Taking a Non-traditional Path to Hunting in New York: Insights and Implications for Recruitment and Retention



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EXECUTIVE SUMMARY

Background

Socio-demographic shifts such as rural to urban migration, exurban growth, changing family structure, and increasing population of racial/ethnic minority groups may have significant impacts on hunting, an activity that is rooted in traditional rural American culture and disproportionately practiced by white males who are often introduced to the activity during their youth through immediate family members, typically the father or another male figure. Anecdotal evidence, however, suggests that proportionately more hunting participants do not have these socio-demographic attributes and may be entering the activity through "non-traditional" pathways. Understanding these "paths," or sociocultural mechanisms that drive interest and participation in hunting is critical to the future of hunter recruitment and retention. The research described in this report examines these mechanisms and provides insight into the degree to which non-traditional pathways are contributing to hunter recruitment and retention.

Objectives

- 1. Identify if NTPHs exist as a significant proportion of the overall population of new hunters and describe traits expressed by respondents in the NTPHs subgroup.
- 2. Identify factors that might facilitate or impede recruitment and retention of particular NTPHs.

Methods

A web-based survey instrument was implemented during January – February 2015. Subjects were identified using the 2014 Sportsman Education (SE) student registry and subsequently filtered based on several criteria: they had to be at least 18 years old and have recently passed a SE course in New York State. Females and racial/ethnic minorities were automatically included in the sample. Caucasian males from suburban and urban areas with limited social support and limited hunting experience were also included. However, Caucasian males from rural areas were subjected to an additional criterion. Those who met the previous criteria (i.e., limited hunting experience and limited social support) and had not participated in a variety of hunting-related socialization activities defined in previous research, such as helping process and prepare wild game meat to eat, were included in the sample.

The Survey Research Institute at Cornell University implemented the web-based survey via personalized email. In total, 3,605 individuals meeting the criteria above represent the entire population of non-traditional path hunters (NTPHs). To reach as many potential NTPHs as possible, half of the non-respondents were offered an alternative mode to respond to the survey. This was done to appeal to potential respondents who might prefer to participate via standard mail than using the Internet. Following the second email reminder, these individuals were sent a questionnaire in the mail.

The survey instrument covered a variety of topics including: current and future hunting participation, social support, motivations to hunt, beliefs about hunting/hunters, barriers to hunting, and respondent characteristics (Appendix B).

Key findings

• **Response rate and population proportion estimates.** Using the criteria described above, 3,605 individuals were identified as potential NTPHs and were included in the final sample. Based on our definition, this estimate represents all of the NTPHs from the 2014 SE student registry. Of these individuals, 1,383 returned a questionnaire (1,283 email; 100 mail) resulting in a 38% response rate.

Overall, we estimate that our sample of NTPHs comprised about 40% of the total population of adults who registered for a SE course electronically and passed a course during the 2014/2015 season.

- **Respondent characteristics.** Most (45.4%) respondents were between 18-31 years old and an additional 25.8% were between 32-41 years old (note our sample only included SE students 18 or older). The majority were White/Caucasian (84.4%) and over half (51.5%) were female. Most did not grow up in an urban center; rather they grew up in either suburban areas (30.6%), in a village or town (18.4%), or in rural areas (32.4%) and currently reside in similar locations.
- Experiences prior to taking a Sportsman Education (SE) course. Many (42.9%) respondents had difficulty locating a SE class nearby and 35.0% experienced difficulty finding a class that fit within their schedule. More than one-quarter (26.6%) of respondents reported not having anyone to go hunting with prior to taking the course.
- Hunting experiences. Over three-quarters of respondents (77.6%) purchased a New York State hunting license during the 2014/2015 hunting season (the hunting season following passing their SE course) and of those who went hunting during the 2014/2015 season, most hunted deer either with a firearm (85.0%) or bow (44.4%). More respondents spent a greater percentage of their time hunting on private land owned by someone other than themselves or their family (37.2%) or on public land (23.4%) than on private land owned by an immediate family member (20.0%) or their own private land (19.4%). Overall, most respondents planned to hunt occasionally (22.1%) or regularly (51.6%).
- **Factors affecting interest in hunting.** The hunting interests of NTPHs were influenced both positively and negatively in a variety of ways. Most sources (e.g., close friend, brother) were overwhelmingly positive though some sources (e.g., mother, sister, news coverage) were less positive.
 - Social support. Overall, close friends were the most significant influence on NTPHs interest in hunting, followed by spouse/partner and father. When examining the influence of social factors across male and female respondents, the categories shift in importance. For example, 76.2% of female respondents' hunting interests were influenced by spouse or partner versus only 22.5% of

males. On the other hand, 68.3% of male respondents were influenced by close friend versus 48.0% of females. Co-worker was the second most influential group among male respondents. The influence of one's father, an important element in the typical "traditional" pathway into the hunting community, was the second most significant social influence among women.

- *Media influence*. The media was less influential on respondents hunting interests, though videos and magazines about hunting positively influenced about one-third of respondents (29.6% and 30.5%, respectively).
- Beliefs and motivations. Most NTPHs approved of legal hunting as a means to obtain meat, enjoy nature, spend time with friends and family, and control wildlife populations. The majority (89.5%) believed that hunting helps keep nature in balance and provides people with locally sourced food (94.0%). Most (77.3%) believed hunting is morally acceptable because it helps reduce the number of animals that would otherwise starve and that hunting helps provide funds used to manage other non-game species (75.0%). Nearly all (97.7%) respondents disagreed with the statement "hunting is never acceptable under any condition."

Several internal motivations were important in developing respondents' interest in hunting. The majority (88.0%) of all respondents were interested in hunting to harvest local, natural meat and 81.5% of respondents expressed a general curiosity to try something new.

Other respondent motivations varied widely. For example, one conservation-oriented perspective (learning about wildlife and their habitat), was very important to 65.3% of respondents yet other conservation motivations were less important (e.g., to help reduce wildlife damage to native plants). Other reasons that were important to NTPHs included getting close to nature (an appreciative motivation) (63.8%), spending time with friends and family (an affiliative motivation) (62.3%), and obtaining meat (an achievement-oriented motivation) (56.6%).

• **Barriers and future participation.** Nearly one-third (28.9%) of respondents said that firearm laws in New York State represented a major barrier to their future hunting participation. Another 12.5% indicated that lacking access to places where they could practice shooting also represented a major barrier. Despite these barriers and other barriers, most respondents intended to hunt in the future especially for deer and turkey. Specifically, respondents were likely to hunt deer with a firearm (90.6%) or bow (73.6%), and turkey (77.6%).

We defined NTPHs as individuals who enter the hunting community later in life (i.e., as adults), are from predominantly under-represented groups (e.g., women, racial/ethnic minorities, suburban and urban areas), and/or have limited previous hunting experience and social support. Most respondents went hunting during the 2014/2015 hunting season and intend to continue hunting in some capacity in the future.

Overall, respondents' beliefs about hunting and hunters were positive. The majority indicated that hunting helps keep nature in balance, provides people with local food, and helps provide funds to manage non-game species. Respondents' interest in hunting was influenced by a variety of people (e.g., close friend, spouse or partner) and personal considerations (e.g., desire to harvest local, natural meat, interest in trying something new). The media had little influence on respondents' interest in hunting. The five most important reasons why respondents hunt included: learning about wildlife and their habitat, getting close to nature, spending time outdoors with family and friends, obtaining meat, and contributing to wildlife management efforts. Note that obtaining a trophy was not important to most respondents. Respondents perceived firearm laws as the single most significant impediment to their future hunting participation. The complexity of hunting laws in New York State was also identified as a moderate-to-major barrier for 25.3% of respondents.

This study represents a first attempt to describe NTPHs in New York State, a potentially unique subset of the hunting community. Our data provide a snapshot of insight into the 2014 cohort of NTPHs, not a long-term inquiry that follows the behavior of these people over time. Thus, we are currently limited in what we know about the long-term retention of these individuals and recommend future research focus on retention of these NTPHs. Our data also provide a baseline description of who these individuals are, how they became interested in hunting, why they are motivated to hunt, and their post SE-course intentions regarding hunting in the future.

