Unraveling the Secretive Life of the Mother Woodcock

By Alexander Fish, DFW; Colby Slezak and Dr. Scott McWilliams, URI

Managing for wildlife populations involves collecting detailed information about how many individuals are born into a population and how many die throughout the year. By combining birth and death information, we can understand whether a population is growing, declining, or remaining stable. For many wildlife species we are primarily interested in female survival, because females give birth and generally provide more care or in some cases all the care for their young. So, female survival is often closely associated with the viability of wildlife populations.

When it comes to wild birds, females lay eggs, and for many species are the only parent to incubate the eggs and provide care to the chicks. Bird conservation relies on understanding not only nest survival, but also how many

Left: Female woodcock (Scolopax minor)
Photo: Colby Slezak

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THE DIVISION OF FISH AND WILDLIFE
MISSION STATEMENT

Our mission is to ensure that the freshwater, wildlife, and marine resources of the state of Rhode Island will be conserved and managed for equitable and sustainable use.

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Featured State Land:

**Rockville Wildlife Management Area**

By: Amanda Cugno, Lands & Compliance Manager, DFW

A not very well known and not very often traversed expanse of green and blue exists in the southwestern part of Rhode Island where you truly can get far enough away from the road to find peace and quiet. Whether you’re trekking down a long rocky path to throw a cast on a pond shore, climbing up the cliffs to look down at the water from above, or wandering around the woods searching for antler sheds in the deer haven of mountain laurel, there is certainly something for every season at RIDEM’s Rockville Management Area. State-owned land in this area encompasses over 1,000 acres. Additionally, The Nature Conservancy and the Audubon Society of RI have conserved 250 acres that connect RIDEM’s parcels to create a vast expanse of protected forest.

Nestled into this bed of green are four ponds connected by Canonchet Brook, the largest of these being Blue Pond in the eastern portion of the management area. Blue Pond is lined on its eastern and northern shore by a boggy strip of wild cranberries. A ten-minute walk from Canonchet Road down Blue Pond Trail leads you to a small clearing along the northwestern shore that provides a spot for fishing. Even in the winter, the pond is a nice place to hang out and ice fish in the sun.

The entire area of Rockville lives up to its name, with large boulders and rocks jutting up from the surface of the earth everywhere you look. The landscape varies from boulder-strewn slopes to wooded wetlands to rocky cliffs of chestnut, oak and hemlock. The land around Long Pond and Ell Pond has an otherworldly feel to it almost as if you’re not in Rhode Island anymore. Though Ell Pond cannot offer much in terms of recreation because it is completely surrounded by a swamp of Atlantic white cedar, it is certainly worth a stop to appreciate its quiet untouched shoreline.

There are many trailheads to choose from that will guide you out to these scenic areas. Canonchet Road itself hosts five trailheads, and there are others along North Road as well. The Narragansett Trail will lead you west from Canonchet Road out through Audubon’s Long Pond Woods and then north along TNC’s Ell Pond Preserve, connecting all three conservation areas. This is a nice option for an out-and-back hike along the cliffs that overlook Long Pond and through the rocky terrain that leads over to Ell Pond. If you’re ambitious enough to keep hiking through, the trail eventually leads to Pachaug Forest in Voluntown, Connecticut.

More access areas are provided around the management area. Ashville Pond to the south provides a canoe and kayak launch along the road, and there are several other small areas to fish along the ponds. There is plenty of wildlife to experience, from barred owls calling to each other across the wooded valleys to peepers singing loudly from the wetlands. Fishing, kayaking, or hiking, you’re sure to find some treasures. Enjoy springtime on our state lands!

If you’re interested in doing more research before heading out to the woods, check out RIDEM’s Environmental Resource Map and Outdoor Recreation Map to view data related to state properties and public access! These can be found at [http://www.dem.ri.gov/maps/](http://www.dem.ri.gov/maps/)
The Emerald Ash Borer

& The Cerceris Wasp

By: Gabby DeMeillon, Outreach Technician, DFW

A hidden treasure trove lays concealed among the treetops of Rhode Island. Insects in the Buprestid family (aka jewel beetles) sport brilliant, beautiful, shining bodies and one in particular has caught the eye of researchers. The emerald ash borer (Agrilus planipennis), or EAB, is an invasive insect native to Asia. EABs lay their eggs in ash trees and have fed on and killed tens of millions of trees since they were first found in Michigan in 2002. While these shiny green beetles fly too high for our reach, another crafty insect has come into our service.

