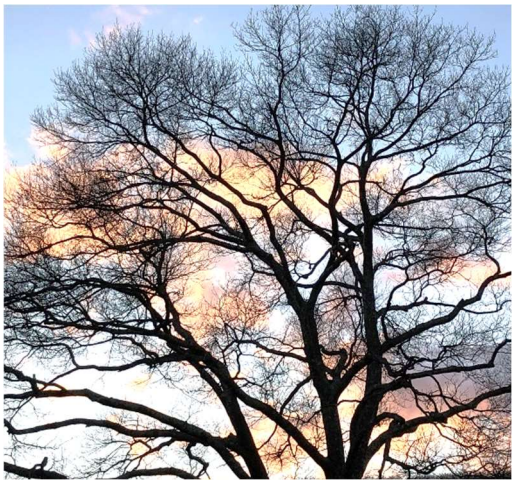
THE GREAT SWAMP NEWSLETTER

FrOGS Friends of the Great Swamp

RESEARCH • EDUCATION • CONSERVATION

WINTER WONDERINGS

Frank Matheis



Judy Kelley-Moberg

Frank Matheis

Ted Kozlowski

Frank Matheis

Volume 23, Issue 1 Winter 2025

Contributors: Paul Andrews, Kathryn Jaliman, Judy Kelley-Moberg, , Ted Kozlowski, Frank Matheis, Sharon Nakazato, Hunter Nigey

Friends of the Great Swamp was founded in 1990, as a non-profit volunteer organization. Our mission is to preserve and protect the health of the Great Swamp watershed through research, education and conservation.

Contact Us! PO Box 373, Pawling, NY 12564 • 845-350-2686 • info@frogs-ny.org • www.frogs-ny.org

FrOGS.NY @FrogsNy frogs.ny

Printing by Olson • 845-878-2644 • Patterson, NY

SIGHTINGS IN THE SWAMP

Swooping Skies

By Hunter Nigey

While walking through The Great Swamp with the chill winter air biting your cheeks, you reflect on the wildlife around you. Bare trees and crunchy frost surround you, with only the sound of the wind and the crunch of fallen leaves underfoot to whisper in your ears. The lack of animal noises causes you to question where they are. As you know, many are in hibernation or torpor, but some spend no time sleeping. One of these animals, the Bald Eagle (*Haliaeetus leucocephalus*), swoops overhead.

Photo by Frank Matheis

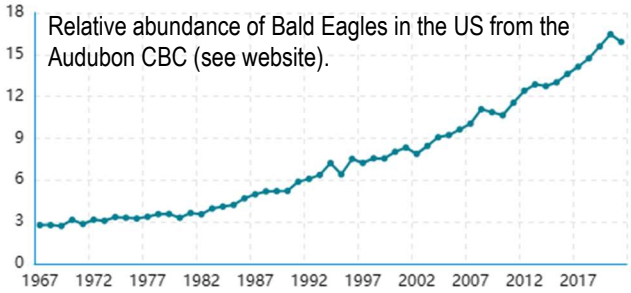
Only found in North America, the Bald Eagle is one of the largest eagle species you'll ever behold. You admire its long wingspan as it covers the sunlight that was once warming your face. With a length of about 6 feet, you recognize that this wingspan is average for Bald Eagles. As the bird continues flying, you are once again warmed by sunlight. You think it will soon disappear in the distant horizon, but rather than flying away, the eagle circles around you and lands abruptly on a rough branch. You don't advance forward, but stop walking and sit atop a nearby flat sedimentary rock.

This gives you time to appreciate the brilliant bird, now preening, in the oak tree up ahead. You appreciate how speckled shadows reflect on the snow white head, hickory brown feathers, and honey yellow beak of the Bald Eagle. You sit in stillness, allowing the quiet beauty of the moment to settle around you like the snow that clings to the trees. The eagle seems unbothered by your presence, its sharp yellow eyes occasionally flicking in your direction, yet never breaking its focused grooming. Those eyes, you remember, are highly specialized for depth perception and are about five times sharper than your own. This gives it a large advantage in hunting for fish, as well as scavenging for carrion. You watch as the eagle shifts slightly, its large talons gripping the branch with precision and power.

