

Community IPM Outreach Efforts for 2018

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Abstract:

The core mission of the Community IPM Program is to provide New Yorkers with safe and effective solutions to manage pests where people live, work, learn and play. Because the field of Community IPM is vast, including all aspects of life that are not associated with growing food or commercial horticultural, the practices promoted by this program apply to all New Yorkers, and help to reduce health and environmental risks associated with pests and pest management practices. In 2018, Community IPM staff engaged diverse audiences in New York and other states in two important and effective ways.

The Community IPM Program provided over 6,500 contact hours of in-person presentations, workshops, seminars, and webinars. In addition, staff had information on display at trade-shows, professional events, and public fairs for over 140 hours with the potential to reach over 120,000 attendees. These face-to-face meetings offer participants the opportunity to ask questions of experts in a comfortable environment, obtain contact information, and learn about resources available from the NYS IPM. Program staff also provided site visits to address specific pest problems.

To complement the appearance of IPM staff at meetings and public events, social media and other internet-based resources continued throughout 2018. In this age of technology, countless sources of information related to pest biology and management are available. However, many non-university resources are inaccurate and may provide recommendations that are illegal, unsafe, or simply fail to address the issue. Therefore, IPM staff used social media to point individuals to research-based information while also generating new fact sheets and blogs. IPM staff also contributed to trade magazines. Because this content is available in several formats, this increases the reach of the Community IPM program and the possible adoption of IPM strategies.

Background and Justification:

Among New Yorkers, familiarity with the term “integrated pest management” is somewhat low. However, when the tenets of IPM are explained, a majority of people feel that an integrated approach is most desirable because it reduces the risks presented by household and public health pests, and the methods used to control them. Therefore, it is essential to the mission of the NYS IPM program that community outreach efforts generate an increase in awareness of IPM, ideally leading to increased adoption of IPM strategies. This is accomplished by changing

decision-making behaviors of people seeking to control pests, which occurs over time with persistent effort.

Educational programs that result in an improved ability to identify pests can reduce the reliance on pesticides for management. This is because accurate identification provides information about an organism's food preferences, life cycle, and preferred harborage sites. While Master Gardener Volunteers can use this information to provide management recommendations for homeowners, pest professionals can hone in on infestation sites and employ sanitation and exclusion techniques to directly reduce pest populations. Thus, a major emphasis of education by IPM staff is to enhance the ability of New Yorkers to accurately identify pests.

In order to reach diverse audiences in New York State, including those in various age groups, program staff promoted the IPM Image Gallery on Flickr, the NYS IPM Facebook page, YouTube Channel and Twitter account, and the NYS IPM and School IPM Blogs. The use of multiple outlets for disseminating information is based on the premise that different generations obtain information in various ways. Whereas older generations prefer hard-copy materials, such as fact sheets, younger generations gather most of their information in short posts and through social media. By adjusting our messages to appear in different formats, we are able to reach diverse audiences and enhance adoption of IPM principles.

Objectives:

- To increase the awareness of New Yorkers about integrated pest management and the best ways to reduce their risk from household and public health pests, including the pesticides used to manage them.
- To create educational materials for community IPM awareness that are easily accessible to New Yorkers and beyond.
- To promote sustainable landscapes as a method of implementing IPM to manage both indoor and outdoor pests.

Activities:

I. Traditional Outreach

Collaboration and Information Sharing

Each year, the Community IPM Coordinating Council meets to provide updates on funding, projects and other endeavors of participating individuals and organizations. In 2018, the Council invited stakeholders to speak at meetings on topics relative to IPM:

- Lynn Braband, NYS IPM Program, led a panel discussion on Structural pest management in sensitive settings.
- Dr. Paul D. Curtis, Associate Professor, Department of Natural Resources, Cornell University gave a presentation on Wildlife damage management in community settings.
- Andie Graham, Department of Environmental Science & Ecology, SUNY-Brockport discussed Invasive species in natural areas.
- Jennifer Lerner, Resource Educator, Environmental Horticulture and Natural Resources, CCE of Putnam County described the IPM-funded project, "Creating a 360-degree video experience: leveraging community assets and volunteer talent to deliver an interactive IPM message".

- Dan Wixted, Pesticide Management Education Program, Cornell University gave a presentation on “Glyphosate: The Untold Story”.

CIPM Grants Program Coordination

The 2018 CIPM Grants program attracted 18 proposals. The Community IPM Coordinating Council reviewed these proposals and ranked them in order of priority and likelihood of success for funding. Ten projects were funded. A separate report for each funded project is available from the NYS IPM Program. Funded projects included:

1. Virtual pollinator garden tour using 360-degree video to promote Integrated Pest Management and Pollinator Support messages
2. Soil biological responses to imidacloprid use in lawns
3. Improving Lawn Quality Using IPM Techniques without Pesticides
4. A Low-Literary Need Assessment and Guidelines for Best Practices: How Do We Best Reach This Audience?
5. Tick Mitigation and Education at 4-H Camp Shankitunk
6. IPM Exclusion Education and Training
7. TICK BE GONE: Promotion of methods for reducing the impact of ticks in area schools, and camps in Courtland County
8. Biological control approach for insect pests of golf course turf-Introducing entomopathogenic nematodes to manage annual bluegrass weevils, invasive crane fly and white grubs
9. Field Assistant of Commercial Natural Oil Pesticides on Tick and their associated habitats on Suffolk County Properties
10. Quantifying Asian Worm Population Density and their Impact on Soil Organic Matter

Annual NYS Integrated Pest Management conference

The Community IPM Team, led by Jody Gangloff-Kaufmann, organized the Fourth Annual NYS Integrated Pest Management conference to highlight the latest efforts in managing ticks and mosquitoes and preventing vector-borne disease. It brought together a wide range of speakers to address the scope of the problem. Dr. Laura Harrington, medical entomologist with the Cornell University Department of Entomology, our keynote speaker was joined by speakers from the NYS Department of Health, Western Connecticut State University, Connecticut Agricultural Experiment Station, and Rutgers University. Information, including pdfs of most of the presentations can be found at <https://nysipm.cornell.edu/resources/nys-ipm-conferences/breaking-cycle-ipm-ticks-and-mosquitoes>.

