URBAN ENVIRONMENTAL EDUCATION AND SENSE OF PLACE

A Dissertation

Presented to the Faculty of the Graduate School

of Cornell University

In Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

by

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August 2013

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Cornell University 2013

Urban environmental educators are trying to connect students to the urban environment and nature, and thus develop a certain sense of place. To do so, educators involve students in environmental stewardship, monitoring, activism, and outdoor recreation in cities. At the same time, sense of place has been linked to pro-environmental behaviors and other desired educational outcomes. However, the related literature from environmental psychology has rarely been applied to environmental education research, particularly in cities. In this dissertation, I apply the sense of place framework to environmental education, and explore the development of sense of place among high school students in seven after-school and summer urban environmental education programs in the Bronx, New York City.

First, I reviewed the academic literature on urban environmental education in the United States to better understand educational programs in the Bronx. I found that urban environmental education programs may pursue several goals, and one of them is teaching about cities as social-ecological systems in which both social and natural components are essential. Second, I reviewed the literature on sense of place, including its role in environmental education. I conceptualized the idea of ecological place meaning, i.e., viewing environmental and nature-related phenomena as symbols or valued elements of places. Third, in 2010, I explored the impact of urban environmental education on sense of place among students. I conducted pre/post surveys with 87 urban high school students (mean age = 16), including 64 students in 6–week urban environmental programs (experimental group), and 23 students in non-environmental, summer youth employment programs (control group). Results showed that urban environmental education programs significantly strengthened ecological place meaning but did not influence place attachment among experimental students; no changes were found in the control group. Fourth, I collected and interpreted nine educators' and five students' narrative profiles to explore the reasons for and approaches to developing ecological place meaning in the city. The narrative analysis

showed that educators are trying to cultivate ecological place meaning among students to help them understand and appreciate urban nature and places, and imagine how the urban environment could be improved. Narratives also demonstrated that ecological place meaning is nurtured among students through direct experiences of urban places, social interactions with educators and environmentalists, and the development of students' ecological identity.

This dissertation raises questions about how nature-related phenomena in cities—including wetlands and terrestrial ecosystems, green infrastructure, and nature-related outdoor activities such as environmental stewardship and outdoor recreation—are valued by urban residents. Urban environmental education strengthens students' appreciation of the urban environment and nature, and experiences in these programs themselves become part of students' ecological place meaning.

BIOGRAPHICAL SKETCH

Alexey “Alex” Kudryavtsev (Russian: Алексей Викторович Кудрявцев) was born in 1980 in Tomsk-7 (Seversk), Soviet Union. Parents: Viktor and Vera. Siblings: Vladimir and Anna. Niece: Maria. Grandparents: Anna, Boris, and Veniamin; Alexandra and Boris.

Alex grew up in Western Siberia and near the Black Sea, Russia. He worked on environmental education and other environmental projects since 1996. Graduated from Tomsk State University, Russia in 2001. Received the MS degree in 2006, and the PhD degree in 2013 from Cornell University.

This work is dedicated to all urban communities improving their environment

through environmental education and stewardship

ACKNOWLEDGEMENTS

This dissertation was a collaborative effort. I am indebted to many great people, programs, and organizations that provided tremendous support to this work. I am happy to have this opportunity to thank at least some of them.

My deep gratitude goes to my research committee. I profoundly thank my committee chair Dr. Marianne Krasny, who is a hard-working, honest, resourceful, and adventurous person and advisor. Marianne inspired my interest in interdisciplinary research, especially connecting ideas about natural resources, education, and communities. She helped me find or apply for several fellowships, grant programs and professional networks. She supported my research presentations in conferences and seminars in Durban, South Africa (2007), Virginia Beach, Virginia (2007), Shanghai, China (2010), Durham, North Carolina (2011), Uppsala, Sweden (2013), and Marrakech, Morocco (2013), as well as my project presentations at the Community Forestry and Environmental Research Partnership fellowship workshops in Vermont (2008) and South Carolina (2009), and several seminars and symposia at Cornell University. Marianne always found time to work with me and other graduate students, despite being incredibly busy as Department Chair, and managing multi-million dollar national research and outreach projects, including Garden Mosaics and EECapacity. She provided feedback on my papers and responded to my emails almost instantly, sometimes at five o'clock in the morning and on weekends. She made my participation possible in very rewarding projects, such as the EECapacity workshops, and helped me develop and facilitate two online professional development courses: "Environmental Education in Urban Communities" in Fall 2010 and Fall 2012, and "Measuring Environmental Education Outcomes" in Fall 2012 sponsored by the US Environmental Protection Agency. Marianne is a great scholar, leader, and mentor; working with her was an exceptional honor.

I acknowledge and thank my other extremely supportive committee members—Dr. Richard Stedman, Dr. Scott Peters, and Dr. Mark Bain—who helped me move through my research by offering their expertise in development sociology, education, natural resources, research methods, and other areas.

Richard Stedman introduced me to the sense of place literature, as well as environmental psychology and sociology in general. It is incredibly exciting to do research about sense of place because connection to places is fundamental to being human. I am also glad that most people can understand and appreciate my research because everyone intuitively knows what a place is, and everyone has personal ties to some meaningful places in cities, in wild areas, or elsewhere. Scott Peters taught me about community education and development, and helped me understand and appreciate the narrative research method. Scott's insights into the narratives approach were important for my dissertation project. Learning about narratives was also significant on a more personal level because we all learn through stories. Narrative approach helps me better understand people, professional biographies, organizations, communities, discourses, and the whole of society from a different perspective. Mark Bain helped me to think about the urban environment using the system approach, and to relate sense of place and ecosystem-level outcomes of urban environmental education to human well-being. I am profoundly sad that Mark recently passed away; he is missed by many. I also appreciate that my committee supported me in using both quantitative and qualitative methods, allowing me to explore my research questions from diverse perspectives.

I am happy that my research site was New York City, which I proudly call "my research laboratory." No place in the world can compare to this vibrant and diverse global city. New York City is an ideal place to study and explore urban environmental education because of the diversity of educational practices, approaches, and ideas that are found there. I am enormously grateful to many outstanding environmental educators, community leaders and students in New York City who contributed to this research, including Adam Green, Adam Liebowitz, Adelaida "Addy" Guance, Andre Rivera, Anthony "Tony" Archino, Anne-Marie Runfola, Carol Kennedy, Celina "Cicy" Medina, Chrissy Word, Damian Griffin, Danny Peralta, Dawn Henning, Elizabeth "Alex" Severino, Govin Baichu, Jennifer Beaugrand, Jennifer Plewka, Julien Terrell, Nia Terrelonge, Sharon De La Cruz, Stephen Oliveira, and Victor Davila. They all possess remarkable expertise in social and environmental issues in urban communities, and in urban environmental education. They wholeheartedly endorsed this research project, wrote letters of support for my grant applications, contributed to my research proposal, shared their narratives,

administered the sense of place surveys, and shared their passion and knowledge about urban communities, environmental education, urban environment, the Bronx, and New York City. Without their expertise, enthusiasm, and support this work would not have been possible. They and other staff members welcomed me to be part of their urban environmental education programs in their organizations, including the Bronx River Alliance, Youth Ministries for Peace and Justice, Rocking the Boat, Phipps Community Development Corporation, Satellite Academy High School, THE POINT Community Development Corporation, and Mosholu Preservation Corporation. I thank all of the students in urban environmental education programs in these organizations who helped me learn about urban environmental education through informal communication or by participating in my surveys and narrative inquiry.

Because this research project was participatory, I had the opportunity to become part of the communities in my research site. One of many related meaningful moments was when Jennifer Plewka gave me the key for the Drew Gardens gate, which is perhaps the most diverse community garden in the South Bronx in terms of participants, plants, ecosystems, and community activities. To me, this key symbolizes that I became a member of local environmental communities in the Bronx—one of the people who cares about nature and people in New York City. Another gift I received from a member of the Bronx community is a skateboard made by Victor Davila, one of the high school students who participated in my narrative interviews. Victor organized EcoRyders, an environmental education program that teaches younger students how to assemble and paint skateboards, and to use skateboards to explore the South Bronx neighborhoods and ride to community gardens to help gardeners. The painting on my skateboard features the New York City skyline and urban trees.

During my time at Cornell University, I moved in and out of New York City several times, and lived in the city for about two years total. Many of the places I visited and the people I met in New York City influenced my research, became part of my own identity, and represent my place meaning for this city—including communities in the Bronx, many environmental leaders and other community members, the Bronx River, the whole of New York City, Midtown, Downtown, Lower East Side, Harlem, wilderness sites, skyscrapers, architecture, museums, diverse cultures and languages, UN Headquarters,

community gardens, oyster reefs, the High Line park, the Bronx Zoo, Central Park, Time Square, Governors Island, the Statue of Liberty, City Hall, New York Harbor, the Atlantic Ocean in Breezy Point, Hudson River, community gardens, the subway, busy streets, green roofs, beautiful waterfronts, and boats on the Bronx River. I am thankful that I experienced first-hand all of these things and learned many stories about them, including from local people and academic publications. All of these interactions and relationships influenced my view of the urban environment and how I wrote this dissertation.

My communications with my Bronx research partners kept me going during this project. I would like to share some excerpts that brightened my days, informally validated this research, and helped me remember why our work together is valuable. Chrissy Word (Rocking the Boat, email sent on September 2, 2010) once wrote to me, "*You'll be missed around RTB! I really appreciate your hard work and commitment to both your research and to the organizations and people that are a part of it. I also look forward to seeing the results of your research and to any future opportunities to work with you again in the future.*" In another email (October 26, 2011), Chrissy mentioned, "*I must say that your research really helps to inform my work at RTB as well as Butterfly Project.*" Damian Griffin (Bronx River Alliance, excerpt from an audio recording on August 20, 2010) said, "*I'd like to tell you that I think you've been a big help in bringing all these organizations [along the Bronx River] together. You've been a really good conduit, connection between the organizations. So you've become a part of environmental education in the Bronx. I think that's really neat. You've done this really interesting… the study itself is great. The ideas that were brought are interesting and important. And just your physical being here and moving between and looking has become like a necessary instrument. I don't know how you are going to ever leave and not come back.*" Jennifer Plewka (Phipps CDC, email sent on January 6, 2011) mentioned, "*We all miss you Alex, The Bronx is not the same without our favorite super-motivated Siberian.*" Carol Kennedy (Satellite Academy High School, email sent on 8/2/2010) noted, "*Thanks so much for making [my project] part of your [research] program. Your input made my experiences (and the students) richer (just what an objective observer does not want to hear).*" Adam Green (Rocking the Boat, excerpt from an audio recording on 9/8/2010) told me, "*I am fascinated actually to… at some point hear your*

observations… having spent as much time with the different organizations as you have – you should be a consultant now to the funding agencies and you would probably be able to give them some good perspective." Thank you all for these kind words of encouragement. It has been an honor to work with you!

During my program at Cornell University, I enjoyed exchanging research ideas with many fellow graduate students, some of whom have already become professors in different universities. Among them are Eunju Lee, Jason Corwin, Jennifer Shirk, Jesse Delia, Keith Tidball, Kendra Liddicoat, Lilly Briggs, Olivia Aguilar, Philip Silva, Santi "Joy" Saypanya, Tania Schusler, and Yue Li. They would often provide feedback on my research ideas, manuscripts, and practice presentations, or just cheer me up. It was also great to share office space, work as a fellow teaching assistant, or chat about research and teaching ideas with Brandon Kraft, Christine Moskell, Darrick "Nighthawk" Evensen, Phuntsho Thinley, Steve Raciti, and some other cool characters among graduate students in the Department of Natural Resources (DNR). I also had fun exchanging environmental ideas with Sihai Wang and Zafri Hassan on our one month, 11,000 mile road trip around the United States in summer 2012—while visiting National Parks and National Seashores, including Badlands, Mount Rushmore, Yellowstone, Grand Teton, Point Reyes, Yosemite, Sequoia, Grand Canyon, Gulf Island, Everglades, Great Smoky, and Mammoth Cave—and while visiting several cities such as Chicago, Salt Lake City, San Francisco, Los Angeles, San Diego, Las Vegas, Tucson, New Orleans, Key West, Miami, and Columbus. Because people learn much about certain places in comparison to other places, my travel experiences in the United States helped me to better understand and appreciate New York City as my research site.

I also acknowledge Drs. James Lassoie, Joseph Yavitt, Steven Wolf, and Timothy Fahey, professors in DNR, as well as Suzanne Wapner—for whom I worked as a teaching assistant and whose outstanding teaching and research approaches influenced my scholarship. I also thank the whole DNR, including everybody in the DNR Graduate Student Association, for being such a great intellectual and supportive community. The annual DNR Graduate Student Association Research Symposium, and weekly DNR seminars were particularly helpful events in advancing my own research.

This dissertation would not have been possible without immense resources provided by the

Cornell University Library. Particularly, Mann Library provided me with state-of-the-art information technologies, useful workshops on information search and management, comfortable workspace, supportive atmosphere, place for collaboration with other students, and a beautiful view of Beebe Lake. I would like to thank staff at Mann Library, especially Betsy Bush and Tom Clausen along with other people at the circulation desk who were incredibly professional and always served patrons with a smile, as well as other behind-the-scenes staff who processed my multiple requests for material purchases, borrowing, and delivery when I was reviewing large amounts of literature. Browsing the library collection shelves was one of my favorite pastimes, which often led to discovering relevant books, articles, or authors that I was not aware of. I am glad that the library had an electronic subscription to most journals in my research area. Indeed, Mann Library with its specialization on environmental and interdisciplinary research areas was an ideal library to support my project. When some materials were not available, librarians would always positively respond to my request to subscribe additional journals or purchase books related to my dissertation. Through a rapid delivery system, the Cornell University Library also gave me free access to books and other materials at Brown, Columbia, Dartmouth, Harvard, MIT, Princeton, University of Pennsylvania, and Yale. I think that at different times some books were delivered to me from all of these universities, which helped me conduct thorough literature reviews for my dissertation, including the review on urban environmental education, and review on sense of place. I am also grateful to the New York Public Library, whose famous main branch building on Fifth Avenue I used as my office for an entire summer. Yet I also acknowledge other information resources that are often taken for granted, such as Google Scholar, ERIC, other online databases, and Wikipedia, which facilitated my research.

I also thank the Cornell University Graduate School, the College of Agriculture and Life Sciences, and faculty in different departments at Cornell University. Many people including DNR directors of graduate studies Dr. Clifford Kraft and Dr. Shorna Broussard Allred, and DNR assistants Erin Kelly, Meghan Baumer, and Sarah Gould provided ongoing, efficient administrative and informational support; they promptly and professionally handled any issues and made everybody feel

welcome. Françoise Vermeylen at the Cornell Statistical Consulting Unit helped me with statistics and the survey design. Sara Schaffzin helped me edit two chapters in this dissertation, and improve my academic writing skills. Some course instructors also indirectly shaped my work. Dr. Shelley Feldman's course on comparative epistemologies was particularly challenging; although for this course I got the lowest grade of my college life (B+), I eventually started to appreciate different ways of thinking about knowledge and social research. Dr. Douglas Gurak's course inspired me about the power and beauty of statistical methods. I am thankful to instructors at Cornell who taught me some Spanish and French, which helped me to communicate with some Spanish-speaking community members in the Bronx and with French-speaking participants of international conferences. I am also grateful to the whole education system at Cornell University and in the United States for enabling me to ask novel and interdisciplinary research questions, and giving me the best institutional support possible to answer these questions.

Sometimes I stop for a moment and realize that very few people the opportunity to go to an Ivy League school, work with the top scholars in the world, get the best intellectual support, and conduct research on one of the most interesting topics in one of the most exciting cities in the world. I wish more people were as lucky as I am, I wish more people had so many opportunities to learn, explore, and contribute to something meaningful. In addition, I also received a lot of support from different experts from outside the university. For example, professionals from the New York City Department of Parks & Recreation, Natural Resources Group, NYS Department of Environmental Conservation, NYC Department of Environmental Protection, Environmental Education Advisory Council, Environmental Protection Agency Region 2, Trees New York, New York Restoration Project, Central Park Conservancy, New York Harbor School, The Battery Conservancy, and numerous other organizations helped me to better understand the city and the connections between people and the urban environment.

My special thanks go to a number of individuals and organizations that helped me better understand urban environmental education through internships, workshops, or our exchange of ideas. Gretchen Ferenz, Director of the Urban Environment Program at Cornell University Cooperative Extension—New York City, generously shared with me her environmental education network in the city

and introduced me to numerous educational organizations, including in the Bronx and Manhattan. Gretchen also shared her passion for public service and working with underserved urban communities, and her inspiration about nature in New York City when she served as my internship supervisor during two or three summers in the city—when I had my own cubicle space in a building on 34th Street near the Empire State Building. I also happily listened to meaningful environmental stories from her husband Tom Fox, a great environmental leader; a founder of New York City Water Taxi; and advocate for open space, waterfront access, parks, greenways and community gardens in New York City. Christine Alfsen-Norodom, Senior Advisor to the United Nations Secretary-General's High Level Panel on Global Sustainability and Specialist at UNESCO Office in New York, shared with me many brave ideas about organizing the urban environment and education during my internship in UNESCO. Dr. Thomas Elmqvist of the Stockholm Resilience Centre and Stockholm University helped me and some of my research participants understand our research and practice through the framework of resilience, and invited us to conduct a presentation at World Expo 2010 in Shanghai, China. All these people and other environmental leaders in New York City and elsewhere believed in my abilities and endorsed my project, which gave me confidence to pursue this project in the city.

Numerous ideas in my research were inspired by my brief or long-term communication and work with awesome people in different research institutions, the North American Association for Environmental Education, the EECapacity project, and other environmental organizations. These people include Arjen Wals, Akiima Price, Augusto "Gus" Medina, Bora Simmons, Joe Heimlich, Justin Dillon, John Fraser, Jose "Pepe" Marcos-Iga, Judy Braus, Karen Hollweg, Martha Monroe, Omari Washington, Paul Hart, Rue Mapp, and Thomas Marcinkowski. Though they may not realize it, their generosity in sharing their professional stories, insights, and advice shaped the direction and form of this research project. I also thank editors and anonymous reviewers in two journals, Environmental Education Research and Ecosphere, whose constructive, critical, and positive feedback helped me revise two chapters, and publish them in these journals. Preliminary feedback from an editor in the Journal of Environmental Education helped me to significantly improve the chapter and manuscript on urban environmental

education.

Many other people helped me in different ways during my field research in the Bronx, New York City. I thank all of the people who I informally met during my time in the Bronx for our conversations that directly or indirectly contributed to my project. I thank my landlord Sam Leon in the Bronx and his family, who provided my room in their house in the South Bronx near Yankee Stadium and the Grand Concourse—a room that was always ready for me whenever I needed to move to the Bronx to conduct research. This elderly gentleman is a great example of local community leaders—he voluntarily cleaned and washed the street on his block, built a flower garden between his house and a Puerto Rican theater, and watered street trees planted by MillionTreesNYC. His family and neighbors also helped me understand the history of immigrant communities in the Bronx and improve my Spanish, which actually helped me connect with some people in my research site. During three summers in the Bronx, Sam's pigeons and parrots in a huge cage outside the house under my windows made sure that I woke up around four o'clock in the morning and start thinking about my research.

Although sitting at my desk and writing this dissertation was an enjoyable experience, some other activities outside my office were more memorable. Years later, I think I will remember that my program at Cornell University offered me opportunities to make friends with many researchers throughout the United States, to boat with students on the Bronx River, to participate in creative environmental education activities in the Bronx, to discuss with Marianne Krasny on the top of the Empire State Building whether Midtown Manhattan counts as a natural ecosystem, to explore with environmental educators several green roofs and green buildings in New York City, to attend the General Assembly meetings at the United Nations, to go into the crown of the Statue of Liberty, to hike to the bottom of the Grand Canyon, to watch sea lions in San Francisco, to climb up the Eiffel Tower in Paris and to walk on the Great Wall of China on the way to research conferences, to get lost with my environmental friends in the mazes of Marrakech, to hike with Cornell students in the White Mountains and the Adirondack Park, to enjoy the beautiful Cornell campus, and to have fun conversations with my fellow graduate students in Fernow Hall at Cornell University. I am thankful for these events inspiring my research.

Partial funding for this study was provided by the Community Forestry and Environmental Research Partnership at the University of California, Berkeley. During this fellowship and through related workshops, I received valuable suggestions on my research from Carl Wilmsen, Dreamal Worthen, Heidi Ballard, Jill Belsky, Jonathan Long, Louise Fortmann, and Marla Emery. After this fellowship I still keep in touch with some of these wonderful mentors. The Cornell Urban Scholars Program (CUSP) in the Department of City and Regional Planning sponsored my preliminary work in New York City communities, and I thank program leaders Kenneth Reardon and Richard Kiely for introducing me to participatory research methods that benefit researchers and serve communities. CUSP was much more than a source of funding; it connected me to great leaders in the city, and included great events such as a research presentation at the Cornell University Tower Club on Wall Street, and a reception at New York City Hall (2007). Other funding for my research came from research assistantships through EECapacity, a national environmental education training program funded by the US Environmental Protection Agency; as well as from the Cornell University Graduate School, including several conference travel grants.

Above all, I sincerely thank my family. My mom and dad know little about my research, but know much about how to support me through our daily phone calls all these years during my studies at Cornell University. I think that a great deal of energy and motivation to work on my dissertation was based on my childhood nature-based experiences with my parents and grandparents. Perhaps I would not have studied environmental education if my close and extended family had not awakened my interest in the environment from an early age. While growing up mostly in cities, I developed a strong interest in learning about nature, different places, and different lifestyles—maybe because my family always had a vegetable or fruit garden wherever we lived; because as a child I spent most summers holydays with my grandparents in a small Siberian village up north and sometimes in towns near the Black Sea down south; and because my family often traveled by car, air, and ship in Siberian and Caucasian remote and developed areas. In some sense, my dissertation work is a continuation of my long-term journey through which I experience all kinds of people and places. I am thankful to my adventurous, open-minded, and warm-hearted parents who value learning, and who supported me in many meaningful ways during my

many years of education. And I am thankful to my grandparents who encouraged my love for nature, offered an example of persistence and excellence, and shared meaningful stories and wisdom—which continues to inspire me.

All people and organizations mentioned above—and probably many other people who I forgot to acknowledge—should know that this dissertation is as much theirs as mine.

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CHAPTER 1

INTRODUCTION

In 2008, my interest in the urban environment and environmental education led me to the Bronx, New York City. I asked educators in seven community-based organizations in the Bronx River watershed about goals of their urban environmental education programs. One common goal that they mentioned was to connect urban residents, including high school students, to the urban environment, or help them recognize and value natural components of the city. This goal could be conceptualized as the development of certain sense of place, notably ecological place meaning. However, despite much interest among scholars in places, place-based pedagogy, and teaching about local ecosystems and communities (Gruenewald, 2003; Smith, 2002; Sobel, 2005), environmental education has rarely used the sense of place literature, framework, terminology, and research results—from which it could benefit. At the same time, with few exceptions (e.g., Ardoin, 2006; Semken & Brandt, 2010; Semken & Butler Freeman, 2008; Vaske & Kobrin, 2001) the sense of place literature has largely overlooked the role of environmental education in fostering sense of place, including in cities.

I thought it was important to address these issues, given that urban residents outnumber the rural population (UN-HABITAT, 2008), and thus many people experience and impact the environment and ecosystems in cities. In fact—while cities can be portrayed as green, natural, and sustainable (Beatley, 2011, 2012; Glaeser, 2011; Mostafavi & Doherty, 2010; Spirn, 1984, 2003), or as environmentally degraded places, as concrete jungles, and devoid of nature (e.g., McHarg, 1969; Pickett, Buckley, Kaushal, & Williams, 2011)—the sense of place literature generally suggests that the way we view places influences how we manage or interact with them (e.g., Andersson, Barthel, & Ahrné, 2007; Brehm, Eisenhauer, & Krannich, 2006; Brehm, Eisenhauer, & Stedman, 2013). However, while sense of place in cities may have implications for human well-being and environmental integrity, little is known whether a certain sense of place can be developed through environmental education in cities; what approaches educators use to influence students' view of the city; and what are the reasons for influencing students'

perception of urban places.

To address these issues, I conducted research that resulted in four independent chapters, including two published papers and two manuscripts. Chapter 2 "Urban Environmental Education" reviews the academic literature on urban environmental education in the United States. I wrote this chapter to better understand educational programs involved in my research. I found that, in general, urban environmental education programs pursue several goals, and one of them is teaching about cities as social-ecological systems in which both social and natural components are essential. Chapter 3 "Sense of Place in Environmental Education" (Kudryavtsev, Stedman, & Krasny, 2012) reviews the sense of place literature, and applies it to environmental education. This chapter also conceptualizes the idea of ecological place meaning, i.e., viewing nature-related phenomena as symbols or valued aspects of places. Chapter 4 "The Impact of Environmental Education on Sense of Place Among Urban Youth" (Kudryavtsev, Krasny, & Stedman, 2012) describes a sense of place survey study conducted in 2010 with 63 high school students in 6-week urban environmental education programs and 24 students in a control group in the Bronx. Results showed that urban environmental education programs strengthened students' ecological place meaning, but did not influence their place attachment; no changes were found in the control group. Chapter 5 "Development of Ecological Place Meaning in New York City" uses the narrative inquiry with nine educators and five students in urban environmental education programs in the Bronx. Results illuminated the reasons for and approaches to the development of ecological place meaning among urban students in these programs. Narratives also broadened our understanding of the idea of ecological place meaning to include not only current nature-related phenomena and activities, but also the future vision of urban places.

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CHAPTER 2

URBAN ENVIRONMENTAL EDUCATION[1]

Abstract

As increasing numbers of people are living and experiencing the environment in cities, diverse urban environmental education practices are emerging. We conducted a systematic literature review and synthesis to better understand the goals guiding environmental education practices in cities. Five broad trends in urban environmental education reflecting different goals were identified: (1) City as Classroom, (2) Problem Solving, (3) Environmental Stewardship, (4) Youth and Community Development, and (5) City as Social-Ecological System. The first two trends reflect broader currents in environmental education; other three trends emerged in large part from practices taking place in cities. This paper uncovers rich traditions of environmental education in cities, and provides a framework for guiding and reflecting on this important area of educational practice and research.

Introduction

As the world becomes increasingly urban (Glaeser, 2011; UN-HABITAT, 2012), questions have been raised about the role of environmental education in providing experiences of nature in cities (Louv, 2011), in helping us to envision a sustainable city (Agyeman, 2003), and in encouraging urban residents to participate in restoring and creating green spaces and green infrastructure (Beatley, 2011). In other words, the field of environmental education is exploring how it can contribute to environmental integrity and human well-being in cities. A systematic analysis of publications on urban environmental education—from its roots over 100 years ago to contemporary approaches—will help to inform future practice and research.

Whereas the term "urban environmental education" was introduced in the 1960s and 1970s (e.g., Glasser, Stapp, & Swan, 1972; Reid, 1970; Shomon, 1969), related ideas date back to the first half of the

[1] This chapter is submitted to a journal, with M.E. Krasny as a co-author.

20th century (e.g., Bailey, 1911; Philpott, 1946; Renner, 1942). Initially, urban environmental education borrowed ideas from nature study, conservation education, and science education; later it was influenced by the environmental movement and focused on environmental and related issues; and more recently it has been inspired by fields such as environmental stewardship, youth and community development, and social-ecological systems. As increasing numbers of people are living and experiencing the environment in cities, diverse urban environmental education practices continue to emerge. Today, educators often refer to programs in schools, museums, and community-based and non-governmental organizations as urban environmental education, and scholars continue to use this terms in publications.

However, despite the popularity of this term, urban environmental education lacks a formal framework reflecting its goals and approaches. With the exception of several earlier reports, symposia, and curriculum guides (Australian Association for Environmental Education, 1984; Board of Education, 1960; Bureau of Sport Fisheries and Wildlife, 1968; Frank & Zamm, 1994; Leou, 2005; Verrett, Gaboriau, Roesing, & Small, 1990), few attempts have been made to conceptualize urban environmental education. The wealth of scholarship and practices in urban environmental education—and their insufficient analysis—hinder the environmental education community's ability to think critically about practice and to design a research agenda based on explicit or implicit goals of urban programs. Thus, we undertook a systematic literature review and synthesis in order to define trends in urban environmental education starting with its roots over 100 years ago. Although our purpose for undertaking this review parallels that of Sauvé (2005), who has outlined 15 currents in environmental education with the dual goals of celebrating the richness of the field and offering points of reference for critical analysis of discourses and practices, our methods differed from previous work in that we undertook a systematic literature review (H. Cooper, 1998; Hart, 1998).

For the purposes of this paper, we define urban environmental education broadly to encompass any educational programs that focus on environmental learning and that take place in cities (cf. Davey, 1984, p. 52). However, the programs we uncovered during our search address multiple social and environmental issues and take advantage of cultural, ecological, and other resources unique to cities. One

way to develop a deeper understanding of urban environmental education is examine the diversity of its goals. Thus, in this article we build a framework for urban environmental education by analyzing its goals as described explicitly or implicitly in the literature. While acknowledging the wealth of practices around the world, because we conducted our literature search in English, most of our sources focus on the United States and other English-speaking countries.

Methods

Literature reviews are conducted to synthesize current knowledge and gain a new perspective (Hart, 1998), often attempting to retrieve the entire population of publications on a certain topic (H. Cooper, 1998). We reviewed academic publications including journal articles, edited book chapters, conference proceedings, and books that turned up in a search of the phrase "urban environmental education," while avoiding curricula, brochures, and publications that mention urban environmental education only tangentially. First, we searched this phrase enclosed in quotation marks in the ERIC educational research database, which turned up 34 results as of April 10, 2013. Second, we searched the same phrase in Google Scholar, and found 496 results as of the same date. Third, we realized that while the term urban environmental education was rarely used before the 1970s, understanding current scholarship and practice would be incomplete without looking at the historic literature; thus we also reviewed earlier publications focusing on urban environmental education that were cited in the literature uncovered through the online searches. More than 80 sources that matched our search criteria are included in our review, most of which focused on programs in the United States although several papers were from Great Britain and Australia. Any omissions of urban environmental education academic publications are not intentional. We also realize that other types of related education in cities are not covered by this review, such as education for sustainable development, outdoor and adventure education, and campus sustainability in higher education. Using the search results, we read all identified relevant publications accessed through the Cornell University Library, via interlibrary loans, and by contacting authors.

We analyzed each paper by first asking, "What is/are the goal(s) of urban environmental

education in this publication?" as opposed to initially focusing on educational approaches, history, theoretical foundation, or other characteristics. In cases where publications reflected more than one goal, we tried to identity the dominant goal. As we read the literature, we sorted sources into emerging categories reflecting different educational goals. We decided to call these categories "trends" because they are continuously evolving. In our analysis, initially a number of small trends emerged, several of which were combined. For example, "Youth Development" and "Community Development" were initially two trends, but were merged because the literature and practice in these two areas overlap. In another example, an initial trend "City as Nature" became part of "City as Social-Ecological System" because of the focus on cities as interdependent social and biophysical phenomena. We eventually agreed on five trends, which present a broad-brush picture of urban environmental education and help us reflect on practices in this field:

(1) City as Classroom;

(2) Problem Solving;

(3) Environmental Stewardship;

(4) Youth and Community Development;

(5) City as Social-Ecological System.

Each trend is described and illustrated with example practices below.

Trends in Urban Environmental Education

(1) City as Classroom

Urban environmental education often uses outdoor and indoor settings in cities to facilitate learning about nature, ecology, biology, environment, and related sciences. The goal of the City as Classroom trend is to foster environmental literacy or knowledge of the local environment, independent of whether or not it leads to pro-environmental behaviors. Typical programs within this trend take advantage of more natural ecosystems in cities, as well as street trees, parks, green infrastructure, industrial sites, and museums. Approaches within this trend include nature study, environmental

monitoring, citizen science, and community mapping.

This trend was driven largely by concerns about science literacy and the recognition that experiential learning can enhance understanding of natural history and other aspects of science. Early writers described the educational value of labeling urban trees (Robinson, 1901) and the role of urban parks and vegetable gardens in fostering interest in wildlife and outdoors (Bailey, 1911). Later, educators were advised to teach about biology, natural science, and resource conservation by taking students to various urban sites including water supply and sewage disposal facilities (Wisconsin Department of Public Instruction, 1949, p. 36), urban nature trails (Polley, Loretan, & Blitzer, 1953), weed dominated vacant lots, urban schoolyards, and urban trees that could be surveyed and mapped (Weaver, 1955), forests near urban schools (Bathurst & Hill, 1957), and greenhouses, vegetable stands, and public markets (Bureau of Elementary Curriculum Development, 1958).

City as Classroom was developed further in the 1960s and 1970s, as described in publications about educational programs in New York City and elsewhere. Shomon (1969), one of the first authors to use the term urban environmental education, described nature centers exposing people to urban natural areas to foster a conservation conscience. Other authors suggested that people can develop appreciation for the natural environment and a nature conscience, evaluate pollution, understand the dependence of cities on other ecosystems, and learn about urban infrastructure through such activities as observing soils, plants and animals around schools (Board of Education, 1960) and in urban nature/outdoor education centers (Hill & White, 1969; T.R. Tanner, 1974); sailing on a schooner within city waters and visiting zoos, natural history museums, aquaria, and urban parks (Blaustein, 1968) or vacant lots and abandoned buildings (Rillo, 1971); becoming aware of the location of fire stations and public transportation corridors (Spitzner, 1975); and independent projects in schools (Blackwelder, 1976).

Recent publications show that learning about ecosystems, biodiversity, and related science remains a goal of many urban environmental education programs. To achieve this goal, students engage in citizen science, outdoor investigations, inventories, inquiry-based activities, and visiting urban nature centers (Barnett et al., 2006; Barnett, Vaughn, Strauss, & Cotter, 2011; Fialkowski, 2003; Hashimoto-

Martell, McNeill, & Hoffman, 2012; Johnson & Catley, 2009; Watson, 2006). Some high schools focus their entire curriculum around environmental studies and use urban ecosystems as their outdoor classrooms (Kudryavtsev, 2011; M. Weintraub, Park, & Jang, 2011). Expected or reported outcomes of such urban environmental education programs include environmental awareness (Fisman, 2005), environmental knowledge (Hashimoto-Martell et al., 2012), helping immigrant students to connect to their heritage (Bruyere, Wesson, & Teel, 2012), improving people's ability to perceive and understand urban environmental aesthetics (de Sousa Vianna, 2002), and learning about local history and communities (de Kadt, 2006, 2011). In sum, City as Classroom is an established trend in urban environmental education, whose goal is to facilitate learning about science and the environment, including students' local environment, through exploration of natural, historical, social, and human-made elements in cities.

(2) Problem Solving

The Problem Solving trend in urban environmental education was motivated by two concerns. First, it emerged as a response to urban environmental issues such as air pollution, lack of green spaces, public health, crime, and unequal distribution of environmental burden and access to ecosystem services. Second, it was inspired by the perception that other forms of environmental education were too focused on ecological knowledge or conserving natural areas outside cities, and had little relevance to the everyday experiences of urban residents. The goal of this trend is to mitigate ecological and related social issues, often through the development of environmental knowledge, attitudes and skills, which are assumed to contribute to pro-environmental behavior, environmental activism, and environmental restoration projects. The types of problems that this trend addresses have expanded over time from pollution, conservation, and infrastructure to encompass related social issues.

In the first half of the 20th century, researchers noted that cities offer opportunities to learn about environmental problems, such as the use of rivers as sewers or roadsides as trash damps, and their solutions (Renner, 1942; Renner & Hartley, 1940). Later, professionals reasoned that conservation

education efforts should include urban residents because they are involved in decision-making affecting natural resources (American Association of School Administrators, 1951), while Donnelly (1957) pointed out that students can learn from firsthand experiences in urban neighborhoods and motivate their parents to help mitigate environmental problems. Notably, this trend attempts to make environmental education relevant to the everyday experiences of urban residents. Publications repeatedly emphasize that urban children and adults may have little interest in nature study, learning about ecology and wildlife distant from cities, or outdoor education in natural areas (Roth, 1961; Schneider, 1968). Rather, authors point out that city dwellers may be more concerned about air pollution, waste disposal, cleaning up urban rivers, human health, city planning, traffic congestion, lack of recreation areas, and experiences of urban life. Further, authors cite concerns about environmental justice, claiming that inner-city residents are overwhelmingly exposed to environmental hazards and experience unequal distribution of natural capital (Clark, 1972; Haluza-DeLay, 2013). Finally, authors claim that to engage city residents in environmental problem solving, urban environmental education should be relevant to individuals with different cultural, economic and ethnic backgrounds, and should respect diversity and civic culture (Verrett et al., 1990; B.A. Weintraub, 1995).

In addition to biophysical problems such as pollution, authors proposed that urban environmental education should address related social concerns including poverty, financial insecurity, youth unemployment, racism, drugs, violence, access to sites for skateboarding and other recreational activities, food supply, and human health (Frank & Zamm, 1994; Glasser et al., 1972; Verrett et al., 1990). These social problems could be addressed or learned about through such activities as field trips, meetings with professionals, art, theatre, development of student skills and competences, taking photos of attractive and negative aspects of inner cities, monitoring noise pollution, building birdhouses, planting shrubs, and other actions through which local residents improve their communities (Glasser et al., 1972; Verrett et al., 1990). Programs often take place in collaboration with neighborhood councils, faith-based organizations, community centers, housing agencies, and grassroots initiatives (EPA, 1972; Verrett et al., 1990). In sum, the ultimate goal of the Problem Solving trend in urban environmental education is to tackle

environmental problems. As a response to environmental degradation, this trend may or may not call for action, but focuses on education about causes and solutions of environmental problems and related social issues such as environmental injustice in cities.

(3) Environmental Stewardship

In addition to addressing pollution and other environmental problems, urban environmental education has long been valued for fostering hands-on environmental stewardship or management of urban natural resources. Within this perspective, the goal of educational programs is to improve urban ecosystems, maintain green infrastructure, support biodiversity, and enhance ecosystem services by involving individuals and communities in hands-on environmental stewardship. A general assumption of this trend is that citizens or communities are able to design, restore, and maintain local urban ecosystems, often but not necessarily in collaboration with government agencies and non-profit organizations, and at the same time will learn about these ecosystems. Programs within this trend may integrate community-based service learning; for example, by involving students in neighborhood greening, urban gardening and farmers markets, designing and maintaining green roofs, rain gardens, and other green infrastructure, and restoring ecosystems such as estuaries that serve as oyster habitat.

The Environmental Stewardship trend has rich traditions all demonstrating that citizens in environmental education programs can make direct improvements to urban ecosystems. For example, in the 1950s, urban schools partnered with civic groups and city parks departments to play a role in tree-planting, beautification, and landscaping in neighborhoods, on school grounds, along streets, and in city parks (Weaver, 1955). Later, authors proposed that urban wildlife could be preserved by involving residents in the management of natural areas in cities (Gill & Bonnett, 1973). In addition to contributing to urban greening (Platt, 2006), urban ecological restoration projects are tools for educating students about urban biodiversity and increasing environmental literacy (Frank & Zamm, 1994; Ingram, 2008). Thus stewardship and educational goals may be of equal importance in some programs. Recent work in civic ecology has continued this trend in suggesting that environmental education in cities can be situated

in civic ecology practices—including community forestry, community gardening, and community-based habitat restoration—thereby contributing to ecosystem services, biodiversity, and social capital while providing opportunities for environmental learning (Krasny & Tidball, 2009a, 2012).

Several authors described how environmental education programs can be integrated with stewardship. For example, educators involved children in environmental restoration activities along the Bronx River to help communicate the value of urban natural areas, improve wildlife habitat, increase students' academic achievement, and indirectly to involve parents in recycling and composting (M.J. Tanner, Hernandez, Hernandez, & Mankiewicz, 1992). Community-based organizations such as Rocking the Boat and Youth Ministries for Peace and Justice in the Bronx provided opportunities for youth to engage in stewardship activities including restoration of Bronx River habitats and cleanup of brownfield sites. Other Environmental Stewardship programs involved students in classroom and outdoor urban forestry activities to teach inner-city youth about forest management (Broussard, Jones, Nielsen, & Flanagan, 2001; Gilbert, 2006). In sum, environmental education has long been viewed as a vital part of urban environmental stewardship and restoration. This trend in the literature suggests that outcomes of environmental education may extend beyond individual learning and solving problems through changing policy to also encompass direct improvements to urban ecosystems and green infrastructure.

(4) Youth and Community Development

Programs inspired by the Youth and Community Development trend use the urban environment as a means to foster positive youth development and community well-being. They often take place at after-school, summer youth employment, and other initiatives sponsored by community development corporations, faith-based organizations, and community-based organizations. Whereas environmental knowledge and related outcomes may be useful byproducts, the focus is on learning critical life and citizenship skills, building social capital and community cohesion, improving social institutions, social norms, and cultural sensitivity, integrating immigrants into local communities, and empowering communities to take collective action.

Starting in the 1980s, authors began writing about how urban environmental education may nurture students' creativity and reaffirm positive aspects of their cultures, increase self-esteem and self-confidence, create positive attitudes towards learning and improve critical thinking, reduce dropout rates and gang and drug activity, promote active citizenship, and develop an understanding of power structures and the ability to influence policy and planning decisions (Breitbart, 1984, 1995; R.D. Cooper & Smith, 1989; Verrett et al., 1990; Welsh, 1993). Employing an asset-based model of youth development, Frank and Zamm (1994) called for building on and promoting positive youth attributes, such as resilience, social competence, autonomy, ability to solve problems, and a sense of the future. Urban environmental education is also considered as developing youths' work ethic and teamwork while increasing neighborhood food security and informing the community about environmental issues (Saveland, 1974; Schusler & Krasny, 2010; Schusler, Krasny, Peters, & Decker, 2009), as well as developing youth social capital (Krasny, Kalbacker, Stedman, & Kudryavtsev, submitted) and a sense of belonging to a community and mutual respect (Fialkowski & Williams, 1998). In a program in the Bronx, an urban river and related ecosystems are used to foster community-based art (Parrilla, 2006).

In this trend, individual and community development are closely linked, as when children or adults participate in decision-making in their communities. For example, programs may help city residents to articulate their environmental preferences and participate in collective advocacy and urban planning (Butterworth & Fisher, 2000); bring together school children, educators, architects, environmental officers, and graphic designers to work on community architecture, community design and art, and other projects to serve community interests (Bishop, Adams, & Kean, 1992); or address local issues through action research and community problem solving (Wals, 1996). Engaging youth and adults in shaping their future through collaborative and life-long learning is consistent with "urban ecosystem education" as proposed by Hollweg et al. (2003) and with the "Growing Up in Cities" program, through which youth assess neighborhood conditions and influence environmental, social, and equity-related policies affecting their lives (Chawla, 2001; Driskell, Bannerjee, & Chawla, 2001; Lynch, 1977). Similarly, in programs in the Bronx, students learned life skills through engaging in data collection,

public speaking, community organizing, remediation of urban rivers and brownsites, improving green spaces, and fighting for environmental justice (Kelley, 2005; Parrilla, 2006; Shiller, 2013). In sum, this trend considers positive youth development (Eccles & Gootman, 2002) and asset-based community development (McKnight & Kretzmann, 1996) as legitimate outcomes of urban environmental education.

(5) City as Social-Ecological System

The goal of this trend is to develop an understanding of cities as constantly evolving, integrated social and ecological systems. City as Social-Ecological System helps people view cities as legitimate ecosystems, where social and ecological processes are of equal importance. Programs motivated by this trend may use any number of educational approaches that help people explore, re-define, enhance, and celebrate urban sustainability and life, including though green design, photography, art, hands-on community and environmental stewardship activities, and learning from professionals and laypeople.

Whereas cities have traditionally been viewed as existing outside nature (Spirn, 2003) or the environment (Moffett, 2006), recent work underscores the importance of ecological alongside social aspects of cities. For example, "education for urban conservation" promoted viewing nature as integral to urban life, thus attempting to bridge the dichotomy between rural and urban ecosystems (Rohde & Kendle, 1997), and other urban environmental education publications emphasize that natural or ecological elements exist in cities along with built, social, political economic, cultural, and psychological elements (Carter, 1979; Howard, 1980; UNESCO, 1983). Further, Beatley (2011) suggested that cities provide nature-based settings for learning and recreation, which might inspire environmental stewardship. In line with this reasoning, urban environmental education programs in the Bronx contributed to ecological place meaning among youth, helping them to see cities as ecologically valuable places (Kudryavtsev, Krasny, & Stedman, 2012), while inner-city adolescents in Detroit were able to connect to and appreciate urban nature even without formal educational programs (Wals, 1994a, 1994b). McClaren (2009) cites authors in environmental education who consider cities as natural, although such views require redefining nature (Colwell, 1997).

In addition to legitimizing nature in cities, this trend emphasizes that different social and ecological dimensions of cities influence and depend on each other. For example, researchers claimed that "urban environmental education builds an understanding of cities as complex systems that blend nature and culture, and ecology and society" (Williams & Agyeman, 1999, p. 29). This idea is further expanded by viewing urban environmental education as an element of urban systems that may foster social-ecological resilience (Krasny & Tidball, 2009a; Tidball & Krasny, 2010, 2011). In fact, the systems view of cities is pronounced among several interviewed educators in urban environmental education programs in New York City (Lauber et al., 2012). Within this framework, scholars also claim that people learn about the city through various channels, including formal and informal educational programs sponsored by community-based organizations, media, and families (Nilon, Berkowitz, & Hollweg, 2003). Specific educational approaches in this trend include field-based surveys, art, cleanups, environmental restoration, school gardens, classroom teaching, formal presentations, street tree mapping, investigating road and building signs, exploring land use, and field trips to museums, zoos and factories (Carter, 1979; Dowd, 1978; UNESCO, 1983). In sum, this trend in urban environmental education is related to social-ecological systems thinking (e.g., Folke, 2006; Krasny, Lundholm, & Plummer, 2010; Liu et al., 2007) and green urbanism (e.g., Beatley, 2011; Beatley & Newman, 2009), and is helping people to learn about and contribute to our understanding of cities as integrated social-ecological systems through participation in collective decision-making and action.

Discussion

Whereas the goals of environmental education are often stated in terms of fostering knowledge, attitudes, and behavior to enhance the environment and environmental literacy, and contribute to problem-solving (Marcinkowski, 2010; UNESCO/UNEP, 1978), delving deeper into the environmental education literature reveals an ongoing and often contested evolution of goals and practice (Fien, 2000; Jickling & Spork, 1998; Sauvé, 1999, 2005; Scott & Oulton, 1999; Wals, Geerling-Eijff, Hubeek, van der Kroon, & Vader, 2008). Disinger (2001) has traced the history of environmental education in the United

States from its beginnings in the early 20th century nature study tradition (Bailey, 1911; Comstock, 1911), to conservation education addressing natural resource management as a response to the devastation wreaked by the 1930s Dustbowl (American Association of School Administrators, 1951), and then to a focus on solving problems that emerged coincident with societal concerns about rampant air and water pollution in the 1960s (Disinger, 2001; Stapp, 1969). More recently, scholars have vigorously debated whether environmental education should have instrumental goals of solving environmental problems, emancipatory goals of developing an individual's ability to make decisions and participate in a democratic society, or should integrate both (Wals et al., 2008). Sauvé (1999) has referred to these conflicting views as modernist and post-modernist, and also presented an overview of 15 separate currents in environmental education (2005).

Our systematic analysis of the urban environmental education literature similarly demonstrated an evolution in goals and practice over time, reflecting societal and environmental changes as well as changes in environmentally-related scholarship and discourse (Table 2.1). Practices consistent with any one goal or trend also evolved over time. For example, the City as Classroom trend has expanded from an early focus on nature study to encompass practices such as systematic data collection through citizen science (Dickinson & Bonney, 2012) and neighborhood inventories (Price, 2011). Although a conservation education focus such as that seen in more rural environmental education programs during the 1930s did not emerge as a prominent theme in urban environmental education, the Environmental Stewardship trend stemming from the 1950s, which focuses on hands-on tree planting and other forms of environmental restoration, is consistent with what one might have observed as part of the Civilian Conservation Corps and other Depression-era conservation education practices (Renner, 1942; Renner & Hartley, 1940). In contrast, the Problem Solving trend emerged concurrently with and strongly reflects a broader environmental education tradition of addressing pollution and other environmental problems that stated in the 1960s (Stapp, 1969).

Table 2.1. Trends in urban environmental education.

Trends	Goals	Educational approaches
City as Classroom	Facilitate learning about science, ecology, and the environment using urban outdoor or indoor settings.	Nature study, citizen science and other forms of environmental monitoring, inquiry-based programs, community mapping.
Problem Solving	Address environmental and related social problems.	Environmental activism, conservation education, action research, environmental justice education.
Environmental Stewardship	Foster community-based management of urban ecosystems and natural resources.	Grassroots stewardship and education, civic ecology education, green jobs training, youth employment programs.
Youth and Community Development	Contribute to positive youth development, asset-based community development, community organizing, and social capital.	Youth development programs, adventure education, youth counseling, community development programs.
City as Social-Ecological System	Develop an understanding of cities as social-ecological systems, re-envision how to manage cities, including for environmental integrity and human well-being.	Any approaches to explore social and ecological aspects of cities: art, participation in green design and environmental events, learning from professionals and lay people.

The last two trends—Youth and Community Development and City as Social-Ecological System—have stronger roots in practices specific to urban environments. Schusler and Krasny (2010), who conducted a study of the ways in which teachers and club leaders negotiate their role and that of their students in participatory environmental action programs, articulated the strong links between environmental education and positive youth development. Subsequent work in New York City has revealed how professionals leading after-school programs in the Bronx describe their work as fostering youth and community development, and talk about environmental education as a means to address these goals. Interestingly, when presented with the concept of sense of place, Bronx program leaders saw the connection between their work in youth and community development and sense of place (Kudryavtsev et al., 2012). Subsequent research with an urban youth farming program in New York City (Delia, 2013) has attempted to link positive youth development and critical pedagogy of place (Gruenewald, 2003) through

the notion of caring or cariño (Bartolomé, 2008; Noddings, 2005).

In contrast to trends that have emerged from environmental education and youth development practice, City as Social-Ecological System draws heavily from scholarship in coupled human and natural, or integrated social-ecological, systems. This trend reflects earlier work of Leopold (1949) who spoke of humans as belonging to a larger community that includes soils, waters, plants, animals, or collectively land; and Cronon (1995), who challenged our notions of pristine wilderness untouched by humans. More recently, this trend has been informed by scholars associated with the Stockholm Resilience Centre focused on social-ecological systems resilience (e.g., Berkes, Colding, & Folke, 2003; Ernstson et al., 2010; Gunderson & Holling, 2001) and with the NSF Urban Long-Term Ecological Research sites (Grimm, Grove, Pickett, & Redman, 2008; Pickett et al., 2007; Pickett, Cadenasso, & Grove, 2004). Because of its unique link to scholarship surrounding social-ecological systems resilience, including adaptive capacity and transformation in the face of ongoing and more sudden catastrophic change, this trend, albeit less developed than the others, positions environmental education as part of a larger discussion surrounding how cities will respond to climate change and associated more frequent and higher magnitude flooding, droughts, heat waves, and other disturbances (Krasny et al., 2010; Krasny & Tidball, 2009a; Tidball & Krasny, 2012).

In practice, urban environmental education programs usually combine more than one trend. For example, a garden-based urban environmental education program in Brooklyn (Morgan, Hamilton, Bentley, & Myrie, 2009) uses ideas from City as Classroom in teaching about science and gardening, and from Youth and Community Development in teaching youth public speaking skills. In another example from New York City, the Harbor School and Satellite Academy High School include classroom and outdoor learning about science and environment, and hands-on community gardening as well as culturing oysters for reintroduction into the city's estuary (Crestol & Krasny, in preparation; Kudryavtsev, 2010, 2011), thus integrating City as Classroom and Environmental Restoration. Youth participating in Bronx restoration projects also collaborated with other organizations and community members to advocate for transforming post-industrial blighted areas into green spaces (Parrilla, 2006), consistent with the Problem

Solving trend, and the Garden Mosaics program engaged youth in community gardening as a means for connecting science and multicultural understanding, and inspiring local action to solve problems identified by elder community gardeners (Kennedy & Krasny, 2005; Krasny & Tidball, 2009b), thus incorporating ideas from all five trends. Finally, an ecological perspective of urban environmental education would suggest the interaction of various trends, practices, and other elements of the social-ecological system (Tidball & Krasny, 2010, 2011), at times reinforcing each other through feedback mechanisms. For example, an intergenerational program may use environmental restoration to promote youth and community development and the social connections and trust formed through this program may foster further engagement in environmental restoration, thus enabling participants and their community to build further trust and social connections (Krasny et al., submitted).

Unavoidably, a number of relevant practices were not uncovered through our literature search, which was limited to English language papers found using the search term "urban environmental education" in the ERIC and Google Scholars databases, and earlier literature cited in these papers. For example, there is an emerging tradition of urban outdoor adventure education (Fouhey & Saltman, 1996) and urban multi-cultural environmental education (Krasny & Tidball, 2009b; Shava, Krasny, Tidball, & Zazu, 2010), and scholars have described the importance of critical pedagogy of place (Bowers, 2002; Greenwood, 2009; Gruenewald, 2003), both of which are highly relevant to urban settings. Further, we are aware of multiple urban environmental education practices in African and Asian countries, including hands-on restoration of nature preserves in Cape Flats, South Africa; natural and cultural history programs along the recently daylighted Cheonggyecheon River in Seoul, South Korea; and pond restoration and dragonfly monitoring in Japan (Krasny, Lundholm, Lee, Shava, & Kobori, in press). These practices would fall into the Environmental Stewardship, Youth and Community Development, City as Classroom, and City as Social-Ecological System trends—although it is possible that further research on urban environmental education in other countries, and using search terms in different languages, would reveal additional trends. Finally, this paper does not address contentious issues about definitions nor does it prioritize one trend or goal over another. Rather, we define urban environmental

education simply as environmental education that occurs in cities. Whereas at first glance this definition may appear to align our work with education *in* the urban environment, the various trends we uncovered also are consistent with notions of education *about* and *for* the environment (cf. Lucas, 1972).

Conclusion

Similarly to other classifications of environmental education based on philosophical, pedagogical and related perspectives (Disinger, 2001; Fraser, Gupta, & Krasny, 2013; Lucas, 1972; Monroe, Andrews, & Biedenweg, 2007; Sauvé, 2005; Schulze, 2005), the goal of our typology of urban environmental education is to foster reflection and conversations about practice and scholarship among educators, researchers, and decision-makers. Environmental education and youth and community development professionals may benefit by using the five trends to reflect on and in some cases adapt their own goals and practice. Researchers may use our typology to start framing discussion about urban environmental education goals, practice and related research questions. Further, a growing number of university urban environmental education courses and degree programs may be able to use this work in training future educators and researchers. Finally, by presenting an analysis of urban environmental education trends, we hope to stimulate a discussion among opinion and policy leaders about the role of environmental education in addressing urban transformation, adaptation, and sustainability.

Acknowledgements

We thank 22 environmental educators from schools, non-profit and community-based organizations, and museums throughout the United States and Canada for reviewing this manuscript and providing thoughtful comments for revisions. These educators participated in an online course *Environmental Education in Urban Communities*, funded by the US Environmental Protection Agency national environmental education training program, EECapacity.

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CHAPTER 3

SENSE OF PLACE IN ENVIRONMENTAL EDUCATION[2]

Abstract

Although environmental education research has embraced the idea of sense of place, it has rarely taken into account environmental psychology-based sense of place literature whose theory and empirical studies can enhance related studies in the education context. This article contributes to research on sense of place in environmental education from an environmental psychology perspective. We review the components of sense of place, including place attachment and place meanings. Then we explore the logic and evidence suggesting a relationship between place attachment, place meanings, pro-environmental behavior, and factors influencing sense of place. Finally, based on this literature we propose that in general environmental education can influence sense of place through a combination of direct place experiences and instruction.

Introduction

The environmental education literature has demonstrated a growing interest in sense of place. Indeed, "sense of place is at the core of many environmental learning initiatives" (Thomashow, 2002, p. 76). Yet related research in environmental education has demonstrated lack of attention to theory and empirical studies in the sense of place literature. In this article we review this literature and discuss how it can contribute to understanding of sense of place in the education context.

Environmental scholars have discussed the people-places relationship long before the development of a strong conceptual basis for sense of place. For example, 100 years ago in words that reverberate with the contemporary place-based education literature, Bailey voiced concerns about the

[2] This chapter was published in Environmental Education Research. According to Taylor & Francis's position on copyright and author rights, the author retains the right to include this article in a dissertation that is not published commercially. Reference: Kudryavtsev, A., Stedman, R.C., & Krasny, M.E. (2012). Sense of place in environmental education. *Environmental education research, 18*(2), 229–250. doi:10.1080/13504622.2011.609615

disconnect between people and their environment (1911, p. 41): "We are more likely to know the wonders of China and Brazil than of our own brooks and woods." Leopold (1949) pioneered the idea that landscapes have multiple aspects such as ethical, aesthetic, economic and ecological, which resonates with the current view of multiple dimensions of place meanings. Carson (1965) emphasized that firsthand experiences with natural phenomena in various places may contribute to children's emotional connection to the world. Taken together, these comments echo contemporary writing about place-based education.

A vast theoretical and empirical sense of place literature developed since the 1960s has been scarcely applied to environmental education despite a surge in interest in place-based and other types of place-related education. Scholars have explored the idea of place and sense of place in relation to childhood development (Bott, Cantrill, & Myers, 2003; Chawla, 1992; Wilson, 1997), restorative experiences and meaningful actions (Kaplan & Kaplan, 2005), well-being (Sampson & Gifford, 2010), pro-environmental behavior, knowledge, and attitudes (Duerden & Witt, 2010; Vaske & Kobrin, 2001), place-based education (Gruenewald & Smith, 2008; Semken & Brandt, 2010; Sobel, 2005), situated pedagogy (Kitchens, 2009), place-based perceptual ecology (Thomashow, 2002), children's place preferences (Derr, 2002), imaginative education (Fettes & Judson, 2011), critical pedagogy of place (Gruenewald, 2003; McInerney, Smyth, & Down, 2011), and higher education (Barlett, 2005b; Orr, 1992). However, with a few notable exceptions (Ardoin, 2006; Semken, Neakrase, & Dial, 2009; Vaske & Kobrin, 2001), environmental education researchers have rarely drawn on the sense of place literature.

Because the sense of place literature has rapidly proliferated in multiple directions, engaging this literature in its full complexity with respect to environmental education is far beyond the scope of a single journal article. We choose to anchor our engagement in environmental psychological sense of place traditions, while recognizing the need for additional work that is based on other approaches to understanding sense of place. The environmental psychology perspective has developed a robust theoretical framework complemented by numerous studies in different contexts. This literature can contribute to environmental education research by offering consistent terminology and research approaches exploring cause-and-effect relationships, thus helping to improve our understanding of

educational activities effects on sense of place. With the goal to advance sense of place research in environmental education, in this article we review the sense of place literature and discuss how this knowledge can be applied to environmental education practice and research.

The Sense of Place Concept

Since first proposed by geographers several decades ago (Lynch, 1960; Relph, 1976; Tuan, 1974, 1975, 1977), the notion of sense of place has been marked by numerous revisions and inconsistent use of terms (Burdge & Ludtke, 1972; Devine-Wright & Clayton, 2010; Farnum, Hall, & Kruger, 2005; Jorgensen & Stedman, 2001; Manzo, 2003). For example, scholars have used imprecise terms with little theoretical foundation such as rootedness, place affiliation and place bonding (Farnum, et al., 2005). Further, concepts such as place attachment have been used interchangeably with notions such as insidedness or topophilia (Low & Altman, 1992), or confused with the notion of sense of place (Vanclay, 2008).

However, today many researchers, especially those using a psychological approach, suggest that sense of place is a combination of the two principal and complementary concepts that we review below: place attachment and place meaning (Figure 3.1) (Farnum, et al., 2005; Semken, 2005; Semken & Brandt, 2010; Semken & Freeman, 2007; Smaldone, Harris, & Sanyal, 2005, 2008; Stedman, 2000, 2002, 2003b; Stokowski, 2002; Trentelman, 2009; Van Patten & Williams, 2008).

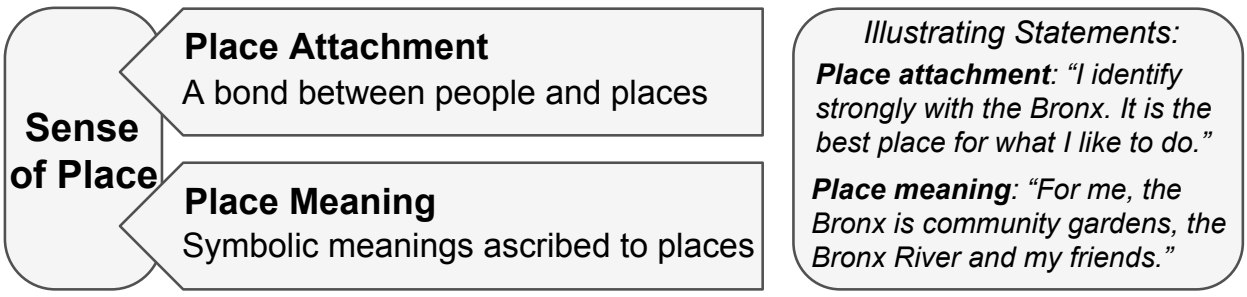

Figure 3.1. Components of sense of place.

Sometimes scholars follow a similar understanding of sense of place, but use different terms. For example, Malpas (2010) suggests that sense of place refers to a sense of belonging to places and the character of places, which resemble place attachment and place meaning respectively; similarly, what Burdge and Ludtke (1972) call "identification with place" resembles place attachment. Some scholars propose somewhat different definitions of sense of place such as "a living ecological relationship between a person and a place" including "physical, biological, social, cultural" and other factors (Kincheloe, McKinley, Lim, & Barton, 2006).

Place attachment in the sense of place literature refers to the bond between people and places, or the degree to which a place is important to people (Jorgensen & Stedman, 2001; Low & Altman, 1992; Stedman, 2003a). Kyle (2003) defines this concept as "the extent to which an individual values or identifies with a particular environmental setting." Within place attachment, researchers sometimes distinguish between place dependence and place identity (Arnberger & Eder, 2008). Place dependence is the potential of a place to satisfy an individual's needs by providing settings for his or her preferred activities (Farnum, et al., 2005; Halpenny, 2006; Stokols & Shumaker, 1981; Vaske & Kobrin, 2001). For example, an urban resident may be attached to a community garden because it provides a space for her favorite activities. Place identity is the extent to which a place becomes part of personal identity or embodied in the definition of the self (Cuba & Hummon, 1993; Farnum, et al., 2005; Hauge, 2007; Korpela, 1989; Lalli, 1992; Manzo & Perkins, 2006; Proshansky, Fabian, & Kaminoff, 1983; Trentelman, 2009; Uzzell, Pol, & Badenas, 2002; Vaske & Kobrin, 2001). For example, a resident of the Bronx may be attached to this borough because it reflects the kind of person he believes he is. Although place attachment usually implies a positive bond between people and places (Vanclay, 2008), scholars call for a broader understanding of this phenomenon by considering negative or ambivalent feelings toward places (Manzo, 2005). For example, they discuss negative place attachment when certain aspects of places are in conflict with self-identity, do not serve a person's needs, or repel people (Klenosky, LeBlanc, Vogt, & Schroeder, 2008; Semken & Freeman, 2007) making them want to escape certain places (Cannavò, 2007).

Researchers often use Likert-scale surveys to assess place attachment. This scale usually consists

of items such as “This is the best place for what I like to do” and “I feel like this place is part of me” (Moore & Graefe, 1994; Stedman, 2000; Williams & Roggenbuck, 1989). Though place dependence and place identity are conceptually different, sometimes these components of place attachment are highly correlated in field studies and researchers treat them as one factor (Jorgensen & Stedman, 2001; Moore & Scott, 2003). Although place identity and place attachment are often positively correlated, some researchers treat them separately because these constructs “do not act uniformly in relation to other variables” such as beliefs about anthropocentrism and other environmental attitudes (Burduk, Thomas, & Tyrrell, 2009). Some researchers use separate Likert scales to measure attachment towards natural vs. civic aspects of places (Scannell & Gifford, 2010). While most research has measured place attachment in adults, two studies used place attachment surveys with youth in a natural-resources-based work program (Vaske & Kobrin, 2001) and in urban environmental education programs (Kudryavtsev, Krasny, & Stedman, 2010).

Place meaning refers to the symbolic meanings that people ascribe to settings. Place meaning is defined by answers to descriptive questions such as “What does this place *mean* to you?” or “What *kind* of a place is this?” (Davenport & Anderson, 2005; Jacobs & Buijs, 2011; Smaldone, 2005; Smaldone, et al., 2008; Stedman, 2000b, 2002, 2008). The idea of people ascribing certain qualities to places, such as cultural values associated with a spatial area, has a long history in the social sciences (Firey, 1945). Relph (2007) argues that “the meanings of places may be rooted in the physical settings and objects and activities, but they are not a property of them—rather they are a property of human intentions and experiences.” Place meaning is a multidimensional construct and may reflect an individual’s environment, social interactions, culture, politics, economics and aesthetic perspectives (Ardoin, 2006; Young, 1999a), a mix of reinforcing or contradictory personal experiences (Kong & Yeoh, 1995), as well as history of places (Kong & Yeoh, 1995; Rotenberg, 1993; Ryden, 1993, 2008). In the same location different people may have different place meanings (Cannavò, 2007, p. 38; Stedman, 2008). As an illustration, one person may think of the Bronx in New York City as the birthplace of hip-hop culture, low-income housing projects and his close friends, while another person may hold different place meanings for the Bronx such

as her community garden, the wildlife in waterways, environmental injustice, and her community-based organization. Multidimensionality of place meanings is confirmed by studies in which people name distinctive natural and social attributes of places (Cantrill, 1998) or in which place meanings are attributed to different themes such as "environment," "self" and "others" (Gustafson, 2001). Place meanings may serve as the reason for place attachment and depend on the value that people put on these meanings (Stedman, 2006b).

Researchers have used various methods to explore place meaning. On the one hand, researchers have employed quantitative methods such as surveys to determine how pronounced specific place meanings are. For example, Stedman (2002) used Likert-scale surveys to assess specific dimensions of place meaning among lakeside residents. The survey asked participants to rate belief statements related to environmental dimensions of sense of place such as "My lake is a place to escape from civilization;" "My lake is a place of high environmental quality;" and "My lake is a pristine wilderness." Similarly, Young (1999b) asked people to use a five-point scale to rate how well a place can be described by 30 place meaning items such as "ancient," "pristine," "overdeveloped" and "crowded." Other researchers have used qualitative methods to explore the whole spectrum of place meanings that participants assign to places, as well as experiences through which these meanings are created. For instance, scholars have used open-ended surveys asking participants to describe memorable places and "explain what these places mean to them" (Schroeder, 1996), conducted semi-structured interviews with questions such as "How would you characterize this place?" (Jacobs & Buijs, 2011), or combined open-ended surveys with in-depth interviews (Smaldone, et al., 2008). Sometimes map-based research approaches are used (Brown & Raymond, 2007) to help research participants determine places that hold some place meanings for them and describe these meanings. To capture even more descriptive and nuanced place meanings as well as to elicit experiences defining place meanings, some scholars have used variations of the narrative approach (Burley, Jenkins, Darlington, & Azcona, 2005; Worster & Abrams, 2005), relied on photo-narratives (Beckley, Stedman, Wallace, & Ambard, 2007; Stedman, Beckley, Wallace, & Ambard, 2004), and involved participants in drawing maps combined with informal conversations generating ethnographic

data (Sampson & Gifford, 2010) and in storytelling to provide "rich metaphors and detailed imagery" converging along several large themes (Davenport & Anderson, 2005).

Sense of place—including place attachment and place meaning—can be expressed for various types of places. For example, researchers have explored sense of place for a river (Bricker & Kerstetter, 2000), city or neighborhood (Hidalgo & Hernández, 2001), wildlife refuge (Payton, 2003), trail (Kyle, Graefe, & Manning, 2005), lake (Stedman, et al., 2007) and urban forest (Arnberger & Eder, 2008). In terms of size, people express sense of place in relation to places of various scales: from a settlement to a country (Shamai & Ilatov, 2005), from a town to a larger ecoregion (Ardoin, 2009), from small-scale objects to large-scale cities and regions (Altman & Low, 1992), from a very specific spot to the nation (Vanclay, 2008), and from a scenic lookout point to a large national park (Smaldone, et al., 2008).

In short, although scholars of sense of place use different terminology, we generally can agree on two main components of sense of place. Place attachment reflects how strongly people are attracted towards places, while place meaning describes the reasons for this attraction.

Sense of Place and Pro-Environmental Behavior

A number of scholars have suggested that sense of place fosters pro-environmental behavior, and related emotions, attitudes and behavioral intentions, which is an important goal of environmental education (Heimlich & Ardoin, 2008; Hungerford & Peyton, 1989; Hungerford & Volk, 1990; Monroe, Andrews, & Biedenweg, 2007). For example, Relph (1976, p. 37) proposed that place rootedness leads to "a sense of deep care and concern for that place." Further, Olwig (1982) wrote, "To encourage the development of sense of place in the child is to provide the basis … for the sense of personal concern which is necessary if it is to take an active interest in the future of its environment" (cited in Chawla, 1992, p. 83). In the same vein, Orr (1992, 1994) builds on Tuan's (1977) theoretical framework and contends that people will act responsibly towards their immediate environment if they have a sense of rootedness. Similarly, drawing on ecojustice philosophy, scholars suggest that affective ties to places may motivate people to be better informed about local environmental issues and make decisions beneficial to

their communities (Adams, Ibrahim, & Lim, 2010). Finally, based on Relph's (1976) proposition that place attachment engenders a sense of responsibility and Gould's (1991) contention that people would not fight for what they did not love, Walker and Chapman (2003, p. 74) propose that "a positive relationship may exist between a person's sense of place and pro-environmental intentions he or she has in regard to that place."

Place Attachment Fostering Pro-environmental Behavior

Supporting these more general statements, empirical research has demonstrated significant correlations between place attachment and pro-environmental behavior. For instance, Kaltenborn (1998) surveyed 300 residents in Spitsbergen, Norway and found a significant correlation between strength of place attachment and willingness to actively contribute to solutions for potential environmental problems, such as cleaning up oil spills along the shoreline. Stedman (2002) surveyed a large sample of property owners in a rural lake region in Wisconsin and found that stronger place attachment was positively associated with behavioral intentions to maintain valued qualities of their environment such as scenery and water quality. Walker and Chapman (2003) surveyed 258 visitors to a Canadian national park and found through regression analysis that place attachment positively predicted pro-environmental behavioral intentions such as volunteering in park projects. In a survey of 305 residents in a rural community in Norway, Vorkinn and Riese (2001) demonstrated that place attachment was a stronger predictor of negative attitudes towards a major hydropower development than a combination of socio-demographic variables. Ryan (2005) surveyed 328 park users in urban settings in Michigan and found that attachment to urban parks predicted residents' and environmental volunteers' concern about conserving nature in cities. Finally, in a regression analysis study Rioux (2011) surveyed 102 children aged 14–17 in a secondary school in France, and found that attachment to their neighborhood is a significant predictor of the behavior of collecting used batteries for recycling. Yet these studies do not demonstrate that place attachment *causes* pro-environmental behavior.