Acknowledgments

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INTRODUCTION

The future of wildlife conservation depends on people valuing wildlife and on their commitment to sustaining wildlife species and their habitats. It has been argued that valuing wildlife and promoting wildlife conservation, as well as pro-environmental behavior in general, are greatly enhanced by engagement in outdoor, nature-based activities (Cooper et al. 2015; Kellert 1996). Hunting has long been identified as important to the development of wildlife conservationists. In addition, human acceptance of some wildlife species (e.g., deer elk, bears, coyotes) that can cause negative impacts on people (economic, health and safety impacts) requires management of those species within thresholds of tolerance (Siemer et al. 2012). Management of these species relies on regulated hunting as means of mortality for population control. Thus, when hunter numbers decline, so can the potential for creating wildlife conservationists and implementing wildlife management.

Socio-demographic shifts such as rural to urban migration, exurban growth, and increasing growth among racial/ethnic minority groups may have significant impacts on hunting, an activity that is traditionally rooted in rural American culture and predominantly practiced by white males (Bissell et al. 1998; Heberlein et al. 2002). Historically, hunters are more likely to have been introduced to the activity during their youth through immediate family members, typically the father or another male figure (Clark et al. 2004; Stedman & Heberlein 2001). Anecdotal evidence suggests that more hunting participants are entering the activity as young adults through "non-traditional" pathways (Larson et al. 2013; USFWS 2009). Non-traditional pathways can include different sources of social support such as people (or groups of people) outside the family and can include different motivations or reasons to hunt (e.g., for civic or community-oriented purposes) (Larson et al. 2014). Understanding these "paths," or sociocultural mechanisms that precipitate interest in hunting and potential hunting participation, is critical to the future of hunting and hunter recruitment and retention.

This study focused on understanding non-traditional path hunters (NTPHs) in New York State. We define NTPHs as individuals who enter the hunting community later in life (i.e., as adults), are from predominantly under-represented groups (e.g., women, racial/ethnic minorities, suburban and urban areas), and/or have limited previous hunting experience and social support. Based on discussions with wildlife management professionals and previous research (Decker et al. 2015; Larson et al. 2014; Purdy & Decker 1986; Purdy et al. 1989) we developed several hypotheses about NTPHs in New York. For example, we hypothesized that NTPHs would be more likely to hunt because of conservation-related motivations or for civic-oriented purposes (Decker et al. 2015; Larson et al. 2014). We also hypothesized that, given the limited support and lack of hunting experience, NTPHs might experience barriers to entering the hunting community, above and beyond those typically identified by active hunters including a lack of access to hunting lands and not enough places to hunt (Duda et al. 2010).

Objectives

- 1. Identify if NTPHs exist as a significant proportion of the overall population of new hunters and describe traits expressed by respondents in the NTPHs subgroup.
- 2. Identify factors that might facilitate or impede recruitment and retention of particular NTPHs.

METHODS

Survey methodology and sampling frame

A web-based survey was used to collect data on NTPHs in New York State. Potential NTPHs were identified using the 2014 Sportsman Education (SE) student registry and subsequently filtered based on several criteria. They had to be at least 18 years old and have recently passed a SE course in New York State. Females and racial/ethnic minorities were automatically included in the sample. Caucasian males from suburban and urban areas with limited social support and limited hunting experience were also included. However, Caucasian males from rural areas were subjected to an additional criterion. Those who met the previous criteria (i.e., limited hunting experience and limited social support) and had not participated in a variety of hunting-related socialization activities defined in previous research, such as helping process and prepare wild game meat to eat, were included in the sample (Enck et al. 2000; Stedman & Decker 1996) (Appendix A).

There were 8,696 adults in New York State who registered for a SE course electronically and passed a course in 2014. Approximately 83% of these individuals were White/Caucasian. Eight percent were non-white and another 8% did not respond when asked about race/ethnicity. Most were male (6,379) though 2,317 females (27.0%) also passed a SE course. In total, 3,605 NTPHs who met the criteria described above were identified and included in the final sample. These individuals represent every potential NTPHs in New York State, based on our definition above and approximately 41% of the population of new adult hunters in NYS who passed a SE course in 2014 (Table 1).

		Percent
	Total	(of total population)
Entire 2014 cohort (duplicates removed)	16,362	N/A
Adults who passed a course	8,696	55.6
Adults who failed a course	16	0.1
Adults who audited, did not show up, or received an incomplete	1,765	10.1
in a course		
Children who passed a course	4,999	30.7
Children who failed a course	24	0.1
Children who audited, did not show up, or received an	533	0.1
incomplete in a course		
Adults in sample (after applying sampling criteria)	3,605	22*

Table 1. 2014 SE electronic student registry

*The total number of adults in the sample after applying sampling criteria is equal to approximately 40% of the adult population who passed a course

Survey Instrument

The questionnaire, titled, "New and Emerging Hunters in New York State," was developed with input from contacts in the New York State Department of Environmental Conservation. The nine-page survey instrument addressed social support and factors that influence participants' interest in hunting; attitudes and beliefs about hunting/hunters; motivations and potential barriers to hunting; and current and future intended hunting participation (see Appendix for full instrument). The survey instrument received approval from the Cornell University Institutional Review Board for Human Participants (protocol number: 1101001927) prior to implementation.

Survey Implementation

The Survey Research Institute (SRI) at Cornell University implemented the web-based survey. Using a modified Dillman Tailored Design method, respondents received five personalized contacts, each containing a unique URL or direct link to the questionnaire. An initial invitation to participate was sent via email on January 14, 2015. A reminder was emailed to non-respondents one week later (January 21, 2015) followed by a second reminder on January 28, 2015. A third reminder was sent on February 4, 2015. A fourth and final reminder was sent one week later (February 11, 2015).

In an effort to offer participants an alternative mode for responding to the questionnaire, we divided the sample of non-respondents into two groups on January 28, 2015 (following the second reminder). This was done to appeal to potential respondents who might prefer to participate via standard mail rather than using the Internet. The first group continued to receive reminders via email on February 4 and February 18. The second group received a questionnaire in the mail on February 4 and a reminder on February 18. Results from each group were combined and are presented below. Non-respondent follow-up telephone interviews were conducted from February 25 – March 11 by the SRI. During this time, 90 non-respondents were interviewed.

DATA ANALYSIS

Descriptive and inferential statistical analyses were conducted using IBM's Statistical Package for the Social Sciences (IBM SPSS 21). Specifically, frequencies and means were calculated for all 1,383 respondents. Of these individuals, 1,283 responded via email and 100 responded using standard mail, resulting in a 38% response rate. In order to examine whether statistically significant differences exist between those who responded to the questionnaire and those who did not, we conducted either T-tests or Chi square tests based on socio-demographic characteristics and hunter-related attributes. Specifically, we examined differences between respondents and non-respondents on the following variables: age, race, area in which respondents' grew up and currently live, current hunting behavior and hunting intentions, approval of legal hunting, and social support. Statistically significant differences were detected between respondents and non-respondents on two variables: (1) current hunting behavior and hunting intentions, and (2) social support. More respondents than non-respondents had gone hunting and planned to hunt regularly (51.6% versus 35.6%) and fewer respondents than nonrespondents had never gone hunting but would consider going (20.4% versus 35.6%). A greater percentage of non-respondents were influenced by their father (50.0%) and other family members (43.3%) than respondents (38.6 and 32.6%, respectively). We did not weight respondent data but acknowledge that a greater percentage of respondents have hunted, plan to in the future and were less influenced by immediate family members.

RESULTS

Respondent characteristics

Approximately three-quarters (71.2%) of respondents were between the ages of 18 - 41 years old (18 represents the minimum age of NTPHs by our definition) (mean age = 34) (Figure 1) and just over half of all respondents (51.4%) were female. The majority were White/Caucasian though there is greater diversity among male than female respondents (Figure 2). Nearly all female respondents were White/Caucasian (94.8%) whereas 74.6% of males were White/Caucasian (Figure 2).

