

# Varroa Mites: The Hive Destructors

#### By Erin Provenzano

It is hard to believe that my beekeeping partner and I have been working at this now for over a year and a half—and even harder to believe that we are already discussing overwintering. As summer draws to a close, fall opens a small window of opportunity for us to prepare our hive for the winter.

All throughout the year, though, we are continually assessing the bees through our hive inspections. These help us evaluate the health of the hive by checking on the brood (eggs, larvae, pupae), honey stores, pollen stores, and most especially the presence of pests and/or diseases. Keeping bees is not always sweetness and sunshine. There are a great number of threats that these small insects face, some being anthropogenic (i.e. neonicotinoids) while others are found in nature.

Humans can help bees by providing habitat for them, not using pesticides, planting native plants... the list continues. But what can one do when the danger facing bees is not directly caused by people?

There is one such danger that has been steadily plaguing bees over the past few decades in North America. It is found in nature but is not a bear, skunk, raccoon, or even mouse—think smaller. One of the greatest dangers to a honeybee hive is only the size of a pinhead and its name is *Varroa destructor*, or Varroa mite.

"The Varroa mite is a common parasite that weakens honeybee colonies by feeding on bee blood and fat stores, and transmitting deadly viruses across the colony. One of those viruses, deformed wing virus, causes misshapen wing growth in infected bees." Nutt, David. "N.Y. Honeybees Stung Hard by Varroa Mite, Researchers Find." *Cornell Chronicle*, <u>https://</u>news.cornell.edu/stories/2017/06/ny-honeybees-stung-hard-varroa-mite-researchers-find 23 June 2017.

If bees are unable to forage and collect nectar and pollen, their colonies will collapse. Once enough of these colonies collapse and populations decrease, we will face a pollination deficit on a global scale. This is where the intervention of beekeepers becomes paramount.

It is very hard to stop the Varroa mite at its source—they are an invasive species that is well integrated into our natural environment. The bees acquire and pass the mites along while they are out foraging from flower to flower. Once the mites come "home" to the hive, they spread to the other inhabitants, including the brood. Though these mites are hard to spot due to their color and size, most beekeepers will treat their hives preemptively, to insure that the mite levels are controlled and that they do not decimate the hive. Agriculturists, apiculturists, and hobbyists alike have been trying different methods of integrated pest management regarding the Varroa mite.



Mites on the bottom board of the hive (circled in red) amidst pollen and other organic material.

My partner and I have used two different methods for managing the mites in our hive. One is called Hopguard which is a substance made from hops. It's a natural deterrent which can be used basically year-round in varying temperatures. The Hopguard consists of strips of cardboard coated in the solution and are put between a few frames of the hive.

The other product we use is called Mite Away Quick Strips and it is made from formic acid, which is an acid found naturally in bee and ant venom. This treatment is done in September when temperatures are typically lower than 80 degrees, which is important in terms of ventilation of the hive.

These are only two out of a whole list of treatments available for hives concerning the Varroa mite. The combined efforts of these treatments as well as the collective knowledge of experts and hobbyists will surely help curb the plight of this problematic parasite.

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Bronx River-Sound Shore Audubon Society, Inc. is a chapter of the National Audubon Society serving the communities of Bronxville, Eastchester, Edgemont, Hartsdale, Larchmont, Mamaroneck, Mount Vernon, New Rochelle, Pelham, Scarsdale, and Tuckahoe

#### Varroa Mites - Continued from Page 1

Beekeeping is not always dealing with the sunny side of things, but it is through these challenges that we learn to adapt and form solutions. Bees do amazing work which aids us; it is only right that we do the same for them.



Installing the Hopguard strips between the frames.



The Hopguard strips have been installed.

### **Bluebird Nestboxes Getting Predator Guards**

Thanks to a very generous donation from the Esmond Nissim Foundation, almost all our nestboxes will be getting predator guards installed on them by next spring. We thank David Fuller, who is a trustee of the foundation, for recommending our organization.