IPM Resources

[How to Get Bed Bugs Out of Your Belongings](#) This resource was published on the NYS IPM Program’s website in February 2018 with stakeholder feedback. The final version is a 70 page document, including an attractive cover created by Karen English. Gil Bloom (owner, Standard Pest Management), submitted an abstract about the guide to newsletters of the New York and New Jersey Pest Management Associations, and the document was promoted by Pest Control Technology Magazine (www.pctonline.com/article/cornell-bed-bug-ipm-guide/). The guide was also distributed to local health departments through the New York State Department of Health,

and to Cornell Cooperative Extension Horticulture Educators in New York State. In the 11 months since its publication, the document has been downloaded over 9,750 times.

In addition to this resource, NYS IPM educators are working on two additional documents to help individuals with bed bugs. The first, “How to Avoid Getting and Spreading Bed Bugs,” is ready for publication, while “Responding to Bed Bug Introductions” requires further content editing. These documents address the two most common questions received by educators about bed bugs.

[Don't Get Ticked NY Campaign](#) Funded by the NYS Senate Task Force on Lyme and Tick-Borne Diseases, the Don't Get Ticked NY Campaign is an outreach and education program geared to help New Yorkers protect themselves from tick bites and tick-borne diseases. Described in more detail in the **2018 Tick IPM Outreach and Research Activities** report, the campaign includes:

- The [Don't Get Ticked NY website](#)
- [Life Cycle of the Black-Legged Tick \(and Lyme Disease Prevention!\)](#) claymation video
- [Tick Infographic Posters](#)
- Tick removal kits
- Tick education kits
- Standardized tick PowerPoint Presentation available throughout the Cornell Cooperative Extension System
- Tick presentations and tabling events across the state
- Peer reviewed [Frequently Asked Questions about Ticks](#)

[Forest Pest Handbook](#) The Forest Pest Handbook was developed as a resource for Cornell Cooperative Extension Master Gardener Volunteers to use to educate the public in the fight to prevent the spread of forest disease and insect pests.

There is information for each pest on identification of the pest, hosts, and damage; range and how the organisms entered and moves around the state (or how it could if it is not currently present in the state), and how to report it if found. Each sheet has additional resources listed, and is meant as 1) quick information if counties receive calls from the public and 2) a method for organizing additional resources as they are available in each county. The pests included are:

- Asian gypsy moth
- Asian longhorned beetle
- Bacterial leaf scorch
- Balsam woolly adelgid
- Brown spruce longhorned beetle
- Dogwood anthracnose
- Elongate hemlock scale
- Emerald ash borer
- European gypsy moth
- Hemlock woolly adelgid
- Jumping worms
- Norway spruce shoot gall midge
- Oak wilt
- Pine shoot beetle
- Rhizosphaera needlecast disease
- Sirex woodwasp
- Southern pine beetle
- Spotted lanternfly
- Spotted wing drosophila
- Sudden oak death
- Thousand cankers disease
- Velvet longhorned beetle
- Viburnum leaf beetle
- White pine needle damage
- Winter moth

[Active Ingredients Eligible for Minimum Risk Pesticide Use: Overview of the Profiles](#) With support from the NYS DEC, profiles were developed of the 31 active ingredients allowed in pesticides that are exempted from the federal pesticide product registration of the United States Environmental Protection Agency. These profiles identify available data for the physical

and chemical properties, human health information, environmental effects information, efficacy, and standards and regulations that apply to the substance. The profiles will help officials, practitioners, and the public better understand the potential risks and benefits of the active ingredients in minimum-risk pesticides. Profiles have been developed for:

- 2-Phenethyl Propionate
- Castor Oil
- Cedarwood Oil
- Cinnamon & Cinnamon Oil
- Citric Acid
- Citronella & Citronella Oil
- Cloves & Clove Oil
- Corn Gluten Meal
- Corn Oil
- Cottonseed Oil
- Dried Blood
- Eugenol
- Garlic & Garlic Oil
- Geraniol
- Geranium Oil
- Lauryl Sulfate
- Lemongrass Oil
- Linseed Oil
- Malic Acid
- Mint and Mint Oil
- Peppermint & Peppermint Oil
- Potassium Sorbate
- Putrescent Whole Egg Solids
- Rosemary & Rosemary Oil
- Sesame & Sesame Oil
- Sodium Chloride
- Sodium Lauryl Sulfate
- Soybean Oil
- Thyme & Thyme Oil
- White Pepper
- Zinc

[Fact Sheets](#) not listed within the above resources.

- Dunn, A.R. [Biocontrol Around the Home: Mosquito Control](#). NYS IPM. 2018. 7/27/18.