Beyond its natural traits, the Bald Eagle has deep cultural significance. Once teetering on the brink of extinction due to hunting, habitat loss, and indiscriminate DDT use, it was placed under the protection of the Endangered Species Act in 1973. Now, thanks to conservation efforts, the Bald Eagle is thriving once again (see chart). It has been a symbol of the nation since 1782, when it was chosen to be the emblem of the Great Seal of the United States, but surprisingly did not become designated as the national bird until December 2024. As the eagle shifts above, flicking snow off the branch it rests upon, you take in its significant history.

The sunlight, now lower in the sky, paints the landscape with a golden hue that softens the harshness of the winter glare on the snow. The eagle seems to sense the change, its head tilting toward the horizon, where the last rays of daylight are slowly fading. With a sudden burst of movement, it spreads its wings, catching the final light of the day before it takes off into the cool air.

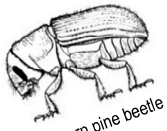
You watch until the bird is nothing more than a dark speck against the evening sky, then let out a slow breath. A cloudy air escapes your mouth as you rise from the rock, feeling the winter chill once more. You look at the now empty branch, and feel grateful to have been a witness to the power and beauty of one of America's most famous symbols. As you begin the walk back along the trail, you swear you can hear the high-pitched piping call of the Bald Eagle echoing from deep within the woods behind you.



hemlock woolly adelgid

CHILLING OUT

By Ted Kozlowski, Forester and Patterson Environmental Conservation Inspector



southern pine beetle

We had a white Christmas for the first time in fifteen years and this is a harbinger of good things to come. Aside from the festive landscape, snow and cold are desirable from an environmental standpoint in The Great Swamp. Winter temperatures are a huge factor in keeping invasive insects in check. The dreaded hemlock woolly adelgid overwinters in egg masses on their host trees but their mortality greatly increases when temperatures drop to 0°F and below. The same for southern pine beetles, which are destroying pitch pine in the Pine Barrens on Long Island. These insects, among other invasive species (including stinkbugs that invade your home), originated in hardiness zones more moderate than ours here in Putnam and Dutchess Counties. Tick mortality will also increase with sustained very low temperatures. So, the lower the winter temperatures the better. But extreme cold can be a problem with some plants and trees, especially those that are marginal in our area. Here is where snow comes into play. Sled dogs figured out long ago that snow is a great insulator and it works wonders for our trees and plants where snow protects the root systems just under the soil. Come spring, that snow slowly melts and replenishes our reservoirs and wetlands. The Great Swamp is the major source of water for the East Branch of the Croton River that traverses the Swamp and serves as a great refuge for wildlife during the harsh winter months. While most water bodies will freeze over, the river will retain some areas of open water for wildlife due to the current and beaver activity.

Now, you may wonder why the cold doesn't freeze trees (and shrubs) to the point where they burst like a water bottle left out in the cold. Trees harness the Sun's energy (photosynthesis) to make their own food by producing sugars (sucrose, glucose, and fructose) that are transported throughout the tree during the growing season. Those sugars function like the antifreeze used in your vehicles (ethylene glycol) and potable water systems (propylene glycol) to greatly lower the freezing point. Trees truly make their own antifreeze.

Winter is a great time to seek and destroy invasive vines and plants. There are no ticks, no mosquitoes, no poison ivy leaves, and no excuses to not go out and attack. In the growing season, leaves on cut invasive vines will dry up, turn brown and look awful. You also risk damaging the trees by cutting vines in the growing season by exposing stressed leaves on the trees to direct sunlight. In winter, the trees are dormant and the opening buds in spring will adjust much better to the increased sunlight. Also in winter, you can locate the invasives better and cut vines easier at their base. In wetland areas the soil will be firmer from the cold and more accessible. Don't try to pull down stubborn vines as that will cause some damage to twigs and branches on the trees. Be patient and in due time the vines will become brittle and are more easily removed.