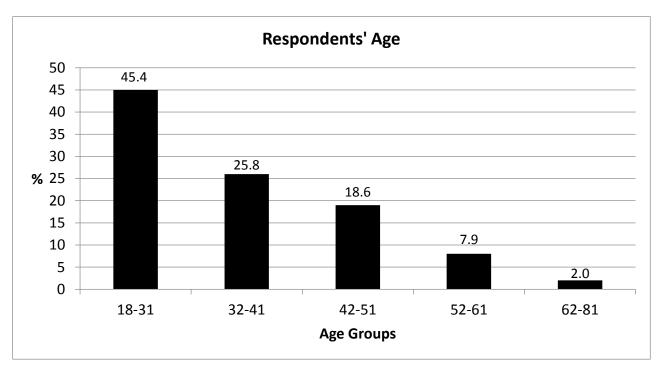


Figure 1. Respondents' age

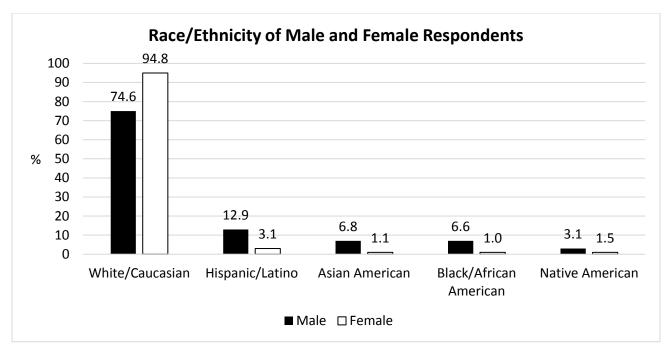


Figure 2. Male and female respondents' race/ethnicity

More than 40% of respondents had a Bachelor's or graduate or professional degree (28.7 and 16.0%, respectively) (Figure 3). About half of all respondents grew up in rural areas (32.4%) or in a village/town (18.4%) and another 30.6% grew up in suburban areas (Figure 4). Most currently reside in similar locations (Figure 4).

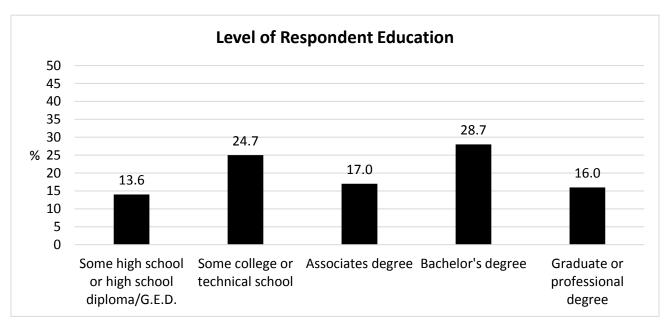


Figure 3. Respondents' education

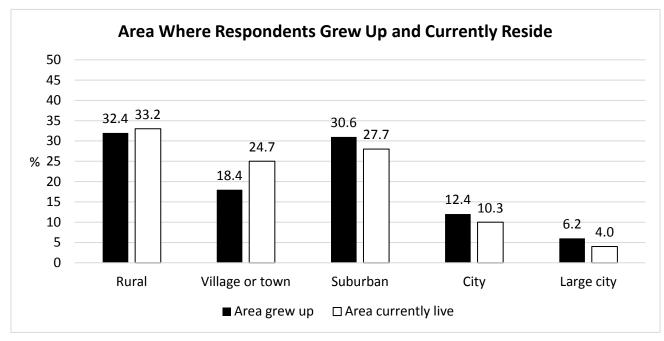


Figure 4. Size of area in which respondents' grew up and currently reside

Potential situations and barriers prior to taking Sportsmen's Education (SE) course

Over one-quarter of respondents (26.6%) did not have anyone to go hunting with prior to participating in the 2014 Sportsmen's Education class (Figure 5). Nearly half (45.3%) of these individuals indicated this represented a moderate to major barrier. The location of courses and the times/days courses were offered also posed difficulties for respondents. Thirty-five percent found it difficult to find a class that fit within their schedule and 42.9% found it difficult to find a SE course nearby. For these respondents, finding a class that fit within their schedule and finding a class nearby constituted a moderate to major barrier to 59.1% and 56.9%, respectively.

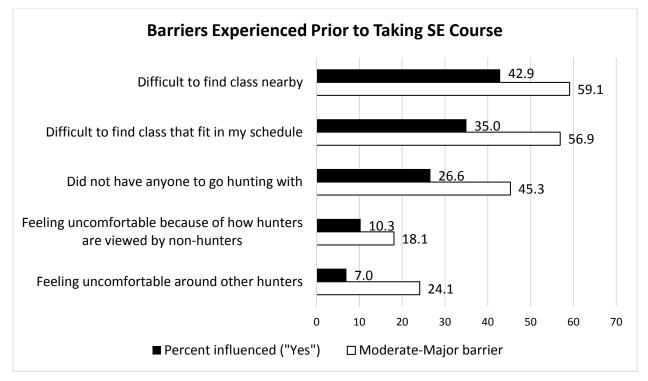


Figure 5. Percent of respondents who experienced situation and degree to which it posed a barrier to taking SE course

Hunting behavior and intention

Over three-quarters (77.6%) of respondents purchased a hunting license in NYS during the 2014/2015 hunting season and most planned to hunt in the future. Over half intend to hunt regularly (51.6%) and another 22.1% plan to hunt occasionally (Figure 6). Of respondents who had gone hunting, none indicated that they are unlikely to go again. Respondents were less interested in hunting small game than hunting deer. Of those individuals who went hunting during the 2014/2015 season, most hunted deer with a firearm (85.0%) or bow (44.4%) and spent between 7-10 days afield (Table 2). Nearly one-quarter (24.2%) hunted turkey and 21.6% hunted small game. Nearly two-thirds (62.8%) hunted exclusively on private land, 14.5% hunted exclusively on public land, and 22.7% hunted on both private and public land (Figure 7).

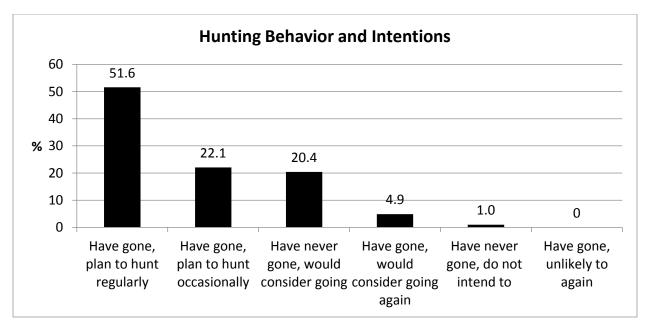


Figure 6. Hunting behavior and behavioral intentions

Species and type of hunting	Percent Participating	Average number of days afield (for those participating)
Deer - Firearm	85.0	7
Deer - Bow	44.4	10
Turkey	24.2	4
Small game (e.g., squirrel, rabbit)	21.6	8
Deer - Muzzleloader	13.1	4
Waterfowl (e.g., ducks, geese)	11.5	6
Upland game birds (e.g., grouse, pheasant)	11.5	6
Bear	10.1	7
Furbearers (e.g., coyote, fox)	8.0	14
Deer - Crossbow	5.3	4

Table 2. Hunting particip	nation by respondents	who went hunting du	uring 2014/2015 season
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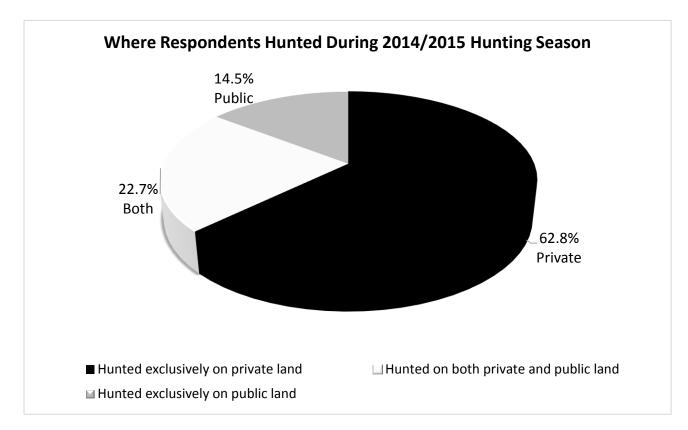


Figure 7. Percent of respondents who hunted on private and/or public land

Interest in hunting

Social support

Over half of respondents cited close friend (58.0%) as influencing their interest in hunting (Figure 8). Spouse/partner was the second most influential category (51.2%), followed by father (38.6%), other family member (32.6%), and co-worker (30.5%) (Figure 8). When asked whether each person (or group of people) positively or negatively influenced their interest in hunting, the majority indicated a positive influence. However, 25.0% of respondents indicated a negative influence from their mother and 15.7% experienced a negative influence from their sister.