Several studies using structural equation modeling, including confirmatory factor analysis, have

teased out a cause-and-effect relationship between place attachment and pro-environmental behavior. In a study that tested this relationship in children, Vaske and Kobrin (2001) used a post-program survey of 182 youths aged 14–17 in a conservation work program and found that place attachment predicted general and specific environmentally responsible behaviors such as trying to convince others to act responsibly towards the environment and joining in community cleanup efforts. In a study with adults, Halpenny (2006, 2010) used structural equation modeling to analyze the data from a survey of 355 park visitors and found that place attachment predicted both place-specific pro-environmental behavior such as volunteering to protect a specific park and general pro-environmental behavior such as reducing energy consumption. Finally, Payton et al. (2005) used structural equation modeling to analyze a survey of 451 wildlife refuge visitors and found that place attachment contributed to individual and institutional trust, which in turn, as part of the same model, was a significant predictor of civic action such as "donation of time, effort, and resources" at the refuge.

Place Meaning Fostering Pro-environmental Behavior

Several researchers examined the effect of place meanings on pro-environmental behaviors, attitudes, and awareness. For example, Manzo and Perkins (2006) reviewed the environmental and community psychology literature and concluded that people are motivated to protect places that are meaningful to them. In a study using a narrative approach with 29 residents in rural Welsh communities, Henwood and Pidgeon (2001) found that residents expressed concerns about potential urbanization that would threaten trees and forests, which carry symbolic meanings that inform place identity in those communities. Brehm et al. (2006) used regression analysis of surveys of 566 residents in rural communities in Wyoming and Utah and found that place meanings related to nature strongly predicted concerns about protection of natural resources. These studies are consistent with Stedman's suggestion that people will be more likely to protect places to which they are attached against outside threats that directly challenge their place meanings (2003b), and Stewart's (2008) idea that "our place meanings tell us which alternatives [of land use] to support, and which ones to oppose." Similarly, people who view a

stand of trees as "biological legacy and pristine ecosystem" would exhibit a different natural resources management behavior from people who view this place as a source of "per-capita income supporting independent lifestyles and well-being of the nation" even if they have the same place attachment (Cheng, Kruger, & Daniels, 2003). In sum, these studies suggest that what we call "ecological place meaning"—one of the dimensions of place meanings reflecting natural elements or ecological features of places—may be related to behaviors that protect these elements. Research has not yet explored whether other dimensions of place meanings, such as social or architectural, influence pro-environmental behavior, but such work would be a welcome addition to that which focuses on ecological meanings. It is possible that ecological place meaning combined with other meanings may have an even stronger impact on pro-environmental behavior, for example, when people are attached to and appreciate a river not only because of its ecological meaning but also because of the cultural and social meanings symbolizing this place. It is also possible that other meanings—for example, those based on community well-being and/or social relationships—may lead to behaviors tied to the ecological environment or to improving other aspects of the local community.

In general, theoretical and empirical studies provide convincing logic and evidence that sense of place impacts pro-environmental behavior, yet research about this relationship can be challenged in several ways. First, the impact of place attachment on pro-environmental behavior has been explored mostly in places with abundant natural elements such as parks and in rural areas. It is unclear whether this relationship applies in more urbanized or disturbed settings. Second, the majority of studies were conducted with adults, and we are unsure to what extent their conclusions are applicable to younger audiences. Third, little is known about how place attachment and ecological place meanings interact with other factors influencing pro-environmental behavior. For example, one study found that place attachment did not predict pro-environmental behavior such as protecting remnant vegetation by farmers in northern Victoria, Australia, but the authors suggest that this type of on-farm pro-environmental behavior is constrained by "contextual factors such as income, time and equipment" (Gosling & Williams, 2010).

Unfortunately few studies have examined the combined effect of place attachment and ecological

place meaning on pro-environmental behavior, yet we suspect that it is the combination of strong place attachment *and* emphasized ecological place meaning that fosters pro-environmental behavior more so than these two factors taken separately. For example, Scannell and Gifford (2010) developed a two-dimension place attachment survey separately measuring attachment to the natural and to the civic environments. They used regression to analyze surveys from 104 community residents in Canada and found that place attachment based on the natural rather than the civic aspects of a place predicted pro-environmental behavior. One may interpret this finding and the studies reviewed above as suggesting that strong place attachment *without* emphasized ecological place meaning may not necessarily contribute to pro-environmental behavior.

Factors Influencing Sense of Place

Many environmental educators seek to influence sense of place among students in efforts to foster environmental behaviors, yet research on how this can best be done is lacking. Below, we review factors affecting place attachment and place meaning. This literature can inform environmental education programs and research addressing sense of place.

Development of Place Attachment

Below we argue that place attachment can be developed through both (1) direct experiences with places, especially long-term, frequent and positive experiences, and (2) learning about places from indirect sources rather than direct contact. An experiential perspective suggests that direct engagement with a place over long periods of time or frequent place visits can forge place attachment (e.g., Relph, 1976; Tuan, 1977; Williams & Patterson, 1999). A number of empirical studies support this idea. For instance, Moore and Scott (2003) conducted a regression analysis of surveys of 438 recreational trail users in a park and found that frequency of use of the trail was a significant predictor of their place attachment. Likewise, Lewicka (2005) used structural equation modeling to analyze surveys of 1328 residents in various regions in Poland and found that residence time was a significant predictor of place

attachment towards inhabitants' neighborhoods. Evidence that less frequent and shorter encounters with a place do not strengthen place attachment comes from Morgan (2009), who surveyed 198 participants of an interpretation program in a cave in Missouri and found that their place attachment was not significantly different before and after a one-time cave tour. Finally, little research has been done to address the question "What happens to sense of place when places change?" (Davenport & Anderson, 2005), although Beckley (2003) hypothesized that "a person's attachment to place will increase or decrease in accordance with both positive and negative ecological changes and sociocultural changes in that place."

Besides the frequency and length of encounters with places, a cluster of studies mentions active engagement with places as driving place attachment. For example, scholars hypothesize that participating in environmental stewardship activities enhances attachment to sites that are being restored or to natural areas in general (Barlett, 2005a; Beckley, 2003; Gobster & Hull, 1999; Wilson, 1997). Supporting this idea, anecdotal evidence suggests that maintaining community gardens enhances connectedness between gardeners and a place (B.D. Lynch & Brusi, 2005). In another project supporting this idea, Ryan et al. (2001) surveyed 148 adult long-term environmental volunteers in Michigan and found that involvement in restoration activities strengthened participants' attachment towards local natural areas. Finally, in a study of 328 park users, Ryan (2005) found that attachment to specific urban parks was stronger among frequent park users and neighbors than among environmental volunteers who became more generally attached to the ecosystems represented by the parks.

Some studies indicate that interactions with other people also influence place attachment. For instance, Eisenhauer et al. (2000) surveyed 434 residents in Utah and found that the most important reasons for place attachment were social interactions and environmental characteristics of places such as a place's scenery and wildlife. Chawla (1992) used environmental autobiographies and reviewed theoretical work to suggest that place attachment in children may be facilitated by a sense of security, the ability to influence the environment, and the opportunity to be a functional community member. Finally, Barlett (2005b) interviewed 37 faculty members at Emory University who learned about the local environment while introducing environmental issues into their course materials, and found that these faculty

experienced a growing connection to ecological and built dimensions of Atlanta and the campus through "learning the names of species, face-to-face narratives, and connections with ethics and personal values" as well as the woods walks they took with their peers.

Although Brocato (2006) argues that people cannot be attached to places that they have "never visited or visited only a couple of times," several studies have suggested that individuals may develop place attachment to distant places. For example, some researchers have proposed that people may be attached to a place that they have never experienced directly if they think that this place "may afford them a unique setting in which to achieve their goals" (White, Virden, & van Riper, 2008). Similarly, referring to place identity and building on Tuan's and Relph's ideas, Warzecha and Lime (2001) propose that "it is possible for people to develop emotional/symbolic ties without ever visiting a particular place." This idea is consistent with Semken & Brandt's reasoning (2010): "While making meaning in places, people frequently form emotional attachment to them. Such place attachments can vary in intensity from simple acknowledgement that a place exists to a willingness to make meaningful personal sacrifices in order to preserve or enhance the place." This idea is supported by a survey study of 386 introductory geology students in Arizona, in which students who had never been to the Grand Canyon showed some level of place attachment, although weaker than in students who had visited the Grand Canyon (Semken, et al., 2009).

Development of Place Meaning

Greider and Garkovich propose that "meanings are not inherent in the nature of things" (1994, p. 2). In the same vein, Davenport and Anderson (2005) posit, "people assign meanings to places and derive meaning in their lives from places." Thus place meanings are created, reproduced, and modified by people (W. Stewart, 2008). Similarly to the development of place attachment, we posit that place meanings can be purposefully developed through two primary mechanisms that are not mutually exclusive: (1) creating place meanings through first-hand experiences in places, and (2) learning place meanings from written, oral and other sources, including communication with other people. Scholars

argue that experiencing unique attributes of places—including geographical features such as rivers and lakes as well as cultural attractions—may facilitate the creation of particular place meanings (Lalli, 1992). In this case the physical environment, although not deterministic of meanings, sets bounds for the possible experiences and place meanings (Goodrich & Sampson, 2008; K. A. Sampson & Goodrich, 2009; Stedman, 2002, 2003a, 2003b). For example, through experiencing an urban place it may be possible to create such place meanings as "concrete jungle" or "well-maintained public parks," but less likely "wilderness" or "native landscapes." In line with this reasoning, Cuba and Hummon (1993) infer that place meanings are informed by the structure of experiences with places and involvement in social activities. Empirical studies also demonstrate that repeated and varied direct experiences in places, positive or negative pivotal moments, and feeling of safety may also contribute to place meanings (Manzo, 2005, 2008).

Scholars have suggested that place meanings are created, cultivated and modified not only through direct place-based experiences but also by such means as stories, myths, literature, promotional materials, folklore, paintings, music, films, history, casual conversations and memory (Basso, 1996; Schenkel, 1992; Tuan, 1977). Place meanings can be articulated and reproduced through media independently of the actual location (Giaccardi & Palen, 2008; Malpas, 2010), or through activities organized in actual places such as community art events and "walks and talks" programs (Vanclay, 2008). Stokowski (2002) suggests that "people actively create meaningful places through conversation and interaction with others." Similarly, Johnstone (1990) reasons that "our sense of place and community is rooted in narration" (cited in Stokowski, 2002). This view resonates with the idea that "collective storytelling plays a critical role in supporting a situated and narrative mode of interpretation and construction of our sense of place and heritage" (Giaccardi & Palen, 2008), and that telling narratives sometimes may be more important than physical alteration of the landscape to alter place meaning (Vanclay, 2008). Consistent with this idea, researchers suggest that collective memories of slavery and sharecropping may negatively influence African Americans' place attachment to wildland recreation areas (Johnson, 1998; Johnson & Bowker, 2004) and parks (Kyle & Johnson, 2008). Yet acknowledging

history and presence of different ethnic groups in a place may improve their view of this place (Low, Taplin, Scheld, & Fisher, 2002).

Supporting this literature, studies have demonstrated that both direct experiences of places and learning place meanings from other people or interpretative media may contribute to creating place meanings. For example, Lim and Barton (2010) used ethnographic research methods to explore how 19 children in New York City developed their sense of place, referring mainly to their place meanings. These researchers found that children assign meanings to places when they learn about the history of places or engage in reciprocal relationships with other people in their neighborhood. Stewart et al. (1998) conducted interviews with 64 visitors to a national park in New Zealand and found that symbolic place meanings could be developed even during short visits to the park through guided tours, interpretation materials, leaflets and display panels. In addition, interviews with homeowners (Case, 1996) and residents near a national park (Smaldone, et al., 2008) revealed that journeys away from local settings also may help people to discover meanings of their local places that otherwise may be taken for granted. Finally, interpretive investigation of place meanings ascribed by 25 community members to Niobrara River in Nebraska showed that place meanings may evolve over time—for example, young people may directly experience places yet take them for granted and realize their unique ecological meanings only when they grow up (Davenport & Anderson, 2005).

Environmental Education Influence on Sense of Place

The literature reviewed thus far would suggest that fostering ecological place meanings and enhancing place attachment may contribute to pro-environmental behaviors. However, we are not aware of research on precisely how environmental education can influence sense of place, in spite of the fact that some scholars indicate that place meanings can indeed be taught or influenced (Lynch, 1960; Stedman, 2006a). Here we will build on our discussion of factors contributing to sense of place to explore how such factors may be used to achieve one of the goals of environmental education: pro-environmental behavior.

The previous section suggests that sense of place—including place meaning and place attachment—is shaped mainly through direct experiences in places and indirect learning about places. Based on this literature we observe that environmental education programs use two general approaches to influence sense of place—*experiential* and *instructional*—often in combination (Figure 3.2).

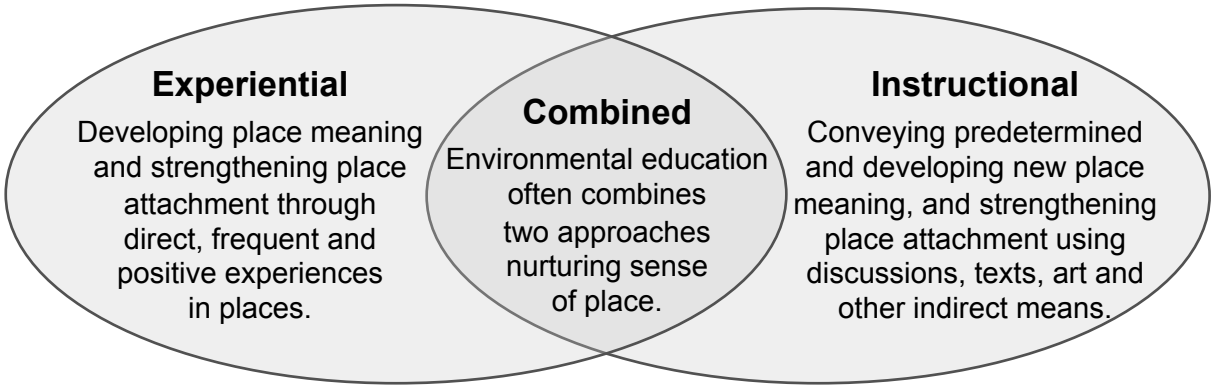

Figure 3.2. Combining two approaches influencing sense of place.

The experiential approach, based on the idea that place meanings emerge from experiences in physical settings (Relph, 2007), implies that participants of environmental education develop place meanings through first-hand encounters with places. Consistent with the literature about factors influencing sense of place, environmental education may nurture sense of place through long-term, frequent or positive experiences in places, and active engagement with places. Examples of experiential activities without place-related interpretation or formal instruction include unstructured time in outdoor programs to explore places on one's own, or at least without intentional teaching about a place. The experiential approach is perhaps related to behavioral insideness, "a situation involving the deliberate attending to the appearance of place… figuring out what is where and how the various landmarks, paths, and so forth all fit together to make one complete place" (Seamon, 1996). However, the experiential approach alone cannot convey some place meanings if they are invisible (Campbell, 2008). For example, the ecological history and cultural traditions of a place are not always directly experienced, and require instruction or interpretation to become place meanings.

The instructional approach, in contrast, contributes to place meaning and place attachment through teaching and negotiation about places by indirect means such as lectures, storytelling, books, art, movies, websites and other media. This approach emphasizes meanings conveyed by instructors rather than experiential creation by students; however it maintains a role for student participation in construction and modification of place meanings. For example, students can contribute to textual representations of places (Cormack, Green, & Reid, 2008) or share their own narratives related to their experiences in and meanings of the urban or other environment (McClaren, 2009). New meanings may emerge through conversations with peers and educators, and through social and reflective learning. Using this approach, education may convey certain place meanings or help students construct meanings even without visiting a place, for example, through discussions and watching a documentary about a national park. What place meanings besides ecological may or should be promoted through environmental education is a topic for future debates, which may involve a political discussion as to what place meanings are more legitimate or desired than others. Some writers, for example, call for a plurality of place meanings to promote diverse place use (Cannavò, 2007). Similarly to the experiential approach, place meanings nurtured through instruction may serve as the base for place attachment. At the same time, educators should be aware of other factors influencing sense of place such as social group identity (Cheng, et al., 2003), occupation (Jacobs & Buijs, 2011), gender, race, ethnicity, and cultural identity (Kyle & Johnson, 2008; Manzo, 2005). Perhaps the impact of these factors depends on contexts; for example, race and gender may be crucial in some settings but not others.

The combined approach takes advantage of nurturing place meanings both through direct place experiences *and* through instruction, negotiation, and interpretation. In this approach place meanings are not only freely created through place-based experiences, but also conveyed by and emerge from discussions among educators and participants of environmental education. This approach resonates with the idea that place meanings are constructed not only through direct experiences, but also through social construction of place meanings before visiting a place (Young, 1999a). Whether purposely or not, many education programs combine experiential and instructional approaches, which we think is an effective

strategy to nurture place meaning and strengthen place attachment. It should be noted that combining direct, perceptual experiences of objects of learning with some kind of interpretation or instruction is not a new idea. For example, a century ago educators promoted observations of natural objects with a follow-up story-based interpretation of what students saw (Comstock, 1904). Contemporary examples of education programs combining the experiential and instructional approaches exist in place-based education, interpretive education, civic ecology education, and urban environmental education, which we briefly review below.

Place-based education refers to a broad range of education programs in which students learn about local natural, built, and social environments through inquiry, environmental action, and other hands-on activities in a specific place (Hutchinson, 2004; Sobel, 2005). The place-based education literature does not necessarily emphasize sense of place as the primary outcome of place-based education programs but more often focuses on academic achievement and appreciation of the natural world (Dubel & Sobel, 2008; Smith & Sobel, 2010). Yet some writers and scholars suggest that such programs are purposefully trying to enrich sense of place (Semken, et al., 2009) or to "enable students to establish a connection to a place" (Green, 2008), and that sometimes "sense-of-place education" may be another name for place-based education (Heimlich, 2007). We agree that place-base education has a much broader mission than nurturing sense of place, and a much broader focus than just fostering behaviors and attitudes. Yet from the standpoint of the current discussion we can observe the use of experiential and instructional approaches in place-based education. For example, certain place-based programs are attempting to reconnect people to their local places through a combination of experiential methods such as field walks, and instructional methods based on social constructivist pedagogy such as map-making, reflective writing and conversations (Wason-Ellam, 2010).

Many outreach and interpretation programs also combine experiential and instructional approaches. For instance, Safari 7 offers online podcasts for self-guided tour of urban wildlife and various habitats along a subway line in New York City, in which participants learn about a place through listening to interviews, sounds and music, as well as through visiting actual parks, cemeteries, buildings and

waterways, and observing animals and plants. Along similar lines, civic ecology education (Krasny & Tidball, 2009a, 2009b; Tidball & Krasny, 2007) links experiential and instructional approaches through environmental learning activities conducted while engaging in environmental stewardship. The stewardship activities offer place-based experiences and educators direct participants' attention to social-ecological components of places during the planning and implementation of such activities. As the final illustration of the combined approach to influencing sense of place, both experiential and instructional methods are prominent in various urban environmental education programs (Kudryavtsev, et al., 2010), which involve students in environmental stewardship, ecosystem restoration, urban farming, social and environmental justice, activism, inquiry, monitoring and exploration activities that are place-based and relate to social-ecological aspects of places. For example, in these programs students may visit a park and interview park visitors about ecosystem services of trees—which combines experiencing a place and focusing students' attention on certain values of this place as part of instruction.

These examples show that it is possible to apply the sense of place literature—including terminology and relationships among various constructs—to environmental education practice and research. In addition to conceptualizing sense of place, this literature equips us with qualitative and quantitative research tools for exploring the relationship between education activities, place attachment, and place meanings. In other words, attention to the sense of place literature may enrich an already vibrant place-informed scholarship in environmental education.

Several caveats need to be emphasized. First, our treatment of the sense of place literature in this work is based mainly on a positivist framework, while some elements within the broader place-related literature emphasize a more phenomenological perspective (e.g., Thomashow, 2002), which "provides a rich understanding of complex, intangible phenomena that do not readily lend themselves to psychometric measurement," and moves "away from the objectification of place and its meaning" (Manzo, 2005). See Beckley et al. (2007), Stedman and Beckley et al. (2007), and Williams and Patterson (2007) for a lively discussion of the relative merits of different approaches. We suggest that synthesizing phenomenological with operationalized ideas about places may give us new ways of thinking about and exploring the role of

place in education. Another aspect to consider is that we built on the empirical sense of place literature that rarely discusses place meanings other than ecological in relation to pro-environmental behavior. We agree that not all place meanings are relevant to natural resources management (Jacobs & Buijs, 2011), including pro-environmental behavior, yet it is possible that some cultural, social and other place meanings do impact the ways people influence their places and more broadly their environment.

Finally, the ideas in this article would be very different if in addition to pro-environmental behavior we also focused on other desired outcomes of environmental education related to sense of place. We assert that expanding this range of outcomes under consideration would be very useful. Indeed, environmental educators may find other reasons to be concerned about place meanings and place attachment. For example, scholars have suggested that sense of place or relationship with places may be related to self identity (Ballinger & Manning, 1998; Malpas, 2008), social capital (Beckley, 2003), social group identity (Cheng, et al., 2003), ecological identity (Thomashow, 1995), environmental justice and empowerment for urban youth (Bott, et al., 2003), sense of community (Wyckoff-Baird, 2005), cultural competence (Greenwood, 2009), self-formation and social formation (Kitchens, 2009), emotional well-being and physical health (DeMiglio & Williams, 2008; Johnson & Zipperer, 2007; Millennium Ecosystem Assessment, 2005; Steele, 1981), general attachment to natural areas (Chawla, 1992; Ryan, 2005), and adaptive ecosystem management (Bott, et al., 2003).

We hope that the idea of experiential and instructional approaches—coupled with the literature about sense of place—will spark further discussion about environmental education influencing sense of place. At the same time, scholars can certainly use alternative approaches to interpreting the sense of place literature and apply it to environmental education in a different way. In fact, environmental education would benefit from scholarship embracing the plurality of theoretical interpretations, contexts and research methods enriching our understanding of sense of place and its role in the education context.

Conclusion

The field of environmental education has demonstrated an interest in sense of place and related concepts, although it has rarely drawn explicitly on the sense of place literature. We applied one specific element of this literature—that which draws strongly on environmental psychology—to environmental education in order to facilitate further research about this concept in the education context. We envision this manuscript as an initial foray into a broader discussion of sense of place in environmental education that will draw not only on environmental psychology but also on critical theory, anthropology, cultural geography, and other frameworks and studies. In agreement with the need to use a combination of methodological approaches in environmental education research (Scott, 2009) and the call for methodological diversity in sense of place research (Stedman & Beckley, 2007), we suggest that multiple research approaches may further improve our understanding of the value and significance of sense of place, and its relationship with other outcomes of environmental education. Such research may support new creative environmental education approaches and improve our ability to address environmental and social issues.

Acknowledgements

The Community Forestry and Environmental Research Partnership at University of California, Berkeley provided funding for this study. We sincerely thank the anonymous reviewers for their constructive comments.

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CHAPTER 4

THE IMPACT OF ENVIRONMENTAL EDUCATION ON SENSE OF PLACE AMONG URBAN YOUTH[3]

Abstract

Research suggests that an ecologically informed sense of place, including strong place attachment and ecological place meaning, contributes to pro-environmental behaviors. Yet it is unclear whether an intervention such as environmental education can intentionally influence sense of place, especially in cities. To investigate the impact of urban environmental education programs on sense of place, we used pre/post surveys of youth in 5–week environmental and non-environmental summer youth programs in the Bronx, New York City, in 2010. Results show that urban environmental education programs—which engaged urban high school students in environmental stewardship, recreation, environmental skills development, and environmental monitoring in the Bronx—were successful in nurturing ecological place meaning, but did not strengthen students' place attachment. No significant changes in place attachment or place meaning were observed after non-environmental, control programs.

Introduction

In a recent article about the Ecological Society of America's Earth Stewardship initiative to promote "the long-term integrity of the biosphere and human well-being," Chapin et al. (2011) suggest that sense of place fosters an individual's willingness to engage in environmental stewardship, including in cities. In fact, research shows that different aspects of sense of place contribute to pro-environmental behaviors or behavioral intentions (Halpenny, 2010; Ryan, 2005; Scannell & Gifford, 2010; Stedman, 2002; Walker & Chapman, 2003). Keeping in mind this relationship, scholars propose that sense of place

[3] This chapter was published in Ecosphere. Authors of papers appearing in Ecosphere retain copyright, and do not transfer copyright to Ecological Society of America publishing this journal. Reference: Kudryavtsev, A., Krasny, M.E., & Stedman, R.C. (2012). The impact of environmental education on sense of place among urban youth. *Ecosphere, 3*(4):29. doi:10.1890/ES11-00318.1

could be purposely influenced in order to promote pro-environmental behavior (Walker & Chapman, 2003). However, little is known about whether sense of place can be modified through interventions such as education programs, especially in the urban context.

Given a call for environmental stewardship including in urban areas, and the relationship between sense of place and pro-environmental behavior, we wanted to explore whether sense of place can be nurtured by urban environmental education. This question is especially important given that half of the world's population lives in cities (UN–HABITAT, 2008), characterized as "the dominant global human habitat" (Grove, 2009) and "the defining ecological phenomenon of the twenty-first century" (Newman & Jennings, 2008). We hypothesized that sense of place can be influenced by urban environmental education. Since natural elements are less dominant in cities relative to more rural settings (Barlett, 2005; Johnson & Catley, 2009), a particularly provocative question is whether education programs can help people view living organisms, biological processes and ecosystems as integral parts of the urban environment, i.e., as part of their sense of place.

Urban environmental education programs, in which inner-city students explore local natural phenomena or participate in stewardship, have existed in the Bronx for many years. In the early 1950s, students from kindergarten to the upper grades were using urban natural trails in the Bronx to learn about natural science (Polley, Loretan, & Blitzer, 1953), and over the last four decades school groups have taken part in environmental monitoring and wetlands restoration near the Bronx River (Tanner, Hernandez, Hernandez, & Mankiewicz, 1992). More recently, students in public schools (de Kadt, 2006), and in education programs in community-based organizations such as Rocking the Boat and Youth Ministries for Peace and Justice (de Kadt, 2011; Young, 2008), have engaged in learning about the Bronx environment through water testing, field trips, collaborating with researchers, restoration projects and related activities. Although urban environmental education programs have a long history, we are not aware of research showing that urban environmental education programs foster an ecologically informed sense of place.

In 2008, the first author conducted exploratory interviews of urban environmental educators in six

community-based organizations in the Bronx, New York City. The educators claimed that their programs were reconnecting urban communities, including youth, with their urban natural environment in order to improve their pro-environmental behavior. Upon being introduced to the notion of sense of place, educators agreed that this "reconnecting" with the urban environment could be conceptualized as nurturing an ecologically based sense of place. Thus, the purpose of this study was to determine the impact of urban environmental education programs on youths' ecologically informed sense of place in the Bronx.

Sense of Place Literature

The idea of sense of place has evolved during several decades and has been used in different fields. Leopold's (1949) suggestion that landscapes include multiple aspects such as ethical, esthetic, economic, and ecological resembles the current idea of multiple dimensions of place meanings. Firey (1945) recognized that people ascribe symbols to places based on cultural values and historical associations, and these symbols may influence land use. Lynch (1960) was one of the first to use the term "sense of place," referring to symbolic and memorable aspects of the urban environment. In the 1970s, Tuan (1974, 1975, 1977) developed an experiential perspective on sense of place, which in his view is created through personal experiences with physical settings, and which can be understood through holistic studies of lived experiences. At the same time, Relph (1976) distinguished such aspects of sense of place as place attachment and place meaning. In his view, place attachment represents ties between people and places, and place meaning is the essence of places or symbolic associations of places that define people's individual and cultural identity. These earlier works inspired sense of place scholarship in different fields such as environmental psychology, human geography, cultural anthropology, architecture, sociology, and leisure studies (see a review by Farnum, Hall, & Kruger, 2005), as well as urban environmental restoration, stewardship, and conservation (Ryan 2000, Andersson et al. 2007, Spartz and Shaw 2011).

While there are multiple conceptualizations of sense of place, in this paper we define sense of place as a combination of place attachment and place meaning (Farnum, et al., 2005; Semken & Brandt,

2010; Smaldone, Harris, & Sanyal, 2005; Stedman, 2000a, 2002, 2003b; Stokowski, 2002; Trentelman, 2009; Van Patten & Williams, 2008) (Figure 4.1). *Place attachment* is the bond between people and places (Low and Altman 1992, Jorgensen and Stedman 2001, Stedman 2003a, Davenport and Anderson 2005). Conceptually, place attachment includes place dependence, i.e., the potential of a place to support preferred activities (Farnum, et al., 2005; Halpenny, 2006; Stokols & Shumaker, 1981; Vaske & Kobrin, 2001), and place identity, i.e., the extent to which a place reflects personal identity (Korpela, 1989; Proshansky, Fabian, & Kaminoff, 1983; Trentelman, 2009). *Place meaning* refers to the symbolic meanings that people ascribe to places (Smaldone, Harris, & Sanyal, 2008; Stedman, 2000b, 2002, 2008), which may reflect the physical, natural, social, cultural, familial, political, economic or other aspects of places (Ardoin, 2006; Semken & Butler Freeman, 2008). In sum, place attachment reflects how strongly people gravitate towards places, while place meaning describes the reason for place attachment (Stedman, 2008).

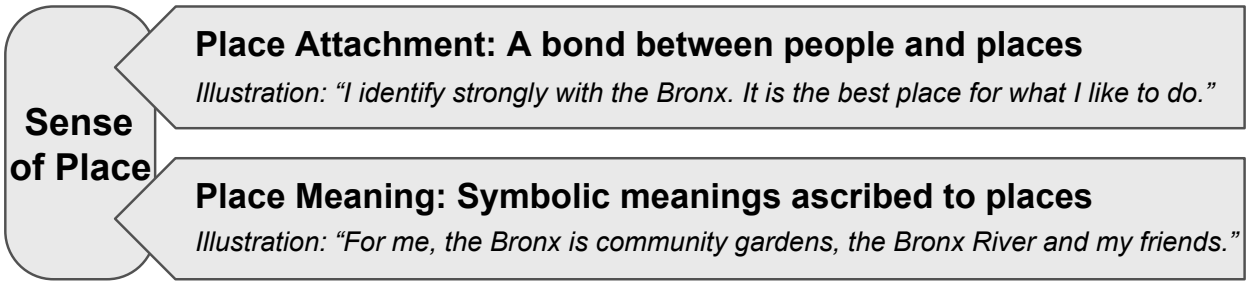

Figure 4.1. Components of sense of place (Adapted from: Kudryavtsev, Stedman, & Krasny, 2012).

In recent years researchers accumulated empirical evidence that sense of place—including place attachment and the ecological dimension of place meanings—may contribute to place-specific pro-environmental behaviors, behavioral intentions, and attitudes. For example, correlational studies showed that people with strong place attachment are likely to contribute to solutions of local environmental problems (Kaltenborn, 1998), support bans on motorized recreation in natural areas (Warzecha & Lime, 2001), hold negative attitudes towards hydropower development (Vorkinn & Riese, 2001), express an intention to maintain valued natural resources such as water quality in lakes (Stedman, 2002), volunteer in

parks (Walker & Chapman, 2003), and be concerned about conserving nature in cities (Ryan, 2005). Similarly, several studies using structural equation modeling showed that place attachment predicts place-specific pro-environmental behavior such as volunteering to protect parks (Halpenny, 2010), civic actions such as donation of time and effort in nature refuges (Payton, Fulton, & Anderson, 2005), general pro-environmental behavior not related to a specific place such as supporting environmental organizations and carpooling (Lee, 2011), and other types of behavior such as participating in a community cleanup (Vaske & Kobrin, 2001).

Other studies suggest that pro-environmental attitudes and behavior are fostered by strong place attachment *in combination* with emphasized ecological place meaning. Advancing our understanding of the interaction between attachment and meanings, Brehm et al. (2006) found that attachment that is based on such place meanings as "natural landscapes" and "presence of wildlife" contributes to supporting environmental protection policies. Similarly, Scannell and Gifford (2010) found that place attachment based on the natural rather than the civic aspects of a place predicted pro-environmental behavior, and Henwood and Pidgeon (2001) showed that people express concerns about potential urbanization if their place meanings include such symbols as trees and forest. Supporting this idea, Andersson at al. (2007) revealed that strong place attachment along with place meanings related to ecological knowledge and practice were drivers for stewardship in allotment gardens. Finally, researchers contend that people tend to protect places (Manzo & Perkins, 2006) or aspects of places (Stedman, 2003b) that are meaningful to them, which is consistent with the idea that emphasized ecological place meanings may contribute to pro-environmental behavior.

Factors influencing sense of place have been reasonably well explored and can be organized in two groups: direct experience of settings, and learning about places from other people or interpretive materials. A number of empirical studies demonstrate that place attachment is strengthened by frequent visits and use of places (Ryan, 2005), commitment to outdoor recreation activities that happen in a particular place (Moore & Scott, 2003), long-term residence (Lewicka, 2005), and active engagement with places such as participating in hands-on environmental stewardship activities (Ryan, Kaplan, &

Grese, 2001). Place attachment can also be strengthened through social interactions in places and opportunities to be a functional community member (Chawla 1992, Eisenhauer et al. 2000, Barlett 2005b, Ryan and Grese 2005). Place meanings are somewhat more difficult to trace causally (Stedman, 2002) but can be informed by direct experiences with places, including by characteristics of the biophysical environment (Manzo, 2005; Stedman, 2003a), as well as by information about a place from other sources (Johnson & Zipperer, 2007). Traveling outside of a place may help people accentuate its meanings, which may be taken for granted (Davenport and Anderson 2005, Smaldone et al. 2008), and sometimes people may realize that they were attached to a place after it has been changed (Ryan, 2000). Scholars also suggest that place meanings can be conveyed, nurtured or created through interpretative materials, mass media, literature, films, photography, legends, customs, discussions, storytelling, and other social interactions (Malpas, 2010; Stewart, Hayward, & Devlin, 1998; Stokowski, 2002; Vanclay, 2008).

Research Question and Methods

Given the link between sense of place and pro-environmental behavior, and given educators' goal to nurture sense of place in urban youth, this research explores the impact of urban environmental education on two components of sense of place. Specifically, we ask:

(1) What is the effect of urban environmental education on youth's place attachment?

(2) What is the effect of urban environmental education on youth's ecological place meaning?

To answer these questions, we conducted a survey study in environmental and non-environmental summer youth programs in the Bronx, New York City. First, we developed and pilot tested a sense of place survey with youth in urban settings in the Bronx. Then we used a quasi-experimental research design to implement pre/post-program sense of place surveys with Bronx youth in an experimental group (urban environmental education programs) and a control group (non-environmental summer youth employment programs). Pre/post-program survey results from both groups were compared by two-tailed *t*-tests, using Stata 10 software. We also used Pearson's correlation to explore whether place attachment becomes more based on ecological place meanings after urban environmental education programs.

Survey Development

To explore the impact of urban environmental education on Bronx students' sense of place, we adapted an existing place attachment scale (Jorgensen & Stedman, 2001) and created a new ecological place meaning scale appropriate for the urban context (Box 4.1).

Place Attachment Scale. To assess place attachment, scholars often use Likert-scale surveys with items such as "This is the best place for what I like to do" and "I feel like this place is part of me" (Williams and Roggenbuck 1989, Stedman 2000a, Jorgensen and Stedman 2001, Warzecha and Lime 2001, Kyle et al. 2004). In all of the studies that we are aware of, place attachment scales are reliable (Cronbach's alpha > 0.7), whether place attachment is measured as one scale (Moore & Scott, 2003; Stedman, et al., 2007) or two separate scales for place dependence and place identity (Burduk, Thomas, & Tyrrell, 2009; Vaske & Kobrin, 2001; Williams & Vaske, 2003).

Box 4.1.

Place attachment and ecological place meaning Likert scales (5–points: "Strongly disagree," "Somewhat disagree," "Neutral," "Somewhat agree," and "Strongly agree").

Place Attachment Scale

1. The Bronx is the best place for what I like to do.
2. I feel like the Bronx is part of me.
3. Everything about the Bronx reflects who I am.
4. I am more satisfied in the Bronx than in other places.
5. I identify myself strongly with the Bronx.
6. The Bronx is not a good place for what I enjoy doing. (*reverse coded*)
7. There are better places to be than the Bronx. (*reverse coded*)
8. The Bronx reflects the type of person I am.

Ecological Place Meaning Scale

1. The Bronx is a place to connect with nature.
2. The Bronx is a place to watch animals and birds.
3. The Bronx is a place where people can find nature.
4. The Bronx is a place where trees are an important part of community.
5. The Bronx is a place where people have access to rivers.
6. The Bronx is a place where people come to community gardens.
7. The Bronx is a place where people have access to parks.
8. The Bronx is a place to canoe and boat.
9. The Bronx is a place to have fun in nature.
10. The Bronx is a place to learn about nature.
11. The Bronx is a place to enjoy nature's beauty.
12. The Bronx is a place to grow food.

To measure place attachment, we used a five-point Likert scale with items representing two sub-constructs: place identity and place dependence. We adapted these items from Jorgensen and Stedman's (2001) scale, a reliable scale used in previous research projects (e.g., Stedman et al. 2007, Halpenny 2010). Although other place attachment scales have been adapted for youth (Rioux, 2011; Vaske & Kobrin, 2001), we decided not to use them because some of their items are not completely consistent with our underlying theoretical constructs. For example, Vaske and Kobrin's (2001) items "I am very attached to this place" and "I think often about coming here" are supposed to reflect place identity; yet we contend that these items probably reflect place attachment overall, not specifically place identity. To ensure that our place attachment scale could be understood and used with urban high school students, in January 2010 we conducted a pilot test of this scale, along with the ecological place meaning scale described below. We administered the scale to ten high school students (approximately 15 years old) in the Bronx participating in summer youth employment programs that were not related to the environment. After completing the paper-based survey the students discussed how their understanding of the questions, which led to minor revisions of items to make them more understandable.

Ecological Place Meaning Scale. We are not the first to employ a quantitative approach to explore place meaning. For example, in relation to a national park, Young (1999a, 1999b) used a five-point scale to rate how well a place can be described by 26 place meaning items such as "ecologically important," "scenic," and "spiritually valuable." In addition, Stedman (2002, 2003b) and Stedman et al. (2007) used Likert-scale surveys in a rural county to assess meanings related to environmental quality ("My lake is a place of high environmental quality"), meanings related to social aspects of places ("My lake is a place to escape from civilization"), and ecological place meanings appropriate for rural areas ("My lake is a pristine wilderness"). Although researchers have called for the development of a scale to measure an ecological dimension of the relationship between people and places (Davenport and Anderson 2005), we are not aware of ecological place meaning scales per se, especially those applicable to the urban environment.

To measure ecological place meaning in the Bronx, we constructed a five-point Likert scale with 12 items. These items share a common underlying construct—viewing nature-related phenomena, including ecosystems and associated activities, as symbols of the Bronx. To create scale items, we asked environmental educators in six community-based organizations in the Bronx to list phenomena (e.g., birds and parks) and activities (e.g., gardening and canoeing) that may serve as ecological place meanings in the Bronx. Based on conversations with the educators we created an ecological place meaning scale that initially included 17 items. This scale was refined through pilot testing with the ten above-mentioned high school students to make the items understandable for this age group. The final ecological place meaning scale was reduced to 12 items to avoid redundancy. We decided to word all items positively in the ecological place meaning scale because we were focusing on meanings that have a positive valence. Further, we did not want to unnecessarily burden or confuse our youthful respondents by including negative non-ecological place meanings or rewording some items as negative (e.g., "The Bronx is not a place to get close to nature") (DeVellis, 2003, p. 69).

Content validity of the ecological place meaning scale, i.e., how appropriate the items are to measure a construct (DeVellis, 2003; Haynes, Richard, & Kubany, 1995; Litwin, 1995), is based primarily on the expertise of the Bronx environmental educators who helped us create scale items reflecting nature-related settings and activities appropriate for the local context. Content validity can be compromised by exclusion or under-representation of items reflecting different dimensions of a construct (Haynes, et al., 1995); thus we decided to include a relatively large number of scale items that are representative of and relevant to the Bronx natural environment. Construct validity, which is "the extent to which a particular measure relates to other measures consistent with theoretically derived hypotheses concerning the concept" (Carmines & Zeller, 1979, p. 23) or "how meaningful the scale or survey instrument is when in practical use" (Litwin, 1995, p. 43), can be tested through experimentation in which two groups are expected to differ on the test (Cronbach & Meehl, 1955). In our case, as we describe in the results section below, construct validity is confirmed by the fact that ecological place meaning became more emphasized among students in urban environmental education, and not among students in the non-

environmental programs.

Survey Implementation

To explore the impact of urban environmental education programs on sense of place in youth we used a quasi-experimental research design, which involves experimental and control groups where true randomization is not possible (Anderson, 1990; Shadish & Cook, 2002; Wiersma & Jurs, 2005). We administered pre/post-program surveys to youths in urban environmental education (experimental group) and non-environmental summer youth employment programs (control group) located along the Bronx River watershed in New York City (Table 4.1). In July-August 2010, experimental and control students participated in 5–6–week summer youth programs in community-based organizations and at a high school, usually Monday through Friday, about 24 hours per week. Students in both groups earned minimum wage, except for 16 students within the experimental group who earned high school credit toward graduation.

Table 4.1. High school students in experimental and control groups.

Groups	Group description	Age	Sex
Experimental *n* = 63	Students in 5–6–week summer urban environmental education programs in three community-based organizations and one high school: Satellite Academy High School in the Bronx (16 students), Rocking the Boat (12), Mosholu Preservation Corporation (20), and Youth Ministries for Peace and Justice (15).	Mean age = 16.2 Min age = 14 Max age = 21 SD = 0.23	♂ = 36 (57%) ♀ = 27 (43%)
Control *n* = 24	Students of similar characteristics in 5-6-week non-environmental summer youth employment programs in two community-based organizations: Phipps Community Development Corporation (14 students) and the Point Community Development Corporation (10).	Mean age = 16.3 Min age = 14 Max age = 20 SD = 0.39	♂ = 13 (54%) ♀ = 11 (46%)

Programs in the experimental group can be broadly categorized as *urban environmental education*. This is the term preferred by educators in these programs. Although a number of studies have focused on environmental education in cities (Krasny & Tidball, 2009; Tidball & Krasny, 2010), a comprehensive literature and theoretical framework for urban environmental education is lacking. Urban environmental education programs involve urban youth in restoration, stewardship, monitoring, recreation and activism with the ultimate goal to improve ecological and social aspects of the urban environment. A shared goal in most urban environmental education in the Bronx is reconnecting urban communities with the urban environment. In addition, these programs pursue other goals such as youth development, which we did not evaluate.

Organizations in our study regularly conduct several-week urban environmental education programs in spring, summer and fall semesters. We administered surveys in summer when a relatively large number of new students join these programs, which allows conducting a quasi-experimental study with a reasonable sample size. Our sample included youth participants at all available urban environmental education programs whose curriculum focused on the environment along the Bronx River watershed in the Bronx, New York City in summer 2010. The content of urban environmental education programs in our study varied. Instead of using or adapting existing curricula such as Project Learning Tree or Project WET, educators designed their own activities. Four activities dominated each program: environmental stewardship, recreation, environmental monitoring, and trainings and workshops (Figure 4.2).

Environmental stewardship activities in the experimental group were embedded in civic ecology practices (Krasny & Tidball, in press; Tidball & Krasny, 2010), e.g., working alongside environmental leaders or community members to steward street trees, restore oyster reefs, water plants in community gardens, remove invasive plants in an urban forest, reintroduce fish in the Bronx River, or maintain a green roof. Recreation activities included canoeing, kayaking, or rowing on the Bronx River or other waterways. Environmental monitoring activities took place in parks, botanical and community

Figure 4.2. Examples of urban environmental education activities in the Bronx, New York City, summer 2010: (A) Environmental stewardship on a green roof, Youth Ministries for Peace and Justice, (B) Recreation on the Bronx River, Rocking the Boat, (C) Biodiversity monitoring by students from Satellite Academy High School, (D) Tree pruning workshop conducted by Trees New York for students at Mosholu Preservation Corporation. Photos: Alex Kudryavtsev.

gardens, or along waterways, and included creel surveys, bird surveys, or water quality testing. Trainings and workshops led by invited community leaders, professional ecologists, and staff from local colleges included indoor and outdoor sessions focused on learning about environmental science and developing environmental skills such as tree pruning and plant identification. In addition, each program in the experimental group included several unique activities such as a food survey at farmers markets and stores; a trip to a farm, island or historic area outside the Bronx; or watching a movie related to environmental justice. The shared focus on the urban environment and overlapping educational approaches justify categorizing these environmental programs as one experimental group, despite some differences in actual activities. In contrast, students in the control group participated in office work and mentoring younger students in summer programs, while engaging in activities related to mixed media, arts, dance, and sports, which took place mostly indoors. Most students in both the experimental and control groups also participated in team building activities and college visits.

On the first day of the programs, students completed the pre-program, paper-based survey at home because parental permission was required for students under 18 years old. Students who took the pre-program survey also participated in the post-program survey on the last day of their programs at the sites where their programs were held, and received $5 in compensation. In the experimental group, 63 students completed both pre/post-program surveys (80% return rate); and in the control group, 24 students completed both surveys (60% return rate). Differences between experimental and control groups (Table 4.1) in terms of participants' mean age ($t(85) = 0.25$, $p = 0.80$) and sex ratio ($Chi2(1, N=87) = 0.06$, $p = 0.80$) are not significant. Most students in the experimental group (86%) and control group (92%) live in the Bronx, while a few students live in other boroughs of New York City. According to educators, except for 2–3 returning students in the experimental and control groups, students were participating in these programs for the first time and had limited prior knowledge about the programs. Participants' ethnicity was not recorded, but we observed that both experimental and control groups were comprised of approximately equal numbers of African Americans and Latinos.

Results

Place attachment mean scores in pre/post-program surveys in the experimental and control groups ranged from 2.77 to 3.02, which is about the midpoint on the 5–point scale (Table 4.2). Ecological place meaning scores in the same surveys were slightly above the midpoint (Table 4.3), with the exception of the post-program experimental group, which scored higher (3.57). The pre-program unpaired *t*-test demonstrated no significant difference between the experimental and control groups in terms of their initial place attachment ($t(85) = 0.239$, $p = 0.812$) or their initial ecological place meaning ($t(85) = 0.557$, $p = 0.579$), which suggests that the likelihood of initial selection biases is small.

Table 4.2. Place attachment (survey results).

Group	*n*	Pre-program			Post-program			Paired *t*-test		
		Mean	SD	Alpha	Mean	SD	Alpha	*t*	df	*p*
Experimental	63	2.90	0.88	0.85	3.02	0.83	0.84	1.378	62	0.173
Control	24	2.85	0.94	0.90	2.77	0.91	0.86	0.532	23	0.600

Table 4.3. Ecological place meaning (survey results).

Group	*n*	Pre-program			Post-program			Paired *t*-test		
		Mean	SD	Alpha	Mean	SD	Alpha	*t*	df	*p*
Experimental	63	3.16	0.91	0.93	3.57	0.85	0.92	4.777	62	0.000
Control	24	3.04	0.88	0.91	3.05	0.93	0.94	0.048	23	0.962

Using paired *t*-tests to compare pre/post-program mean scores, we found that place attachment showed no significant change in either group (Table 4.2). At the same time, we found that the mean score for ecological place meaning increased significantly in the experimental group from 3.16 to 3.57, and did not change in the control group (Table 4.3). For the experimental group, Pearson's correlation between place attachment and ecological place meaning was not significant in pre-program ($r(61) = 0.177$,

$p = 0.166$), but became significant post-program ($r(61) = 0.358$, $p = 0.004$). In the control group, this correlation was significant in pre-program ($r(22) = 0.416$, $p = 0.043$) and post-program ($r(22) = 0.728$, $p = 0.000$).

Discussion

As the global population becomes increasingly urban (Bloom, 2011), attention needs to be paid to how humans can foster sustainability and provide for ecosystem services in cities (Andersson, 2006). In particular, scholars have called for enhancing environmental stewardship and related environmental education in cities (Krasny & Tidball, 2009; Tidball & Krasny, 2007), and suggest that sense of place may facilitate stewardship for ecosystem resilience and human well-being (Chapin, et al., 2011). Our research shows that, to a certain extent, interventions such as urban environmental education may nurture sense of place, which others have found might foster place-specific pro-environmental behaviors.

The survey results in the experimental group suggest that relatively short yet intensive summer urban environmental education programs may significantly increase students' ecological place meaning, i.e., their perceptions of the presence and importance of nature in the local urban setting. Because improvement was not observed in the control group engaged in non-environmental programs, strengthening ecological place meaning in the experimental group may be attributed to these urban environmental education programs that combine multiple teaching approaches. Our finding is consistent with the idea that place meanings are not solely inherent (Greider & Garkovich, 1994) and may be influenced through direct experiences and interpretations of places (Cuba & Hummon, 1993). Indeed, ecological processes in urban places can become part of sense of place through participation in the environmental restoration activities (Newman & Jennings, 2008) that were a significant component of the urban environmental education programs in this study. However, based on our survey data, we are unable to determine the effect of specific aspects of urban environmental education programs on ecological place meaning. For example, recreation in natural areas and environmental monitoring activities may have a different effect on ecological place meaning.

The pre-program mean scores of ecological place meaning in the experimental and control groups were just above the midpoint on a 5–point scale, and thus cannot be considered particularly high scores. Our explanation of these scores is based on ideas that place meanings are rooted in characteristics of the physical environment (Stedman, 2003a), which is far from pristine in cities, and social and interpretive mechanisms through which place meanings are developed, negotiated and shared (Stewart, et al., 1998; Stokowski, 2002). Urban environmental educators suggested several reasons for moderate pre-program ecological place meaning scores, including students' generally limited experience of natural aspects of the Bronx before urban environmental education programs (C. Kennedy, *personal communication*). Some of these students rarely experienced the natural environment in the inner city because of highways, industrial facilities, or other infrastructure blocking access to waterfronts or other green areas in their communities (J. Terrell, *personal communication*). In addition, some parents in the Bronx discourage their children from involvement with the urban natural environment including community gardens because of its perceived lack of safety (J. Plewka, *personal communication*). Finally, ecological place meaning in the Bronx is perhaps sometimes underemphasized due to stigmatization of this area as ecologically degraded, akin to other types of stigmatization of inner-city places (Wacquant, 2007). Similar to what researchers have reported in relation to inner-city, high density neighborhoods in general (Permentier, Bolt, & van Ham, 2011), residents of the Bronx may think that the Bronx has a poor reputation compared to "low-density garden-city neighborhoods," and thus assign little ecological meaning to this place.

Contrary to place meaning, urban environmental education programs in the Bronx did not significantly strengthen place attachment. This result may be explained by research that suggests that place attachment develops over long or frequent experiences of places (Hay, 1998; Tuan, 1977). The environmental education programs in this study were only 5–6 weeks long, which is perhaps not enough time to increase attachment to a place where most participants already reside. Sometimes people do not bond with a place even if they grew up there (Johnson & Zipperer, 2007), which may be another explanation of Bronx students' weak place attachment. It is also possible that, similar to environmental stewardship activities in other studies (Ryan, 2005; Ryan, et al., 2001), urban environmental education

with a focus on environmental stewardship is more likely to foster general place attachment to certain types of ecosystems, such as rivers and parks, than attachment to a particular place.

Whereas we measured place attachment only to the Bronx, one could hypothesize that urban environmental education may be more successful in strengthening place attachment towards specific places where education activities are conducted, such as a certain park, section of a river, or particular community garden. Further, our findings contrast with another study in the non-urban context (Semken & Butler Freeman, 2008), in which undergraduate students' place attachment towards Arizona significantly strengthened as the result of taking an introductory geology course. We may hypothesize that pedagogical approaches, curriculum, audience demographics, location and length of residence, the scale and characteristics of places, and other factors determine the effect of different types of education programs on place attachment and sense of place in general. Factors influencing sense of place in the urban stewardship context could be addressed in future quantitative studies with a larger sample size or in-depth qualitative studies. In fact, currently we are conducting narrative research with educators and youth in these same Bronx organizations to explore the mechanisms of nurturing sense of place among urban students.

The mean pre/post-program place attachment scores in the Bronx in both experimental and control groups are around the midpoint or lower on the 5-point scale. In contrast, place attachment in other studies conducted in more natural areas such as trails, parks and lakes was considerably above the midpoint (Moore & Scott, 2003; Stedman, et al., 2007). Based solely on our research we cannot claim that attachment to a city is in general lower than attachment to more rural or natural places. Yet relatively low place attachment in the Bronx could be explained by the fact that many students in the Bronx hold both positive as well as strong negative place meanings underpinning their place attachment. For example, in informal conversations with the first author, some students mentioned such positive descriptors of the Bronx as family, friends, and home, as well as negative descriptors such as crime, poverty, underserved schools, industrial facilities, highways, empty lots, dirty streets, air pollution and lack of parks.

While place attachment may be based on different place meanings (Stedman, 2003b), including social and natural (Brehm, 2007; Brehm, Eisenhauer, & Krannich, 2004), a notable result of this study is that the correlation between place attachment and ecological place meaning in the experimental group became significant after treatment. This suggests that, although place attachment in the experimental group did not increase, it became more based on an ecological set of place meanings. This also corresponds to Barlett's (2005) idea that attachment to urban places can be based on meanings of place related to such natural components as trees, grass and birds. However, an unexpected result was that in the control group this correlation was significant in both pre-program and post-program survey, which may suggest that there were some unobserved differences between control and experimental groups that are not easily interpretable.

Applying the concept of ecological place meaning to urban settings is quite provocative because usually the built environment rather than the natural environment dominates our attention in cities (Barlett, 2005; Budruk, Thomas, & Tyrrell, 2009), and because natural aspects are sometimes perceived as occurring only outside the city (Johnson & Catley, 2009). One of the motivations for this research was that acknowledging the presence of green areas in cities and of the ecological worthiness of urban places—which reflects positive place meanings—might inspire commitment to urban environmental stewardship (Light, 2003; Ryan, 2005). In contrast, exclusively negative environmental information, which is sometimes emphasized in environmental education, media, and other descriptions of cities, may lead to the denial of environmental problems (Dickinson, 2009) or the feeling that one cannot contribute to environmental solutions (Ewing & Gold, 2011). Thus urban environmental education programs that emphasize ecological place meaning or worthiness of the natural environment in cities may inspire community-based initiatives to create more urban farms, roof gardens, community gardens and greenways, or to further restore aquatic ecosystems and urban forests. Similar to other feedback loops in social-ecological systems (Tidball & Krasny, 2011), it is possible that ecological place meanings and community-based environmental stewardship may be reinforcing each other, especially if education programs are embedded in environmental stewardship.

Finally, developing ecological place meaning could redefine self-identity of urban residents, which, given the link between self-identity and pro-environmental behavior (Devine-Wright & Clayton, 2010; Whitmarsh & O'Neill, 2010), may influence how people interact with their environment. Sense of place in general "is understood as closely linked to identity (McClaren, 2009) and our place meanings are related to our sense of self and may tell who we are (Hull, Lam, & Vigo, 1994; Korpela, 1989). In addition, meanings that people attribute to their environment are viewed as "symbolic reflections of how people define themselves" (Greider & Garkovich, 1994). Hence it is possible to assume that place meanings like "The Bronx is a place to connect with nature" may foster such self-conceptions as "I am a person who connects with nature in the Bronx," thus contributing to nature conservation attitudes and environmental stewardship in the urban context.

Conclusion

Resonating with Chapin and colleagues' (2011) call for Earth Stewardship, previous research has demonstrated that place-based stewardship behaviors may be facilitated by sense of place. Our research further shows that sense of place in cities can be nurtured by urban environmental education. Urban environmental education programs in the Bronx help young people see ecological aspects of the urban landscape as legitimate and worthwhile. These programs teach students to view cities as places to interact with nature, grow food, and engage in outdoor recreation and learning. Such sense of place may ultimately enhance environmental stewardship in urban communities. The concept of ecological place meaning—combined with other constructs such as place attachment, self-identity, pro-environmental behavior, and community-based restoration—may open new avenues for thinking about how people interact with urban natural resources and what motivates them to engage in environmental stewardship in cities.

Acknowledgements

We thank urban environmental educators and organizers in New York City—including Anthony Archino, Jennifer Beaugrand, Sharon De La Cruz, Gretchen Ferenz, Adam Green, Damian Griffin, Addy Guance, Dawn Henning, Carol Kennedy, Adam Liebowitz, Stephen Oliveira, Danny Peralta, Jennifer Plewka, Anne-Marie Runfola, Julien Terrell, and Chrissy Word—for facilitating many aspects of this project. We thank anonymous reviewers for their comments. The Community Forestry and Environmental Research Partnership at University of California, Berkeley provided funding for this study.

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CHAPTER 5

DEVELOPMENT OF ECOLOGICAL PLACE MEANING IN NEW YORK CITY[4]

Abstract

Urban environmental education is helping students view nature as a valuable and legitimate element of cities. The sense of place literature suggests that the development of such ecological place meaning might contribute to pro-environmental behavior. But we have only a dim understanding of *why* and *how* environmental educators are developing ecological place meaning in cities. To address these questions, we conducted narrative inquiry with nine educators and five students in urban environmental education programs in the Bronx, New York City. Through narratives, we helped educators and students to make sense of their practice in urban environmental education programs, and thus illuminate experiences, stories, or contexts related to ecological place meaning in the Bronx. First, the narrative analysis demonstrated that urban environmental educators are trying to cultivate ecological place meaning among students to help them: (A) understand, appreciate, and benefit from urban nature, and (B) develop a sense of possibilities and imagination of how their urban environment could be improved. Second, narratives revealed that ecological place meaning is nurtured among students in urban environmental education programs in the context of: (1) direct experiences of urban places and nature, (2) social interactions among students, educators, and environmentalists, and (3) development of students' ecological identity. Finally, we discuss how understanding of this practice may contribute to the sense of place literature.

Introduction

Arguably, cities are the primary places where many people experience nature: they walk in parks, gather in community gardens, maintain green infrastructure, experience natural disasters, observe wildlife, and enjoy street trees. One the one hand, few would dispute that cities are sometimes perceived

[4] This chapter will be submitted to a journal. Co-authors: Kudryavtsev A., Peters S.J., Krasny, M.E., & Stedman R.C.

as concrete jungles (Glaeser, 2011), or places where the built environment, not nature, dominates attention (Barlett, 2005), and some people even view cities as the antithesis of natural areas (Beatley, 2000; Martino, 2009), or assume that in general the environment "is found somewhere far from the city" (Pickett, Buckley, Kaushal, & Williams, 2011, p. 334). On the other hand, scholars also advocate for viewing cities as natural phenomena, or places containing nature. For example, Lynch (1971, p. 12) argues that "Man is himself a part of nature, and his cities are as natural as his fields," Spirn (1984) considers cities as part of nature, and Cronon (1996) regards cities as one type of landscapes on a continuum of natural landscapes. Similarly, Beatley (2000, 2011) calls for viewing cities as already or potentially green and sustainable, suggests that the ideas of wilderness and nature in cities can be extended to street trees, rooftops, and hydrological features in addition to established public parks or other green areas and ecological processes, and proposes that "We must begin to move into a deeper, more profound understanding of cities as nature, as wondrous and significant and valuable as those in the most pristine nationals parks" (2011, p. 152).

We consider such natural or environmental dimension of our perception of cities and other places as ecological place meaning. The broader term *sense of place* describes human perception of places in general, and it includes place attachment and place meaning (Farnum, Hall, & Kruger, 2005; Semken & Brandt, 2010; Smaldone, Harris, & Sanyal, 2005; Stedman, 2000, 2002, 2003b; Van Patten & Williams, 2008). Whereas *place attachment* is the bond between people and places, or how strongly a person is attached to a place (Davenport & Anderson, 2005; Jorgensen & Stedman, 2001; Low & Altman, 1992), *place meaning* is the symbolic meaning that people ascribe to a place (Smaldone, Harris, & Sanyal, 2008; Stedman, 2002, 2008). Place meanings "characterize ways in which an environment may be valued" (W. Stewart, 2008, p. 84), and may reflect "the layers of associations that we attach to places" (Lew, 2006, p. 30). Resonating with Thomashow's idea that "Exploring sense of place involves thinking about home and community, ecology and history, landscape and ecosystem" (2002, p. 76), place meanings may include ecological cultural, architectural, familial, political, and economic meanings (Ardoin, 2006; Ardoin, Schuh, & Gould, 2012; Manzo, 2005; Semken & Butler Freeman, 2008), human and natural history

(Williams, 2008), personal meanings attached to a place (Lynch, 1971), and meanings associated with activities such as boating or birding (Spartz & Shaw, 2011). In this project, we focus specifically on *ecological place meaning*, which we define as the extent to which nature-related phenomena are viewed as valued or important characteristics of places; these phenomena may include natural ecosystems, green infrastructure, and nature-related objects and activities such as gardening and boating (Kudryavtsev, Krasny, & Stedman, 2012; Kudryavtsev, Stedman, & Krasny, 2012).

The sense of place literature describes factors influencing place meanings, and its importance for human interaction with the environment. Place meanings are influenced by features of the biophysical environment (Stedman, 2003a), pivotal moments or other significant life experiences that happened in a place (Manzo, 2005), and information obtained secondhand about a place (Johnson & Zipperer, 2007). Traveling outside of a place may help people find greater value in its meanings (Davenport & Anderson, 2005; Smaldone et al., 2008), perhaps by increasing place repertoire and cross-place friendships (Fisman, 2007). Place meanings can be informed or created through interpretative materials, mass media, literature, films, photography, customs, discussions, storytelling, other social interactions (Malpas, 2010; Sanger, 1997; E. J. Stewart, Hayward, & Devlin, 1998; Stokowski, 2002; Vanclay, 2008). Different people may ascribe different meanings to the same place (Stedman, 2006), depending on their race and class identities (Fisman, 2007), and perhaps depending on their social roles, occupation, or other identity-related factors.

Although scholars do not define "ecological place meaning" per se, they point that viewing nature a valued component of a place—often in combination with strong place attachment or place attachment based on nature-related place meanings—may influence pro-environmental behavior or decision-making related to natural resources (Andersson, Barthel, & Ahrné, 2007; Brehm, Eisenhauer, & Krannich, 2006; Brehm, Eisenhauer, & Stedman, 2013; Henwood & Pidgeon, 2001; Scannell & Gifford, 2010). Researchers also contend that people tend to protect places (Manzo & Perkins, 2006) or aspects of places (Stedman, 2003b) that are meaningful to them, which implies that strong ecological place meanings may encourage people to protect nature-related elements of those places. Interestingly, relatively few empirical studies on sense of place—let alone on ecological place meaning or similar constructs—have been done

in cities.

At the same time, various environmental education programs are trying to foster ecological place meaning in cities. In 2008, the first author conducted exploratory interviews of environmental educators working in after-school and summer youth employment programs in the Bronx that involved high school students in learning about the urban environment through hands-on stewardship, monitoring, field trips, activism and other activities. The educators claimed that their programs aim to "reconnect" students with their urban natural environment, which could be viewed as developing sense of place, particularly ecological place meaning. A follow-up pre/post-program survey study with students in 6–week summer urban environmental education programs showed that they significantly strengthened ecological place meaning among participants (Kudryavtsev, Krasny et al., 2012). This interest of urban environmental education programs to connect students with the urban environment resonates with the larger idea of now place-based education connects students to many aspects of the local environment (Gruenewald, 2003; Semken & Brandt, 2010; G. A. Smith, 2002; Sobel, 2005).

But despite a notable progress in sense of place research—and despite environmental education's growing interest in the local environment—we know little about *why* and *how* urban environmental education programs develop ecological place meaning among urban students. Thus, in this research we ask: (1) Why are educators motivated to nurture ecological place meaning among urban students? (2) How do education programs attempt to nurture ecological place meaning among urban students?

Methods

Narrative Inquiry

We used narrative inquiry to answer our research questions because such questions call for participants' deep reflection on their professional experiences and meaning of their practice. Narrative inquiry is the study of experience as story (Connelly & Clandinin, 2005; Pinnegar & Daynes, 2007), the study of stories (Polkinghorne, 2007), the study of experience as it is lived (Clandinin & Rosiek, 2007), or the study of descriptions of a series of events (Pinnegar & Daynes, 2007). Narratives are coherent

personal stories co-constructed by an interviewee and interviewer, and reflect the respondent's experiences and views related to research questions (Emerson & Frosh, 2004). In narrative inquiry "the interview is not just a means for collecting data, but itself a site for the production of data" (Elliott, 2005, p. 17). Unlike chronicles that simply list events, narratives are viewed as a way or organizing and communicating human experiences (Hart, 2002), and are characterized by "a meaning structure that organizes events and human actions into a whole" (Polkinghorne, 1988, p. 18). In contrast to positivist research that mirrors pre-existing entities, narratives construct subjective reality (Spector-Mersel, 2010) and meanings (Berger & Quinney, 2005), and uncover "the values and motivations that lie behind people's actions and decision making" (Elliott, 2005, p. 176). In addition, instead of focusing on causal relationships, narrative inquiry is using the interpretive framework to "help researchers to explore the mechanisms underlying the causal relationship: the how and the why behind the what" (Dodge, Ospina, & Foldy, 2005, p. 289; Lin, 1998). Narrative analysis can produce meaningful findings in form of discoveries, theory-making and generating hypotheses (Lieblich, Tival-Mashiach, & Zilber, 1998; Wells, 2011), which echoes the goals of our research.

Research Site

We conducted the data collection in 2010–2011 with nine educators and five students in urban environmental education programs in six community-based organizations and one high school in the Bronx River watershed in the Bronx, New York City (Table 5.1). These urban environmental education programs (Figure 5.1) involve students, approximately 14–18 year old, in learning about the urban environment during 6 weeks in summer; some of these programs also have after-school activities during 12 weeks in spring and fall seasons. Some students participate in these programs for several years. Educational activities in these programs vary, but in general include: environmental restoration such as restoring oyster reefs, urban forests, or riparian habitats; maintaining community gardens, urban farms, green roofs, parks, flower beds or street trees; environmental monitoring such as water quality testing in the Bronx River or bird surveys; environmental recreation such as boating or canoeing on the Bronx

River; and learning indoors about the urban environment from educators, other professionals or community members. Sometimes students also participate in environmental activism through events in parks, community art and media, presentations, parades, distributing flyers or writing letters. Although most educational activities take place in the Bronx, sometimes these students explore other places in New York City such as Governors Island, Jamaica Bay Wildlife Refuge, the High Line park in Manhattan, or water treatment plants and rooftop farms in Queens. Occasionally educators take students to explore places outside the city such as rivers or farms. The interviewed educators either had created their programs or significantly adapted existing programs to fit the needs of their students. Interviewed students were either former or current participants in these programs. Educators selected these students for interviews because they had participated in urban environmental education programs at least for two years, and thus could provide thoughtful, reflective answers.

Table 5.1. Participants of narrative inquiry.

Interviewee	Position and organization in the Bronx at the time of interviews
Educators	
Adam Green, 37	Founder and Executive Director, Rocking the Boat
Adam Liebowitz, 30	Director of Community Development and the A.C.T.I.O.N. program, THE POINT Community Development Corporation (CDC)
Anthony Archino, 31	Boatbuilding Program Director, Rocking the Boat
Carol Kennedy, 53	Science Teacher, Satellite Academy High School
Chrissy Word, 42	Director of Public Programs, Rocking the Boat
Damian Griffin, 43	Education Director, Bronx River Alliance
Jennifer Beaugrand, 32	Horticulture Program Director, Mosholu Preservation Corporation
Jennifer Plewka, 34	Director of Environmental Education, Phipps CDC
Julien Terrell, 28	Director of Organizing, Youth Ministries for Peace and Justice
Students	
Andre Rivera, 17	Former participant and current Youth Organizer, Youth Ministries for Peace and Justice
Celina Medina, 19	Former participant and current Program Assistant, Rocking the Boat
Elizabeth Severino, 19	Former participant and current Program Assistant, Rocking the Boat
Nia Terrelonge, 20	Former participant at Rocking the Boat; and current Program Assistant at Mosholu Preservation Corporation
Victor Davila, 16	Current participant in the A.C.T.I.O.N. program, THE POINT CDC

Figure 5.1. Urban environmental education programs in the Bronx, New York City: (A) Students from Satellite Academy High School exploring a rooftop farm in Queens. (B) Educator Damian Griffin from the Bronx River Alliance talking to students about historical events along the Bronx River. (C) Students from Mosholu Preservation Corporation going to water street trees. (D) Educator Chrissy Word and students from Rocking the Boat monitoring an oyster garden. (E) Educator Julien Terrell and students from Youth Ministries for Peace and Justice, and Devona Sharpe of the Bronx River Alliance testing water quality in the Bronx River in Concrete Plant Park. (F) Educator Jennifer Plewka and a student from Phipps CDC constructing a floating island on the Bronx River in Drew Gardens. (G) Student at THE POINT CDC demonstrating a vertical strawberry farm. (H) Students from Satellite Academy High School walking to the High Line to interview park visitors about biophilia. Photo credit: Alex Kudryavtsev.

Interviews

While narrative inquiry encompasses autobiography, life stories, narrative ethnography (Lodico, Spaulding, & Voegtle, 2010) and personal narratives (Leon, Sandal, & Larsen, 2011), we used the narrative genre called "practitioner profiles" (Forester & Peters, 2005; Peters, Alter, & Schwartzbach, 2008). Practitioner profiles are "edited transcripts of narrative interviews" (Peters, 2010, p. 15) that have been used to generate first-person accounts of what people "do, feel, and experience in specific examples of their work" (Peters & Hittleman, 2003, p. 3) including, in our case, engagement in education programs. Narratives often have a beginning-middle-end structure (Berger & Quinney, 2005; Polkinghorne, 2005), with the main practice-related plot in the middle. To construct narratives, the first author conducted open-ended interviews with each interviewee in 1–3 sessions, lasting 2–4 hours total. Interviews took place in summer 2010, except for that with Julien Terrell, which took place in 2011. Three types of questions guided the interviews: (1) *Background*: Where are you from, what were the key influences in your life related to your current position as an environmental educator or student, and how did you join an environmental education program in the Bronx? (2) *Practice*: Tell me about particular projects in your education program that you conducted as an educator, or participated in as a student. (3) *Reflection*: What lessons from these experiences would you like to share, especially related to teaching or learning about the city as an ecologically important place? Interviewees recounted their experiences as educators or students in urban environmental education programs.

The first author recorded, transcribed, and edited the interviews to create narratives, by which we mean the final version of edited interview transcripts. The final versions of narratives used in this study are not confidential, and participants or their parents allowed using their real names. We are aware of the constructivist and discursive aspect of narrative interviews (White & Drew, 2011)., i.e., that much of meaning is constructed and analyzed during interviews when respondents decide to include, exclude, or emphasize certain events (Feldman, Sköldberg, Brown, & Horner, 2004), or when the interviewer asks respondents to clarify certain ideas. Indeed, narrative interviews influence participants (Childress, 2000), which may result in somewhat new ways interviewees see and reflect on their practice. At the same time,

we agree that in interviews meanings are not formulated absolutely anew because they reflect "relatively enduring local conditions, such as the research topics of the interviewer, biographical particulars, and local ways of orienting to those topics" (Holstein & Gubrium, 1995, p. 16). In the process of constructing narratives, we were guided by the idea that good narratives "approach the complexities and contradictions of real life" (Flyvbjerg, 2004). To edit narratives, the first author put events into chronological order, shortened some episodes, and "erased the co-construction process" (Riessman, 2008, p. 58) by deleting interviewer's questions and transforming messy spoken language and conversational exchange into a readable text. We used the narrator check (Mears, 2009) to allow interviewees to amend their narratives, and confirm that the intended meaning in narratives is accurate and complete. Final narratives are between 4–12 thousand words long. To judge the quality of the primary data, readers can access full-text narratives in the Appendix.