IPM Staff Contributions to Other Publications

- Eshenaur, Brian. Source for: "[How to pick and preserve your Christmas tree](#)". The Livingston County News. 19 December 2018.
- Eshenaur, Brian. Source for: "[Rules announced for Christmas tree disposal](#)". Article by: Sarah Eames The Daily Star, Oneonta, New York, December 26, 2018.
- Eshenaur, Brian. Source for: How (and where) to recycle your Christmas tree. Article by: Sean Lahman, Democrat and Chronicle Newspaper Rochester, NY. December 26, 2018.
- Eshenaur, Brian. Source for: "[What can you do to put your Christmas tree to use?](#)". Article by: Thomas Giery Pudney, Ithaca Journal, Dec. 28, 2018
- Three articles about pest exclusion were published by PCT Magazine on 21 August 2018 based on presentations given by Drs. Matt Frye and Jody Gangloff-Kaufmann at PestWorld 2017. The articles also included images from NYS IPM staff.
 - Benefits and Opportunities with Exclusion Programs: www.pctonline.com/article/benefits-opportunities-exclusion-program/
 - The Inspection: The Critical First Step: www.pctonline.com/article/inspectioncritical-first-step/
 - Factors to Consider When Selecting Materials: www.pctonline.com/article/factors-consider-select-exclusion-materials/
- Frye, Matt. "Research Round-up." Pest Control Technology Magazine, GIE Media, Inc. 28 August 2018. Web. URL: www.pctonline.com/article/research-round-up/
- Frye, Matt. Source for: "[A Cockroach Stuck in Your Ear? | How Common Is It?](#)". SELF, Condé Nast, 7:11m, 18 September 2018.
- Frye, Matt. Source for: "[Eliminating food sources is the solution to rat problems, pest expert says](#)". the Wash, American University. November 2018. Article by Ana Claudia Chacin.
- Lampman, Joellen. Source for: "[This Towering Plant is Invading the US, and It's Causing Serious Sunburns](#)". Article by: Yasemin Saplakoglu, Live Science, 18 June 2018.

- Lampman, Joellen. Source for: "[This Woman Stumbled into a 'Hobo Parsnip' Plant. Days Later, Her Legs Were Severely Burned](#)". Article by: Kimberly Hickok, Live Science, 18 July 2018.

Service

All staff responded to e-mails, phone calls, walk-ins, extension, Facebook, etc. on a variety of topics related to pest management in private homes, office buildings, schools, childcare facilities, public housing, private lawns, and sports fields. Program staff also provided site visits to address specific pest problems at locations throughout New York.

Presentations

Presentations (including school, tick, and wildlife IPM presentations that are also listed in other reports). Contact hours are a measure of the number of participants and the duration of time spent (ex. for 10 participants in a 1 hour session, the contact hours would be 10 * 1 = 10 hours).

Date	Location	Conference/ Meeting Name	Presentation Title	Contact Hours
1/22/18	White Plains/ Westchester	NYSTLA Conference & Trade Show	Keep Ticks Away!	169
1/25/18	Brentwood/ Suffolk	Turf, Plant & Tree Conference	Dealing with Critters in the Landscape	60
1/30/18	Lynbrook/ Nassau	Arrow Annual Training Meeting	Urban Rats and Mice: Health Concerns	68
2/5/18	Rochester/ Monroe	Food Processing Sanitation and Pest Management: A Pest Manager's Recertification Workshop	Bed Bugs in Unusual Places: Responding to Introductions in Offices, Schools, Retail Stores and Food Facilities	60
2/13/18	Lincoln, NE	Nebraska Urban Pest Management Conference	Rodentology and Pest Management	101
2/13/18	Lincoln, NE	Nebraska Urban Pest Management Conference	The Dirt on Filth Flies	50
2/17/18	Geneva/ Ontario	Ontario County Garden Symposium	Weed Suppressive Groundcovers and Plant material for Upstate NY Landscapes	155
2/23/18	Batavia/ Genesee	Master Gardener training	Protecting Yourself from Ticks & Tick-borne Disease	20
2/23/18	Elmsford/ Westchester	Target Specialty Products Seminar	Adding Exclusion Services to Your Company Profile	65
2/26/18	Chenango Forks/ Broome	State Park Winter Training Seminars	Tick IPM	21
2/26/18	Chenango Forks/ Broome	State Park Winter Training Seminars	Enhancing Pollinator Habitat on Golf Courses	6
2/27/18	Farmingdale/ Suffolk	State Park Winter Training Seminars	Tick IPM	20
2/27/18	Farmingdale/ Suffolk	State Park Winter Training Seminars	Enhancing Pollinator Habitat on Golf Courses	6

Date	Location	Conference/ Meeting Name	Presentation Title	Contact Hours
2/28/18	Pleasant Valley/ Dutchess	State Park Winter Training Seminars	Tick IPM	12
2/28/18	Pleasant Valley/ Dutchess	State Park Winter Training Seminars	Enhancing Pollinator Habitat on Golf Courses	4
3/1/18	Latham/Albany	Capital District Pesticide Applicators' Recertification Day	Keep Ticks Away	94
3/1/18	Latham/Albany	Albany CCE Pesticide Recertification Workshop	Structural IPM Short Course	58
3/4/18	Atlantic City, NJ	New Jersey Environmental Health Association Annual Education Conference	Rodentology and Pest Management	101
3/5/18	Atlantic City, NJ	New Jersey Environmental Health Association Annual Education Conference	The Dirt on Filth Flies	74
3/6/18	Cobleskill/ Schoharie	Tick Update	Keep Ticks Away	17
3/8/18	Troy/ Rensselaer	Turf and Landscape Pest Management Update	Keep Ticks Away	38
3/8/18	Rochester/ Monroe	Monthly meeting	Protecting Yourself from Ticks & Tick-borne Disease	40
3/12/18	Buffalo/Erie	NYSTA Western Regional Conference	Keep Ticks Away	62
3/13/18	Batavia/ Genesee	College Grounds Crew Meeting	Pruning Trees for Pest Management and Shrubs: Why and How	14
3/15/18	Ithaca/ Tompkins	Education Day	Best Management Practices for IPM - scouting	45
3/20/18	Baltimore, MD	9th International IPM Symposium	Biological Control of Lily Leaf Beetle with Multisite Releases in NY	13
3/22/18	Baltimore, MD	9th International IPM Symposium	"Pest Exclusion: The Future of Pest Management"	8
4/4/18	Elmsford/ Westchester	Monthly Master Gardner Continuing Education and Training	Entomology 101: Insect Identification, Morphology and Biology	62
4/10/18	Rochester/ Suffolk	2018 Suffolk County Vector Recertification Course	Rodentology and Pest Management	48
4/11/18	Webinar	CCE Systems Conference	Don't Get Ticked! An Outreach Program Coming to You!	24
4/17/18	Schenectady/ Schenectady	Talking Turf with Dr. Frank Rossi	Monitoring for Ticks	6
4/17/18	Voorheesville/ Albany	Albany County Dept. of Public Works Training	Keep Ticks Away	36