I find it sad to see discarded Christmas trees left on the roadside for the sanitation people to cart away when there is so much value in the tree for good environmental uses. You may wish to position the tree near a bird feeder to provide shelter (and sometimes you may see a piece of tinsel used in a birds nest come spring), or cut the branches off and use them for winter cover on sensitive outdoor plants. Dried cut branches also make for great fire starters in outdoor firepits. You can save the main stem for garden stakes. I purchased a small gas powered wood chipper for all my pruning and it works great for chipping the tree for mulch.

Rock salt may be good for ice melting but it is deadly for plants, trees and wetlands. The salt will dehydrate roots and branches and affect water chemistry. Remember how your hands look after a day at the beach? That's the salt dehydrating your skin. That's what it does to plants and trees. In spring you will notice many conifers like white pine along roadways turning brown from the salt spray used by highway crews to melt ice. Rock salt will also damage concrete as well as any metal it comes in contact with (including your car). Use calcium chloride mixed with sand or wood ash instead. It is much more environmentally friendly and safer for wildlife, pets and vegetation. Wood ash from your fireplace is also rich in plant nutrients, helps improve acidic soils and inhibits insects attacking your veggie garden in the growing season. I add some to my compost pile throughout the winter.

Photo by Ted Kozlowski

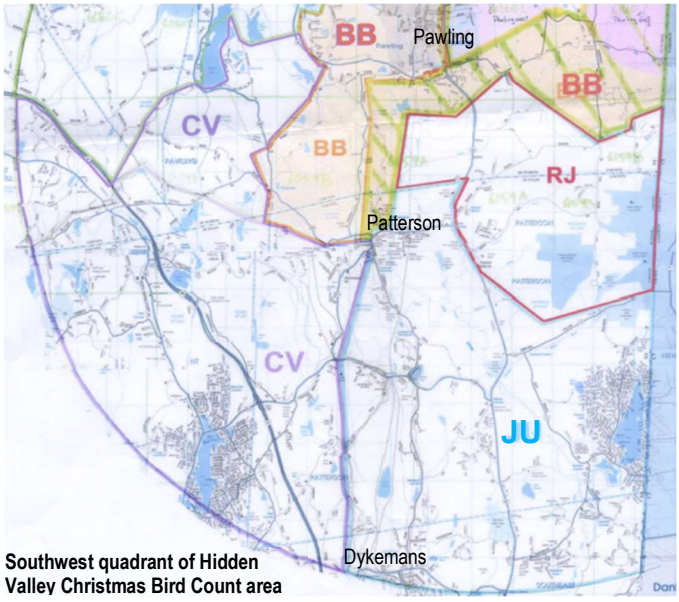
THIS IS FOR THE BIRDS!

THE AUDUBON CHRISTMAS BIRD COUNT

By Judy Kelley-Moberg

It is 3:00 in the morning on January 1st, and two men are observed repeatedly stopping along the back roads around The Great Swamp in Patterson. At each stop, they quietly exit the car, scan their surroundings and appear to be listening. Meet Steve Ricker and Paul Lewis from Bedford Audubon out on this winter morning "owling" for the 125th Christmas Bird Count (CBC). The CBC is the oldest citizen science event in the US. They were participating in the "Hidden Valley" count, an area within a 15-mile diameter circle from Wingdale to Dykemans that includes Patterson, Pawling and part of Connecticut (see map).

Steve and Paul's portion of the circle (JU on the map) is an area defined by a line drawn from the village of Patterson, down Route 22, includes Putnam Lake, then heads west along Route 312, north up Ice Pond and Bullet Hole Roads to Route 311, and back to the starting point. At first light, FrOGS's Board members Astri Teal, Judy Kelley-Moberg, and Jenny and John Pirc started up Bullet Hole Road to cover the western section of the area, including Ice Pond. The two groups had agreed to meet at 3:00 pm to tally their results.