EABs were first documented around Detroit in the early 2000s but have since spread to 35 states in the U.S., including Rhode Island. Biologists and land managers are so concerned with this little beetle because it has had a massive impact on forest ecosystems, resulting in hundreds of thousands of dollars worth of damage. While the adults only cause minimal damage, feeding on the leaves of ash trees, the larval stage lives within the bark and feeds on phloem. This inner layer of bark is what transports nutrients throughout a tree and disrupting it ultimately leads to the death of the tree.

Females lay 55 eggs on average from June through August and the larvae overwinter within the bark. After pupating, transforming into their vibrant green adult form, they finally emerge from their D-shaped exit holes during the late spring. Twisting and overlapping lines on the outer layer of trees are tracks left behind by the feeding larvae.

Adult females typically live about two months while males only live about one month. During their lifespan, adults spend most of their time high up in the canopy of ash trees feeding on leaves. This makes researching and detecting EABs difficult for humans, despite their gleaming green coloration. However, in 2008, scientists formed an unlikely alliance with an insect called the cerceris wasp (Cerceris fumipennis). This wasp, a member of the Crabronidae family, specializes in catching native Buprestid beetles and, since the introduction of the EAB, has included them in their food resource collection.

Cerceris are inconspicuous wasps that build their nests in sparsely vegetated areas such as baseball fields, around fire pits or on road sides. They are about the size of a yellow-jacket but are all black except for a cream-colored stripe on their abdomen and a few small dots by their eyes (females sport 3 dots while males have just two). These wasps make such ideal assistants for monitoring EABs because of their talent for finding Buprestid beetles in places where researchers simply cannot reach.

Cerceris wasps capture and stun adult beetles to feed to their larvae buried about 10-22cm deep in the ground, in
a hole about the size of a pencil. The nests are marked by a small mound of dirt, slightly larger than most ant mounds. Once the prey is stunned, but still alive, the wasp lays a single tiny egg on the insect, which provides nourishment to the larvae once it hatches. The wasp will repeat this process, depositing each egg-laden beetle in its own cell within the underground nest. One wasp will lay between 5-12 eggs on average.

While the wasps work diligently, carrying their prey from the tree tops to their small holes in the dirt, biologists swoop in with nets. To evade capture, a wasp will release its stunned prey, dropping it directly into a biologist’s net. Then, unburdened by the additional weight of the beetle, the wasp escapes to find new prey while researchers bring their stolen collection of Buprestids back to their labs to be sorted and studied.

Cerceris wasps will hunt about 750m away from their nest on average, so if an emerald ash borer is collected among the stolen Buprestid beetles, it indicates there is an infestation nearby. This biosurveillance, using one species to search for another, has allowed scientists to detect occurrences of EABs early on. While other detection methods are still in use, such as “funnel traps” made up of a series of stacked funnels baited and hung from trees, the cerceris has played a major role in studying EABs.

There are laws in place preventing the transport of firewood from one state to another. This measure was taken to slow the spread of EABs and other problematic insects to new locations. Firewood should be bought locally to prevent this pest from destroying un-infested forests.

Signs of EAB include: D shaped exit holes in trunks, small, winding tracks in bark, an increase in woodpeckers and dead or dying canopies on ash trees. The USDA provides numerous resources on emerald ash borers and sightings can be reported to the USDA Emerald Ash Borer Hotline at 1-866-322-4512.

Cerceris wasps are fairly common and once you recognize them, you will most likely notice them more frequently around parks, on paths or while enjoying a summer campfire. While these wasps do have the capacity to sting their prey, stinging does not seem to be used as a method of defense. They are mild creatures and have become remarkable allies to scientists.

Next time you are outside, take a moment to observe the small things, flitting around, lively yet unnoticed. With a keen eye you may discover evidence of emerald ash borers, a cerceris wasp nest, or perhaps even a Buprestid beetle for yourself, a jewel hidden in plain sight.