We examined whether male and female respondents had similar or dissimilar influences on their decision to hunt. Most women in our sample (76.2%) identified spouse/partner as responsible for influencing their interest in hunting (Figure 9), followed by father (53.6%) and close friend (48.0%). Nearly 70% of male respondents were influenced by a close friend (68.3%). Co-worker was the second most influential source for 42.5% of male respondents followed by extended family member (33.2%) (Figure 9).

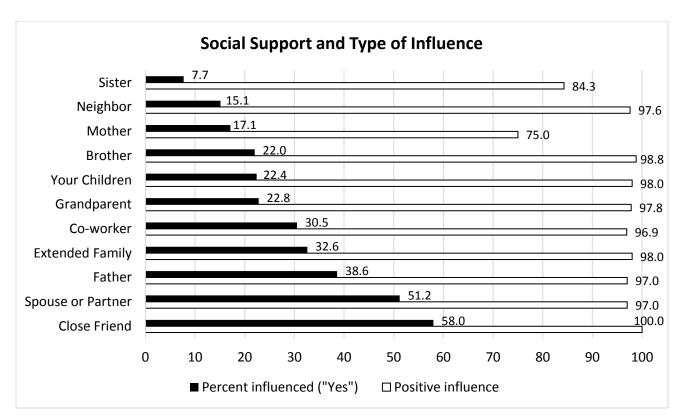


Figure 8. Social support and percent (positive) influence

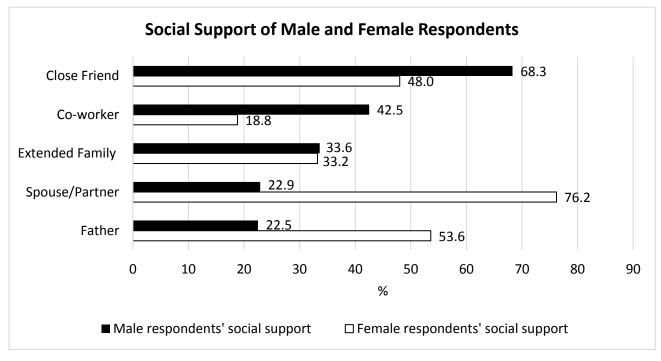


Figure 9. Male and female respondents' social support

Media influence

Nearly one-third (30.5%) of respondents were influenced by hunting magazines and hunting videos (29.6%) (Figure 10) and 23.4% were influenced by movies/television. News coverage exerted the least influence on hunting interests. Only 13.3% of respondents were influenced by news coverage and 18% of these individuals indicated that the experience was negative.

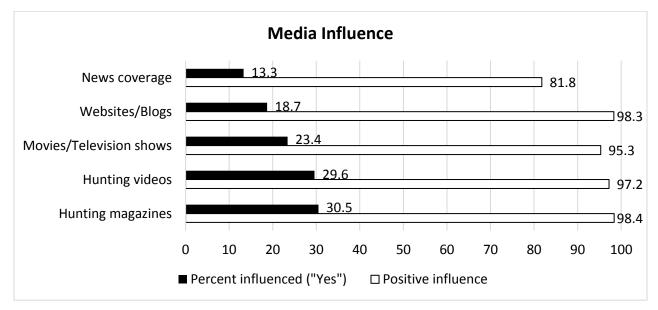
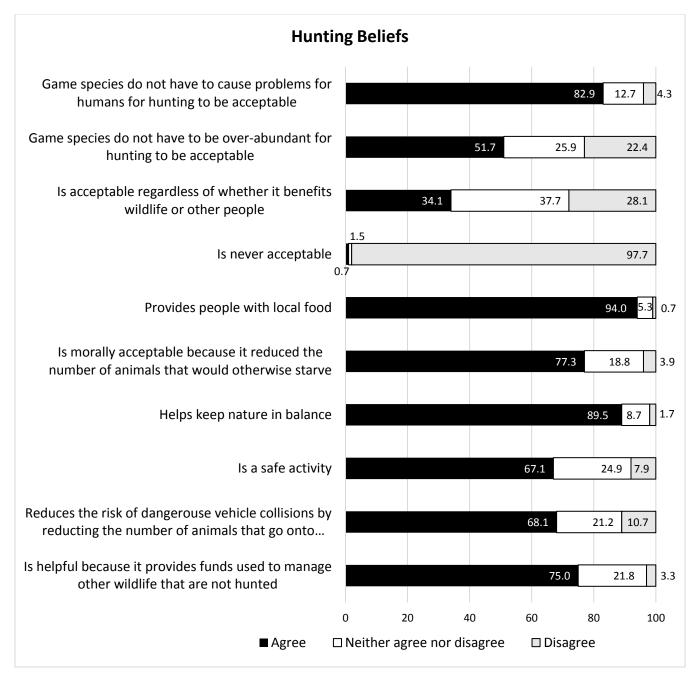


Figure 10. Influence of media on hunting interests and percent (positive) influence

Beliefs about hunting and hunters

Beliefs reflect the information people have about a given topic and form the cognitive foundation for attitudes which, in turn, influence human behavior. It is important to understand NTPHs beliefs about hunting and about hunters because they have the potential to influence both recruitment and retention of NTPHs. Overall, responses varied with respect to *why* people believed hunting was (or was not) acceptable. Almost all respondents believed that hunting helps keep nature in balance (89.5%) and 94.0% agreed that it provides people with local food (Figure 11). Three quarters of respondents agreed that hunting is helpful because it provides funds used to manage non-game species and 77.3% agreed that hunting is morally acceptable because it reduces the number of animals that would otherwise starve. However, 22.4% believed game species need to be over-abundant for hunting to be acceptable and only 34.1% agreed that hunting is acceptable regardless of whether it benefits wildlife or other people (Figure 11).





The majority of respondents believed that hunters behave responsibly, care about protecting wildlife populations and about conserving natural resources, and have compassion for wildlife (Figure 12). Most approved of legal hunting for a variety of purposes including: to obtain local, free-range meat, to be close to nature and spend time outdoors, and to control wildlife populations causing problems for people and the environment (Figure 13). Only 25.9% approved of hunting to obtain a trophy (38.7% disapprove).

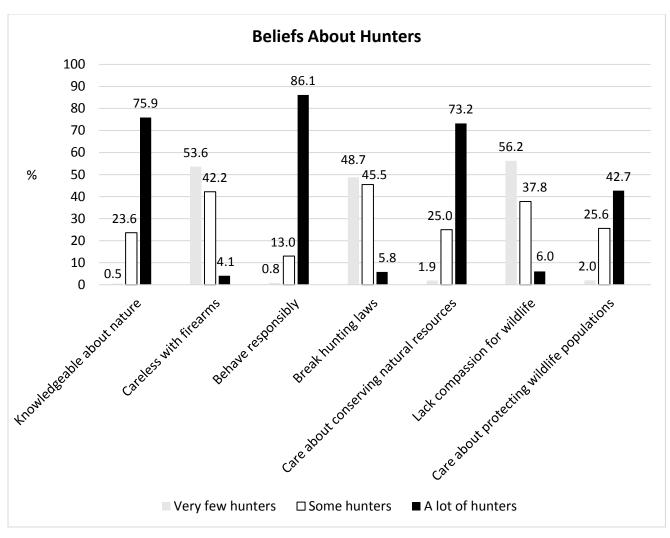


Figure 12. Beliefs about other hunters

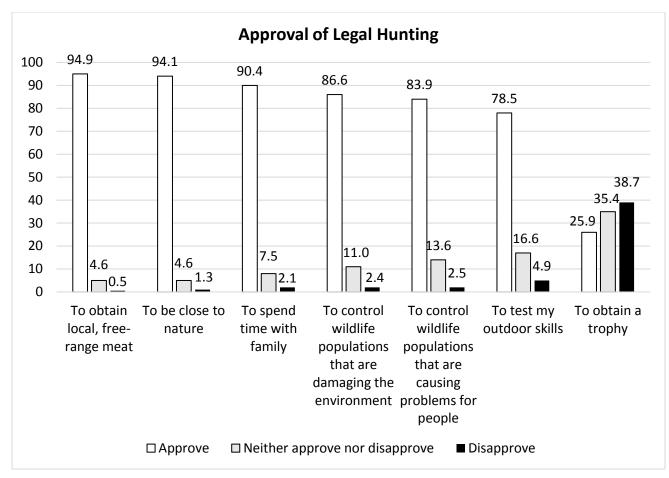


Figure 13. Approval of legal hunting

Internal motivations to hunt

A variety of internal motivations influenced respondents' interests in hunting. The desire to harvest local, natural meat was of interest to most respondents (88.0%). Similarly, most respondents expressed being generally curious to try something new (81.5%) and reported that previous outdoor nature experiences during childhood (71.4%) also piqued respondents' interest in hunting. Almost two-thirds (62.6%) were interested in hunting to help manage overabundant wildlife populations (Figure 14). For respondents who were influenced by these factors, the type of influence was overwhelmingly positive.