Southwest quadrant of Hidden Valley Christmas Bird Count area

Rules and experience usually eliminate counting the same birds twice. ID by voice is allowed unless it's an unusual species not often seen in the area. Hours and miles by car and on foot, as well as the numbers of birds seen in each species, are recorded.

Great Horned Owl
Photo by Frank Matheis

Most compilers are "old timers" who know the "hot" spots for specific species in their territory and often alert area residents of the count date and collect feeder count data. The FrOGS team met area residents, collaborated in the field, helped an injured biker on the Maybrook Trailway and can't wait for the 2026 count!

"Owling" is usually done by playing a recording of the owl's call and listening for a response. On Count Day, one Screech Owl called back, a Barred Owl responded with its bold "who cooks for you" call and four Great Horned Owls answered with their repeated, low, resonating who-whos. On ice-free Putnam Lake, Rick and Paul counted Mergansers, Buffleheads, Ring-necked, and Ruddy Ducks as well as two Bald Eagles. They also recorded Hermit Thrush, Cedar Waxwings, a Red-Wing Blackbird and Swamp Sparrows. The FrOGS crew's interesting birds included: Black Ducks, Golden-crowned Kinglets, Wild Turkeys, and a Rusty Blackbird. The total for our JU area was 55 species, including robins, bluebirds, multiple species of sparrows, hawks, and woodpeckers, but sadly, we all missed our Pileated Woodpeckers. The count for the entire Hidden Valley area was 74 species and 13,578 birds.

Cedar Waxwings
from the Audubon Collection

To find information on the CBC, explore historical data, and see how the data is used to evaluate threats to species, trends, and migratory pathways check: https://www.audubon.org/community-science/christmas-bird-count.

WINTER IS FOR HIBERNATION

By Kathryn Jaliman

I remember learning about hibernation in my mid-western elementary school science class. Hibernating animals are like real, live Rip Van Winkles I thought! I imagined what it might be like to be asleep for months on end through a grueling winter and emerge into the springtime air. In the 1960s, Wisconsin winters often had temperatures between -10 to -30°F, so sleeping through that bone-freezing weather appealed to me.

For Native Americans, winter signifies a time of reflection, renewal, community gathering, and a connection to the slower-paced rhythms of nature. It is a time of quiet, space to rest and repair, storytelling, curling up in shawls and blankets, going within, dreaming about the spring to come. Hibernating!

Since my school days, hibernation has been thoroughly studied and many animals once thought to hibernate, including bears, actually enter a lighter sleep-state called torpor. Mammal size seems to be the determining factor between hibernation or torpor. Animals that are considered true hibernators include smaller rodents like chipmunks, deer mice, woodchucks and ground squirrels. Bees and some bats are also hibernators. The larger mammals like bears, raccoons, and skunks are all "light hibernators" that use torpor to survive the winter. The two main differences between hibernation and torpor are body temperature changes and the ability to wake up quickly.

As winter approaches, bears enter a period of excessive eating called hyperphagia, during which they can eat up to 20,000 calories and put on up to 3 pounds every day. It is critical for bears to put on all this extra weight as they will survive solely on their fat stores during the whole winter. As the temperature drops, they make their winter den in hollow trees or logs, the space beneath the root mass of a tree, rock crevices, and caves. The leaf litter becomes their "mattress" and they position themselves with their backs, which have the thickest fur, towards the coldest or most exposed spot. They curl themselves up with their heads against their chest which allows them to conserve and breathe in their own heat and moisture.

Bears may spend up to six months in their winter den, and during this time they do not eat, drink, or expel waste. In torpor, bears' kidneys shut down and the urea normally excreted in urine is recycled into protein. This maintains muscle and organ tissue even though they don't move for months. All the bear's bodily functions slow down. Their metabolism drops dramatically, thus stretching their body fat burned for calories for the whole winter. Their heart rate slows to a few beats per minute, breathing to once every 45 seconds, and body temperature drops from around 100°F to 88°F. This allows them to stay in a somewhat active state, meaning they can wake up if necessary, for instance, to defend their den or care for their cubs, which are born during this time. Wintering asleep in their insulated dens conceals them from predators, and drastically cuts their energy needs when there is very little food and harsh weather.