Jeff Zuckerman, David Fuller, Isabelle Fuller, and Sandy Morrissey at our Annual Wine & Cheese meeting.



### **Hog Island Adventure**

#### By Alice Pernick

I am a serious night owl. Yet, for one week this summer, I became an early bird, my eyes popping open before 5AM, eager to begin another amazing day on Audubon's Hog Island in Maine. I first heard about Hog Island while watching the trials and tribulations of a pair of Osprey named Rachel and Steve, whose breeding season on Hog Island is streamed via webcam. When I learned Audubon offered a camp there for teachers, as an environmental educator and teacher, I dreamed of sunny moments unplugged and immersed in the study of nature. I was thrilled to find out that, thanks to the generosity of the BRSS chapter of the Audubon Society, it was really going to happen!

With great anticipation, I met other excited campers at the dock, where a short boat ride transported us to a natural paradise. Most of Hog Island is an undeveloped preserve of rocky intertidal zones, coniferous forest, cliffs, meadows and bogs. Upon arrival, I looked up to see Rachel peering down at me from her nest, where she was raising two osplets. Delighted, I felt as though I had spotted a celebrity!

That evening, we were treated to a talk by Dr. Steve Kress, the founder of Project Puffin, an organization responsible for restoring Atlantic Puffins to historic breeding grounds off the coast of Maine. The Puffin chicks were translocated from Canada and encouraged to return and breed on these Maine islands using decoys, sound recordings, and mirrors. These low tech enticements proved successful and have been adopted all over the world to repopulate other bird species.

Steve detailed how the plight of other species affects Puffins. The unforeseen Bald Eagle revival causes increased Puffin predation. Fish species that Puffin chicks can swallow have moved north due to climate change, causing Puffins to fly greater distances to find enough food for their hungry chicks. As Steve pointed out, it is not enough to



protect the islands where Puffins breed. We need to protect the whole ocean so there are enough fish for the Puffins and all species that eat them. Hearing this, I felt both inspired and overwhelmed by the enormity of the task of protecting species and ecosystems, but over the course of the week a recurring theme was that we should focus on the small things we can do, whether it is planting a container of native plants in a schoolyard, or opening our students' eyes to the world of tiny creatures in a teaspoon of pond water.

Days were packed with exciting, hands on activities. It was a dilemma choosing from the options. I wanted to do them all! Bird walks, island hikes, ponding, intertidal exploration with seining, astronomy, photography and seaweed pressing were just some of the activities, all led by experts in the field. Not only were the leaders top notch, but I was humbled by the deep knowledge of other campers. It was great to share and learn from one another.

The boat trips were breathtaking: rebounding Bald Eagles perched on islands' edges; squawking Puffins converged on Egg Island; Gray and Harbor Seals silently periscoped up and down in calm waters; fishing seines were so full that fishermen literally used shovels to haul fish into their boats! Great care was taken to emphasize that local people need a healthy ocean ecosystem to sustain the lobster and fisheries on which they depend.

Some other highlights included adding two new birds to my life list (Northern Parula flitting about the forest understory and a Razorbill mixed in with throngs of Puffins on Egg Island); hiking through fields of chest high ferns and blooming milk-weed where monarchs floated dreamily about on the intoxicating aroma; watching a spectacular moonrise over the water; viewing Jupiter and four of its moons through a telescope; and being brave enough to eat an invasive species of periwinkle gathered and cooked with melted butter right on the beach.

The days were long and full and most nights I fell asleep early (for a night owl), exhausted. My bed was next to a window from which I had a beautiful view of the sun rising early over Muscongus Bay each morning, and I could watch the lobster boats setting out and returning over the course of each day. By the end of the week, I had gotten used to the rhythm of life on the island and wished I did not have to leave this idyllic place. But I was merely a visitor passing through this snapshot of time, observing life cycles that have been going on for eons, and hoping they continue for eons to come. I return refreshed, renewed, and ready to try new approaches to instill in children a love of nature and a desire to protect it.