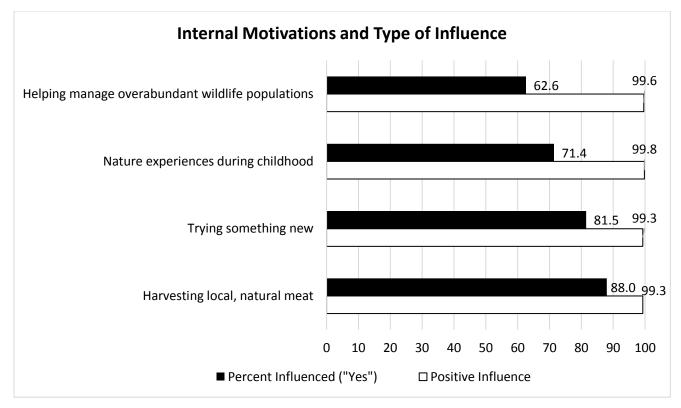


Figure 14. Influence of internal motivations on respondents' hunting interests and percent (positive) influence

Personal motivations to hunt

The reasons why people begin hunting are often described in terms of the goals they seek from the activity (Decker et al. 1984). For example, appreciative-motivated hunters are driven by a sense of solitude and desire to connect with nature or spend time outdoors. Individuals interested in the strengthening social relationships or by the camaraderie hunting offers, are referred to as affiliative-motivated hunters and those interested in meeting self-determined standards of performance, are considered achievement-motivated hunters (Purdy & Decker 1986). However, recent evidence suggests conservation-oriented and civic or community-oriented reasons may be increasing in importance among new hunters. Respondents identified a variety of reasons why they would hunt. For ease of interpretation, responses are separated by motivational category.

Conservation motivations

Hunting for conservation-oriented purposes was important to most respondents (Figure 15). However, the degree to which it was important varies with respect to the specific conservation outcome. For example, learning about wildlife and their habitat was very important to 65.3% of respondents and slightly-to-moderately important to an additional 33.5%. However, contributing to wildlife management efforts was very important to 43.2% of respondents and slightly-to-moderately important to 54.3%. Helping to reduce damage to native plants was very important to only 24.8% of respondents and slightly-to-moderately important to 64.2%.

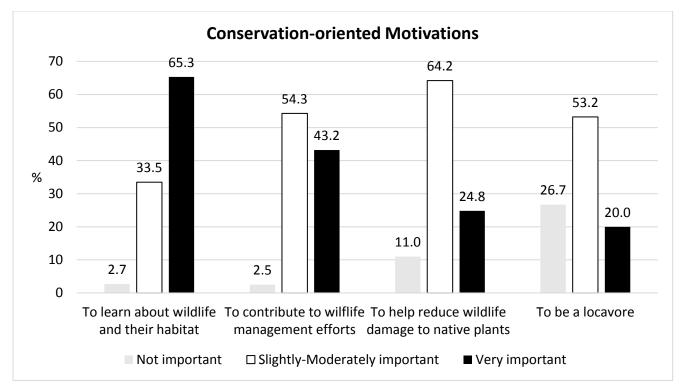


Figure 15. Respondents' conservation-oriented motivations

Appreciative and affiliative motivations

Connecting with nature and people are important reasons to hunt. Specifically, getting close to nature and spending time outdoors with family and friends is very important to 63.8% and 62.3% of respondents, respectively (Figure 16). Escaping from everyday problems was slightly-to-moderately important to almost half of respondents (46.1%).

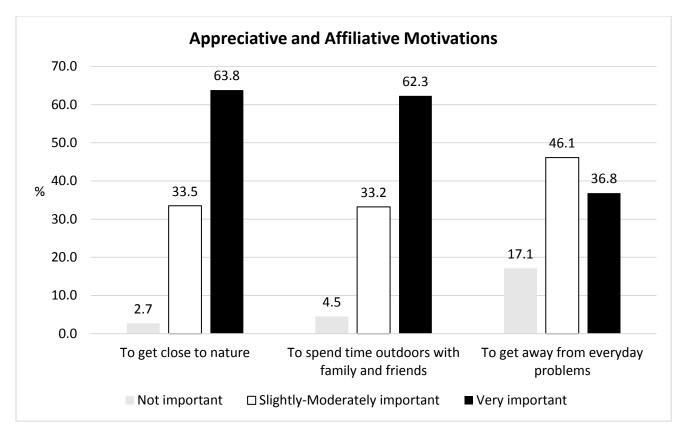


Figure 16. Respondents' appreciative and affiliative motivations

Achievement motivations

Obtaining meat is very important to 56.6% of respondents in our sample (Figure 17). Testing outdoor skills, using hunting equipment, and being a locavore is slightly-to-moderately important to over half of respondents. Hunting to obtain a trophy is the least important of all motivations.

Civic motivations

Overall, hunting for civic-related purposes is slightly-to-moderately important to over half of respondents (Figure 18). However, less than 28% identified civic motivations as very important reasons why they hunt.

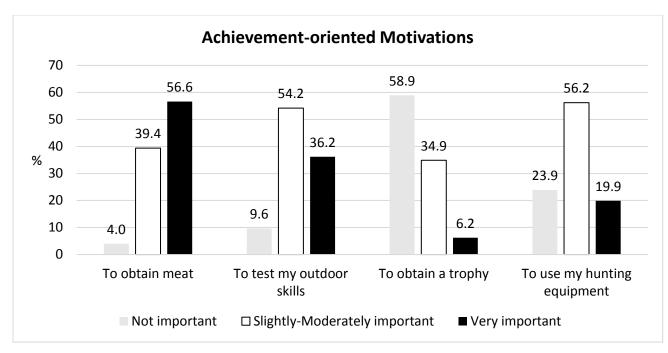


Figure 17. Respondents' achievement-oriented motivations

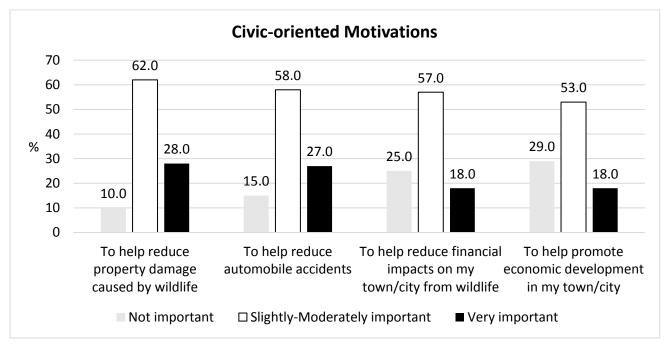


Figure 18. Respondents' civic-oriented motivations

Future participation

In the future, 90.5% of all respondents indicated they are likely to hunt deer with a firearm and 73.6% are likely to hunt deer with a bow (Figure 19). Over three-quarters (77.6%) plan to hunt turkey even though only 24.2% hunted turkey during the 2014/2015 hunting season.

Most respondents intend to hunt on similar types of land ownership to those identified by respondents who went hunting during the 2014/2015 hunting season. About three-quarters (73.5%) intend to hunt on private land owned by someone else, though 58.9% and 57.2% intend to hunt on private land owned by an immediate family member and public land, respectively (Figure 20).