Analysis and Interpretation

In general, qualitative analysis pulls together themes or patterns from the text, whereas interpretation draws meanings from the analyzed data and explores these meanings in a larger context (Ely, Vinz, Anzul, & Downing, 1997). We used "thematic analysis" as an approach to analyze narratives (Riessman, 2008, pp. 53–76), which is similar to "content analysis" (Lieblich, Tival-Mashiach, & Zilber, 1998, p. 112; C. P. Smith, 2000) or "holistic content analysis" that focuses on themes or patterns (Wells, 2011, pp. 44–49). Following Lieblich (1998, p. 113), the first author repeatedly read narratives "as openly as possible" to find emerging themes related to sense of place in general. This type of thematic analysis with open coding is not new to environmental psychology, and has been used in other studies on sense of place using narratives (e.g., Rogan, O'Connor, & Horwitz, 2005) or semi-structured interviews (Manzo, 2005). The first author assigned temporary themes to highlighted meaningful segments, and repeatedly revised these themes until starting to see larger patterns among them, i.e., any patterns that could be relevant to fostering ecological place meaning. For example a broad theme that we call "experiences of places" covered meaningful segments about experiences of urban nature, participation in hands-on

environmental activities, and visiting distant places. Because meaning derives from interpretation rather than analysis (Hart, 2002), our next step was to interpret the broad themes and underlying excerpts in ways that enrich, support or challenge existing ideas about the development of ecological place meaning in cities. As suggested by Lawler (2002), and Ospina and Dodge (2005), while we interpreted narrative themes we focused on significance or meanings of underlying events, not just what happened.

Validity

We refer to validity as "the correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account" (Maxwell, 2012, p. 122), or "the believability of a statement or knowledge claim" supported by the evidence and argument (Polkinghorne, 2007, p. 474). In narrative inquiry, knowledge claims are about the meaning that people ascribe to their experiences (Polkinghorne, 2007), or about a person's understanding of reality (Dodge et al., 2005), not about causal relationships or replicable results (Lieblich et al., 1998). Validity of narrative inquiry is often framed in terms of trustworthiness (Wells, 2011), or the credibility and plausibility of argumentation (Dodge et al., 2005). In this research, we use the following criteria for validity: persuasiveness, correspondence, and pragmatic use. *Persuasiveness* refers to plausibility of results or theoretical claims, as well as reasonable and convincing interpretation of narratives (Riessman, 1993). Persuasive arguments "lead readers through a progression of evidence (quotations from the collected text) and explanations of why other interpretations (which may have been tried during the research process) are not as adequate as the presented interpretative claim" (Polkinghorne, 2007, p. 477). We offer narrative excerpts as we support claims, and discuss alternative interpretations where appropriate. *Correspondence* is testing conclusions with people whose narratives are analyzed (Riessman, 1993), and is similar to credibility, which reflects whether the researcher's interpretation of the data "captures the true meaning of the participants' experiences" (Lodico et al., 2010, p. 170). To address correspondence, first, we asked interviewees to revise edited interview transcripts to make sure that they adequately reflect their voice. Second, we shared an early version of this article with participants and they helped us revise our interpretation of their narratives.

Pragmatic use is the degree to which narrative inquiry "become[s] a basis for others' work" and contributes to the development of knowledge (Riessman, 2008, p. 193). This aspect of validity reflects the idea that narrative and other forms of qualitative inquiry are pivotal for major developments in knowledge because they are built on nuanced, complex, and sometimes conflicting stories that may extend existing theory (Flyvbjerg, 2004; Riessman, 2008). At the same time, Elliott (2005, p. 26) suggests that "the reader is left to make up his or her own mind as to how far the evidence collected in a specific [narrative] study can be transferred to offer information about the same topic in similar settings." Because "human interpretation is always only partial" (Seamon, 2000, p. 170), narrative researchers usually do not claim that they offer "the only way to interpret a narrative" (Feldman et al., 2004), and invite readers to participate in the interpretation. Our work will pass the test of pragmatic use if our interpretations and conclusions are reasonable and useful to other researchers or educators.

Results

Interviewed students and educators have overlapping and complementary perspectives on the reasons for and approaches to nurturing ecological place meaning among students in urban environmental education programs. First, the narrative analysis shows that all nine educators are trying to cultivate ecological place meaning among students to help them: (A) understand, appreciate, and benefit from nature-related aspects of urban places, and (B) develop among students a sense of possibilities and imagination of what their urban places, environment or ecosystems could be, and what steps can be done to improve these places. Second, all narratives from nine educators and five students reveal three general approaches to nurturing ecological place meaning among students in urban environmental education programs: (1) direct experiences of urban places and nature, (2) social interactions among students, educators, and environmentalists, and (3) development of students' identity, including ecological identity.

Given the space constraints of a journal article, below we offer selected excerpts and analysis of only two out of fourteen narratives. These excerpts and analysis offer a glimpse on how the general narrative themes emerged—themes that address our research questions. The two narratives discussed here

are chosen because they are well articulated, cover educator and student perspectives, and describe both school-based and community-based environmental education programs. We selected excerpts that make two coherent texts that illustrate some common themes observed in most narratives. Complete narratives from nine educators and five students are available in the Appendix.

An Educator Narrative: Excerpts and Analysis

Carol Kennedy is a science teacher in the South Bronx. She lives 80 miles north of New York City, and drives every day to teach students in the Bronx. Her story shows her background of growing up connected to nature, and how it has influenced her current approaches to educating urban students. Carol's teaching philosophy combines classroom learning with outdoor experiences in the city and elsewhere to connect students with their communities and the larger world. This narrative interview illuminates her past work with students in a school garden, and focused on EcoLeaders, a 5–week environmental education program that Carol organized in summer 2010 to offer students a variety of nature-related learning experiences in the city. Although Carol is the only school teacher in our research while other educators are from community-based organization, her EcoLeaders program with its multiple stewardship, inquiry, and exploration activities is representative of urban environmental education programs that use local places to educate students.

My name is Carol Kennedy, and I'm a teacher at the Arturo A. Schomburg Satellite Academy—Bronx, a small alternative, transfer high school in the South Bronx. … I felt it was really important to make connections between the school and surrounding communities. It was probably about 15 years ago that I got a group of kids, and we went to the community board and looked at maps of the area, searching for city owned empty lots around the school. We found that right across the street from the school there was a city-owned plot. It was full of garbage, all sorts of weeds, shrubs, trees and all sorts of other stuff. We started the process of making this lot into a garden with Green Thumb. We started cleaning it up and eventually got some fences and other materials donated. Little kids, big kids from the community and staff from the school helped with the cleanup. Now, almost every year I can run a gardening and community

activism class. The students spend a week out in the garden during our spring break doing cleanup, start the planting, visiting with local community groups, but most importantly, and they spend all this energy on making the garden look nice. And this carried over when the class is over—the students feel a connection to the space and are angry when they feel folks in the neighborhood don't treat it with respect.

For a lot of new students [in the EcoLeaders program], as you might have noticed when we went out, this is the first time that they have done something like this—going out to the river, sitting by the river, going out in the water, collecting water samples, putting on waders and walking out into the water with the nets to catch the critters, holding them in their hands and looking at them. This is the first time for students to do this because it's not part of their life experience, this is something new and different for them. And for a lot of them it's like, "Hey, I hate the bugs, but let me hold the fish." At the same time they can enjoy some of it too. I'm hoping that they get this picture of the experience—which they will remember; I'm hoping that they can say to themselves, "I can do something and be successful. I enjoy myself in nature, and maybe I might want to do something like this in the future."

In the EcoLeaders program we did a lot of activities: planting seeds in the garden, exploring oysters with Rocking the Boat, doing a toxic tour of the community with Sustainable South Bronx, rowing on the Hudson River in my brother's community rowing club. ... I have noticed that it's hard for students to get ideas about particular areas if you just show them a map, just talk about it or show pictures. It's hard if they are not out there to touch it and experience it. If you are not out there touching it or seeing it to make it concrete, it means nothing. Things like: "What are tides? Which direction does the water flow? Where is the source? Where is the mouth? What is upriver? What is downriver? What is north or south?" Those things don't make sense unless you are there to experience it or to put it in some context. I mean it took Stephanie, one of students, who took almost until the end to get a grip on what tides were until it she actually saw it over and over and it clicked, "Oh, these tides, oh, and that happens here every day too."

Another experience for EcoLeaders was in Drew Gardens at Phipps CDC, and working with the Bronx River Art Center. We broke the kids in half. Half stayed in the garden, got a tour with Jennifer Plewka from Drew Gardens who talked about all the different things found in the garden and its history. I

thought one of the things she said was especially interesting, the one related to human aspects of a place that are so powerful for young folks. They may not remember the name of a plant, but they remember a certain tree in Drew Gardens was planted in memory of this person who passed away and whose ashes are under the tree, and flowers planted in memory of a child. Students could remember that story, which was told probably in the same amount of time as Jennifer might have talked about composting or anything else. But will they remember that? No. They remember that narrative about people and their lives—it's easier for students to incorporate and remember. It means something more to them, so that the garden means more to them in that sense. I agree 100 percent with that. That has been my experience as a teacher. Even if it's a made-up narrative, if I can put a narrative, a story to it, it means more.

I think that a lot of what I do comes from my really selfish need to replay things that have happened in my life, experiences that I had, and what works for me. I think a lot of teachers do that even though they don't acknowledge it, that this is the experience that they had in life and that's how they replay it when they become teachers. For me, part of why I did the EcoLeaders program and other activities is because I spent so much time exploring outside when I was a kid, because of my experiences with the world and learning things and I want to have other folks, my students, have those experiences as well. But then I try to rationalize with all sorts of education theories of what we are trying to do at Satellite... I think students are going to have some concrete traditional experiences within the classroom. But they are also going to have this experience outside the classroom to understand the world they live in. And I want to ground it in the place where they are at, starting with the garden and building a connection between the students' lives and the community life. And once they have that connection, then they will be empowered, excited or energized to continue digging through the knowledge about this world and make some changes.

Similarly to other educators, Carol's narrative illuminates two reasons to nurture ecological place meaning in urban environmental education. First, Carol's and other educators' narratives reveal how place-based urban environmental education programs help students become familiar with and appreciative of their urban places, including nature-related phenomena and activities. In most narratives,

educators link this familiarity with and appreciation of urban nature to students' well-being: psychological, physical, educational, or social. Like some other educators, when Carol grew up she experienced undeveloped or nature-dominated landscapes, and now she wants her urban students to also have nature-based experiences, yet in the city. More broadly, Carol is trying to help students understand the world they live in—starting from a community garden near their high school or tides in the Bronx River—in order to be able to make changes in this world and in their own lives. Further, Carol helps students reflect on the idea of biophilia and benefits of nature in city, for example, by engaging students in interviews of visitors of the High Line park in Manhattan about why people value urban green spaces. In general, stories by other educators also demonstrated that they are conducting urban environmental education to help students enjoy the serenity of nature, benefit from unstructured time and play in nature, and use natural or managed landscapes as places to reflect, or use nature-based activities in cities to become more responsible citizens, open their eyes to natural treasures in their local environment, and appreciate their community for existing ecological assets and processes.

Second, Carol's and other educators' educational practice is intended to foster students' imagination or sense of possibilities in regards to the future of urban neighborhoods, or students' own future in this environment. Similarly, other educators are also teaching about temporality of places, and that students can re-imagine and transform their neighborhoods—which is evidenced in this quotation by Adam Green (educator, Rocking the Boat), "*I wanted to empower young people by giving them a sense that they do have power and control, and you can make things happen. For example, right outside our door for years was the Cross Bronx Expressway. Kids did not know that it was not always a highway. Before it was a highway it was a neighborhood. Before it was a neighborhood it was farmland. Before it was farmland it was a forest. People made decisions every time it changed from forest to farmland to a neighborhood to a highway. And guess what, will it always be a highway? We are not stuck with it as it is. We can always change. And think about how it might reflect on me as a kid growing up in the South Bronx on my block, 'This is it. I'm stuck. It's my reality.' That's kind of the work I'm trying to do, to explain that our reality is only what we have decided, and that it can be changed*." In sum, in Carol's and

other educators' narratives the main motivation/reason to develop ecological place meaning among urban students is to help them (A) understand what kind of place they live in, and especially understand, appreciate and benefit from nature-related elements and activities in their urban environment, and (B) imagine what kind of place their neighborhoods could be, as well as what steps should be taken to improve this urban environment.

Further, Carol says that she uses a variety of direct experiences of places to connect students to their urban environment. She recognizes that many students have rarely been to such local places as the Bronx River, parks, and community gardens. Like other interviewed educators, Carol involves students in hands-on experiences such as environmental monitoring and maintaining a community garden. She also sometimes takes students to places outside the Bronx or even outside New York City, so that students can understand their urban places in relation or in comparison to other urban and more rural areas. An important aspect of connecting students to the urban environment in her story relates to social experiences. For example, she makes her students communicate with environmental activists, educators, or other students involved in other environmental programs. Carol also finds it important to show students that there are many local community leaders and professionals such as scientists who study, improve, or advocate for the health of the local environment or natural areas in the city. Moreover, this and other narratives demonstrate that learning about urban places happens within a social context or social experiences, such as storytelling, interpretation, and activities with other students. Finally, an important theme in Carol's and other educators' narratives is influencing students' identity to develop ecological place meaning. For example, by calling her students "EcoLeaders" and giving them t-shirts with this label, Carol is trying to influence how students see themselves, and thus how they see their role in their urban communities and their relation to environmental or natural elements in the city. As she describes, her activities aim to help students develop self-identity reflected in such statements as, "I can do something and be successful. I can enjoy myself in nature, and maybe I might want to do something like this in the future."

A Student Narrative: Excerpts and Analysis

Elizabeth Severino is a former student in the On-Water environmental education program at Rocking the Boat in the Bronx. Recently she began working in this organization as a program assistant. Rocking the Boat has helped her, as a student, to discover the urban environment, rivers, and animals. Elizabeth's story tells about her experiences on the Bronx River and other urban places, how her perception of the Bronx and New York City has changed as the result of participation in Rocking the Boat's programs, and how she shares her experiences with others.

My name is Elizabeth Alexandra Severino, but my friends and people at work call me Alex. I am 19 years old and I live in the Bronx on 225th Street and Broadway. My father is a proud Dominican, and my mother is originally from Curaçao, but she is of Dominican descent. I have a brother and a sister, who are much older than me, so I did not really have my siblings around because they were already in college. I was kind of alone, except for my parents. But when I was five I got a dog, and I named him Balto because of a Disney movie that I loved. Balto became my best friend. He was talking to me physically instead of verbally, "I don't want to eat right now, I'm going to sit on a couch." Since that time I wanted to work with animals. My interests jumped from veterinarian to wildlife veterinarian, to wildlife conservationist, to what I'm doing now on the Bronx River. Although I was always interested in environmental aspects, I never did anything with it. I was just going to a normal public school, some after-school programs, and home—the same things every day.

I have lived in a project housing near the Harlem River for at least 10 years now. ... My apartment overlooks the Harlem River, but there is no access to that river. It's all fenced up and trains pass by, so you never can go to this river or at least you never thought you could. I always thought that Harlem River was the Hudson, but now I realize it isn't, the Harlem River actually expands to the Hudson. Teachers never educate you about the rivers, parks, and your neighborhood, they just expect that you already know about it. The only park that you hear about once in a while is Central Park in Manhattan because it is in movies and shows, and that's pretty much it. When you go to school, they talk about different countries and the history of New York City. But they never talk about the environmental

aspects of the city or its rivers and parks. Teachers don't tell you that hawks fly and catch some prey in the city. Tons of people still do not know it. No one in classes gives you the geographical aspect of where you live, they only tell you obvious information like the Statue of Liberty is one of few historical things that are being taken care of in the city.

In 2006, one of my friends told me about [an after-school education program at] Rocking the Boat, "Why don't you go to Rocking the Boat. We go rowing all the time," and I said, "Rowing? How do you row in the Bronx?" Then I joined the program, and became an after-school On-Water student. Since then I had a lot of discoveries because of Rocking the Boat. One of the first things I had was sailing with other students and educators on a 106–foot mast sailboat called Clearwater. We see sailing in movies like Pirates of the Caribbean, and I never thought I could go sailing in New York City. I did not think that people with mediocre lives would go sailing on 14–foot boats with five people. The first day I ever went sailing I was happy. I was the happiest person to sail along the Long Island Sound. We learned all the parts about the boat, and we were learning not in a classroom with a blackboard, we were learning on the boat, while it was moving. If you don't pay attention, you'll mess it up. And the best thing about a 14–foot boat is that when it slants all the way to one side. So you have to go all the way to your left side when the boat is going to be slanted to the right, and you see students running from one side of the boat to the other together in unison. If you don't do it, you will fall or get wet. Sometimes I was using the tiller and telling where the boat would go, which was so relaxing and therapeutic because you are doing something that not many teenagers are doing. One day we also went on a powerboat from the Bronx River to East River, then to Harlem River and the Hudson River. When we were on Harlem River I looked to my right and I saw my house in the Bronx, my area, and my apartment. I was like, "Am I on the river that I look at every day? I am on this river!"

In 2008, I graduated from high school with a scholarship to one of the most known private environmental colleges called Unity College in Maine, which is all the way in another state. ... Then something happened, something that I thought would never happen: I got homesick. I thought I would never get homesick for New York. I realized that I was homesick not just because of my family, but also

because of how people knew me already. In Maine I did not feel like I was involved with the environment as much as in the Bronx, which is interesting because it should have been the other way around. Maine is so open and natural, but it's here in the Bronx where there are many environmentalists. I have realized that so many things happened to me in the city since I started at Rocking the Boat. I met scientists from different organizations and colleges. In the South Bronx I have met a very inspiring woman called Majora Carter, who used to work with Sustainable South Bronx and then left to continue her own organization. I wanted to meet more of these people who can help me make a difference. So I decided to take a break in my college education and come for a while back to the Bronx. When I came back … Chrissy said that there was a job for me at Rocking the Boat. My first teacher Chrissy Word is now my boss, and I am her program assistant.

Today we taught a group of students from Satellite Academy High School. There were some students in my boat who were enthusiastic about rowing. But you don't just go and row on these short trips with new people. We go to the river, and then I tell students a story about the river, how it was polluted and how it's getting better. If you just show students how to row, they will not care about the river. They will be eating a sandwich and drop trash in the river. But when we go and learn how to row, we always explain how we restore the river. I have picked up a bottle from the river as I told the Bronx River story. Students understand the story and start caring, and they see that they can make a difference. So, today some of these new students saw a plastic bag in the river, and picked it up. I did not ask them to get the bag. Did you see how one influence makes another happen?

I think that my experiences at Rocking the Boat have changed a lot what I think about the Bronx and the city. Many people say that where I live in the North Bronx is the best part of this borough, and that the South Bronx is where prostitutes and drug dealers are, especially in Hunts Point. When you think of Hunts Point, you think of a lot of factories, companies, and organizations. Even the Rocking the Boat building is in-between a garlic factory and a metal scrap recycling facility. You can see many trucks around here. On the top of the hill there is a community and churches, and on the bottom of the hill there are all these factories and the shop for cars blocking access to rivers. There is an invisible line between

two realities, and so many people in the community don't see this industry next to their community. People wonder why their children have asthma. But now Hunts Point is becoming a very good environmental place. Now I just feel like I want to live here, it's the new place to go, it's becoming a greenbelt.

Similarly to all other interviewed students, Elizabeth was initially unaware of natural assets in the Bronx. In her view, nature or the environment existed somewhere else outside the city, but not in the Bronx. An episode when she discovers how it feels to boat on the river near her house is an example of stories, in which urban students explore various nature-dominated areas in the city—during environmental monitoring, stewardship, recreation, unstructured time in urban ecosystems, or while teaching other students about the urban environment. Through direct experiences, Elizabeth and other students discover that the Bronx has some of the largest parks in New York City, natural waterfalls, and the only freshwater river in the city. Yet students also encounter evidence of environmental degradation in the Bronx. They recognize negative place meanings of the Bronx related to environmental injustice, meanings that are sometimes shared with them by people from outside the Bronx or taught in their education programs. While Elizabeth begins to appreciate and benefit from nature-related experiences, her narrative also shows how she begins to see the possibilities for positive environmental changes in city, how she re-imagines the urban environment. For example, she tells other students how polluted the Bronx River used to be and how it is becoming better, and she believes that bringing more urban residents to the river will encourage them to take care of it. Sometimes, Elizabeth and other students can observe how urban neighborhoods are becoming greener during their involvement in urban environmental education programs; and sometimes students observe how their own stewardship activities in oyster reefs and urban farms can lead to environmental improvements. Elizabeth concludes that Hunts Point, a neighborhood in the South Bronx, "is becoming a very good environmental place" even though Rocking the Boat is located near a recycling facility and many trucks pass by. In some other narratives, educational activities help students participate in designing greenways, and imagine what the Bronx would be with fewer highways.

While direct experiences of places seem to play an important role in nurturing Elizabeth's ecological place meaning, her learning about urban places is related to her social interactions with environmental professionals, and to changes in her own identity. The narratives also show that if students participate for a few seasons in programs, they move from a position of novices in environmental education or community-based stewardship programs to more recognized young environmental leaders. They learn about the urban environment through networks that include environmental educators, professionals, scientists, local environmental leaders, and peer students. Elizabeth even concluded that to her, the Bronx's community of environmentalists is more prominent than that of Maine where she attended college. Her experiences with urban places are also connected to the development of her identity, especially to how other people in the Bronx recognize her as a young environmental leader. Narratives also show that Elizabeth and other interviewed students come to think of themselves as capable to make change. In addition, her narrative demonstrates that her identity became defined in relation to the Bronx's environment, her urban environmental education program, as well as her connections to Bronx environmental leaders. In sum, Elizabeth's and other interviewed students' narratives reveal that changes in their place meaning related to the Bronx reflect their place experiences, social interactions, and development of identity as environmental leaders.

Discussion and Conclusion

The sense of place literature has linked certain place meanings, or place attachment based on nature-related place meanings, to pro-environmental behavior and attitudes (Brehm, Eisenhauer, & Krannich, 2006; e.g., Brehm, Eisenhauer, & Stedman, 2013; Scannell & Gifford, 2010; J. W. Smith, Davenport, Anderson, & Leahy, 2011). Thus, one could hypothesize that environmental educators, perhaps intuitively, would try to foster ecological place meaning among students to promote pro-environmental behavior. However, the narratives in our study demonstrate that educators who are trying to connect urban students to natural aspects of their neighborhoods are motivated by a desire to help youth understand, appreciate, and benefit from urban nature, and to envision what their Bronx

neighborhoods might be in the future (Figure 5.2). Compared to pro-environmental behavior, these reasons are perhaps less utilitarian and less emphasized in the sense of place literature, yet significant for educators and students.

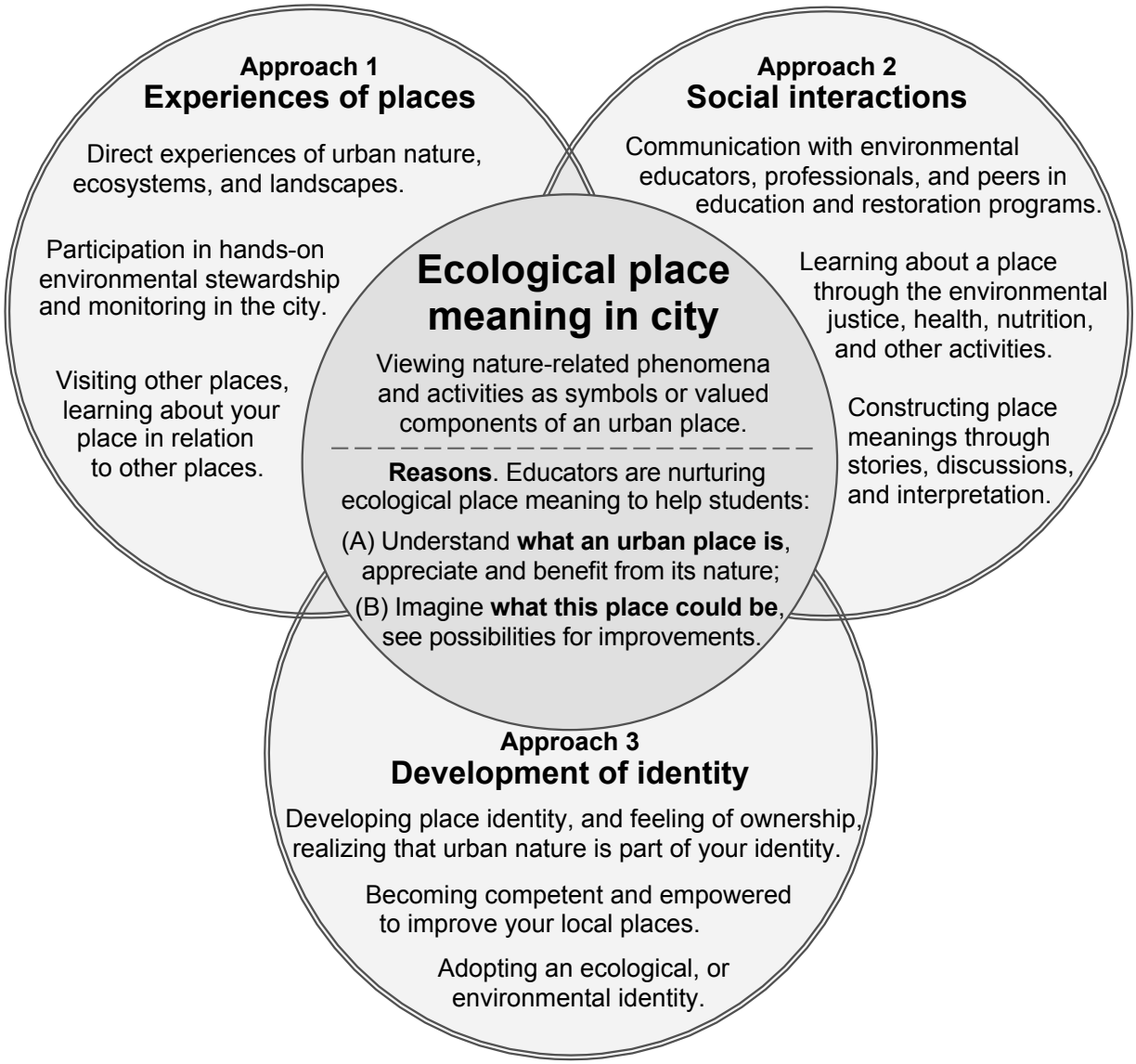

Figure 5.2. Reasons for and approaches to nurturing ecological place meaning among students in urban environmental education programs in the Bronx, New York City.

Educators' first reason—to enable students to notice, experience, observe, understand, enjoy, or otherwise benefit from urban nature, ecosystems, other environmental features and related activities in the city—is not emphasized in the sense of place literature. However, this motivation is consistent with place-

based education, which focuses on helping students to learn from and connect to nature and other features of the local environment, and thus strengthen students' understanding of the world and their community (G.A. Smith & Sobel, 2010; Sobel, 2005). Related to these ideas, our narratives show that some students begin to enjoy themselves in outdoor and natural settings in the city, develop pride in already existing natural assets in their neighborhoods, develop shared nature-related experiences and memories with other students, establish meaningful connections with different places, and find nature-related and stewardship activities fulfilling. These outcomes also resonate with a youth development focus in environmental education, in which students' well-being is regarded as a more important outcome than pro-environmental behavior or attitudes (Schusler & Krasny, 2010). At the same time, most interviewed environmental educators in the Bronx remembered their own nature-related rural experiences as children, which may have motivated them to provide similar experiences for urban students. Interestingly, the emerging generation of urban environmental educators is growing up primarily in the city, including some of the interviewed students who as program assistants are mentoring younger students, and thus their idea of what counts as urban nature and ecological place meaning in the city may differ from those of the educators in this study.

Educators' second motivation is to develop a sense of imagination and possibilities of what the city's environment, places, ecology, green infrastructure, and nature could be. Students are taught about the temporality of places, they observe how the urban environment is changing every year, discuss and create a future vision of the Bronx as a better place to live and experience nature, and think outside the box about the possibilities for environmental improvements. Whereas these visioning activities may relate to positive youth development—through unleashing students' imagination and creative thinking about their places—it also may be intended to encourage students' future involvement in improvements of urban places. These ideas reverberate Lutts's (1985, p. 40) question about promoting sense of place in environmental education by teaching students about the past, present, and future of a place, "Are we also teaching about the potential *futures*; helping people to recognize the alternatives, to choose those that preserve and create what they believe to be of value, and to act to bring this about?" This aspect of place

meaning education also resonates with Sanderson's (2009) idea that re-imagining our cities can motivate people to use urban spaces such as rooftops and waterfronts in a more sustainable fashion. Examples such as newly built Concrete Plant Park in the Bronx (de Kadt, 2011), and the High Line park in Manhattan (La Farge, 2012), suggest the potential outcomes of community members re-imagining decaying urban infrastructure and valuing urban nature.

As for the three identified approaches to the development of ecological place meaning (Figure 5.2), they are consistent with the sense of place literature in that place meanings are derived from experiences with biophysical landscapes (Stedman, 2003a), are socially constructed and learned through human interactions, interpretation, and cultures (Brandenburg & Carroll, 1995; Greider & Garkovich, 1994), and are influenced by self-identity or self-definition (Greider & Garkovich, 1994; Kyle & Chick, 2007; Kyle & Johnson, 2008). Narratives support these three pathways for nurturing ecological place meaning by describing concrete educational practices and sharing related stories. For example, narratives show how students learn place meanings through place-based experiences, including stewardship activities and visiting places they are not familiar with. Further, students learn place meanings from other people and though shared experiences with peers and, depending on types of educational activities, students may develop ecological place meanings that encompass notions of environmental justice, neighborhood history, environmental art, and community health and nutrition that perhaps cannot be learned solely by observing landscapes without interpretation or social learning. Finally, as students begin to identify themselves with the urban environment, they begin to think of themselves as environmentalists or as people who can enjoy nature-related activities in the city, and develop a sense of ownership of urban places and feeling competent or able to make positive changes in the urban environment.

Aside from answering our initial research questions, through the holistic representation of students' and educators' experiences, the narratives uncover the complexity of the actual practices of nurturing ecological place meaning. For example, we find that students sometimes have to reconcile conflicting place meanings, such as a view of the Bronx as green and sustainable, yet also environmentally degraded. Further, narratives contribute important nuances to the concept of ecological

place meaning by showing that ecological place meaning may include not only understanding and appreciating current nature-related amenities and activities, but also a future greener vision of a place. Lastly, although our findings are admittedly context-specific and we are careful not to generalize them beyond the educators and youth in our study, they can be useful for helping other educators to reflect on their own practices, and for researchers to build hypotheses for future research on the complex and rich idea of sense of place in educational and urban contexts.

Acknowledgements

We thank educators and students in the Bronx, New York City who participated in narrative interviews. The Community Forestry and Environmental Research Partnership at University of California, Berkeley provided partial funding for this study. This project is approved by the Cornell University Institutional Review Board for Human Participants (project ID# 0911000995).

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CHAPTER 6

CONCLUSION

Sense of place in cities—the way people perceive urban places—may influence human well-being, how people interact with and organize the urban environment, and our decision-making related to urban ecosystems. Through several independent chapters, this dissertation explored the role of environmental education in the development of sense of place among urban students. The main conclusions and contributions of this dissertation are:

(1) This dissertation reviewed the sense of place literature for environmental education.

The sense of place literature has produced many rigorous theoretical and empirical publications, which can enhance research and practice in environmental education. To date, this dissertation (Chapter 3) provides one of the most comprehensive reviews of the sense of place literature for environmental education scholars and practitioners. Environmental education could use the results of numerous published empirical studies about factors influencing sense of place, and about potential outcomes of sense of place such as pro-environmental behavior and human well-being. At the same time, environmental education researchers may benefit from adopting and consistent use of such ideas as place meaning and place attachment, and use the sense of place literature to create hypotheses for future research in environmental education.

(2) This dissertation conceptualized the idea of ecological place meaning.

Based on our literature review (Chapter 2) and observations in the Bronx, New York City, it was found that one of the goals of urban environmental education is to teach people about cities as social-ecological systems. This goal includes the development of sense of place, including what we call "ecological place meaning" in cities—i.e., understanding and recognizing ecosystems, nature, green infrastructure, and nature-related activities such as environmental stewardship and outdoor recreation as

essential elements and symbols of urban places. The concept of ecological place meaning per se has not been discussed in the literature, although researchers referred to similar ideas, such as place attachment based on nature-related place meanings. The idea of ecological place meaning may be interesting and provocative to investigate in the urban environment where nature-related features do not always dominate our attention. Based on the sense of place literature and observations in urban environmental education programs, one can hypothesize that ecological place meaning may have implications for how urban residents perceive, manage, and benefit from the urban environment. In the future, researchers may investigate the deeper implications of ecological place meaning for young people, such as its impact on students' interest in improving their environment, their well-being, and their potentially more positive perception of cities.

(3) Ecological place meaning can be measured using a survey.

We developed a valid and reliable Likert-scale survey to measure ecological place meaning (Chapter 4). The scale items are designed for the Bronx, New York City, yet they can be easily adapted for use in other urban areas. We made this scale available for educators in an open-access journal (http://dx.doi.org/10.1890/ES11-00318.1). Educators or community leaders in environmental education, place-based, restoration, civic ecology, or recreation programs in urban areas can use this tool to evaluate the effectiveness of their programs in terms of fostering ecological place meaning. We are already aware of a few instances in which environmental educators adapted and used the ecological place meaning scale in their programs in various cities. When we applied this survey to urban environmental education programs in the Bronx, we found that these programs significantly strengthened students' ecological place meaning. Thus, students started to view the Bronx, New York City as a more ecologically valuable place. Although we cannot generalize these results beyond the programs in this study, we hypothesize that similar environmental education programs in other cities may also significantly strengthen ecological place meaning among students by involving students in environmental stewardship, monitoring, activism, interaction with environmental leaders in communities, and outdoor recreation activities in cities.

(4) Narratives improved our understanding of educators' motivation to nurture ecological place meaning among urban students.

Through the narrative inquiry, we helped educators and students in urban environmental education programs in the Bronx to give meaning of their practice. These narratives illuminated experiences, stories, or contexts related to the development of ecological place meaning in cities. The narrative analysis showed that urban environmental education programs are trying to nurture ecological place meaning among urban students to help them: (A) understand, appreciate, and benefit from urban nature, and (B) develop a sense of possibilities and imagination of how their urban environment could be improved. These reasons somewhat contrast with pro-environmental behavior—the most apparent benefit of nature-related place meanings and environmental education described in the literature. The imagination of future improvements of the urban environment might encourage students' future participation in environmental stewardship or decision-making. Yet both of the above reasons for the development of ecological place meaning also reflect educators' intention to contribute to students' well-being and positive youth development.

(5) Narratives revealed approaches for the development of ecological place meaning.

The narratives revealed that ecological place meaning is nurtured among students in urban environmental education programs through: (1) direct experiences of urban places and nature; (2) social interactions among students, educators, and environmentalists; and (3) development of students' identity, including ecological identity. This contextualized, detailed knowledge about urban environmental education practice may not only help us learn about approaches to fostering ecological place meaning, but also provides meaningful lessons for other educators who can use narratives to reflect on their own practical theories and improve their own educational programs.

(6) Implications of sense of place in the city.

Despite the history of previous urban environmental decline and current environmental issues, urban environmental education programs in the Bronx, New York City are portraying the city as environmentally valuable, green, natural, and sustainable, and as having a great potential for further environmental improvements. Perhaps, developing such a sense of place is only one component of successful management of urban places—along with efforts contributing to social capital, positive youth development, civic ecology practices, ecosystem services, and other attributes of resilient urban systems. Yet nurturing ecological place meaning through urban environmental education programs can be regarded as an important step to help urban residents unleash their imagination and creativity, and open new possibilities in organizing urban places, environmental governance, ecosystems, and nature in a more sustainable way—which would contribute to human well-being and environmental integrity in cities.

APPENDIX

NARRATIVES

"WE USE BOATS TO BUILD KIDS"

AN EDUCATOR PROFILE OF ADAM GREEN

Founder and Executive Director, Rocking the Boat
Interviews conducted by Alex Kudryavtsev on August 4, August 5, and August 9, 2010

Adam Green is the Founder and Executive Director of Rocking the Boat. This after-school education organization contributes to youth development through engaging high school students in wooden boatbuilding, maritime skills, and environmental education in the Bronx. Adam believes that youth empowerment requires compassion, trust and creating a welcoming environment. This story focuses on Adam's background, the development of this organization, its educational philosophy, and examples of students who built boats and participated in environmental restoration using boats. A brochure at Rocking the Boat says, "Kids don't just build boats at Rocking the Boat, boats build kids."

My name is Adam Green. I'm the Founder and Executive Director of Rocking the Boat, which I started as a volunteer project in 1994. I'm not a community organizer, I'm not doing environmental justice. We are working with young people to try to get them to be connected to themselves through the world around them. We work to allow young people to dream about what they want to become in a realistic capacity, to set realistic goals, and achieve these goals in ways that benefit themselves and benefit the people around them.

I grew up on a small island called Manhattan, in a very typical Upper West Side Jewish family. Both of my parents were involved in public service. My mom is a social worker, my father was a writer and editor who worked for the Metropolitan Transportation Authority. My brother who is five years younger than I am is also doing sort of environmental, social work around community gardening and food in Berkeley, California. I went to high school in the Bronx; I went to Bronx Science and Riverdale Country School. I was aware of The Bronx all through high school, but I did not have any real connection to the Bronx other than this random place where I happened to go to school. Before high school, I went to public and private schools in Manhattan. My mom, a nursery school teacher, gave me the chance to discover things through playing. I did a lot of building with blocks, with Lego. I was always making things. My parents gave me lots and lots of room to do that. I had a little workbench in our apartment. I was by no means a carpenter, but I had a little hammer and some tools, and I played. Those experiences were very powerful.

Over the summers my parents would send me to camp for half of the summer. And the other half of the summer we would do something fun, which involved renting houses in different places in New England or on the beach. Sometimes it involved traveling to Israel, Scotland, or France for two or three weeks. But my favorite experiences were spending a couple of weeks at a time in a new house in a new place. Many of my friends had country houses. My parents never had a country house, and I'm glad for that, although at the time I wished we did too. We did not have the money for a country house, but we got to see lots of different places and did not have any the responsibilities of owning another house.

It was really over those summers—particularly a couple of summers that we spent in Long Island on the beach—that I learned how to fish and catch little animals in the water, and got really excited about nature in many ways. I would go fishing with my dad on a charter boat out in the middle of the night. But generally I would fish myself off a little dock outside the house. I would take a little rod and catch little baby bluefish, which we called snappers. You could literally go out in the morning and catch your lunch. I would go in and my mom would fry up the fish and I had lunch. It was a pretty cool thing. It's certainly fun to put fish in a tank and see them swim around, and it's really fun to cook them and eat them. [laughing] We do that for years, we take our kids fishing on charter boats and there is nothing more powerful than taking home lot of things out of the ocean and feed yourself with it.

We would also go up to New England to hike. My parents were big campers, we would do a lot

of that kind of stuff. Early camping experiences were very powerful to me. Hiking with my family, camping in the woods and just being out in nature for a couple of days at the time offered the sense of how much else there was out there and the sense of peace. I was not thinking in those terms, but I remember as a little kid walking through the Bronx Zoo, looking up into the trees at certain points of the Zoo and thinking, "Wow, this is such an amazing place. If I were just right here looking up, I could be any middle of the woods." I know that the 2 train was running over there, but if I were just right here… this is such an amazing thing.

The only real boating exposure I had was through an organization called the Hudson River Sloop Clearwater. Clearwater is a 106–foot, single-masted sailing ship that is about 40 years old now, and was built to reflect the boats that were used to sail up on the Hudson River as cargo vessels in 19th century. Its purpose is to teach people about the beauty of the river and get people to care about Hudson River. Musician and activist Pete Seeger started it in mid 60s. My parents were big fans of Pete Seeger. So over the course of my childhood we would go on the boat maybe once a year, once every two years, and take a 3-hour-long sail. It was an amazing experience, this huge sailboat out in the middle of the harbor. You could look back at New York City, these little buildings that you could just grab in your hands. It was an amazing feeling of power, perspective, and freedom.

So when I was 14, I was young enough to take part in the volunteer program that they has on the boat, and my father and I spent a week on the boat. It was a fantastic bonding experience for my dad and me, and it was also my first experience being on the boat for that length of time. And probably more important it was my first experience with experiential education in action. I actually taught kids both younger and older than I about dissolved oxygen and plankton. Doing something that was really unique made me feel very special and stand out in my own mind. And I think that's very much what we are trying to do in Rocking the Boat. Rocking the Boat is sort of a response to Clearwater, expanding on the things that I got a taste of but wished I'd had more. I think the biggest challenge Clearwater has with its educational program is that most kids are just spending three hours on the boat. They come on with their class, so it's almost always in the context of school.

In my school experience I did not feel very special at all. I felt like probably every junior high school kid does. I was not one of the real losers, but I was not one of the real popular kids. I was somewhere in the middle, perhaps slightly on the side of the loser. I was really small for my age. I remember in 8th grade I was the lightest kid in the class, including girls. [laughing] I weighed like 94 lbs, a late bloomer. All that kind of translated into me feeling not so hot, and that sort of continued into high school. I figured a way out of it in college by getting into stuff that made me feel more unique.

I graduated high school in 1991 and I went to Vassar College in Poughkeepsie, New York. It's a small liberal arts college. I did a lot of partying for the first couple of years, which was more often harmful than valuable. And I was really looking for something to give me a reason to wake up in the morning and give me a sense of purpose. I went to some wonderful schools, I had some great teachers, but there was not the kind of love, empowerment, trust, and so much of what we do here at Rocking the Boat by giving kids the power to go out and do their own things. That was not something that I ever really experienced except in my home life, my family life. And today in many ways I see Rocking the Boat as an opportunity to give our students on the institutional level some of the opportunities that I had at home.

After three years of college I did not know why I was there. I really needed to take some time off, not waste my parents' money and figure it out. I took a semester off. I went to Ithaca, New York because I had a good friend who was going to Cornell University. His fraternity house had some open rooms, and it was a nice place to spend the summer. I spent two months working in a carpentry shop in Ithaca, living on Steward Avenue, biking past Buttermilk Falls every day to get to work. And then I spent two months working on Clearwater. I was crew on the boat doing much of the same stuff I was doing when I was 14. But I was disappointed that I was not able to create more long-lasting connections with students. They are coming for three hours, you make a connection, and they are gone. Then another group comes, you make a connection, and they are gone. Not only was not I able to teach them very much, I was not able to develop relationships with them. I felt like this work would be much more powerful if it were sustained over a longer period of time and if it were not just only the surface: here is some plankton, some sailing, a

bit of this and that. It could be really used as a tool to open up different opportunities. I think it was out of those experiences that I later started Rocking the Boat. But I'm using it not just as a way to increase academics, give kids a nice fun experience, or get them off the streets. It really allows them to experience all kinds of different opportunities around and within themselves.

After working on Clearwater I spent two months at home. It was during that period that I started volunteering at the East Harlem Maritime School. A teacher in this junior high school had a dream to build a boat and wondered if I wanted to try to do it. I had met this teacher when he brought his class on Clearwater that fall and I made a connection with them. I gave him a call, and he said, "Sure, come to my classroom. I have two ideas—one is to do a journal writing project with my students and another is to build a boat—but I've never been able to do it because I have to teach a class. Would you be interested in doing it?" I thought, "Cool. Sweet. Sure." That's how it started. I had an undercurrent of wanting to create the environment that has the compassion, the warmth, and the sense of possibilities. And I found that teaching kids through something as tangible as building a small boat was a really exciting.

I did not have any experience building boats, but I had spent that two months working in a carpentry shop in Ithaca and two months working on Clearwater. I had enough experience for me to feel, "Sure, I can try this." That's how it got started. Then I went back to college in the spring. Sometimes experiences mean a lot, but they don't really kick in until you tell someone else about them. In school they asked, "What did you do?" "I'm teaching a bunch of kids in East Harlem how to build a boat." And they said, "Oh, that's really cool!" and another person, "Really? Wow, that's cool!" And I realized, "Yeah, you're right, that is really cool." And I continued throughout that semester with the group of junior high school kids in Harlem. We built the boat, a little 6-foot dinghy that we floated in the pool at the basement of the school, and I wrote this little article for the Clearwater Navigator magazine. In fact one of these kids wrote me on Facebook very recently [copied from Facebook], "*I was a part of the initial boat building team at east harlem maritime school, i still have the magazine clipping with my photo in it, i remember that day like the back of my hand and it was over ten years ago, i remember building the boat, i remember trying it out in the pool at school. adam you and mr. pennoyer were the greatest, thanks a bunch*." Isn't that cool? Really, really cool. It was very exciting.

My senior year in college I pulled away a bit because in fall I was working on my thesis on storytelling in the Hudson Valley. My degree is in American Culture, my focus was on religion, English, and geography. Then in the winter of 1996 the fellowship director at Vassar suggested that I consider applying to a fellowship called Echoing Green. It's a foundation that invests in social entrepreneurs, people who do community service related projects all over the world. At that point they recruited through a series of colleges, and they asked that I take my ideas and develop them into a sustainable project. I took my little volunteer program and had to build it into something that had legs. In completing the application, I was asked for the name of the project. It didn't have one. My housemate had once yelled from the kitchen "Adam, you rock the boat!" and I realized he'd given me the perfect name: Rocking the Boat.

But now I had to really create a project. That first boat project was just me going in once a week building a boat, and there were no objectives other than finishing the boat. For this application, I built out an entire year-long project, with educational and social objectives along with the actual completion of the boat. I made it to the Echoing Green finalist round. As part of the competition, I went to Boston for a whole weekend of interviews and met all the other finalists. I was inspired by all these people and felt, "I'm among all these really smart people doing amazing things all over the world—I must be one of them!" In the final round I was turned down and I did not get the fellowship. But I still had this plan to create a boatbuilding program as a way to do youth development. I did not know this term, so at that point it was to empower kids and give them social, emotional and academic skills. So it was very clearly about using the boat as the tool to give kids power. I was committed to making the idea happen anyway.

After graduating from college I managed to get myself a job teaching boatbuilding at Hostos Community College in a high school after-school program. I worked with high school students from two different schools, and got paid. I was a substitute teacher in the New York City Public School system, so I got paid as a teacher, probably more than I make an hour now. We met three days a week: Tuesday,

Thursday and Saturday. My job was to teach kids to build a boat. I had to first learn what I was doing, and that's why I started looking at and learning from Floating the Apple, a volunteer organization building Whitehall gigs, 26-foot long rowing boats. Mike Davis started this organization; he was a character. I found about him in 1995 when I started my volunteer work in a high school. Floating the Apple's mission was to get people on the water because the more people we have on water, the more sense of freedom there will be, reflecting the 19th century when boathouses were built all around Manhattan. I would say that it's not an education goal; it was more of an urban planning goal. It was a wonderful thing, but I preferred programs that were more about education. Like a community garden—you can have a community garden just to grow plants, eat and have a great time, or you can have an educational garden.

I was much more interested in youth development and having kids empowered by understanding everything that happens. I want to be able to say, "You, kid, how do these boats get to be the way they are?" and have them say, "Well, you start off with these plans and these patterns, and this is the work we are doing." I wanted kids to understand that things do not just appear and disappear. I wanted to empower young people by giving them a sense that they do have power and control, and you can make things happen. For example, right outside our door for years was the Cross Bronx Expressway. Kids did not know that it was not always a highway. Before it was a highway it was a neighborhood. Before it was a neighborhood it was farmland. Before it was farmland it was a forest. People made decisions every time it changed from forest to farmland to a neighborhood to a highway. And guess what, will it always be a highway? We are not stuck with it as it is. We can always change. And think about how it might reflect on me as a kid growing up in the South Bronx on my block, "This is it. I'm stuck. It's my reality." That's kind of the work I'm trying to do, to explain that our reality is only what we have decided, and that it can be changed.

At Hostos Community College I spent a lot of time working to engage the kids, making sure they showed up, calling them at night to make sure they came the next day. And we started building a boat. It was really my first time working outside of the school context, it's really when I started doing youth development. We would take trips on the weekends, go sailing on Clearwater, going to the botanical garden, and doing other environmentally related things. I think one of the most powerful things I observed was that for the first time kids actually had the reason to know things. They had the reason to put what they'd learned in school into practice. Everything I asked them to do was because if you don't do this, this won't happen. I found myself spending a lot of time teaching fractions, teaching how to read the ruler, which is still something that I'd say 90% of our kids don't know how to do.

I actually found myself teaching fractions and how to use the ruler yesterday. I had to spend a lot of time in the shop because Tony Archino is on a trip, and I said, "Wow, these kids still don't know how to read rulers. It's amazing." My conversation yesterday was, "If we had one and 3/8 and we add 1/8 to it, what do we have?" And the kids looked like I had just asked them what the planet Mars was composed of. I think a student said, "Four." I was like, "No, no, no. Don't guess. You don't need to guess, you know the answer to this not by what you remember but what you understand." And then we went to the beginning, which has to do with money and pizza and all the basics of how to teach fractions. One of the things I experienced was that these kids had never been taught anything in school that actually had a purpose. So there was a very direct impact giving them a reason to learn stuff. And think of the image of seventh grade girls using power drills and jigsaws—it's really exciting to see these kids doing that stuff—and not because you can go and become a carpenter. It's power, it's amazing, it feels good.

So at Hostos Community College we came up to a point where they got us to set up building a boat in a little classroom in an administrative hallway. And I said to them, "There is no way that we're going to be able to get this boat out of the room through a little door. We can start here by making all the pieces. But once we put them together, we are stuck." And they said, "Okay, okay, we'll find you another room." So we started working, made all the pieces, and I said, "Where is the other room?" They told me they hadn't found it yet. So I delayed the project, and we built bookshelves and whatever for a while, and I realized that the school was not going to give us another room. So I decided, "I'm gonna continue building the boat." In the meantime I started talking about the project and through a couple of lucky breaks I ended up getting the New York Times to take notice. When the reporter from the New York

Times told he'd be coming to do interviews and take pictures, he of course asked: "How are you going to get the boat out of the room?" "That's a great question. I'd like to be able to give you the answer: we are going to break down the wall and get it out. Now that you are writing this story, I can go and ask the administration and see what they want to do." So I did, and I said, "New York Times is coming, and they are going to see that one little door, and you are going to look pretty damn silly if you don't give them an explanation of how that boat will get out of the room." [laughing] So they said, "Okay, we'll break down the wall."

So at the end of the article in New York Times[5] you read: "*There is, however, one small complication. Now that the boat has taken shape, it cannot fit out the standard-issue door. To solve this ship-in-a-bottle problem, the group is planning a fund-raising bake-off to finance knocking down part of the cinder-block wall. A backup plan involves cutting the boat in half. 'We're building boats and knocking down walls,' Mr. Green said, 'and that's not even a metaphor.'*" And that was our first real press. And then later, CNN also covered the story, it was very exciting. So, we knocked down the wall and we got the boat out. We had a big concert, a big celebration, and it was great.

But I decided that I did not want to work in a community college, which is not a community. I did not want to work in a school. I wanted to work right in the community. I didn't make a lot of money, but I had a successful program, a New York Times article, and a CNN international news story. I started shopping this idea around and decided that, "I'm a White kid from Upper West Side in Manhattan. What place do I have standing on a street corner saying, 'Who wants to build a boat with me?' Why don't I find an already existing community and hook myself up with them and work through their relationships?" So I started researching other organizations, and eventually settled on a group called New Settlement Apartments, which is the settlement house in the West Bronx. They were very excited to have me and the deal was, "I would raise all the money if you give me space to build boats and endorsement to work with your community." And they were happy to do that. They had lots of buildings, lots of space. In summer 1998 I set up in a basement, and we started in fall of 1998. For the first time I had a non-profit that I could start raising money through. In the spring of 1998, I started fundraising and applied again to Echoing Green along with four other foundations. And I got the Echoing Green grant this time. It was pretty cool because I said, "Remember two years ago you turned me down? Well, I did it anyway, and here are the pictures." So I got that. It was 20 thousand dollars plus full health benefits for me. It was a fellowship that was directed to me personally. And then I got four other grants, totaling $53,500 in that first year.

It has been an incredible ride ever since. It grew from environmental education because even back in that first year we would go down to river and take trips. But we did not have our own boats, we could not do anything like we do today. So we were in the settlement house in the basement for 1999 and 2000, and then we moved to a storefront, where we were until just last summer when we moved everything to the current site on the Bronx River. Our boatbuilding program was in the storefront for nine years, a small but beautiful storefront on 174th Street and Jerome Avenue. We grew from just being me building boats with a couple of kids to me hiring former students to help run the program. They were called apprentices back then; now they are called Program Assistants. So we had a boatbuilding program and in 2003 we added the On-Water component, which was in different locations. At first it was not clear what that was, but my idea was environmental science, the Bronx River restoration work. We chose the Bronx River because we came here to Hunts Point Riverside Park in spring 1999 to launch our first boat. Right here when it was just an empty lot.

I was the boatbuilding teacher for six years. We did not do nearly the degree of current environmental science or sailing we do now, it was very basic. But we went to lots of other places, we went sailing on Clearwater, we went to museums, seaports, we went on weekend trips every other weekend, camping and ice fishing, and all sort of the other stuff because it was just me and I could do anything. We hiked to the headwaters of the Hudson River up in the Adirondacks, which you actually should do to have an amazing experience where the Hudson River starts, lake Tear of the Clouds. It was

[5] Kilgannon, C. (1997, April, 06). Staying afloat. *The New York Times*.

all one program—you'd build a boat and you learned about the world around you.

One of my favorite trips was one of the simplest. We were in our shop on Jerome Avenue in the West Bronx. Between Jerome Avenue and the Harlem River there is a huge hill, and you literally have to walk all the way steeply up the hill to visit the Bronx Community College and see beautiful sculptures of famous people. Then we would start going down the hill. I would ask, "What do you think there is at the bottom of the hill?" "I don't know." "Well, just take some water and pour, and it's going to hit the ground and where is it gonna go?" "Down" "Right. So what do you think is at the bottom of the hill? Water? Right!" And we walk down the hill, and it turns out that there is the Harlem River. And then we get on the boat and go rowing the Harlem River. So giving them this very-very basic sense that we are at the bottom of the hill here, you walk up to the top of the hill, you walk down the other side, and there is water. It was a basic experience, but guess what? We are in nature. Geology is all around us, and gravity is all around us, and these are very basic concepts that I was trying to get to kids. I think it's the same sense of place that you are trying to capture—the idea that we are connected to the world around us and whether we like it or not—we are governed and defined by natural forces. And so no matter how much concrete is built around it, gravity still works and hills are still hills, and water collects at the bottom of those hills.

I started the On-Water program so that we could use the boats we built. The idea was that we are not teaching carpentry or fractions. We are teaching kids to build something real that actually works: a boat. Great. But why are we building a boat? How do we use it? We needed to come up with some practical purpose for a boat. Boats are nothing without the environment. You could be building furniture, and in fact there are many boatbuilding programs around the country that should be building furniture. They don't know what to do with the boats once they are built, which is ridiculous. And it seems to me that restoring the river is a pretty good reason to have a boat. So the idea of our environmental work is exactly the same as the idea of boatbuilding. It's learning about all this stuff as a tool to create impact in the world.

We restore the Bronx River for the same reason we build boats. Our goal was not to build boats, our goal was not to restore the Bronx River. But at the same time we build beautiful boats that really work and we are really restoring the Bronx River. When it comes down to our goal, the goal is to build kids. And I think one of the reasons that we have been successful is because we are absolutely clear about that. If Dawn Henning or another educator at Rocking the Boat came to me and said, "Adam, the Bronx River really needs this, we need to plant lots of trees everywhere," I'd say, "That's nice, but our job is not to plant trees. Our job is to develop kids. So, talk to me again. Tell me how this idea is going to help us develop kids."

And in fact, in our scientific work we specifically don't initiate restoration projects because we don't want to be responsible for whether those trees grow or not, or whether they do their job or not. We want to be responsible for kids. The only accountability I want to have is how much have you learned, how much have you grown, how much have you developed. If the Bronx River does not do what we hope it will do, if the boat does not float, it's not that I could care less, but it's not why we are in business. And I think that looking at many non-profits across the city, particularly in the Bronx—there is not as clear of a mission. Often it is "We are here to solve lots of problems." And my feeling is that we are not here to save the whole world, we are here to do one very small thing. And if all of us across the world were just trying to do one very small thing, we'd be in a whole hell better shape than we are. [laughing] So that is my philosophy on change. We are not, for example, trying to do major urban planning initiatives. We are not trying to turn empty lots into parks. We are using them, and we are doing education.

So in 2003 we created the On-Water program with the focus to do environmental science. That grew and developed with some stops and starts, and we eventually added a maritime skills component onto it because you need to know how to use the boats in order to use them to do the environmental science. Everything relates to some larger goal. And in 2006 we added the Job Skills program, which is a very important, big step in our development. It is something I have been developing in my mind for a number of years as a response to a whole bunch of different challenges the organization was having structurally—both on the development level for the kids, and on the practical level in terms of what the

organization needed. The work that the Job Skills guys are doing is directly related to everything else that the organization needs to survive. We are one big ecosystem. Everything we do is connected to everything else. Very simply, the boatbuilders build the boats, the On-Water kids use the boats and beat them to hell, the Job Skills boatbuilders fix the boats, environmental apprentices do the high-level environmental science work, it trickles down to after-school and summer Addy's On-Water programs, it trickles down to Chrissy's On-Water Classroom program, and it's all connected.

And I think it's one of the reasons that we were successful, it's all pieces of the big machine. If the Job Skills boatbuilders were not repairing the boats, we'd have to hire someone else to do it. Boats gotta get fixed. If Dawn's apprentices were not leading these complex environmental projects, then kids in the On-Water program would not have any work to do. And who is that staying up late getting the projects done? It's Dawn's apprentices because they are getting paid to do this work and hold the primary responsibility, not the after-school program students. I think the reason it's an effective work environment for students is that we are not paying them to learn. We're paying them to deliver a product. There are a lot of programs out there that pay kids to learn, and I don't find them compelling.

So the boatbuilding shop was in the West Bronx, but the On-Water program was using different waterfront locations. First it used to be right here in Hunts Point on the Bronx River. We had a trailer, a container where we kept our boats. And then the city came and closed this vacant lot to create Hunts Point Riverside Park. Once they told us to leave we moved up the river to what would become the Concrete Plant Park, and we were there for three years from 2002 to 2004. We had three storage containers and ran the program out of these containers. We kept the boats in them, and did everything outside, we did not have any indoor space. In 2005 that park was also closed to the public for renovation, and we moved to Clason Point park on the East River, where we were a little over a year. Tony Archino was running programs inside the containers; educators were really creative. Then we finally moved back to Huts Point Riverside Park. That's when we got classrooms and really started to stabilize. Moving to Clason Point was interesting, though, in many ways. In particular, because it really gave us a chance to experiment what it was like not to be on the Bronx River. Rowing right out in the East River was a very different experience because it's a much larger river and the weather was a much greater threat. We were very conscious of the wind. If it was too windy we just could not go out, it was just way too open, whereas here on the Bronx River, which is much smaller, there are very few days that keep us from going out. So it was very interesting to see and reinforce the value of being on the Bronx River.

Even the boats we are building now come from a tree that grew along the Bronx River. A huge tree blew down last August in the Botanical Garden, we harvested it this past fall, brought it here on a flatbed trailer, sawed it up into planks, and we are building our boats out of it. It was a 265–year–old oak tree growing in a native forest a couple feet from the river. We were talking to the Botanical Garden about another project, and this kind of came up. We ended up doing an exchange where our kids spent the day spreading seeds of native species in the Botanical Garden. In exchange we got this 20–foot log. It's a massive log: 3–feet on one end and 4 feet on the other end. I expect that we'll be using wood from this tree for the next two years or so. We love the idea of building boats out of wood that came from the Bronx River to be used to help preserve the ecology of the Bronx River.

Getting back to Clason Point, here is a good story that happened in summer 2006. One Sunday one of my staff people and I went sailing. We had a big tent out in the park. When we returned, under that tent there is a huge party, a live band, people playing music, people drinking beer, huge party, all local folks. We walk up and someone turns around, everything quiets down, and the whole thing went dead silent. And the head guy runs over me and says, "Hello sir, I hope it's okay that we were in the tent. I'm so sorry…" And I said, "Of course it's okay! I would not leave the tent up in a public space and not let anyone use it. Of course it's okay, go for it. Absolutely." They said, "Oh, that's great!" Then they handed me a beer and we had a great time. That's my theory of how to keep the place safe. It is to involve as many people in it and give a sense of investment and ownership to as many people as we can to share that. So I want to let everybody come in here and know how great are the things we are doing, and how this thing can help you, your kids, and your family. You can come up, no matter how scary you look I say, "Yeah, you should come out and go out rowing on Saturdays with us. Come rowing!" Anybody.

You were probably not here when the motorcycle gang Rough Ryders had their barbeque here. It was mayhem. They were just setting up in this park when we left, and I said, "Hey, if you need water or if you need to use our porta potties, go for it. And they were pretty nice. I came back, they had a deejay, they were blasting music so loud I could not see straight, they hay jet skis speeding all over the water, it was really a mess, it was awful, honestly. But we created a relationship with them, so that there was no trouble to talk to them. So it's very important to just be totally open and inclusive. And we feel very fortunate with the resources we have. And we have a lot of resources. We want to share them. The parks department comes and cleans the park every day, and they all come in here to use the bathroom, they take fruit, and they are very grateful. And guess what, when we need something, we can go to them, and we know we can have them do it for us.

I would say that we were not particularly successful at collaborating with other youth development organizations in the Bronx, but we've been highly successful at collaborating with other scientific organization: Lehman College, the Gaia Institute, the Audubon Society, SUNY Maritime College, NOAA, the Parks Department, the Bronx River Alliance, a whole big list of partners, which we work with in the capacity of a scientific partner. And I think the reason we collaborate so well is because each organization has something the other needs, which is the nature of collaboration to some extent. Our partners have ideas, scientific perspective, and knowledge. Rocking the Boat has people, access on the water, and capacity to do lots of stuff, so we implement the projects of our scientific collaborators. We collaboratively design environmental projects and fulfill their scientific goals in ways that allow our kids to actually do real work. All the science we do—water quality monitoring, water testing, oyster reef restoration—relates to these limited number of projects that we are working on with our scientific partners. So we are not just teaching environmental education, we are not just taking water tests because it's a nice thing to learn, we are not tramping through the mud because it's good to get out into nature. Everything we do should be directly tied to a larger scientific goal or purpose. And I constantly challenge my staff to make sure that whatever they are doing with kids is very directly tied to a larger practical goal.

I think we have done some wonderful collaboration with the Bronx River Alliance. I don't think of the Alliance as a youth development organization, but we work with them on education. If you are a teacher, you might want to do the Bronx River education class at Rocking the Boat with Chrissy Word who runs the On-Water Group program, and you and your students would come to us over a series of programs. We get you on the boat, use our equipment and do very intensive teaching on the river. We are running the show and you as a teacher are sort of a participant. The Bronx River Alliance, however, primarily engages teachers in being able to run their own educational programs. They lend equipment to teachers, they give them curricula to be able to develop programming, and they give teachers the tools to be able to do it on their own. It's great, but very different from us. When people say, "Oh, you run programs for teachers. Aren't you guys like the Bronx River Alliance?" I can say, "No, we are not. They do it this way, reaching this goal. And we do it that way, reaching that goal."

And the two models of education programs actually complement each other very well. We have lots of teachers who benefit from the Bronx River Alliance by doing stuff on their own, and then they come to us because what we do you could not do on your own with other resources. So it works very well. And we would not do what the Alliance does, and the Alliance for the most part does not do what we do because of a variety of reasons. And then on a scientific level we collaborate as well because they have scientific initiatives and citizen monitoring that we help to fulfill. It does not hurt that two of our staff are on the Alliance's Board of Directors as well. And I think that the collection of organizations doing work around the Bronx River is quite extraordinary, and incredibly unique in the degree of capacity that they have. I'd be very surprised to see any other river of the tiny little size that the Bronx River is that has that much attention, organization and energy around it. It's quite amazing.

Now Rocking the Boat is located in a new facility on the Bronx River between Hunts Point Riverside Park and a recycling yard. One of the most remarkable things about this place is that we are about 1.3 miles from the mouth of the river when it opens up into the East River. What that means is when you go out to the river right here you are in the Bronx. The Bronx is all around us. Soundview Park is across from us, Hunts Point is behind us. The Bronx Zoo is north of us if you really want to go far. But

we are completely surrounded by the Bronx, which is the same reality that most of our students live in. They live in some streets and neighborhoods in the Bronx, and they rarely leave the Bronx. The amazing thing about the Bronx River and the boats we use is getting on the water and rowing for 15 minutes, and you get to the mouth of the river. And all of the sudden the river opens up, across the East River you see Queens, and if you go farther you see Rikers Island, the Manhattan skyline and the Empire State Building, and if you go north-east you see the Whitestone Bridge and the Throgs Neck Bridge.

This is a very real experience of leaving the Bronx. You are in this big, wide, open world that is clearly connected to lots and lots of other places. This is what we are trying to offer to young people—under their own power, rowing their own boats that they built—seeing how they connect to the rest of the world, and that they are not by any means locked in the Bronx, in this one reality that they can't even escape from. They see that where they are is a part of the much larger world. A big part of what we are trying to do at Rocking the Boat through the On-Water program is to use examples of geography and definitions of home as a way symbolizing your relationship to yourself. When we talk about the Bronx and the Bronx River, when we are taking students on boats out to the East River and other places—obviously we are talking about yourself. Rocking the Boat is here in the Bronx. We are not in some faraway beautiful place that you have to travel to. We are right within you already. You don't need to be anyone different that you are, you've got all necessary qualities, and it's just a matter of finding them.

Rowing up to the mouth of the Bronx River gives you this experience of, "Wow, look at this magnificent openness that you have." One of kids said in the most perfect way, "I can come out here and feel free whenever I want and feel free." Feeling free—it's up to us to interpret. And that was so much that we are trying to accomplish in working with people. But this physical place… The river is both metaphorically and very practically a way to explore our own possibilities. We bring a lot of attention to kids' awareness of where they are, where the river can take them. It's something that is very much a reflection of this place. The other thing about the river is: you go north, you pass 180th Street, the river turns from a tidal brackish saltwater system into a freshwater stream, and the nature of the river changes radically. You can be at the Bronx Zoo by the Bronx River checking out the plants and animals, and then come down here, and it's a totally different system, but it's the same river. This degree of diversity in such a small place that reflects the Bronx is really unique and exciting thing for kids to learn from. For many reasons the Bronx River is just an ideal classroom, a place to explore and experiment.

The reason why we are here in the Hunts Point neighborhood is not specific to Hunts Point. In fact, the reason why we are in the Bronx is not even specific to the Bronx. Our mission is to serve underserved, under-resourced communities, and there are many of them around New York City. The reason why we are here specifically is because we need a very unique tool to do our kind of youth development work. And that tool is the Bronx River. Honestly, we are not here for the Bronx River. We are here for the people in this community. But we are not even specifically here for the people in *this* community. We are here for the people who need our help, and it happens to be that this community is next to the Bronx River, which provides us the tools that we use to do our work. We are serving this community, but also people from all over the city—Brooklyn, Queens, Harlem, Washington Heights—can use our services. We are dedicated to the Bronx River very differently from a lot of the other organizations we are working with. Rocking the Boat is not a community-based organization in the same way. We are youth development organization that could exist anywhere. We just happened to be here.

Rocking the Boat has recently moved in this beautiful building near Hunts Point Riverside Park. It's a 6,000 square foot former warehouse that we have just renovated to create a huge boatbuilding shop, environmental science lab, offices, a library, a big lounge area, and a full kitchen with stove, sink, refrigerators and all that stuff that we have in our own kitchen at home. There are a lot of reasons we have a kitchen. One of them is that the most intimate moments happen in kitchens. It's generally not in a bedroom. It's usually in the kitchen. [laughing] So we have a kitchen that people can really use, and it seems to be working just that way. And we are very fortunate to be able to get free fruit and vegetables through another local organization called the Hunts Point Alliance for Children, so we feed our kids really as much fruit and vegetables as they can eat. And it's amazing to see them just gorging themselves on blueberries, grapes, blackberries, oranges, apples, grapefruits, nuts and raisins. They eat it up without any

complaints at all. I don't think anyone asked me for a chocolate bar or chips, they are very happy with all the fruit. So it's very important for us to have comfortable places for kids to come and crash, and hang out, and feel at home. We are very excited about this building, and still exploring the new wonderful opportunities it offers to the work we do with kids.

One interesting thing in our facility is that—knock on wood—we have not had any graffiti at all. But the Hunts Point Riverside Park, which is adjacent to Rocking the Boat, was really devastated by graffiti a month and a half ago. There is an article on the Hunts Point Express and a piece on News 12 about it. But even beyond that there was constant scrawling and desecration of this new park. The water fountain was smashed, lights have been broken. Maybe it is somehow about personal expression, but not in the same way. Most recently, this weekend, a beautiful steel fence section on the peer was stolen. We've talked about the causes of it and solutions with the Bronx River Alliance, with all other local organizations—THE POINT CDC, Sustainable South Bronx. It was in general, not just about graffiti: why do people do that to such a beautiful resource? I'm sure there could be social studies on the topic. And so the question is, "Why is this happening?" and "Why is it happening more here than in other places?" Maybe it is somehow about personal expression, but not in the same way.

I think there may be at least two or three reasons of vandalism in this park. The primary one is that this is the community that has never had parks before, and you have to learn how to use them. We have a very big problem of swimming off the pier, kids swimming in the river. That does not have the same qualities as vandalism, but it's not an appropriate use of the park, and I'm sure you have heard of two kids who have drowned up in the Bronx River Park. So the big problem is that people are just not familiar with how to use this resource. The river is not just a baseball field, and people never had any kind of access to a river. There is not a body of water anywhere in New York City that is even remotely as welcoming, inviting and relatively safe as the Bronx River. The other reason why the vandalism is happening is because this park is brand new. And this brand new, beautiful place is also calling out for attention. Some of this attention is wonderful as the kids with families who picnic in the park and the guys who fish from the pier. But in every community—particularly as under-resourced as this one—there is a huge undercurrent that can often be targeted and turned into violence.

I would be fascinated to see if you were able to have a conversation with any of the kids who are hanging out in the park and write graffiti—not big bad ones, but just little stupid kids scrawling on park benches. Why are they doing that? I don't know if they would talk to you, but I think it would be a fascinating perspective to get a counterpoint, and even a baseline to compare to kids in Rocking the Boat. These kids in the park are probably unconnected to the value of their environment. Well, maybe they are because they *are* coming to the park. If they were totally unconnected, they would be in their apartment or they would be on their street corners. But they are actually coming down to the park, so they are not totally unconnected, they are just destroying it. But maybe they are not destroying it in their minds, maybe some kids are writing their names on a park bench not thinking about it as vandalism. Maybe there is something about the park that they don't feel included in. I don't know, I'm guessing. Maybe there is something that they see as "this place is not for us."