Date	Location	Conference/ Meeting Name	Presentation Title	Contact Hours
4/18/18	Westwood, NJ	RK Environmental Training	Entomology 101: Insect Identification, Morphology and Biology	15
4/20/18	Delmar/Albany	Elsmere Earth Day	Keep Ticks Away	35
4/23/18	Montour Falls/ Schuyler	Community Meeting	How to Avoid Getting and Spreading Bed Bugs	49
4/26/18	Colonie/Albany	Men's Garden Club dinner meeting	Keep Ticks Away	20
5/9/18	Hunter/Greene	NYS DEC Campground Caretaker Training	Don't Get Ticked NY	38
5/10/18	Henrietta/ Monroe	Monthly Meeting Presentation	What's new with landscape pest management and invasive pests.	40
5/10/18	Voorheesville/ Albany	CCE Albany Master Gardener Meeting	Intro to iMapInvasives	22
5/11/18	Albany/Albany	Staff Safety Meeting	Don't Get Ticked NY	23
5/18/18	Pittsford/ Monroe	Science Exploration Days	Ticks and Disease: How to reduce your risks while still enjoying the great outdoors	84
5/22/18	Conference Call	Monthly Teach-In Call	Don't Get Ticked NY!	44
5/31/18	Altamont/ Albany	Meet a Scientist	Don't Get Ticked NY	25
6/12/18	Moravia/ Cayuga	Summer Camp Staff Training	Ticks – avoiding the bite at camp	75
6/16/18	Poughkeepsie/ Dutchess	Tick-Tastic Family Extravaganza	Busting Tick Myths	76
6/26/18	Sunken Meadow/ Suffolk	State Park Field Days	Ticks/ Pollinator habitat	7
6/27/18	Rockland/ Rockland	State Park Field Days	Ticks/ Pollinator habitat	6
6/28/18	Green Lakes/ Onondaga	State Park Field Days	Ticks/ Pollinator habitat	8
6/29/18	Watertown/ Jefferson	Summer meeting	Discuss possibility of organizing workshop(s) on developing IPM policies & programs (tentative)	19
6/29/18	Watertown/ Jefferson	AESHP conference	Model IPM Programs/Don't Get Ticked NY	19
7/10/18	Guilford/ Albany	Butterfly Station Docent Training	Don't Get Ticked NY	25
7/12/18	Albany/Albany	Free Classes at the Co-op	Don't Get Ticked NY	6
7/13/18	Voorheesville/ Albany	iMapInvasives training	iMapInvasives training	21
7/13/18	Ballston Spa/ Saratoga	2018 CTFANY Summer Meeting	Don't Get Ticked NY	35

Date	Location	Conference/ Meeting Name	Presentation Title	Contact Hours
7/18/18	Shirley/Suffolk	Nuisance Wildlife Management & Design Strategies for the Ornamental Landscape	Dealing with Critters in the Landscape	50
7/19/18	Geneva/ Ontario	Master Gardener Volunteer Workshop	Grubs in the lawn: when to manage them and biocontrol solutions	100
7/24/18	Guilderland/ Albany	Butterfly Station Docent Training	Don't Get Ticked NY	25
7/25/18	Schenectady/ Schenectady	DEC Division of Operations Staff Training	Don't Get Ticked NY	24
7/26/18	Stamford/ Delaware	DEC Division of Operations Staff Training	Don't Get Ticked NY	30
7/26/18	Albany/Albany	Free Classes at the Co-op	Don't Get Ticked NY	7
8/3/18	National webinar	All Bugs Good and Bad Webinar Series	Bees, Wasps, and Hornets, Oh My!	210
8/7/18	White Plains/ Westchester	Break The Cycle: Integrated Management of Ticks and Mosquitoes	Don't Get Ticked NY! A campaign for tick avoidance	16
8/30/18	Fonda/ Montgomery	School Health Professional Meeting	Don't Get Ticked at School	12
9/10/18	Webinar	NPMA Technical Webinar	Understanding the Disease Potential of Urban Rodents	37
9/12/18	Webinar	StopPests Webinars	Developing an Exclusion Program for Cockroaches and Rodents	142
9/16/18	Syracuse/ Onondaga	NYS Arborists Fall Conference	Identifying and Managing Invasive Pests	94
9/20/18	Stony Point/ Rockland	Master Gardener Volunteer Training Series	Entomology 101: Insect Identification, Morphology and Biology	66
9/26/18	Carmel/Putnam	Master Gardener Volunteer Training Series	Entomology 101: Insect Identification, Morphology and Biology	162
9/29/18	Melville/Suffolk	NYPMA Fall Workshop	IPM and Pesticide Safety	120
9/29/18	Melville/Suffolk	NYPMA Fall Workshop	"IPM Update and Pesticide Safety"	200
10/2/18	Rensselaerville/ Greene	NYS Conference of Environmental Health Directors	Don't Get Ticked NY	53
10/3/18	Geneva/ Ontario	NYS Association of County Agricultural Agents – Professional Improvement Conference & Annual Meeting	Don't Get Ticked, NY: tick safety campaign from NYS IPM	7
10/4/18	Albany/Albany	Master Gardener Volunteer Training Series	Entomology 101: Insect Identification, Morphology and Biology	294