Chipmunks prepare for winter by storing food, rather than body fat. They stockpile acorns and seeds in an underground hole, burrow, or den. They hibernate from October to March and may exit their den briefly if the temperature is warm. Most of their body functions are significantly slower to enable them to get through the cold winters. Every few days, the chipmunk wakes up for temperature adjustment, consumes a few more nuts from the cache to rebuild fat reserves, urinates and defecates, then quietly goes back to sleep. During sleep, their heart rate plummets from 350 to only 15 beats per minute. The normal body temperature of an eastern chipmunk, which ranges from 96° to 106°F, declines to only 42° to 45°F. When chipmunks hibernate, they coil themselves into a ball in their den.

A study was done in southeastern NY for 7 winters (2000-07). Radio-collared chipmunks were monitored for hibernation and winter survival. Five of these winters had normal temperatures and during these, 100% of the chipmunks hibernated and 88% survived. In two unseasonably warm winters, only 40% of the collared chipmunks entered hibernation, but had shorter sleeping bouts and only 11% of these chipmunks survived. Those two winters were the warmest in almost 100 years. Perhaps the hibernators of our area are not adapted to unnaturally mild winters and the physiological mechanism that triggers hibernation didn't function, leaving them without food sources required for surviving awake. Bears may also be affected by warming winters. In recent years, some have been seen in The Great Swamp with their new cubs before March-April, the typical time they leave their winter dens.

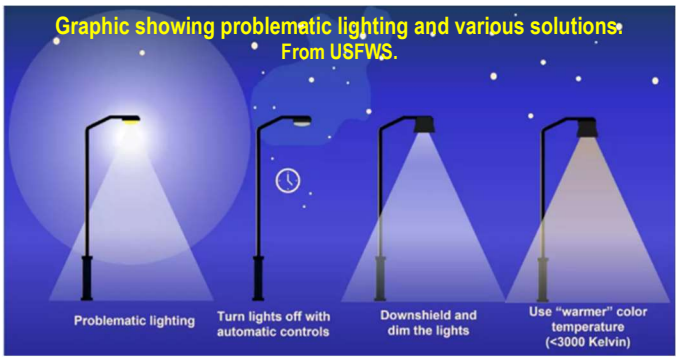
Winter represents a period of dormancy. It can be a time for inner reflection and spiritual renewal. Give it a try!

FATAL (LIGHT!) ATTRACTION

By Paul Andrews

Birds have suffered dramatic declines in the last 50 years with almost 30% of the population (3 billion birds) lost in North America. Contributing factors include: loss of habitat due to agriculture and urbanization, collisions with infrastructure, predation from house cats, pesticides and herbicides, loss of feed, plastic ingestion, and disease (West Nile virus, bird flu). Another significant factor is the insidious effects of human-made light pollution across their migration routes.

Human-generated light has many impacts on the natural world, but one of the most alarming is its effect on bird migration. Most songbirds migrate at night to avoid predators and rely on natural cues, such as the position of the stars and the moon, to navigate during their journeys. Artificial light disrupts these cues, leading to disorientation and increased mortality. Bright city lights and illuminated structures, such as tall buildings and communication towers, attract and confuse birds, causing them to veer off course. Known as "fatal light attraction," this phenomenon can result in birds circling artificial light sources until they become exhausted or collide with buildings. This behavior has been observed in numerous migratory species, including warblers, thrushes, and sparrows. Studies have shown that fatal light attraction in urban areas can cause the deaths of 365 to 988 million birds annually during a single migratory season.