YOUR PASSION FOR THE OUTDOORS BRINGS YOU TO SOME OF THE MOST IMPORTANT PLACES FOR OUR NATIVE WILDLIFE. YOU ARE ADVOCATES FOR THE CONSERVATION OF WILDLIFE AND THE HABITATS UPON WHICH THEY DEPEND. THE NATIVE TURTLE SPECIES OF THE NORTHEAST ARE FACING A NEW THREAT — POACHING. REMOVING EVEN INDIVIDUAL TURTLES CAN HAVE PERMANENT CONSEQUENCES FOR POPULATIONS ALREADY UNDER TREMENDOUS PRESSURE. IT IS AGAINST RHODE ISLAND LAW TO POSSESS OR REMOVE ANY NATIVE AMPHIBIAN OR RETILE FROM THE WILD. HERE’S HOW YOU CAN HELP:

**WHAT TO LOOK FOR:**
- Individuals with bags poking around in fields, wetlands, or along streams, or flipping over logs and rocks.
- Unmarked traps set in wetlands. A trap set for research purposes will be clearly labeled.
- Cars parked near forested areas with collection equipment - like nets, containers, and pillowcases - visible inside.
- Unattended backpacks or bags left in the woods, along a trail, or near roads.

**WHAT TO DO IF YOU SEE SOMETHING SUSPICIOUS:**
- Maintain a safe distance and protect yourself.
- Note your exact location, and call the 24-hr RIDEM Law Enforcement hotline (401-222-3070) when it’s safe to do so.
- If you are safe, try to take photographs that can corroborate your report. For example, the license plate of a car, or the serial number on a turtle trap.
- The U.S. Fish and Wildlife Service also has an anonymous tip line: 1-844-FWS-TIPS (397-8477).
First Fish Awards are available for children who catch their first fish in Rhode Island.

To qualify, an angler must have caught a fish by rod and reel, tie-up or handline by legal means.

Applications can be processed without the need for an official weigh-in.

Below is the First Fish Award application. It can also be downloaded using the following link:

www.dem.ri.gov/topics/fwtopics.htm

First Fish Awards are processed twice a year: once in the fall and prior to the opening day of the following year.

THE 2022 FRESHWATER FISHING REGULATION GUIDE IS AVAILABLE NOW

Pick up a copy at bait & tackle or sporting shops around the state, at the RIDFW Great Swamp office, or online using your computer or mobile device. Stay informed of fishing season dates, changes to laws, improvements to fishing areas, and much more.

GET THE REGULATIONS GUIDE ONLINE:

WWW.EREGULATIONS.COM/RHODEISLAND
Join the RIDEM Division of Fish and Wildlife to discover effective strategies for coexisting with our native wildlife. Sessions are designed to address common seasonal conflicts between humans and wildlife and provide the public with guidance. Each session will cover the life history, rules and regulations, solutions, and research being done in our state, and will include a dedicated time for questions.

**Black Bear Basics**

*SPRING*

*American Black Bears*

American black bears disappeared from Rhode Island and much of New England following colonization, but with populations in surrounding states growing, Rhode Island has seen their return.

Black bear sightings are becoming more frequent and concerns about encounters are common.

If communities can come together and integrate bear-conscience strategies, we can avoid problems with bears in the future.

This session will address what to do when encountering a bear and how to avoid drawing bears to your yard.

View [Black Bear Program](#) here!

*Highlighting the American Black Bear Project.*

**Vegetable Vandals**

*SUMMER*

*Rabbits, Woodchucks and Deer*

The bane of many gardener’s existence are these three critters. Half-eaten tomatoes and munched on magnolias are enough to drive anyone to their wits’-end

While these critters may seem impossible to manage, there are measures you can take to defend your garden.

As frustrating as these fuzzy felons may be, they are important to Rhode Island’s ecosystem, acting as valuable natural resources in our state.

This session will give you tools to protect your crops and cover the rules and regulations for hunting and trapping on private property.

*Highlighting the New England Cottontail Project and Deer Program.*

**Noisy Neighbors**

*FALL*

*Bats and Squirrels*

The small pitter-patter of feet is not so adorable when it’s coming from your attic. These small mammals may just be trying to find a warm home, but yours is taken.

These tiny mammals are tricky to remove effectively and if exclusion is done improperly, it can lead to ineffective and unfortunate results. It is imperative that they are safely and properly excluded from homes.

This session will cover the appropriate time and measures for removal of your noisy neighbors and how to prevent them from returning.