Date	Location	Conference/ Meeting Name	Presentation Title	Contact Hours
10/11/18	Cleveland, OH	25th Annual Conference of The Wildlife Society	Welcome and Overview – the History and Status of Wildlife Professionals in the Private Sector	20
10/11/18	Newark, DE	Med/Vet/Forensic Entomology Class	Bed Bugs Suck!	16
10/18/18	Newark/Wayne	Meeting	Lily Leaf Beetle Biological Control Update and Alternatives to Invasives	20
10/23/18	Batavia/ Genesee	College Staff In-service	Tree and Shrub Diseases and Insects	30
10/23/18	Online	EPA IPM Webinar Series	Bed Bugs in Health Care	?
10/29/18	Peekskill/ Westchester	Nature Adventurers	Bug Talk	36
10/30/18	Voorheesville/ Albany		Don't Get Ticked NY	20
10/30/18	Manhattan/ New York	Assured Environments Annual Training Seminar	The Dirt on Filth Flies	163
10/31/18	Albany/Albany	NYPMA Capital Region workshop	Structural IPM Short Course	68
10/31/18	Albany/Albany	Hands-On Training	NYS IPM Short Course	68
11/7/18	Stony Brook/ Suffolk	Tick IPM for Schools Workshop	Ticks on School Grounds	25
11/7/18	Setauket/ Suffolk	School Tick Workshop	Led the hands-on workshop to build and use tick drags.	100
11/7/18	Lexington, KY	Kentucky Short Course	Pest Entry and Exclusion	174
11/7/18	Lexington, KY	Kentucky Short Course	Rodents in the City	517
11/8/18	Voorheesville/ Albany	Master Gardener Training	Don't Get Ticked NY	14
11/13/18	Ithaca/ Tompkins	2018 Agriculture, Food & Environmental Systems In-Service	Don't Get Ticked NY	7
11/13/18	Ithaca/ Tompkins	2018 Agriculture, Food & Environmental Systems In-Service	Lily Leaf Beetle Biological Control Update	5
11/13/18	Portland, OR	Target Specialty Products Portland Workshop	The Dirt on Filth Flies	177
11/13/18	Portland, OR	Target Specialty Products Portland Workshop	Rodents 101	177
11/14/18	Ithaca/ Tompkins	2018 Agriculture, Food & Environmental Systems In-Service	Costs & Benefits of different methods for installing habitat plants for beneficial insects	7
11/14/18	Ithaca/ Tompkins	2018 Agriculture, Food & Environmental Systems In-Service	IPM Resources for Horticulture Educators	6

Date	Location	Conference/ Meeting Name	Presentation Title	Contact Hours
11/15/18	Vancouver, BC, Canada	Ent Soc of America annual meeting	Outreach Successes in IPM	8
11/15/18	Sacramento, CA	Pest Control Operators of California Sacramento PestEd	The Dirt on Filth Flies	111
11/15/18	Sacramento, CA	Pest Control Operators of California Sacramento PestEd	Fight the Bite! Battling Bed Bugs with IPM	56
11/26/18	Ithaca/Tompkins	Applied Entomology Class	Urban Pest Management	13
11/28/18	Albany/Albany	IPM: Identification and Exclusion Best Practices Workshop	Pest Entry and Exclusion	176
11/30/18	Queens/New York	Magic Exterminating Training Day	IPM for Schools	17
11/30/18	Queens/New York	Magic Exterminating Training Day	IPM for Mosquito Management	17
11/30/18	Queens/New York	Magic Exterminating Training Day	Rodentology and Pest Management	26
11/30/18	Queens/New York	Magic Exterminating Training Day	The Dirt on Filth Flies	26
12/4/18	Poughkeepsie/Dutchess	Dutchess County Tick-Borne Disease Prevention Work Group	Don't Get Ticked NY! A campaign for tick avoidance	7
12/6/18	Hauppauge/Suffolk	NYSTA Long Island Region workshop	Tick Update for the Landscape Industry	90
12/12/18	East Greenbush/Rensselaer	IPM: Identification and Exclusion Best Practices Workshop	Pest Entry and Exclusion	148
12/12/18	East Greenbush/Rensselaer	IPM: Identification and Exclusion Best Practices Workshop	Pest Entry and Exclusion	148
12/17/18	Geneva/Seneca	Turf Team Meeting	Ticks, homeowners IPM guide	4
12/17/18	Geneva/ Ontario	Cornell Turf Team Meeting	Brief update on Lily Leaf Beetle Biological Control Project	2
12/17/18	Geneva/ Ontario	Cornell Turf Team Meeting	What's the best way to establish habitat for beneficial arthropods?	4
TOTAL CONTACT HOURS				6,392

Tabled Events

NYS IPM staff set up tables at fairs, trade shows, and meetings to showcase and distribute community IPM resources. Over 120,000 New Yorkers were exposed to resources during 143 hours of total time.

Date	Location	Conference/ Meeting Name	Table/Poster Theme	Estimated # of attendees	# of Event Hours
1/22/18	White Plains/ Westchester	NYSTLA Conference & Trade Show	Keep Ticks Away! Table with Matt Frye	511	9
3/3/18	Ridgewood, NJ	Super Science Saturday	Ticks: Tiny Terrors	1,500	5
5/19/18	Voorheesville / Albany	Garden Education Day	Don't Get Ticked NY!	498	4
8/7/18	White Plains/ Westchester	Break The Cycle: Integrated Management of Ticks and Mosquitoes	Don't Get Ticked NY! A campaign for tick avoidance	77	9
8/7-9/18	Seneca Falls/ Seneca	Empire Farm Days	Don't Get Ticked NY!	65,000	23
8/14-19/18	Altamont/ Albany	Altamont Fair	NYS IPM Table/Ticks	50,000	69
9/15/18	Delmar/ Albany	Annual Fall Festival	Don't Get Ticked NY table	950	4
10/12/18	Ithaca/ Tompkins	Ag Day on the Quad	NYS IPM Table/Ticks	40	8
10/16/18	Syracuse/ Onondaga	2018 Professional School Health Seminar	Don't Get Ticked NY table	84	1
10/18/18	Mayville/ Chautauqua	2018 Professional School Health Seminar	Don't Get Ticked NY table	40	1
10/20/18	Ithaca/ Tompkins	Insectapalooza	Don't Get Ticked NY table	1,700	6
10/24/18	Latham/ Albany	2018 Professional School Health Seminar	Don't Get Ticked NY table	57	1
10/26/18	Poughkeepsie / Putnam	2018 Professional School Health Seminar	Don't Get Ticked NY table	77	1
11/1/18	Rochester/ Monroe	CCE of Monroe Co. annual meeting	Don't Get Ticked NY table	100	2
TOTAL				120,634	143