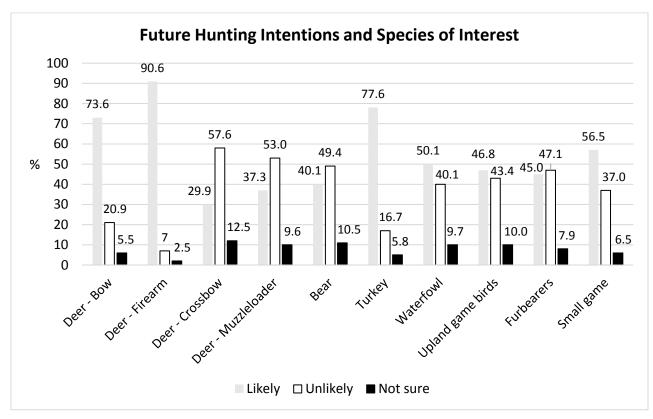


Figure 19. Future hunting intentions by species and type of hunting

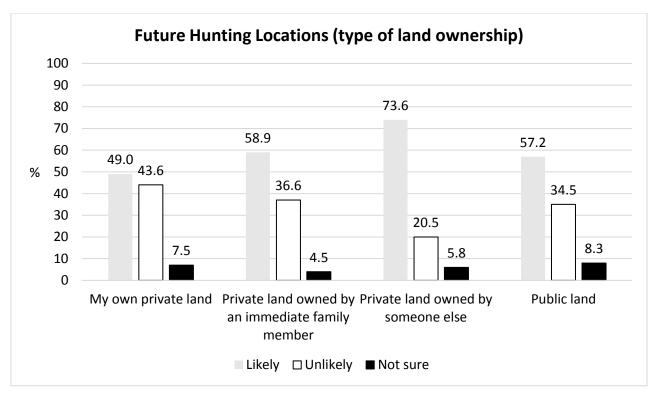
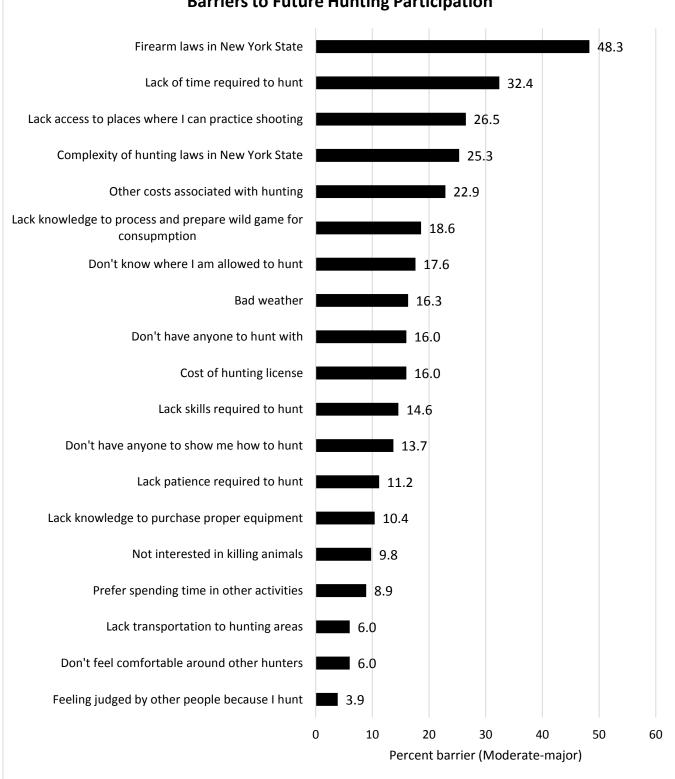


Figure 20. Percent of respondents who intend to hunt on private and/or public land

Potential barriers to hunting

For over one-quarter of respondents, complexity of hunting laws, a lack of access to places where they can practice shooting, a lack of time, and firearm laws represent potential barriers to their future hunting participation (Figure 21). Firearm laws in New York State represent the single most significant perceived barrier for 48.3% of respondents.



Barriers to Future Hunting Participation

Figure 21. Potential barriers to future hunting participation

DISCUSSION

To characterize how NTPHs enter and become socialized into the hunting community, we identified a subset of individuals based on characteristics that would potentially differentiate them from more "traditional" path hunters. The latter are predominantly male and are introduced to the activity during their youth through immediate family members, typically the father or another male figure (Purdy et al. 1989; Purdy & Decker 1986; Stedman & Heberlein 2001). Thus, we wanted to target individuals who began hunting later in life (i.e., as an adult), have limited family support and previous hunting, and/or are from typically under-represented groups (e.g., females, racial/ethnic minorities, suburban/urban areas). Given the age at which NTPHs are entering the hunting community and the overall lack of support from family, we hypothesized that, prior to taking a Sportsman Education course, most respondents would be less likely to have someone to hunt with and would not have had the opportunity to go hunting during the 2014/2015 hunting season. On the contrary, few respondents experienced not having someone to hunt with and the majority went hunting. When we examined who influenced respondents' interests in hunting we find that most male respondents became interested in hunting through a close friend. The majority of female respondents were influenced by their spouse or partner. These findings illustrate how respondents' sources of social support have helped them get started hunting.

Another hypothesis we made involved the personal motivations or reasons why potential NTPHs hunt. Since the 1980s there has been a steady decline in hunting for primarily utilitarian purposes (i.e., achievement-oriented motivations such as for a trophy or for meat) (Decker, et al. 1984; Responsive Management 2006). Anecdotal evidence suggests that a growing number of new, adult hunters are becoming interested in hunting because of the conservation or civicoriented benefits derived from the activity. Findings from a recent national survey provides evidence to suggest that the American public also approves of hunting for these purposes (Decker et al. 2015). As such, individuals who enter the hunting community later in life may be more influenced by and interested in hunting to achieve goals specifically related to wildlife conservation or civic responsibility (Larson et al. 2014; Siemer, Decker, & Stedman 2012). Further, female hunters often express different motivations than male hunters (Covelli 2015). The former are more often motivated to hunt to obtain meat or to spend time with friends and family (i.e., achievement and affiliative motivations) than their male counterparts (Responsive Management 1995). Given our interest in under-represented groups (e.g., adult females who recently passed a SE course), we posited that respondents would hunt because of a variety motivations, but with emphasis on conservation or civic-oriented purposes.

Findings reveal that respondents are motivated to hunt to learn about wildlife and their habitat and, to a lesser degree, to contribute to wildlife management efforts. Far fewer respondents identified civic purposes as being very important reasons why they hunt. Rather, getting close to nature (an appreciative motivation), spending time outdoors with friends and family (an affiliative motivation), and obtaining meat (an achievement-oriented motivation) were very important reasons why most respondents hunt. Clearly, conservation is important to those in our sample but results also indicate that no single motivation (or category of motivations) is the most important to respondents. Instead, many of the same reasons traditional path hunters engage in the activity (e.g., get close to nature, spend time with friends/family, and to obtain meat) (Decker et al. 1984; Purdy & Decker 1986) appear important to NTPHs as well. Several internal

motivations including an interest in harvesting local, natural meat and a general curiosity to try something new also influenced respondents' interests in hunting. These findings provide support for the notion that there are alternative pathways into hunting and that social agents outside the family (e.g., friends, co-workers) as well as non-blood relatives (e.g., spouse or partner) play an important role in encouraging or at least supporting hunting participation of NTPHs.

Many active hunters face obstacles to hunting participation. Examples include: lack of free time, costs associated with purchasing equipment, lack of access to places where hunting is permitted, and hunting rules or regulations perceived as overly complex and/or restrictive (Brunke & Hunt 2008; Decker & Brown 1979; Duda et al. 2010; Larson et al. 2013). However, the NTPHs in our sample are, by definition, relatively new to the activity. Thus, we sought to explore whether other barriers to their future participation might exist in addition to these wellrecognized obstacles. Further, we were interested in whether perceived personal constraints (e.g., inexperience) or being seen as "atypical" and hence perhaps not well accepted by the hunting community might further act as barriers. Overall, few of the constraints listed in the questionnaire represented major barriers to respondents' future hunting participation (aside from firearm laws in New York State). However, five items represent moderate-to-major barriers for over 22% of respondents ranging from concern about lacking access to places where respondents could practice shooting to the complexity of hunting laws in New York State. Several barriers including firearm laws and complexity of hunting laws in New York State represent structural barriers which agency professionals may be able to address through outreach and Sportsman Education efforts. Similarly, barriers indicative of perceived personal constraints (e.g., lacking the skills required to hunt; lacking the knowledge to process and prepare game meat) also have the potential to be addressed through programmatic efforts, either by agency staff or by sportsmen and women organizations. More work is needed to explore further whether NTPHs face unique barriers, and how these in particular might be mitigated.