My deepest thanks to BRSS Audubon for making this dream a reality. Hog Island reminds us that everything is connectedif you care about birds, then you have to care about fish, plants, insects, people and ecosystems. My peaceful time there will be in my heart always.

# **PROGRAMS 2019/2020**

#### Wednesday, September 25 @ 7PM Chappaqua Performing Arts Center Screening of the film "From Paris to Pittsburgh"

From coastal cities to America's heartland, Paris to Pittsburgh celebrates how Americans are demanding and developing real solutions in the face of climate change.

Hosted by the Chappaqua Library and the Town of New Castle. Co-sponsored by Bedford Audubon, BRSS Audubon, Central Westchester Audubon, Hudson River Audubon, Orange County Audubon, Putnam Highlands Audubon, Saw Mill River Audubon, Federated Conservationists of Westchester County, Films on Purpose.

#### Saturday, October 26 @ 9AM - 12:30PM Westchester County Center Climate Change Boot Camp

Get up to speed on climate change, what you need to know, and what you can do. This Climate Change Boot Camp will focus on local effects of climate change and responses from local and regional government.

#### Cost: \$12 per person

Co-sponsored by Bedford Audubon, BRSS Audubon, Central Westchester Audubon, Hudson River Audubon, Orange County Audubon, Putnam Highlands Audubon, Saw Mill River Audubon, Federated Conservationists of Westchester County.

#### Monday, October 28th @7PM Tuckahoe Public Library Elizabeth Cherry -For the Birds

Education Ph.D., University of Georgia Master of Arts, University of Georgia Bachelor of Arts, University of North Carolina at Wilmington

Dr. Elizabeth Cherry is an Associate Professor of Sociology and Anthropology at Manhattanville College in Purchase, NY. Her research focuses



For the Birds Protecting Wildlife through the Naturalist Gaza ELIZABETH CHERRY

on culture and social movements, specifically in cultural analyses of social movements and social movement analyses of contentious subcultures. She is interested in the role culture plays in constraining and enabling collective action, as well as how activists attempt to change culture. Topically, she studies issues concerning animals, food, and the environment.

For the Birds offers readers a glimpse behind the binoculars and reveals birders to be important allies in the larger environmental conservation movement. With a wealth of data from in-depth interviews and over three years of observing birders in the field, environmental sociologist Elizabeth Cherry argues that birders learn to watch wildlife in ways that make an invaluable contribution to contemporary conservation efforts. She investigates how birders develop a "naturalist gaze" that enables them to understand the shared ecosystem that intertwines humans and wild animals, an appreciation that motivates them to participate in citizen science projects and wildlife conservation.

Wednesday, November 13th @7PM Bronxville Public Library George Amato--Endangered Species of North America Education Yale University, Ph.D., 1994 Yale University, M.S. Yale University, M.Phil. University of Connecticut, B.S., 1978

Dr. Amato's current research interests include genetic threats associated with habitat fragmentation in endangered species, molecular ecology, taxonomic and phylogenetic questions related to determining units of conservation, using molecular markers for assessing priority areas for biodiversity conservation, non-invasive sampling techniques for endangered species and monitoring the trade in endangered species products using DNA based forensic science. Dr. Amato has participated in research activities worldwide, including research in Cuba, St. Vincent and the Grenadines, Madagascar, South Africa, Tanzania, Malaysia, China and Peru. He has published and lectured extensively on conservation strategies for endangered species and especially on using molecular analyses to determine conservation priorities.

#### Wednesday, January 15th @7PM Eastchester Public Library Jessica Schuler--Connecting Urban Youth to Nature through Citizon Science and

#### through Citizen Science and Ecological Restoration.

Jessica A. Schuler, Director of the Thain Family Forest at The New York Botanical Garden, is responsible for the management of the 50 acre, old growth urban Forest including ecological restoration and the development of education and



research programs. She teaches about urban forest restoration, invasive species, and native plants. Jessica earned a BS in plant science with distinction in research from Cornell University, is an ISAcertified arborist and Certified Ecological Restoration Practitioner with the Society for Ecological Restoration. Jessica is an advocate for native plant conservation and ecological restoration.