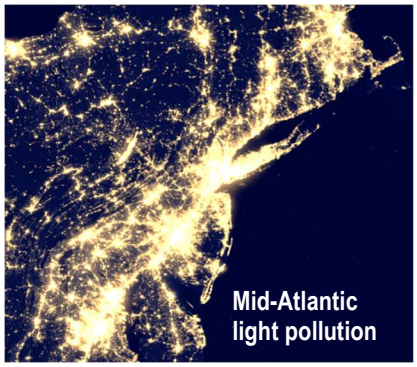


Light pollution also alters the natural day-night cycle, disrupting birds' biological rhythms. Many species use the length of the night to determine the timing of their migration. Artificial light can mask these natural signals, leading birds to start their journeys too early or too late (misaligned with forage/nesting), reducing their chances of survival. Excessive light can also affect stopover habitats, where migratory birds rest and refuel. Brightly lit areas often lack the darkness and tranquility birds need to recover, forcing them to seek less suitable rest stops.

The ecological consequences of light pollution extend beyond bird species to entire ecosystems. Migratory birds play a crucial role in seed dispersal, pollination, and pest control. Declines in avian populations due to light pollution and other factors can disrupt these processes, negatively impacting biodiversity and ecosystem health.

What Can You Do?

Past newsletter issues have brought attention to what you can do in your own backyard as conservationists to protect the health of The Great Swamp, such as planting trees, re-wilding your lawn, removing invasive plants, minimizing chemical applications on your lawn, and removing rodent poisons. Light pollution is another impact from your home that not only affects birds and other wildlife in The Great Swamp, but also blocks our view of the universe.



The box below lists actions you can take to reduce light pollution from your home and landscape. By applying these practices throughout the year, you can have an immediate impact on the environment around you. Not only will you help preserve the natural cycles that are so important to people, birds, and other wildlife, you will also save more money through lower energy consumption and decrease your carbon footprint. Please consider what you can do to make our night sky more naturally dark, helping to create a friendlier environment for birds and humans in The Great Swamp.

How You Can Reduce Light Pollution

- Turn off outdoor lights at night
- Birds are at greater risk from lighting during spring and fall migrations and on cloudy nights. Consider if lighting can be turned off during April-May and Aug-Oct migrations.
- Use automatic controls such as timers, dimmers, or motion sensors to turn lights on/off as needed
- Use amber, orange, red, or "warmer" lighting (<3000°K) that is less harmful for most species. Avoid using blue, white, or "cooler" lighting (>3000°K).
- Keep light as dim as possible
- Close blinds, shades, or curtains at night
- Direction: remove lights that point up or illuminate the landscape, use fixtures that eliminate light above the horizontal plane.
- Insist your town install dark-sky-compliant lighting in public spaces and pass outdoor lighting ordinances that encourage dark sky compliance
- Join/donate to DarkySky International at https://darksky.org/

GREAT SWAMP QUIZ

Track ID: Which of our forest friends made this track? Answer in box below. Hint – loves a diet of evergreen bark in the winter.

Where in The Great Swamp?

A

B

Answer key: Track is from a porcupine!
A) This is the dam at the pond north of Wonder Lake. B) On the Appalachian Trail heading to Nuclear Lake from Rt 55.

FrOGS Needs *Your* Help!

JOIN ~ VOLUNTEER ~ DONATE

Friends of the Great Swamp is an organization dedicated to preserving The Great Swamp through educational programs, scientific research, conservation, and by making all aware of this wonderful resource in our midst.

The generosity of our members and supporters extends FrOGS' reach and effectiveness.

Please fill out and return this form or visit frogs-ny.org

DONATION

Remember your donations are tax deductible! Send yours to:
Friends of The Great Swamp, P.O. Box 373, Pawling, NY 12564

☐ Supporter $25 ☐ Contributor $50 ☐ Friend $100
☐ Patron $250 ☐ Sponsor $500 ☐ Benefactor $1,000

Please use my donation for: _____

VOLUNTEER

We can always use another helping hand! Let us know which activities you're interested in helping with.