This research represents a first attempt to identify and describe NTPHs in New York State. Several limitations should be acknowledged. First, we were unable to sample individuals who may be interested in but unable (or unwilling) to take a Sportsman Education course; that population is currently unknown and unidentified. Second, the percentage of adults 18 years of age or older entering the hunting community has increased markedly from about 18% in 1983 to 33% in 2005 (Applegate 1982; US Fish and Wildlife Service 2012). Therefore, we are limited in both what we can say about the entire population of NTPHs (past and present) and the long-term retention of these individuals. More often than not, adults who are initiated into hunting, typically through a spouse, friends, and/or co-worker, are more likely to cease participation than hunters influenced by more "traditional" mechanisms such as a father, during childhood (Decker et al. 1984; Purdy et al. 1985). We recommend future research explore whether there is a segment of the population interested but unable to enter the hunting community and the degree to which NTPHs are likely to be retained over time.

CONCLUSION

Overall, this study provides evidence to suggest that a significant number of NTPHs exist in NYS. Often influenced to hunt by non-family members and non-blood relatives, they are entering the hunting community through alternative pathways compared to most hunters traditionally. This is a positive prospect for hunter recruitment and retention, but optimism

must be tempered by the finding that most male respondents are becoming interested in hunting through their associations with friends and co-workers. Given the mobility of adult males, these relationships have the potential to be short-lived, thus hunting continuity is threatened among NTPHs for whom the relationship with friends and co-workers is important for their participation. Previous research indicates that cessation of hunting for this type of hunter is common after one or two years (Decker et al. 1984; Purdy et al. 1985). Female respondents received social support from spouse/partner. While this may help in terms of overcoming initial barriers to hunting (e.g., having no one to go hunting with) (Purdy & Decker 1986), the number of female hunters retained over time is typically much lower than for men (National Shooting Sports Foundation 2015).

Literature Cited

- Applegate, J. E., (1982). A change in the age structure of new hunters in New Jersey. *Journal of Wildlife Management*, 46, 490-492.
- Bissell, S., Duda, M. & Young, K. 1998. Recent studies on hunting and fishing participation in the United States. *Human Dimensions of Wildlife*, 3(1), 75-80.
- Brunke, K. E. & Hunt, K. M. (2008). Mississippi waterfowl hunter expectations, satisfaction, and intentions to hunt in the future. *Human Dimensions of Wildlife*, 13, 317-328.
- Clark, E. A., Brown, R. D., & Higginbotham, B. T. (2004). Developing a strategic plan for future hunting participation in Texas. *Wildlife Society Bulletin*, 32(4), 1156-1165.
- Cooper, C., Larson, L., Dayer, A., Stedman, R., & Decker, D. (2015). Are wildlife recreationists conservationists?: Linking hunting, birdwatching, and pro-environmental behavior. The *Journal of Wildlife Management*, 79(3), 446-457
- Covelli Metcalf, E., Graefe, A. R., Trauntvein, N. E., & Burns, R. C. (2015). Understanding hunting constraints and negotiation strategies: A typology of female hunters. *Human Dimensions of Wildlife*, 20(1), 30-46, DOI: 10.1080/10871209.2015.957366.
- Decker, D. J., Provencher, R. W., & Brown, T. L. (1984). Antecedents to hunting participation: An exploratory study of the social-psychological determinants of initiation, continuation, and desertion in hunting. *Outdoor Recreation Research Unit Publication*. Ithaca, NY: Cornell University, Department of Natural Resources.
- Decker, D. J., Stedman, R. C., Larson, L. R., Siemer, W. F., (2015). Hunting for wildlife management in America. *The Wildlife Professional*, 9(1), 26-29.
- Duda, M. D., Jones, M. F., & Criscione, A. (2010). *The sportsman's voice: Hunting and fishing in America*. State College, PA: Venture Publishing, Inc.
- Enck, J. W., Decker, D. J., & Brown, T. L. (2000). Status of hunter recruitment and retention in the United States. *Wildlife Society Bulletin*, 28, 817-824.
- Heberlein, T. A., Ericsson, G., & Wollscheid, K. U. (2002). Correlates of hunting participation in Europe and North America. *European Journal of Wildlife Research*, 48(1), 320-326.
- Kellert, S. R. (1996). The value of life: biological diversity and human society. Island Press, Washington, D.C., USA.
- Larson, L. R., Decker, D. J., Stedman, R. C., Siemer, W. F., Baumer, M. S., & Enck, J. W. (2013). *Hunter Recruitment and Retention in New York: A Framework for Research and Action*. Human Dimensions Research Unit Series Publication 13-04. Department of Natural Resources, Cornell University, Ithaca, N.Y. 72pp.

- Larson, L. R., Stedman, R. C., Decker, D. J., Siemer, W. F., & Baumer, M. S. (2014). Exploring the social habitat for hunting: Toward a comprehensive framework for understanding hunter recruitment and retention. *Human Dimensions of Wildlife*, 19(2), 105-122. doi: 10.1080/10871209.2014.850126.
- National Shooting Sports Foundation (2015). *Annual hunter churn rates and composition of the hunter population by region*" Technical Report #2. Produced by Southwick Associates. August, 2015.
- Purdy, K. G., & Decker, D. J. (1986). A longitudinal investigation of social-psychological influences on hunting participation in New York: Study 1 (1983-1985). Human Dimensions Research Unit Series Publication 86-7. Department of Natural Resources, Cornell University, Ithaca, N.Y. 127pp.
- Purdy, K. G., Decker, D. J., & Brown, T. L. (1989). New York's new hunters: Influences on hunting involvement from beginning to end. Human Dimensions Research Unit Series Publication 89-3. Department of Natural Resources, Cornell University, Ithaca, N.Y. 25pp.
- Purdy, K. G., Decker, D. J., & Brown, T. L. (1985). New York's 1978 hunter training course participants: the influence of social psychological influences on participation in hunting from 1978-1984. Human Dimensions Research Unit Series Publication 85-7. Department of Natural Resources, Cornell University, Ithaca, N.Y. 127pp.
- Responsive Management. (1995). Factors related to hunting and fishing participation in the United States: Final report. Study conducted for the U.S. Fish and Wildlife Service. Harrisonburg, VA.
- Responsive Management/National Shooting Sports Foundation. (2006). *The future of hunting and the shooting sports: Research-based recruitment and retention strategies.* Harrisonburg, VA: Author. Available at http://www.responsibemanagement.com/download/reports/Future_Hunting_Shooting_Re port.pdf
- Siemer, W. F., Decker, D. J., & Stedman, R. C. (2012). Cornell University lands deer hunting program: Profile of active participants in 2011. Human Dimensions Research Unit Series Publication 12-4. Department of Natural Resources, Cornell University, Ithaca, N.Y. pp.
- Stedman, R. C., & Decker, D. J. (1996). Illuminating an overlooked hunting stakeholder group: Nonhunters and their interest in hunting. *Human Dimensions of Wildlife*, 1(3), 29-41.
- Stedman, R. C., & Heberlein, T. A. (2001). Hunting and rural socialization: Contingent effects of the rural setting on hunting participation. *Rural Sociology*, 66(4), 599-617.

United States Fish and Wildlife Service (2012). 2011 National survey of fishing, hunting, and wildlife –associated recreation: National overview. Washington, DC: US Department of the Interior, US Fish & Wildlife Service.

APPENDIX A

Screening Questions for Selection of Interviewees

NOTE: These questions were asked of all 2013 online hunter education course registrants to identify potential non-traditional hunters for interview follow-up.

1. How would you best describe the area where you grew up? (Check ONE.)

- Rural
- Suburban
- Urban

2. Did you grow up in a household with one or more family members who hunt?

- Yes
- No

3. Have you ever hunted before?

- Yes
- No

4. Have you ever participated in the following hunting-related activities? (*Check ALL that apply.*)

- a) Gone afield with someone who was hunting even though you were not carrying a firearm
- b) Helped process or prepare wild game meat to eat (field dress game, cut and package game meat, cook game, etc.)
- c) Regularly eaten game meat obtained through hunting

APPENDIX B Questionnaire New and Emerging Hunters in New York State





NYS Department of Environmental Conservation

and the



Human Dimensions Research Unit Department of Natural Resources Cornell University

Introduction & Background

The New York State Department of Environmental Conservation (DEC) is working with Cornell University to conduct a study of prospective hunters in New York. We are interested in understanding why people hunt and different factors that foster their interest in hunting. The information we gather will help DEC understand the expectations and program needs of new and continuing hunters across the state.

Please complete this questionnaire as soon as you can, seal it with the white re-sealable label provided, and drop it in any mailbox; return postage has been paid. Your participation in this study is voluntary, but we strongly encourage you to take a few minutes to answer our questions. Your identity will be kept confidential and the information you give us will never be associated with your name.