The New York Botanical Garden is an advocate for the plant kingdom; this mission is achieved through three main program areas: science, education, and horticulture. The Thain Family Forest program encompasses all three of these program areas through ongoing ecological restoration and monitoring work in the 50-acre urban, old-growth forest. Over the past 10 years, many youth programs have engaged in ecological restoration and monitoring work within the Forest. We find that the programs that include both a citizen science monitoring and hands-on restoration component are the most successful. Providing middle school and high school students with an authentic fieldwork experience, engaging them in data collection and allowing them to draw their own conclusions. This program model empowers students with the knowledge and ability to become environmental stewards. With more than 50% of the world's population living in urban areas, the stakes are now at their highest to engage urban youth in nature and environmental stewardship. This talk will discuss the curriculum that NYBG has developed to monitor invasive plant species, water quality, and phenology to teach ecology and the importance of ecological restoration as a conservation practice to urban youth in New York City.



# **FIELD TRIPS 2019/2020**



Please Contact Doug Bloom at (914) 834-5203 for info or to register.

#### September 28, Saturday - Larchmont Reservoir

Meet at 8AM at upper parking area at the Reservoir. Looking for fall migrants.

#### October 5, Saturday- Hawk Watch Lenoir Preserve, Yonkers

Meet at 9AM at Lenoir Preserve. Park at the mansion. Looking for Hawks and other fall migrants

#### October 20, Sunday- Marshlands/Read

Meet at 8AM at Read Sanctuary. We will be looking for late migrants.

#### November 16, Saturday- Jamaica Bay

Meet at 7AM at Scarsdale Village Hall. Looking for late migrants and early waterfowl.

#### December 22, Sunday- Christmas Bird Count

Contact Doug Bloom to Volunteer for this important Bird Survey. As much time as you can give is appreciated.

#### **January 1, Wednesday- Greenwich Point** Meet at 9:30 AM at Greenwich Point near bathrooms in main parking lot

#### January 19, Sunday- Jones Beach

Meet at Scarsdale Village Hall at 7:00 AM. Looking for wintering Birds including possible Snowy Owls

February 8, Saturday-Eagle Fest Rain date Sunday Meet at Croton Point Park at 9AM. Looking for Eagles.

#### March 15, Sunday - Connecticut Coast

Meet at 7AM at Scarsdale Village Hall. Looking for late winter migrants.

#### April 11, Saturday - Larchmont Reservoir/Hommocks

Meet at 8AM at Larchmont Reservoir. We will be looking for early migrants. Warblers and other songbirds that are passing through.

#### May 3, Sunday- Central Park

Meet at 7:30AM at 77<sup>th</sup> street at statue across from Museum of Natural History. Will be looking for spring migrants such as warblers, orioles and others.

#### May 9, Saturday - Rockefeller Preserve

Meet at Rockefeller parking lot at 8AM. Looking for spring migrants.

#### May 16, Saturday- Doodletown Road

Meet at 8AM at Doodletown Road. Best place to see Cerulean Warblers nesting and other migrants.

#### May 24, Sunday - White Memorial Park, Connecticut Meet at 7AM at Scarsdale Village Hall. We will be looking

for early migrants. Warblers and other songbirds that are passing through.

**June 5 - June 7, Friday-Sunday- Delmarva Peninsula** Looking for spring migrants.

# **Calling all Youth Birders**

#### We are resuming our Youth and Beginner Adult Bird Walks

**October 12, Saturday at 9AM** – Crestwood Lake. (Meet in Crestwood Lake train station parking lot on parkway side of train station, accessed from exit 8 off Bronx River Parkway).

November 9, Saturday at 9AM – Twin Lakes Park (Located on California Road, Eastchester. Park on Highland Ave. near trail entrance.)