II. Internet-Based Outreach - Social Media, Blogs and Videos

Videos

Surveys have indicated that people prefer videos for learning as long as they are short, simple, and realistic ([How to Create Videos for Extension Education: An Innovative Five-Step Procedure](#)). During a NYS IPM Program staff workshop, staff were trained to use Spark to develop short videos to highlight IPM topics. By the end of 2018, the following have been posted to YouTube or Facebook, with many more coming in 2019:

- [Have you spotted... Spotted Lanternfly?](#)
- [How to Set a Snap Trap](#)
- [Beneficial Insects: More than just Butterflies and Bees!](#)

As part of the Don't Get Ticked NY campaign, a Claymation video, [Life Cycle of the Blacklegged Tick \(and Lyme Disease Prevention!\)](#) was created.

NYS IPM Facebook Page - <https://www.facebook.com/NYSIPM/>

Images, news stories and announcements are posted almost daily to the NYS IPM Facebook page by IPM staff. In 2018, the page rose from 703 followers to 884, with hundreds of people talking about the 486 posts, and a total reach of over 156,000 unique users.

In 2018, we used hashtags to emphasize certain topics to make it easier to track topic related posts. Examples include:

- #ticks (33 posts, 41,778 total reach)
- #spottedlanternfly (22 posts, 19,461 total reach)
- #pollinators (20 posts, 3,827 total reach)
- #biocontrol (24 posts, 3,747 total reach)

NYS IPM Twitter Account - <https://twitter.com/NYSIPM>

In 2018, Twitter account @NYSIPM gained 217 followers and generated over 279,500 impressions (interactions) from 492 tweets. These numbers illustrate a continued need to improve online reach and presence in the minds of New Yorkers. Social Media provides a platform to accomplish outreach to otherwise unknown and under-reached audiences.

Think IPM blog - <https://blogs.cornell.edu/nysipm>

Blogs offer useful information in a narrative format. The NYS IPM blog, *Think IPM Blog*, covers all IPM commodities (fruit, vegetable, livestock, greenhouse, community, etc.) and is distributed to 121 subscribers. Blog posts can also be accessed when Facebook and Twitter users click on links posted in these platforms. Thus, in 2018 there were 41,716 unique visitors and 58,707 pageviews. Community-related posts have addressed the biology, management and regulations regarding spotted lanternfly, rodents, kudzu, western bean cutworms, pollinators, ticks, and more. Biocontrol, IPM resources, and Excellence in IPM Award winners are also highlighted.

- Lampman, Joellen. "[Ticks and the freezing weather](#)" *Think IPM Blog*. Cornell University, 5 January 2018. Web.

- Woodsen, Mary. "[We give awards: IPM, excellence, and Julie Suarez](#)" *Think IPM Blog*. Cornell University, 16 January 2018.
- Woodsen, Mary. "[One bug at a time: how biocontrol helps you, even in winter](#)" *Think IPM Blog*. Cornell University, 23 January 2018.
- Woodsen, Mary. "[Hops on top](#)" *Think IPM Blog*. Cornell University, 31 January 2018.
- Woodsen, Mary. "[Pests and pupils don't mix](#)" *Think IPM Blog*. Cornell University, 7 February 2018.
- Hetzler, Paul. "[Maple pest saps maple syrup production](#)" *Think IPM Blog*. Cornell University, 9 February 2018. Web.
- Woodsen, Mary. "[Apple-Year and IPM's ode to Liberty Hyde Bailey](#)" *Think IPM Blog*. Cornell University, 14 February 2018.
- Woodsen, Mary. "[Planning for pollinators: No time like now](#)" *Think IPM Blog*. Cornell University, 21 February 2018.
- Lampman, Joellen. "[Ticks don't care what month it is](#)" *Think IPM Blog*. Cornell University, 22 February 2018. Web.
- Woodsen, Mary. "[Climate, Weather, Data: Change Is the Name of the Game](#)" *Think IPM Blog*. Cornell University, 1 March 2018.
- Woodsen, Mary. "[So many acres, so little time: IPM's answer to where the pests are](#)" *Think IPM Blog*. Cornell University, 7 March 2018.
- Woodsen, Mary. "[When It Rains, It Pours: Anatomy of a Wet Year](#)" *Think IPM Blog*. Cornell University, 14 March 2018.
- Woodsen, Mary. "[Pests, Pesticides and Proposals: Funding IPM Community Projects](#)" *Think IPM Blog*. Cornell University, 16 March 2018.
- Lampman, Joellen. "[Right Plant, Right Place – For Pollinators](#)" *Think IPM Blog*. Cornell University, 23 March 2018. Web.
- Hetzler, Paul. "[Managing monsters: Ladybugs problematic for many this winter](#)" *Think IPM Blog*. Cornell University, 28 March 2018. Web.
- Woodsen, Mary. "[The Craziest of Worms](#)" *Think IPM Blog*. Cornell University, 6 April 2018.
- Woodsen, Mary. "[The New Tick in Town \(Part I.\)](#)" *Think IPM Blog*. Cornell University, 18 April 2018.
- Woodsen, Mary. "[The New Tick in Town \(Part II.\)](#)" *Think IPM Blog*. Cornell University, 27 April 2018.
- Hetzler, Paul. "[Let's work on being less attractive \(to blood-thirsty mosquitos\)](#)" *Think IPM Blog*. Cornell University, 2 May 2018. Web.
- Woodsen, Mary. "[Poison ivy \(like the Rolling Stones said ...\)](#)" *Think IPM Blog*. Cornell University, 15 May 2018.
- Woodsen, Mary. "[The Invasive of the Month Is ... \(Drum Roll\)](#)" *Think IPM Blog*. Cornell University, 23 May 2018.
- Lampman, Joellen. "[Minimize tick risk while minimizing pesticide risk](#)" *Think IPM Blog*. Cornell University, 24 May 2018. Web.
- Woodsen, Mary. "[The low-down on ticks. Part 1A, Biology Q&A](#)" *Think IPM Blog*. Cornell University, 6 June 2018.
- Frye, Matt. "[Tick and Mosquito Repellent Safety – For You and Yours](#)" *Think IPM Blog*. Cornell University, 8 June 2018.
- Woodsen, Mary. "[Tick Trickery](#)" *Think IPM Blog*. Cornell University, 19 June 2018.
- Frye, Matt. "[What Can I Spray for...](#)" *Think IPM Blog*. Cornell University, 28 June 2018. Web.