THANK YOU FOR YOUR HELP!

Hunting Related Experiences

1. Which of the following statements best describes you?

[Please check only one response.]

- □ I have gone hunting, but am unlikely to do it again
- □ I have gone hunting, and I would consider going hunting again in the future
- □ I have gone hunting, and I plan to hunt occasionally
- □ I have gone hunting, and I plan to hunt regularly
- □ I have never gone hunting, nor do I intend to
- □ I have never gone hunting, but I would consider going hunting in the future

2. Had you ever experienced any of the following situations prior to taking the 2014 New York State hunter education course? <u>If yes</u>, please indicate whether or not each was a barrier to taking the course.

Potential situations	Experi No	ence? Yes	Not a barrier	Slight barrier	Moderate barrier	Major barrier
Difficult to find a hunter education class nearby						
Difficult to find a hunter education class that fit in my schedule						
Feeling uncomfortable around other hunters						
Did not have anyone to go hunting with						
Feeling uncomfortable because of how hunters are viewed by non- hunters						

Current Hunting Participation

3. Did you purchase a New York State hunting license during the 2014/2015 hunting season? [Please check only one response.]

YesNo

4. Did you go hunting in New York State during the 2014/2015 hunting season? [Please check only one response.]
□ Yes [If Yes, continue to 4.1.]
□ No [If No, skip to 5.]

whether of not you <i>harvested</i> and	Participate?		Number of	Harvest Animal?
Species and Type		1	Days	No Yes
of Hunting	No	Yes	5	
Deer - Bow				
Deer - Firearm				
Deer - Crossbow				
Deer - Muzzleloader				
Bear				
Turkey				
Waterfowl (e.g., ducks, geese)				
Upland game birds (e.g., grouse, pheasant)				
Furbearers (e.g., coyote, fox)				
Small game (e.g., squirrel, rabbit)				
Other (please specify):				

4.1 Did you participate in any of the following types of hunting during the 2014/2015 hunting season? If yes, please also write-in how many *days* you were in the field <u>and</u> whether or not you *harvested* an animal

4.2 Thinking about the total time you spent hunting during the last 12 months, what percentage of that total time did you spend hunting in the following kinds of places? [Please write % in the space below. Responses should **add up** to 100%.]

	Percent Time Spent Hunting in Each Place
	(write-in response)
My own private land	
Private land owned by an immediate family member	
Private land owned by someone else	
Public land	
TOTAL	100%

Hunting Support 5. Did the following people influence your interest in hunting? <u>If yes</u>, please indicate whether the influence was positive or negative.

	Type of Influence							
	Influe No Y	ential? (es	Very negative	Slightly negative	Slightly positive	Very positive		
Mother								
Father								
Brother								
Sister								
Grandparent								
Spouse or partner								
Your children								
Other family member								
Close friend								
Neighbor								
Co-worker								

influence was positive of negative.	<u>Type of Influence</u>						
	Influential? No Yes	Very negative	Slightly negative	Slightly positive	Very positive		
Desire to harvest local, natural meat							
Interest in trying something new							
Outdoor nature experiences during childhood							
Desire to help manage overabundant wildlife populations							
Movies/television shows							
Hunting videos							
News coverage of hunting related topics							
Websites/blogs							
Hunting magazines							

6. Did the following factors influence your interest in hunting? <u>If yes</u>, please indicate whether the influence was positive or negative.

check only one response for each statement.]					
Statements about hunting	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Hunting is helpful because it provides funds used to manage other wildlife species that are not hunted					
Hunting is never acceptable under any condition					
Game species do not have to be over-abundant for hunting to be acceptable					
Hunting reduces the risk of dangerous vehicle collisions by reducing the number of animals that go onto roadways					
Hunting is a safe activity					
Game species do not have to cause problems for humans for hunting to be acceptable					
Hunting helps keep nature in balance					
Hunting is morally acceptable because it reduces the number of animals that would otherwise starve					
Hunting provides people with local food					
Hunting is acceptable regardless of whether it benefits wildlife or other people					

Your Opinions about Hunting and Hunters 7. How strongly do you disagree or agree with the following statements about *hunting*? [Please check only one response for each statement 1

8. To what extent do the following characteristics apply to *hunters*?

[Please check only **one** response for **each** statement.]

	Very few hunters	Some hunters	A lot of hunters	Almost all hunters
Knowledgeable about nature				
Careless with firearms				
Behave responsibly				
Break hunting laws				
Care about conserving natural resources				
Lack compassion for wildlife				
Care about protecting wildlife populations				

	Strongly disapprove	Moderately disapprove	Neither disapprove nor approve	Moderately approve	Strongly approve
To spend time outdoors with family and friends					
To obtain local, free-range meat					
To be close to nature					
To test my outdoor skills					
To obtain a trophy					
To control wildlife populations that are causing problems for people					
To control wildlife populations that are damaging the environment					

Reasons for Hunting 9. To what extent do you approve or disapprove of legal hunting for the following purposes? [Please check only one response for each statement]

10. How important to <u>you</u> is each of the following reasons to hunt? [Please check only one response for each statement.]

Reasons to hunt	Not important	Slightly important	Moderately important	Very important
To spend time outdoors with family and friends				
To get close to nature				
To learn about wildlife and their habitat				
To get away from everyday problems				
To be a locavore				
To use my hunting equipment				
To obtain meat				
To test my outdoor skills				
To obtain a trophy				
To help reduce wildlife damage to native plants				
To contribute to wildlife management efforts				
To help reduce property damage caused by wildlife				
To promote economic development in my town/city				
To help reduce automobile accidents				
To help reduce the financial impacts on my town/city from wildlife				



Potential Barriers to Hunting 11. Do you expect any of the following to be barriers to your future hunting participation? [Please check only **one** response for **each** statement.]

	Expected Experience					
Potential barriers	Do not expect it to be a barrier	Slight barrier	Moderate barrier	Major barrier		
Lack patience required to hunt						
Not interested in killing animals						
Lack skills required to hunt						
Lack knowledge to process and prepare wild game						
for consumption						
Lack knowledge to purchase proper equipment						
Cost of hunting license						
Other costs associated with hunting (equipment,						
travel, etc.)	_	_				
Don't have anyone to hunt with						
Lack of time required to hunt						
Don't know where I'm allowed to hunt						
Feeling judged by other people because I hunt						
Don't have anyone to show me how to hunt						
Lack access to places where I can practice shooting						
Firearm laws in New York State						
Don't feel comfortable around other hunters						
Bad weather						
Complexity of hunting laws in New York State						
Lack transportation to hunting areas						
Prefer spending time in other activities						

Future Hunting Participation

Species and Type of Hunting	Very	Unlikely	Likely	Very	Not
	unlikely			likely	sure
Deer - Bow					
Deer - Firearm					
Deer - Crossbow					
Deer - Muzzleloader					
Bear					
Turkey					
Waterfowl (e.g., ducks, geese)					
Upland game birds (e.g., grouse,					
pheasant)					
Furbearers (e.g., coyote, fox)					
Small game (e.g., squirrel, rabbit)					
Other (please specify):					

12. In the future, how likely are you to participate in various types of hunting in New York State? *[Please check only one response for each statement.]*

13. In the future, how likely are you to participate in hunting at the following locations? [Please

Locations	Very	Unlikely	Likely	Very	Not
	unlikely			likely	sure
My own private land					
Private land owned by an immediate family member					
Private land owned by someone else					
Public land					

check only **one** response for **each**.]

Background Information

14. What is your gender?

□ Male

Female

15. In what year were you born? [Please write answer in space provided.]

16. What is your race/ethnicity? [Please check all that apply].

- □ Asian American
- Black/African American
- □ Hispanic/Latino

□ Native American

□ White/Caucasian

□ Other (please describe):

17. What is the highest level of education you have obtained?

- [Please check **one** box.]
- □ Some high school
- □ High school diploma/G.E.D.
- □ Some college or technical
- school
- □ Associate's degree □ Bachelor's degree
- Graduate or professional
- degree (M.S., M.A., Ph.D., M.D., J.D., etc.)

18. How would you best describe the area where you live and where you grew up? [Please check only one response for each.]

How would you best	Rural	Village	Suburban	City	Large
describe		or town			city
The area in which you					
currently live?					
The area where you lived					
for the longest time while					
you were growing up?					