☐ Fall Celebration ☐ Trail Work ☐ Booth Staffing
☐ Habitat Restoration ☐ Animal Surveys ☐ Event Registration

Suggest an activity: _____

So we know whom to thank...

NAME _____

ADDRESS _____

CITY, STATE, ZIP _____

CONTACT PHONE _____

EMAIL _____

P.O. Box 373 • Pawling, NY 12564
RESEARCH • EDUCATION • CONSERVATION
FrOGS Friends of the Great Swamp
THE GREAT SWAMP NEWSLETTER

CALENDAR OF EVENTS

Great Hollow Nature Preserve
February 18, Kid's Drop-in Day (9 – 3)

Gordon Douglas East Hike
February 23, Sunday (10:00 am)

An easy 1.5-mile hike with amazing views of the Great Swamp and an opportunity to do some birding in a private reserve. Bring your binoculars and cameras!

Michael Ciaiola Conservation Area Hike
March 9, Sunday (10:00 am)

A 6.5-mile hike loop located on Haviland Hollow Rd, Patterson, NY. Considered a moderate hike with great views and a beautiful waterfall.

FrOGS Annual Meeting
Saturday, March 15 (11:00 am)

Open to all FrOGS members. We will review some of our key projects on habitat restoration, conservation, and environmental advocacy as well as hold a short Board meeting and take Q&A.

Pawling Nature Preserve Hike
March 23, Sunday (10:00 am)

A moderately challenging incline for the first ¼ mile, the rest of the hike is random terrain with beautiful views covering approximately 6 miles and taking 3 to 4 hours. Hike will start from the Sprague Road entrance to trails in Wingdale, NY.

Laurel Ledges Natural Area Hike
April 6, Sunday (10:00 am)

An easy hike exploring the connected preserves around Turtle Pond. View indigenous peoples' rock shelters. Hike will start from the Cornwall Hill Road parking area.

First Paddle on North Flow
April 13, Sunday (8:00 and 10:00 am)

We will depart from the DEC launch site on Wheeler Road in Wingdale. We will paddle up river (south) on the Swamp River and then back north to visit the great blue heron rookery. No children under 16 allowed. Bring your own kayak or use our canoes. Paddle is dependent on weather and a good water level.

Spring Paddle at Patterson Environmental Park
April 20, Sunday (10:00 am)

We will paddle down the East Branch Croton River and back. No children under 16 allowed. Bring your own kayak or use our canoes. Paddle is dependent on weather and a good water level.

Early Morning Paddle North Flow
May 4, Sunday (7:00 am)

We will depart from the DEC launch site on Wheeler Road in Wingdale. We will paddle up river (south) on the Swamp River and then back north to visit the great blue heron rookery. No children under 16 allowed. Bring your own kayak or use our canoes. Paddle is dependent on weather and a good water level.

World Migratory Bird Day
May 10, Saturday Turn off your lights!

Green Chimneys Paddle on the East Branch Croton River.
May 17, Saturday and May 18, Sunday
Launch times at 8:00 and 10:00 am

We will explore the Great Swamp on the East Branch Croton River upstream from Green Chimneys. Paddle duration will be about 2 hours. Equipment will be supplied or bring your own. The Green Chimneys launch site is across from the school at 400 Doansburg Rd, Brewster, NY. Children must be 6 or older.

Audubon Deer Pond Hikes (Sherman)
Feb 11, Love Birds: Avian Courtship Talk, Tuesday (10:00 – 12:00)
March 7, First Friday Hike (10:00 – 12:00)
March 20, Spring Equinox Walk (10:00 – 12:00)
For details, see: https://www.ctaudubon.org/deer-pond-farm-programs-classes/

For all FrOGS events, please contact Ken Luhman at frogspaddle22@gmail.com. Paddling events require registration and have fees.

The most up to date list of events can always be found on our Facebook page: facebook.com/FrOGS.NY

You can also sign up for email updates via our website: https://frogs-ny.org/mailchimp-newsletter/