I think the real answer to solving this problem of vandalism is through education. It's not a simple solution, and it's definitely not a cheap solution. I agree that it's important to put the gates, cameras and whatever security measures you can, but that's a symptomatic response. It's not a fundamental response because it works until the moment someone figures out how to get over the fence or where not to be seen by the camera. The real solution is to get people to appreciate this place and to feel like by vandalizing it they are hurting themselves. And that's what we are trying to do with our people in so many ways. I see littering as one of the world's greatest evils. What does it mean if you throw a piece of garbage on the floor? Would you do it in your own house? You might. But what does it say about the way you feel about your own home or the way you feel about your own environment? For that matter, I could go off on a big tangent about what people do to their bodies and how they litter their own bodies. But what does that mean about the way they think about themselves? I see a lot of it has to do with self-esteem and self-perception. So my feeling is the better people feel about themselves, the more they are willing to bring the rest of the world along with themselves and make everything more beautiful.

A good story is that we have been able to engage a number of these kids who hang out and are kind of distractive in the park, and get them involved in our programs. We always welcome everybody from the park to Rocking the Boat. Want to use our bathrooms? Feel free. You have to have a piece of fruit? Feel free, come on in. When we have a big gang of kids in the park, I would say, "Come inside, look at the fish tank, and we have some fruit." And they go from this sort of mean, rowdy, angry group to a bunch of little kids looking at fish in tank and getting excited about seeing the crabs, and then walking out hands full of apples, oranges and grapefruits. It's like, "Oh yeah, right, they are people, they are sweet kids." They just need nourishment and love, and that's probably what they have not got. And a big part of this place is in very concrete ways fulfilling the same role that my family fulfilled in the context of my life: that compassion, love, and warmth. That's why we'll have a big comfy couch upfront, and we'll have beanbag chairs up in the library. I think we are doing a good job here, as well as the other organizations working on the river. But that serves a tiny percentage of the population. I think it has to start very-very young, and it's gotta be a common goal among schools, community organizations and families.

And I think that organizations like ours should dedicate a significant amount of energy to programming in the park. We do our regular programs, and we also do Community Rowing, the only program that is open to the general public each week all year. Every Saturday we do the Community Rowing program where our Job Skills apprentices bring our boats down the river and take whoever wants to go out rowing on the Bronx River for free for 20 minutes, half an hour. I'm guessing that this year we'll probably take about 2,000 people rowing—a huge number of people. It's little kids, big kids, and elderly people. We have infant-size life jackets, we've taken people in wheelchairs lifted out on their wheelchairs and sat them on the boats. We've taken people who are blind. As long as you are up for it, we'll take you out rowing. You can do the rowing yourself, or you could just sit back and let us do the work, whatever you want to do. And it was really a response to people's desire to get out on the water with us. Park visitors would see us over the course of the week with our kids and say, "Hey, how can I do that?" We would say, "Hey, we don't really have a way for you to do that." And so then we developed this way for people to do it, and now we say, "Sorry, you can't come with us on Tuesday, but on Saturday from 12 to 5, come." Just the other day it was Thursday or Friday, I saw some people and said, "Oh, you should come on Saturday." They lit up, "Wow, that's great!" It's such a nice thing to be able to offer, and people are so happy to be invited. The reason why it's free is because I don't think the people for the most part in this community can afford to pay for it. Another reason is because I think we can raise more money by offering it as a free program and getting other people to pay for it then we could ever do by charging the people who actually are taking the program. It's something that adds a lot of value to our work to be able to say it's free—it creates a great deal of good feeling. It's a very memorable thing that people don't forget.

Oftentimes teachers will say, "Can I bring my class and have them all join Rocking the Boat?" We do our On-Water program, but that's not the sole thing that we do, so we answer, "No, we don't want to work with all kids from one school." We don't want them to pick them up in one place and drop them here. We want lots of different kids from lots of different places who come here and then create their own identity and their own community. We treat everybody the same with a great deal of expectation. We try not to treat them like kids, but to actually give them responsibility and expect that they will hold the responsibility. I'd be interested to see how it compares to other environments. Have you seen any real behavioral issues in all the time that you've been hanging out in Rocking the Boat? Yeah, kids don't fight here. They are just kind of happy and hanging out in Rocking the Boat. It's amazing. You go into any of these schools that these kids go to, and it's a constant battle all the time. And I think a big part of it is because everyone here is because they want to be here. They don't have to be here, for sure. And it is also because we created an environment where everyone is welcomed, supported, and given a sense of inclusion.

As far as ethnicity, we don't have any absolutes about who can be a part of the program and who can't be a part of the program, other than be roughly 14 to 18 or so years old. We don't want to work with kids who are too young or too old. But beyond that, you have the application process that shows us that you really want to be here. It's all about effort and your ability to demonstrate that to us. If you

demonstrate that you want to be here for right reasons, then you'll get in. I don't care where you come from. The majority of kids come from the Bronx, but we have kids from Brooklyn, Queens and Manhattan as well. In theory, if more and more kids from wealthier backgrounds started to apply to Rocking the Boat, then we would have to come up with something because in fact our mission is to serve underserved people and underserved communities, and that's what people pay us to do. Currently we have one or two kids a semester from wealthier backgrounds apply and join Rocking the Boat. We are not White, Black, Asian, Puerto Rican, Dominican, Mexican, African—we are just people here doing our thing. I don't care what you look like. And I'm very happy to see the dynamics here, it's just a neat kind of integration that none of them have ever seen in another place.

The question that we get asked is "What happens to these kids when they go through this program, what is the real impact of your work?" We do a great deal of work with alumni, gathering that information from them, and following them over time to see what choices they make in their lives and whether this place has anything to do with those choices. I think in general, without any specifics, what I've seen in kids is an amazing sense of compassion and awareness of possibilities that are out there, that they don't have to be stuck in what they are doing right now or what they thought they were going to do. I can give you a few stories of our students.

Lovett Evans, who is the program assistant in the On-Water program, was a student with us. He has been for many years and how is helping to run the On-Water program. A couple of weeks ago he asked if he could set up a meeting with me. We set down and he said, "My think is… I love music and I love instruments, and it was my thinking maybe creating a program like Rocking the Boat to do instrument building with kids—that or maybe something around recording and creating a sound studio and doing that with kids." And I laid out some pitfalls of what I saw as challenges and so forth, and way that he might be able to explore. But the fact that here is a 22–year–old guy thinking about the possibility of creating his own organization to do youth development work—it's very exciting. And it's that kind of seed of possibility that we are trying to plant in kids. You can really do amazing things in your life. So that was a really neat thing to see. He was always a sweet kid, but he was never someone leading the pack. And I think it's exciting to see him now as the On-Water program assistant, taking a very strong leadership role and thinking about being a leader. He is not saying, "I want to work for a bank." He says, "I want to start something on my own." It's very impressive.

And this is a great little vignette: a kid named Lenard—I met him in his school maybe about two months after he immigrated to America from a little island in the Southern Caribbean called Trinidad. He spoke English, we started talking, and it turns out he told me he was a fisherman in Trinidad. His family were fisher people, and he would spend all the time on the water fishing, and he was a phenomenal sailor. So I said, "Dude, you gotta come to Rocking the Boat. You gonna love it." He came and joined the program. He was a very dynamic, sweet kid. And he started teaching us how to fish the way that he and his family fished in Trinidad, not using a reel, but just using what is called a hand caster: you just hold sort of little spool and you would throw a line out just using this spool. And he basically took over all of our fishing. And he rose in the ranks of the program from being a student to a program assistant. Here in the Bronx it was this wonderful way for him to continue living and doing what he was doing in Trinidad. And this is a kid that was completely uprooted from his life at age 14 or 15, and thrown here. If he was not thrown here and had not been for his fun at Rocking the Boat—who knows what he would be doing. Now he is working on tall ships as a professional sailor. You can check out his Facebook page, I think he is in Michigan working on a tall ship that sails on the Great lakes. This is so cool, and we take full credit for setting him in that direction. I think a big part of Rocking the Boat is really understanding where they are, and not say, "You have to go to college." Lenard never went to college, he went straight to be a sailor, which is just fine. The great majority of our students do go to college, and that's great. But not everyone has to, that's something we are very careful to explore with kids individually, particularly in the Job Skills program.

We have some examples of great success that have not played out in the ways that we dreamed they would. One of our all-star, fantastic participants who rose in the ranks and was a huge leader named Melissa was with us five years before we had the Job Skills program. She was a student and then she was

a program assistant, a big leader among all of us. She was in college and on a good track. She wanted to become a judge or something very high and mighty. I don't now exactly what happened, but I think life got overwhelming for her, she dropped out of Rocking the Boat in a pretty abrupt way and disappeared, and we just did not see her. Then I've heard about her, and she is doing fine. But she did not continue in school, and now she is the manager of an H&M department store down on 34th Street. She is not a judge, environmental scientist, lawyer, doctor or any of these things. But she runs a huge department store. That's not so bad. I'm sure she got full health benefits and she is doing quite well for herself. She probably started there as a checkout girl and moved up the ranks up to manager. I have no doubt that a great deal of the organization and the discipline that she learned here contributed to her success. So there is a twinge of disappointment that she is not something more professional, more academic and studied. But at the same time she is fulfilling a really necessary role and managing lots of people and doing very well for herself. And that's great, she fulfills the main goals that we set.

Toniann is a wonderful story. She was someone who was always very gregarious, outspoken, and forthright. She started at Rocking the Boat as a participant in one of the group programs with her school, she came with her class as a student during the daytime. She participated in our after-school program, and then went to the Job Skills program, and then became a program assistant last semester. She just left us this summer to go to college, which we are very sad about, but happy for her first. She is going to school in Florida where she is studying underwater photography. Where did she get this idea from? I can't imagine. [laughing] She also was a leader of Voice, a group of youth from Rocking the Boat, THE POINT CDC and Youth Ministries for Peace and Justice, coordinating students' collaborative environmental efforts. She has taken the tools that we have given her and run with them. And really, the underwater photography idea came very directly out of a convention that we brought the kids to, and she learned there was such a thing as this profession. And now she is exploring. This is really, really neat.

So many stories… Tori Swedin is another story. She just left us at the end of the spring and was accepted to SUNY Albany, which is a great school, and we are thrilled that she got accepted. She went to the New York Harbor School, she found about us, and then came and stayed with us. She had lots of academic and family challenges, and Rocking the Boat really served as sort of an anchor for her to get through school. We had an impact with her beyond what her school was able to offer. Harbor School is a wonderful place, but schools are limited in their ability to work deeply with kids because it's a mandatory obligation and so forth.

Currently one of Rocking the Boat's biggest challenges is the expectation to grow. Everyone wants us to grow, "What you are doing is wonderful, it is successful, let's do more of it." Should we grow and do more of it? Should we stay the size we are? My feeling is that part of the reason we are successful is because we are small and focused. So I say, "We serve 3,000 people a year," including 2,000 Community Rowing people and 800 are our group programs. So we are working in a really intensive way with 200 people a year. It's small, I don't have a great desire to grow larger than that at all because we would not do as good work. My dream is to keep this place going, keep it creative, keep it as driven by mission as possible, and continue helping young people develop into empowered and responsible adults.

"TAKING OWNERSHIP IN YOUR COMMUNITY"

AN EDUCATOR PROFILE OF ADAM LIEBOWITZ

Director of Community Development, THE POINT Community Development Corporation
Interviews conducted by Alex Kudryavtsev on May 28 and July 20, 2010

Adam Liebowitz's profile centers on his work of educating youth about the environmental justice and stewardship in Hunts Point, the South Bronx. His story tells us how community-based educators can engage young people in solving environmental problems in underserved, minority and low-income communities. We learn from Adam's story that he nurtures in students a sense of care for the community through involving them in activism and stewardship, and exposing them to the social and natural environment.

I work at THE POINT Community Development Corporation. For most of my time here till upcoming September 2010, I have two job titles and two roles with THE POINT. The first half of my job is community development in a broad sense of the term, advocacy and influencing policy related to community development in Hunts Point. The second half of my job is running one of the after-school programs we have for teenagers, which allows me to work with students. I run the A.C.T.I.O.N. after-school program for South Bronx teens. I don't have an intentional philosophy of teaching young people about activism and environmental stewardship, but as ideas come to me, I improvise and try to be flexible, and by practicing community development and education I become better at it. Over the years of running the program I have built a loose curriculum that now provides more of a guide.

I am the youngest of three children and we were raised Jewish. I was born at the Albert Einstein hospital in the Bronx, New York City, but almost all of my childhood was in Scarsdale, in Westchester County, which is about 10 miles north of the Bronx. Scarsdale is the typical suburbs, where people live in houses not apartments. It's one of the wealthiest towns in the country, predominantly White, and the second largest racial category is probably Asians. It's a very Jewish town, middle and upper-middle class, but liberal. My parents had a house with a nice big backyard. We certainly were not millionaires, but obviously wealthier than people in the South Bronx. I still have both of my parents living together in the house that I was raised in.

My parents were in service-type professions related to helping kids. My father is a child psychiatrist. He worked mostly with youth and his practice was in our house in the basement. I did not go down there often, but I was aware of children coming to my home to meet with my father to discuss their issues. My mother was a speech pathologist at an elementary school with many low-income Hispanic and Black students. Once a year she would throw a party at our house for her students. I would meet those students, but I did not think it was significant to me. Looking back, I think that I developed a strong sense of justice and equality both by nature and nurture. Although the majority of people in my town were White and Jewish, my closest friends were all minorities. My best friend, since kindergarten to this day, is Indian-American. My other best friend was Indian, and the third best friend was Korean. I was friendly with the more mainstream White Jewish kids, but I was a little separate from them because they were much wealthier and a little more stuck-up then I was.

Every summer from the time I was nine years old I went away for an eight-week summer camp, and for 7 out of 8 years I went to Echo-Lake, a sleep-away camp in Warrensburg in the Adirondacks near Lake George. Sending kids away for the summer is a very typical North-Eastern Jewish thing. This camp is where I developed my love of the outdoors and love of nature through being outside and play. When I was in high school I volunteered a couple of years in an extracurricular club at Children's Village, which is a residential treatment center for boys. I would tutor once a week at this full-time school for boys who for many different reasons were removed from their families. It was my first experience of working with kids from a different background and a different demographic than me.

In 1998 straight after high school I went to Wesleyan University, a private liberal arts college in Connecticut. I was an English major. During my college years, I worked for an after-school program run

by the local YMCA helping mostly low-income students with homework and arts. After my freshman year I did not want just to sit at home with the extra month of summer that college kids get. I wanted to travel to see the world. I had heard of a volunteer program in Africa, so I spent a month in Ghana working and traveling. I also left school for one semester to take a break out in Colorado, where I taught snowboarding for a winter. In spring 2001 I did a study abroad semester in Nepal, which was the best learning experience of my life.

During a cultural immersion program I lived for a semester in Nepal with a family and I learned the Nepali language. Back in high school I took French, I had a textbook and tests, but it never made sense to me. I did it for five years, but French never stuck with me, after a while it all went away. But in Nepal I was really learning. I did have classroom language training, but I was living in the country where Nepali was spoken, and I had to use it for my survival. I was living with a family that spoke only Nepali. Every time I learned something, it was a huge benefit because I could communicate with my family better. I learned the language quickly and I was speaking some Nepali within two weeks of being there, and I benefited from knowing it. Just walking around town in Nepal I needed to put my new knowledge into practice. I went in the Himalayas for an independent study project, where I hiked with a guide, who was a Tibetan monk. Nepali was his second language and my second language, but we were communicating in Nepali together. For treks in the Himalayas tourists stay in teahouses or lodges. Typically all the tourists would sit in one room and talk to each other in English, and all the different guides would sit with the owners in the kitchen. But I would be in the kitchen with the other Nepalese helping them peel potatoes and practicing Nepali. Every single day if I learned a word, I immediately had to use it.

I graduated from college in 2002 and I moved to California for a year to Lake Tahoe to work in a ski resort. In the fall of 2003 I came back from Tahoe to New York City. I lived in Washington Heights in Manhattan and I was looking for jobs. I have not been the most proactive career-focused person. I just look around at job postings and take what is out there. You could call it laziness or just letting things come to me. I was willing to do any job, but I knew that my resume was strongest in youth work because in high school and college I was tutoring youth, sometimes in low-income and disadvantaged communities. And I found the Boys and Girls Club off of Fordham Road in the Bronx through an ad in New York Times. This job choice was completely random, not on purpose. I applied and out of a hundred resumes they happened to read mine. When they interviewed me, their question was, “Why would a White Jewish man from Scarsdale come and work in the Bronx?” My response was like, “I don’t know, but I’ll just do it.” I took this job but in some ways because it was the first place that offered me a job.

I got the job and worked as Education Director at the Boys and Girls Club for two years. It was my first experience in the Bronx, my first real taste of living as an adult on my own in the city. I did not know a whole lot about the Bronx. I knew its reputation as low-income and dangerous, but I don’t think I really bought into that. I don’t really believe in stereotypes, so I was not really concerned. I loved the Boys and Girls Club, I really did. I was working with about 150–200 kids from the neighborhood, aged from 6 to 18. I fell in love with the kids and their families. I really felt like I was a part of the community in that neighborhood, but it was a little unfulfilling after a while. I felt like I was just babysitting and was not making enough of a change in the kids or the community. I was helping out kids in terms of education and homework, but I did not do anything for their family situation or for their life situation. I wanted to go to the next step. I could try to encourage this kid to do well in school, get good grades and go to college. But if his mom was in jail, and they did not have any money, could I really make the kind of impact I wanted to make? After two years of the Boys and Girls Club I saved up money and got the travel bug again. I left and traveled for about a year. I worked for a service-learning program that takes wealthy teenagers from the US overseas to do community service work in different locations. That summer I worked in the British Virgin Islands doing construction projects with 25 teens and a staff of 6 adults. That fall I traveled in South America by myself for 8 months. That’s where I learned Spanish and just had a good time. Then I worked in the summer again for the same program building a school, this time in the Dominican Republic because I spoke Spanish.

I came back to New York City in the fall of 2006. I did not know what to do and I started looking

for jobs again. I was applying to many places. I thought maybe I would try a corporate job, and see if I could get rich and make money. But I knew that I would never really be able to do that, I am not made to wear a suit and work in an office, it's not my thing. I was applying anywhere and everywhere. But I did know that I wanted to go a little further than my work at the Boys and Girls Club. I wanted to go beyond just working with kids, and maybe do some sort of community work. But I did not know what that meant and I did not know how to look for it. So I still was applying to all sorts of jobs and organizations, even similar to the Boys and Girls Club.

Then on Idealist.org I found a job offer at THE POINT CDC (Community Development Corporation), which needed an educator and community developer. I applied, had an interview and got the job. Initially I did not think I even wanted an interview when they called me. I thought it was going to be too similar to the Boys and Girls Club, it sounded like it's just another small community center, probably low budget and disorganized, and I am not going to feel fulfilled. During the interview I found that this position bridged the gap between the two components I was searching for: I would facilitate youth development by teaching activism to the students and at the same time organize community development projects for the organization. It was all brand new and exciting to have a job with two roles. I thought this idea was brilliant and I accepted the job offer. They wanted to hire someone who had experience with youth, and they said, "You can learn the community development stuff as you go." Now I'm doing community development for THE POINT, I'm learning about it in school, and at the same time I'm the one teaching kids about it. For example, if I'm working on the greenway project, I know exactly what we need to move the project along, so I could just turn to the students and say, "Okay, you have to help to put up flyers about the greenway." Since I got this job I have really become passionate about this type of work, I've gotten really used to it and I became good at it. This is how I ended up here at THE POINT, and I've been here ever since.

THE POINT is located in a South Bronx neighborhood called Hunts Point. I would describe it as a very low-income environmental justice community. It's an overburdened and underserved community, historically neglected by government. When it's not neglected, it's seen as a place to put facilities that other people don't want in their backyard such as sewage treatment plants, power plants, waste transfer stations, a food distribution center and heavy trucking. Hunts Point does not have many parks and it's not always a very clean place. But the past couple decades the non-profit world has been working to change that and has done tremendous work in the neighborhood. I would describe this community as one that is fairly well organized. This community is very proud; it's on the upswing. It has seen its worst days, which are behind it. This neighborhood is predominantly Latino with many African-Americans also. All the standard indices of poverty in the United States are probably somewhat magnified here: high asthma rates, low graduation rates, high unemployment, low income and high crime. The South Bronx in general and Hunts Point specifically has long been the symbol of urban blight in America. I frequently see prostitutes in the neighborhood, any time of the day, all ages. Every now and then I get propositioned, but it happens less and less now because I think now they recognize me. You see prostitution, people addicted to substances, or maybe they are mentally imbalanced, who should be getting help.

At THE POINT I run A.C.T.I.O.N., which stands for Activists Coming To Inform Our Neighborhood. For my first three years I ran the program by myself, then last year I took on a former A.C.T.I.O.N. student as my assistant, and this year she runs the program mostly by herself with some guidance and supervision by me. This is an after-school program for high school students who meet on Monday, Wednesday and Friday 4:00 to 6:30 pm. Students get escalating stipends depending on how many semesters they have been involved in it. When I started, A.C.T.I.O.N. as a program had already been going on for five years. There were already 20 students involved, and the idea was that they were community activists. All youth who participate in A.C.T.I.O.N. are Bronx high school students or pursuing GED (the General Equivalency Degree) instead of high school. Students are predominantly Latino or African-American descent, sometimes a mix. There are always more girls than boys. Most of them live in the South Bronx. I've been part of this community for four years, and have had to deal with students in my program that have had friends who were shot, mugged, killed and stabbed. I had youth in my program who have gotten pregnant or gotten someone else pregnant, and now have to deal with a

child at the age of 15 or 16. I had students in my program that had to leave their home because they got evicted or had to go to live in a domestic violence shelter because the mother's boyfriend was beating the mother. These are not just examples; these are real stories that happened in my time at THE POINT.

It's harder than you would think to describe my program because it's so improvised and spontaneous, and I change it every year. An educator who ran A.C.T.I.O.N. before me gave me some curriculum, but I don't think I ever looked at it because my program has a loose structure. The way I run A.C.T.I.O.N. is the product of my personality, so nothing is really very intentional or seriously planned out, and often depends on grants that we get. When I first started, THE POINT began to realize that students were producing amazing activists through holding campaigns, getting up in front of City Hall and speaking at press conferences. Students did all these activities, but they were failing of high school and not going to college. THE POINT's desire was to introduce more of an academic focus, which is what attracted them to me because my previous position at the Boys and Girls Club was Education Director, and I used to teach SAT classes as well. They liked the activism piece in A.C.T.I.O.N., but they also wanted to have some focus on the academics. When I started, I tried to keep the activism part and included more of an academic base. In the first year I tried to have a homework hour once a week, but it has been lost in the past couple of years because we've gotten too busy. We could not offer tutoring and we did not have the resources to really turn it into an academic program, so I implemented the minimum grade point average (GPA) requirement. If you want to stay in A.C.T.I.O.N., as an incentive, you have to maintain a 75% GPA in school.

During my first year at THE POINT we started writing grants to implement new ideas. We recognized that the students in A.C.T.I.O.N. had already become educated about environmental burdens, environmentalism, and environmental justice issues. They knew something about poor air quality, pollution in the Bronx River, too many trucks in the neighborhood and not enough green space. We informed the community about these issues though surveys, flyers and presentations, but we were not actually connected to the environmental work itself. In the past THE POINT had a history of doing environmental work: before me there was an educator named Nino who used to take kids in canoes out on the Bronx River before Rocking the Boat was around. But gradually the A.C.T.I.O.N. program lost the strong connection to the environment. My students were doing environmental activism, but not environmental stewardship. Then we heard about the CITGO program that was providing grants to South Bronx groups to help clean up the Bronx River and its surroundings. We thought this grant would be a great way to connect A.C.T.I.O.N. students to the environment, nature and environmental stewardship, and it would bridge the gap between activism and practice.

We wrote a proposal and were awarded a grant in partnership with the NYC Audubon Society. The initial purpose of the grant was to conduct habitat restoration on North Brother Island. The project had to start in the fall of 2007 and continue during three school years till 2010. We were supposed to go to North Brother Island in the East River near Hunts Point to conduct restoration work: remove invasive species and make the island more habitable for the birds. This plan was quickly deemed impossible because we could not get to the island in the winter. It gets dark at 5pm and it's freezing. We were not going to take kids on the East River in the dark and cold. Then in spring we found that we could not go to the island because it was nesting season, so no human activity could be there during most of the warm months. That frustrated us a bit, and we wished that Audubon Society had told us about these restrictions before we wrote the grant.

So the first year we tried to teach students about birds and ecosystems in the classroom, not on North Brother Island. The Audubon Society provided an educator, Erik Karff, who would lead activities once a week. During this and other projects I found that we need a broad base of support, we need experts in different fields interacting with the kids. One person can know only so much. And it's okay if an educator is completely a novice and has to do certain projects with the students and learn as you go. But it's very beneficial to have an expert. When we are dealing with invasive species it's beneficial to have an expert come in and say, "Hey, this is how you identify plants. I'm a botanist, I'll tell you what weed this is." Guest speakers and guest educators help the students to see a fresh face and hear a fresh voice, and not just their same educator explaining everything.

However, this project almost turned into classroom education, in which students would learn lessons about birds, ecosystems and habitats, which is something we did not want. In addition, sometimes we would conduct field trips to ecology centers and museums, but overall the A.C.T.I.O.N. students did not like it. Learning about birds in a classroom bored students and some of them even hated it. Audubon put a lot of emphasis on bird identification and learning about migration, which was not vital to our work. So I worked with Erik, "We need to eliminate one-way classroom teaching and do something else." He agreed, and we tried to make the project more hands-on and less classroom-like.

I tried to expand this program to environmental stewardship in general. I wanted the students to learn that cities have to have green space where people can enjoy and be stewards of the natural environment. Since we could rarely do stewardship work on North Brother Island, we could do something in our own environment near THE POINT or elsewhere in the Bronx. In the summer of 2008 we worked with the Natural Resources Group, a division of the Parks Department dealing with North Brother Island. We decided with them to work in Pelham Bay Park in the East Bronx and do the type of work we would have done on North Brother Island: removing invasive species. This project slowly turned into our environmental stewardship project that we call the Happening Habitat project. But it was still not as well thought out as I would have liked it to be. And when it got warm in spring, we would look for hands-on projects. That's when we decided to get involved with the wildflower week project and to have students volunteer in the Bryant Hill Community Garden in Hunts Point every now and then. We also started working in the small gardens at THE POINT.

I personally got more and more interested in urban agriculture and food justice. To me this theme was like a natural progression to go from environmental activism to environmental stewardship to growing food. My students already learned how to take care of wild plants or ornamental plants that look nice, and how to remove invasive species. And then once students learned how to take care of our land, I thought that the next step was to grow food. By doing so I would introduce a whole new genre of activism, which was food justice. It's one thing to grow plants, and another thing to grow food. Growing food in urban areas with low-income students touches on millions of other topics such as health, education, food policy, food security, economics and activism. Urban farming is a great way to teach about where your food comes from, food deserts, obesity, nutrition issues, how food companies use media to promote unhealthy food and how to conduct community food assessment. This is why I decided to make our students explore our food system and developed many ways to introduce urban agriculture.

So, last spring and summer I started to engage our students in urban farming and urban agriculture projects through planting our own food instead of removing invasive species in Pelham Bay. Last summer we planted some vegetables here in THE POINT's backyard. We also visited the Added Value Community Farm in Brooklyn and Bissel Gardens in the North Bronx. 2008 was the first time that I was able to extend A.C.T.I.O.N. into summer time because of the CITGO grant, which gave our students an internship over the summer. It was only four days total, once a week during July, but we could offer this position to about 10 students. It was the same last summer in 2009 with the gardening, and this summer we'll continue urban agriculture as well as the new rainwater harvesting project to collect water for our gardens.

At THE POINT, around our main facility at 940 Garrison Avenue we have a couple raised bed gardens. Nino, who was the environmental person at THE POINT before me, created these gardens, which were regular gardens with some trees, shrubs and wildflowers. Last year I decided to turn one of our gardens into a vegetable garden. So we chose the one that gets more direct sun near the entrance to our building. My students and I removed all of the wildflowers and shrubs that we had been planted there and moved them to another garden. Then we got 10 EarthBoxes through a partnership with Steve Ritz, a high school teacher with whom we connected through different urban farming initiatives. EarthBoxes are plastic containers in which you can grow food. We keep them in our main facility's back area, in the section that we call the back triangle. It's not a garden, it's just a slab of pavement in the back that gets really good sun. Steve also supplied us with seedling trays, so students planted seeds in trays in our back triangle, which grew into seedlings, which we planted in our garden and in the Earth Boxes. This year Steve also got us an indoor growing unit with four levels of trays under lights to grow seedlings.

Recently A.C.T.I.O.N. has built and maintains a brand-new raised bed garden through a donation from the organization called Urban Farming. It's at another piece of property that THE POINT owns near the Bronx River, which we call THE POINT Campus for Arts and the Environment. The raised bed is a 20 by 20 foot garden. It's on our property, but it's co-owned with Urban Farming because they provided the materials, including supplies: the wood and the soil to build the garden. In addition, through a company called Green Living Technologies we got an A-frame, which is a vertical garden. It's a metal frame that is shaped like an A, and you put panels on the sides of it, in which you can grow plants. In addition, this year we worked on greening the sidewalk on Barretto Street, which has been neglected for years. We partnered with a landscaping architect firm, which designed a new wildflower garden for us, and we replanted the garden with wild flowers that had been donated to us for Wildflower Week.

Some students would notice that they appreciate the environment more through getting exposed to North Brother Island and urban farming. But some other students would still say, "No, it's my least favorite part of A.C.T.I.O.N., I hate getting dirty, I don't want to do it." And the way I get around it is just forcing them to do the task. But I can force them to do only so much. I try to let students ask me questions and challenge me about why we are doing certain tasks, so that they understand where I'm coming from. It's a lot different than saying, "I'm the boss, and your are going to do what I say because I'm telling you to do it." It's more like, "This is what we need to do and here is how I think we should do it. What do you guys think, does it make sense to you, do you have a better way?" And sometimes I'm okay that youth are just being exposed to stewardship work and observe it. I know that if I'm working, the kids that are interested will come and help. But even if they are just watching me weed or plant a tomato plant, they are still being exposed to it. Even if they don't recognize it consciously, through that experience they become a little more open to the idea of nature. I think the idea of biophilia is a true thing, and maybe these experiences will tap into that. Maybe by being exposed a little more to the natural world they will begin to appreciate it a little bit more.

When we teach students about food security, urban framing, or environmental injustice, one of the comments we get from A.C.T.I.O.N. students is, "I never thought about this stuff, I never knew where my food comes from. Why is my neighborhood different from other neighborhoods?" If you stop someone on the street, the answer would often be different, "That's the way it is, this is because we are poor. If you are poor, you live in a crap neighborhood, and when you are rich, you live in a nice neighborhood." We teach students to look beyond and say, "No, actually there is actually environmental injustice happening, but you can change it." Because you are at a political disadvantage in the inner city, you get the burdens that other communities don't get so much. But you can fight for political change that would change your neighborhood. We are trying to convey to A.C.T.I.O.N. students that knowledge is power. Instead of just saying, "That's the way it is," you can dig deeper and learn where these differences come from—because Robert Moses built this highway or some other reasons. When you understand it, you can influence it through policy change and stewardship.

We don't have any illusions that everyone coming to the A.C.T.I.O.N. program will suddenly become an activist. It's not our goal. But I hope that through educating 20 students every year we are creating at least some of the leaders of the environmental movement of tomorrow. Why not? I hope that one of my former students will come back and replace me. That's why this year it's so exciting to hire Sharon De La Cruz as my assistant because she is from this neighborhood and she was a member of the A.C.T.I.O.N. program when it first started. This is where we are trying to head. But we also want to empower kids in general. I want to help them take charge of their own lives, become confident, get ready to go to college, get a job or do whatever they want to do. We are trying to achieve these goals through offering students real life experiences.

We are trying to use a diversity of education approaches and make learning as hands-on as possible. Experiential education to me is very important, and we are trying to either supplement or in some ways even supplant academic classroom-based learning. I am able to learn in a classroom setting, but for many students it's hard to sit in a classroom, read a textbook and listen to a lecturer about certain things. I went through this too. In classrooms you don't grasp it, don't feel it the same way as when you are doing things. My best education experience in my life was learning about Nepali culture by staying in

Nepal and living with a Nepali family. I was getting educated, although it did not feel like education because it was life, I was just doing it. It was experiential education. So, I could teach kids about politics and how to grow food by showing them diagrams and reading textbooks in the classroom. But why not go out and grow some food, and let students learn by doing it? To me it's a much more meaningful way of learning.

Steve Ritz, the teacher I was talking about, uses the Earth Boxes to teach his Earth Science curriculum for the New York Regents Exam. Through growing food in an Earth Box, you can learn about the water cycle, photosynthesis and plant cell structure. Students could look at something tangible and explain why and how it's happening. I think that we can use this approach with a lot more teaching than educators realize. We can teach history by focusing on culture and going out and examining that culture in our neighborhood. But very often the lessons in high school are more about the method than about the actual content. For example, you could take a history course, but it's educational goal is often focused on how to do research, write a paper, gather ideas and put them together in a coherent way. But if the goal is to learn how to organize ideas and present them, why pick dry topics that people can't relate to, like the American Revolution? Why not ask the kids, "Pick something in your own history, in your own culture. Are you from Puerto Rico? Pick something in your own history, in your own culture, study something about Puerto Rican migration to New York City." Kids will learn the same skills from the New York Board of Education standards that teachers want them to learn, but learning would be more hands-on and more applicable. To me, this is where education needs to go, make people relate to the content.

Do you want to learn about social studies and civic engagement in Hunts Point? Okay, we can teach you how a bill becomes a law. But I can also teach you why your community has poor air quality, what you can do to change it, and how people can become engaged with civic participation. Eventually you will learn the same basis of how a bill becomes a law. But it's going to mean to you more because you learn about your own community, it's your nose that's smelling this air, and it's your own life that's impacted. You are going to learn the same thing. But rather than making you read a textbook about people you never heard about, a place you've never been or something that happened 200 years ago—why not learn through something that has a direct impact on your life today. This is what I think A.C.T.I.O.N. does for students. And I had kids report back to me, "Oh you know we were talking about it in school today, and I told them about this project," and students draw the connections between what they learn in school and in A.C.T.I.O.N. It is working that way.

In addition to building connections between students and the community, we are also creating a family in A.C.T.I.O.N. We do it by trying to make it a little laid-back and giving students time just to hang out and bond with each other and talk. We do it through several ways. For example, when I started with A.C.T.I.O.N. four years ago, I created a tradition of an end-of-the-year celebration to close a year out. In the past we went to picnic in Barretto Point Park, or to the beach, or took ropes courses and played games in Alley Pond Park Adventure Center in Queens. But this year I decided to get the kids out of the city to a place where we can hang out together. I decided to take students to my friend's farm, the Willow Ridge farm in Putnam County, which is an hour drive from New York City. It's such a magical and safe place, and I knew it would work for a number of reasons and it would not cost THE POINT any money. We have been gardening and studying food systems in the Bronx so much, so it would be great to explore these ideas on the farm. I showed some video from Willow Ridge to A.C.T.I.O.N. students, and they got really excited. Since we were not paying the Beals family to visit their farm, I wanted to give back by doing something for them and having the students get a little taste of farm work. We would pay back with our labor and then have a day to explore the farm and just have fun. We took the van up to the farm with 9 students. When we drove, students noticed the difference between city life and rural life. They were surprised, "Where are the bodegas? Oh my god, if people want to run out to a store, do they have to drive somewhere? That's crazy!" I remember kids told me that it was more frightening to be in a rural area than in the South Bronx, although there is so much more violence in the city. It's funny because kids where I grew up are afraid of inner city, and kids in inner city are afraid of rural places.

After we got to the farm, Mr. Beals and his son and my friend Matt Beals gave us a little introduction. Then we went straight to work. Students had to shovel and clear all the manure in the barn

where animals stay over the winter. It was great seeing the South Bronx kids shoveling cow, horse, lama and donkey manure out of the barn. I was so shocked because I thought I was going to hear a lot more complaints. Only two kids just sat on the side and were not going to do it. And if I forced them, they would have done it but it would have been a fight, but the day was about having fun, so I did not want to force them to work. They still did a little bit and watched their friends doing it, so they still got exposed to farm work. Most students got really into it, and started competing, "My stable is cleaner than your stable, the cows are going to like this one." We worked for about an hour and did an amazing job, and the Beals were very impressed. We were hot, tired and sweaty, so we went to the fun part of the day. I fired up the grill, and started barbecuing. The kids started swimming in the pond and in the pool. We had lunch and played some card games, and just hanged out. In the afternoon we did a tour of the farm and saw different animals like lama, donkeys, goats, horses and turkeys. Students understood a little more about country life, "Oh, that was so much fun, I can't believe they get to live there, it's like a vacation."

I think there is a huge difference between growing up in an apartment building in the South Bronx versus growing up in a house in the suburbs, where you have more open space, community space, your own land in the backyard and where you have exposure to nature in general. In the city you don't always have a field of grass or your own tree. In the city all you have are parks and maybe some street trees. And an urban park offers a completely different experience than going to a forest. It's related to what Richard Louv calls nature deficit disorder. You don't have that connection to the natural world in the city. And in low-income areas you usually have even fewer parks than in other communities. Humans have a natural inclination and love for nature, but some of my students would literally say, "I don't like nature. Grass is gross. Birds scare me." Many students were just not exposed to it and are not used to it at all.

Part of the sense of place we are trying to teach is just taking ownership in your community. I think that sense of place does not have to be only about the natural world, it could be about your built environment, your habitat and your community in general. Typically many people from neighborhoods like Hunts Point think, "How can I leave this bad community and go to a better one? I want to go to school, get a good education, and make enough money, so I can leave Hunts Point to go to a better place." Because of this sentiment people do not necessarily care about their neighborhood, and that's why we see trash on the street. It's also the difference between owning land and renting. When you think of yourself as a transient member of this neighborhood as opposed to permanent, you don't have the same investment in your own community. "I'm here only for a short time, I'm only a renter" versus "This is my permanent home, I want to make it better." Fewer people question, "How do I make my community a better place to live?" And it's not just THE POINT, not just me, but the whole community-based movement is trying to change this attitude. The Majora Carter Group painted the mural on Hunts Point Avenue, which says along the top, "You don't have to leave your neighborhood to live in a better one." And that's the kind of message we are trying to send.

If you are connected to the physical environment, the earth and the built and social environment in your neighborhood, then you are going to care about it more, you are going to take ownership of it. And you can do it by being an activist and fighting for policy change, or you can do it by cultivating the land and being a steward of the land in your neighborhood. One way to do that is by removing invasive species, pruning trees and cleaning up the water. Another way to do that is growing food and feeding your neighborhood. And once you feel that connection to the land and that you are a steward of your neighborhood, then you have the power to be a keeper of your neighborhood.

"MAKING YOUTH DEVELOPMENT PART OF ENVIRONMENTAL EDUCATION"

AN EDUCATOR PROFILE OF ANTHONY ARCHINO

Boatbuilding Program Director, Rocking the Boat

Interviews conducted by Alex Kudryavtsev on May 30 and August 18, 2010

Anthony (Tony) Archino is the Boatbuilding Program director at Rocking the Boat. This interview focuses on his previous work in this organization as the On-Water Jobs Skills Program Director and On-Water Program Director. Originally from Florida, Tony came to the Bronx and became a park ranger. He crafted the floating Golden Ball, which became for several years the symbol of community-based revitalization and restoration efforts along the Bronx River. At Rocking the Boat he contributes to youth development by building close relationships with his students during education projects, connects students to natural aspects of their environment by using structured activities and unstructured time in ecosystems, and promotes critical thinking through discussions.

My name is Anthony Archino. I'm the Boatbuilding Program Director at Rocking the Boat. I've been here since September 2005. I am from Miami, Florida. One thing that I think of about growing up in Miami is that there is water everywhere, there is a lot of environment everywhere. You may live in a suburban neighborhood with houses, front yards and backyards, but there might be a canal going right through it and marshland two houses down. I spent a lot of time in the Everglades. Manatees swimming by and alligators were everywhere. You could go out and do what you want to do. I had a cousin down there, who was about ten years older, who would take me out on his boat through canals all the time. I also lived for a while in Texas on the edge of a pretty big wooden area. And when I was five years old, I was allowed to just go into some sort of nature not far away. That's how I grew up, basically just out in the woods, out in outdoors. Stuff like that was just part of regular everyday life. At that time it was not unique or special, and I was taking it for granted. But now that I'm here in the Bronx I can see how it did shape what I do as an adult, and how other people grow up differently than I did. I hope we can talk later how people connect to their environment based on their perception of their area.

I have a bachelor's degree in fine arts and education. I met my wife in Florida; however, she is from Manhattan. We got married and moved up here primarily for her to go back to school to get her doctorate in art history. And I had never lived in a big city before, so that was pretty exciting. In spring 2002 we came up to New York, and I thought I would be a school teacher in the field of art. And since it was spring I needed a summer job till the school year would start in the fall. I applied for a summer job in with the parks service, thinking it would be picking up trash or something, but at least it working outside. From that nondescript job listing, I ended up being a park ranger for New York City, mostly in the Bronx. I definitely had preconceived notions of what the Bronx was. If you are not from here, you think it's like trash, cars on fire, people shooting at each other, and just hell on earth. Obviously, that is not true, but that's what you are told if you are not from the Bronx. The Bronx has a national recognition, it's not like a place you don't know, and you know it as bad. But I did not have any preconceived notions about the kids, the people I would be dealing with. And what I found pretty immediately, and I still think it's true, is that most of the kids that I get to meet are really inquisitive kids and they ask a lot of questions.

When I got hired as a park ranger I had no environmental training whatsoever. I don't have any formal environmental or boatbuilding training to this day. The only formal training I have that relates to this program is in education, knowing how to teach. So I was assigned to the Bronx as a ranger. Urban park rangers are dealing specifically with urban parks and getting the community connected to these parks. And I really loved that opportunity. Through the rangers I got a lot of somewhat surface-level training on everything in urban parks. Marsh ecology, forest ecology, and everything you could do that would get people in the parks, including biking programs, hiking programs, canoeing, and all that kind of stuff. The Parks Department was also trying to get people from the community on water. For the canoeing programs we used the Hunts Point Riverside Park, which at that time was just an empty lot at the end of

the street. The first time I saw that park I was thinking, "Who the hell would ever come down here to go on canoeing?" And no one ever came. No one *ever* came. Ever-ever. We would just have programs maybe a couple times a month to take people canoeing out from here. No one person would ever show up because it was a desolate place. I remember I was thinking, "Man, it's just like nowhere. Who is every gonna come out here and do things?" So it's really funny to be working here now and see how much this park has changed and how much it is used. Now, you would come on a weekend and it could be literally hundreds of people in this tiny little park.

My first experience with community-based organizations on the Bronx River was organizing the Flotilla event in spring 2002 with the Bronx River Alliance. The Flotilla is an event in spring when people in 50 or more canoes are paddling down the length of the river in the Bronx, which is about 8 miles. These people are representatives of all different groups that work along the river and the community. The Flotilla 2002 was really amazing for me. I came from Florida and Texas where rivers were still pretty natural from my perspective. It's just natural in comparison to the Bronx. But what really blew me away about the Bronx River is that you start off in the upper section of the Bronx, which is kind of suburban: you have a park and houses nearby, and everything is manicured, the banks of the river on each side are mowed, not industrial in any way. Then you hit the Botanical Garden, and all of the sudden you are in a virgin forest, it's pretty much how the river has looked for 10,000 years. And then a mile later you go through the Bronx Zoo, which is pretty unique, and you have animals on the either side, the river gets really wide, shallow and slow moving. And then a mile later you are in a heavily industrialized area where there are giant cranes are moving things left and right. We are talking just about 8 miles at most, and there are all sorts of stuff in this tiny little stretch. I remember just thinking how special and unique the Bronx River is, that you really get this cross-section of what a river can be.

After about a year of being a regular park ranger I got promoted. They had an environmental after-school group for high school aged kids called Ranger Conservation Corps. I taught at Crotona Park and Pelham Bay Park in the Bronx. It was very similar to the On-Water program here at Rocking the Boat in the sense that you are working on restoration and monitoring within city parks, but it was all land-based. Eventually, I was developing curriculum and running the program citywide. I worked with specific schools, and one of the first groups of kids were Chrissy Word's kids, and now she also works at Rocking the Boat. I taught the program at Crotona Park, and worked with Drew Gardens, a community garden where Jennifer Plewka is working now. It was an after-school program, only one day a week, and kids would come for the spring and the fall. They would work on restoration and monitoring projects based on whatever the park needs. This program was not as defined as Rocking the Boat because the park rangers as an organization are focused on many different issues, not just on high school kids after school. Rangers are focused on everything related to getting people connected to the parks as well as law enforcement, animal conditions, and a lot of stuff. But I really liked that job because I got to work with young kids and adults. My favorite part obviously was working with the teenagers after school. Some of those kids in the ranger program moved with me to Rocking the Boat in 2005, which is kind of neat. And I still keep in touch with most of these guys.

Seven years ago when I was leading an education program as a park ranger I got an email about a college awareness program called College Awareness Symbolizes Hope (CASH). I knew that this was something missing from our program because it only focused on the environment and not on other needs of kids. CASH is run by a national black fraternity, and the idea is that mentors—mostly professionals with master's degrees and now in the professional business world—give back to youth by teaching them about money management skills, how to employ that when they go to college, and so on. It's much more about college, but kind of from the money point of view, understanding how to choose a college that works for you, expenses, getting credit cards and things like that. I did not realize that they called the people who had already to sign up for the program to be youth mentors. So I went there, and all the participants had to get up and speak to say about themselves. So I'm standing up there, and everybody is talking, and then I realized that they called me as if I officially signed up to be mentor and teach the youth. So when they got to me, I explained my confusion to them, and they like, "Oh, well. Are you gonna come with the kids?" I said, "Sure," and they, "Okay. So you are a mentor." So my participation in

CASH went for seven years, and I ended up being one of their lead mentors. And it's funny in a way because at that place everybody is Black but me, the only White guy. And more separating than race is that fact that they are all business professionals. Everybody who is a mentor there wears professional suits, and I was a park ranger at that time and later at Rocking the Boat. So I'm coming covered in mud or sawdust, sometimes in my uniform, and all that kind of crap. Anyway, what I learned from them was ways to engage kids in talking about really important things. You can get any group of kids talking about really important things on really deep levels if you give them a right forum to do it, set it up in a good way.

In 2005 I left the rangers to come to Rocking the Boat because this organization is 100 percent focused on the after-school high school kids. I was the On-Water Program Director, working with the kids who are using the boats to do environmental work. At that time, I was one of two instructors for this program: my counterpart was teaching a maritime skills component, and I was teaching an environmental component. Basically throughout the semester the kids would get about half the time working on environmental projects and the other time would be working on maritime skills. It was a 3-semester program: in summer, fall and spring. The spring and fall semesters each are 13 weeks, and the summer program is 7 weeks, and kids come 4 days a week. I think I changed a lot of things in small ways in this program, so it's kind of hard to really spell that out.

The kids in the On-Water program use the boats built by the program to go out on the Bronx River and work on real restoration and monitoring. And the way we mean real is that there are other scientific and restoration groups—Lehman College, the Bronx River Alliance, Parks Department's Natural Resources Group, the Department of Environmental Conservation—which have the projects that they want to do on the river. And we have access to the river through our boats, we have a team of skilled, or at the very least very motivated youth, who can accomplish these projects. So we team up. What is great about that—and this is something that was hard for rangers—is that we don't have the burden to create scientifically sound restoration project. We are leaving it to the people who have the qualifications to do that. We are just helping them to get these real projects done. The work that kids are doing—whether it's a one day or they are out there for a year—is going to be part of the larger whole, something that has been thought out and well conceived. This is one way in which I think Rocking the Boat is really strong, and the kids really understand how the work that they are doing is going to support a larger whole. And this is as opposed to the rangers because the staff there is always changing. One ranger may commit and say, "Okay, we are going to restore this forest and do some clear cutting and cutting invasives," but there is not a follow-up plan, and next year it's exactly the way it was before. So it was really only for the educational aspect, not really helping the environment in any lasting way.

This formal of collaboration between Rocking the Boat and other organizations existed before I came here, so I can't take credit for making it. I do think, though, that I helped solidify how that works. Before I was here I don't know how much of information the kids were gathering, how much of it was really valid, how much of it was really used by scientists. I think during my time I made sure that the level of work that we are doing was much higher. For example, I made sure that we do the water quality actually every week, that the data we are collecting is accurate, correct and being presented right. But I think that's secondary. It's not our goal. Our goal is to help these kids grow and get into whatever is their next step, and we deliver this goal by working with kids very individually. So I did that position until 2007, and in summer 2007 we started the On-Water Job Skills program, which is for the advanced level kids.

In the Job Skills program eight kids each semester can get hired as apprentices after being here for a little bit. As On-Water Job Skills apprentices they bear a larger responsibility for environmental projects than other students do. They also do a lot more work analyzing the data and get the data to the scientific partners. Dawn Henning, who currently runs this program, calls our partner organizations as clients, and I think it's a really good way to look at it. So the kids are seeing their clients and deliver them a scientific product that meets certain level of quality. Through this program the main goal is to prepare kids for their next step in life. I say it flat out to the kids that "I don't give a shit if you remember what pH is after you leave here. What I want from you is to be somebody who wants to learn, whatever it is. I want

you to think creatively and know how to solve problems. That's my goal." I rarely curse with the kids, so this is done to make a point. I know that a lot of these kids are going to run into a lot of walls. They are going to get to college, have hard time getting it paid and registering for the classes, juggling college and other responsibilities at home, and all this kind of stuff. So if they don't have that kind of passion towards what they are doing, whatever that is, it's going to be very hard for them to succeed. And if they don't have the ability to solve those problems, those walls that they are going to hit, then they are potentially going to fail. Through those goals, I hope to help form people who want to learn, and to be critical, creative thinkers, and who become socially responsible adults. And, how that relates to the environment, my main goal for them is to connect their daily lives in some way with what's going on in the environment, to connect them to their community.

I'm not coming up with many education ideas; I'm often taking them from somebody else. For example, I took a few things from CASH and employed them here, which really worked. In CASH they organized discussions about different attributes of colleges—like cost, location, education, teachers, maybe 20 different attributes. Then kids as a group had to decide which three attributes were the most important. And the great thing about that is that it does not matter what kids pick. What matters is the discussion that is generated from the activity. Now you have this group talking about and arguing with each other about what is the most important because they only pick top three themes. So in my Jobs Skills program at Rocking the Boat we discussed the most important attributes of employer and employees, two different sets of attributes. Maybe one of the attributes is honesty and the other one is timeliness, things like that. If you just try to generate that conversation out of nothing, you would not really get much. Choosing top three attributes provides a structure. But within that structure the kids are allowed to be as free as they want to be. That's something I feel is important in the lesson plans that I do. You don't think that you just go and do nothing, but I also think you don't want to provide a structure that kids are doing just "a, b, and c." You want to provide a structure that allows as much freedom as possible within that structure. So in this case you are giving them some sort of guideline of attributes, and then within they can do whatever they want. They have to come to a consensus in one way or another, and maybe they don't and then they yell at each other. But you get them talking about it and get to hear from them, in this case, what qualities they want to see in employers. The structure of activities should allow the kids to be completely creative. And that's an activity that I stole directly from CASH.

And another example of what I learned at CASH is a way of selecting the focus of a semester. I took all the things that relate to our program—water monitoring, shrimp study, fish survey, designing the Dam Tour—and put each one on the sheet of paper around the room. And I gave each kid three post-it notes, and they could stick them on the three that they through were the most important. They can put all three on one if they want to, and then everybody has their own individual say, and you start to see group trends. You could see that nobody picked the shrimp study, so forget it, we are not going to do it, or at least it's not something we are going to focus our energy and do the bare minimum of what we are required to do. If everybody is into the Dam Tour, that is going to be a much larger focus of what we are doing this semester. And then there might be one sticker on something, and a kid then has a forum to say, "This is why I think this is really important." Maybe he is off the whole rest of the groups, but it's away to get individual voices heard, and see group trends in a very visual way. That worked well.

Another thing I have done, and I don't think I got this from CASH, is to do the X and Y-axes, which is a way to get individual voices and see group trends. For example, it's a great way to learn what kids thought about an activity that you did. You can ask, "Did you learn stuff or did not you learn stuff?" versus "Was it fun or not?" Maybe they learned lots of stuff, but it was not fun. Everybody comes up and just thinks for themselves, "I think it was fun and I did not really learn anything" or "I learned a whole lot, but this was a really boring activity," and kids put a mark in the grid where they think they are and put a circle where they want to be. And it works. Maybe in this example you don't have to have a circle showing what they think it should be. But what you see is trends, you see what most youth thought was fun, but maybe they did not learn much from it, or something else. It can be a way of rating your specific lessons without math, you could just look and say, "Well, the most successful lesson was this one because they learned the most and liked it." You can go back to the least successful and say, "Should we adapt

this, or should we throw it out completely?" It's definitely a really good self-assessment for students to say where they think they should be and where they think they are. You can give the kids different colors if you want to ask then, "Who had yellow and why is it a way out here?" and have them talk about it. That works really well on whatever topic you are talking about.

One thing that is really neat about Rocking the Boat is that you have this continuation with these kids for such a long time. You really get very connected to the kids, and the kids get very connected to you. And they also get very connected to the river in a general sense. I'll use the Alewife Project as an example. Just a brief overview of the project: alewife fish live in the ocean and spawn in fresh water. They live in the river for a few months and then go out in the ocean, and in three to five years they come back as adults to the river they were born in to spawn again. Alewives were in the Bronx River before the river was turned into an open sewer. The dams went up in the 17th century; they blocked alewives from returning from the ocean and making it up to the fresh water. We have not had this fish in the river anymore because we polluted the river and built dams that cut off their cycle. We could potentially restart the cycle if we could get alewife in the river and spawning, and if the ecology of the river can support a spawning successful enough to send many-many alewife babies out into the ocean to live three to five years, become adults, and make it back to the river. Then we would build ways for the fish to get over the dams.

The fish have not been here for a couple of centuries. It's not that people did not care before to get it back. People probably started caring a few decades ago, but the river could not support it. Dumping a bunch of adult alewives into our river in the 1970s, 80s or even 90s probably would not be successful. The adults would die; the babies would not have enough oxygen in the water and food sources to survive. It was not until 2006 that the Bronx River Alliance and Rocking the Boat data on water quality supported that we can do this. We wanted our kids understand this project, so they were part of the entire process. In 2006 the Bronx River Alliance put a whole bunch of adult fish in the river. Rocking the Boat was part of every step of the way. Our students were helping them to release fish, monitor how many adult fish survived that process, the spawning rate, the eggs, and the young fish. And then 2009 was the first potential year that those babies from 2006 could have come back. We were part of the group that was monitoring at the base of the dam where the alewife would be stopped. Our students were not the only group there, but we took turns to check the trap. And it happened to be on one of our days—our students got in the trap the first alewife after 300 years!

Cicy Medina, one of our students who now works here as a program assistant, was there in 2006 putting alewives in the river and in 2009 catching these fish. She understood the project from start to finish and currently, she teaches the incoming students. It's great to have this continuity. This was a very exciting moment for all the people who were still around here, and it spread very quickly to all the kids who were here in 2005, 2006, 2007 and so on.

I think that the Bronx River is very unique in a sense that over the course of that three-year period a kid could see significant change. And I think that even in a course of a year or even a semester the kids can actually see change and difference in the river. And it's because we are not the only ones who are out there doing it, we are very small part of what's happening in the Bronx River watershed. So the kids are part of that change, they feel ownership. They don't have to do everything, but they still feel ownership that, "Yes, I did that, I made this happen, I'm part of this team, I'm part of this community." And that is very important that it's not solo, it's connected to a large group, and we are able to affect this change. And I think that is really, really one of the strongest points of restoration efforts on the Bronx River.

The time I have with my students through the Job Skills program and the amount of kids I have is very good. With Job Skills it's eight kids, and you see them quite a lot. You can casually talk to them about what's going on in their lives. You can observe what kind of skills they have in a specific area. Cicy is a great example of my kids. She came with me in the regular On-Water program in 2005, and she was among the first kids in the On-Water Job Skills program, and now she work as a program assistant and also works with the Bronx River Alliance helping them run their canoe program. She was very, very nervous about public speaking, and even speaking one on one. And because of the way our programs are set up, we could work with her on that, we specifically set up strategic stepping-stones. I took small steps

with her, speaking in front of this group of her friends and peers, and move it up from there, and now she is an educator, a presenter. (Now she is in college to be a teacher!) We did the Dam Tour, a historical tour of different old mills and dams on the Bronx River. We would go with Cicy down the river and do tour talks on different spots in front of each other. Then we took groups from Rocking the Boat on the tour, and Cicy would talk to a group of 20, but it's still people she knew. And then we started taking other groups, public groups, and so on. So now she is the program assistant and runs programs with the Bronx River Alliance, and has no problem with public speaking. That was a very strategic plan, stepping-stones that Anita (our Social Worker) and I have developed for Cicy. We gave her more opportunities to gradually build up her public speaking. And you really have to give Cicy her credit. It's not like we said, "Do this or you are fired." There was no negative recourse that we were imposing if she did not do it. It was what she wanted to do, so you have to give her credit for being able to kind of step up like that and change something she was really upset about. And then informally Cicy and I have a good relationship. She used to meet with me once a week for lunch, we had lunch together and just talked. And there is just a lot of kind of good guidance that comes out of that stuff. A lot of times for the kids it's important to talk about the things that are frustrating them, and then they figure it out. The impact of informal talks is huge, huge, huge, huge.

I think what's really important to look at how much Cicy was able to do through Rocking the Boat, like all other kids here. I think the overall take-home message with Rocking the Boat is how much the kids can do for themselves here. We are setting up a lot of structure, but the idea is that the kids are doing it for themselves. Look at Cicy and say, "How successful is she as a person?" Her success is because of what she was able to do herself through here—the opportunities that she took on herself, that were provided for her at Rocking the Boat. For example, in Job Skills I used to do weekly challenges. The idea was that every week I was doing some sort of game or activity similar to homework, where kids got a chance to show off what they learned from the previous week. It was a competitive activity, so I gave points over the semester, and there was a winner, but the actual activities were not meant to be so much competitive to each other. I gave each kid topics that I thought were cool, which they had to go and research. For example, the General Sherman tree out West, a huge volcano under the Yellowstone National Park, the Blue Grotto in Italy—things dealing with the natural world that I assumed they probably did not know about. I gave each kid a topic to research, come back and just talk about. One activity I remember with Cicy, in which she failed, which really made me think about what we are doing. We were studying shrimps with Dr. Joe Rachlin at Lehman College, a study in which we were catching a bunch of shrimps because researchers found a new species of shrimp in the river. Joe taught us how to identify the shrimps using a dichotomous key for the different parts of shrimps. The idea was that we would go out and set traps, check the traps regularly, and then sort these shrimps by different species. So the weekly challenge was the species review game. I drew a giant shrimp on a big piece of tablecloth: right-hand rostrum, left-hand carapace, whatever parts. Students had to get trained on the different parts of the shrimp to know the terminology and refer to the actual shrimp itself. That was a great idea, and I thought the kids were going to have a great time with it. And Cicy was just pissed off and angry at the moment, and I did not know why. She did not want to be part of the game, she did not want to do anything, it was just like bad attitude. And then later we talked about it, and I found out that she had a perfect day in school. She had studied for her tests, did all her homework, etc., but had forgotten to prepare for this game. So, it made a sense that she was upset at herself. Even though it was just a small thing, to her it was big.

She had a lot of trouble getting through high school because school for her was a bad atmosphere. She was trying to get away from that world where kids were cutting school and doing drugs. But distancing herself away from that world meant skipping school. She was trying to skip school completely, stay at home and keep her head down. She was failing, but in regard to the shrimp game, she had apparently gone to every class, done all the homework she needed to do, did well and had a great day. And then she got to Rocking the Boat, and have forgotten that we were going to do this shrimp game, a silly game, but it marred her perfect day. And it just caught me so off guard because she was really mad and upset, and first I had no idea why. And it made me really think about the kind of stuff that we do

here, it made me think about where the kids are coming from. You can set a really high bar: like in this case I was doing this activity to review what they know. At in this case of Cicy it was so important to her, not only to have this perfect day where everything is right but also to be successful at Rocking the Boat. All kids got stuff going on at home or in school, so you don't want Rocking the Boat to be a place where they feel unsuccessful. At the same time, you don't want to be like, "Oh, you are doing a great job" all the time because it has no meaning either. So it is definitely something that I keep in the back of my mind when I'm planning my lessons in the future.

My wife is a big part of Rocking the Boat. She is finishing her doctoral degree in art history. She used to teach SAT and GRE tests, so people would pay thousands of dollars to get her to teach. My wife and I are very close to our students, so she would tutor Cicy and some other students at Rocking the Boat. I don't know if you have noticed, but there are a lot of girls in Rocking the Boat. So for me having my wife involved with some of these kids was important because she is an example of a successful academic woman. I can't be a woman role model for these students. I can be a role model in a general sense, and to the guys I can be a male role model. But she was somebody who invested in herself academically, and kids see who she is as a person and what her life is. My wife is the end result of educating herself, and it's very important because our kids rarely get to see the benefit of education. They see this person who has devoted her life educating herself so far that she can have the life she wants to have. Seeing her being successful in life is very important, especially for students like Cicy, whose parental backing towards the value of education sucks in many ways, and who have a hard time with school but really like to learn.

I'm trying to think of some other good stuff... Do you know the weir? It's just north of us in the Starlight Park, and it's pretty much the upper limit we can go on rowboats, that's called a low-head dam. That's a dam that is only exposed at low tide, so during high tide it's about three feet under water. On our boats you can go right over it, and go upstream maybe another half-mile. But from about mid-tide to low tide the dam is exposed and it becomes a waterfall. You have to do canoes in the upper section because it's not deep enough and there are waterfalls. And we would do it regardless of what the tide level was. If we got to the weir and it was exposed, everybody would try to jump from it on boats, and sometimes almost everybody would make it, and other times everybody would fall in. But our group is kind of special because we are so used to being on the water, so we would try to jump the weir. But one time Cicy and a guy named Ralphy ran the boat together. We got there and the dam was fully exposed, it's was about three foot straight drop. You can jump over in on boats if you go fast, but the thing that we learned later is that you have to have a bigger person in front because you want the weight of the bigger person down in the water. But if you have a bigger person in the back, it slows the boat down a little more. Ralphy is 6.3 tall and 250lb, a big guy, and Cicy is like 5.2 and 130. So we have a really good picture of Cicy in the front of the canoe, about 7 feet out from the weir in the canoe and 3 feet above the ground, and the canoe would not move. We have lots of little stories like that. It's a good example of kids interacting with the environment in a fun easy way.

In Rocking the Boat's summer program we take weeklong trips. These trips are expeditions on boats that we build. The idea is to get the kids unplugged from their daily lives and electronics, push them from their comfort zone of what they know and broaden their horizon a little bit. I think the second goal is to foster a team, get them out in a different world hanging out with each other and help them work on interpersonal relationships and group dynamics. And the third part is to get them to have time in the environment, to appreciate the actual natural world. In the past we would tow the boats four-five hours to do the Connecticut River. But I observe that our recent trip, which left from our location on the river, was far better than the trip to the Connecticut River. The Conneticut river trip was like telling the kids that you had to go somewhere else to get to the environment, you had to leave the Bronx to get into the natural world. A lot of time the environmental thought is that you have to go somewhere to be in the environment, you have to take a train, a bus, a boat, an airplane, or whatever to go somewhere else. And there, in another place, there is the environment, there is the natural world of trees, water, birds and fish. So now we are trying to connect kids to the environment directly from their house, from their neighborhood that surrounds them.

So I think it was an important decision that Addy (On-Water Program Director) and I made this

year—to leave on boats from here and return to here. We traveled with 20 kids in sailing boats that we built over the last few years. We started at Rocking the Boat in the Bronx, left the Bronx River, headed out to the East River, from the East River into Long Island Sound, and then to the ocean all the way to Connecticut. The kids could see that the environment is right around them in the city and it is connected to the larger world. It was something that was thought about and purposely done. We went from here out the Sound to Calf Island, which is 35 miles from here in Connecticut. It's exciting. Sailing. Sailing the whole time. We had a really good wind, so the kids were able to sail the whole time. The first day of the trip we went from here to SUNY Maritime College, which is about four miles away. The current and the wind were against us leaving the river. If you look at the map and the river, you'll see we were heading south, which is where the wind is coming from. So it took us about an hour and a half of really hard rowing. The kids were pretty exhausted. But then we got out of the mouth of the river and had to turn east to go towards Maritime, the wind was coming from our side and everybody could sail. It was a really great day because in the beginning we had all this really hard work with no evidence of any payoff, and then—boom—you are sailing and you are flying. It took us about an hour and a half to go not even a mile from to the mouth of the river, and then 30 minutes to go about three miles from the mouth to Maritime. For most of the kids this was the first time they really sailed in wind. I think that was pretty exciting. And throughout that week, that first trip, we had a really good wind, so the kids were able to really understand how to sail. Every kid got to do every position and kind of understand how to read the water and the winds coming along, and all that kind of stuff.

We stayed the first two nights at a place in New Rochelle, which is just north of New York City. It was a house, kids called it a mansion. It's a three-storey really nice house that let us stay there, and it was our base of operation for the first couple days. Then the third day we left New Rochelle and headed to Calf Island in Connecticut, where we stayed two days. So the fourth day in Calf Island we did not have anything, we just hang. I took kids on the powerboat, told them how to drive a powerboat. They flipped over a Whitehall, one of our rowboats, to see what that was like. They went out where the water was deep enough, loaded the boat with lots of people and see what it takes to actually flip one of the boats over—just because they have never done that before. Obviously we would never advocate trying to flip the boats over, so this was like a little safety drill in the safe environment.

Then one of the people who run the island said, "Hey, at low tide you can actually walk from this island to that island. It's very shallow, you won't get that wet." And I thought it was a really great idea for the kids because it really does teach about the tides. I think that for the kids the concept of tides is somewhat abstract even thought they see tides on the Bronx River. And I also think that our kids really don't get a lot of time to explore without restrictions. Even when we are going out on water with Rocking the Boat, they are out there for a purpose, whether it's just to learn how to row or to monitor birds. There is a purpose to it—you come to Rocking the Boat and this is what you do, it's structured time. I think exploring the island was unstructured, students could just ran across this land bridge between two islands and do whatever they want to do over there. There was no real purpose to do it, we went to the nearby island because it was there, and we had a good time. On the way it was good to see a tidal pool, an area where you have low tide and in low spots between rocks the fish and other big and small organisms get trapped. It was really neat for the kids because this was a little ocean in a jar. They are walking up, they can see fish, plant life and crabs all trapped in this really small area. I think the kids had a good time seeing that because they don't really get to see that too much. I think the weeklong trip is a good example of combining structured and unstructured time. We give kids the tools to navigate, we expose them to these areas, and let them do it on their own in their own way.

If you talk to anybody who is involved in the environment, whether professionally or in their personal lives or passion, I would see that almost all of them had some sort of unstructured time in the environment. It could be because of where they lived. I grew up in rural Texas for a while and in Miami where there is a lot of outdoor space. So I think it's important for people to be actually connected to the environment, to have a life-long association with nature in one way or another. But our kids in the Bronx just don't have that opportunity, there is not a lot of stuff like that. Even in the Bronx that has two of the largest parks in the city you still have to get there, unless you happen to live by them. It's not part of your

daily life. However, what is great about programs like Rocking the Boat is that it's a first step into understanding the environment and noticing the natural world around you even in the city. One of the kids, Josh, lives two blocks up the hill and had no idea that there was an urban river here until he joined this program. So you have this first step, "Yes, there is a natural world in the Bronx." Even if it's an urban natural world, it's still a natural world.

One thing that I really like is showing kids a little plant called pineapple weed. It's a little tiny plant that has a greenish-yellow bulb on top. If you pick it up and rub that bulb and small it, it smells really strong like pineapple, very sweet smell. That's one of the things that I really love to show the kids because it is in many cracks between two sidewalks. You walk outside your house, no matter how urban and cement it is, there is pineapple weed, which brings the idea of nature at home. I also show a tree called ailanthus, whose broken twigs smell like burnt peanut butter. And it's something that I feel is really neat because kids start seeing it, they start noticing it in their neighborhood that they lived the whole lives. They start noticing natural things that have been there the whole time. Maybe a rare urban kid was exploring that on their own anyways, but most kids in our program start to gain a new perspective here, "Hey, there are other things between my house and the train, there is this yard that has trees and there is pineapple weed." They start noticing a different world. That's a pretty neat thing.

But I still think that it takes a lot time for kids to get past the idea that nature, the environment, is something that you do only in a structured program. You come to Rocking the Boat and go out in urban nature, which is still a destination. I think that very few kids take the next step of hanging out in other natural settings on their own as part of their daily life. I'm not saying that it is a negative part of this kind of afterschool programs, but I do think that this issue is not addressed enough. These kids love the environment, they are really into it, but they may not really integrate it into their daily lives in the way you would think they would. I think they understand now the connection between some of their daily actions and the environment that they care about. As an example, they become more conscious of pollution since they are dealing with this issue, so in that sense they stop littering. I have a pretty complete picture of many of our students, who stay with our program several months or years. I can't say that they would have littered before, but I do know that now they have a really strong understanding of what littering does to the river. And I think a big part of what we did was talk about, "What are you willing to do?" If you want to take an hour long shower, take an hour long shower, but you should understand what that means in terms of water consumption and stuff like that. I don't see it as a downside, but these kids like the environment and see themselves connected to it not in the way outsiders see it. I think that most environmentally minded outsiders came from areas where they were connected to the environment on a daily, unstructured basis. So I think that's a difference. Don't get me wrong: you don't have to be in a pristine national forest to be in the environment, but I don't think that connection to the environment is going to happen as readily in the city.

I think that one of our goals is to try to get people use the parks in their daily lives. There are people who come out and fish every day in the parks, and there are people who go to this park to canoe today and then never come to a park besides that. We want to get people to start regularly use outdoor space in some ways, like the people who picnic in the parks, play baseball, whatever. I don't think it needs to be environmental activities. I even make a joke about the Botanical Garden, which is in the backdoor for many of these kids, and it's only two bucks for kids and it's free on Wednesdays and Saturdays. Some of our teenagers did not know that they could go there and be part of it. I was joking with a couple of our kids, "Go there and make out. Spend the two dollars and you have a place to make out in the woods." They thought it was really funny that I was advocating for that, but the idea I'm trying to promote is just being in the environment, having unstructured experience. And some of them do go to hang out in parks. Connecting people to the environment is more than just understanding what kinds of trees are in there. That's great, but the goal is to engage in different activities. Do you like to play baseball? Well, play baseball. Sometimes people are destroying a natural area for some sort of community use. We are destroying the banks where we put our boats. But we are okay with that because of the greater good, and we maintain the area.

I also tell these kids about Captain Planet. Do you know what Captain Planet is? It's a cartoon,

and it's horrible. Long story short, there are four or five eco-friendly teenagers who love the environment and get together to stop the bad guys. The bad ugly green-faced guys are harming the environment by dumping barrels of oil and toxic waste into the ocean for no reason. And the good guys are like, "Oh, that's bad" and they try to stop it. Good guys are living their normal lives, consuming things, watching TV, but they are good because they like the environment. I think this cartoon sends the message to kids that you are good as long as you like the environment. So kids don't think how their daily choices affect the environment. This show completely disconnects their daily actions with their effect of the environment. I think that's a big concept for the kids of grasp. If you go to a bodega and get a sandwich, that sandwich is wrapped in wax paper, then it's wrapped in foil, then they put 20 napkins and a straw if you get a drink, and then they put that into a paper bag and into a plastic bag—you take all that with you for your sandwich. That's part of daily life in the Bronx. I'm not telling the kids not to get a sandwich any more. But they should understand these are choices that they are making in their lives. These are realities of being an American living in the Bronx, and these are the effects that it has. So I think we worked a lot to fight against those Captain Planet types of concepts and the idea, "Oh, I love the environment" without making connection between your day-to-day actions and how these actions impact the environment.