- Gangloff-Kaufmann, Jody. "[The Jumping Spider at Your Service](#)" *Think IPM Blog*. Cornell University, 3 July 2018. Web.
- Woodsen, Mary. "[New Field Crops and Livestock Coordinator Joins NYS IPM](#)" *Think IPM Blog*, New York State Integrated Pest Management Program, Cornell University, 10 July 2018.
- Woodsen, Mary. "[It's Invasive Species Week, and ...](#)" *Think IPM Blog*, New York State Integrated Pest Management Program, Cornell University, 12 July 2018.
- Woodsen, Mary. "[Tick, Tack, Toe the Line: Lyme Disease and What to Do](#)" *Think IPM Blog*, New York State Integrated Pest Management Program, Cornell University, 18 July 2018
- Woodsen, Mary. "[Tick Check 1.2.3.](#)" *Think IPM Blog*, New York State Integrated Pest Management Program, Cornell University, 26 July 2018.
- Gangloff-Kaufmann, Jody. "[An Exotic Tick Could be Very Bad News](#)" *Think IPM Blog*. Cornell University, 1 August 2018. Web.
- Lampman, Joellen. "[Stop the Bite – Mosquito IPM](#)" *Think IPM Blog*. Cornell University, 3 August 2018. Web.
- Woodsen, Mary. "[Crusader for sustainably managed golf courses earns excellence in IPM](#)" *Think IPM Blog*, New York State Integrated Pest Management Program, Cornell University, 17 August 2018.
- Frye, Matt. "[Pest Exclusion: An Old Concept with New Life](#)" *Think IPM Blog*. Cornell University, 22 August 2018. Web.
- Marvin, Debra. "[Nominations Sought for 2018 Excellence in IPM Awards](#)" *Think IPM Blog*. Cornell University, 24 August 2018. Web.
- Woodsen, Mary. "[Bugs in your bed? IPM solution at your fingertips](#)" *Think IPM Blog*, New York State Integrated Pest Management Program, Cornell University, 30 August 2018.
- Woodsen, Mary. "[The eat-local movement: IPM works for you...](#)" *Think IPM Blog*, New York State Integrated Pest Management Program, Cornell University, 9 September 2018.
- English, Karen. "[Spotted Lanternfly Enters New York State](#)" *Think IPM Blog*. Cornell University, 13 September 2018. Web.
- Marvin, Debra. "[Boxwood Blight is Breaking the Bank](#)" *Think IPM Blog*. Cornell University, 20 September 2018. Web.
- Eshenaur, Brian. "[Mushrooms Popping up in Your Lawn?](#)" *Think IPM Blog*. Cornell University, 24 September 2018.
- Parker, Ryan. "[Spotted Lanternfly: A Foe You Should Know](#)" *Think IPM Blog*. Cornell University, 27 September 2018. Web.
- Dunn, A.R. "[Pollinator Habitat.](#)" *Think IPM Blog*. New York State Integrated Pest Management Program, Cornell University, 9 October 2018. Web.
- Carroll, Juliet. "[Hummingbirds as Pest Management Partners?](#)" *Think IPM Blog*. Cornell University, 11 October 2018. Web.
- Cummings, Jaime. "[Seed Selection for Resistance to Insects and Diseases](#)" *Think IPM Blog*. Cornell University, 17 October 2018. Web.
- Frye, Matt. "[Sorry, I Can't Help You \[grow that horribly invasive plant\].](#)" *Think IPM Blog*. Cornell University, 29 October 2018. Web.
- Marvin, Debra. "[Update on IPM in NY Schools](#)" *Think IPM Blog*. Cornell University, 2 November 2018. Web.
- Woodsen, Mary. "[Educator Bee-Guiles Audiences... Meet Excellence in IPM Award Winner Jen Lerner](#)" *Think IPM Blog*. Cornell University, 14 November 2018. Web.

- Marvin, Debra. "[New Posters Available from Don't Get Ticked New York](#)" *Think IPM Blog*. Cornell University, 20 November 2018. Web.
- Marvin, Debra. "[Unsung Hero of Albany Earns Excellence in IPM Award](#)" *Think IPM Blog*. Cornell University, 27 November 2018. Web.
- Lampman, Joellen. "[Tick IPM – The Dog Zone](#)" *Think IPM Blog*. Cornell University, 4 December 2018. Web.
- Braband, Lynn. "[Everything Wants to Prepare for Winter](#)" *Think IPM Blog*. Cornell University, 7 December 2018. Web.
- Hetzler, Paul. "[Dreaming of a Local Christmas—post courtesy of Paul Hetzler](#)" *Think IPM Blog*. Cornell University, 10 December 2018. Web.
- Marvin, Debra. "[Unwanted Holiday Guests](#)" *Think IPM Blog*. Cornell University, 17 December 2018. Web.
- Lampman, Joellen. "[2018's Best of NYS IPM](#)" *Think IPM Blog*. Cornell University, 26 December 2018. Web.