Please let us know if you plan to attend. Send email to <u>brssaudubon@gmail.com</u>. For more information contact Sandy at 914-391-3695.

### **National Audubon Convention**

#### By Henry May

The National Audubon convention in Milwaukee, Wisconsin, the weekend of July 25th, was a smash hit for me. The weather was great every time I left the hotel. There were over 600 attendees from all around the country at this convention. Each person I talked to was happy to explain the kind of work they were doing in their state, city, or town. Most of the people I met were "volunteers!" I had to consider that I, myself, was a volunteer! It was an awakening for me to realize that much of what is accomplished by Audubon is a result of work from committed "unpaid" birders and conservationists in communities all around the country!

The convention committee did a magnificent job of planning, and scheduling the concurrent work sessions. The work session leaders were knowledgeable. You could tell that the people sitting in a room were at that session to learn something that would help them do a better job when they returned to their community.

The "keynote speakers" were inspiring, and things like the audiovisual equipment worked wherever it was being used. Microphones worked, power point presentations were clear, seating was comfortable. Not much, if anything, went wrong!

You don't have a successful convention like this without a lot of careful, advance "planning and preparation."

### **Monarch Update**

We have been encouraging people to plant milkweed, the only thing monarch caterpillars can eat. We also have encouraged people to raise monarchs, to keep them safe from predators from the egg through the chrysalis stages, releasing them as adults.

I recently learned that when rearing monarchs in the late summer and fall, you should rear them outdoors if possible. The last generation that is programmed genetically to head to Mexico gets clues from the environment. The days get shorter, the temperatures cooler and the milk-weed plants get old. If reared indoors in artificial light and temperatures controlled for your comfort in the 70s, then these triggers might not happen. While reared monarchs do reach Mexico, a much higher percentage of "wild" ones are recorded (data from recovered "tags" placed on monarchs by volunteers).

I moved my rearing cages to my back terrace where the monarchs will experience ambient temperatures and light. My milkweed is aging naturally, so no issue there.

Sandy Morrissey – bluebird and monarch enthusiast



Monarchs reared outdoors have a better chance to reach Mexico during migration

# Take a Look at our New Website

Thanks to board member, Erin Provenzano, we have a modern new look to our website.

Check it out: www.brssaudubon.org.





Time to purchase bird seed for the winter. The order form is included in this newsletter. It could be a very cold winter. Please feed the birds and support the activities of the BRSS Audubon.

Our Annual Wine & Cheese Meeting - A Wonderful Evening Honoring Michelle Sterling and Ron Schulhof







## **Bluebird Population Still Low but Encouraging Signs**

The 2019 bluebird nesting season ended with us having just 68 nesting attempts. That's down from last year and a 10-year low. While we will never know the exact reasons, my guess is the problems are both from the parasite in 2017 that reduced our population by about half, plus the very cold, rainy, lingering spring.

We were off to a very slow start, and then lost 5 broods (21 nestlings) after a 3-day stretch that held temperatures in the 40s and constant rain. What was interesting is that nestlings that were over a week old during this period died. But newborn nestlings managed to survive. I banded many chicks that were severely underweight, but fortunately they caught up when the weather improved.

The good news is our success rate was surprisingly good - at 80% – despite losing several broods in the cold weather. Another hopeful sign is bluebirds returned to more golf courses and had successful nests. There was no sign of dead bluebirds killed by the parasite.

The best news is we continue to involve many youth in our Eastern Bluebird Project!



Alex (left) and Carl (right) monitored bluebird trails this summer. Joshua will get a trail next year.



Girl Scouts from Putnam Valley helped band nestlings born in boxes they built and placed in a local cemetery.



Monitor Nadia Valla's granddaughters helped us band, plus replace a broken nestbox on The Apawamis Club.



Masters School students monitor nestboxes on their campus, and helped band a brood of bluebirds at Knollwood CC.

### Bronx River-Sound Shore Audubon Society, Inc.

(formerly Scarsdale Audubon Society) P. O. Box 1108 Scarsdale, NY 10583





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