My goal with the kids is to make them critical thinkers who like to learn. That's really my goal. I like to do that through projects with kids where they realize their relationship with the environment. For example, we calculated our ecological footprint. We figured out what we consume, what we do in our daily lives, and what we are willing to do. A lot of times in environmental education there is the idea that there are good guys and bad guys. But nobody here hates the environment. So we are all good guys. Students have no malicious intent, but they don't think about the consequences of their actions. It's really important for kids to understand that we are all harming the environment, just in varying degrees, and most of it is for a practical purpose. Yes, the rainforest is being cut down, but it's not being cut down by evil fat green-faced ugly people for no reason. It's because we are buying wood to build houses or burning it to make our charcoal for fires because that's part of our lives. Of course these students are not going to live in a yurt somewhere, take showers no longer than 30 seconds, and scrub themselves with a rock. And I think it's like an "Aha" moment for many of the kids to realize that they don't have to be these environmental extremists in order to be helpful for the environment. Kids need to understand how they impact the environment, and then make choices that they can actually live with. They can live with taking a half an hour shower instead of taking an hour long shower. Some people would bike to work as opposed to driving or taking a bus. They would not get all those bags when they go to a bodega. They would start to impact the environment less. And what I think is more important that the cumulative effect will be great, and that they would start to look at their daily lives from an environmental point of view. That's something that I've made a very strong point to teach.

Another outcome of programs like this is that kids starting to see the aesthetics of their area. I think programs like this help kids understand that the Bronx was not always like this. And it is not going to be like this in the future—whether it will be better or worse. But you start to understand that you are part of it, and you are trying to make it better. You understand that, "Yes, things change and I have a voice in how they change." I think it's a big outcome of programs here, not only Rocking the Boat, but also THE POINT CDC and YMPJ. I think it's a big outcome that is not really verbalized, but I think we all probably feel the same way. It's really important how students view their community and themselves, and how they see the connection between people and the environment.

"THE WONDERS OF NATURE IN THE CITY"

AN EDUCATOR PROFILE OF CAROL KENNEDY

Science Teacher, Satellite Academy High School
Interviews conducted by Alex Kudryavtsev on May 8, May 22 and August 2, 2010

Carol is a science teacher at the Satellite Academy High School in the South Bronx. She lives 80 miles north of New York City, and drives every day to teach students in the Bronx. This story tells about her background of growing up connected to nature, and how it has influenced her current approaches to educating inner-city youth. Carol's teaching philosophy combines classroom learning with outdoor experiences in the city and elsewhere to connect students with their communities and the world around them. This interview focused on EcoLeaders, a 5-week environmental education program that Carol organized in summer 2010 to offer students a variety of nature-related learning experiences in the city.

My name is Carol Kennedy, and I'm a teacher at the Arturo A. Schomburg Satellite Academy—Bronx, a small alternative, transfer high school in the South Bronx. I am the middle child of eight children, and I grew up in Poughkeepsie, one of the oldest cities in New York State. It's a city of about 40 thousand people; probably 40% people of color. The house I grew up in was 180 years old, and it was a big, rambling kind of place. The house was very close to the center of the city in a really old part of the city, but even so it had a big backyard. My parents rented out lots of rooms to other people because the house was so big and they could not afford it. I grew up with lots of people, and lots and lots of books everywhere. The only way to escape all these people would be to find a little corner and a book to escape into, or to go outside and play around in or just sit in the backyard. I guess that is the beginning of my experience with learning about the world. My dad and especially my mom loved to read and she loved to read to us kids. Sometimes she would find the time to spend reading with me alone, and that was precious time.

I guess I was raised to be an outdoor person. My family was really into swimming, and we were always around water. In fact, the local newspaper—the Poughkeepsie Journal called us the "Swimming Kennedys." We had a big swimming pool in the backyard and my mother and father ran a swimming team from the pool. I suppose that could be why I got to gardening and all kinds of outdoor stuff, because we had a backyard and the pool.

My parents had a hard time just keeping up with eight crazy kids. To keep us occupied, besides swimming, my mom would sometimes have us take all kinds of IQ and other tests just for fun. My mother's father was the principal of one of the first vocational high schools in NYC and she had many of the old tests he had brought home from his years there. In addition to that we did all sorts of other crazy stuff, and she had us playing complex and creative games, sometimes dressing up and pretending we were strange characters. I guess this in a way made me creative and kind of crazy.

Over thirty years ago when I was 15 I ran away from home and I went to live with my sister out in Oregon. She lived in a commune. In this commune there was a group of about 10 to 15 people trying to live off the land in a sort of alternative setting. They lived on a huge piece of land that backed up against the national forest. This was way up in the mountains in Oregon. Some of them lived in little tents, or yurts, or other different kinds of things basically whatever they had a mind to put together. I learned about organic gardening there because that's how they grew their food. I think that was the start of my interest in alternative lifestyles and living off the land.

I returned home and I did another year of high school. After I graduated I went first to the local community college and then transferred to New York University. But I did not have enough money to keep paying for NYU, so I decided to move to Ithaca, New York, work and stay with one of my sisters who lived there as well. I got a job working in the ΔΤΔ fraternity as a cook. I had some experience cooking because I came from a big family but mostly I was able to convince them by lying that I had

some experience as a cook at other restaurants. I liked it, and I lived in Ithaca for two years. I also worked at the Ithaca middle school teaching kids how to do photography and I designed ads for a local paper called the Grapevine.

I eventually went to the Ag School at Cornell University, and I was in general studies program. I graduated in 1981. After I graduated from Cornell I spent a year in Albany at the medical center learning to become a medical technologist, and then I worked for a while at the New York State Health Department in the Immunology Department. I next moved back to Ithaca and I worked in the Genetics Department at Cornell for a year. I decided I wanted to get a graduate degree so I applied and was accepted at Roswell Park Cancer Research Institute in Buffalo, where I studied molecular biology. After a year I decided this is not for me. I just didn't want to be stuck in the lab all day.

So, I went back to Poughkeepsie. It had been about 8 years since I'd been back home. I went to SUNY New Paltz, and I got my teaching certification. The college is located up by where I live now, near Highland, on the other side of the Hudson from Poughkeepsie. After I got my teaching certification, I taught chemistry for three years. I also taught at an alternative junior high school program called the DOME Project, Developing Opportunities through Meaningful Education. This school was my first experience of teaching in New York City. The school began with an educator who took a group of some of the worst students from the middle school and built a dome with them. This dome was placed in the center of a community garden, called the DOME garden and it was there that I got interested in urban gardening. But I still needed to get my master's degree, so I went to Columbia Teachers College where I was introduced to some really interesting ideas about alternative and urban education. I wanted to find a school that needed a science teacher and used alternative ways of assessing knowledge, like portfolios, or assessed what somebody knows through a series of student-led projects and presentations.

At that time I had a friend who lived in a squat in the South Bronx next to St. Mary's Park, so I got to come down here quite often. Do you know what a squat is? In the 60s and 70s after the city built the Cross Bronx Expressway the Bronx sort of died. Landlords would abandon buildings, and people then moved in and "squatted". The people thought they had the right to stay in the unused space. I sort of got involved in the politics, got a little social knowledge of what's going on in the South Bronx and what challenges folks who live here face. I think I was also kind of ignorant of what was going on in communities I was not a part of. I think I was kind of blind because I just didn't look to far outside myself. In the Bronx I learned new things. It just seemed like a life that I wanted to be part of. It sort of got me involved in community activism, in knowing folks who were trying to make changes from the grassroots up. Around that time community gardens were becoming a big thing in the city again. And I thought, if I come down here, I want to see if I can get hooked up with an education program, help them be more responsive with the community needs and maybe improve the community, and combine it all with my love to garden.

So, in 1992 I came to Satellite Academy High School, a small alternative transfer high school in the South Bronx. I was getting my feet wet with urban education, but urban education with a twist, which involved looking at other ways of showing what you know, sharing knowledge, and expressing science knowledge in a different way rather than a test or with a piece of paper. The school is for students who were unsuccessful in their other high schools. Many of them don't know how to be students because they have truancy issues. A lot of them have health issues, home issues, family issues, their own children, substance abuse issues, no parents, parents in jails, no money, a history of bad habits, of bad education, all sort of issues. Students who come to Satellite face a lot of challenges. Many of them feel they have failed at their other schools, or that the other schools have thrown them away. And we have only two years to fix it instead of regular four-year high school. We have maybe 50% success rate, we lose about half of them, which does not make us happy. They come to us with this shell we have to get through and very little experience being a student. What they say about school is that "It's hard, it's boring." And I think that part of this feeling they have has to do with our educational system, what it does to the minds and social development of our children. Many of our students would say, "I did well in junior high school, and then something happened when I hit high school, and then I did not go to school." What have we done in our schools and in our society to make this happen to them?

I came to Satellite because I wanted to work in this setting, in the South Bronx, and I liked the

small school idea. I feel like I came from a privileged background, I had a good family structure, and a great education. I used to teach in suburbs in one of the wealthiest school districts in Bedford, New York; it's where Hillary Clinton has her home. I knew what was happening in education in the city, especially the inner city, that it's hard to get good teachers with science background. Good science teachers did not flock to the inner city to schools like Satellite. In Bedford I had a lab assistant who was a retired research scientist. She would set up my lab and kept everything organized, she did all the ordering and brought us cakes and coffee every morning. And I come here… a lab tech? What? A lab? What? I mean that the room that I have now got built in the past 10 years, but it was nothing when I started. Even today I have incoming students who say, "I never did labs before. We just read from a book and did handouts." It's really hard to set up labs without any help. It's hard to get supplies on a limited budget, make it work, and to do all the safety protocols so that nobody gets hurt. But I wanted to believe I was making a difference because that makes me feel good.

When I started at Satellite I lived on a horse farm in Dutchess County. I took care of horses in the morning before I came to work. Then I moved to Brooklyn for a while, but I could not do it. *[laughing]* I could not. So I moved back upstate. I like going home and sitting outside and having no voices around. I like to be close to my family, so I can call them up and say, "Do you want to make a dinner together?" But I think it's mainly I wanted my little oasis. I remember when I was a little kid, and if I could vision my future I would be like this witch who would live in this little cottage like in a fairy tale… *[laughing]* away from everybody else. That was my view of the future. But I think I have that tendency to withdraw from people if I can. When I think about people living in the projects with all these people around them, "How can people do this?" I can't breathe because it's just too much being surrounded by so many people, so many souls. *[laughing]* So that's why I live up there and come down here, although so many times I'm so scared driving all that way. I think about how easily I could get into an accident—three times I have hit deer on my way back and forth. Yet I still drive 80 miles each way every day to teach kids. It's an hour and 45 minutes each way.

Some students come to Satellite because they did not like big high schools. When Satellite began, most high schools were big like big factories, and they were very dehumanizing. Many students fall out of the loop when you are at this big place where nobody knows your name, when you are just a number and a teacher knows you because you sit in the seat that has been assigned to you, and they read your name off a little card. Recently I have read a book called "The Science of Good and Evil" by Michael Shermer, and he describes the history of violence in communities and development of communities. One of the things that he mentions is that it's difficult for people to be in groups larger than 200 individuals. Once the groups grow larger you begin to objectify people, you can treat them in a way that you would not treat someone who you care or know about. So most students who come to Satellite did not like going to a big school, they wanted to come to a small school where everybody knows who they are and they know everybody. Now, many of the large comprehensive high schools in the city are breaking up into smaller schools.

When I came here, the school was just in the beginning of developing portfolio, or performance based assessment and what the process would look like. Instead of exams students at Satellite have to do a portfolio: they have to gather the work together, reflect on their work, create major projects, and at the end of the semester they have to present it in front of a panel. It's a real challenge for kids who have been doing next to nothing for most of their high school career. This is probably why most of our students come to us with 6th grade or lower reading and math skills. In addition, one of the biggest issues we face with our students is their attendance—they just don't make it to school, and no matter what we do, no matter how wonderful our classes or programs are, we cannot change the life situations that brought our students to us in the first place. But we are trying, we want to help them develop a new identity, and habits—like coming to school—that will make them successful and perhaps become a new person.

To graduate from Satellite, students have to prepare a senior seminar portfolio and a PowerPoint presentation of their research projects from their different academic classes, a number of different essays and an educational plan where they describe where they want to go in life. When a student comes to Satellite they start with what we call their "core" classes in science, math, English and social studies. Part of this core experience involves getting them to do things outside of their comfort zone, things that they

would not consider before. As one of the "core" teachers I get them out into the Bronx environment, out into our school's garden and out on the Bronx River.

I firmly believe that to get someone invested in what's going on in school you have to have them invested in what is going on in the community, to make them feel a part of the place where they live. I felt it was really important to make connections between the school and surrounding communities. It was probably about 15 years ago that I got a group of kids, and we went to the community board and looked at maps of the area, searching for city owned empty lots around the school—this was before you could get that information easily from the web. We found that right across the street from the school there was a city-owned plot. It was full of garbage, all sorts of weeds, shrubs, trees and all sorts of other stuff. We started the process of making this lot into a garden with Green Thumb. We started cleaning it up and eventually got some fences and other materials donated. Little kids, big kids from the community and staff from the school helped with the cleanup. Now, almost every year I can run a gardening and community activism class. The students spend a week out in the garden during our spring break doing cleanup, start the planting, visiting with local community groups, but most importantly, and they spend all this energy on making the garden look nice. And this carried over when the class is over—the students feel a connection to the space and are angry when they feel folks in the neighborhood don't treat it with respect.

But about 10 years ago the city decided they wanted to get rid of all community gardens, and sell them so that they could make some money—the city owned the land after all. We went through the process of process of fighting for our little piece of land. That was interesting. At that time I was also searching for community groups who could work with our students to help them find their voices through community action. We hooked up with a community-based organization called "Mothers on the Move" that wanted to work with our students and teach them how they could organize and start initiatives to do something positive for their community. We had the perfect project that the students could work on—to fight to save our garden, but that was my baby. For the students to be invested I felt the project they focused on had to come from them—sort of organically. To do that we went through a process where we answered a number of questions, "What can you do? Is it doable within the time frame and with the resources we have? Luckily for me that saving the garden was the project the students decided to work on. We got somebody from the borough's office to come to speak with us, we brought together the students who would work on the presentation, we found some community members—both children and adults, and all testified on how important our little garden was to them. We ended up being able to save the garden.

[Conducted in the garden, the interview was interrupted by two passersby, a Latino man and a Latina woman, looking at the garden from the entrance gate. Carol, "Hello! You want come in and take a look? You can come in and walk around. Come, come, come!" Visitors spent a few minutes exploring herbs and vegetables in the garden. Carol, "Did you take anything? No? Okay, then I've got just the thing for you. Smell that. That's not mint, that's called lemon balm. Isn't it great? You can actually make it into tea, take a bath with that, or rub it on your skin. I tried to put a lot of things in the garden that are smellable. And this is lavender, it's my favorite." A visitor, "I like it!" Carol, "You are welcome! Well, come by again! You can come and hang out too, that's allowed. Bye-bye!"]

And from the garden I met other people in local organizations. Somebody introduced me to Nino DiSemone at THE POINT Community Development Corporation who used to do environmental stewardship projects and rowing from the Hunts Point Riverside Park before it was renovated. He used to take kids out, and I went out with him. And then I got hooked up with people from Rocking the Boat, and I've been taking kids out on the river ever since. This has been a challenge because it is really hard to work it into the school curriculum, and find the time and money to make it happen. Even so, at least twice a semester as part of my curriculum I take students to the river. I have designed a curriculum that focuses on the Bronx River. This is in the core class for new students to Satellite. There I orient them on what's going on in the school, as well as, try to get them excited or interested in science again. Part of the class also involves a number of initiatives where they have to solve problems and have fun at the same time.

For example, last fall we did unit on biodiversity. I designed simple research projects where we tried to answer the questions "Is the Bronx River healthy?" that involved students collecting data about

the Bronx River. We looked at the aquatic biodiversity by bringing out kick nets into the river, throwing them out 10 to 15 times, collecting, identifying and counting the organisms from one location, which is the estuary at Hunts Point. We then compared those results to the number of organisms we could get in the freshwater portion by Burke Bridge. Before our fieldwork students would read articles about freshwater and estuary biodiversity and health and come up with a hypothesis about which part of the river they think would have greater biodiversity based on such factors as habitat type, water quality, and pollution. For example, students would read about estuaries, that they are called the nursery of the sea, so they might hypothesize there would be a lot more organisms there than in the freshwater part of the river. We also looked at health of the river by looking at buffering capacity, which part of the river—fresh or estuary—had a greater ability to protect itself from acid pollution. Students would collect data about pH, and for buffering capacity, they would do simple titrations and use this information to support or refute their hypotheses. We would also look at different parameters, like dissolved oxygen, nitrates, salinity to answer the question about the health of the river. By doing this field research I feel it gives students a taste of what it's like to be like a scientist.

For a lot of new students, as you might have noticed when we went out, this is the first time that they have done something like this—going out to the river, sitting by the river, going out in the water, collecting water samples, putting on waders and walking out into the water with the nets to catch the critters, holding them in their hands and looking at them. This is the first time for students to do this because it's not part of their life experience, this is something new and different for them. And for a lot of them it's like, "Hey, I hate the bugs, but let me hold the fish." At the same time they can enjoy some of it too. I'm hoping that they get this picture of the experience—which they will remember; I'm hoping that they can say to themselves, "I can do something and be successful. I enjoy myself in nature, and maybe I might want to do something like this in the future."

I've been teaching in the city for long enough that I realize if you don't go out there with the students, these experiences are not real for them. I could use pictures and talk until I'm blue in the face, "Okay, there is a freshwater part of the river, and there is a salt water part, and this is what it looks like." But now, let's go out there, and they say, "Oh, this is what it's like, this is what the freshwater part looks like, and this is what the wildlife around is, and this is what an estuary looks like." They get a mental map in their mind, a mental picture of what it looks like. I could just tell them, but it would not mean anything. The other day one of students said, "Oh, we are going to the estuary this time, right?" So they know that the Bronx River in Hunts Point is the estuary part, not freshwater part. They have a picture of it because they went and experienced it. And it's not the same as showing them pictures of it, it's actually being there that goes to that part of your brain that has no words to describe it, the part that "I can sense this, I can understand this in the way that I don't need words to explain it." And then when I want to teach them and make connections between what they learned, I can do it better. You can remember things better because it's at the deepest center of your brain, because you had an emotional and kinesthetic experience with this thing rather than just a conceptual experience, and it's all those things that make an experience real.

Some of students already have had experiences with the Bronx River. They've been by the river, they've gone over the river in subway trains, they've seen it. When we start talking about the Bronx River, they say, "Ugg, it's dirty, it's disgusting, it's horrible," sometimes they say that even after we go there. The last time we went there it was low tide, and there were mud flats. The only way they could conceptualize what looked like to them, "Ugg, it's dirty," when in reality that's normal, that's what it is supposed to look like during low tide, it's not dirty, its just dirt and mud. That brown mud is rich with life that on closer inspection is filled with crabs and other critters. When I get those responses I sort of see this as, "Okay, this is the first little crack in the door that I'm making to let them see the world in a slightly different way, and this world is so close to them and they just can't see it." Maybe I can open the door a little more with more time. I have to compete with all that has come before to shape their view of nature. They are indoors or in a subway most of the time, they are hanging out on a stoop, or they are in a man-made park, and that has been their experience with nature.

Why is it important? My selfish thing… because I think the more positive experiences you get, in a gardening club or rowing out in the water, the more you get the sense of peace and a positive sense of

place. You understand that nature is not frightening any more, nature is beautiful, nature is something that you can easily experience and enjoy. And then you get to see the world around you in a much more holistic way, rather than, "There is this compartment, which is my life, and there is this other compartment where wealthy people up in suburbs or up in the country can experience the world and that other place is nature." But now they have a much deeper, richer experience and the understanding that they have real nature in the city that they can mix into their life. And in the future when they have to make choices and they have to vote for things, they'll say, "Okay, here is a much broader picture of what the world is, and so I can make a better decision about choices." Kids that I've had working in the garden come and say, "Some jerk just threw all this stuff on the floor in front of the garden," whereas in the past they would be the jerk throwing crap on the ground. So, they get a different understanding of what it means to be part of a community and how you maintain the community. They have some ownership, "This is my little piece of the pie that I'm making beautiful and I enjoy it. It looks nice and I feel good to be here." Before working in the garden students did not know that we have a garden across the street. They are so used to be in this tunnel when they come to school that they don't see what is around them, so I have to take them over there, and show them, and get them to do something over there.

The idea of the EcoLeaders program, or I guess the seed of it, started a long time ago. It has always been my notion that folks learn stuff when they are actually doing it. Kids and adults really get a lot of enjoyment and personal satisfaction from helping someone else or feeling like they are doing something for someone else. I have tried various things to make that happen: with after-school programs, in the garden, and working with groups like Rocking the Boat and Bronx River Alliance. In the past I was able to get services from these organizations such as rowing on the river for free, and that was sweet. But now, in this economy, I can't get this anymore. So to be able to afford what I thought was a great thing for my kids to do, to enrich their classroom experience, I asked myself, "Alright, what can I do? I gotta get some money from somewhere." I had to write a grant, and I had to come up with an idea. I needed a body of skilled folks, real experts who can help me teach scientific skills, and tie this with out in the field and on-water experiences on the Bronx River. I wanted to design activities that kids and I would enjoy. So I wrote the grant to Toyota, thinking that I'm not gonna get this.

The program was designed to be about the Bronx and the Bronx River. In the Toyota grant the official goal was to have kids experience the natural environment in the Bronx in a new, different and positive way, and change their mind about what is available to them in their communities. Many kids spend all their time playing basketball, or are inside their apartment, or outside running around and causing trouble, or just hanging out. If you ask the kids what they do in their free time, it's not "I go to the park and go hiking." That's not in their lexicon of things to do. I wanted to give them a bunch of new things to do, "I know this place now, and I can take my friends there." I also wanted to make kids feel the need of making changes in their environment. Number two, I wanted to actually collect some real scientific data, to do some research on the biodiversity and water quality in the Bronx River. I wanted the kids to interact with scientists, see another side of this world, what scientists look like, taste like, smell like. And three, I wanted to support boating activities, to teach students navigate the Bronx River with wooden boats and canoes, and to learn about natural and social history of the river.

Initially 25 students came for interviews to be in the EcoLeaders program. Most of them were from the Bronx, and some from Manhattan, Queens and Brooklyn. For one of the questions on the interview the kids had to tell me about a time when they taught somebody something, and how they felt about that. It has always been back there in the back of my mind, to engage kids in teaching. When the program started there were 22 students, and then we ended up with 17. I lost students because we had a really strict attendance policy, they could not miss more than two days. I think the main reason they chose to do this program is to get four school credits; and to graduate from high school they need 40 credits. I have taught some of these students. To make the EcoLeaders program worth four credits, I had to have 240 hours of time either in class time or after class time. The program was very intensive; we had to be on from 8:30am to 4:30pm pretty much every day, including weekends for 5 weeks. And that took a lot out of me. You have to get all these permission slips, make sure everything is prepared for all these different activities. Make sure that people—not just students but the scientists and consultants are there, get bus and train passes, always having to call "Are you coming? Are you there?" And invariably things happen

that are just out of your control. A lot of times I had envisioned and planned certain activities, but not with a 100-degree weather and broiling sun; we can't sit down and reflect on the experience because it's just not comfortable. You always have to face it when you are doing stuff outside, and the weather is not always perfect.

In the EcoLeaders program we did a lot of activities: planting seeds in the garden, exploring oysters with Rocking the Boat, doing a toxic tour of the community with Sustainable South Bronx, rowing on the Hudson River in my brother's community rowing club. The first day of EcoLeaders it was so hot—a heat advisory day—and I had to cancel an outdoor Project Adventure course trip to Alley Pond Park, which was where I had planned to for the students to get to know each other and build group cohesiveness. Instead, I had come up with a new plan on the fly—we discussed the importance of nature in a person's life in terms of educational, physical, emotional, mental health. I had them read texts and view short movie clips, but I don't think the message did not make it to them. We did an activity where we discussed what most people consider "nature" or "not nature" and why. And then we negotiated what is man's influence on nature. Finally, we came up with a working definition of "nature." Next day we went out to the High Line Park in Manhattan. Before we went we developed questions to interview park visitors about nature and we practiced interviewing, filming and taking notes. In the park the students were in small groups, some interview and some filming. They asked the people the questions we had come up with about nature, where it is and its benefits. I had to help them along at first and was the first one to conduct a practice interview. I said, "Okay, I know you guys are scared, you watch, I'm gonna go up and ask someone." So I sort of broke the ice with them, and then they had no problem going around, finding people and asking them, and recording interviews by taking notes and using a little flip video recorders. What I realized during this activity is that not only did it reinforce the idea of nature benefits, that we've been talking about in class, but they got to hear over and over again what people think about nature deficit disorder and other ideas. So, I don't have to teach it to them again, it's here, they hear it over and over again from different perspectives, and they have to clarify it for other people, so they too can understand. This is great! I don't have to teach this! This was really sweet, I really enjoyed the activity. Later we shared and discussed the video interviews.

One of the other goals of the program was to have the students maintain written and video journals of their Eco- Leadership experiences, and, in collaboration with scientists from Lehman College, analyze the collected data. I hoped this data analysis will lead to new knowledge about the health of the Bronx River ecosystem, and the student Eco-Leaders will present it in a credible way to a variety of audiences at several venues. One venue, of course, would be their end of semester portfolio presentations. Every day after activities I uploaded some photographs taken and my take on the experience to a "Ning" that I put together for the class. Students responded to them, or described what they thought happened during the experiences. The kids started doing it before I actually assigned it. They would respond to the photographs that I put up on the web, "Carol, I was waiting for those, and then they finally came on last night, how could it take you so long to put the photographs up." They would make jokes about the titles that I put on them, "Oh, that's me in the park, that's funny." One of the kids said that there should be a way through this website to send announcement texts to their phones because that's probably the best way to get in touch with them about events.

When we went to Lehman College, that was cool because we worked with Dr. Rachlin and the kids got to see what college was like, what a college class would look like. They learned hands-on how to identify all these different critters that they would find in the Bronx River. They got to meet real college professors and interact with them, and be on a college campus. Later we could refer to what we learned when we actually went out and caught the critters in the nets, and that was cool. The lab was filled with all this stuff—preserved species from the freshwater and estuary part of the Bronx River—and students were just, "Look at this, look at this!" They just loved old school naturalist studies, they were into it, and they just could not be drawn away from those things that were in the room, it was enjoyable. They don't get to normally see these things, at least not in most high school science classes. "Carol, do you have stuff like this in your classroom?" I have a couple of specimens, but nothing like this. And they, "We really need to get stuff like this in Satellite." And then they would ask, "Carol, do you do dissections?"—"No, I don't ever do dissections, sorry."

I need that affirmation from students that what I'm doing is worthwhile. I need it. I guess its kind of selfish of me. For example, after we did the foraging activity with Leida Meridith, where we learned about edible and medicinal plants in the Bronx River Forest, most students were really into that. Afterwards Jensey, one of students, said to me, "Carol, do you know what has happened? Every time I see a plant now, I wanna know its name." I said, "Yeah, I know. That happened to me too. I walk through some places and ask what is that called? And then when I know its name, I'm like, yes, that's one of those!" It's a piece of my experience with the world that I can walk through it and enjoy the fact that I can put a name on something, enjoy the fact that I can see the connection of this to that, or enjoy the fact that I want to know what this thing is.

I have noticed that it's hard for students to get ideas about particular areas if you just show them a map, just talk about it or show pictures. It's hard if they are not out there to touch it and experience it. If you are not out there touching it or seeing it to make it concrete, it means nothing. Things like: "What are tides? Which direction does the water flow? Where is the source? Where is the mouth? What is upriver? What is downriver? What is north or south?" Those things don't make sense unless you are there to experience it or to put it in some context. I mean it took Stephanie, one of students, who took almost until the end to get a grip on what tides were until it she actually saw it over and over and it clicked, "Oh, these tides, oh, and that happens here every day too. Oh! Right, we learned about that way back with Dr. Rachlin what he was with the moon and showing these pictures." Part of this is trying to put the students into the physical context, so that they could make sense of the concepts and ideas. So that they would see this concrete picture of the world and in their mind they had something to ground the concept in.

Another experience for EcoLeaders was in Drew Gardens at Phipps CDC, and working with the Bronx River Art Center. We broke the kids in half. Half stayed in the garden, got a tour with Jennifer Plewka from Drew Gardens who talked about all the different things found in the garden and its history. I thought one of the things she said was especially interesting, the one related to human aspects of a place that are so powerful for young folks. They may not remember the name of a plant, but they remember a certain tree in Drew Gardens was planted in memory of this person who passed away and whose ashes are under the tree, and flowers planted in memory of a child. Students could remember that story, which was told probably in the same amount of time as Jennifer might have talked about composting or anything else. But will they remember that? No. They remember that narrative about people and their lives—it's easier for students to incorporate and remember. It means something more to them, so that the garden means more to them in that sense. I agree 100 percent with that. That has been my experience as a teacher. Even if it's a made-up narrative, if I can put a narrative, a story to it, it means more.

I mean in most of my activities I try to create a story. I create this person or this event. When I want students to learn about how to use a refractometer or learn the concept of salinity I create a story about this guy whose name is Heza Slaquer. This name is weird, but it says "he is a slacker," a lazy guy. So Heza Slaquer got a job at the Bronx River Alliance, and all he had to do was collect samples from two places in the river and bring them to his boss who would test them. He lives near the estuary in Hunts Point, and one day he did not feel like going all the way up to Shoelace Park in the freshwater part of the river. So he gets water samplings and brings them to his boss. And the next day his boss says, "Do you want this job? It's clear you don't want this job." And then the question is: How does boss know that he was slacking? Then we go into the idea of salinity in different parts of the river, and other concepts that I was trying to get across. I always try to create these corny little stories that help students buy into activities. Unfortunately, students sometimes remember a story more then the concept.

So back to Drew Gardens… half of folks were in the garden, and the other half went across the street to the Bronx River Art Center where they had to—in groups of two or three—design a garden, any kind of garden. They were not told where the garden had to be or what had to be in it. They were asked to just design a garden. But all of them designed a garden on the river with the river in the middle of it. The Bronx River had taken a place, a shape in their minds. That was cute—more then cute, it was what I had hoped for—for the river to become this center beauty that they could build around. Each of them planned a garden with flowers, vegetables, and places for shade. They began to see how you could make a place that people could enjoy, that people could use, and that would be good for the community. So they began to understand what makes a place that they would want to come to, how you would set this up. They were

able to take knowledge about gardens and put it into some conceptual image because they now had the experience of such places. Then the two groups switched, and the folks that were out in the garden took the design that the first group had created and made a 3–dimensional model of it, which was great.

On another activity: we went out with George Jackman, a former NYC policeman who is now working on his doctorate, to do the fish electroshocking, which was a real challenge. The electroshocking was to take place beneath and above the dam at 181st Street. Our plan was to observe eels, that are catadromous: they live in fresh water, spawn in the Sargasso sea where adults die, but elvers, the little eels, come back and make their way up into estuaries and freshwater portions of rivers all along the cost of the Atlantic Ocean. We hypothesized they can't make it over the dam at 181st street on the Bronx River, so we were going to electroshock there to test our idea. But the day before the electroshocking was to happen, two youngsters drowned there. It had been so hot, they went wading, and one of them got above the dam and fell in, she must have hit her head and went under. Her friend went to try to save her and he went under, and both of them died. So it became a real issue with taking kids into the water, especially in that river, in that spot. So we did it upstream, I had to get another person to come with me, so I got my brother because I just wanted to have more people to keep eyes on these kids. We are not going in water over our heads, but we are going into moving water, we are going in water with obstructions on the bottom, you can fall over and get your waders filled with water, and I did not want any incidents on this adventure. Also, my pal Ross, who was also with us on this adventure is a relatively spiritual fellow, and was not about touching the water after two kids had perished in that body of water. I appreciate his spiritual convictions, but it's hard enough to get the kids to do something that they have never done before especially when it comes to water. And if an adult says, "I'm not gonna do this" it's even more challenging to make kids do it. So I said, "Please don't tell them that you don't want to go in water. I'll just say that I need you to do things on shore." And then George's electroshocker stopped working half way through the event, so we ran into some technical difficulties. But the kids who did it really liked it. So it was cool, we each had our own buddy in water, we had to hold our buddy's hand, which was so cute, even the guys had to, they did not hold each others' hand, but they would put their arms on shoulders. George and I were very safety conscious too as we went through this process of trying to shock the living critters in the Bronx River to see if there are any eels in there. We did not find any. So that was interesting too. All in all it was an interesting adventure.

Ah, and the Botanical Garden! A lot of kids said, "I've never been to the zoo. Can we go to the zoo?" And I'm like, "I don't wanna go to the zoo." I don't really enjoy zoos. So we went to the Botanical Garden, but in the forest and river part of it—away from the more formal and maintained portions. And Anna, from Brooklyn says, "This isn't like the botanical garden in Brooklyn." I said, "I'm not taking you to the garden part on purpose. I want to take you to the more natural parts. This is the last remaining forest in all of New York City. This is the original forest. This is what it used to look like." I wanted to show them there all these little paths in the garden that are sort of abandoned because it's one of the oldest gardens in the city and there is a lot of forgotten places back there that are very cool. We looked at wetlands, and this was cool because a few days later on the trip to Newburgh Stephanie was able to ask as we passed by a wetland area along the Hudson River, "Are those wetlands, Carol?" I thought it was cool because she made the connection—the conceptual leap and recognized wetland area in both the Bronx and the Hudson Rivers. In the Botanical Garden students realized that a garden could be more then a traditional Victorian garden, that it could contain wetlands and forest as well. We tested the water quality there and made predictions about how the water would compare in the wetland area versus the Bronx River. And of course the results did not come out the way the students predicted. It was also neat because the place I'd picked for us to go in the Bronx River to test water was where we had rowed the day before with Damian Griffin from the Bronx River Alliance. But we had come from a different direction, so the students made the connection, "We? We were in the river just down there right?" The students were able to see these connections and two different perspectives on the river. We also looked at the difference between a man-made and planned garden. We looked at the rose garden versus the forest. Students came up with ideas about how they were different, we looked at succession and nutrient cycling and stuff like that in the forest and made predictions about what would happen if nobody took care of these gardens any more… And my favorite plant in the Botanical Garden, you rarely see it around here, is black birch, the

stuff you can make birch beer that smells like root beer. You can also see all the rounded rocks in the Botanical Gardens, the impact of glaciers.

Sometimes I wish I could control more of what happens in program or classes when we are doing field experiences. It might just be my need to control things. Part of the problem is that when I teach I feel like I'm making "salsa", but not exactly following the recipe. It's sort of my theory of how you make salsa: I figure a little bit of this, a little bit of that, chop it all up, mix it together, and it's gonna come out somehow. *[laughing]* One day this summer the students actually made salsa: we went to the garden, they harvested the onions, the garlic, peppers, cilantro and tomatoes from here, and then chopped, mixed and tasted. And that's part of the problem with my programs because recipe is not fixed, it changes with what you got. This was one of the problems for me when I worked in the labs before I came into teaching. I did not follow the procedures exactly as hard as I tried, and of course the things did not come out right because I hated the procedures. I wish I could say, "Oh, this is why I'm doing this activity today" and to have an end in mind when I plan my curriculum. On paper I can say so, but in reality what I want and what happens are often very different. Even with very concrete, specific goals things do not always go as planned.

But as I said before, I think that a lot of what I do comes from my really selfish need to replay things that have happened in my life, experiences that I had, and what works for me. I think a lot of teachers do that even though they don't acknowledge it, that this is the experience that they had in life and that's how they replay it when they become teachers. For me, part of why I did the EcoLeaders program and other activities is because I spent so much time exploring outside when I was a kid, because of my experiences with the world and learning things and I want to have other folks, my students, have those experiences as well. But then I try to rationalize with all sorts of education theories of what we are trying to do at Satellite… I think students are going to have some concrete traditional experiences within the classroom. But they are also going to have this experience outside the classroom to understand the world they live in. And I want to ground it in the place where they are at, starting with the garden and building a connection between the students' lives and the community life. And once they have that connection, then they will be empowered, excited or energized to continue digging through the knowledge about this world and make some changes.

And I see a lot of changes in students. Stephanie—she has been at Satellite for almost three freaking years and barely came to class. But this summer she was here every day. Terrell, Steve, and other guys—they blossomed. These are guys that never did anything like this before, and they are not really highest performing students either, but they really jumped in there, they were ready to do something. For example, Terrell, "Nitrates? I'm the one. Let me go and do the nitrate test. Yeah, I know how to do that test! Yeah!" And things like that. It's so corny; I hope they don't read this. *[laughing]* If you were just walking down and saw them on the street, you would think these are some rough guys. And here you see they are just little kids, and they can be pleased by these really simple things. I'm also so happy that I introduced this slogan "Share Love" that's printed on EcoLeader t-shirts. Every time students had any little silly argument, I just say, "Share love. Share love. Share love." Until they began to say when people started arguing, "Share love." So, that's my kids.

If I had the money and resources I really wish that I could take them to all the places that I've been to, the natural places that made my life worthwhile. I wanted to take them there, so that they could have that experience and share it with somebody else because that's what it is all about: appreciating this world around you and sharing it with those you love. Part of my thinking is that I want students to enjoy being in nature because part of the wonder and joy of nature is the fact that you can be in it and relax and enjoy, and be social in this setting. Joke with each other, be scared of the bugs or whatever, be with other people in a setting like this garden with all its pluses and minuses, and experience the wonder of it.

Think of this quote by Henry Miller: *"The moment one gives close attention to anything, even a blade of grass, it becomes a mysterious, awesome, indescribably magnificent world in itself."*

"APPRECIATING OPPORTUNITIES FOR REPAIRING THE ENVIRONMENT"

AN EDUCATOR PROFILE OF CHRISSY WORD

Director of Public Programs, Rocking the Boat
Interviews conducted by Alex Kudryavtsev on May 22 and July 28, 2010

Chrissy Word is an environmental educator in the Bronx at Rocking the Boat. Her story begins in Florida, where she became passionate about birds and nature at an early age. Chrissy's story is culminating in the Civic Action program, which she has organized at Rocking the Boat in 2009–2010. High-school students in Civic Action are recent immigrants from other countries. Today Chrissy is trying to open the eyes of these young people to the natural environment in the city and involve them in the restoration of ecosystems along the Bronx River.

My central role at Rocking the Boat is running On-Water Classroom programs for high-school students during the school year and summertime. Rocking the Boat is an environmental and youth development organization in the South Bronx, which involves students in boatbuilding and environmental restoration using these boats. My interest in teaching about the environment stems from my childhood experiences.

I spent the first twenty years of my life in Florida. My family lived in Jacksonville and Clearwater, very verdant and green subtropical places. My parents were kind of hippies spending a lot of time outdoors. We often went canoeing in very beautiful areas, down beautiful clear streams and rivers. We spent a lot of time at the ocean. We often went to the beach in the summertime, and went camping a lot. I think all of those things influenced my love of nature and being outdoors. We lived in a house, and then my mother and I lived in an apartment. But even the apartment building in the Pine Brook complex on the south side of town was built amongst pine trees, so the suburban area felt like a forest. It was how Florida was developed when I was a kid. Now it has changed, unfortunately, and construction companies clear the whole area when they develop it, which is really sad to me.

Until I was an early teen, I spent summers just with my grandmother, who was a housewife and who spent a lot of time outdoors gardening. She lived in rural Florida in-between Jacksonville and Gainesville, which was very remote at that time. It was a small lake community down a dirt road, the houses were sparse and there were not that many people around. This is when I interacted with the natural environment through observing birds, animals, and plants. There were a few children and I would spend some time with them, but I spent most of time just trying to entertain myself out in nature, exploring the lake and the nearby forest. I loved hanging out in the grass looking at bugs and snakes. I sat on a snake once, and screamed, and my grandmother came running, and she said, "Chrissy, it's just a snake. What are you screaming about?"

There were alligators in the lake. The funny thing is that I swam in the lake. We were not really afraid of the alligators, although my grandmother kept a close eye on me. I was only allowed to swim right next to the dock. But now when I look back I wonder, "What was I thinking swimming in the lake with alligators? I don't think I would do it today" [laughing]. And at night my grandmother and I, and sometimes my parents would sit on the dock with flashlights and skim across the top of the lake looking for the eyes of the alligators. When the light connects with their eyes they glow in the dark so we could see the alligators floating on top of the water.

Often my grandmother and I would sit on her porch that faced the lake to listen while watching the birds. My grandmother knew the birds songs. In her kitchen there was a window near which she had a bunch of birdfeeders, and we would just sit there as well to watch the birds. We would watch them from the window, from the porch, or down by the lake. At that point in Florida there was such an abundance of so many different kinds of birds: eagles and other birds of prey, egrets and herons, forest-type birds like quail and bobwhites, and all kinds of songbirds and hummingbirds.

After high school I went to Florida State University in Tallahassee for my undergraduate degree

in public relations and music. Then I went to Denver, Colorado for a few years to study French. I also stayed in France several times for a few months at a time. Then I decided to try New York City. I was in my twenties, and I was fascinated by New York City anyway. The big city just held some really big interest in all the people and everything going on. I applied for a master's degree program and was accepted to Hunter College. I settled in New York City in 1995, did my master's in French literature, completing part of my degree at the Sorbonne in Paris. When I returned, I met my husband in Williamsburg, Brooklyn, where we eventually lived together in a small apartment. I tried to grow a garden in the backyard near the building where I was living, but I really missed birds there. I really felt disconnected from the environment. Birds became my environmental focus: birds and their songs, and then butterflies, and eventually plants because birds and butterflies depend on plants.

From 1998 until 2003 I taught French at Flags High School, which was the beginning of my story in the Bronx. In addition to teaching French, I was also the director of student activities for this school. I tried to get my students to go into St. Mary's Park right across the street from the school. It's a lovely park, but I could not even get the administration of my school to support me on doing programming in the park. The park had big beautiful trees, squirrels and birds, but most local residents did not spend time there because it was considered dangerous. It was overgrown in some areas and kids were afraid that they could be jumped or meet drug dealers. And yet when I walked through the park, I saw just a park with nice big boulders, birds, squirrels and bugs. I did not understand why students and the school seemed completely disinterested in the park. So I decided to take up the goal of getting at least some of my students interested in interacting with the natural environment.

I invited the park rangers to come to a career fair in our school. This is when I met Tony Archino, who used to be a park ranger, and who now also works also at Rocking the Boat. He came to the school with another park ranger and discussed their career paths and what park rangers were doing. At that point, I decided to start an after-school club called Urban Green Spaces to introduce students to the recreational and professional possibilities in New York City's parks and green spaces. The maximum number of students that I had in the club was probably eight high school students. We took weekend and after-school trips. We went to Pelham Bay Park in the Bronx and St. Mary's Park across the street. We went to an animal rehabilitation center in Staten Island and to the wildlife sanctuary in Jamaica Bay, which was a really fun trip. For each trip I tried to schedule a professional person to meet with us either as a guide or just to speak to the students for a few minutes as part of the trip.

During that time I realized that French was not what I wanted to teach. I felt confined in the classroom and it was not where I wanted to be every day. I wanted to be a teacher and I also wanted to be working in the natural environment more often. I felt passionate about the environment. I started looking around to change my career. The problem was that at that time I was not qualified to teach about the environment. I had a master's degree in French literature and the public relations degree. Then one day a girlfriend of mine emailed me an ad for a job to manage a garden in the Bronx that she found on the Idealist website. She said, "This is perfect for you, apply for this job." And I emailed back, "I am not qualified for this job. They are not going to look at me!" And she replied, "Just do it!" So I applied for the garden managing job at Drew Gardens in the Bronx, working for the Beacon program at Phipps Community Development Corporation. I got the interview right away, and I asked myself, "What's going on? Why are they interested in me?" They were looking for somebody with formal teaching skills and I was a schoolteacher. Even though I did not really have the garden managing skills at that time, they did not worry about it. But I tell you that first year working at Drew Gardens was like getting another master's degree for me. The learning curve was sharp and I had so much to learn! Really, it was wild.

I was a garden manager there for almost two years. Drew Gardens is a community garden on the Bronx River in West Farms in the Bronx. The Beacon program at Phipps did not really understand the benefits and possibilities of garden programming for students. My director at that time did not support me enough because she did not understand the potential for the garden. The garden used to be overgrown with the grass to your shoulders, but we got it cleaned up. Gradually it became a thriving community garden. We planted a beautiful butterfly garden there. Now it's a nice place just to hang out and enjoy. I started a vegetable gardening program for the community members to grow vegetables and other plants.

We built the first raised beds that people use for growing their vegetables. At that time I also worked with the Bronx River Alliance doing water quality monitoring in the Bronx River in the garden. Then I decided to start an internship program through the Beacon and the city-sponsored Summer Youth Employment Program. The internship involved high school students in helping out with the garden maintenance. During this service-learning program students were working in the garden, learning about horticultural practices, botany, the flora and fauna of the garden, the Bronx River, and the challenges for the Bronx River specifically.

Then I was offered a job at the Clearpool Education Center in Putnam County, New York State. I really waffled on that offer because I loved my job at Drew Gardens and the people that I was working with, especially the kids. But Clearpool offered me a really great job in the woods. And at that point I had been living in New York City for eight years, so I decided to take the opportunity to move out and see another part of New York State. Clearpool Education Center is a really beautiful and remote place about an hour plus to the north of New York City. It sits on 380 acres sandwiched between a big beautiful reservoir and a wildlife management area. We had a house near a lake there. I was an educator for camping school groups from New York City, and it was a great opportunity for me to learn about the nature of New York State. The job, however, lost its challenge after only three years. I was working with New York City students, but I missed developing relationships with them. Campers came for just three days at a time and I couldn't get to know them. Plus, you introduce every camping group to the same kinds of things over and over again. I wasn't able to go too deeply into any subject. In addition, my husband was getting bored with the commuting because he was still working in New York City. So we decided to relocate back to New York City in 2006. That's when I started looking for a job in the city, and I contacted Tony, my colleague, and he said, "Rocking the Boat is looking for someone." What a surprise!

In 2007 I started working as the On-Water After-School Director at Rocking the Boat in Hunts Point in the South Bronx. The On-Water program is an after-school youth development program for approximately 24 students per semester. Most of our students at Rocking the Boat are born and raised in the Bronx, so they know the Bronx to a certain extent and are streetwise. But when they get on the Bronx River, they see something that they don't know at all because they have never spent any time on the river. In general, most people in this neighborhood, including new students, are not aware of the recreational possibilities of the Bronx River, its environmental and ecological aspects, and opportunities for interacting with the natural world. Although rivers surround this neighborhood, public access to the rivers was difficult to impossible since this area was industrialized and until just recently. Only recently have access points started to crop up on riverbanks for people to discover these waterways. The Hunts Point Riverside Park near Rocking the Boat is only a little over three years old. Cement Plant Park just north of here on the Bronx River opened last fall. Barretto Point Park on the East River is only three years old.

In the On-Water program students conduct environmental restoration and learn about the ecology and the environment of the Bronx River. We conduct these activities using the boats that our boatbuilding students have produced. When I came to Rocking the Boat, we were conducting salt marsh monitoring, water quality monitoring and oyster reef restoration at the end of Soundview Park. But I noticed immediately that there were all kinds of interesting birds along the Bronx River and I wanted my students to notice and learn about them. So I asked my students to look at the birds and ask questions about them. What kinds of birds are they? How do they use the river? Are they migratory or do they live here all year long? What food do they find in the river? We developed a partnership with the New York City Audubon Society and were funded to conduct a formal monitoring program of the wading birds, the egrets and herons in the Bronx River estuary. Today I am really proud to hear and see the students at Rocking the Boat involved in studying birds. They come to the classroom and talk about the birds and try to identify them. They also use a formal scientific survey and interact with scientists from the New York City Audubon Society. And now I go down to the waterfront and sometimes hear students shout, "Hey, look at that, there is a Great Egret over there!" I love this wonderful reaction, and I am really proud about establishing the bird-monitoring program in our programs.

That leads to the next phase for me at Rocking the Boat. I got pregnant and had a baby since I've

been here. I could not run the after-school program anymore because I need to be at home in the evenings. I had to switch to the daytime program at Rocking the Boat, which introduces students from various schools to the Bronx River. Soon I realized that I was right back in the same situation that I was in Clearpool, in which students come for three sessions maximum, and I don't develop relationships with students. I wanted to design a program, in which I would see students over a longer period. So last year I organized and ran a summer camp for students from the Bronx International High School who were recent immigrants to the country and had limited English-speaking skills. Courses are taught in English as well as the other languages that the students speak, primarily Spanish but also French, Creole, and Arabic. My summer camp included nine on-water sessions on the Bronx River. It went really well last summer and the students enjoyed themselves. They were new to the country and everything was new to them, so it was a different vibe working with them.

After last summer I approached the Bronx International High School to see if they wanted to continue this program during the school year. The school requires its students in ninth to eleventh grade to complete a certain number of community service hours each year, but they were having difficulty finding service learning programs for their students. I proposed to them that if they would like to send me a group of 20–25 students, I would find and manage projects for them, and at the same time develop learning opportunities around these projects. Out of our conversations and negotiations grew a community service-learning program that is called the Civic Action component to our On-Water Classroom Program. The students were originally from urban or rural settings in Puerto Rico, Dominican Republic, Trinidad and Tobago, countries in South and Central America, African countries such as Benin and Senegal, or from the Middle East. They know very little about the Bronx and certainly even less about the Bronx River and the environment in the Bronx. My program was a completely new thing for them. I think to a certain extent these students are more open to it and more interested because they are just more open to everything. All of these experiences are very new for them. Many of them ask more questions and they look at things maybe more closely. Of course, I have students who are originally from the Bronx, and who come and immediately show a lot of interest, but because students in Civic Action have just recently arrived to the country everything was very interesting and new to them.

Students in the Civic Action program came to me for twenty sessions in the year: ten sessions on Fridays in the fall 2009, and ten sessions in the spring 2010, each session was three hours. Each time they learned about the environment along the Bronx River, often through restoration with other organizations. We partnered with other organizations that I have already worked with, including the Bronx River Alliance and Phipps Community Development Corporation. In one of the projects students worked on restoration with the Bronx River Alliance crew in the Bronx Forest, north of the Bronx Botanical Garden. Students helped them to remove invasive plants, install native plants, restore some paths, and participate in other kinds of park remediation. The students participated in salt marsh monitoring in the Bronx River estuary. They traveled in the rowboats and measured and counted plants and animals in the salt marsh that was restored right across the Hunts Point Riverside Park. Students also conducted oyster gardening, wading bird monitoring, and urban farming.

Even though urban farming does not seem to have much to do with the Bronx River, I arranged for the students to work in Drew Gardens located right on the Bronx River. I wanted them to experience an access point along the river that is very beautiful and where many community members grow their food. I organized four service days there—two last fall and two this spring. This community garden supplies an urban farm market, and my students helped to winterize the farm plot, and then they helped to plant a cover crop as well as other crops destined for the farm market in the springtime. Drew Gardens has quite a diverse community growing their vegetables because West Farms is a very diverse area ethnically. One of my students coming from Africa recognized a vegetable plant that one of the community gardeners was growing in a plot there. The student said, "I know that plant, we grew it at home!" And Jennifer Plewka who manages the garden, told the name of this plant and where the family growing it comes from. The student said, "Yes, it's not so far from where I am from and we grew this plant too!" And it was such a revelation for him to see this plant. It was a really important experience because that's a part of home, part of that person's growing up experience. And what was just great was

the connection between Jennifer and the student. They became instant friends talking about this plant. Jennifer picked up a piece of the plant and ate it, and the student did the same thing, and the other kids said, "Are you eating that right out of the garden?" and they replied, "Sure." It was really fun. It was a really wonderful experience.

I think another great experience for students in the Civic Action program was simply being out on the Bronx River in the rowboats and learning about all the life there. You came with us once when we went down to measure the oysters in our oyster garden. I don't know if you noticed, but they got excited when they were rowing out to the mouth of the river and we were lucky to have some beautiful days when we did it. We have done oyster monitoring with these students three times now. It takes a while to row to the mouth of the river. Students took those big cages with oysters in them out of the water, and most of the kids are like "ughhh!" because the cages are muddy and there are other organisms in with the oysters. Then we would open the cages up, spill out oysters into the boat, and students counted and measured them. Students really got into it at that point, "Is this one alive or is it dead? Oh, great, this one is living, put it over here." I think I was so lucky to share that with the students. This experience was completely new to them: they were not only introduced to oysters, but also to the fact that people are studying oysters, and trying to understand them, and that people care about them and want to reintroduce them to the river. When we started to explain and discuss these questions, the answers became quite clear.

Most of these students had never eaten an oyster. But there are always one or two students in the crowd who have tasted oysters, and who love them. So other students say, "Oh, do you eat those?" and I say, "Yes, I love them, they are delicious." "But would you eat that one?" and I have to say, "No, because it's in the Bronx River, which is still polluted. One day I will be able to eat oysters from the Bronx River, but right now I don't." And some other kids would add, "Oh, yes, we always eat oysters. My parents love them!" while others say "Oh, I would never eat those!" But one day, hopefully, most of these students will be adventurous enough to eat an oyster and maybe they will like it. Perhaps in their lifetimes, the students will see oysters being sold from around New York Harbor and they can be proud of their own small part in that.

Regarding language, I have been quite lucky in terms of translation because there are a handful of students, maybe six, who speak French, which I speak too. And my program assistants are Spanish-speaking. We teach lessons or discuss the concepts in English, but along the way we do a lot of simultaneous translation into Spanish and French. There are also two Arabic-speaking students, but they are stronger in English than most of the students, so that has not been much of a challenge, even though there is not an Arabic interpreter for them in my program.

The major challenge with the Civic Action group has been in attendance. I have discussed it with the administrators of the Bronx International High School, and we realized that we selected the wrong day of the week for this program. Friday is not a great day for these students. They are not only learning all of their subjects required to get their high-school diplomas, but they are learning English at the same time, which is a huge task. By Friday students are simply tired and coming to another program at the end of the week is a big challenge. A lot of them opt to go and rest, so attendance has not always been great. Yet the students who do make it each week seem to be thriving with the program. If we do it next year, we are going to select a day earlier in the week.

Comparing to other programs at Rocking the Boat, students come less frequently to the Civic Action program. I have a very specific goal designed in collaboration with their teachers, and I don't get enough one-on-one time with these students to learn more about them, although there are exceptions such as Sekou. He has just immigrated from Guinea, and started with my program last summer speaking very little English. His native language is French, so there was definitely a connection between the two of us. He was culturally different from many Latino students at Rocking the Boat who bond fairly quickly because they all speak Spanish. There are few African students, and some of them come from conflicting countries. It did not really seem that the African students have bonded the same way as Latino students. But in any case, Sekou liked the program and demonstrated an enormous desire to learn, so I helped him to navigate his way in the program and recruited him to join Rocking the Boat in the fall. He was engaged in my program because he loved it, but he also observed boatbuilding students every day when he was

here and liked talking to me about it. I told him, "Sekou, you should join the boatbuilding program." Since then he has turned out to be a star in that program. In one year, not only has he learned English, he has learned Spanish from other students. When other boatbuilding students take a break, he comes down to the waterfront to help out On-Water students by pulling the boats up and talks to them. It's amazing. He is now a very popular boy at school because he is a dynamic person that has desire to learn.

As I have mentioned, immigrant students know very little about the Bronx River and don't have the same preconceived notions about it as students who are from the Bronx. But I think there is a bit of fear of rivers in general. This river, like many other rivers, is dark and you can't really see through the water. In addition, there are issues with solid waste on the river. The students immediately develop an opinion about it and think it's dirty or it's scary. I have to counter this fear along the way. The best way to do it—what I have always done with programs at Rocking the Boat—is just to get students out on the river. Students go out in the boats and watch birds, and we sometimes see crabs and other organisms near the shoreline. Young people net some fish, crabs and jellyfish, and things like that. They see that there are lots of living organisms using this river. With all that life, the river can't be completely polluted and dead, especially if so many of these animals are thriving.

I think that students at Rocking the Boat who I have worked with over three years and who have come here every week during the program seasons have changed their view of the Bronx River. It has to do a lot with the people that they meet along the way. Learning is not just interacting with the natural environment, which is an important part of it, but it's also interacting with professionals. And interacting not only with their educators here, but also with people like yourself, people from the Bronx River Alliance, the Parks Department, the Natural Resources Group and New York City Audubon Society. The students, especially in the after-school program, have a lot of opportunities to network with professionals from other organizations in Hunts Point such as Sustainable South Bronx, THE POINT Community Development Corporation and Youth Ministries for Peace and Justice. These opportunities to interact with people who are involved in the natural environment have a large impact on students. The students see that there is a great interest in the environment and that people are dedicating their professional careers to it. These professionals have gone to schools and gotten degrees only to come back or relocate to the Bronx and work on improving the environment here. That's really an important statement. Similarly to these professionals, a number of Rocking the Boat graduates have been accepted to colleges. Cicy and Marcus are now studying biology at Hostos College and rival me in identifying birds. Kristyl and Josh both started with me at Rocking the Boat and have both been accepted to SUNY Maritime College. The prospects for students at these colleges are really good and it was definitely Rocking the Boat that got them there. They may continue working here as program assistants, and if not, they will volunteer and continue to have relationships with Rocking the Boat as they go through college.

I think that many surprises in my work came from teaching and my development as an educator. Often I have had to change my approach with my students as I learn more about them on personal levels. I come from such a different walk of life. Not that it was always peachy when I was a kid, but I certainly did not have the same challenges that my students have here in this very urban setting. I believe that the natural world is very calming and soothing and helps you to focus and see things more clearly. When I need to relax, regenerate, rejuvenate, I go out into nature. And I strongly believe that nature is good for all people. That's why I feel that people who live on a street with no trees have more stress and anxiety than people who live on a street with trees. I truly believe that being out in nature and just being able to enjoy it is therapy. I am not saying that going out and working in it is necessarily, but just enjoying it, listening to a bird's song or taking in the light that plays in the leaves of a tree. I feel that in the city there is noise, a lot of people, and there is a lot of energy coming from many different places. But living here, we have to learn how to navigate that and how to protect ourselves. It's a fine balance to not become overly sensitive or desensitized to all the things that are happening around us. And that's a struggle in itself for the students who come here.

It was also challenging to learn how to interact with my students and not take the hard line with them all the time. Sometimes we need to allow them to experience things in their own way. When I came to teaching, I had an idea that you develop a lesson and then strictly follow that lesson. Now I understand

that this is not the way teaching should be done. You really have to take things in the moment as they come. For example, if we are out looking at birds and conducting the wading bird survey, but we don't find herons and egrets, then let's look at other birds or other things in general. You need to take the experience as it comes and not have such a hard plan because if that plan is not successful, than the experience is a failure. Every single experience with the students out in nature should be something joyful, exciting and fun. I don't want students to get the idea that we are here only for this one activity and if we don't succeed then we just forget about it—that's very dangerous. If students have binoculars in their hands and they feel like looking at something besides a bird, that's fine. Go ahead and use those binoculars and one day students will probably use them to watch birds. If you are looking at something else today because it's interesting to you, it's okay. I am not saying that we completely ignore the lesson, definitely not. We try to stay on track. As the students get more comfortable with me, with the boats and with the Bronx River, they find it easier to focus on a planned lesson.

Now I am puzzled, "What do I do next?" That's always my question. Because I don't know that the program developed this year will continue next year. There are a lot of variables that are unsure. Will the school have the budget? Will there be some other mandate that causes them to follow a different path next year? So I have to be on my toes and be figuring out another plan if that's the case. You have to be flexible [laughing]. You do, you have to be flexible and keep trying to brainstorm different ideas. That's the whole thing, I think, with this job. Working in a non-profit allows you the room to brainstorm and come up with different scenarios and develop different projects. I really like that aspect of this job.

I love my job. I love being an educator in the Bronx. Sometimes I love it as much as I miss Florida. As long as I stay here, I want to continue teaching in the Bronx because I love it here. I have seen positive changes in the Bronx and its environment since I've been here, for sure. I have also seen some setbacks at the same time. I think that environmentalists, environmental activists and people working in restoration are going to face a lot of challenges over time. Climate change is probably going to be a huge issue here. There has been so much environmental and ecological damage in the Bronx, so the opportunities for repairing its environment are vast! I just love these opportunities. And most importantly, I get to work with so many different people. I have heard many stories and I love that. This is something that I am going to continue.

"CONNECTING PEOPLE TO THE BRONX RIVER THROUGH STORIES"

AN EDUCATOR PROFILE OF DAMIAN GRIFFIN

Education Director, Bronx River Alliance
Interview conducted by Alex Kudryavtsev on August 20, 2010

Damian Griffin works as the Education Director at the Bronx River Alliance. This organization serves as a "coordinated voice for the river" to make it "a healthy ecological, recreational, educational and economic resource for the communities." Damian's story focuses on his outreach education and recreation activities with school groups and local community-based organization. We learn how Damian uses stories about local people and nature to reconnect people with the river, its history, communities and the environment in the Bronx River watershed. Based on his own experiences he developed an education approach for participants of his program that includes several steps. He is trying to facilitate enjoyment of and physical contact with the river through recreation, followed by learning about urban habitats, how people shaped ecosystems in the past and affect them today, and what can be done to improve the urban environment.

I am Damian Griffin. I am the Education Director for the Bronx River Alliance. My job, for the most part, is to help classroom teachers and educators in organizations and community groups get access to the Bronx River. I provide them with information that they need to get down to the river, teach them about the history and science of the river, and support other learning activities like environmental monitoring, restoration and clean-up.

I am the son of two Bronx natives, and I am the last of seven children. I grew up in Fishkill, New York, which is an hour north of New York City. Our house was outside this small town in a very isolated place separated from a lot of things. The town has a creek, which is a really cool place. Now one of the things that I am surprised about is that although I grew up next to this great little bit of water, I was never taken to the creek by teachers or anyone in the school. The only times we went there is when we were able to escape as kids and find a way to get into the water. Our community was one of those developments, where we all families had their own houses for the first time: kids of city kids. Most of the kids were the same age and knew all the other kids. We would do regular things: playing ball in the streets or in the backyards, going down to the school to play basketball or play on swing sets, nothing that exciting. We did have one woody area north of us between two housing developments. We would go there and hang out sometimes, but not to experience nature. There were vines growing from the trees and we would swing from the vines.

My dad was a New York City fireman and my mom had a few different jobs. When we would have a vacation, my dad would find out-of-way state parks and take us up there because he wanted to get away from everything, from all the people. When we had vacations as kids we would spend a lot of time hanging out on lakes and down by the ocean. We would go to New Hampshire into the mountains, up in the Adirondacks in New York, Acadia National Park up in Maine and all the beaches up there. Dad wanted to be as far away from people as possible. I would not say I was interested so much in what was going on. It just seemed very natural to want to be out there. Driving was usually very stressful because you have so many kids packed into one car, there was some elbowing and pushing and dad getting angry because he just wants to go. But then it was neat to arrive, get out and just go hang out somewhere.

I lived in Fishkill until I was almost 18 years old. I was a great student in elementary school, but teachers did not engage kids as a part of our community. In high school I did not care about the world that you live in and my senior year I was about to fail out of school. By high school I did not know what to do because when you become a senior they are usually prepping you to put you into college. At the same time, in school I was taking woodshop classes with a carpenter teacher Mr. Stenky. I was learning carpentry, building cabinets, making chairs and small pieces of furniture, doing the work you are assigned or trying to make your own things. But I was not doing well academically in school and I was almost not

going to graduate. I was thinking about what to do and I went to speak to my woodshop teacher; I wanted to talk to him because he had helped me a lot in the woodshop. He really liked the work that I was doing in his class and how hard I tried to learn.

I told my teacher that somewhere inside me I thought I'd like to be a park ranger doing forestry out in a national park some place out in the western United States. This was the time of Ronald Reagan. They were selling the national parks. National parks were protected, but it was a very difficult economic time in the United States. The government was actually selling the national parks to make money. They were selling national parks to the oil people and farmers that wanted to cut down the forest and put cattle there… anything at all that would make money for the United States. Because that was their point: to make money. There were very few jobs involved in environmental ideas, including forestry. I asked Mr. Stenky how to get an environmental job and what I needed to do. His advice to me was not to do it. He said that one or two jobs were open a year, that was really hard. And I said, "Well, my other choice is to go into home construction. Maybe I could build houses." The only problem was that I was small; when I graduated from high school I was 5 foot 5 and weighed about 120 pounds. And he said, "That would be fine, but you are not going to be the person that they are going to look for on a construction site." But he found for me an apprenticeship as a small-job carpenter working inside houses, an apprenticeship that became a part of my schooling. The other part of my course was learning life skills, how to live on your own: what it means to have a credit card, what it means to shop and bargain. For two months I worked as a carpenter's apprentice and then I would go to school for two months, and then go back and work for the carpenter. The carpentry job provided me with skills that I could use, and the training in living offered me an opportunity to look at life a little bit differently, "I can do this, I can take care of myself."

As I was ending school, I got a full time job with that carpenter. He took me under his wing, and said, "Come on, we can work together." And I stayed with him for almost two years. I did not go to college partly because of grades and because we did not have the money, and I did not see the point of investing money in something that I did not know what I would do with. This is when I looked around at my town, and I did not see it as a place that I wanted to stay. I did not see it as an interesting place. Half of my friends had gone to college. The friends that stayed behind got very typical jobs: one in a factory, another guy in the post office. They were 18 years old and they have already figured what were their lives, they felt like they are set, "This is fine, this is what I want to do." They would go to work, come home and go to the bar, and nothing beyond it. It just seemed very stifling and boring to me, there were no growth opportunities, and I did not want just to sit around.

It was about 1985 when I decided to move out. I bought a small pickup truck and drove to Florida. My idea had been, "I've got carpentry and I've got tools. I can work my way around the coast of the United States doing carpentry jobs." That was my goal. I got down as far as St. Augustine in Florida, which is a coastal town, the oldest town in the United States, so it had this old incredible history right there. I lived in various apartments, in some pretty rotten little places. I met some people that I really enjoyed spending my time with. One of these guys was a sculptor, an art major, and the other was interested in music. Out of nowhere I decided that I was going to learn how to play music, and we just picked up instruments and started banging on them. Whenever there was a free time, I'd go to the beach swimming and learning how to surf. I fell in with a lot of people who were like hippies, into natural foods and things like that. In cold months I would work in a restaurant. And then I ended up doing my own small-scale carpentry business instead of working for other people—doing handyman stuff, building decks, fixing things in the houses and putting new roofs.

In about 1990, I was in my mid 20's when one of my friends graduated from college. He decided to join the Peace Corps. He had the application and he said, "Why don't you apply?" And I said, "I've never been to college. They don't want me." And he said, "It does not say you have to go to college. Give it a try." And I wrote down all my experience on paper, and I was accepted. He was not. The Peace Corps liked my life experience and I was sent to Honduras to work in a school, I thought, to teach carpentry. I really didn't even know that it was in Central America and I had to look at the map to find out where it was. I had no idea what I was going for. I had never even taken a foreign language class in my life, and this was my first opportunity to speak Spanish.

Honduras is 85% mountains. It's an incredible place and also amazingly poor. The Peace Corps sets you up in a house to live with a family, which takes care of you. You are supposed to call the father "dad," so you immediately get a feeling of a family. One of the things that amazed me the most was that people were able to get everywhere with public transportation, even in the mountains. There were no places that you could not get to by a bus. Here in the United States. I can't visit my parents unless I have a car. In Honduras if you want to get somewhere, you ask somebody, and there will be a bus that takes you from here to the corner, and then you wait there, and there is a guy with a pickup truck that comes around picking up people to take them to a little town at the end. It was amazing to me that public transportation could take care of everybody and you did not need a vehicle. One the other hand, there was not a lot of wildlife. You had a lot of natural areas, which at the same time were destroyed: people cutting and burning trees down in order to be able to plant for cattle, killing animals because they needed to eat. It was once a beautiful place, but so much of it had been eliminated and destroyed.

The Peace Corps is the best organization in the world for teaching people languages. They have been doing it for 50 years now. They know that you would not be able to work very closely with people unless you speak their language competently. We spent six weeks of learning language for five hours a day. The first day that I was in Honduras Peace Corps, a volunteer said to everybody in our group, "If you make very close friends in the Peace Corps and you spend a lot of time with them, most likely you are going to speak English. If you speak English, you are not going to learn Spanish. Do what you can to not spend a lot of time with English speakers, as much as you can." I made it a point not to spend much time with other Peace Corps volunteers. And when I did, I was trying to speak Spanish with them as much as possible. Then I realized that you only learn a language when you speak it, when you are out there getting involved. I would go and introduce myself to people in small towns and used every opportunity to talk and listen. At the end of my two years with the Peace Corps I was at the highest level of Spanish that they test for. I was pretty proud of myself. I could go anywhere and speak to anybody on any subject, and not feel like I was in a struggle.

I was sent to a really small town up in the mountains called Zacapa. I was supposed to work in a school. I thought I was going to teach carpentry, but they already had carpentry teachers. My job was to somehow help the teachers teach better about carpentry, electricity and welding, but they were better teachers then I was. I was sort of stuck in a situation where I've been given this great opportunity and I did not have the skills that these people needed me to have in order to be really helpful. So, I just tried to make my best of my time. My job became trying to make the school more sustainable in terms of their materials. I would also volunteer my time with whoever needed some help in the school and the community. I would get a ride on a motorcycle to the town in the middle of nowhere and help give vaccinations to the locals who had no other way to get their vaccinations; they even let me give the shots with no training.

Half of the people in my group in the Peace Corps were there for environmental reasons. They were there to help and protect the natural reserves. I started to learn about what it means to take care of the environment. These people would not say, "You know, you've got to leave nature alone, this is the only one way to protect the environment." They were intelligent and thoughtful enough to realize that people need nature to support their lives, so our job is to figure out a way for people to interact with nature, get what they need to survive, but still keep it sustainable. For example we were promoting a living fence. You plant a tree that grows only from the top up and use it as a fence post. People would use nature in place of just a post. It would be useful for stopping erosion and creating shade. We also had people trying to figure out how you help a farmer who lives near the rain forest, who could sell his land for more if he cut down all the trees on it to grow grass and cattle. The Peace Corps participants were looking at these issues and trying to find a connection between the natural world and the needs of people. These attempts were not always successful, but we were trying to discuss these issues with farmers to learn from them first.

Then I ended up working in another school, and I was teaching some of the skills necessary to do carpentry. My job was to find a way to take all the waste, the leftover material, and design a course for students, where they would build something out of this material, such as a toy or something small. There

was so much leftover pieces of wood there, but at the same time there were so many people that would get full use out of absolutely everything. You've seen the pictures of the people that go and walk through the dumps looking for bits and pieces of things. It's like the beginning of recycling. It's recycling at the very human level: don't waste, take what is there, and reuse it. So a part of my job was to take used things, mostly wood that the school would throw away, and have students make something out of it.

I would go out and do a lot of walking in the community. There was one man, Don José, who lived on the road between where I worked and where I lived. I would ride past his house every day on my bicycle. It was the house that he used only while he was growing watermelons. It was nothing more than a shack: four walls, a bed in it, and a place to keep his clothes. For cooking he had a big coffee can that he had drilled some holes in. He would go to the local sawmill and gather up all the sawdust, pack this coffee can full and would use it as a little improvised stove. Whenever he would see me, he would call me in. We would sit and drink coffee and he would make me eat a whole watermelon. A lot of my time was spent going to different people's houses and talking. There was one family that I've been able to visit several times since returning from the Peace Corps. They were actually from Nicaragua, and they had come to Honduras fleeing the Contra War. They had a very small adobe house. Gloria was the oldest daughter, she was just working trying to find a way to help support the family, she learned how to cut hair and started her own little business right there in the house. So many people living very much on the edge.