Biocontrol Bytes - The goal of this blog is to inform New Yorkers who are trying to control pests – on farms, in backyards, in businesses, or in homes – about the role that biological control plays (or could play) in successful integrated pest management.

- Dunn, Amara. "[If you plant it, they will come: Attracting natural enemies of pests.](#)" *Biocontrol Bytes*. New York State Integrated Pest Management Program, Cornell University, 29 January 2018. Accessed 2 February 2018.
- Dunn, Amara. "[Biocontrols, biopesticides, biostimulants, oh my!](#)" *Biocontrol Bytes*. Cornell University, 28 February 2018.
- Dunn, Amara. "[But does it work? Efficacy of biological control](#)" *Biocontrol Bytes*. Cornell University, 30 March 2018.
- Dunn, Amara. "[Mix and match: Compatibility of biocontrol with other pest management strategies.](#)" *Biocontrol Bytes*. Cornell University, 30 April 2018.
- Dunn, Amara. "[Don't make a mountain out of an ant hill – why ants in your lawn may not be a problem.](#)" *Biocontrol Bytes*. Cornell University, 29 May 2018.
- Dunn, Amara. "[Creating habitat for beneficial insects – early summer 2018 project update.](#)" *Biocontrol Bytes*. Cornell University, 18 June 2018.
- Dunn, A.R., Eshenaur, B., Lamb, E. "[Creating habitat for beneficial insects: Project update at the end of the first year](#)" *Biocontrol Bytes*. Cornell University, 30 November 2018. Web.
- Dunn, A.R. "[A new resource to help you protect pollinators.](#)" *Biocontrol Bytes*. Cornell University, 13 December, 2018. Web.

ABCs of School and Childcare Pest Management - <http://blogs.cornell.edu/schoolchildcareipm/>

This blog, dedicated to addressing pest management in school and child care facilities, is distributed to 46 subscribers and posts have been promoted on the NYS IPM Facebook page and Twitter feed leading to 3,653 unique visitors and 5,676 pageviews. Topics included bed bugs, ticks, slime mold, athletic field management, and school IPM resources.

- Lampman, Joellen. "[Stop School Pests Launches Free Online Courses](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 3 January 2018. Web.

- Woodsen, Mary. "[Pests and pupils don't mix](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 7 February 2018.
- Lampman, Joellen. "[Bed bugs in schools aren't going away](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 12 February 2018. Web.
- Rossi, Frank. "[Managing Traffic is IPM](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 4 September 2018. Web.
- Lampman, Joellen. "[Slime Mold – Pest or Not?](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 11 September 2018. Web.
- Lampman, Joellen. "[The ABCs of Ticks on School and Childcare Grounds](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 22 October 2018. Web.
- Marvin, Debra. "[An update on School IPM](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 8 November 2018. Web.
- Lampman, Joellen. "[What we're pondering](#)" *The ABCs of School and Childcare Pest Management blog*. Cornell University, 5 December 2018. Web.

Image Gallery on Flickr

The IPM Image Gallery continues to grow, with over 4,000 unique images and 51 videos categorized into 84 albums. A name and brief description is given to each image and key words are added to help users find the images on common search engines such as Google. In many cases, links to resources from the NYS IPM website are present in the image's description.

Since its inception, there have been over 893,000 views. Images are posted to the program's Facebook page, have been used in professional presentations, and are linked to IPM resources. One expected outcome of the image gallery is that individuals using Google Image search will encounter our photographs when looking up a pest and will subsequently have access to accurate information, including identification and treatment methods. We continue to tag images with key words and cross-reference them with pertinent pest management information on the IPM website as it becomes available.

Many of the most popular community IPM images highlight bed bugs, invasive species, pollinators, and ants. Flickr views are being monitored to help determine public interest for information on a variety of subjects and will help to inform a list of resources to be developed in the coming year.

Permission has been sought, and granted, for use of images in other publications such as the image of cat flea used here: www.youtube.com/watch?v=InwRFoX-NsA.

Discussion:

Although much of the work done by NYS IPM educators is area-specific (school IPM, turfgrass management, bed bug outreach) some does not fall into such a category, and yet it represents a significant need in New York. The variety of pests encountered in homes and landscapes is large and the means of controlling such pests are varied from doing nothing to using pesticides that may pose risks to human health. Annually there are stories across the country of an

individual catching their house on fire trying to eliminate pests. The need for IPM awareness and adoption is as strong as ever.

Social media continues to expose more people as likes and followers increase annually. These followers then share posts, which vastly increases the number of viewers to any given post. Between our social media platforms, over 2,000 followers has translated to over 220,000 impressions, many of which link back to NYS IPM Program resources.

NYS IPM staff members helped train professional pest managers in structural, wildlife and landscape management. Over the past decade a shift toward the adoption of IPM has been apparent in the professional pest management industry. From the promotion of key IPM tenets, such as pest prevention, to support of the adoption of IPM in schools, the National Pest Management Association has embraced IPM and the extension programs supported by IPM funds. In 2018, Community IPM staff offered 110 presentations in 27 New York counties, 8 additional US States, and Canada, resulting in over 6,300 contact hours of training. Topics included: IPM in schools, buildings, turf (golf, sports field, grounds), and food establishments. Programs were developed to help individuals and organizations better manage wildlife, bed bugs, ticks, rodents, and landscape pests. Presentations also covered pollinators, biocontrol, identification, and invasives.

Samples of Resources Developed

Flickr: <http://www.flickr.com/photos/99758165@N06/>

Fact sheets: <http://tinyurl.com/nmcpyxr>

Facebook Page: <https://www.facebook.com/NYSIPM>

NYS IPM Blog: <http://blogs.cornell.edu/nysipm/>

School IPM Blog: <http://blogs.cornell.edu/schoolchildcareipm/>

YouTube Channel: <https://www.youtube.com/user/NYSIPM>