Then I got a job with a construction company in Tegucigalpa, the capital in Honduras. Right after I got the job, the manager told me that he could not pay me upfront, he was an American, and that they were having some trouble in their company with cash flow. I worked in this company for free for about four months, I was living in the manager's house and he provided me with food. But I found that his company was funded through stealing from the Honduran military, so I decided to leave the country. But sometime earlier while living in the capital city I had met a woman who would become my wife and is my wife today, Nancy.

I came back to New York in 1993 and I had to figure out where to go. I grew up in Fishkill and had spent many years down in Florida. I did not want to go back to Florida just because I made a change from there. I chose New York City because I knew that I did not want a car. I got a job as a restoration carpenter doing carpentry in a building that was 150 years old. My job was to help make it look like what it was back in those times. Soon afterwards I got an apartment in New York City in the Lower East Side near the Williamsburg Bridge. My wife came up on a fiancée visa and we got married. And I decided to go to school, really just to see if I knew what I thought I knew.

I was doing carpentry working in different places, but I realized that I wanted to counsel youth in a social work setting, although I was not sure exactly what that meant. I came out of Honduras seeing that there was a need for people to be involved with other people. In Honduras it was the first time that I ever worked with people younger than me, having to teach people, whether it was teaching some English classes or trying to teach those workshops getting kids to build the toys of the wood. I realized that working directly with people that way and teaching was a pretty interesting job, and I looked at that as sort of a possible career when I came back to the United States. I wanted to do some sort of outreach in a community, so I participated in a few seminars about the needs of youth in the urban environment. In every place I went, they said, "You've got a great background, great experience, but we only accept applications from people with college degrees." They would not give me an opportunity at all, and I decided to go to school.

With that push and being a big reader, I decided to give college a try. I paid practically nothing to go to the City College of New York because there were much more grants than today to go to school. At first I just wanted to see whether I could do it, and I loved being in school so much even though I almost failed in high school. I loved being in a classroom and wanted to learn more and more. I decided to study English literature because I enjoyed reading. I spoke to a professor about getting into teaching school and maybe getting a teaching degree. She said to me, "Instead of going to teaching school you are better off learning things. Because the way teaching is going today, they are not so much looking at teachers who know how to teach, they are looking for people who know things. If you go to school and try to learn more and more, it'll make you more valuable as a teacher." She said that it's content that matters, "I

always laugh when people say we are teaching kids how to think." Her big question was, "Yeah, but to think about what? You need people that know things in order to be able to give people the idea about what to think about." So she encouraged me instead of following a teaching career to study some of the things that I enjoyed.

English was what I loved, but I felt I was really good in Spanish. I thought being who I was and having a strong Spanish background would give me even more help in whatever I wanted to do. So, I became a Spanish major and I took all sorts of courses, I even traveled to Cuba to study the language back when you were not allowed to travel to Cuba. But while I was away, my wife got sick. She was in New York City alone, and she was really scared. It turned out that she was pregnant with our first child, Damian Jr. And at that time I learned that the guy that was my mentor at the Spanish Department did some unethical things while running his courses, which made me feel very uncomfortable, so I switched majors into English. I also fell in love with biology and chemistry, and I wanted to change my major into those things. But my wife Nancy was getting tired of me spending so much time outside. She said, "Get your degree in English and then maybe another time you can go back."

In 2002, after I got my degree in English it was the time when the teaching fellows program was just beginning in New York City. This is an organization that helps people without teaching degrees, but with a lot of experiences, to become teachers and get into classrooms in New York City. Due to my bilingual abilities I got in, and I was hired as a 4th and 5th grade bilingual teacher in the South Bronx. I moved into the Bronx as soon as I got that job. Do you know Paulo Freire, a Brazilian educator? I took courses here and there about education, I discovered him, and I read his books on my own. And one of the things he said is that if you are going to teach people in the community, you need to know the community and you really should live there. Nancy was in full agreement and when I found where I was going to be teaching, we started looking for a possible apartment in the Bronx. We found an apartment about 10 minutes walk from the school, and I started teaching in the school PS 157. We still live in the same apartment.

One of the things that I thought was really important was to figure out a way to either bring the world into my classroom or take my students out into the world. There was an abandoned community garden near the school, which I wanted to make a part of my curriculum. Even though it was not a part of my curriculum, I was trying to think of ways of getting my students to grow things, get out of classroom and observe their communities. Not that the regular curriculum was inadequate, but for learning you need to have some more excitement, something that ties you into the world around you, your community. I just love the idea of growing things and improving something in your community as a part of your learning. It's good not only for you, but also for the people around you. I asked some teachers if they every used this abandoned community garden, and they said, "No. Don't bother asking because the principal won't let you. They should not allow anybody to go out there."

I proposed my plan to the principal, and I told her how a garden could be a multi-disciplinary place to learn. There was a way to do measures and learn math, there is a science of things that grow, there is room for observation and an opportunity to have students do journaling out there and improve their writing skills. My principal just loved it. She was very supportive and went all for it. I contacted the City Parks Foundation, which improves green areas, and I said that, "I am interested in doing some work in this garden." And they responded, "We've been hoping for somebody to do that." We started getting people involved, cleaning the garden, opening it, going there with students and inviting their parents to come on weekends. I told the students in the neighborhood, "Whenever I am there, open that door and come in." I made it very much just an open place for kids to come in. So, Nancy and I helped restart that community garden. We just happened to be in the area at the right time, started unlocking it, and more and more people got involved in it.

This garden made me think about multi-disciplinary ways of using the natural world to teach, the natural world where so many things are going on. Kids saw how we raised butterflies in the classroom and got them out in the garden. And because all of my students were recent immigrants, I saw this garden as a bridge between the world these student might known in their home countries and their new country. Most of my students came from rural areas in Ecuador, Honduras, Mexico, Dominican Republic and

Puerto Rico. I saw this garden as the connection to the natural world in this urban area. It was also a big opportunity to interact with parents and kids not as a teacher who is giving you grades, but as, "Come on in and let's plant some plants. You can do what you want over there. Your kids can come in here." And quite a few parents had that interest and the garden just gave them an opportunity to know somebody on a different level.

I would teach one day in English and one day in Spanish. I had big ideas for language learning. At that time, unfortunately, bilingual education was on its way down. The year that I came the school started to gradually eliminate bilingual classes. And finally they eliminated all bilingual classes, which was what I wanted to do. Then I got a job teaching bilingual math at a middle school, MS 118. Again, I was looking for any way to bring more of the world into the mathematics classroom. We did studies on flights of airplanes, on building bridges, getting the idea of geometry through building things. Being a carpenter, that's how I know my geometry, through building stairs and roofs.

It was around that time that walking around with my son that I noticed a canoe on the Bronx River. At that time there were no parks in the South Bronx that had access to the river. I did not know anything about it and I decided to learn about it. At the end of 2005 I met Michael Hunter from the Bronx River Alliance, who was a canoe guide, and I started volunteering and helping him with the canoe trips. This is what I would do with a lot of my free time: I would come with Damian, my son, and help as a canoe guide. I realized that the Bronx River Alliance could give new opportunities to my middle school students. Through Michael I was able to get my students out on the river and get an amazing experience in the canoes, which they have never done, at least here in New York City. Michael also was a natural teacher that covered many important topics in what seemed to be only a preparation talk for a canoe trip. Many kids who grew up in some different places had contact with water and were swimming but in New York City they did not have that. I started again making the natural world a part of the mathematics classroom.

I have taken students from my class on canoe trips on the river. I started a river study program, in which the kids could learn about the water quality, similar to the monitoring program at Rocking the Boat. In the class that I was teaching there was one girl, Betsaida, who had been in and out of shelters with her mom for the whole year. She had probably missed about 60 days of school in a year. I found out that one of the reasons that she was not coming to school was she and her mother lived in a shelter all the way over in Manhattan. To come to school, this 14-year-old girl had to take two buses and a train. She often did not come to school, but she made it a point to come on the day of the trip. I was supposed not to allow her on trip because in this school you are not supposed to get privilege if you miss a certain number of days. It was definitely a privilege to go on the river and it was such a big learning opportunity. You don't know how it's going to affect students. So, fact that she made the effort and was willing to come for that day made me really happy.

And there was another student, Steven. He was in 8th grade class, where most students were 13-14 years old, but Steven was going to be 17 years old. Among younger students he was a big kid, and always causing trouble. He definitely had learning difficulties and was struggling in 8th grade. He was one of students that are called SIFE, a student with interrupted formal education. For most of his life he was balancing around from school to school. He spent a few months down in Dominican Republic and then would come to the United States, where he would not go to school at all. On a day of a trip on the river we decided that Steven would be Michael Hunter's helper. And he was amazing; the trip would not run as smoothly if he were not there. Steven learned the paddling really quickly. He was shouting out directions to people. If anybody needed help, he was hopping on his canoe and helping and moving the canoes; it was his opportunity. When I was in high school, my own opportunity to do something that I felt I could do came when I started carpentry. And for Steven I saw that trips on the Bronx River were a real opportunity to be able to get out there and help people to navigate the river. You do see it with a lot of students who need something else in their education; they need that connection to the real world.

Then I got a new principal in my school. Under the new principal I was not allowed to do those things that I had done with my last principal, partly because there was no proof at hand that the Bronx River helped students with the testing. This is when my current job at the Bronx River Alliance opened

and I decided that maybe it's time for a change. Some of my most positive experiences as a teacher came when I worked with students in the garden, taking them in the canoes, visiting the river, doing different sorts of things that involve the natural world around them. I wanted to be the person who facilitates these experiences for students. When I was on the phone with Michael Hunter, he said, "Well, you know, we are looking for applications for the education coordinator for the Bronx River Alliance." I said, "Oh, really? Can I apply?" And he said, "I wish you would. You'd be a great candidate for it." I decided to give it a try. And for some odd reason they took me in.

The Bronx River Alliance has been around since 1998, officially named in 2001. Its focus is to help all the other organizations, community groups and schools in the Bronx River watershed and beyond to have access to the river, learn about the river, and do to their best in whatever they want to improve the river and communities. We are partners with the Parks Department because the river goes through New York City parks where you get to the river. We are a liaison between and a supporter of organizations along the Bronx River. For example, Rocking the Boat may want to teach their students about restoring riverbanks. It's not something that they are specialized in, so we can offer support to their students to fulfill their goals, their curriculum. As the Education Director for the Bronx River Alliance, I'm a resource person for everybody out there—classroom teachers, educators and community members—who wants to learn about and do work on the river. If I don't know something, my job is to either learn about it or connect educators to somebody else. Chrissy Word from Rocking the Boat might have a question about something that's going wrong with the river, and I can't answer it, so I make the connection with Dr. Joe Rachlin at Lehman College to make sure that we can all learn more.

The other part of my job is the Bronx River Stewards program, which is to teach people how to look at the river and how to collect the data that might be useful to improve the health of the river. For example, at Youth Ministries for Peace and Justice they have a group of students that is studying the river down in their area. The Bronx River Alliance would train them and their facilitators how to study the chemistry of the water in the river. In their case they are trying to prove that the Jenna Concrete Corporation is poisoning the river. I would train the teachers so that they could bring their students down to the water and say, "Well, what does it mean to have healthy water? Is there a way to find it out? Can you tell us whether the water is clean? Is it even the word to use when you are talking about water quality?" I would discuss with educators how to do this sort of teaching with students and how educators can use this topic with their classes. And the other portion of my work is to help coordinate the recreation program. Its main component is canoeing, getting school groups and community members out on the water, giving people the opportunity to make a direct connection with the river. This type of recreation is very much tied to environmental justice. In other parts of the country having the opportunity to paddle in a canoe isn't that big of a deal, it might be just the natural course of things. But in cities recreational opportunities are so limited, especially here in the South Bronx. Now I'm also really working more towards making education and recreation tied very much closely.

Why should people connect to the river and why take them on canoes? There are many things that we want to achieve through this. The first part is just personal enjoyment because it's fun. You have to be there and enjoy it and play with it, which is really important since we work with many youth. Do you know Lev Vygotsky, the Russian psychologist? One of the things that he supported is that play is the work of children. You have to enjoy and play in your environment. You have to have this very physical connection with a place, and it's also about knowing your body. This physicalness of your connection to a place creates understanding that you are actually a part of the natural environment. When you are in a canoe, you have to react to the natural world. As an educator you are trying to use the zone of proximal development, trying to move people one step up, trying to find what would help move people onto the next step. For example, when you want to teach about water, you need to think about stages of understanding of how we interact with the environment. You have fun on the river in a canoe and learn about this place, then you learn what the water is and what an ecosystem is made of, you discover that really small organisms are the real heart of the river and water, and then you discover what we do to it and how we can improve the river.

The canoe program has always been like a gift after you have done all the work to improve the

river and got all the knowledge about the river. But I have realized that people need that direct connection with the water as the introduction to environmental programs, not at the end of programs. Moving in the water is very attractive. One of the things that I love about the water, about canoes and kayaks, is the opportunity for moving across natural things that are going on in and above the water. You realize that you are down low in the water, you realize that streets up the hill in Hunts Point are above you. You did not think of your community as a hill, but now you see that there is a slope. You stop and realize that you are at the bottom of the watershed and that the water comes to that one point. I have written some grants to provide easier access to these sorts of experiences for all the people in the community rather than having it as a once-in-a-while thing. Once people are on water, they look around, they relate to this environment and then want to do something about it. In the Bronx River Alliance we also started our monthly walks "The Bronx River Rambles" with Stephen DeVillo from our office, where instead of keeping people by the river our talk about the Bronx River would expand out into the community and the watershed. The river is one of the reasons that communities are here, and communities have an effect on the river, so everything gets tied in.

A lot of unexpected things go on in our programs, and I am even never sure what learning comes out from our activities. I try to plan the whole experience for participants, but I'm not sure what gets remembered and what is important to participants. For example, one day I took my students down to the river to conduct the water quality monitoring. Students had the rubber waders on, so they could get into the water. I am there for the science, I want them to learn maps, look around and enjoy it. And I turn around to keep an eye on all participants, and I see two 14–year–old girls from the Dominican Republic sitting in the river. They are just sitting there and talking. They could sit anywhere, but they chose to walk out into the middle of the river and sit down on a rock in the water with their rubber suits on so they are not getting wet. But it's not just about sitting in a different place; it's about somehow making them feel connected to something else. They realize that they are involved in something. At that time my goal was to teach them about the science of water. But now I think that my bigger accomplishment was allowing them to know that there was something very interesting in their community and that they can be very much involved in the natural world in a very urban situation.

One of the big things that the kids almost always say is that they never knew that there is such wilderness in the city. We may not think that it is wilderness, but they sure do. I remember kids walking along the Burke Bridge in the Bronx River Forest and saying, "This is the wildest thing that I've ever done." They get the opportunity to experience the wilderness right in their own backyards, and I want to be able to give them more opportunities like that, which is not that difficult even in the city. I told you that I came from Fishkill, a rural place although not a farm country. I often went there this summer because my mom was sick. I told you about a really big backyard, and the creek and an apple orchard not far from there. But this summer every time I died to come back to the Bronx because up in Fishkill I don't have that access to the natural world. When I go out on the Bronx River I can look at how things are changing, I can study the birds, I can think about what's happening in the water, and I want everybody to have that opportunity to be out there and look at it and think about it.

Do you know the book written in 1996 by a Japanese guy Tadashi? It's called "Down with the cities!" You can get it downloaded for free from the Gutenberg texts. His whole book is about why we should eliminate the cities, destroy them and get rid of them. So, his whole book is about destroying the cities because they are poisoning the world, and you may think that he is right. And I'm reading it, and I accept many negative things about cities that he says because it's true. But from my experience with the environment in the Bronx and the possibilities for environmental change in an urban space I see cities as very efficient places to live, depending on how the urban environment is treated and taken care of. You look at some great things that are going on in cities and you see the opportunities for change.

When I joined the Bronx River Alliance, my job was very much about adapting other environmental education curriculums such as Project WET and Project Learning Tree and giving them to teachers, so that they could conduct these activities down by the river. Anne-Marie Runfola, my predecessor, put together the educators' guide, which is a great collection of activities, many of which were adapted from all those other curriculums. But I wanted the river to be mine. Since I've been in the

Bronx River Alliance I have gained an extensive knowledge of the river. I wanted to know everything about it and about every place along it, what affects it, its geology and human history. I have brought a different aspect to my job, a different type of knowledge that has not been the focus of the Education Director before. If scientists in the Natural Resources Group in the Parks Department or a community member have a question about certain parts of the river, I'm the one of the people that they call. I'm not the scientist Dr. Joe Rachlin to answer specific scientific questions, but I'm somebody who knows a lot about the river, who learned a lot from people, and it's a different depth of knowledge that I feel is very important.

It goes back to what one of my college teachers said to me, "Don't study how to teach, study the stuff you might want to teach." My knowledge of the history of nature, people and communities along the river has given me a better understanding of ecology. You look at old maps and think about what the world used to look like here, and you are being able to explain how our communities have come to look the way they do. You learn about where other rivers were and how they influenced our history. For example, there was a river on the other side of the Bronx, which is covered today, but it gave names to Brook Avenue and Brook Park. On that river there was a foundry, which provided the iron for the United States Capitol dome. Abraham Lincoln, the big seated sculpture in Washington DC, was carved in a workshop on Brook Avenue and 148th Street. This workshop was right on the water because they could float out the statue in big pieces of marble. The statue was carved here, but what have we done to the ecology of this river? We have filled it in. Having this knowledge and understanding I'm asking students to figure out what and why has happened to the river, river systems, and the watershed. So, I made it a part of my job, although it was not in my job description.

Before learning the history of the Bronx River I had to find out what I wanted to learn. I had been fooling around with maps and found a website that offered some high quality historical maps that you could access online. It was about same time that I met Eric Sanderson, who did The Mannahatta Project. He said some really amazing things that he discovered by exploring maps and historical ecology. One of the things that he said in a presentation at Fordham was, "Maps show you what the people who are making them want you to see. They show what is important to them." Thinking about it I started to look at where bridges, houses, industries and forests were on the Bronx River, I started to look at historical maps to figure out how things got there and why they would be there. It taught me a lot about the growth of the Bronx. This is how I've learned the history of this place. I would learn from maps what places were called back in 1880s. Then I would search the New York Times archives, which you can get back to 1851. You would not be able to learn about certain areas around here by searching the current names of some streets because they were not the streets in the 1850s, and many of them did not exist. I would also find and visit those places. Then I would immediately write my own piece about what I've learned to try to remember it, share it orally with somebody else or share it through newsletters or the blog that we call "Bronx River Bio-log."

I'm trying to support learning in different ways. This summer we were organizing walks, teacher training and monitoring programs for students and teachers. One day we did "The Bat Walk," which was open to anybody. We walked in a dusk with people in such areas of city parks, where they normally would not try to see bats, so we could prove to them that there were bats up in the Bronx River Forest. Last Wednesday we took out 30 students from a local day camp at a Methodist church and got them out in the river with little fishing nets. They not only learned how to paddle, but they also had a competition to see who could get more garbage out of the river. They loved it so much so that they asked if we would not mind driving all the garbage over to their school and dropping it off for them so they could show everybody else how much they cleaned up. This summer we also organized our regular Bronx River Festival to just get people out onto the water in canoes and show them some of the river life from inside. We also conducted the Student Symposium, where students from many schools and programs presented environmental projects related to the Bronx River.

I'm also inviting environmental education groups and stewards to volunteer with our Restoration Crew. Summer Youth Employment Programs, like the one in Mosholu Preservation Corporation, teach their students about the plants and involve them in environmental stewardship along the river. We would

take these groups out on the river to paddle and see the ecosystems from a different perspective. We also help teachers facilitate their programs. For example, this summer we had a group "Into the Woods" from a local school next to Drew Gardens. Inspired by the book "Last Child in the Woods," their teachers are trying to bring kids to natural areas. We did a combination of things: a day of water study, a day of walk and cleanup and the third day to paddle on the river. In addition, we often support one-day restoration projects. For example, Carol Kennedy from Satellite Academy High School came with her group EcoLeaders, and we did some invasive species removal up in the Bronx River Forest in the northern section, and students learned about how invasive species affect biodiversity. And later that afternoon these students got a chance to use our canoes on the river.

I think that a part of our mission is to help all environmental organizations along the Bronx River achieve their goals and work together. But the Bronx River Alliance has been lucky to benefit from education programs in these organizations in many ways as well. For example, some of our restoration crewmembers have been trained by Sustainable South Bronx. Some graduates from Rocking the Boat, Cicy and Josue, are working now in our recreation program. So, I hope that we can be a destination for some young people who graduate from environmental programs, but we also have to push them off to something new.

The Bronx River Alliance, including my Education Program, is trying to support restoration projects, new parks and community-based environmental initiatives. One of the greatest stories of parks in the Bronx is Concrete Plant Park. This site was a functioning concrete plant until the 1980s, and Giuliani shut it down when he was a federal prosecutor because the mafia ran this plant. In the late 1990s New York City decided to either build a highway through there or build up some sort of industry. But local community groups with a big push by Alexie Torres at Youth Ministries for Peace and Justice (YMPJ) and Majora Carter came out and said, "No, it's going to be something better. We got this great stretch of land along the river. It does not look beautiful now, but it has access to the river. We should have a park here." They got together and came up with an idea for a park to be in that area. It took six years to build the park because it involved the New York State Department of Transportation, Parks Department, and a lot of dollars. Now it's a beautiful access area to the river, wonderful area.

When it came time to open the park, they asked me if I could sing a song at the official opening ceremony. I thought it would be a good idea to write a new song for it. I took the music from a song, and wrote the words to talk about the river and some of the people that have been involved. I was trying to write a song about the park itself. I was looking at old pictures and thinking, "Well, maybe I should write about this beautiful place for people that used to be an industrial area producing cement." Then I did some research about the West Farms neighborhood when I came across an article from 1899 about Mrs. Sarah Titus who was in charge of a bridge that laid over the Bronx River on Westchester Avenue. It was a drawbridge; they would have to raise it for the boats to come through because it was the boat center for the Bronx on 172nd Street, where all the docks were. I realized that this person's life was definitely connected to the river. In 1888 New York City acquired a big part of the Bronx, which used to be Westchester County, and the city wanted a more official bridge tender to be in charge of the bridge. They came to Mrs. Titus and said, "Give us the key because now we will have this official person in charge of the bridge." But she did not trust the city, she got to do a big fight and beat a police officer. The city was demanding change from a local person, and she ended up loosing the battle.

Then I reflected on the fact that the main name that is attached to establishing Concrete Plant Park is Alexie Torres, the founder of YMPJ. She is the face of the park. She got everybody to rally around her and got the community involved. Alexie, community members and students from her organization pushed the government to build the park. And I wrote a song that compares a woman who fought against the city and lost because she tried to do it all by herself, and somebody like Alexie who won the battle because she did not try to do it all by herself, she tried to get the whole community involved. I wrote a song around this idea and got to sing it at the opening of the park. I was playing guitar and singing this song, Adam Green from Rocking the Boat played harmonica with me on that day, and Dart Westphal from Mosholu Preservation Corporation sang with me that day too.

The Ballad of Titus and Torres

Listen now and I'll tell you a story of
Two powerful women who lived in this town.
This is the ballad of Titus and Torres.
Listen, listen, all come around

Sarah Titus held the key to cross the river
Since the death of her husband that bridge she did draw
Count on Mrs. Titus, the brawny and sturdy
To let the boats through to the docks of West Farms

1895 the city took over
The land on both sides of West Farms Creek.
The new bridge commissioner said, "Give me that key,"
Mrs. Titus shouted back, "Come take it from me!"

They came and they took it by force and by guile,
And left Sara Titus laying in tears.
In came Moriarity, the official bridge tender,
Goodbye Mrs. Titus after 22 years.

Chorus:
This the ballad of Titus and Torres,
Two powerful women of the Bronx River story
Titus is gone, the bridge no longer stands,
But we can see Torres and Concrete Plant.

Torres grew up on the banks of the river,
But never did see the tides as they turned.
She heard fishing stories from the lips of her father,
And set out to find the river of which she'd learned.

Concrete Plant sat abandoned and forgotten
Ready to return to its dirty industry.
Torres set out to rally her neighbors
And tell the city "This cannot be!"

They shouted,
"We too are experts, we too have dreams,
We too want beautiful riverfront places,
We deserve better for our friends and our children,
Places to feel the river breeze on our faces.

The city took note of the voice of the people
And hung a parks leaf on the towers above.
Now families and fishermen enjoy the river
In the heart of the city with those that they love.

Chorus

Two powerful women who stood for their beliefs,
One stood alone, ventured all and was lost,
The other stood surrounded by her friends and her neighbors,
And brought about a change for all of us.

Chorus

I think that narratives, the stories are the way through which I'm trying to tie in ideas about the environment and people. For example, in summer 2008, I was taking a group of high school students from a summer employment program to the river near the Bronx Zoo. Their facilitator wanted them to learn about the science of the river in some way, trying to find out what's going on in the river. One of the ways that we do it is by scooping up macroinvertebrates off the bottom of the river and identifying them. In one of those scoops came up a piece of wood, which was not natural in its shape. It was man made and looked like a part of a very old wheel. You find something like that in the river and it makes you think about it, about the history of this place. Here we are sitting just south of a dam that had been built in 1860s, where a lot of textiles had been bleached and colored. I started to tell the story of what would this wheel have been used for, and you realize that this wheel may be from the time when the horse carriages were the main mode of transportation. But maybe this wheel has been some part of a mechanism inside the dam if there was a mill. Maybe that mill used the power of the river, and the wheel was there to get things moving. Maybe this wheel was discarded into what used to be the garbage area in the river. In the past you would threw it into the river because it would be washed away and you don't have to worry about it anymore. And the river is still full of these archaeological artifacts.

Another day Cicy and Josue, our young staff members, and I were walking out of the Student Symposium in the Bronx River Art Center in West Farms. Our car happened to be parked on 179th Street. just above the river. As we were walking down there I could not help realizing that this was the place where the original bridge went over the Bronx River. It's not there anymore, but if you look closely, you can see how the street continued and you would want to see a bridge there because it's a perfect place to cross the river. And I told Cicy and Josue a story. In the time of the American Revolutionary War you had Patriots and Tories fighting over this area. One of them was DeLancey whose family owned the land that is today the whole Bronx Zoo. He did not want George Washington's generals being able to come down and go into New York City to attack. So on the banks of the river next to the bridge he built a small fort to protect it. He would have men stand up there to protect it so that the Patriots would not have an easy time coming down. And people that were stationed up in White Plains sent down a bunch of men in the middle of the night, and they burned down the fort. Right there until around 1920 there was a pine tree, taller than any other and said to be four feet in diameter, which was called the DeLancey Pine. Rebels would climb it with a rifle to try to shoot DeLancey if they saw him.

I think that in environmental education there is the whole idea of a sense of place, and a sense of time and a sense of history. It's so much about how we have affected the environment that surrounds us, and how we continue to affect it now hopefully for the better. Narratives and stories are the way in which we have always shared our ideas. When you speak to parents, they share memories in a story form. History and stories create your sense of place. And in my style of working with participants of my program I prefer to tell a story rather than to only state the truths or facts. It's better to put together ideas in a story form because we are more able to remember what happened and what was in this place. It seems that these stories start to grow when you see one little thing and ask yourself, "Why is it the way it is?" Then you are trying to fill in the gaps by reading and asking people, and you build your own narrative. Then you get that sense of place, a sense of realizing that there is a connection between you, the history, this place, people and the natural world that surround you in the city.

"WORKING WITH YOUTH AND PLANTS"

AN EDUCATOR PROFILE OF JENNIFER BEAUGRAND

Horticulture Program Director, Mosholu Preservation Corporation
Interviews conducted by Alex Kudryavtsev on May 26, August 12 and August 18, 2010

Jennifer Beaugrand, a native New Yorker, is an avid horticulturalist and educator. Pursuing her passion for landscape design and teaching students, Jennifer engages youth and other community members in the North Bronx in caring for parks. This story focuses on her work in green spaces around Mosholu Parkway through the NYC Parks Department and the Mosholu Preservation Corporation. In the 2009–2010 summer youth employment programs Jennifer involved high school students in improving parks and stewarding street trees. In this seven-week program she found it challenging to offer students diverse educational experiences while trying to meet the goals of environmental stewardship in the community. Yet she managed to organize various learning activities related to plants and parks by taking students to the New York Botanical Garden, teaching propagation at the NYC Park's Department nurseries, and organizing environmental literacy programs. Positive feedback from community members and seeing improvements in parks keep Jennifer, her staff and students motivated to continue their work in green spaces.

My name is Jennifer Beaugrand. I am the Director of the Horticulture Program for the Mosholu Preservation Corporation(MPC), a non-profit affiliate of Montefiore Medical Center. MPC began as a real estate development corporation in 1981 to help combat the urban decay that was affecting the Bronx; it has grown to provide community news, economic development and the horticulture program. The horticulture program helps improve our local parks through actively engaging volunteers and seasonal employees. I work with students and adults to revitalize and beautify their parks, it's what I love doing.

I grew up in New York City in an unusual apartment complex, as it had a common garden area. When I was little, the garden was open to the public, but eventually it became a private garden for the use of the residents of the buildings. Growing up with a garden was very important for me because an apartment is a rather confined space. While our building had relatively large apartments, being able to escape to an open space with swings and grass was essential to me. I think that people in suburbs take it for granted, but living in the city having accessible open space becomes a serious consideration, to where to live, especially for people with children. It creates an ease in friendship building in children and adults. Instead of making play-dates and traveling to other places to see friends, I could just call people on the other side of the building to meet in the garden, or go out for a game of tag. It had immeasurable affects on my development, and being able to use my love for design and working with youth to help create those safe play spaces for other children makes my job that much more rewarding.

When I was younger, I went to camp. Every summer until I was nine I would be picked up in the morning, bussed out to camp, and bussed back in the afternoon. This created an escape from city life, swimming and running around and being by the water. As I grew older I attended a few sleep away camp programs, one was very regimented with lots of structure and constant activities and one left campers with too much free time, and not enough oversight. Learning the benefits to a structured program and the risks to leaving youth unsupervised, taught me the essential need for structured programming as it promotes positive social interactions within youth's social network and inhibits negative and often harmful behaviors. This does not negate the need for free play time, it is just a recognition that both forms of play and social interaction are necessary. The love of camp and what it represented remained with me. The idea of people coming year after year to a natural world away from their homes in the city and getting to know each other; it's an alternate reality to the rest of the year, being out in nature for a few weeks, especially coming from the city.

In Manhattan I went to the Spence School, which is an all-girls private school on the Upper East

Side of Manhattan. I was there from kindergarten through 12th grade. In 7th grade I had a history class with Mr. Taylor, and we studied Africa. One of the first things that he had us do was a map test. We had to learn all of the African countries and their capitals. Our whole class did it, and the first time we did it I think I got a C- on the test, which might have been my worst grade so far in school. He let those of us who had done poorly retake the exam. I don't think I had ever studied harder. The second time I got an A++, and from then on I was hooked on Africa. Africa is a huge continent. I remember he showed us the map of Africa and then took the United States and stuck it in Africa. Africa can fit three and a half United States within its boundaries. It was this huge diverse landscape filled with vast cultures and at 11 we heard mostly negative things about starving people in Ethiopia. Our study of the history of Africa, prompted an interest that stayed with me. In college I took an African storyteller class my freshman year. It was a fascinating course about oral tradition stories that were often being lost to the changes in society.

When I went to the University of Wisconsin-Madison in 1995 I though about studying landscape architecture, but it was a five-year program and I was also fascinated by the idea of working for international organizations doing work to create positive change in far off countries. If you do landscape architecture, you are going to become a landscape architect. I was not sure if that was exactly where I wanted to go, although I loved the creative side of it, I also loved conceptual thinking in political science and international relations. Deciding on Political Science and International Relations, the stuff that I learned was amazing. My focus was on developing countries and the developing world, specifically, Africa and Sub-Saharan Africa. Africa still fascinated me and I figured that my trajectory would take me down the path of NGOs or the UN. I've since been to Africa three times, in Egypt, Morocco, Tanzania, Kenya, and Uganda. But when I was graduating from college, I started thinking, "Why do I need to go and fix Africa when we can't even fix neighborhoods in New York?"

It was spring of my senior year in college, and I wondered "What am I going to do next?" When one of my friends cancelled our meet up in Africa and asked me, if I could do anything that summer, what would it be? "I would work in a summer camp with kids," I said to her, "I would work especially with youth, from inner-city neighborhoods, from where I grew up, who don't normally get to go to camp." Camp is an amazing experience, just being outside, being able to run around, it's great. I wanted to work for a place that brought the kids from the city, like me out into nature. The city is constant frenetic energy, harsh, bad smells, traffic and noise. There are no stars in the sky and it never really gets dark here. When you are at camp in the summer, you may walk around at night and you get your night vision, but it's pitch-dark. And the stars are brilliant in the sky, and the air smells good. You wake up to the smell of plants and clean air. It's wonderful. You can take a breath. The cities are all about run, run, run. And the mentality… is "Achieve, achieve, be successful, constantly look forward." Sometimes it is when you can get away from that that energy that you can refocus your mind and remember why and what you want to achieve while you are out there.

That summer I worked the Fresh Air Fund, an organization that runs multiple programs, including five camps that are housed on a reservation about an hour and a half north of the city. I worked at the girls' camp with 9 to 12 years old girls. I just loved the idea of girls getting out and having fun. The kids that I worked with were with us for 12 days of programming and many had never been out of the city before Counselor was screamed innumerable times in the first few nights, for spiders, strange noises and all other sorts of scary wilderness oddities.

The next summer program I worked for was in Brownsville, Brooklyn in New York City. Working with kids in the summer in the city was a vastly different experience. It was one of those times, where you ask yourself, "Why do I do what I do?" At the end of a day I sat down with a co-worker. We sat down on this ball field, but it was asphalt, and nothing like a field [crying]. The tar had been mixed into asphalt where it had started to crack. It was so hot on this ball field that the tar had melted in the sun, and got stuck to the back of my favorite pair of shorts. For the rest of the summer I had this spot of tar on the back of my shorts, and it was indicative of what kids were dealing with living in certain areas of the city. "Is that supposed to be a ball field? This asphalt court, is it your playground, is it your space? This thing that is super heated every summer, so hot that the tar melts?" I guess for me that was rather disturbing.

Working with kids and youth in after-school, weekend and summer programs, I ran adventure programming, team building exercises, education and art programs, just a bit of everything. But I realized that as much as I loved working with kids and youth I needed art to be a component of what I did. Something was currently missing; I was not using my creative side. Through a good friend I found my outlet, and I went back to study. The New York Botanical Garden offers a number of programs and I becamse a certified Landscape Designer with them.

When I took classes at the Botanical Garden, I took the 4 train from Manhattan to the Bronx, and would get off at the Bedford Park Boulevard and walk over to the Botanical Garden. I was taught from the young age that the Bronx was scary. When I was growing up, many neighborhoods in the city were deteriorating. But in my mind I was a poor student and thus should take the less expensive public transport and avoid the more costly metro north that dropped you right across from the garden. One of my friends and I began to take turns driving, and as we drove down Mosholu Parkway at night, I wondered about the big green parkway. But it was dark and there wasn't much to see.

I finished the NYBG program, and realized that I had begun to find my niche. The combination of art and knowledge required for the profession has given me a sense of content within the work. This certificate program took two years, and I was teaching in an after-school program at the same time.

After the landscape design program I wanted to go back to graduate school for landscape architecture. But at the Botanical Garden I learned that most landscape architects use a very small pallet of plants and often don't have enough knowledge about plants. As I wanted to be good at what I did, I thought I should spend some time working with plants before going on to school. In spring 2005 I was hired by the New York City Parks Department, as an assistant gardener through a Neighborhood Parks Initiative. This was a citywide effort to bring horticulture into some of the more underserved parks throughout the five boroughs. I was assigned to the Williamsbridge Oval Park in the North West Bronx. I was responsible for the horticulture. The "aha" moment for me was when I tried to figure out where it was and realized my park was about a 10-minute walk from the Botanical Garden, and I did not even know it existed. It is a 20–acre park, but such a neighborhood park, that most people who live outside that immediate area of the Bronx have not heard of it.

My job was a combination of gardening and community outreach. I had two goals: to make the community want to help, and to be a gardening presence. I worked from Sunday to Thursday from 10:00am to 6:30pm, the hottest hours of the day during the summer, not generally good hours for gardening. But they were great hours for being a part of the community. Between 4pm and 6:30pm the whole dynamic of the park changes, you get all the people who have left work and are coming with their kids. The park just fills up, and they see me working there.

I found the best way to do community outreach was to love what I was doing. I started work on the East side of the park, weeding and creating entrance gardens. As I worked there many of the community members came to me, asking who I was, what I was doing and why. As I became an every day presence they incorporated me into their conversation, and as I have found often the commentary went from "why bother—because people will just destroy it anyway," to "wow, that looks really nice, thanks." One Sunday I was in my flowerbed putting the plants in, and a woman came up to me, "Hey, what are you doing?" she asked "I am the gardener here, I'm putting in a flower bed." "How could I get involved if I wanted to get involved?" "Here is my cell phone number. Call me anytime. I'm always out here on Sundays, so if you ever want to come and volunteer with me, you are more than welcome." And she responded, "What about now?" She was out walking her dog with her morning coffee at the time. "Sure, I'm putting in flowers and would love some help." So this woman, her name is Alice, ties her dog up to my wheelbarrow, puts her coffee down, climbs into the flowerbed with me, and spends the next four hours helping me put plants into this flowerbed. It was amazing, completely amazing. She just got in and got to work and stayed. She became my regular Sunday helper, as for her, it was a chance to get out of her apartment, leave the stress of her work week behind and relax.

Working for the Parks Department in 2005 and 2006, I also collaborated with participants of the Summer Youth Employment Program (SYEP) who were sited at the Mosholu Preservation Corporation (MPC), a non-profit that was across the street from the Oval Park. 2005 was a very hot summer, and

every day we were watering plants. The students that worked directly for me that summer Jaseline and her boyfriend started shy and quiet. As the summer progressed they started to gain a comfort level and by then end of our summer I was hosed down with our plants, in an attempt to keep me cool and motivated, according to them. They would take the hose and "ha-ha!"—attack me and the plants simultaneously. I would be soaked through my shoes but it was kind of a relief and if that was what motivated them, the chance to get me at some point during the day, well our plants were all the better for it. They came back and worked hard for the entire summer.

The following year I worked more closely with the Mosholu Preservation Corporation SYEP group. That year there was a kid who really liked to draw, and he used the back of his work t-shirt as a canvas. He made big bubble letters that said "notice", and underneath he would write something. I said, "I love what you do. If I bring a blank t-shirt, will you make one for me?" He did, writing "notice" and then the caption underneath was, "The lady with green thumb." I still have the shirt and it makes me smile every time.

There were many other defining moments to my time at the Oval. There is a family that lives on Bainbridge Avenue, just around the corner from the Oval. They have three children, their oldest daughter is Allison, and she was probably 13 when I first met her. She was not eligible for the summer youth employment program yet, which requires being 14 years or older, but she always wanted to help and be involved. She would help me at the end of the day with rolling up the hoses, putting up all my tools away, and watering plants. One day towards the end of the summer she came running over to me out of breath, and I asked, "What's going on, is everything okay?" "I did it!" "Did what?" "I rolled up the hose all by myself!" The hoses that I use are really stiff, so you can't easily roll them. They require twisting and for Alison it had been a constant struggle, and each time she would ask for help. It was one of those moments that still sticks with me, almost a silly thing, but the excitement and sense of accomplishment she felt, that lasts.

In fall 2006 I left the Parks Department. There were things that I needed to learn about myself that I would not necessarily find answers to in New York. I spent some time traveling and then did a pottery apprenticeship and gardened in Scotland for 6 months. After that I went to learn about permaculture at a research institute in the Bahamas. While in the Bahamas I worked for The Island School a semester abroad program for high school students. I taught research and was a mentor for youth. The youth work reminded me how much I gain from working with students, their views and challenges, can help change our perceptions of things.

After finishing up the semester in the Bahamas I came back to New York, for what was planned as a stopover. Dart Westphal, the president of Mosholu Preservation Corporation at the time, had discussed me eventually coming and running a horticulture program for him in the Norwood neighborhood of the North Bronx. When I came back in the summer of 2008, I called him to say "hi" and check on how the summer program was going. He asked what my plans were and we agreed to meet for lunch. As our plan had been for me to come work for him in the Spring of 2009 I intended to head out to the west coast to work out there for the next six to nine months. Instead, when we met for lunch that Saturday he offered me work helping run the horticulture program until the end of the season, at which point I could go away for four months and then come back in the Spring to take over. And that is how I ended up back in the city a bit sooner than expected. At the end of our discussion Dart said, "You can start tomorrow" at which point I reminded him that, "Tomorrow is Sunday." "Okay, then I'll see you Monday morning at the office."

Mosholu Preservation Corporation works in Norwood, Kingsbridge and the whole area generally defined by the District 7 Community Board in the North Bronx. The Horticulture Program generally works as far south as Fordham Road, but we have helped with a tree planting project in Crotona Park. Some of my summer youth employment groups work with the Bronx River Alliance as far north as 233rd Street. We work in the Bronx Park along the Bronx River—Fort Knox, Rosewood Playground, and Shoelace Parks. While we branch out our main focus has remained the Williamsbridge Oval and Mosholu Parkway.

Mosholu Preservation Corporation started the horticulture programming as a summer youth

employment program site in 2001. When I came here in 2008, we had 35 high school students in summer. As a work site, we get our students from the Mosholu Montefiore Community Center, which is one of the operators for the summer youth employment program. We employ students during the course of the summer, from the beginning of July till mid-August, and they work with us 25 hours a week. We run our programs 4 days a week, Monday through Thursday, from 9am to 4:15pm. We staff our program with college mentors, one college-age mentor per five high school students. They go out in parks and do horticulture maintenance work. While we will assist in park clean up our focus is horticulture. We help maintain the parks in terms of weeding and mulching, working to stabilize hillsides and combat erosion, and we maintain about 40 flowerbeds. Our Program currently helps steward about 100 trees; this includes everything from mulching to weeding, from aerating the soil to watering, from erosion control to pruning. Our students all go through the TreesNY Urban Forester Class, which culminates with an exam that if passed provides a Young Urban Forester Certificate to those under 18 and a Citizen Pruner's license to those 18 and over.

I've been in the Mosholu Preservation Corporation since 2008. This summer our SYEP program has shrunk from 43 students last year to only 27 students due to budget cuts. Most of our mentors come from local colleges, we have a long lasting relationship with Fordham University and recently we have started recruiting from Bronx community College, and through other organizations working in the Bronx, such as Rocking the Boat. During the pilot period for my program we ran a few trial groups of SYEP student's and found that the best student to mentor ratio, for productivity and group dynamics, was five students to one mentor. It is still hard to get the work done, and we could run the program differently, raising more money and having more adult workers and leaving the teenagers out, but that defeats the point of what we are trying to do, it's not just about getting parks to look nice for a summer, it is about having a lasting effect, and having the community help with our efforts.

For me, the Horticulture Program combines all the things that I love. Working with youth; plants and the knowledge that goes behind working with them; design, knowing how to put colors, shapes and textures together, and in this work it is also being creative with what you can get, making things beautiful with what is available.

For the students in our program, we hope they learn an appreciation for the environment around them. My goal for them is to have a different view on what their local environment means to them, on the complexities and nature of plants and trees. They learn what it means to have community people come up to thank them for a day of hard work, it creates a sense of ownership within our groups for their parks, plants and trees. The adults in my seasonal horticulture training program in many ways are learning the same things. One said to me recently "Jenn, I've never had somebody thank me for the work that I do before." But in this work, when you are out in the parks and working hard, people see you changing the way the landscape looks and they thank you.

I have many stories in my program that I will remember. One of our students, her name is Angelica, works this summer in the Oval Park, she worked here last summer as well. She came up to at the site selection process for SYEP, "Tell me you still have spots left at the Oval. I was with you last summer and I've been waiting and waiting for the chance to come back and work with you again because I loved it so much. Every time I walk by a tree, I think about how I want to be involved." It's phenomenal. She is one of 43 students we worked with last summer. Last year's program also had two students who volunteered with us during the school year, because they wanted to continue to be involved. These are some of the reasons I love what I do.

But that doesn't mean that things always go well and every student becomes a volunteer. We had a student who worked with us last summer, who did not work with us and was fired at the end of the summer. He was struggling and even with our small mentor to student ratio this is still a job, and thus about accomplishing our objectives and being able to work together. He struggled with being respectful within his group and telling the truth. He came back again this summer, unfortunately even after a few one on one discussions it came out to the same result. Perhaps by next year he will try again with a new attitude. We keep trying and are going to keep trying. Sometimes we have students who don't seem to realize that they are in the workplace. They show up late, don't want to work and forget to call out.

Sometimes they don't know how to handle themselves. While for many of them it's their first job, one goal is to make sure that they learn the rules so they can keep their future jobs.

My students all go out in the community and I expect them to work really hard. But while I love environmental stewardship and park beautification, for many of them it is just a job. One thing that I have learned over the years is that the more you know about something the more invested you can become. This belief pushes me to incorporate more learning activities that help our students understand more about our plants and urban landscapes. For example, we are bringing each group to the plant nursery four times during the summer, this teaches them propagation skills and allows them to see a different aspect of horticulture. We are going to go to the New York Botanical Garden, so they can see what a really well park and garden area looks like. Bringing this knowledge to my students will not make them all want to be gardeners or perhaps even have a backyard, but it teaches that there are many different types of trees in the city, and that our parks and trees need a lot of hard work and care to thrive. If this can be the lasting message that they take with them, that caring for parks is hard work, or that helping to water their local street tree may mean the difference between its life and death, then we have accomplished my takeaway goal.

It was through my goal to teach my students that I first became involved with Trees New York I met their Executive Director, Susan Gooberman a parks related conference. We talked and found that we could work together, and they could teach my students how to prune trees. What would be cooler than learning how to prune trees at a summer job? Last summer we started working with them and they taught a Citizen Pruner class in our summer youth employment program. This summer they organized a five-week Young Urban Forester youth environmental literacy program to teach our students everything they should know about how to take care of street trees. Everything from weeding and mulching, aerating and identifying trees, calling 311 to get a new street tree or report problems with your current one. They learned the health benefits and how trees are beneficial to the environment. In the second year of our program every student passed the final test and became Young Urban Foresters or Citizen Pruners.

It's hard to balance work and education in summer youth employment program. It's hard to teach kids who are just coming to do work for the summer to love what they are doing, especially because it's extremely hard work out in the heat all summer. A lot of it depends on their mentors. If the mentors love what they do, kids will too. Quinn, my program coordinator, was a gardener at Devoe Park and acted as mentor for students last year. Quinn also loves what he does and his ability to share that love with our students has been phenomenal. Last year his group was the only group where everyone passed the test. This year I had him work with each of the groups throughout the summer, to pass on his exuberance and motivate all the staff. I try to find mentors that will share this mentality, because it makes the summer a much happier experience for everyone.

This year I have great mentors who are completely invested and their kids are getting the most out of the program. Recently we had a staff meeting, and the mentors asked about other trips for the students. One suggested visited a few local colleges to get the students thinking about school and what comes next for them. My students are in high school, and we want to encourage them to go on to college. It was a great idea, and with her organization we managed to plan a great day trip. We decided that on last Wednesday of the program we are going to combine the trip to the New York Botanical Garden with a visit to Fordham University and Lehman College. We are trying to change the way our students think about a tree, and we are trying to get them change the way they think about college. If you go to college, you have a lot more doors open. We are trying to teach that the more you learn the more options you have, this goes for knowledge they can learn on the job as well as in school. The Botanical Gardens will help provide reference for how beautiful a park can look. I want our students to see how their progress affects the change and how these changes can affect their community. If your park by your house is well maintained and beautiful, it makes you feel that your neighborhood is being cared for, which changes how you view your community and yourself. Other trips are also quite transformative for our students. We take them on a canoe trip with the Bronx River Alliance, so students can see how nature is right in their backyard. They also have another trip with the Bronx River Alliance, which teaches them about the ecology around the river. These trips hopefully help to create a bigger picture of how their daily work

affects their community's environment, and the people who live there.

I don't know if the summer youth employment program offers enough time to really get the kids invest in what they do. The longer a program, the more you get students to really invest, they start to see the difference they make, they see more people who come to the parks and say, "You are doing such a great job," and students start to see how their work is changing the neighborhood. Today I was down at the gully at one of our spots, and passers-by were asking what we were doing with students in the park. You can't imagine how this green area was covered with weeds before we got there two years ago, and how it has changed. People are starting to respect the park more because we go in there with students, we change the way it looks, and we say, "We care." When I first got in there, people would say, "Why are you wasting your time? Nobody cares about this spot." And now it has changed. When we come in and change the way a place looks, we change the way that place is treated. We care for a place, and everybody starts to say "Thank you." They start to notice, they start to feel the difference. All people need is somebody to take the lead and say, "I'm going to do this." People want to be involved, they ask, "How can we be involved?" But taking something over is often too daunting a task for people to try without some support.

Last year my student mentors talked about how this program affected their students. They talked about the sense of accomplishment, the sense that they had an impact and changed something. I think students now realize how much of work goes into doing anything in the park. They get a sense of how much work it is just to keep it organized, and how much on top of that is to make it look really beautiful and bring it above a base level. And I also imagine that they probably knew their park next to their house, but a lot of them probably had no idea about some of the other parks that exist, and how big the green spaces are in the Bronx.

In the future I look to opportunities to pick smaller spaces where our work can be better showcased. But before expanding and serving new parks, we need to make sure that we do a good job at the ones that we our currently working on. We need to continue to keep the trees alive, the weeds need to keep being removed, and ornamental plants need to be maintained. I think my mission is moving towards doing more of what I'm doing. Become more and more removed from the actual gardening work has been difficult, and it also pushed me to think whether I still love what I do. The answer for me has been yes, the changes we make, the improvements, have been worth the changes in my role. I love working with kids, working with plants, changing urban communities and neighborhoods. I'd like expand our capacity, as there are so many parks that could still use our love. But I think it's important to balance getting the work done and changing people, changing their perceptions, changing what happens in the community and how it happens.

My work in the North Bronx has allowed me to combine the love for horticulture, working with youth and changing people's perceptions. So I get to do the design, I get to work with the students and the community. Now I'm working with groups of individuals on public assistance, growing their skill sets and making them more marketable for jobs. My crews this year have been phenomenal. In my work I get to be a piece of all these parts of the community, I'm really lucky with what I do.

"INSPIRING PEOPLE ABOUT URBAN FARMING"

AN EDUCATOR PROFILE OF JENNIFER PLEWKA

Director of Environmental Education, Phipps Community Development Corporation
Interviews conducted by Alex Kudryavtsev on May 7, May 26 and August 7, 2010

Jennifer Plewka is an educator at Phipps Community Development Corporation. She manages Drew Gardens, a lush community garden that sits on the bank of the Bronx River near a subway station and a busy street, and combines the tidal river, vegetable garden, urban forest, butterfly garden, and open space. In this interview Jennifer talks about her background, professional development and her current job to educate the community through youth internships and garden memberships about urban farming, food security and appreciation of nature. She teaches students and adults by inviting them into the garden and having them rub and smell peppermint, cut sunflowers, harvest dill, play with compost worms and get their hands dirty.

This is Jennifer Plewka, I am the Director of the Environmental Education for Phipps Community Development Corporation's Greening Program in the Bronx. I value places by the quality of soil in their gardens, not by how much money they have. I judge them by how productive their soil is. When you put love into the soil of the garden, and you work it, you get very good results. This is what I'm teaching urban kids, teens, families and seniors in this community—how to take care of your soil, your land and your neighborhood.

I grew up in Coram, New York, that's in the middle of Long Island. I have one brother, mother and father. I grew up in a house with a backyard. I had a tree house, my favorite place to play. It is still there, it has a window, and I used to pretend that it was my own personal restaurant and I would cook food at the restaurant, I called it the Daisy Café. And I spent all day long outside.

I think that one of my earliest memories of exploration in the natural world is a story I often tell to my students. I was four or five years old, and one day my mom sent me outside, and she told me to go and dig. She just wanted me to do something with myself all day. And I said, "Okay, I'll dig." And I started digging. And she said, "I want you to dig all the way to China." I dug a hole all day long, and by the time I finished, it was starting to get dark. And I could go in the hole and stand in it. I was really proud of myself, and I said, "Mommy, come here, I can hear the Chinese people singing!" That's totally true, I remember like it was yesterday. I think from that point on I realized how big the world was and how small we were, and it really started to fascinate me. That's where I started, right in my backyard. That was my first story of exploring the natural world that I can remember.

My father always encouraged me to look really closely at plants and learn from them, touch and work with them. We always planted and worked in the backyard together. We planted in our backyard trees and fruit shrubs like a blueberry bush and raspberry bush. My family would go picking our own vegetables and sometimes strawberries and pears. We would go to farms that would allow us to come inside. This is when I developed this passion for nature. My father and I used to really love irises. Irises are the flowers that we have here in Drew Gardens that are in bloom in late spring. They are very beautiful, very exquisite. I'll show them to you later. We found a store on a very busy road that had gone out of business. It was like a factory, and in front of it there were a lot of irises. And my father told me, "We are going to get those irises now." So guess it was stealing, but it was not really stealing because nobody was taking care of these plants. My father and I were a little bit of renegades: we jumped out of the car, got a garbage bag and dug up those irises and transplanted them into our garden.

My mom was a teacher of second and third grade for 38 years. I often helped her in her classroom. I graded the spelling test and helped her make her bulletin board designs. She worked in the same school that I attended, which was sometimes uncomfortable, and sometimes it was good. My mother knew all of my teachers, and I knew all of my teachers by their first names because I have been to all of their houses in the summer time for pool parties. When they became my teachers, it was always a

little weird because I know them by their first name, and then I have to call them Ms. So-and-so. My mother really insisted on me sitting in the front row of every class. She always checked on me because she was there, and asked teachers how I am doing, if I am sitting in the front. That definitely influenced me to be a better student.

I don't know if you notice, but I'm legally blind, which was from the time I was born. Both of my mother and my father never treated me like I had any disability at all. My mother made sure that I, being a blind person, got all the services that I was entitled to. She wanted to make sure that I was getting the same services as if I did not have any sight at all. For example, I had a tutor coming into the classroom twice a week. I was a pretty bright kid, I did not need to catch up to where the students were. So my tutor had to create other things for me to do because I was above the level of most of their other blind students. For example, when I was six, one of the things that I learned how to do was to use a typewriter; my tutor put white stickers over every of the keys, so I could not see any of the letters. My tutor taught me mobility. I can't see very far, but he took me on public transportation, he took me to the city, and he showed me ways to maneuver myself without having to depend on my eyesight. I also had somebody coming into my house to teach me how to cook food for myself, and I prepared food when I was 5 years old. I knew how to use the stove. And that's one of the things I do now, teaching people how to cook.

I think all this helped me develop a sense of confidence, and a sense of "I can do all of this stuff, I am really smart." People used to tell me that all the time. I think it definitely pushed me to be the type of person that does not give up very easily, and to not be ashamed about being disabled. In the 1990s after high school I went to the State University of New York (SUNY) at Purchase, and I studied environmental science. That program was very small, there were about 25 people in the year I was in it, and only four of them were girls. My concentration was on biology. I loved learning about biology. And when I was in my senior year, I found an internship that I fell in love with. The internship was at the New York Botanical Garden. I was conducting programs within their conservatory for school-aged children. I was taking groups of students through the conservatory, touring them through different habitats. We toured them through the rainforest and through the desert for two hours at a time. This was my first real hands-on teaching experience that I have done outside of helping my mother to teach in her classroom when growing up. My mother was a teacher, and I think it's probably why I'm also a teacher. I enjoyed working in this internship so much that I continued for a second year.

On the second year of the internship the Botanical Garden opened up a brand new, state-of-the-art children's educational site, the first indoor-outdoor hands-on museum that was dedicated to plants. It's called the Everett Children's Adventure Garden. I was interning at the Botanical Garden at the right time, and they offered me a full time job because I was a good teacher. I think that I had the ability to relate to many different types of students and make the activities more engaging. When you teach a class that goes well, at the end when you are wrapping things up and the students can answer your questions, so you can find out if they really learned something. You have this feeling that you have really made a difference in these kids' life. I get this feeling more often than not. Of course, every teacher is going to have a class when you are off a little bit. You can't be perfect all the time. But in the majority of my classes I fee like I made a difference. These kids are going to grow up a little greener than they were before. So, I was hired by the New York Botanical Garden at the Everett Children's Adventure Garden as a Senior Explainer. It's a funny title for a job. But an Explainer's job is like what I have done all along like the way I am explaining things to you.

The Adventure Garden has six learning galleries dedicated to teaching hands-on plant science. It's still just as cool as it was when I was working there. There is one gallery that will have a special place in my heart called the herbarium, a library of pressed plants. I loved doing demonstrations on how to press and mount plants, how to preserve plant forever. I loved it. I would do this demonstration sometimes 20 times a day. I didn't care who I was talking to as long as they were listening to me speak about plants and I did it well. Every child that did it with me would go home with a pressed plant specimen. And till this day I use that skill. I've never showed this to you, but I do beautiful artwork out of pressed plants, I made these figures, fairies and women out of pressed plants.

I was in charge of all the Explainers—those who were paid, and teens and senior citizens who

were volunteers. It was my job to coordinate them in their gallery spaces, train them on how to interact with the public, schedule them, and set the tone for the day on how we are going to work with many school groups that came through that garden. I'm talking about 10-12 school groups in a matter of two hours coming through, having a self-guided experience, and then coming into one of our indoor facilities to participate in an experiment or demonstration. Sometimes it was about crowd control. But when you get a perfect group, their learning experience is really worthwhile.

I was in the Botanical Garden for seven years: first, doing the Green School internship and then working at the Everett Children's Adventure Garden for three years until my position was eliminated due to budget cuts. When that happened, I started working in another part of the Botanical Garden called the Family Garden. That's the job that reminds me the most of what I'm doing now. The Family Garden is a place in the Botanical Garden that is about the size of Drew Gardens. They have very similar composting system, raised beds and vegetables. It gave me my training to do what I do today. My job in the Family Garden was leading groups of students, teaching them how to grow their own food. There were not very many adults in that program, and I was working exclusively with younger children.

Then I decided that it was time to leave the Botanical Garden, and I found a job in an after-school program at Columbia University. The program was called Earth Friends, it was in the basement of the Horace Mann Hall at Columbia University. It was a really exciting job that I was able to teach cooking to kids who came from neighborhood schools. Columbia is a really good thing to put on your resume, even though I was not working with adult age students. We had an amazing classroom with three stoves, three sinks, three of everything, so I could have three different groups of students cooking at the same time. At the end of each class we would share food that we prepared together, sit down at a table and talk about food. This is something that is so common in most families across America, but it was not very common for these kids. They did not know how to sit down at the table, they did not know how to talk about the food. One thing that we had to really teach them is that they were not allowed to say that the food is nasty. They could say that they did not like the food, that it had too much salt or was not sweet enough. We encouraged them to use their words to describe foods, sit together as a group and appreciate that time. Unfortunately that program ran out of its funding stream, and they no longer had money to pay for my work there. Then for a short time I was a nutrition education teacher in a very small after-school program in the Bronx on Burnside and Jerome Avenue.

A few years ago I was offered the position of the Director of Environmental Education for Phipps Community Development Corporation in the Bronx. This is a multi-service non-profit organization that supports social programs from housing development to community education. We like to say we have programs from birth until death. Phipps CDC has Tier II shelters for people in transitional housing. We have many after-school programs throughout the Bronx and Manhattan for young children and teens, and we have the Bridge to College program. We have adults program like Learning English as a Second Language, GED programs, programs for seniors.

The Phipps Greening Program works with youth and adults teaching them how to garden and grow vegetables. We teach students how to grow and cook their own food. I coordinate a teenage internship program here in Drew Gardens in the Bronx. I also steward this beautiful 2.5–acre garden on the bank of the Bronx River, and work with adults and seniors growing their own food. I work with students of all ages learning or doing internships in the garden.

Drew Gardens, a community garden on the bank of the Bronx River, was started in 1995. This place used to be an industrial landfill filled with building materials, garbage, tires and cars, and the river was very polluted at that time. This piece of land was an eyesore. The trucks would come in and fill it up with trash and rocks. Little by little community-based organizations like Phipps CDC, the Bronx River Art Center, the Bronx River Alliance and local community members came together to say, "Enough is enough, we want to make this place better for our community. We want something nice to look at, we want to enjoy this part of our community." It took a long time because there was so much garbage here. You still can see big pieces of bricks with cement holding them together. They just don't belong to this place, they must have been dumped here. But as you can see, now we have transformed this former garbage dumping zone into a beautiful community garden that is full of fruit trees, vegetable plots and a

butterfly garden. And we have the Bronx River right here, we have a performance stage, yoga and meditation classes.

But the most important thing that goes on in Drew Gardens is the interactions between people. They may have never had the opportunity to meet each other on the street, but once they have come inside this community garden, I think their stereotypes or preconceived notions about each other just blow away in the wind. They feel very, very comfortable around each other when they are inside the garden. They start to learn from each other about how to grow food, how to take care of plants, and even take care of themselves a little bit better. People share their knowledge very freely. People and plants really thrive in this garden. Seniors growing vegetables in raised beds are the most valuable members in the garden. They are tireless and have so much love, energy and knowledge to share, they are just amazing.

The Bronx had a really bad reputation in the 1980s as being dangerous and dirty, and heavily laid in drugs and crime. Nobody wanted to come up here. This was not a place for people who were looking for nature. "Nature? No, not at all!" But after this period of "the Bronx is burning" there were a lot of empty lots that were open and nobody was claiming them. In that time many community gardens started to pop up on land that was not deemed for community gardens. So what happened after that, the gardens became very vulnerable to the city taking back the land. People who started just planting turned into advocates for gardening programs because once you start a garden program you don't want to give it up.

Now my entire professional career since I graduated has been working in the Bronx, except for working for Columbia University. And I have lived many years in Queens, which is a different borough. It takes me an hour to get to work. Two weeks ago on the train ride to get home I got off the train and started thinking about this, "Why don't I live in the Bronx? I like the Bronx. I like the people in the Bronx. I like the neighborhoods in the Bronx. I like a sense of community in the Bronx." Where I live in Queens people are not as friendly. I sneezed and I was walking by a bunch of people and nobody said, "God bless you." Here I don't have to sneeze, I don't have to do anything—people walk by and they say, "Hey ma, how are you doing? You gonna grow these vegetables? When is the farmers' market?" In general the way that people interact on the streets in the Bronx is very different from other boroughs. People sit on the block and look out for each other, they know everybody who is walking back and forth. It's a community. It's definitely a community.

Probably the main issue that we have in Drew Gardens is that inside of our garden we have something called CSO, a combined sewage overflow outfall pipe. It's a place where raw sewage is regularly released into the Bronx River. It's a mix of surface runoff and domestic sewage. It takes only a tenth of an inch of rain in order for raw sewage from people's toilets to be pumped into the Bronx River. And we don't like it, it's not good for the fish and makes the garden smell. So we decided to partner with two other organizations that are also based along the Bronx River—Youth Ministries for Peace and Justice, and THE POINT CDC—to educate the public about the situation that is going literally under our noses. As educators from three organizations we have come together and decided to bring this issue to light. We wrote a proposal, which was funded by the organization called NOAA, the National Oceanic and Atmospheric Association. Each of three organizations in the Bronx are installing new green infrastructure. I'm installing the rainwater harvesting system with some input from my interns this summer. This system will catch runoff from the rain, and we will be able to use this water in our community garden. This project will demonstrate to the community that we can reduce the amount of water that goes to the storm drain, and use this water to grow vegetables, flowers and fruit trees. This project will provide water for the garden and teach local residents about a way to impact their community in a positive way.

Most of my students come to my program in summer as interns. Students of all ages come from college preparation programs or school trips. But I recruited students in the NOAA program in January 2010. It was not very hard to recruit 10 students, mostly African-Americans and some Latino high school students. There is a stipend attached to this program, which made it very attractive for the students because they would get money. Their attendance in spring was up and down depending on the weather and some scheduling conflicts. Sometimes the internship days fall on other activities that these students are involved with through other programs at Phipps CDC. These kids do not have an environmental

science background, so we need to start really fresh with them, start to talk about the issues that are affecting their local community. Specifically, the issue of the CSO, the issue of getting water for Drew Gardens that we can use in our food production, urban agriculture. I took them on the field trip to see the other NOAA sites—Youth Ministries of Peace and Justice, and THE POINT CDC—although it was a cold winter day. I took them to an education even at the UN Headquarters. We got into Drew Gardens several times to do spring cleanup. We also did composting and planting activities in the garden.

We are excited that the new rainwater harvesting system will be the reality for us by the end of this summer because we have been struggling with this issue of accessing water since five years ago. This is going to be a new era because now we use a fire hydrant that is a block away from the garden. We connect ten sections of hose to that fire hydrant, which I'm going to do this afternoon, and fill up about seven or eight rain barrels in Drew Gardens. It takes four hours to fill the barrels and put the hoses away, so it's a really time-consuming part of my work. Unfortunately when water is such a scarce resources in the garden, the gardeners tend to use more of it instead of less because they think, "I love my plants so much that I'm gonna give them more water. I don't want to not have any water, so I'll take more than I actually need." It's like if there was famine, and you only have a little food, you really hold on to it tightly. This is the same with water.

I have been tossing around ideas with my students, ideas about the design for the water harvesting system. I have been working on this issue a lot during my winter vacation. We decided that GrowNYC will be responsible for building the system. This non-profit organization has a program specifically geared towards building rainwater harvesting systems, and Lenny Librizzi is in charge of this program. He is what we like to call the expert of rainwater harvesting systems in New York City. He and Dwaine Lee from Sustainable South Bronx are knowledgeable about this type of projects. So Lenny is bringing people from the MillionTreesNYC program to help build the system. These adults are being educated on how to create green infrastructure in gardens and will get green jobs after their experience this summer. The rain harvesting system is a way that we can use nature to our advantage, use the rain to our advantage. We will install on top of the pergola a pitched roof with gutters. Underneath the roof there will be the new tank holding a thousand gallons of rainwater. The first flush system made of PVC piping will make only clean water enter into the tank. I had hoped that the rainwater harvesting system would be completely installed by the end of students' internship this summer. But I know that students—Ashley, Moses, Likah—they are going to come back when this system is finished in the next two weeks. We are going to have a big water fight with water balloons, water guns and anything related to water to celebrate this. Having rainwater harvesting is going to be a new era for the garden, it's going to be fantastic.

But water from the city still does enter the river, and it is carrying lots of pollutants and garbage, and depositing them right into the Bronx River. We try to stop that from happening and clean the river by installing small floating islands with plants that may provide habitat and clean the water. Creating a floating island is one of the major projects in which I involve my NOAA interns. Even if it's cleaning a small amount of water, it's something that my students can do. Earlier this summer we created this island out of floatable trash. We took floatables, like plastic bottles, and corralled them by putting them into a piece of plastic fencing that we made into the shape of a donut. Inside of it we planted a whole bunch of different plants that like to be submerged in water. These plants need to be specific to tolerate both fresh water and salt water because that's the type of water we have in the Bronx River. We chose plants that were native to New York and water loving plants. These plants were given to us as a gift by the Natural Resource Group in the Parks Department. After construction of the island I had students put on waders and go into the river to anchor that island to a long pole so it does not float away when we have high tides. None of my students had ever worn the waders before and none of them have been in the Bronx River. They really enjoyed that. It's a great project for students also because they can show their family and their friends the island. They can see it from the overpass, so it's a memorable thing. We wanted to create something that would make our river a little bit cleaner, and something that would be visible, so people could see and possibly do something similar on their own.

Another thing that I decided to do with the interns is to work a lot in the vegetable garden. Working with teenagers is funny. A lot of the students have never seen a vegetable garden growing, had

not had experience with picking vegetables, and putting the vegetable seeds in the ground. Last week I had a group of high school students from CUNY prep. They have created a pretty ingenious way of protecting their most valuable possessions, which are their sneakers. They come to the garden with two bags from the supermarket, and completely incased their sneakers in plastic bags, so that they can work in the garden and not get dirty. *[laughing]* I though that was a really clever, cool idea. I do have a picture of that if you want to see that, that's phenomenal. A question that came twice this month from these students was if you could die from poison ivy. We do have some poison ivy in the urban forest part of the garden. You can get skin rush from it, but you are not going to die from it. But students ask this question because they have never had the experience with any plants.

I think that some students here started loving the garden and becoming more a part of the garden family. For example, Ashley was not that interested in the beginning of the internship, but towards turned into the most interested of the group. She always comes, often before I come. She really embraced all of the things about the farmers' market that I run in summer near the entrance to the garden. She liked to take records of vegetables that we were selling. The last portion of the internship was to provide outreach services at the farmers market. Everything that students had done in our program helped them to feel comfortable to talk to the public about growing vegetables.

I work not only with high school students, I work with students of all ages. Kids that are in the primary school age programs—they jump out of their comfort zone, they are screaming out, they just want to get dirty. Even if mom says it's not okay, they do it anyway. They absolutely love it. So I would say that little kids could be impacted more through environmental education programs than older students. I could imagine how wonderful it would be if the child started at three years old and continued. I've seen evidence of change in older kids too. But it's tough if they really don't want to get dirty, it's hard to change their opinion. If they really hate bugs, if it's already engrained in them as something negative, I think they are the hardest to turn onto it. They will often find other activities in the garden, like sitting and texting. They will find things to occupy themselves and stay in their comfort zone.

Some time ago I worked with my co-worker Julia in Krystal Community Garden, which is not far from Drew Gardens. Several school age children were standing against the fence from the outside of the garden watching us and wanting to help us. We did not want them to come in because we had a lot of work to do, but they asked us to borrow our shovels. They asked us if they could find worms. And these were my former students when they were kindergarten age. Those were little minds that we have definitely changed, and taught what fun things they could do in a park aside from throwing a ball into each other. So they took shovels and went into the lawn in a park outside the garden, and they were tearing up the lawn with shovels and looking for worms. That probably would not have happened if they did not come to the gardening program as little kids. I don't think they would have done anything like that if they had not been exposed to worms so early on.

I think that opening up the children's eyes to their local environment will eventually create people who stay in this community, who want to serve it, who want to see this community thrive, who want to protect this community for all wonderful natural elements that it has. Teaching kids, especially at a very early age, opens their eyes to explore nature. This is where there is the gap in education. There are a lot of young parents in this community who grew up in this neighborhood with very little access to exploring nature right here other than the Bronx Zoo. And they would complain about their children getting dirty in the garden. This always comes up when children get scared to get dirty, they are afraid of going home with dirty sneakers, some of them told me that they would get beaten by their parents if they come home dirty.

The Bronx is not a place that you want to escape from, there is so much beauty here, there is wildlife here, animals live here in your community, and fish live in this amazing river. There are free canoe trips and recreational activities in your community. You don't need to go to Central Park or Prospect Park; you have a lot of great stuff going on here. And in order to keep that great stuff going on we need to promote more of the resources that we have. Who is the best promoter? The teenagers. If they think it's cool, they will tell their friends that it's cool, and then they will turn into advocates for their own community instead. They may become advocates for the things that they have right in their own

backyards.

The work that we do along the Bronx River is not unique because there are other organizations that do greening throughout the Bronx. But it does offer a different perspective by connecting work along the river with urban agriculture, looking at the importance of creating a place where we can grow our own food. We also grow a conscience about the way we treat our land, and we pass it on to our students. We grow a conscience. For example, you can observe it in Renisha, my summer youth employee for two years. I've met him three years ago. Just a little kid from the neighborhood, maybe 13 years old who had very little experience in gardening. He was a very small kid trying to figure out what was interesting to him. He was working in the garden for a whole summer, 25 hours a week. We would spend together hot days, rainy days, any days. And after that summer he decided to go to the Joan Bowne High School for Agriculture, which is far from here in Queens, so he travels for over an hour every day on buses to get to that school, but he likes it. I think he decided to go to that school because he worked in the garden. In Drew Gardens he started liking it, he started realizing that we can have fun here. It was not always hard work, there were cool things to see, and this was an enjoyable place to be rather than sitting in an office somewhere. I think that this made an impact on his life, and maybe will eventually help him choose the career path in the green field. I think that he realized that this is a niche, a special thing that he does that his friends don't do, and this sets him apart from his group of friends in a positive way. Renisha came back to participate in the NOAA internship this year and helped install the rainwater harvesting system. When he passes the overpass and looks down into Drew Gardens, he can show his friends the floating island that he built to help control pollution in the Bronx River. Renisha is a good example of what being a part of a community garden at that time of your life can do for your personality. Positive changes that help our community, not hurt it.

And I think the impact of this garden on the community is humongous. I'm trying to make this garden available for other education programs. The Bronx River Art Center, for example, has utilized this garden for many of its events. Yesterday they built some artwork from recycled and found material, and permanently installed it in the garden. I allow the students from the Art Center to use the garden as a place for them to draw, paint, take pictures, do digital filmmaking and sound recordings.

I think this garden shows this community that over the last couple of years we can change one little piece of land with a lot of love and caring. It gives people hope that this community is not as bad as it has been treated. This garden provides people the opportunity to grow in their community. Once they come in the garden, they first thing they would talk about is plants. Then they will start to talk about other things like their families. Sometimes they may disagree and have some issues, and they have to work it out. They really want to stay members because they see the benefits of what this garden can bring. They work on solutions to problems that don't involve any violence. Solutions involve fairness, talking, and communicating with each other. And I think once people realize that they can solve little problems just by talking, they may be able to solve bigger problems in their lives by using the same strategies. Also, teaching people how to grow food in these days is really, really important. We may not have the security of the food system in the next 50 years. What is going to happen if we did not have any more supermarkets? If you know how to grow your own food, all you need is a piece of land, that's it. You could survive because you know how to plant.

I keep learning how to work with people and how to inspire them to love nature and care about their local community, and about the assets they have in their community. I hope that Drew Gardens will keep getting better and better and better every year. I'm trying to encourage and inspire community gardeners and students to keep doing what they are already doing in this garden. Because it takes just a little bit of love to make this all happen. It's not that hard. I mean there are days that you have to put in a lot of hard work, a lot of sweat. But it's very, very rewarding. I hope that this garden keeps growing. And the future for myself… Oh, I don't know. A big farm somewhere, a garlic farm! *[laughing]* I love garlic. Yes, a big garlic farm. *[laughing]*

"TRANSFORMING THE NEIGHBORHOOD AND PEOPLE"

AN EDUCATOR PROFILE OF JULIEN TERRELL

Director of Organizing, Youth Ministries for Peace and Justice
Interview conducted by Alex Kudryavtsev on July 25, 2011

Julien Terrell is the Director of Organizing at Youth Ministries for Peace and Justice (YMPJ) in the South Bronx. Julien grew up in Harlem and spent six years in Buffalo, New York, where he learned about environmental justice issues and also developed an interest in working with communities and younger people. This story recounts his current projects at YMPJ, illustrating his passion for fostering leadership in inner-city youth, and his work helping members of underserved communities to recognize, appreciate, fight for, and steward urban environmental resources.

My name is Julien Terrell. I am a resident of Harlem, New York. I am the Director of Organizing at Youth Ministries for Peace and Justice (YMPJ). YMPJ is a community-based and faith-based organization located in the Bronx River neighborhood of the South-East Bronx. Our work is done primarily on the Bronx River, in Crotona Park, and in West Farms. My role at YMPJ is overseeing youth organizing programs, including environmental justice education, and supervising related community development programs.

I was born and raised on 141st Street and Convent Avenue on the west side of Harlem. Both my mom and dad are African American and Native American, just different percentages. My mom was born in the Bahamas where she got real understanding of hard work. She moved to Alabama when she was young, ended up finishing high school when she was 14, and got accepted to the City College of New York. My dad is from Batavia, a small town 20 minutes outside of Buffalo in western New York. He was in the only Black family in the whole town. My dad ended up coming to New York City for an arts school, and then he and my mom were working at the same place, that's how they met.

My parents realized that they wanted to live in New York City in Harlem where they could connect to the history, which is a really big part of my dad's grounding principles. He felt that Harlem played a big role in the upbringing of Black folk in America, and wanted my twin sister and me to be brought up there. My dad taught us that you have to have a connection to the community. I identified with Harlem, which became a big part of my development.

I think many of my early experiences helped me understand what environmentalism is. My dad would talk to me about the importance of being around trees and stuff like that because that's how he grew up. My mom talked about the importance of just seeing ocean and seeing water around you because that's how she grew up. I found it interesting because I've never seen it. But it was also frustrating that I've never been around it, so it has got to the point where I did not want to hear these stories because it was not what I saw. My sister and I did not grow up that way, we grew up with a lot of concrete and a lot of pollution. I knew that people were trying to preserve trees and build more open space, but I always looked at it as something that was in the country, not something that could happen in the city. Teachers would say, "We need to be more connected to nature," but at the same time I did not see any nature around. Nobody explained to me that people who grow up in poor communities in the cities can care about the environment too, and that we have our own environment in a lot of ways, it is different from natural but still environment.

Then I got into high school and started linking environmental issues with a racial analysis, although I did not know what to call it. As I was getting older I started to notice a lot more what happened around me. My family started to get a lot more pressure as far as rent, and I'd see my mom and my dad talking about rent issues. I noticed that some people who I grew up with are moving down south, and I did not know exactly why. People would say, "Well, it's too expensive up here, and I need to see nature." Those are two big themes that I grew up around—"It's too expensive" and "I need to see nature." I did not really understand it, and actively wanted to do something about it, but I did not know what you could

do about it, it was just "I know this is a problem."

At the same time, people in the community started to privatize the use of some facilities. Like the soccer field at Riverbank State Park—it got to the point where I tried to go and play soccer as usual, but I was told, "You can't use the field." I was like, "I'm from this neighborhood, this park is here for us, why can't I use it?" And they were like, "Well, other people have it reserved." And then I would notice that those folks did not look like me. I knew they were not from the neighborhood because at that time there were not any White folks in my neighborhood. Whether they were cool or not, I knew that they were not from here. It brought up anger, but it was a very specific type of anger. It was not to the point "I'm going to fight these people," but I was so angry that I just did not know what to do. There was this feeling, "This is not right and I need to do something about it, I just don't know what to do." That was really frustrating for a while.

I think that some of my environmental experiences were also linked to the wastewater transfer station called the North River Wastewater Treatment Plant on 135th Street and the Hudson River. There was a really big problem with the odor emanating from this plant. We could smell it all the way on Convent Avenue, which is about four blocks up. There was a lot of sewage treated there, and it was really stinking up the neighborhood. And essentially the government wanted to build or reopen another wastewater treatment plant in a more affluent neighborhood in Upper East Side, but those communities rallied together and pushed it back. So the government was like, "Let's just go uptown because those folks don't really care about their environment," which is what they thought. At the same time, the public participation was not mandated. If you said that you were going to do a meeting, then that was all they needed. It did not matter if you did not tell anybody about the meeting, if you said it was a public meeting, and did it at 3:30pm when everybody is at work. It would be fine as long as you could prove that you did a meeting. But the opposite happened. We have an organization WE ACT, which used to be "West Harlem Environmental Action," and today it stands for "We Act for Environmental Justice." WE ACT did a lot of work organizing on that project to make sure that the facility was not expanded. And around that time a deal was made, "If you guys are going to keep this plant open, not only do you have to cover the parts of the facility that were allowing the odor to come out, but you also need to put money towards some benefit. And that benefit was Riverbank State Park. I did not have a big connection to parks. And I was around eight or nine when this lovely state-of-the art park opened. It was a really, really big deal in the neighborhood. But it was bittersweet because the wastewater treatment plant is beneath the park, and it smelled that way in hot summers.

Every summer until I was nine my dad used to send me up to Buffalo, so I got a chance to be with my family in a different setting and get out of the city. My dad was trying to tell me, "There is nothing for you to do here, I don't want the cops to get you." That's the time when he was intensely talking to me about our people; he was saying, "We are targeted." You know, there is the whole concept of us being targeted simply because of the color of our skin, of us not having access to park because of the color of our skin. And I would ask, "Dad, how can't we climb trees?" He would say, "One, because we don't have a lot of trees, and two, because we are not really allowed to enjoy stuff like that in our neighborhood."

My relatives in Buffalo did not have a lot of money, but they had big backyards, which really confused me because the only people that I knew who had big backyards were rich White folks. So when I was going to my aunt's house, and I would see that they had a big backyard, I'd think, "But you guys are not rich," and they were like, "No, it does not have to be that way." This is a lot different than New York City. I'd climb their pear tree or their apple tree, and just chill up there. I loved to climb trees. I would be like, "Why can't I have this down in Harlem?" I would go swimming, and I would be like, "Why can't I go swimming down there?" My aunt would take us to the field near the farms, and we'd just run around, and I was like, "Why isn't there open land like that down in Harlem?" So these different questions were coming up. I was sent there for the summer to do all this stuff that I normally would not so I loved it. I really enjoyed going up to Buffalo. I saw White folks every day, but they were just as poor as my family was, and it seemed like we weren't as divided. My understanding of class grew because of these experiences.

My interest in the environment and the racial/class dynamics grew, but the concept of doing

environment work was not exciting because people would just say, "That's for White folks." I would hear older people around me say "Oh, that's bad, that's not being Black, that's not being Latino, that's being White" because that were the only people who did environmental activities in the pictures on TV or in books. I did not know there was such thing as a Black and Latino owned and managed farms because I only would hear about farming in relation to slavery or abused workers from Mexico. The only people that I had seen in movies were White farmers, so we just assumed that that is for White people. So going out of the city really helped open up a lot for me. That experience was not exactly what a lot of my friends got, although many of them also spend time outside of the city. But when I went back home, there was always that initial phase of sadness. I was happy to be home and to see my friends, but I was not happy that I could not climb big trees. Any time I tried to climb a tree, I'd have some park ranger that was, "You are not supposed to do that." And again, having that same feeling—not knowing the best way to deal with it, not feeling strong enough to even say something about it. It really troubled me.

When I was 12, my dad again sent me away to what I thought was a sports camp. It was organized through the Episcopal Church on the other side of Connecticut. Up there we had a lake, we did boating classes and camped in the woods. We were living out in the woods in tents on platforms elevated above the ground. Tents were big enough to comfortably fit six to eight people. The last year that I was in the camp, there were older kids, like 14–16. We were responsible for cooking our own food, you had to wake up, prepare wood and start a fire. I've been slowly introduced to a lot of different environmental activities. They did not call it "environmental education." We were talking about certain types of pine leaves that burn better, or the fact that there are trees that are green year round—little things relevant to the stuff that we were doing. I though that it was survival skills, I always enjoyed it, but I did not know that it related to environmental education.

In school I had a couple of cool teachers who helped open things up for me. Other than my parents, my track coach was really my biggest role model when I was in high school. Running track, cross-country—it became my default youth program in a lot of ways. My coach was from Jamaica. I was around him a lot. He talked about being able to wake up and go to the field to cut coconuts and sugar cane. I would be like, "Oh, you actually do that?" I think it really helped to shape the whole concept of looking at somebody who is an expert in stuff that we did not know we could do. In a lot of ways he was somebody I really looked up to, and he also talked to me a lot about the importance of determination. He would say, "If you see something that's not right and you feel that is not right, then most likely that's not right, you have that feeling for a reason." He was really intentional about teaching us how to trust our judgment. When we would go over to the soccer field at Riverbank Park and be disappointed because it's taken, we'd be really angry. But he also took it as an opportunity to ask, "Why do you guys feel so angry about this? Is it because you feel ownership over this park?" And I was like, "Yeah, this is our park. That's not that other people can't use it, but this is a park that our community should be able to use." So he tried to use those experiences as the way to help us learn more about racial, gender and class issues. And specifically for me that's also where the environmental issues came from.

All my science teachers in high school were White, except for my chemistry teacher who was also from the Caribbean. I think all of them were really good at making connections between what we saw outside of the classroom and inside the classroom. Most of them did not use a racial analysis, but they did talk about stuff happening all around, which got me interested in teaching. I had a really good history teacher who helped me understand race and class. So the work that I was doing with him coupled with the science work really helped me build an understanding that there are environmental issues that impact us too, that we have a connection to the environment. I started to understand that some problems in our neighborhood should not be there because we were not asked about it and we did not give approval for it. I think it related to the core concepts of environmental education and environmental justice that I teach today.

In 2001 I went to college at the University of Buffalo. I started college literally a week before 9/11, so that was hard for a ton of reasons. I went to Buffalo because I have a family up there. I did not want to be in New York City, but I did not really want to leave the state. Buffalo was far enough for me to go to where I could be not too close. Originally I went to school as Electrical Engineering major. I did

very well my first semester, but I realized that I was going to be in a lab a lot of time working with electrical engineers. I realized that I was not going to work directly with people in communities, which really made me sad. I also started to realize what I wanted to do, maybe not specifically, but how I want to do it. I knew I wanted to be working with people who either cared about what I care about, or are impacted by what I care about. But I had not been able to connect the dots, so when I decided to change my major it was, "Either I'm going to be a history teacher, or I'm going to do something around the environment." But I did not know what it was, I did not know about environmental justice at all.

I knew that my core interest was about getting more open space into your neighborhood, involving more people in making decisions about what is going to come into your neighborhood. I did not know that these were environmental topics, I though that environment is about land aspects, not so much people. I was taking a lot of environmental classes my second semester and my whole sophomore year. I was like, "You know, this is interesting, but this is not what I want. Why am I learning about soil? Why am I learning about rocks or how rocks are made? Why am I learning about salt water?" I through it was just not interesting. I thought it was not related to history of Black, Latino and Native American people. But I did not know how I could focus on history, while also including the environmental aspect.

I did really bad my first semester in my sophomore year. I lived in a dorm and I was doing a lot of stuff I should not have been doing. It was also due to the fact that I did not really connect to any of the classes other than the Environmental Anthropology class. It was the only class that I passed that semester because it interested me. That's where I learned about Chernobyl and other environmental problems happening in other countries and about people loosing their homes due to climate change. I thought, "There are other people who are impacted by environmental issues. But I don't wanna just study it. I wanna do something about it." I identified with anthropology right away, but it was not enough for me. I wanted to study how this is impacting my people, and I also wanted to do something about it with those people. But again, I did not know what that was called.

Getting out of sophomore year, I went to my advisor and asked to take classes that focused on environmental issues but were more relevant to the urban environment and people of color. He suggested that I do an internship either down in the city or back up in Buffalo, and then maybe I would get that perspective. He told me, "Stick with it. You may not see it as relevant, but you also have to understand that a lot of people in your neighborhood that you are from don't get access to this. This is not information that a lot of people in your position get a chance to learn." He was a White guy, but he had a really specific racial analysis, especially when it came to Black and Brown students. Our conversations helped bring up a lot of feelings around determination, which my dad and my track coach were telling me about.

At that point my grades just went through the roof, whether it was boring or not. I went from failing every course but one to getting As in every course, literally the semester right after that. I was determined to make the concepts and practices I was learning relevant to how I could use them in communities of color I wanted to be working in after I graduated. So when I started calling people for internships, I tried to explain my interest, and they were like, "We don't do that. Good luck." I kept on getting that, and then one person finally was like, "You know, you are talking about environmental justice." "What?" "You are talking about environmental justice. You are talking about working with people who are impacted by an issue and need to be fighting back. But they are also impacted by that because they are Black or poor." I was like, "Yesss! I wanna do environmental justice." Then I ended up linking with a woman named Michelle Moore who works for the Department of Environmental Conservation (DEC), which is a statewide environmental regulatory agency. They have a department within their permitting office in New York City. She is the person who coordinates everything on environmental justice in this office and she was my internship supervisor. She also helped me understand that there are a lot of environmental issues that happen in communities of color that should not be happening. There are a lot of benefits that we don't have access to, and that's not by mistake, that's on purpose.

In DEC I was supposed to call every organization that got funding though Environmental Benefits Fund. Anybody who was impacted by an environmental issue in a neighborhood was given

money to either work on a project that provided a benefit to the community or build awareness of the issue in the neighborhood. My job was to check in with each one about how the project was going and how we could help them. I also scheduled the site visits. My boss and I would go over there, and I'd go over there with a shirt and tie, and she was like, "Well, Julien, if somebody came to you from the government with a shirt and tie, would you feel comfortable around them?" "No." And she was like, "Even if you look like them?" And I was like, "Well, no, because they were in a suit." And she was like, "Well, why would you wear a suit and tie then?" That was when she really started helping me understand that I could be myself and still do an effective job. I did not need to come up here with a three-piece suit. If you know you would not trust somebody who is coming to you with the suit, then you should not be doing that. If you are using environmental terminology that you know people are not going to know, then you have to break it down, you need to explain and build their capacity. You have to help them realize that they know more about an issue than they think they know.

When I looked around the DEC office, and a lot of people who were doing that job did not look like people in my neighborhood in Harlem. Michelle did. But others did not. These people who were responsible for permits were really good people and each of them had a role in helping understand how to use environmental analysis to strengthen local campaigns. They helped me understand the importance of knowing how to connect to my people while also having an understanding of the science and environmental review processes in order to better a resource to the community. It has to be somebody from the neighborhood who is taking that leadership. This internship helped me completely change the direction that I was going in my career development. It was cool to do science, to do law, and live in the hood. It was about combining different levels of expertise—you know about science, know about regulations, and know about your people. It really helped me understand what urban environmentalism is and that there are environmental issues that are very specific to city.

I got school credit for this internship. I used to call it "life credit" because what I learned in internship interested me far more than some of what I was learning in college. That internship completely changed my life. I think that working with DEC was the beginning of what I'm doing now. But I also noticed that there are many restrictions in the organization because people were representatives of government. There was only so much they could do, which reminded me of school. I knew that they could not talk about race or class unless it was under a specific instruction. I observed people I respected having problems getting approved to do things that needed to be done. I took many of the lessons learned that summer to school, and started crafting my work on environmental policy and education with a specific concentration on race, class and equity.

During my last year in college I ended up meeting a guy named Joe Gardella, who played a major role in my development. He was a chemistry professor, a really cool White guy from Detroit. He was not based in the community, but he understood that the community needed to be leading whatever effort is happening around an environmental issue. After some initial conversations, he thought it would be best for me to continue working on environmental justice and placed me with a community-based organization called the Toxic Waste Lupus Coalition. Lupus is an autoimmune disease. A whole cluster of people in Buffalo—primarily poor Black folks in East Buffalo—were found to have lupus, and University of Buffalo was interested to explore whether or not the reason was that these people lived next to contaminated sites. My role was to support this community-based organization in developing outreach materials that explained the problems being caused by the most contaminated of the three sites. I was working closely with the Project Coordinator Judith Anderson who became another role model and mentor for me. I think that the leadership of women in the environmental justice movement is essential. She taught me a lot about leadership and gender dynamics in the professional world, which I hadn't learned much about while studying in college. A lot of times I had other people telling me that women don't make good bosses, and that environmental work is for men, not for women. She really helped me challenge those thoughts, and understand the importance of challenging all forms of oppression and ignorance in environmental work. She was an example of somebody who could navigate through different spaces without compromising her or his values.

I graduated from college in the summer of 2005, and I continued working for the university in the

same role I had been during the internship. I graduated in the beginning of August on Friday and started working full time that next Monday. My main job was to support the community-based component of this research project, which was a partnership between the university and the Toxic Waste Lupus Coalition. Although I was a university employee, my work was mostly working with the coalition. I would put together the newsletter and fact sheets, organize the meetings with Judith, conduct all the outreach activities, assist local residents to deal with local environmental issues, and talked about health connections. I used my background around environmental science and environmental health to help them address local problems, which is essentially environmental justice organizing, although I did not know this term. Organizing is identifying an issue that is causing a negative impact on a group of people, and then rallying the people who are directly impacted by that issue to develop and implement a strategy to end it. I feel the role of an organizer is not to tell people what to do, but to help develop that person to be a leader of that project. One of the most important environmental justice principles is that the people who are directly impacted are the ones who need to lead that work. We can teach them how to do outreach, teach them how to do public speaking, how to understand the use of law and policy to support their organizing and create new policy.

I ended up working with several other great folks, and we started up a new organization. I worked with people like Derrick Byrd who was another elder doing organizing work, Janice White who worked with the church that was located across the street from the most contaminated site that we focused on, and David Hahn Baker who was a political strategist and a great leader on environmental justice issues in Buffalo. We formed this organization to continue the work around that contaminated site. We were able to get a plan developed by people and our technical assistance partner in the neighborhood around how they wanted to remediate that site. We ended up using that plan as a frame on how to work with the local DEC office. They accepted our plan, which is one of very few times when a remediation plan developed by the community has been used by the government, which was the victory I had been involved in.

My transition into post college organizing was an interesting time for me because I had been more intentional about deepening my political understanding and many of my friends did not understand the concept of environmental justice, which made it difficult to explain what I was doing. The label of a tree hugger was being given to me, but it was a time that helped me define my role in the movement, and inform those around me about what was happening in Buffalo and back home in the city. My dedication as a young Black environmental educator also got stronger because I knew there needed to be more of us to help make these connections for people in our community. Around that time my mom's health was getting worse due to her lupus, so I decided to move back to the city in the winter of 2006-2007. I went home for a break and talked to my mom about it, and she did not want me to come back. She wanted me to stay up in Buffalo and continue my work. And I was like, "Listen, if my work was about helping folks fight back and you are sick, then I need to be here. I can't justify doing that somewhere else if my own family needs me at home." I also thought about what was happening in Harlem at the time, and that I felt conflicted not being close enough to efforts pushing back against gentrification and organizing environmental justice issues in my neighborhood. I had been working in a statewide coalition with WE ACT for Environmental Justice, an environmental justice organization based in Harlem, and became interested in the potential of working with them when I decided to move back to the city. I applied for the position of the Our Housing is Our Health Campaign Coordinator working on environmental health issues that arose from living in poor housing conditions and putting pressure on landlords both directly through organizing and legislatively through the development of public policy to govern best management practices. I got the position and started shortly after I returned.

I worked for WE ACT in Harlem for a little less than two years. I loved working on issues in my neighborhood, like the health problems that come from living with rats, roaches and mold in your apartment, and organizing against local rezoning that would lead to development that was not best for the people living in the community. I was working with people who had asthma and dealt with environmental burdens inside their homes framed around indoor air quality. On a couple occasions I had the opportunity to work with a few interns that served as my introduction into youth work. The first intern I've ever had was a young man who grew up in my neighborhood and was my best friend's younger brother. He

assisted our campaign working with me to mobilize community resident against the expansion of Columbia University. That was one of the first major projects that I worked on—looking at land use and gentrification as an environmental issue. That's an issue that is very personal to me. When you live in a community in which you are working you don't separate your life and work experiences. That's a big part of what drives me. A lot of the issues that I work on are the issues that I'm either directly impacted by as well or issues that I have been impacted by. My intern helped put together information packages. We used to give them out at meetings and going from door to door. When I went to meetings he was there with me, whenever we were door knocking he was there door knocking. He was saying, "I did not know this was environmental work." I was like, "Yeah, it is our environment work, we are informing people about environmental issues that impact us."

Shortly afterward, there were two more interns from the High School of Environmental Studies that were placed with me to work on the Our Housing is Our Health Campaign. The experience supporting them at this time cemented my interest in working with youth to develop their understanding of environmental justice and organizing. I was developing my own style of doing environmental education, taking all the experiences and all the frustrations that I had, and making sure that that was not the experience that other people had. I was always saying that I fell into environmental work by mistake—not knowing it was environmental, but I had the right people along the way to help guide me, eventually getting to where I am now at. I realized that, "I wanna be that person. I wanna be that person who was gonna help youth connect the dots." I don't want folks to have to go half way through their life not realizing that they are impacted by something when it's right in front of their faces. I wanted to be that connect-the-dots person, and I wanted to do it with youth.

I started talking about it more often, and my coworkers and mentors were really supportive of it. But I did not have the opportunity to do it at WE ACT because they did not have a youth organizing component to their work. I was just supervising internships and temporary projects with high school students, but that was not the main part of my job. Carlos Jusino, who is their GIS specialist, played a big role in that because he used to be a member of WE ACT's youth group that existed in the past. He said that this type of work could be working with young people, introducing them to environmental work, and help them start their career in environmental fields. Yolande Cadore, my organizing supervisor, was very intentional in my development as an organizer. At one of trainings that she sent me to I met two staff people from Youth Ministries for Peace and Justice (YMPJ). One of them, Flavia De Souza, was working with people living near contaminated sites in the Bronx. I was surprised that people were working on that down in New York City, also doing organizing, working on the science-based piece, and working with youth. Although I knew I wanted to be organizing with youth, I also knew that I did not have any formal experience doing this work other than the opportunities at WE ACT. I figured that if this is the direction I was moving, I needed to be at an organization that had a youth organizing program.

After transitioning out of WE ACT, I took some time off, I applied to a bunch of places in Harlem that did not exactly do environmental work, but I just wanted to work with youth at that point. I also called YMPJ because I had heard that they had a job opening. They asked about my interest, and I was like, "I'm interested in doing environmental justice work with youth and teaching them how to organize around environmental justice issues." They asked me to send them my resume, and in 20 minutes after I sent an email I got a call, "Well, I read the description of what you would like for a job, and we have an opening doing exactly that." I came in and applied for it, and was given the second interview with Alexie Torres-Fleming, the founder of YMPJ. At first it was really scary to me because YMPJ was started out of the Catholic Youth Ministry, but I'm a practicing Buddhist.

When I originally started to work at YMPJ I was the environmental justice organizer. I worked with a group of young people to help develop an analysis of local environmental issues that impacted this community. We have a concrete facility across the street, so a lot of dust is getting across the street inside of people's homes. Some of the youth I worked with lived in Bronx River Houses, which also excited me because it was an additional connection we could make. We talked specifically about the SEQR process, which is the state environmental quality review. Any time a company applies for a permit or wants to expand their facility, they have to go through a review process to show what they are doing is not going to

have an environmental impact on people and the area around them. This is exactly what I learned in college, my own internships and at my two previous environmental justice positions. But environmental education is not just about educating folks on the issues at hand, it's also about using interaction with young people as an opportunity for youth development in general.

The first group I worked with at YMPJ was about seven or eight students, who were already in this program that existed before I got here. But a lot of young people joined the program later. In the summer right now we have 55 students who come through the summer youth employment program. I think summer program is really important because it's where we get the largest number of people who are new to social and environmental justice work, and it's where that connection needs to be made in order for people to feel that they want to come back. During the spring it's usually 20–25 students, and fall is about 30–40 students. We work to ensure that the young people from summer choose to stay with the program in fall and spring. I organized a lot of the activities with the first group. At first, it was boring for students because it was not stuff that they usually talked about. You learn about what governs the review process, but you also have to get evidence that we have to get ourselves. So I would go out to teach them about how to monitor air quality, how to describe the nature of a problem, who is impacted and how to explore the geographical details of the neighborhood that make the problem even worse. We would go out and take pictures of the neighborhood with the students, and then discuss what we see.

A challenge for me was to create ways not only to talk about it, but also to practice organizing on a consistent basis. When you are doing environmental education I think it's important to introduce the concepts, but what sticks is the experience of actually doing it. Talking about water quality testing in the classroom is different from actually doing water quality testing on the Bronx River. You understand these concepts better when you actually have done it, and you connect it to your other experiences. Why is water quality testing of the Bronx River is important in the first place? If you want people to come to the Bronx River, and you want them enjoy clean water. You make water quality testing relevant to everybody through certain steps.

One of the days that I'm thinking about specifically is the first day that I started to lead the water quality testing. We had to go to the end of the 174th Street Bridge, the blue bridge right off a block from here. At that time it was the only way that we could get down to the waterfront by Starlight Park because Concrete Plant Park had not opened up yet. Steve Oliveira, a previous YMPJ environmental educator, used to take water quality samples with a group of students, and they found that pH was higher than it should have been. They thought that it was the result of the impact of Jenna, the concrete facility. So we decided to continue water testing to be able to link this problem back to Jenna, to prove that it not only impacts the health of people by polluting air, but also impacts the health of the river. So the whole spring 2010 semester we concentrated on taking water quality samples on the river. I think the memorable experience that I had was the first time we did it. It sounded like a great idea, but I did not know how the young people were going to take it. We sat down and I explained the concept to them with the hope that we will be doing the water quality testing that day. We wend down there, and we were doing it, and I was amazed just seeing how excited they were about doing different tests. I had already been talking to a couple of them about this stuff this past year, and it was like, "We gotta do this, this is how we can use this process. We need to do an X amount of samples to be able to prove something." I just realized: this is literally an example of sessions where we do community building, organizing and action.

We help students take the concepts that they learn in schools and utilize them in our work. Let's say, the water monitoring can be looked at through a very strict biology or earth science lens when you talk about nitrification or pH levels. When the water is too basic certain set of organisms can't survive—to some of my youth it may sound really boring. They get more interested when you are talking about increasing access to a river, and if our job ultimately is to clean up the river, it can't be just about removing industry from the waterfront so they are not polluting. It also has to do with how to monitor water to see if your work is actually being effective. One of the biggest ways that you can indicate that is looking at plant life and fish. If you have more fish, then you know that the water is in some ways getting cleaner. You also know that pH level affects fish, and if fish can't survive, it means something wrong is happening. So my programs connect an academic theme from high school biology classes to real life in

your community.

One of YMPJ's recent environmental justice accomplishments has been the development and opening of Concrete Plant Park. In late 1990s YMPJ found through a community survey that one of the biggest issues for local people was access to open space to hang out and feel comfortable at all times instead of getting arrested by cops on streets. So YMPJ looked to the waterfront where there was a lot of abandoned open space. YMPJ and the community fought against the commercial development of that space, and eventually Congressman José Serrano was able to set aside money for the construction of the park, which transformed the former concrete plant site into the park that provides water access and recreation opportunities.

So when I joined YMPJ one of my roles was to build the presence of local residents in the park and to organize events in the park to make sure that people understood that this is their park and how it can be utilized. When you fight so long to get something created the last thing that you want is people not using it. Providing environmental education activities rooted in environmental justice and local community struggles helped us build connection of students from local schools to the park and the history of the organizing that took place. This summer, for example, we are conducting free community canoeing every Saturday in Concrete Plant Park. We are taking people on the river and giving the context to why it's important, how the park was established and what is the connection to the river. It's lovely to be on the river and see all the trees along waterfront. But then you canoe down the river and see a recycling and garbage facility right on the river. Concrete Plant Park also used to be a concrete manufacturing company on the river, and you understand that this does not happen the further north you go. You have the New York Botanical Garden and the Bronx Zoo, and once you get to Westchester where the demographic, color, and income of the people change, you also notice that the Bronx River looks a lot different. When you get downwards to us you get a lot more industry and the river is a lot dirtier, and that's not by a coincidence, we don't shy away from talking frankly about it. So for us environmental education in communities of color without racial analysis is meaningless.

We are developing young people through interaction with their neighborhoods, through canoeing as a specific practice, and through a narrative about this place. Sometimes we use a script to talk to people in the boats, "Is this the first time that you've been on the Bronx River? Did you know that the Bronx River is here? Why did you choose to come? Do you know that it took ten plus years to get this park? Do you know what combined sewage overflow is?" These trips are conducted by a mix of our staff, our young participants, and people from the neighborhood who have been trained as canoe guides. Again, it has to be people from the community who are leading it.

Another project that I conduct with youth is maintaining the green roof on top of St. Joan of Arc church, a building where our youth program is located. It shows to the community that this technology exists and that it can be done in our communities. But we also know that it's not enough. Our one green roof and two rain gardens around YMPJ are not going to retain all the storm water that causes combined sewage overflow. That's unrealistic. So we say that this is an example of how you can help solve that problem. I think the other part of it is not just showing that green roof exist in the communities of color, but that it can be done *by* a community of color. I think there are some people who do this type of work and look at it mainly as a technical issue—how to install this mechanisms of retaining storm water. For us it's more a community empowerment tool. There is a problem impacting your community, and the roof teaches you about how to address this problem. It's something that we have to be not only knowledgeable about, but *we* need to be doing this work. That causes a big challenge with organizations that work with green roofs and storm water: these organizations should know how to work with communities of color and enable people from these communities to lead these projects. If you don't live in the neighborhood where the Bronx River is at, then your participation should be from the role of a facilitator and assistance provider.

I think we need to develop more innovative ways of addressing environmental justice problems in communities where unemployment and poverty is high. The solutions should be rooted in grassroots principles so we can be more effective in bringing local folks into environmental work and the larger movement. I can't bring in somebody else to do a job in your community because that's not actively

developing the understanding and the capacity of the people themselves to work on that issue. If you don't build the capacity and then leave, what is left behind other than that project that you implemented? A community can't maintain a green roof or rainwater garden if nobody knows how to maintain it and nobody even understands why it's important in the first place. That has been one of the driving motivations that we think constantly about—how do we improve the quality of the Bronx River while also building the capacity of the people in the neighborhood to actively do that? So the goal of promoting environmental justice and stewardship is twofold. It's not just the quality of the river that's important, it's also about the understanding of the people in the community that the river is connected to them and that caring about your local environment is necessary.

You may have a community that is not used to having certain resources, and then all of the sudden you are given information that you have a right to access a river in your community. But you have to inform people that it's our responsibility to take care of that river because it's a part of our home. We also need to be ready to hold any entity that is polluting the river accountable. Sometimes on a Saturday volunteer day you may hear, "Well, I'm not really that interested in participating. I don't have anything else to do, but I'm not really that interested," as opposed to, "This is my river, and I have a responsibility for taking care of this river because I had to fight to get access to this river." The meaning of waking up on a Saturday morning to do some volunteer work will have a different level of connection. It's more of a personal obligation. So even if you don't end up going, just the narrative inside your head around the importance of stewardship is completely changed. I teach our young people that even an empty lot owned by a developer is part of *your* neighborhood, it does not matter who owns it. If a developer gets angry, you hold them accountable and ask, "If you owned this lot for ten years, why is that we had to clean the lot up and not you? For ten years you did absolutely nothing with it." It's building the connection that you have to those spaces in your neighborhood, and feeling that you have a right to these spaces. You connect a little differently to pulling weeds, which becomes more than just the physical act of pulling weeds. It becomes an act of the defiance, it becomes an act of ownership, "This is *my* neighborhood. I'm gonna take responsibility for this lot. And if you have a problem with it, then I'm gonna ask you why you did not take care of it if this is your lot."

I'm trying to teach youth in YMPJ about truly understanding your surroundings. I think there are a lot of different ways that you can look at your community, a lot of different lens through which you are looking at it. Like using a camera, you can have a basic lens to see things, but when you strap on that heavy-duty lens at the end of the camera you notice details that you would not have been able to notice with a disposable camera. Using a high-powered Canon is different than using a disposable camera. You may be seeing things using a disposable camera, but your understanding and your analysis of it is a lot deeper if you can notice details using the Canon. I use this analogy about the Bronx… I think that there are many experiences that the young people have that build their connection to the Bronx. But when you are developing a young person's critical thinking and young person's political analysis, I think their understanding of the community becomes more defined, and then you just have a more transformative connection to your neighborhood because you understand your role in that community a lot differently. You understand your relation to other people in the neighborhood, you don't focus on the division, but emphasize the similarities.

The Bronx River is a resource that some don't realize is a resource because of the disconnection from the waterfront due to industry and highways. There are a lot of people who live within a block from the Bronx River, who don't know that there is a river there, including some of our incoming students. This seems crazy. But when you think about it, it makes perfect sense. If you have no reason to go to a river, how would you know that a river is there? If your community is surrounded by highways that prevent you from getting to a river, how would you know that a river is there? If you know that the river is there, but all you see is trash in it, then your appreciation of it is like, "Well, this is mad dirty, why should I care about it?" Then what is your connection to it? "Well, it's a dirty river, I don't really need to be cleaning this up, I don't use it anyway"—because the lens that you have does not show that it's a resource. But then you realize the fact that not everybody has access to the river, but everybody deserves access to the river. Programs like YMPJ are for you to understand the history that explains why things are

there, why you have highways built through your community, and why they don't have to continue to be there. When you learn it, *how* you relate to your neighborhood gets so much deeper. And that's really what we want to provide as part of our environmental education. Stewardship is really important, but you have to connect it to community empowerment, which is an essential part of how we do our environmental education.

Some students from the neighborhood who join YMPJ just come to the program. A lot of folks come to us through the summer youth employment program; they have never been exposed to this work. We involve them in environmental education, and we do it around the stewardship work—how to take care of the Bronx River, what do we do about combined sewage overflow by using a rain barrel in our rain garden system. But a lot of that is also linked to a racial analysis, which is really in the core of environmental justice. We ask students, "How many green roofs have you seen in your neighborhood? How many rain barrels have you seen in the back? Do you even have ability to do a rain garden because we don't have grass, or farming on a mass scale? Are there any farms in the Bronx?" They are like, "No, because there is probably not a lot of open space, and that space is contaminated." So you are combining traditional stewardship with a more intentional focus race and class. A lot of this education is also through a workshop format, so we make sure there is a mixture of hands-on activities like the water quality testing and canoeing, as well as learning through discussions. Sometimes I use film to show examples of what we have done in the past and what other folks have done to express the importance of being part of communities that are fighting for environmental justice.

I learned some of my teaching approaches from my colleagues, including young people in YMPJ. Shanay Sneed was a youth organizer and now is my co-worker who I supervise. People like her are a big part of who I am now as a participant in the environmental justice movement and also an adult ally. She was really essential in helping me understand how to do environmental education through environmental justice in a way that can be fun and exciting—while using my skills and helping me fine-tune them to get other people involved. So it's not just about you being excited and passionate. Other people have to be passionate about it as well, and these methods are an art that come with practice and guidance. She really taught me a lot. And Andre Rivera, one of our youth participants, taught me a lot about how to be an effective environmental educator. He is an 18–year–old young man now. He is really passionate about what he wants to do, is a leader, and he provides a model for other youth for how to work with people, and he is a great example of how YMPJ fosters youth development through environmental education. He developed his character, responsibility and maturity, and through his example I learned that environmental education does not have to be separate from youth development; you can use it as a relationship building opportunity that helps support a young person.

I'm very proud of the young people I'm working with at YMPJ, and I have many experiences that I reference. The youth organizers who lead our work, Rasean Robinson, Tyreke Rambert, Lamar Robles and Andre Rivera, have each developed their own styles of doing environmental education for others. It's like seeing the product of your work over two and a half years, but having them explain issues in the community based on their own understanding. They speak from experiences that we have exposed them to, but based on their understanding and using their own words. I don't always know if the young people we work with realize how many different stereotypes they prove wrong—by the fact that you can have a group of young men and young women who a lot of people expect not to do anything with their lives, but you see them in the position of leadership, and you see that level of power that young people have. It is a constant reminder to me of why I do and love this work.

I have enjoyed and grown from my time at YMPJ, and I plan to continue to build up the organizing work around environmental justice with young people. We still have projects that have to be finished, and many residents to engage in our environmental education. I also think a lot about scale, taking some of our smaller projects and developing them so we have a larger impact both on the neighborhood, and throughout the city and country. And it's also about developing young people who will make this work sustainable, who will continue to do this work in the future. The work that I'm doing with the youth here and the gratification that I get from it is like nothing I've ever had. I believe I've been effective in what I'm doing to an extent, but I still look forward to further improve my skills of using environmental education to transform the neighborhood and the people who live in it.

"FIGHTING FOR ENVIRONMENTAL JUSTICE"

A STUDENT PROFILE OF ANDRE RIVERA

Youth Organizer, Youth Ministries for Peace and Justice
Interviews conducted by Alex Kudryavtsev on June 11 and August 11, 2010

Andre Rivera is a high school student and youth organizer in an after-school environmental education program at Youth Ministries for Peace and Justice. He works with other youth and his educators to green the community through fostering civic engagement, campaigning for new parks, redeveloping brownfields and cleaning up the Bronx River. In this narrative story Andre recounts his experiences as a student and youth organizer in YMPJ.

My name is Andre Christopher Rivera. I am 17 years old, and I go to Lehman High School. Both of my parents are Puerto Rican; one is raised in Manhattan and another is raised in the Bronx. I have one sister, two nephews and a niece. I was born in Manhattan at Metropolitan Hospital, but I grew up in the Bronx. I moved into this neighborhood about seven years ago, and I live in an apartment. My neighborhood is surrounded by three major highways. The quality of air in this area is terrible because of all the highways and truck traffic. A couple semesters ago I got hired at Youth Ministries for Peace and Justice (YMPJ) as a youth organizer. Basically what I do here is work on rain gardens, rain barrels, maintaining the green roof and work on the Bronx River canoe program. I also do tree stewardship with other students around the block. As a youth organizer, I work along with other students in YMPJ where I develop my leadership skills.

When you think about the Bronx, everybody thinks how it is all negative, with crime and pollution. This is true for some parts. We do have some crime and a lot of pollution. But I see the Bronx as my home because I live here. I grew up here, so anything that happens in the Bronx, especially the South Bronx, is very important to me. It became important because of the work I do in YMPJ. For example, a couple weeks ago there was an oil spill in the Bronx River—that's very important because it impacts the quality of water, the quality of life of the Bronx River. But before I came to YMPJ I did not know anything about the river. I did not know anything about parks. All I knew about the environment was trees and photosynthesis. But now I see that trees help to clean and beautify the environment. I began to learn about this over time.

I would describe the Bronx as multicultural and diverse. Multicultural—because we have different people from different backgrounds and income levels in the Bronx. The South Bronx is the community that has the poorest congressional representation, the highest asthma rates, the highest poverty rates, the highest dropout rates and some of the highest crime rates. But that does not mean we are a bad part of the city. It's just that we have the misfortunes of being the poorest congressional district. But on the good side of it we have a whole bunch of youth organizers and community leaders who are trying to improve the community. Success stories include creating new parks like the Concrete Plant Park, Hunts Point Riverside Park and the soon-to-be Starlight Park. The Bronx River here enters the poorest part of borough, which is probably not very fair, but we have to work on it. We deal with our responsibility as the community not to let it sit there and do something for it.

I came to YMPJ around 2003–2004, and I've been here for several years off and on. In the past, I would just go straight home after school, sleep and watch TV. I was not as social because I didn't have to be. During summers I would just go out to the Crotona Park pool or Orchard Beach. The only reason I came to YMPJ was that in school my teachers told me that I need to find something to keep me busy and become more social with people, "You have to do an after-school program." And my mother found this program on my block. When I first came in 2003–2004, I did not know much about the program just like anybody. It was just a random program that I walked to every day.

When I first started, I was skeptical about it, "Should I do it? Should I not?" When I first came in, I met the staff and went through orientation about how the program is going to run through the day. We

had some homework help if we needed. Maybe one of my most memorable moments with YMPJ was the first time I got onto the river and boated down the river in a canoe. You go from the North Bronx and you come down. In the beginning you can see the water, you can see the little fishes, and then you are coming to the South Bronx, "Wait, where are the fishes?" What you see is a floating rat, and you see floating trash. I think that in public schools we need a lot more education on such environmental issues. In school we are constantly studying, "Oh, a plant has this cell, and the animal has this cell." We are not talking about all the issues in our community, how our areas are extremely polluted, or how we can't have access to the river because there is so much industry on our riverbanks. In schools we don't even learn about pollution, we don't learn about other stuff that YMPJ teaches.

Each group of youth in after-school programs in YMPJ has a project in the community, and you work to improve that project over time. Sometimes this means going to do rallies, doing community gardening, some kind of civil service for a community. When I first started, I participated in the asthma campaign, which is about all the pollution because we have 17% rate of asthma, and that's due to the three major highways—Sheridan, Cross Bronx and Bruckner. The dust pollutes the air and goes to people's apartments. So I started off working on asthma campaign to educate the community.

Soon after, I ended up working with an environmental educator Steve Oliveira. He introduced me to the whole idea of canoeing, gardening and doing fish quality studies in the Bronx River. He educated me about how to catch fish and what types of fish there were, what types of trees there were, how to plant a tree, how to plant native species, how to identify them and how to pull up weeds. We had about 10 to 15 students in the environmental group that started off with Steve. During the summer we would work about 25 hours a week, and then during the school about an hour and a half four days a week.

I have been with YMPJ for about 6 years, but have been a youth organizer for the last two years. Youth organizers help to train new members. During school year we get maybe 5 to 10 students in the environmental program each semester. But during the summer we have many students coming here through the summer youth employment program. We give them orientation, we tell them about different environmental and social campaigns, like the combined sewage overflows. We teach them about the steps to do it, different organizing skills and different gardening skills. As a youth organizer I get to go out to the community and work with the trainees on how to use what we've learned during our campaign sessions. For example, we talk about the history and ecology of the Bronx River while canoeing.

Overall in YMPJ, you get a lot of different experiences depending on what you want to do. Just because I work in the environmental team does not mean that I don't have other experiences with other groups in YMPJ. I can work with the environmental team, but we all collaborate on larger social injustice issues, including environmental injustices, educational injustice, cops beating up people, and immigration issues. I focus on the environment, but environmental students in YMPJ still work with other students as a whole to support one larger project, which is to restore our community and bring it where it should be. I think that every person that comes to this organization has their own unique way of doing things. As a youth organizer I think I'm a reliable person. You can tell me, "Andre, I want you to meet with you at this time, or I want you to come to help me out." I'm going to come regardless if I have time or not, I make space to represent the organization. I have not gotten tired of doing that, although I've been with YMPJ for several years.

We are trying to educate our community that the Bronx River is an important resource. You can't see the river in the community unless you cross over a bridge, and the community does not have access to it unless you walk along the side of the highway. People can't access the river because the highway blocks the access. You can't use the river right here, for example, to fish. The first time I went fishing to test toxicity in the water we started fishing near the bridge in our community, but the hoods and lures got stuck to the bottom maybe because of trash. We could not pull the rod. So we left that place to go to another park called Bronx River Park. My first time going there I threw the rod, and the guy in the park said, "This is how you tie the lure." I guess I made some mistakes because there was a catfish on the end of it, and I let it go. When I pull up the rod, he is like, "No, don't pull it up." Fish went. So then I threw it back in and I caught a catfish for the first time ever. I never saw a catfish in my life, I never thought there would be a catfish in the Bronx River. We caught eels, a crab and some fishes. When we came back to the

organization we basically wrapped them up in plastic, froze them, and sent samples to a lab in Virginia, and they tested them for the toxins.

The results for the toxin tests say that you can eat only one fish a month to stay safe because of toxins. You can eat only one fish no matter how much you catch. But unfortunately fishermen catch striped bass and bluefish in the Bronx River in Concrete Plant Park, and sell them for like $20. But the quality of that fish is not good. These people say that they have been fishing all their lives, they have been eating this fish, and nothing happens to them. At the same time, plant life and animal life is dying in the river because of pollution from combined sewer overflows.

To prevent rainwater from going into sewer contributing to sewer overflows, we built the green roof on the St Joan of Arc Church, which is next to our office. Basically it's a rooftop garden. Instead of regular soil you have specially engineered soil, it's lightweight so it won't take down the roof. It takes up one half of the roof. It collects water instead of it going to sewer, it uses the sunlight. In summertime when they have masses in church you don't feel the heat under the green roof. And in wintertime the roof keeps the church warm. It also holds native species that are native to this community. I was not here when the roof was established, but I participate in its maintenance: pulling up weeds, watering, planting some rosemary, onions and sunflowers. I've seen people who have been amazed by seeing a garden on the roof. They are like, "What is the garden doing on the roof?" In addition, we collect water on our roof to get water for our garden. People have been amazed by seeing the pipes going from the roof to rain barrels in the garden, "Why is this water goes in, why you just don't water it?" I say, "Instead of just wasting water every day and spraying it with water hose you can just have it off the roof when it rains and put it through the garden."

I actually helped Julien Terrell, the Director of Organizing at YMPJ, to teach students from Phipps CDC and THE POINT CDC about our rain barrel system and the green roof because we are working with them on a demonstration project for the community, a project that promotes rooftop rainwater harvesting. We came up with this project because the research shows that if you reduce the amount of rain that goes into the sewer, the pollution of the river will reduce. So we collect the water that comes from our roof in a rain barrel and use it to water our plants. But before that we had to look at our gardens, mix the soil with sand and compost, which is actually coming from worm poop and elephant poop from the Bronx Zoo, and mix that with mulch. Then we hooked up plastic tubes from the roof to a barrel, and then a hose goes under the garden. After we implemented the rain barrel system we never had floods in the basement of the office.

The education is not only for our own community. For example, last summer one of the main things we were doing was working on a service day with the Bronx River Community Houses, which is a housing development authority across the street. They had 200 kids from all over the city coming to this community, and planting trees and shrubs. And we had even a group of high school students from the North Carolina countryside helping us plant a couple of flowers and native species in the community near the senior houses. Many of them said, "Oh my god, I can't believe all the pollution that we see, all the noise." They told us that it's a lot different in North Carolina, they don't have buses like we do, the air quality there is a lot different, there is no that much noise, there are more plants and trees. These students were mostly Caucasian kids, and in this neighborhood you find mostly Latin American and African American people. They were helping us, that's what counts, no matter what color you are. As long as you are doing something to help your environment, you are doing good job.

We are living in the South Bronx—the poorest congressional district in the whole United States. We are the last of the last people to get any funding for anything. I noticed it when I did the first Bronx River Flotilla with YMPJ. We would go up to 218th Street. We went canoeing down the Bronx River from the cleanest part of the river to the dirtiest. It's like two and a half hour ride. You would see the cleanest part of the river, see the river shining, you pass the Bronx Zoo, see the buffalos and stuff. You have to pick the canoes and carry them over the dams and the waterfalls. And then we hit this part of the river where all we've seen was tires and car parts. It displayed how the community is organized. You go up north, and the community is extremely clean, but when you go down south, it's where the pollution and trash in the water. It's also the problem of ownership of the community. If the politicians and the

government who are in charge of the community don't want to keep it clean, then it's your responsibility to do it. YMPJ shows a way to do it and get people to do it. Youth learn that you are stewards, and you should be able to treat the community as it would be your house or your own family.

Once in a while we have community forums to discuss this. We talk about issues in the community and sometimes the fathers and the mothers come and talk about their issues with us. And when we have the youth summits and national social forums, we meet people who have been pioneers in organizations, done the environmental work, and set standards for us. For example, the last United States Social Forum was in Detroit, Michigan. I went there with five other youth organizers and two adults from YMPJ. We were going to join other groups around the nation to do the work that we do, to meet and network with other organizations, and to conduct a workshop on education justice.

When we went to Detroit, we were driving down blocks of abandoned broken buildings. We passed five blocks with nobody, and they were broken up. Buildings were abandoned, broken glass, fields that had nothing but dirt. The only places that were good—it was the convention center and baseball field. They had a food market that was almost as big as in Hunts Point in the Bronx. The South Bronx may still be poor, but Detroit was poor by definition. Their problems and their community problems got worse compared to other communities.

Being in Detroit for a week, you understand how different it is compared to the Bronx. It made me appreciate my home a lot better than I did. You go there, and you say, "Oh, look, I come from the South Bronx, the poorest district in the United States. And we have these polluted rivers. But you go over there, and it's abandoned." You can't find people walking down the block, if you do—it's like maybe one person per hour. And most people who live there are homeless. I've seen a homeless guy on the street, there was a homeless guy who was actually sleeping next to our bus stop. Everybody kept on stepping over him to get on the bus. Their buses were broken down, very old, had no air conditioning. I think it's good to go in a different community and compare it to your own community. Now I better see the issues that we still have to fight in my community.

Maybe one of the most successful issues that YMPJ campaigned for was Concrete Plant Park, which opened last fall. We had the opportunity to celebrate the opening with a whole bunch of organizations and the Park's Commissioner Adrian Benepe. We had Adam Green from Rocking the Boat, Adam Liebowitz from THE POINT CDC come and talk about their work. We had our display board representing our past and present work that we've done in Concrete Plant Park. It used to be a cement plant. After it was closed they were going to put a truck route through. But YMPJ along with Parks Department wanted to keep that space and create a park. It took about 11 years to have it open, and now it serves as a riverfront park. It has the stairs to go down to the river, so you can go and canoe from that park, or bike through the park from Westchester Avenue to the Hunts Point community in five minutes.

Another trip outside of the Bronx was to Freedom Farm, which is upstate. Freedom Farm was created by YMPJ alumni to serve the community, grow fresh organic food, and help out people who need help. The people who are in charge of Freedom Farm were youth organizers with YMPJ when the organization was created. Instead of going to McDonald's, you make something that's organic. We made pancakes of whole wheat and farm milk. Nothing was pasteurized, nothing with pesticides or chemically changed. This summer we took summer youth employment students to Freedom Farm. Their first impression was like, "Oh god, this food is nasty, of my god, these bugs are all over me." They are not used to having bugs on them, they are not used to grass, they are not used to trees that are truly green. So they were like, "All these bugs are bothering me." Students were scared of cows, they would scream when the fly would come close. I was like, "Hey, this is the same fly that's in the Bronx, the same fly that's in your community, but maybe it's just upstate and is a lot bigger and healthier." When you step out of your own comfort zone and go to Freedom Farm you think it's awkward and weird, and kind of crazy. But then you understand that living in the Bronx is unhealthy, and we need to work on issues.

Another memorable experience in YMPJ was building a raft representing the Bronx River watershed. Alex Levi from SLO Architecture came with his wife to YMPJ and did a presentation of the project, which we liked and then worked on it. We made this raft in the basement of the St Joan of Arc church. We basically took recycled stuff such as bottles, umbrellas, Metro Cards—and we built a raft of

it, a big floating raft that looked like the model of the Bronx River watershed. We took umbrellas and created hills that the community has. We created the train stations. We took bottles and put steel wires through them to create the greenway. We took markers and colored in colors of the Bronx River. We took little square pipes and made them the sewage outflow pipes. We took three branches and glued them together to make the forest parts of the city. We took Metro Cards to make them like trees and the community map.

We worked on this raft for two or three months. Towards the ending we had to put different sectors of the raft together and put everything on top of empty bottles. When we put it on the river it floated perfectly fine. We had it float in the Bronx River by Concrete Plant Park last fall when it first opened. The big challenge with that was that we could not find anywhere to put it to store and preserve. So we took it to the recycling plant on the Bronx River in Hunts Point and recycled it. The raft was tied to canoes, and we floated it to the recycling plant. The recycling plant is on the riverfront. Barges and tugboats are coming to pick up trash. And that day there was a big tugboat coming and we almost got smashed in canoes. They stopped in the last minute and we saw this big arm that came off a construction vehicle, and it threw the whole raft on top of the barge. All this work that we did for a couple of months was gone in a couple of seconds.

I think the best way to teach students in the community about the environment is to do it physically. Don't put them into seats and talk them about facts because it's boring. Instead of lecturing you can actually show them in person, which is more fun. You have to find an activity that interests them and shows them the difference. Take them out of the city, go upstate to a farm, eat organic food, then compare it to a supermarket food. Taste that, taste this, which one tastes better. Of course you are going to say that food from the supermarket you are used to tastes better. But you have to be able to show them the dynamic of being a youth in the South Bronx, and present the dynamic of being a youth outside the South Bronx. And of course I often notice a difference between students in YMPJ and the outside community. I think they are accustomed to what we call "wasting" and we are accustomed to recycling and reusing. As a youth organizer I have to understand, "Okay, you come from a different background." Most of my schoolmates don't work in environmental organizations, and don't really care. Some people in the community say, "I don't care," but some people say, "Let me join that program."

I'm going to senior year in high school. In the future I want to focus on political science—doing the organizing work I do in YMPJ, but on a higher level as a politician. I'd like to tell people what is wrong in the community and what needs to be fixed. I'd like to be a leader, not a follower. I want to do environmental science too. I still want to do the work I do here, but on a higher level and in a more educated way. I would like to get a public office to educate and influence a whole bunch of people, maybe to be a Parks Commissioner, maybe a councilman, I'm not sure yet. So in a couple of years I'm going to college to study the community and the environment. And then I'll probably come right back to this community.

I don't want to go to college too far, probably I'll go upstate. I still want to be home at the same time. I want to experience different communities, see how they work with environmental stuff. But at the same time I want to be here too. I don't want to be one of those kids who grows up, becomes a leader of their organizations and does not bring it back to the community. I get a lot from the community, and I give a lot to the community. I want to be able to give and still take at the same time, but do it fairly and properly. For instance, Jennifer Lopez—she grew up in the South Bronx, and now she is a big hip-hop star. She lives somewhere in Hollywood, and from what I know she does not give enough back to the community or we just don't hear about that.

I want to be one of those who takes from the community and brings something back. From this community I get experiences and first-hand stories about how people have grown up here, and how they've seen the community change because of the work that we do as environmental activists, youth organizers and coordinators. After college I want to be able to come back to the community, ask them what they want, be able to give them what they want, and be able to teach kids and the community about environmental justice.

"MY EXPERIENCE ALONG THE BRONX RIVER"

A STUDENT PROFILE OF CELINA "CICY" MEDINA

Program Assistant, Rocking the Boat
Interviews conducted by Alex Kudryavtsev on May 30, 2010

Celina Medina is a program assistant at Rocking the Boat. In this story she tells about her experiences growing up in the South Bronx, and then participating in the On-Water program at Rocking the Boat as a student and an apprentice. She learned about the Bronx River and developed her teaching skills, which allowed her to work as a program assistant at Rocking the Boat and recreation assistant at the Bronx River Alliance. Cicy wants to pursue a teaching career and improve underserved communities by educating people about the environment.

My name is Celina Medina, and I'm 19 years old. At this point in time I am a Rocking the Boat program assistant for the On-Water program. I also have recently been working with the Bronx River Alliance as a recreation assistant. My days usually include taking kids out on the water on canoes and rowboats, and pretty much educating the public overall.

I grew up here in the South Bronx. For most of my life I lived by 149th Street, not so far from here in the Hunts Point area, and now I live in the Soundview section of the Bronx, which is probably about less than a mile from here, right across the river. So I've been in this area my entire life. I live with my mom. My dad lives not too far from me. I have one brother, he is five years older than me, and lives in Harlem with his wife and two children. My mom and my dad were both born here. They grew up right on Bruckner Expressway, right next door to each other. And all of my grandparents were born in different parts of Puerto Rico. My mom, my dad, and everyone in my family besides me speak Spanish. I'm not in touch with my Hispanic culture.

When I was younger my mom was a community developer, working for building management. She worked within the building that we lived in. She had her own office and everyone would come to her for any kind of complaints about the building or the neighborhood, about hot water, something broken, getting guys to come and fix it. She hosted tenant meetings, ran block parties and after-school programs where kids could come and do homework. It was within building, so it was just a safe place that I would go through my younger years, hanging out with the kids in the building. My mom was kind of the light on the block and very popular because people came to her with their problems. Everybody would ask, "When are you going to do the next party on the block?" I did not want to admit it before, but my mom and her work influenced me a lot. My mom used to do what I'm doing now, helping the community. I wanted to do what she did, something very positive. I thought that maybe I could go off what I learned from her, do my own thing, and try to improve this part of the Bronx.

My mom did not let me hang out outside because my block back in 90's was a gang-related block, and she did not want me involved in the types of things that was happening on the block. During that time there was a lot of blood on that block, and a lot of people would get cut. So I was lucky because she kept me inside. And my brother was kind of positive, he helped me stay in school, and just kept goofy in my house. It was always fun. When we were not playing outside, we would just hang out in the house, messing around. My block was actually really neat. It was a real closeness, one person did something, everyone knew. But it was kind of separated. There were Blacks on this side of the block and Hispanics on this side. They got along well, but it was tough. I knew of some stories going on, and I just would stay upstairs and look up the window, "What's going on there?" There was a lot of drama and too many kids hanging out.

I went to middle school M.S. 302, and Clinton, which is a high school not close to here, but it's also in the Bronx. I found it kind of difficult to get the help I needed within the school. I guess curriculum-wise they taught what they had to teach, but there was not really much of support in that school. It was the school of 5,000 kids, so it was not really any one-on-one support or teaching ever. We

were just grouped most of the time. It was pretty hard. The graduation rate is pretty low, but people are trying to get through it.

As a child, for the most part I would just study in school. And in summer time I would stay with my mom with her after-school program; we went on trips. We would do trips to local places like Riverbank State Park. We used to go just everywhere, we were like, "Where should we go next?" My mom would organize this with a few people in the office, and we would just go off and try to escape. People in the neighborhood wanted to get out of the neighborhood because there were a lot of negative happenings there. I never thought about the environment in which I lived. Right across the street next to my building there was a trucking company. When I would look out of the window from my living room I saw a trucking company, I smelled burning rubber. I don't know why they burned rubber. It's not too far from Hunts Point, the main industrial area in the Bronx.

I got into Rocking the Boat when I was a sophomore in high school in the fall of 2005. Stephanie, my best friend since 6th grade, came home with funny photos of her in a yellow rain jacket, and I'm like, "What are you doing?" It was just ridiculous: in the pictures I see a river behind her, and I'm just like, "Where were you? What have you been doing three days a week?" Then she took me to Clason Point, a park on the East River where Rocking the Boat was. I never had that opportunity to get on the water. But I knew that specific park because my grandfather had taken my brother, my cousin and me to hang out there. My grandfather used to keep coins in a jar, he would wait for a while, turn his coins in, and then take that jar of coins and spend money on us for a day. He would take us to Clason Point park. So when I came to Rocking the Boat I had that positive feelings for that park because my grandfather took me there. Everything about this park was so special to me. When I went on the water, I rowed, got hooked and kept on going to Rocking the Boat.

I can't remember exactly my first day at Rocking the Boat, but Anthony "Tony" Archino was the On-Water Director, and Seth was another educator. I remember we studied maps on the first day, "This is where we are." Tony and Seth had this relationship that they could just bounce off each other, and make a lesson hilarious and informational. They just kept it interesting. Right after that we got on the water, and I was freaking out because the oars were so heavy I remember asking, "How do people actually row?" I could not get it. [laughing] I had no upper body strength at that point. What I remember is struggling with the oars. And the first feeling: when I got into the boat, someone else stepped in, I felt the boat sway, and that initial sway was just, "Oh no!" After that I just got used to it, and it was just fun besides the oars. You could use oars to build muscles, and I built it eventually. As a student I struggled with oars being heavy for maybe about a year and a half. I pushed, I just kept on trying and kept on building muscle. Those oars were killing me, but you kind of build the relationship with the oars, so it's funny.

I remember one day—we had High Tide; this boat was a flat bottom, which allows to turn really fast on the water. We were practicing maneuvering and playing boat tag. Will, a fellow student, was the best rower. So he is bugging out with me and another student, the sun is beaming on us, we are dehydrated, and we just keep on going of course. And Will is like, "My arm is swelling…" We started pouring water on him because he was sweating so much and he was the only one rowing. We would just have so much fun. I guess he had sun block mixed with sweat, so it started burning his eyes when we put the water, and he is freaking out. [laughing] It was just so funny because he had to keep it going, his arms started cramping, we were laughing at him. It was a typical day of us just hanging out. We did have time where we were really working on projects. But there was time where we just hanged out on the water.
I was a student at Rocking the Boat about two years, and Tony was my educator the entire time. Everything I learned is just like one big ball of information, it's so integrated. Then they opened up a Job Skills part of the program, I think it's 2007. I think I was in Job Skills for another year and a half before I became a program assistant. Tony was the Job skills director when that program opened up. It's beneficial for the teacher to know who the students are, it saves a lot of class time trying to figure out what every students' weak points are, and what are strong points. But having had them last year, he knew what we were knowledgeable of and what we didn't know. So he skipped that whole first part and just got to business. I think that's what our advantage was in Job Skills. We already had that relationship with Tony. He already was like a father figure.

I remember that as a Job Skills apprentice it was difficult to get up so early in the morning to do the oyster reef restoration work by the mouth of the Bronx River. We used to catch the lowest low tide. I don't know the science of it, but Tony knows that one day every month the tide is at it's lowest point, in the morning hours or the late night hours. So we had to be here by 6:00 in the morning, and on the water by 6:30. I'm not sure whether Tony had picked us up, or if we all met up to get here together because it was really early to be in the Hunts Point area because it was still dark at that time. It was warm, so I'm assuming it had to be in the spring. By the time we were on the water the sun was up, so we were not rowing in the dark. My role that day had me on the shoreline. We had a system going. We had mesh bags full of clamshells, and we were transporting the bags to the trays that we had then set them into the water. I was passing the bags, traveling back and forth. The people who were in the water were wearing waders. I had a pair of big boots on me that day, and it was really mucky by the area because of the lowest tide, really muddy, the river bottom was exposed. The mud really sucks you in when you step foot in it, and you are stuck. So I had boots on, my foot went too deep into the mud, then my foot slipped out of the boot, and I was wobbling on one foot for a while, and then I fell right into the muck. I was wearing my white basketball shorts. It was the worst. I was really pissed off, but we kept on going. And next time I was like, "I'm not getting out of the boat." So they kept me in the boat for the next monitoring session, and I was checking to see what kind of organisms we found in the bags, I was just checking it off on our data collection sheet. And they sent me in the water eventually after they let me get over the fear of going back into that area that can suck you in. That's just one example of the projects that we did, we had done that a few times.

Oh, I remember one time in that same area, but I did not have waders. We were doing a monitoring session. We had to walk because it was too shallow, we were getting stuck because it was really rocky in that area, we could not really row because it was just rocks everywhere. So we had to get out and walk the boats along the riverbank because the tide was petty low there too. And I'm wearing a pair of dunks, a form of Nike sneakers. I loved those dunks, I paid a lot for them, but I had to get out of the boat. I knew I should not have worn these expensive sneakers to Rocking the Boat. But I just had to jump out and walk in the muck and kind of walk through with them. I was freaking out. I have so many experiences about the muck in the river. I also think I hold the record for falling in by the shore and falling out of canoes. I always fall in when I'm doing our Dam Tour with Rocking the Boat or have a trip with the Bronx River Alliance who I work now. Rocking the Boat students always get to see me falling. They know me, they are like, "Oh, she is cool." They all think I'm great and stuff, but when I go into the kayak I'm always looking bad in front of them. I think it's ironic, and it's just funny.

I think I started at Rocking the Boat not being able to creatively think at all. I would always go to Tony for everything, for any issue, It would not even cross my mind that I could figure things out myself. So I guess Rocking the Boat helped me to get this confidence in myself. I got some critical thinking skills and was able to have confidence to make decisions. Tony is always pushing me to work for me. I'm this kind of person who needs a push from someone. Most of time I'm helping someone, and he is like, "You have to look at yourself, and help yourself first." And that's also something that I'm kind of trying to work on now.

I graduated from high school in 2008. I took a whole year off, and then in September 2009 I went to Hostos Community College. I'm still in Hostos. In 2009 I became a program assistant here helping the On-Water program. Rocking the Boat has two On-Water programs, The day program which has schools come for class trips. The other On- Water program is after school where students come in and become environmentally conscious. I was in the day program with Chrissy Word. What I learned in Job Skills is so helpful because by the time I became a program assistant I knew everything that needed to be said on the river. Plus I had an advantage because I was working with the Bronx River Alliance at the same time. So I was getting information about other sections of the river from Damian Griffin at the Alliance, and he is very knowledgeable when it came to history, and he had been drilling me with information. So going back and forth between Rocking the Boat and the Bronx River Alliance I got a bunch of information that I can offer to participants of the On-Water program. I never realized how much I know about the Bronx River until Chrissy spotlighted me during a trip with kids, "So Cicy will talk about history." And she

would have to take the spotlight from me because I would just go on and on about history.

I remember that I did not have much knowledge of the Bronx River or the Bronx. I was not aware of real nature in the Bronx at all, and I always had trouble to getting to a park. There were no real parks or trees around during my younger years. When I lived in Avenue St John near Bruckner, it was mostly concrete all over. There is a small park by my house in Soundview, and I did not think much of it. I was ignorant to the fact that there were no parks. I did not know that parks were supposed to be. I was just living, I knew what I knew, and I saw what I saw on the daily basis. I was ignorant of any better living. I did not know anything about it. My mother did not focus on parks and greenery, her main focused was on people.

Before Rocking the Boat I did not have any consciousness for environmental issues or anything that was going on. I just had this one way of life. I was not really worried about anything that was going on around me. I was just channeled into what my life was about. It was pretty much school and trying to be cool, of course, trying to have fun with right friends, and going to the right places. At that point life was about hanging out. But when I came to RTB, it opened my mind. It drew me in because I lived here my entire life, and it showed me parts of the Bronx I had never seen. And then I stood at RTB because I felt obligated since I lived here, I was educated about issues that are going on. I felt I had to stay. I could not stop doing Rocking the Boat, I feel like I would fail the world if I left Rocking the Boat. How could I not want to help this area? I felt I had to do things to help out. When you don't know of any issues, then you are not bothered by it because it does not exist in your world. But as soon as I came here, I was no longer ignorant to what was going on here, I had no choice, I felt like I had to help out.

When I first came to Rocking the Boat I learned the basic issues on the river, like pollution and combined sewer overflow. I learned basic maritime things. In the beginning we never got really in-depth of any real issues. And when I got into Job Skills, it was the main projects, like planting spartina grass along riverbanks, doing a creel survey that we use as an indication of how the river is doing. We learned the science of it, why the salt marshes are so important. Then the history of the Bronx became apart of our focus; the history of this area, its total disregard for the last 200 years, and basically all the restoration efforts in place to try and bring it back.

When I was an apprentice in Job Skills at Rocking the Boat we worked in collaboration with the Bronx River Alliance. They provided canoe and kayak training for the Job Skills apprentices. And I became canoe and kayak certified through the American Canoe Association. Michael Hunter, who was the recreation program director at the Bronx River Alliance, trained me. For example, he taught me and Josue, who was also an apprentice from Rocking the Boat, everything that we needed to know, basic strokes, how to do t-rescues when canoes flip over. Then Michael's two assistants left, so there were two positions open. In order to apply for the job, you had to be canoe and kayak certified, and you had to know the river in order to take community and school groups down the river. They knew me and Josue already, and they gave us this job in the summer of 2008.

During the last two years as the recreation assistant at the Bronx River Alliance I was responsible for equipment and making things run smoothly, giving the speech as to what to do on the water, what to expect, safety procedures and how to paddle. Sometimes I was put on the spot to give some history talk. Josue and I brushed up on history when we were in Job Skills at Rocking the Boat through our Dam Tour, which gave made us familiar with the dams in the upper part of the river where the Bronx River Alliance conducts community trips. For the spring we probably had just a few trips because it's the opening of the season. But in the Summer and Fall we were on the river daily. Usually depending on the groups' experience in canoeing and kayaking we had a few types of trips. For the most part we had the Upper River Run from 219th Street to Mitsubishi River Walk in the Bronx Zoo, which takes two or three hours. Or we conducted our extended trip from 219th Street to Boston Road.

At the same time, I started college in 2009, I went to Hostos Community College. I had pretty good grades, and I started as liberal arts major because I was not really sure, "There is so much that I could do." And after the first semester I got 3.4 GPA. I was extremely happy about that because in high school teachers were telling me that I'd burn if I went to college, that there is no way that I'd be able to handle the work in college if I was not doing the work in their class at the moment. In college I worked

hard to prove them wrong. I felt like going to my old school and showing it in their face, but of course it would not prove anything.

I changed my major after the first semester to early childhood education. And this last semester I was kind of going through some stuff, and dropped to a 2.8 GPA, but I passed all my classes. I was supposed to fail a class, but my teacher went easy on me, he gave me a D, so I'm very thankful. It could have been so much worse. At this point I'm leaning toward teaching. Right now I'm not interested in teaching inside of classroom. I might just tolerate teaching inside a classroom for a while to get that experience and more teaching skills. I want to keep it environmental and recreational. I want just to get the basics for being able to teach and get some real paperwork to say, "I can teach, guys!" So I got a D in childhood education because I gave in all my papers late. I work well under pressure, if the pressure isn't on I work on my own time. But I did my assignments, I would give them in late because I did not want to freak out about getting something done at one moment when I was busy with something else.

I'm trying to balance my school, working at the Bronx River Alliance and working at Rocking the Boat. For the fall and winter I was only working probably two or three full days a week with the Alliance. We were not having any trips in the winter, and I did administrative work. Now I'm scheduled to work three days a week. But my schedule at the Alliance conflicts with my schedule at Rocking the Boat, so I may leave either Rocking the Boat or the Alliance. Like Tony Archino mentioned, there is a point where you've been somewhere long enough, and it's about time when you know it's time to go. I've gotten all I could get form the program, so there is nothing else for me to do but to leave that for people who are up and coming. And now I'm helping Chrissy to train her new program assistants who are not as experienced. I want the program to continue to thrive and to be successful. I want everyone be up to par where they need to be on the water and in education. I do love it, but you just got to get out when you need to. I want more experience elsewhere, kind of keep on going, so that when it's time for me to teach—I can teach well and really give the kids something to remember.

I think that when I started at Rocking the Boat I was really disdainful toward people in general. I'd walk around and always got stopped not smiling. I was angry because I did not understand why the community was not involved in environmental issues. I had this anger inside of me at first at Rocking the Boat. I got upset that there is only such a small group of people who were trying to make a big difference, and that everyone else in the community were not even trying to make an effort to try to help. It actually was kind of like two different worlds. In my mind I had it as this: the community does not care, and there is a small group that does care and is trying to make a big difference. And being a part of that small group I though of it at first as opposing sides rather than "we should get them all together" because I was just angry. And learning more about it, I realized that we need the help of other people and we need to educate them. That transition happened fast. I was angry until I really got the information and it changed my whole outlook to them. I know that other people can help the environment. If they knew what was going on, they would. Just like I did not know, and then I was educated.

And besides working here and getting random groups coming I try to get all the kids, "you should come and join us," or give them some positive feedback, "you should do this" if they show a smidgen of interest in what I'm doing. I'm emailing them, trying to get them to just come down and show some interest to get into it. I'm trying to get people come and volunteer. The high school students—they respect me as an educator and as a friend because I talk just like they do.

Just the other day at the Bronx River Alliance we had a group of 25 high school students from Brooklyn. During the trip one of the students was a little kid who was a little troubled through the trip, he was like a thug. I asked them, "What do you plan on doing with your future?" And he told me, "I'm going to stay in the family business." And I asked, "And what business is that?" And he said, "street pharmacist," which is a drug dealer. And I said, "Dude, just go to college. Stay in school and go to college, please." He walked off, and that was the end of that. And Damian Griffin, with whom I conducted the trip, looked at me, "Did you just tell him to go to college?" I was like, "Yeah." And he looked at me funny, and I explained to him what happened, and he did not say anything. But I think we realized that it was just a trip, it was about reaching the kid and giving them something to model about. Maybe students would look at it and say, "She might be right. She is just like me. She is doing this, and I

don't have to do that." Maybe I changed the life of this student by saying something, maybe I'm just contributing to something positive that changes his life. If more people tell him to go to college, then just maybe he actually goes. We often see people who have never experienced the things you have, and they tell you what they think you should do. But they don't really know what you are going through, they've never been through anything that's even close to your hardships in the Bronx. I think it's important to have someone who is similar to you who has been in similar situations—it gives you more of a connection. So who knows, maybe the kid that I told to go to college actually goes and makes something of himself.

And for the students who are forced to come for class trips—we get a lot of them who are like, "I want to do this," and some are like, "Oh my god, I hate this." You get frustrated when you are the first time on a canoe. It's hard to control it. So students are frustrated for the first half of the trip. On average by mid-trip they are still mad, but they are calming down. When we end up at the Botanical Garden, they are happy, "This is awesome! We got to get out of boats? No!" I don't know what that does for them in the long run. But just during the trip you see them change completely. Just like the other day on the trip with this girl—she was freaking out the whole trip, "I don't want to do this!" She was just mad. And at the end she is like, "Thank you Damian!" Sudden change. Some of them like the fact that it's over, but most of time they are happy with the experience.

Some of student groups that I lead know that there is the Bronx River, they've heard of it, but they don't know much about it. Kids from the Bronx who know about the river have that negative outlook of the river, they are freaking out. I think that people who live here think that it's dirty, whatever other people may have told them. Students from Brooklyn who don't know much about it, they don't have that negative outlook at the river, they are excited. I think the negative outlook at the river in the Bronx is changing very slowly, especially since we have people in high positions trying to help us out in raising awareness through the media. We've been on the news a few times, the word is getting out. The Bronx River Alliance is always expanding, and within the organization we are trying to get world out to people in general. We are trying to do as much outreach to people as we can, just spread the word about the safety of the river. I think everybody here is trying to spread the word because they know that as long as everyone is educated, maybe they can participate in recreation and restoring the river.

I also tried to take my brother and his daughter out here. I don't understand why they don't want to come here. I guess they still have this whole outlook of this area in general that they got to go to Hunts Point area. My dad used to work here in the Hunts Point produce market, so he told my mom what's going on with prostitution. My parents lived not too far from here the entire life, so they know what went on when they grew up here, and they know that it was all about drugs, everything you could think of here. This neighborhood is changing, but they still have that mentality, and they brushed my brother up on it, so he also has that mentality. They don't want to come to this area. My family drives through, but my brother won't take his kids to the park here. It's pretty sad.

I think that since we lack parks in this area we don't have respect for parks. This is just my opinion. But, for instance, this park—Hunts Point Riverside Park—is fairly new and not many people know about it. It's clean for now, but when it becomes more popular I'm sure that it will become filthy with trash. Since we don't have parks in this community, we don't understand it and we don't have respect for it. We don't have value for them because we don't know them. We are ignorant to the fact that parks can be so helpful to our health and offer a place to go. Somewhere that's not your block. If we had more parks and more access to green space, we'd have something positive to go to, some fresh air to breath in and a place to get away from streets. Now wherever you go it's mostly concrete, it's everywhere, it's just a block, and it's sad. [crying]

I am not sure what I'll do after I graduate from Hostos Community College. Right now I want to go to a SUNY school, in particular I want to go to SUNY College of Environmental Science and Forestry. Everything in this school is based on the environment. For right now that's what I plan on doing. Whatever it takes. I know that I'm going to teach somewhere. I'm going to teach about the environment or maybe recreation. I'm not really sure what I'll end up doing as opinions and goals change over time, but teaching is just something that I want to have under my belt. Since Rocking the Boat I have planned to leave the Bronx, better myself, and come back to make it better.

"I WANT TO BE THE VOICE OF NATURE"

A STUDENT PROFILE OF ELIZABETH "ALEX" SEVERINO

Program Assistant, Rocking the Boat
Interviews conducted by Alex Kudryavtsev on May 6 and May 14, 2010

Alex Severino was a student in an environmental education program at Rocking the Boat in the Bronx. Now she works in this organization as a program assistant. Rocking the Boat has helped her to discover the environment, rivers, and animals in this borough. Alex's story tells about her experiences on the Bronx River, how she perceives the Bronx, and how she shares her experiences with others.

My name is Elizabeth Alexandra Severino, but my friends and people at work call me Alex. I am 19 years old and I live in the Bronx on 225th Street and Broadway. My father is a proud Dominican, and my mother is originally from Curaçao, but she is of Dominican descent. I have a brother and a sister, who are much older than me, so I did not really have my siblings around because they were already in college. I was kind of alone, except for my parents. But when I was five I got a dog, and I named him Balto because of a Disney movie that I loved. Balto became my best friend. He was talking to me physically instead of verbally, "I don't want to eat right now, I'm going to sit on a couch." Since that time I wanted to work with animals. My interests jumped from veterinarian to wildlife veterinarian, to wildlife conservationist, to what I'm doing now on the Bronx River. Although I was always interested in environmental aspects, I never did anything with it. I was just going to a normal public school, some after-school programs, and home—the same things every day.

I have lived in a project housing near the Harlem River for at least 10 years now. Projects are apartment buildings owned by New York City. New York City is taking care of the projects, but often unsuccessfully. Housing projects tend to become a place for people to do illegal things. Now there are many efforts trying to clean it up. I still live there till this day, and I still never feel comfortable there. My friends don't live in that area, but most of them live in the Bronx. When I talk to people, for example, from California, they would ask, "Where do you live?" and I answer, "In the Bronx," and they say, "Oh my gosh, how do you walk home every day?" When they think of the Bronx, they think of gang wars every day. They think that New York City is Manhattan, and everything else is the ghetto. Maybe Queens is okay, Staten Island is alright, but the Bronx—oh no, it's bad, evil. It's very interesting what they think because it's not like that, not really. Maybe just in certain spots.

My apartment overlooks the Harlem River, but there is no access to that river. It's all fenced up and trains pass by, so you never can go to this river or at least you never thought you could. I always thought that Harlem River was the Hudson, but now I realize it isn't, the Harlem River actually expands to the Hudson. Teachers never educate you about the rivers, parks, and your neighborhood, they just expect that you already know about it. The only park that you hear about once in a while is Central Park in Manhattan because it is in movies and shows, and that's pretty much it. When you go to school, they talk about different countries and the history of New York City. But they never talk about the environmental aspects of the city or its rivers and parks. Teachers don't tell you that hawks fly and catch some prey in the city. Tons of people still do not know it. No one in classes gives you the geographical aspect of where you live, they only tell you obvious information like the Statue of Liberty is one of few historical things that are being taken care of in the city.

I was a very good student in middle school with 95 averages. But during high school, I just stopped caring about my grades because I was tired of the same life. I went to DeWitt Clinton high school in the North Bronx. The school felt like a jail, with gated windows, dull-blue painted walls, and light flickering in the hallways. On student IDs there were numbers and a barcode to identify students. The teachers barely knew students by their names, and they often identified us only by numbers. We teenagers were so disrespected that I did not see the reason to go to school, and I started skipping classes and not even going to school for days. I decided to leave that high school, but I did not know how to and I did not

know how to tell my mother. The only thing in Clinton High School that I enjoyed was the Small Animal Care program. The program had a laboratory filled with different animals such as a hedgehog, tarantulas, several types of turtles and snakes. Students had to care for them, learn about the anatomy of these animals, classification systems, and so forth. So I continued going to this class.

During that time in 2006, one of my friends told me about Rocking the Boat, “Why don’t you go to Rocking the Boat. We go rowing all the time,” and I said, “Rowing? How do you row in the Bronx?” Then I joined the program, and became an after-school On-Water student. Since then I had a lot of discoveries because of Rocking the Boat. One of the first things I had was sailing with other students and educators on a 106–foot mast sailboat called Clearwater. We see sailing in movies like Pirates of the Caribbean, and I never thought I could go sailing in New York City. I did not think that people with mediocre lives would go sailing on 14–foot boats with five people. The first day I ever went sailing I was happy. I was the happiest person to sail along the Long Island Sound. We learned all the parts about the boat, and we were learning not in a classroom with a blackboard, we were learning on the boat, while it was moving. If you don’t pay attention, you’ll mess it up. And the best thing about a 14-foot boat is that when it slants all the way to one side. So you have to go all the way to your left side when the boat is going to be slanted to the right, and you see students running from one side of the boat to the other together in unison. If you don’t do it, you will fall or get wet. Sometimes I was using the tiller and telling where the boat would go, which was so relaxing and therapeutic because you are doing something that not many teenagers are doing. One day we also went on a powerboat from the Bronx River to East River, then to Harlem River and the Hudson River. When we were on Harlem River I looked to my right and I saw my house in the Bronx, my area, and my apartment. I was like, “Am I on the river that I look at every day? I am on this river!” In Rocking the Boat I started sailing, and rowing almost every day, and it was a great form of going outdoors, a great form of recreational sports, and then meeting with scientists.

One of my educators in the On-Water program was Chrissy Word. She and other educators taught me tons of different things, from navigation to water quality testing, how to sail, row, and conduct bird surveys for organizations like the Audubon Society. When I first got to boats, aside from being excited, I was a little nervous because I’ve never been on a boat till that time. Boats with the current go from side to side a little, and I thought to myself, "I like the environment, but I don’t know whether I really want to go on this boat." But once we got on, and I continued rowing, I thought that I wanted my friends to know the cool stuff we do here. I don’t know whether I saw my first bird with Chrissy that day, but when I first saw a Great Egret or Blue Heron, and I thought, “Wow, this bird isn’t a pigeon, nor a sea gull,” because these are the first and sometimes the only birds that people in the city tend to see. But this bird had blue on its wings and a black top on its head. These were tropical birds in my mind because if I went on vacation or on Discovery channel I would see colorful birds. But on TV they always say, “In Florida” or “In California,” and never “In New York.” And I never imagined these birds flew by here. I asked why would they even come here. And then one day I saw one bird fish something, just swoop down and get something out of water. That’s amazing! If I had a camera, I would make my own discovery movie. On another day I saw a Red-Tailed Hawk perched on a tree. This is a predator bird, a bird that kills cats if he wants to. If you see a little pigeon you don’t think that it’s going to give you a challenge. But if you see a predator weighing several pounds and a wingspan of about four feet with a beak that is strong, it's cool. I realized that all these amazing things are going on in the Bronx. I realized that I enjoyed the Bronx River more than I thought I would ever enjoy it. I could enjoy birds and the river when I thought I could never enjoy New York City in general. Then I went home and I told my friends and my mom, “Do you know that you can do this and that?” My mom was so happy for me because a few weeks before that I did not want to do anything. Rocking the Boat also encouraged me to go to high school, “You got to go to school, you can’t be here if you don’t go to school.”

One day at Rocking the Boat that I remember was with Tony Archino, another educator. Tony picked me and said, “Hey Alex, do you want to come with me to check oysters?” Instead of taking a regular Whitehall rowboat we took a kayak that students had built. We paddled out to the artificial oyster reef in the mouth of the river. I was talking to Tony during that time, and we had a great time. We were working with some of the Parks and Recreation staff monitoring these oysters. We had waders on, which

are waterproof overalls. We had to get into water and I am about 5 foot one, so I'm pretty short and this water was deep, so I was practically up to my chest. I remember that I almost fell in the water, I did get wet, but not fully. My foot got stuck in the mud because on the bottom of the Bronx River there is mud instead of sand. My foot was stuck in the mud and I'm here trying to get my foot out while trying to push the boat in. It happens often when you are restoring a salt marsh; you put your foot into mud when you get out of the boat, and you can't pull your foot out because it's like quicksand. Then I got into a boat and learned how to measure oysters in the artificial oyster reef. An oyster reef is similar a coral reef except that the main life substance are oysters. Other animals thrive there too but the main tenants are oysters. An oyster garden is like a cylinder-type of grate, in which you put oysters, and it floats in a specific way, so the oysters are in the water and you know their location. We took out the oysters and put them in buckets to measure them and see which ones were alive. The oyster is alive if it is closed when it's out of water because it needs to keep the moisture. This anecdote is an example of something that I did here after school, and I will always remember that adventure.

I have a few great stories of working with the Bronx River Alliance crew. One day RTB canoed with them all the way from a park to the Botanical Garden, to the Bronx Zoo, and all the way to here in Hunts Point. That little stream that you see in the Bronx Zoo and in the Botanical Garden is the Bronx River. I went to the Bronx Zoo for at least 25 times in my life, but never knew that it was the Bronx River. And they even have a waterfall. You would not know they have waterfalls in New York City, but it's a big enough waterfall that we could not row there. We had to leave our canoes and pass the waterfall by walking and then drop in. There were also rapids, and we were paddling in canoes, and all of a sudden you see white water and currents. It's white water rafting the Bronx River, it felt like maybe a level one or two rapids, "Am I white water rafting right now?" I actually got hurt that day. I bashed my knee on a rock because the rock was slippery. It was painful but I did not care, I knew there is only one way of going, I would not get a cab here, and I had to finish the trip all the way. I did not need to use my legs in the boat, so I just continued. On our way there was a big floating boom across the river. We had to pass it by. We had to "super paddle" our way to get some speed, so we could pass over the boom. And once we get on it, some of us got stuck in the middle. Passing pedestrians were watching this happen, they were seeing teenagers doing this on a Thursday afternoon and having so much fun.

The second semester in Rocking the Boat I felt like it was my family. I would come here almost every day and knew what to do. During that semester my classmates from Rocking the Boat and I had a trip to Jamaica Bay, a bird resort in Queens. It's a huge and beautiful wilderness area in the city, well maintained and taken care of. We were there to monitor birds and check how they are doing. When we came there, educators gave us a challenge to find birds. Students had to go around all by themselves, just us, through several acres. We went to a little lake section. There were some Canada geese, and we wanted to come closer to take some photos. We approached them and one goose came up, "Why are you here?" and he was coming up to us. These birds were tall, and their wings expanded about 4 feet wide. You don't really want to get too close to these birds because they could peck you, they get a little territorial, and we were backing up as they approached. Then we went to another site, and there was a beach. I got to observe Seagulls swoop down and take oysters and fly all the way up, and drop oysters and then go pick it up. You would wonder why they were doing it, they were opening the oysters shell with the use of gravity, and once it was opened they could eat it. It was amazing! Birds tend to be viewed as a stupid animal. Velocity with speed equals crush, birds fly all the way up, drop oysters, and eat them, which doesn't seem stupid to me. I love animal behavior; it's my fascination.

We also measure water quality at Rocking the Boat. We regularly test the water quality of the Bronx River on the shoreline, in the middle of the river, and on the end of the river. We measure nitrate, pH levels, temperature, turbidity, and dissolved oxygen. We send most of our results to organizations like the Bronx River Alliance and other electronic databases. During a heavy rain the sewer overflows and pollutes the river, and we notice the level of oxygen in the river goes down, which is bad for the aquatic animals. The water is rarely very clear in the river because the bottom is mud, and because there are very few oysters to filter the water.

I was in Rocking the Boat for a while. And then I went to a new high school after Clinton. My

new principal connected me with a book publisher from California. She was looking for 8–18 years old girls that are environmentally friendly or are environmental activists. The writer wanted to feature these girls in a new book called "Girls Gone Green." I spoke to a publisher by phone for an hour about my life and environmental experiences, and she decided to put me in a book. A photographer for this book came on a cold and icy winter day, and one of my educators Tony Archino helped me pull a boat out to the river to take photos for the book. I was just a normal person that thought that I could make a difference, and I never expected to be featured in a book. It makes you feel appreciated when your name is in a book that is in Barnes & Noble and Amazon. When you are being noticed, it gives you extra energy to make a difference.

In 2008, I graduated from high school with a scholarship to one of the most known private environmental colleges called Unity College in Maine, which is all the way in another state. The main focus of the college is the environment, and the school itself is environmentally friendly. With other students we did country skiing, dog sledding with Alaskan Huskies, stayed in a hut in the woods, went snowboarding and deer tracking. Some classes were indoors, while other classes were outdoors, which I have enjoyed. Then something happened, something that I thought would never happen: I got homesick. I thought I would never get homesick for New York. I realized that I was homesick not just because of my family, but also because of how people knew me already. In Maine I did not feel like I was involved with the environment as much as in the Bronx, which is interesting because it should have been the other way around. Maine is so open and natural, but it's here in the Bronx where there are many environmentalists.

I have realized that so many things happened to me in the city since I started at Rocking the Boat. I met scientists from different organizations and colleges. In the South Bronx I have met a very inspiring woman called Majora Carter, who used to work with Sustainable South Bronx and then left to continue her own organization. I wanted to meet more of these people who can help me make a difference. So I decided to take a break in my college education and come for a while back to the Bronx. When I came back, the book "Girls Gone Green" was published. I got it and called to tell my educator Tony Archino in Rocking the Boat. Next day Chrissy said that there was a job for me at Rocking the Boat. My first teacher Chrissy Word is now my boss, and I am her program assistant.

As a program assistant at Rocking the Boat I helped Chrissy conduct the On-Water Classroom activities with day-time groups. For example, last fall we went with the Bronx International High School students to Drew Gardens on the Bronx River. We guided students to remove invasive species and help gardeners with landscaping. We worked in Drew Gardens because the land and river are connected—fishes eat insects, and insects need plants. So, I was helping to organize students that day. One of students was shoveling, and he did not see an approaching snake, he accidentally shoveled right in snake's stomach area. The snake was dying. When I was younger, I thought all animals have to be saved. But in college I learned that sometimes you have to let them go because this is nature. The student felt bad about what has just happened, and everybody asked why he cut the snake, but it was not intentional. The snake was still alive and was bleeding and suffering. So I said, "Okay guys, it's not like we gonna call a vet for a garden snake. What we have to do is to put it out of misery." Personally, I could not do it, so I asked if anyone would be brave enough to do it. It's a brave thing to do, to take something's life to save it from suffering. I picked the snake up and gently put it on a rock. And I told a student who was willing to do it, "Take the back of your shovel, and hit it on the head to break his skull." I stepped back and turned around, some people were also turning around because they did not want to see it. The student smashed the reptile. Then other students volunteered to bury it because they wanted to give it a little burial ceremony. They buried it, eventually it will biodegrade in due time, and will always be part of Drew Gardens. So everybody was fine at the end, and the student was okay, he did not feel as bad because it just happens.

Recently on Earth Day we had other students from Harbor School. It was their first day here, and we took them on water. While rowing, we talked to them about the Bronx River. One of students said, "Hey, look there. What is that company doing?" It was the Hunts Point food market, and they were putting cement around their wall near a barge. They were doing it carelessly, so a lot of cement was falling into the river. And the students got so aggressive, "You can't do that, it's Earth Day! Don't you

know about the Bronx River?" But the construction men continued doing the same thing. We did not ask students to fight for the river, but they started recording this issue by taking pictures. And it was interesting because they were so enthusiastic about the river, whose history and problems we have discussed a few minutes ago. This is just because students got on water, because they were in boats. I love the fact that students care about the river because all you need is something physical, to go on the river. The river will not matter to you if you just hear how people say stories about it all the time. But if you do something, you can see the difference. So once students get on the boat, they feel like they are part of the Bronx River. They become the Bronx River, and have to defend it. When the students came back the next time, Chrissy wrote a complaint letter about the falling cement, so that the Department of Environmental Protection could come. She did it before students left, so they could see that they did something. They stood up because what they say really matters. You can be fourteen, and make a complaint letter, and they will listen to you.

Today we taught a group of students from Satellite Academy High School. There were some students in my boat who were enthusiastic about rowing. But you don't just go and row on these short trips with new people. We go to the river, and then I tell students a story about the river, how it was polluted and how it's getting better. If you just show students how to row, they will not care about the river. They will be eating a sandwich and drop trash in the river. But when we go and learn how to row, we always explain how we restore the river. I have picked up a bottle from the river as I told the Bronx River story. Students understand the story and start caring, and they see that they can make a difference. So, today some of these new students saw a plastic bag in the river, and picked it up. I did not ask them to get the bag. Did you see how one influence makes another happen? And on another day I was walking on a sidewalk from Rocking the Boat after finishing my day of work, and I saw a fire hydrant that got popped out and gallons of water were pouring out of it every minute. That water goes to sewage system, and it's going to contribute to the sewer overflow and pollute the river. So, I called "311" to make my complaint to the Department of Environmental Protection, so they come and fix the hydrant. I would never have done that before. Never in my life I would have done that because I thought I never mattered.

Sometimes we go to the river just for fun. One day after community rowing we were done with the job and everybody was gone. Addy, some other program assistants and me jumped on a few boats. We were rowing all the way to the Concrete Plant Park. We were passing the bridge, and there was a Canada goose near us. We were about to hit him because he was on our way. We were like, "Excuse me." But the goose was not listening, so the person that was on the boat with me was screaming. The goose heard it, and he got up, and he was like running on water with his wings as if he was flying, but his feet were still touching the water. It was right next to us. It was so beautiful because you could see him very close doing this beautiful natural thing. It was so much fun to see that, though the goose was not happy at the moment.

I think that my experiences at Rocking the Boat have changed a lot what I think about the Bronx and the city. Many people say that where I live in the North Bronx is the best part of this borough, and that the South Bronx is where prostitutes and drug dealers are, especially in Hunts Point. When you think of Hunts Point, you think of a lot of factories, companies, and organizations. Even the Rocking the Boat building is in-between a garlic factory and a metal scrap recycling facility. You can see many trucks around here. On the top of the hill there is a community and churches, and on the bottom of the hill there are all these factories and the shop for cars blocking access to rivers. There is an invisible line between two realities, and so many people in the community don't see this industry next to their community. People wonder why their children have asthma. But now Hunts Point is becoming a very good environmental place. Now I just feel like I want to live here, it's the new place to go, it's becoming a greenbelt. So my experiences have changed my view of what side of the Bronx is right. I have also found that there are nice people in the Bronx. And I also find more parks, which I have not seen in the past.

This place in the South Bronx is very organized. Many people in the community know what is going on. More community gardens are being created, which is something new in some parts of the Bronx. I found that this area in the Bronx in general is becoming green, or at least green-aware. The housing that are being built are green. I would like more people to experience what I see on the Bronx

River. I can't wait for Community Rowing to start because I got a few friends to bring here. I made a list of them. Even people who don't like water said, "We are coming!" My mother is afraid of water, but she promises me that this year she is going on a boat. I've already had my brother here and his girlfriend. My two best friends came over for Community Rowing last year, and they got on a rowboat. That was one of the most exciting things because they are dear to me, and they have never seen the Bronx River. It was amazing to see them do what I do almost every day. I believe we should invite more residents to come by instead of discouraging them because they could pollute it. Some people think that there are too many of us, and that we are going to ruin ecosystems. But I think people should come and experience it, and learn how to save it and to see nature.

If we had more nature around, then the behavior of that person would be a little bit brighter than gloomy. If they know that they can't do anything outside they would close the shade and watch television. But if the sun was shining and a few kids playing soccer on the grass, then they would go out and play soccer with their friends. The thing is, though, in teenage world, your friends influence you a lot. So if your friends don't want to play, you just don't play either because you don't want to play with that stranger across the street, you want to play with your friends near your house.

What am I doing next? I need to finish college education. I have already done one year of college in Maine, and I need three more years to finish school. Probably I will transfer to another school closer to a big city. In the future I want to be someone like Anderson Cooper mixed with the Crocodile Hunter. Anderson Cooper is a well-known journalist, and he goes around the world and talks about things that are going on. The Crocodile Hunter was a man named Steve Irwin who used to wrestle crocodiles and educate people about large animals, even though they are dangerous. He would pet a crocodile, and say, "Isn't she a beauty?" He has passed away because a stingray at the Great Barrier Reef stabbed him, but he wanted people to love animals. I want to be like these personalities because I want to educate people about saving the environment. The first dog in my childhood, birds around the Bronx River, and other animals can't talk, but I want to speak for them, I want to be the voice of nature.

"THE BRONX IS A PLACE OF HOPE"

A STUDENT PROFILE OF NIA TERRELONGE

Former student, Rocking the Boat and
Program Assistant, Mosholu Preservation Corporation
Interviews conducted by Alex Kudryavtsev on August 6, 2010

Nia Terrelonge studies Ecological Anthropology at Binghamton University and minors in Sociology. She used to be a student and apprentice at Rocking the Boat in the South Bronx, and youth mentor at Mosholu Preservation Corporation in the North Bronx. Participation in Rocking the Boat helped Nia to become part of a community of young people and mentors who are exploring and restoring the urban environment, and influenced the choice of her college major.

My name is Nia Terrelonge. I'm 20 years old. I was born in Co-op City in the Bronx. When I was about five years old my family moved to Texas, and then to Florida and Georgia. We always moved over the summer. We would do the school year and then we would move. Even when we lived down south we moved around from place to place within the state. I'm like a professional mover—packing up, unpacking. I don't remember a consistent big chunk of summer living in one place until I was in high school. My mom did not really like the cities and did not like the heat, so she wanted to find a place to live elsewhere.

It was fun to live in Florida there because I lived in a big house with siblings and cousins, we had three dogs and it was so much fun. Then we lived in Atlanta for three or four years, and my mom loved it there. When I was about 12 years old my stepfather passed away during our trip to New York City. We became homeless and were never been able to move back to south. We did not have any money, so we lived in a homeless shelter in the Bronx for a while when I was freshman in high school. We've been in New York ever since because we had never had finances to relocate again. The Bronx is the place I call home. It is my community even though I lived in all those other places. This is where I had the majority of experiences growing up that I feel really shaped the person I am. Before my stepfather passed away we used to have a big family, but then my older siblings moved away, and it became just my little sister, my mom and me.

I feel like my mom has always had the desire to stay in a suburban neighborhood with trees. She is a lover of nature as well, but she has never had the opportunity like I have to really explore it. Whenever we moved, my mom was searching a right place to call home. The city never felt right for her. She likes putting her feet in water and relaxing, she loves lakes and trees. Her dream is to have her own garden. We never had a garden because we never stayed in a place long enough to really become stabilized. We never were in a place for long enough to call it home, and so my family has always been my place to seek refuge. I have a few memories that really meant something to me from each place we lived in, but it's not like a whole repertoire.

When we moved back to the Bronx I went to high school across the street from Fordham University. When I was a sophomore in high school I had gone extra math credits that I carried with me from junior high. My school offered a few advanced placement classes. A lot of kids take these classes in high school if you study well. But the only one advanced placement class that I could fit into my schedule was environmental science. My science teacher, Mr. Christian Dockum, was my favorite teacher in high school. He was always like a fun teacher, he was never stressed, young and kind of goofy. Science has always been my least favorite subject, it just never interested me—learning about electrons and all those different types of things never caught my interest. Learning about cells and tectonic plates was cool, but it did not seem relevant. I thought science was like Earth science and biology, I did not know there was a whole array of different sciences, and environmental science was never explained to me.

During my advanced placement environmental science class I really began to enjoy a more practical side of science, it was so different. It was knowledge that I felt was useful to me, I really enjoyed

learning it, I felt like it was something I could apply to my everyday life. Learning about environmental science seemed relevant and it was fun. I learned what ecology meant, that we have the relationships with our living and non-living environment, it was a brand new thing to me. So everything from that point on has been ecology for me, interacting with our environment, and even now I'm studying ecological anthropology in college.

When I was a high school freshman I worked for the summer youth employment program, a similar program and I'm supervising this summer. I was employed by the Mosholu Montefiore Community Center as a day counselor for kids. My host site was a day camp in public school PS 15. I did not choose this position, public schools was the only thing that was available when I got there. It was a babysitting job. Parents drop their kids of in the morning at 10am, you keep their kids busy by playing around, doing activities and gym time until the parents come to pick them up at 5pm. It was not anything that was really enriching my mind. I never really favored working with children anyway, and I was making minimum wage. There was no substance to the program, which is probably why it just did not affect me that much. So when I was done with that, I was like, "Never ever. I'm never gonna work for summer youth again." It feels like you are just a number, you are one out of 3,000 youth that are being employed for the summer. There is no relationship with peers or mentors, I did not feel like we were a team, I did not have any sense of community with people I worked with. And the following year I heard about Rocking the Boat.

I think in spring 2005 as a part of the course my science teacher decided to take us to Rocking the Boat for a day program. My class came to Rocking the Boat once a week for five weeks. We would take the bus from my school together as a class to Rocking the Boat. At that time the educators were Tony and Seth. They would take us out on the rowboats. My class was probably 12 students, and they were all seniors graduating from high school. I was the only sophomore because I had come with extra credits. For everybody else it was like, "Yeah, we get to get out of the school building, it's our senior year, we get to hang out." For them the program was more like a trip outside the classroom, but I really took a liking to the program and what we did. I was really absorbing all the information, I felt like it was very relevant. They would teach us pretty basic stuff: how the oysters filter water, how tides work. The first time I think we got on boats and rowed out to a big shipwreck in Long Island Sound—it's kind of a landmark now, it does not move. My classmates were frustrated, they did not know how to row, and a couple of them were scared because you are in the boat. But it was so natural for me, I was not scared, I was enjoying the view so much, being that close to the water, and seeing the site—it was so beautiful. I fell in love with it from day one. As I loved my science class in the classroom, and then coming out to Rocking the Boat was just like a cherry on top.

I feel I'm a little bit different from other youth in the Bronx. I feel like my experience of living down south has definitely shaped me in a way that makes me a little more dynamic than average urban kid. I spent 5–6 years of my life living in the suburbs where there is no honking, ambulance and fire trucks. There are parks and lakes. We walked out dogs around our little neighborhood. So it was a void inside of me for a long time that I did not realized was there. And when I got here and experienced natural aspects of my old/new community in the Bronx, I fell in love with it. I saw that I did not have to live down south to get into nature; they have this up here too. They have nature here in the city. I started seeing it, I realized that this is great, this is the place that makes me comfortable, and this is the balance that I need for living in the city. I was feeling like I can reminisce and be nostalgic about some of my past that was not in the city and that did not revolve around the urban environment. I really enjoyed getting on water at Rocking the Boat. It was different, it was new. I was more intrigued than anything, I wanted to know more, and just learning about tides and how the moon affects tides—all of that stuff was to me just so interesting. I've never heard that before. It's kind of like you know you like one thing, but nobody has ever taught you how to do it or gave you the knowledge about it. So finally when you get that, you are like, "Oh my god, this is so amazing. I thought it was great before, but now I really know this is what it is."

After five weeks were up, they told us that if any of us enjoyed our time there we could join their summer program. It was an 8-week summer program, and they paid you stipends. The part that attracted

me the most was the promise of an all out one-week camping trip on the Connecticut River. I was like, "Yes, I want to do this for the summer." So I applied to the On-Water section of Rocking the Boat in summer 2005. At that time Rocking the Boat was not on the Bronx River, it was in Clason Point by Soundview. It had two trailers and a huge tent there. I did not know other the kids that I met that summer, but those people became my family, my Rocking the Boat family. That group of kids from that summer were the pioneers, we are the true definition of what I think Rocking the Boat On-Water is. And I love those people to the bottom of my heart. Every time I see them—they are like my brothers and sisters. Cicy, Stephanie, Will, Josue, and a few other people—those are the people that are dear to my heart.

The first day when I got there it was a little weird. You don't know anybody, but it had just a blast, we just clicked and it was just a great summer. We were working with two educators: Tony and Seth. Tony was the younger, more energetic, more personable, and Seth was the older, more serious, more nautical sailor guy. I love Tony, he was 27 then. We just really clicked as a group. We would take the bus home together, we just did so much together all summer long. We would plan out trips, go out to trips, and would do rowing. I had never done anything like that before—go sailing, fishing, talk to the community because the park we were at was a big community park. A lot of older men would fish there in Soundview, so we would do projects where we would interview the community. We would do scavenger hunt, we learned how to use compasses. We would go to YMCA once a week to learn how to swim, which was so fun.

Tony is a type of man who has so much knowledge. If you are walking with him and he sees something, he would tell you what that is. I learned so much just from being around him, not even in our class time, just spending time with him and the other kids. It was a totally enriching experience. I felt like a new person at the end of the summer. I was like, "Oh my god, this is what I do." I felt so different from the kids that I went to school with in the Bronx, "I am an environmentalist." I began to care about recycling and pollution, and all those things actually became relevant to my life here. We played this fish game where everybody would have a color piece of paper, and your color represented a type of fish on a different level of the food chain with a different amount of pollution in them. Then you would go around and eat the other person's fish, so we'd figure out what fish died by the end of the game because they had too much pollution in them. We just had so much fun together. We played all these weird games and learned along the way.

Each summer Rocking the Boat does a week-long camping trip. It was so excited. As the matter of fact, this was the reason why I applied because I wanted to experience what camping was about. They were telling my class during the spring, "We have this summer program, and we go camping during the program. Not fake camping in a cabin. We go camping for real in the woods in a tent, and use the bathroom behind a tree." We were going to drive to the Connecticut River in Massachusetts with boats on the trailer and row down 32 miles in total, stopping at different islands and staying at the night. I was so excited. It was my first camping trip ever. I still have the picture of the first tent that I put up.

There were three Stephanies in our group, two of them were my best friends. We had our own little click. We built a tent together, the dynamics among our group was just great. I have never had that before because I have never stayed in a place long enough to even have a group of friends. My older sister was always a social butterfly wherever we moved, so she would always make friends really fast, and I never made any friends. And the only thing that has kept me at Rocking the Boat all these years is that I feel like they are my family. When I come around, I have genuine love for these people, and I feel the same in return. It's not like just a program that I was in or a project that I participated in, or a person that I used to work with. These are my people. If I had to be stranded on the island with them I would be totally okay, I would pick these people to be stranded with. It's a different bond you get when you are working outside with people when you are sweating with these people, you are getting dirty with these people. It's your working hard with them that builds a different bond. If you are in a boat with these people and something happens you need the person in front as much as you need the person in the back. It's a different bond then if you are just working together on a project. You are working together to keep each other safe. We spent the whole summer together and became really close.

So the camping trip was seven days long. The trip was a 32–mile row. Everybody gets a boat,

everybody gets settled with the people that are going to be in their boat—same boat, same people for the whole trip. I was in a boat with a kid Lenard and other girl. Lenard is my favorite kid ever. He is from the island, from Trinidad, he was very comfortable with everything that we would do. He is very experienced with fishing and just used to be on a boat. He is short but he is strong, so whenever I would get tired he rowed for me. Lenard is a big fisher, and he decided he was going to trawl. We did not have a net for our own boat, but he had a fish wire. He tied a hook to a piece of fishing string, and he just tied it to the back of our boat and let it hang out there as we were rowing. It was a long piece of wire with a hook. And he caught three stripped bass on our way to the island. We would stop at an island, he put on the campfire, and I had fresh fish from the river. It was so good, so fishy, it tasted so good. I had never caught, cooked and ate a fish in the same two-hour timeframe. That was a cool experience.

Another memorable experience was on one of the islands that we slept at. We had a big tree swing. You tie ropes to the tree on a cliff and they swing like Tarzan. The cliff was like 15 feet up. You hold this rope, "I'm gonna jump off." I was so scared, "I'm not going, I'm not going." So finally I go, it was so scary, but it was so fun. You are screaming the whole time you are swaying, you let go, and fall into the water. My friend Stephanie was a little more reserved than I am, and she was like, "I don't know if I want to do that." She wore a life jacket just in case, she had her glasses on, it was so cute. She actually went and came back, but she slipped, so she ended up falling down the cliff without the swing. She ended up falling and tumbled down on the hill into the water. I was so scared because there are rocks and stuff. But she had a life jacket on. She never did it again. That was one of my funniest experiences ever because after you go you watch everybody else go. And then another one of the boys—the rope swing got wrapped around his swimming trunks, they ripped, and he is like, "Tony, I need another pair of shorts." His shorts got lost. It was so funny. We had the best time ever. Camping is just a really fun experience, and really builds comradery and friendship. Brushing your teeth in the river, taking a little bath in the river, washing your cloths. I had never used the bathroom outside ever, and now it's one of my favorite pastimes, I feel like I'm one with nature. We had highs and lows. Of course there are times when you are frustrated, but overall it was a great experience.

Then we worked on the oyster restoration project that Rocking the Boat started the summer before. So we were the ones who would go out and check on it, see if it was working. I had never done restoration projects and I did not even know what was really going on. It was not until the next year that I became really involved with it and understood the project. We would go out, do monitoring there, row to different locations. We took samples of water, did all the different tests on them—dissolved oxygen test, nitrates, all those things. We spent a lot of time learning how to do water quality testing properly. And then we'd go out and my favorite thing was seining—when you use a seining net to fish at the shore. You scoop up the water and see what you can find. We would catch crabs, little animals.

At home I would share my experiences with my mom. I would tell my mom, "You have to come to see. You would love this park." In Soundview you look out, it's East River, it's where everything meets—the Bronx River meets the East River and the Long Island Sound. It's huge and beautiful site. You stand at the rocks and you look out, it's so pretty. I remember I would tell my mom, "Mommy, I could see the LaGuardia Airport." You see the plains landing on the opposite side of the East River, you could see the smoke that come from their wheels when the tire burns the rubber on the runway. Every three minutes a new plain would leave or land. My mom thinks everything I'm doing is cool. I would talk about day, "We did this today, we did that today."

After the first summer at Rocking the Boat the fall was approaching. I was going to be junior high school, and I was part of their fall program. All my friends from the summer came back during the fall. But the fall was a little different because you only meet twice or three times a week for a couple of after-school hours from 4:30am till 6:30pm. And the fall is not paid; it's more like an after-school program than a job. Essentially we were volunteers at that point because we did not get compensated for our time. I could be just honest: my first fall semester at Rocking the Boat was my least favorite. It was so different than things that we were doing over the summer. I was actually a little discouraged about being a part of Rocking the Boat after that because the summer is fun, fast-paced, you get to go out, you are rowing, you are doing all these cool projects. But fall comes—you are not doing a lot of rowing because it's cold

outside, you don't really have time to do big trips. A lot of it was planning and scheduling, working indoor and doing paperwork. It's very stifling, confined—especially for somebody who is a lover of nature, a lover of being outdoors—to have to transition to doing indoor projects behind a desk. It was a little boring, just to be frank about it. But there were some rewarding projects, though, like making a website to add environmental monitoring data, and taking trips to Lehman College and looking at their lab.

But luckily the second summer rose around fast. My next summer at Rocking the Boat was actually really exciting. It was the start of the Job Skills program, which opened specifically for advanced kids that were in Rocking the Boat program for at least two semesters and were finishing high school. At that point I was going to be a senior. Job Skills was not only to teach us environmental stuff, but at the same time to integrate skills that are necessary to succeed in life. Resume writing, different workshops. At the same time while they were teaching you environmental stuff they are teaching you skills that are necessary to survive in the real world, having a job, studying.

While as the regular On-Water kids we were doing oyster restoration projects and stuff like that, as Job Skills apprentices we were taking everything to the next level. We would do restoration projects in a much larger fashion. I remember we did what we called the Dam Tour. We mapped the entire Bronx River and each dam along the Bronx River. It was electronic as well as a physical map. We had a kiosk, you could click on a dam, a link would open and give you information about the dam: when it was erected, what it was used for initially, if it is used now. We did that for each dam along the Bronx River. Like I said, we were the first Job Skills class. The same kids from my first year moved on the Job Skills. We were definitely the guinea pigs, pioneers of Job Skills, and I think we did a good job. And Tony moved up with us and became the director of Job Skills program. He was still our boss, and we had all become very accustomed to each other. We had just been working together for so long, and even now Tony knows me really well and vice versa. He has seen me grow up a lot.

But after that it was graduation time, so a lot of us left. It became a little sad because you have kids that are graduating from high school, they go off to college, and then I graduated and went off to college. This is very tough. My friend Stephanie graduated a year before me. But then it was my senior year, so I was applying to college. The Job Skills program was very helpful for applying to college. Anita, who was the Job Skills student advocate, helped me a great deal through a resume workshop and meeting with a career advisor. Tony gave me so much advice about just college life that I still use today. He has not only been an educator, but a mentor to not just me, but to a lot of the kids that were in the program. I know that lot of us still call Tony and Anita for help when we have to get a job for the summer, or just not knowing for sure what class to register for, or what to study. They have become our mentors as well as our past employers. They wanted us to succeed, they read over our college applications and gave us letters of recommendation. It really made a difference in a lot of our lives.

I decided to apply to a bunch of different colleges. I got accepted to the College of Environmental Science and Forestry a SUNY in Syracuse. But I decided to go to Binghamton University. I did not clear my major until last spring. I was pre-medical, I was going to go to a medical school. When I was applying to colleges, environmental science was not my priority. I knew it was something that I enjoyed, something I loved, it was my passion and I loved studying it. But I had never through about it as far as my career. Since I started with environmental stuff in high school it was something that I loved to do in my spare time, like my hobby, something I liked to do in my summer. Rocking the Boat became a great heaven for me, but I never correlated it with school. A lot of the kids got science credit for participating in Rocking the Boat in high school. I never did because I did not need the credit. Rocking the Boat was always just fun for me. Environmental science has never stressed me out, so I equated it with something that was not worth studying, I though it was something that I would just pursue in my free time. So in college I had declared a major in biology. It was not something I enjoyed, but a lot of pre-med students choose biology as a major.

But after my first year and a half I really got a sense that your major should be something that you are overly passionate about, it should be something you love to study and read about. It should not be something that is stressful and hard for you in a negative way. So I decided that I was going to study what

I enjoy studying, what I've been studying for a long time, which was environmental science. I just recently declared my major as environmental science and more specifically, ecological anthropology. It is about how different cultures interact and value their different environments. It has caught my attention because I relate it to how I live in this urban community, how some of us can be so dedicated and aware of the cause, and some of us are just totally unaware. That's something that I value and I have acquired since I've been at Rocking the Boat. They have helped me along the way to reach that point of my studies, which I'm studying now. This is what I study at school and this is what I hope to be doing with my life when I get older. I'm glad that I'm finally comfortable and confident with environmental major because it is my passion. I feel like that is going to make me more successful because I'm doing something that is in my heart and not just in my mind.

I have so many angles to approach my environmsntalism from. I could potentially be of more help in so many different ways. And every new summer job I get helps me to broaden my awareness and my desire to do something different. Last summer I worked for the Parks Department as a camp councilor in Junior Rangers Camp. We were teaching the kids in Inwood Hill Park in Manhattan to be junior park rangers. It was environmental education, we would take young kids on daily hikes in wooded areas and teach them about plants and animals on the way. It was not too strenuous of a task for me, but my goal has always been to do something different every summer, learn a little more, and meet a few more people.

And this summer 2010 I work for Mosholu Preservation Corporation (MPC) in the North Bronx. When I come home from Binghamton University I stay at home with my mom, but then I always give Tony Archino a call, "Hey Tony, what's going on?? You guys doing any trips? Do you have any jobs lined up for me?" I was looking for a job, but I did not know what I wanted to do. I did not really want to work as a program assistant at Rocking the Boat for the summer because I spent so many years in this organization, and I wanted to explore other places. When I told Tony, he heard about a summer job Monday through Thursday as a youth mentor in a horticulture program at MPC. It sounded perfect because I wanted to work part time this summer. I never studied horticulture, so I thought this would be a great opportunity for me to learn about different aspects of the environment. I picked to work at MPC for the summer.

The job I'm supposed to be doing is restoration in the parks. I have a group of six teenagers 14 to 18 years old: three girls and three boys. We are stationed at Fort Knox, which is part of the Bronx Park. We meet there to work seven-hour day, four times a week, seven weeks. Kids make minimum wage, which is 7.25 an hour in New York City. We do a series of restoration projects in the parks. For instance, we are taking a citizen pruner class by Sam Bishop and another woman from Trees New York, which is teaching us how to care. If we pass an exam at the end of the summer we become citizen pruners, which means that legally we have the right, knowledge and skills to go out and prune, manicure and upkeep trees in our community. Working with Rocking the Boat I had opportunities to get my powerboat certificate, canoeing certificate, CPR first aid. In MPC I have this opportunity to get my pruning certificate along with kids, that's really exciting for me.

I want this horticulture program to be as best experience for the kids as possible. But I feel this summer program is not enough educational, and it's really hard for me to change anything because MPC has its agenda for the summer. It's mostly planting flowers, fighting invasive species and watering trees. I really want kids to feel like what they are doing in parks is for a greater goal as opposed to just doing something because it's a task they have to do. I want them to know that by fixing this you help this animal, that animal, and all those different things. I feel that MPC needs to offer a lot more explanation to the kids because the kids don't really know what and why they are doing. I just want them to have a sense of family, but it's a short program for them and I don't know if all of that is really possible. But I'm trying my best to have them interact with other groups and go to different parks to see that every park has a different need. I just want them to connect it to a bigger issue, not just their summer job for a month they are doing.

I think what I feel about the Bronx now is very similar to what I felt before what the Bronx was. The Bronx is still a very dirty place. It's still a concrete jungle, it still has a lot of poor communities, poor families, people that are not really educated, that are not aware. All those things are true. But after all of

my years here and after doing all these environmental programs I feel like I've added to my definition of what the Bronx is. I feel like the Bronx is all of those things, but it is also a community that cares. It is a community made up of so many people that have the desire to live in a better place and to make the Bronx a better place. And there are so many natural beauties that are in the Bronx, even starting with the Bronx River in Hunts Point that a lot of people don't realize was there, don't realize that they had that there at their fingertips. Now I feel like the Bronx is a place of hope, a place where people and different organizations feel like there is hope here to get better. If we keep doing what we are doing now, and recruit more and more people to join the cause, it can be a wonderful, wonderful place. We could turn it around completely from what it is now.

We have communities that are beautiful already, that have been maintained and preserved. But the rest of the Bronx has not been. And there is no reason why it can't be restored. Now I feel like I have new hope that this is not a permanent state that the Bronx is in. It's going to change, it's going to get better if people like me, you, Rocking the Boat, and all of us continue to keep moving further with this. We will keep bestowing it upon others because our message has the ability to spread and reach other people, organizations, schools, communities and kids.

"GREEN SKATEBOARDERS INFORMING PEOPLE ABOUT THE ENVIRONMENT"

A STUDENT PROFILE OF VICTOR DAVILA

Student, A.C.T.I.O.N. at THE POINT Community Development Corporation
Interviews conducted by Alex Kudryavtsev on May 13, May 19 and August 3, 2010

Victor Davila is a high school student who grew up in the Bronx. This story recounts some of his experiences in A.C.T.I.O.N*, an after-school youth program at THE POINT Community Development Corporation. Victor participated in the restoration of green areas in the Bronx, studied global warming in Antarctica and went to Michelle Obama's vegetable garden. To further help the environment and educate younger students in the Bronx, Victor organized his own program called EcoRyders, which combines environmental stewardship and skateboarding.*

My name is Victor Davila. I'm 16 years old. I live in the South Bronx, in West Farms specifically. I've lived here my whole life. I'm Puerto Rican. My grandparents on both of my parents' sides are from Puerto Rico, but after my grandparents we are all born in the United States. My parents speak Spanish, but unfortunately I don't speak Spanish. I can understand some, but I don't speak. I used to go to public schools but after the forth grade I started homeschooling.

I first found about this area, Hunts Point in the South Bronx, when I was 10. I came here because my mom was looking for piano classes, which THE POINT Community Development Corporation used to offer. Classes were only for an hour one day a week, and then I would leave back home. But then my mom put my sister in a dance program here at THE POINT, and I had to accompany her every time she had to go to class. I was just hanging at THE POINT and I had nothing to do until I met Carey Clark, Visual Art Director for THE POINT. She taught me how to do silk screening. After that I started coming here a lot more for different after-school programs. After that I've been a part of every program in THE POINT except the circus class and a school program for little kids. I took the visual arts classes, music program, photography classes with the International Center of Photography. Most of these programs are free at THE POINT. Then Emilia, who used to run A.C.T.I.O.N at THE POINT, told me about it, and I joined it in 2007.

A.C.T.I.O.N. stands for Activists Coming to Inform Our Neighborhood. It was first founded because the government was planning to build a jail, and a bunch of teenagers and young adults wanted to stop the jail from happening in this community. They formed this group around the principle of stopping social injustices. It was not until recent years that A.C.T.I.O.N. has been fighting against environmental injustices that happen in Hunts Point. I had no idea what A.C.T.I.O.N. did, but I've heard that they could help me to get to college. I went for an interview, and they accepted me because they liked me. Old A.C.T.I.O.N. members interview new students and decide if you are in A.C.T.I.O.N. or not. Now I know that it sort of helps me to go to colleges by supporting scholarship applications, but it's more about opportunities to improve this community.

In A.C.T.I.O.N. we deal with social and environmental injustices in Hunts Point, and I found that many people actually care about the issues that are happening around. Hunts Point is an area in the South Bronx that has been abused for many years because we are a poor community and in the past because of our race. If you heard "The Bronx is burning"—that actually happened. The economy was so bad at that time and landowners would burn their property to collect the insurance. It was more profitable than to have people pay rent. Today it is not nearly as dramatic, these things stopped in 80s, but the Bronx still suffers from a lot of the city's industrial burdens. Everyone in New York City benefits from the certain facilities that have been put into Hunts Point, but not everyone has to deal with the problems. Hunts Point deals with all sewage from the Bronx and 40% of New York City's sewage while Manhattan produces the most waste but handles none of it. It means you enjoy the pleasure of flushing your toilet and having all that stuff go away, but we have to deal with that. We have the New York Organic Fertilizer Company that takes up sewage and processes it. This company and the wastewater plant cause the fumes and smoke that you smell in Hunts Point.

When someone says “the Bronx” I think a lot of things. I think of art and community, I think of the music, hip-hop came from us, I think of the people I love in the Bronx. I’ve spent a lot of time with people from outside the Bronx—from Ohio, from Oklahoma—and their mindset about the Bronx seems that they think it’s some post-apocalyptic wasteland. Like all you see is the buildings on fire and people wearing gasmasks. But in reality it’s not like that. I love the Bronx. I think it has problems that need to be faced, I can’t ignore these problems, but all I want to do is to fix them. I always knew about problems in the Bronx, drugs, gang violence and things like that. But until I joined A.C.T.I.O.N. I was completely ignorant of many other social and environmental issues that are going in Hunts Point and in the Bronx in general. I thought that every area in the Bronx look like my neighborhood. It’s not bad, it’s not the best, you still have graffiti and certain things. But it’s not a horrible place, it’s just a place where you live. I live a block away from the Bronx Zoo. On my block there are trees, there is a deli across the street, there is a park. But you go down the street and see a bunch of fast food stores, the train station and a lot of graffiti on the walls. Some graffiti is bad, but some artwork is incredible.

In A.C.T.I.O.N. I’ve learned different things about different aspects of the environment. The first A.C.T.I.O.N. project in terms of helping the environment was the North Brother Island project. North Brother Island is in the East River between the Bronx and Queens. It is one of the largest waterfowl nesting areas in the East Coast of the United States, but the number of the birds has been dropping because of human stress forcing on it. It’s illegal to go to the island if you don’t have a special permission. If you go there during the nesting season the birds may fly away from their nests, and chicks are exposed to predators and the sun, so they may die. And regardless of that, the birds sometimes leave forever; they don’t want to come back to the island. We also believe that birds fly to other areas for food—different parks in New Jersey—and then bring it back to the nests. The reason they don’t stay on the island for nurturing is because of all the invasive species of plants. These invasive species have come from different areas of the world like Asia and Eastern Europe, they are not supposed to be here and they kill of native species. The birds can’t feed on these plants because they don’t contain the nutrients that birds need. So A.C.T.I.O.N. went there to kill of those plants. We went there with very large scissors called loppers. We had to cut invasive plants from the root or pull up the root itself. This is hard because some roots are deep, and often you have three really big A.C.T.I.O.N. members trying to pull out that one little root, and they can’t.

I think all A.C.T.I.O.N. members play important roles in different ways. Some A.C.T.I.O.N. members have absorbed more information about certain topics than others. I think I’m kind of the North Brother Island dude. When it comes to the information about North Brother Island and the stewardship project that we do, I have accidentally memorized a lot of it. When we get new A.C.T.I.O.N. members they have to learn from an older A.C.T.I.O.N. member about one of our projects, and then they teach it back to everyone who is new. So this year I was teaching Mikela, who is a new member, about North Brother Island and everything we do in terms of stewardship and how it started.

We could not get to North Brother Island every time we planned because it sometimes rained. So A.C.T.I.O.N. expanded from there and we decided to work in other gardens and do a lot of other stewardship. For example, I have been involved in urban farming through A.C.T.I.O.N. We deal with a food desert. A food desert is an area that does not have a lot of access to healthy fruit and vegetable. So we work with an urban farming group, which tries to turn abandoned lots and parking lots into community gardens or entire farms to grow food and vegetables locally and affordably. We started building a garden near the Riverside Park in Hunts Point. A.C.T.I.O.N. is going to be working in that garden once it’s built. We are going to start growing fruits and vegetables, and sell them at an affordable rate to the Hunts Point community. We already have a garden in our backyard that uses Earth Boxes. We planted some tomatoes, pumpkins, corn, radishes, asparagus and just pretty flowers to make the area more beautiful. Last year throughout the entire summer I came in every week to water them.

So we worked with the Urban Farming group, and it was having an event where they were going to D.C. to the White House to help Michelle Obama’s vegetable garden. The Urban Farming group invited a member of A.C.T.I.O.N. to this event. Adam Liebowitz, who is in charge of A.C.T.I.O.N., put in the hat names of students that he thought were the most interested in the subject, and pulled my name at random. So I went to D.C. last year. The garden is not completely organic because for years—I can’t

remember if it was Bush or Clinton—were using a sewage-based fertilizer for plants. After you put it in soil you can't make it into an organic garden. I was not able to meet with Michelle Obama or Obama himself, but I did go into the White House, and they gave us a tour of the garden that is there. It is huge. They actually have their own bees, like a beehive.

Because of A.C.T.I.O.N. I've heard about the Students on Ice program that sends you to Antarctica. This program sends students to Antarctica for free, and I'm pretty sure I'm the first A.C.T.I.O.N. student to be part of this program. Students participate in expeditions to help to learn about the Antarctic environment. I have applied to this program last year when I was old enough. Then last winter I took a plane—first plain ever in my life—to Miami, and from Miami I went to Chile, then to Argentina. And in Argentina we went to a town called Ushuaia and then we got on a boat, when through the Drake Passage, which has the roughest seas in the world. For some strange reasons it was pretty calm, I mean calm for roughest seas on the planet. There were classes every day on the boat. In Antarctica we collected samples of ice cores to see how the levels of CO2 changed. For the most time I was stuck in a really big boat with 60 people for two weeks. I think it helped me to break out that habit being asocial; now I can communicate with someone and just be in one-on-one conversation.

The trip has changed the way I thought people view the Bronx. There were 60 students from different countries, including 15 students from New York. The rest were from different countries: Canada, Palestine… But when I first went there I told a young woman where I was from, and she asked me if I lived in a ghetto. I don't think she did it maliciously, but I don't think she realized how offensive that was. And in the hotel I had two roommates. I told one of them about it, I said that that woman asked me if I lived in a ghetto. I said that it was a bad question to ask. And one young gentleman said, "Why? Because the Bronx is all a ghetto?" Those who don't live in the Bronx view it like it's the most terrible place on earth, one gigantic wasteland, people getting shot every hour of the day. I tried to explain that it's not true, but it's hard when people just don't get it. Unfortunately, sometimes I get frustrated and give up when people around me can't look past the rumors they hear about the Bronx when I try to tell them what is the reality of life in the Bronx. They can't connect to what I tell them like it's hard for them to think that there are any good things about the Bronx. People have their own mindset about how the world works and how certain areas are. And unless you can teach someone when they are young about certain things, they hear it and they look at it with filtered views.

This year I have created my own youth-led program to teach younger students about the environment through workshops and skateboards. The idea of this program started last year. I took classes from Douglas Miles, a man who owns a company in Arizona called Apache Skateboards. He was at THE POINT, and the workshop was completely free. He taught me how to design skateboards, and ever since then I've been obsessed with skateboards. I have had a skateboard on the brain since then, and I was thinking of a way I could incorporate skateboarding, art, and environmental activism.

Then a woman named Lila Starbucks came to A.C.T.I.O.N. She is from New York Powered by Service, which is a branch of the organization called Usher's New Look. Usher is a really famous singer; he decided to form an organization to help out communities in need, and he wanted it to be youth helping communities. Usher's New Look has an office in New York and in other states in the United States. So Lila came and talked about a $500 grant to start your own organization. And I was thinking about it and came up with the idea. I had no name for it, but then I turned it to Kendrick, who is my friend and co-founder of EcoRyders along with Chenkon Carrasco, and he came up with the name EcoRyders. We had to change the "i" in "riders" to "y" just spelling-wise because "ecoriders" is copyrighted. So we were doing planning for a month. We were doing research on how much the boards would cost, what equipment we need, how much paint we need, we were just wrecking our brains. Our application to Usher's New Look was accepted and we got the grant.

We decided that the main goal for the EcoRyders program is to educate youth about the environment. I think there is a lot of activism being done in the Bronx to try to fight against the issues that happen here. But I don't think it's enough in proportion to what's happening. I feel if you do know all the information—not just about the bad, but also what you can do to prevent it—it makes you a lot more active because it makes you hyped about it, makes you really wanna do something. If you just scare a person with bad information, they are just paralyzed. You shouldn't give them just this information, you

have to give them hope and tools they can use to fight against an issue. So my plan was to invite several middle school and high school kids to learn about the environment and several social issues during several weeks. As a reward, as an incentive for these kids to come to EcoRyders workshops we would show them how to design their own skateboards and teach skateboarding.

I think that skateboarding is probably one of the most environmentally friendly ways to travel. Skateboards are powered by nothing except your own sweat and effort. You don't need to take a bus if you are going only three blocks away from where you are. You can skateboard there much faster. The travel aspect of skateboards are important to Hunts Point considering the fact that only 23% of Hunts Point residents own cars. A skateboard costs far less than a car. It does not take a lot of time to learn how to ride. Skateboarding is a workout. It can also help to solve an obesity problem because you start loosing a lot of weight. Before I started skateboarding I weighed about 285 lb, and now I weigh 265 lb. I lost 20 lb within a year, and I attribute a large majority of that to my skateboarding. Many of the parks in Hunts Point are behind a barrier of industrial zone. It's hard to get there when you walk, these parks are pretty far from residential houses and the area is not served by MTA public transportation. Skateboards can help you get to parks faster. When you start skateboarding you gain a connection with your urban surrounding.

We mapped out a route to Barretto Point Park to get there faster on skateboards. The reason we mapped it out is because the route we use now is mostly downhill, so it's easy to ride, but when you come back you need to find a gentle slope. You don't think about slopes when you walk or drive, but when you start skateboarding you start mapping out routes in your head. You get to know that this place is downhill, this place will get me faster, this is uphill, this street has a lot of cracks so I might fall, and this street is very smooth so I can go really fast on it. You begin to remember these things just by instinct. I think it's an amazing phenomenon that more and more skateboards seem to be appearing in Hunts Point. I'm not going to attribute that to EcoRyders, but the fact that each year I can send at least 11 more skateboarders out to Hunts Point—it helps.

The Students on Ice program made it a bit harder for me to set up EcoRyders because I left the day after Christmas to Antarctica, and I was away for about two weeks. When I got back I had to start making EcoRyders on the go. We were able to get boards and all the equipment, but that was really rushed and panicky. Originally the EcoRyders program was supposed to last only February, just one month. But it ended up lasting three months because of how much stuff students had to learn and do. Because I did not have enough money from the grant, I was not able to afford wheels for the skateboards. We were able to order 20 wooden boards, and everything else in EcoRyders came out my paycheck. Paper, box knifes, the paint, spray cans, the masks for spray cans, rubber gloves, pizza for every day—came out of our paychecks from A.C.T.I.O.N. But it was completely worth it. I had a lot of support form THE POINT with finding a space to run EcoRyders workshops.

Surprisingly, I did not have to recruit participants, and there was no interview process in EcoRyders. They found out somehow. The people who wanted to come told their friends, and those friends told someone to come, and they've told more. Only one student came to EcoRyders because he saw one of our flyers. And even now I have five kids who want to come to the next year EcoRyders because they've heard about it from their friends. If you want to join, just show up. I have recruited around 11 students who were 11-18-year-old, mostly boys. They all brought different talents to EcoRyders. Some of my EcoRyders were incredible artists, some were great skaters, the list of talents goes on. In the beginning we had a survey to check environmental knowledge, and if you fill in the survey and answer correctly every question I might not let you in. It's an educational program, and you are supposed to learn. My friends Chen and Kendrick—he is also from A.C.T.I.O.N.—and I taught most of environmental classes and skateboard making.

The original plan was to conduct environmental classes and skateboarding classes only in February, but we did not get the boards in time. The funding organization wanted us to send them the list of the items we needed and they bought it, which caused the delays. So I had to extend EcoRyders in time. After we had the boards we realized this program could take a bit longer because we still have to teach all environmental information, and the boards also were still not even close to being completed. Another cause of delays was that we planned to do a lot more gardening in the Bryant Hill Community

Garden as part of EcoRyders. Several times that we planned to go there it rained or snowed, so we could not work because gardeners did not want us to go inside, slip, and get hurt.

The first day was the introduction, when we mainly played games and a lot of icebreakers. We wanted the EcoRyders kids to know each other and be comfortable with us. We told them what we will be doing in the future for EcoRyders and started working on sketches for skateboard paintings. I had them make practice stencils for the skateboards and get a feel of how it was like to make a stencil. Kids just designed what their skateboard would be. And after that I had them cut stencils out and we practiced what it would be on a board. Then we talked about North Brother Island: the island itself and its history. I was talking about North Brother Island when we were looking at it from Barretto Point Park, so kids were completely engaged. You get that a little less when you are just in a room talking to them with a PowerPoint presentation. You don't get as much interest. So I know the next time I start EcoRyders most of the classes will probably be outside in the areas I'm talking about.

We had no backup plans when it rained. So we just made something up to do that day. We talked about different species of animals that live in the Bronx River. We started talking about this woman named Typhoid Mary. She was a carrier of typhoid but she had no symptoms, and she infected many people by typhoid because she was a cook, and then she was sent for quarantine to North Brother Island before it was a natural bird reserve. I told students one random fact or story every day when we did EcoRyders just to keep them engaged. Skateboards are also mainly a means to attract the kids to come. The skateboards hook you, but once you are in the organizations, you actually start to get excited about some of the stuff we do like the gardening.

Another day I took students to Lucia's garden, which is a community garden called Bryant Hill Community Garden. Before we actually went to Lucia's garden I taught kids some facts about the local environment, about what's going on with them—food desert and urban farming. And that information had kind of excited them about the community garden. I found that it was good to do stuff first before throwing them into garden work because they realized what they were doing and how it was helping everything around them, and they focused on that. In the garden all I had to do is to delegate tasks, "You do this, you go there, be careful with that," and they got the job done. Some EcoRyders had already painted and assembled skateboards, while some had not finished it and walked to Lucia's garden on foot. Lucia Hernandez is an artist, a gardener, and a professional tree pruner. I knew her personally because we both worked in a mural project about different cultures in Hunts Point. She was willing to allow us to help her in the garden. The garden is surrounded by apartment buildings. It is rocky, and still has natural landscapes and a lot of slopes. And because of these slopes when it rains all the nutrients get taken out of soil and run off into sewers. So she had us move the soil to even the ground near some of the trees. We did a lot of shoveling the dirt. We also removed a very annoying rose bush that would not come out the ground and planted it in a different area. This was a 15–year–old rosebush, and its roots were deep. I was not sure where the roots ended, so we stopped trying to dig them up and just cut them from where they were. All EcoRyders who were there that day focused their attention on getting this one stubborn rosebush out of the ground. I know for next year when I do EcoRyders again we need to dedicate more time to working in a garden because an hour and 30 min is not enough to get a lot done. But otherwise I think we did a good job in the garden.

I also wanted to talk to students about Barretto Point Park and its location in an industrial area. It used to be this brownfield, which is a contaminated land. I wanted to tell them how it was turned into a park where you can see East River, the Manhattan skyline and North Brother Island. Most of EcoRyder participants had never walked or went by car to Barretto Point Park. So kids who had skateboards—I let them on skateboards, and others had to walk. And they realized how horrible it was to walk there, it's not a good walk at all. This is an industrial zone, there are cars coming out everywhere, trucks coming out everywhere, really hard wind will hit you in the face. It's not a good thing to be around there when you are walking with kids. But the park is beautiful. You have an amphitheatre that looks directly at North Brother Island, and that's where I teach them about what's going on with Barretto, about trucks, and a little bit about asthma rates in Hunts Point. Students were really impressed. And just to make sure they had learned something, I took a video camera and then uploaded videos on EcoRyder's Facebook. So I took a video camera and recorded randomly one of them, and asked him to teach me what I just taught

them, and a kid would start explaining it. I just wanted to see what they got, and they explained in full detail, which made me happy that they were actually listening and learning. We also spend time teaching to skateboard in the park.

I think I learned how to be a good teacher on the Antarctica trip. Before I went to Antarctica the original plan for teaching the EcoRyders students was to create that barrier—I will be the teacher, and you are the student, you have to listen. But the teachers on the Antarctica trip were really friends with me. They were completely personal and funny. I learned a lot because of that, I was not bored whatsoever. So for EcoRyders program I learned that if you want people to learn and be engaged, the best way to do that is to try to be the best person you can be with them. Just try to make them laugh, and sneak as many jokes into what you are saying as you can. And they'll be engaged. You can talk dramatically about something that's not a big deal. Talking about North Brother Island I mentioned a funny story that actually happened to keep students engaged such as this: The Commissioner of the Parks Department and some other city officials were going to North Brother Island to visit without informing the Coast Guards. And the coastguards pulled them over and they were about to get arrested because they had no permission to be on North Brother Island. And it was hilarious, and you remember it because it's funny.

To teach students about nutrition problems in the Bronx I had them watch the movie "Food, Inc." But before I had them watch Food, Inc I brought them a lot of food that I knew had high-fructose corn syrup in it—honey buns, different pastry snacks—so they would be freaked out while they are watching the movie. And I was very happy to see that most of them stopped eating the food and freaked out. One of them stopped eating fried chicken for about a week. I was very happy to hear that. I admit that Food, Inc is a very scary documentary because it tells you that there is a lot of bad stuff in your food, nothing else. But another documentary that we watched, called "Fresh," is about the same issues, but it gives you a bit of hope. They show you solutions that other people are doing to grow organic food. They are showing you people who are working to help. And that inspires ideas. Not everyone is fit to lead, but so long as someone has that spark, things get rolling. I think that as long as you can focus on this local environment and if a community can work on it—that answers all the problems of global warming, environmental problems and nutrition problems. As long as people are contributing, it adds.

I conducted surveys in the beginning and at the end of programs to see how much they learned, and I think students learned a lot. There were a lot of environmental aspects that they had not any idea about. After the program almost all of them answered almost all of my questions in terms of environmental knowledge, and they had a much larger interest in the environment than in the beginning. Students learned many facts. For example, they learned about Robert Moses who was not a particularly nice man. He forced a lot of communities to be destroyed because he wanted to put different highways in the city, which is why the Bronx has so many highways cutting through it. Five of my EcoRyder students had no idea that there are community gardens in Hunts Point. Although most of them live in the Bronx, they had no idea the gardens are here. Sometimes I go to hang out with my former students, and they actually pay attention to nutrition information on bottles and foods just to see if there is any corn syrup in it. And if they can afford it, they will not drink it. They will make sure to throw the bottles and trash not just on the street. And of course all EcoRyders made their skateboards by the end of the program and used stencils to paint them.

Next year my plan is to go to college for environmental studies and business. I want to go for these two majors and a minor in arts. But I also plan to continue EcoRyders to educate the kids in Hunts Point about these problems because they are going to inherit them. Outside of just freaking them out about the bad stuff that is happening in Hunts Point I give them tools and resources to actually help these problems. When I will be in college I will help EcoRyders by working on grants and showing my friends how to run it. If I am in college I need my EcoRyders students to take the reins.

I think that in A.C.T.I.O.N. at THE POINT I learned about issues in the South Bronx. The Students on Ice program expanded my knowledge of environmental protection on the global level. And in the EcoRyders program I focused mainly on teaching kids about issues and solutions in this community. My experiences in these programs prove that if people are informed they are all willing to act to improve their environment and their standard of living.