*Highlighting Bat Mist-Netting and Maternity Roost Counts.*

To view upcoming sessions, visit [DEM.RI.GOV/wildlifeoutreach](#)
Spring 2022

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Catch and Release in the Beaver River

Set Aside for Rhode Island’s Wild Salmonid

By Corey Pelletier, Freshwater Fisheries Biologist, DFW

In July of 2021 the Rhode Island Division of Fish and Wildlife (DFW) amended its stocking regulations to remove the Beaver River from the list of Trout Stocked waters. Along with the removal from this list, the Beaver River was also designated as catch and release only with the use of a single, barbless hook and artificial bait. This is only the second stream in Rhode Island to be designated as a catch and release area, second to the Falls River in the Arcadia Management Area.

This may seem drastic as few locations have been removed from this list in recent years. Much thought and consideration went into this management action. The Beaver River is home to a population of wild Brook Trout which can be found throughout much of the river from its confluence with the Pawcatuck River, upstream several miles to Tug Hollow Pond Dam at New London Turnpike. Wild brook trout found here commonly range between 5-8 inches, with some reaching over 10 inches. Until July of 2021, the Beaver River has historically been stocked with hatchery-raised brown, rainbow, and brook trout species at Shannock Hill Road, Beaver River Schoolhouse Road and Route 138, in the Town of Richmond. Many sections of the river between the stocked locations are privately owned and have densely vegetated riparian zones which makes fishing access difficult.

In recent years, DFW has conducted extensive data collection on fish populations and water quality throughout the river. In 2020, the Town of Richmond received a grant and hired a consulting firm to conduct a watershed assessment of the river and surrounding lands. Results from previous DFW data collection and data collected as part of this study, identified priority habitat for fish species including wild Brook Trout. The Beaver River is unique due to groundwater influence throughout the river which supports cold-water dependent species such as the Brook Trout. A series of dams and ponds which make up the headwaters of the Beaver River, contribute to warming of the water during summer months. This “thermal loading”, or heating of standing water from the sun, creates an issue for wild Brook Trout. They require cold, well oxygenated water to survive, and this warming effect forces them to migrate and find thermal refugia to survive through summer months. Through data collection, the coldest section of the Beaver River was
found to be from the Hillsdale Road crossing down-stream to Route 138. This is most important during summer months when water temperatures are at their warmest, limiting the available habitat which can support these fish.

The decision to cease stocking of hatchery raised trout will have positive impacts to the wild population of Brook Trout in the Beaver River. Habitat competition between hatchery raised and wild trout has been documented in research studies. The degree of impact in Rhode Island is largely unknown but we do know that wild Brook Trout populations persist in areas that have been stocked for generations. Despite this, removing introduced quantities of hatchery raised trout will only benefit the wild population of Brook Trout by allowing more habitat to be available, which may otherwise be occupied by stocked trout. Furthermore, ceasing stocking will eliminate any competition for food resources between hatchery stocked and wild trout. Wild Brook Trout in Rhode Island are listed as a Species of Greatest Conservation Need in the RI Wildlife Action Plan, indicating that efforts must be taken to maintain, protect and improve populations. The goal is to improve the quantity and quality of wild Brook Trout in the Beaver River while still allowing anglers to target these spunky yet beautiful fish. If you are a fan of catching large rainbow and brown trout raised at one of RI’s four trout hatcheries, do not worry! We will not be stocking any less trout. They just won’t be in the Beaver River.

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young that hatch and leave the nest live to become independent of parental care. Given that the incubation period for ground-nesting birds is especially risky, most females go to great lengths to hide and conceal their nests and young from predators, so finding enough nests or young birds to study can be rather challenging!

The American Woodcock (Scolopax minor; woodcock hereafter) is a migratory shorebird that has abandoned the sandy beaches and marshes to live in young, regenerating forests and forested wetlands throughout Rhode Island. Recent telemetry studies of woodcock that spend April-November in Rhode Island found that they primarily spend the winters (December – March) in the southeastern U.S. Woodcock are highly secretive, spend most of their time concealed on the ground, and only emerge from the dense shrubs or young trees during crepuscular periods (pre-dawn, post-dusk). Their feathers have evolved to resemble leaf litter and most people only see a woodcock as they erupt underfoot just as you are about to step on them! If observing woodcock is so difficult, then how in the world do we find their nests, and/or recently hatched woodcock? Over the past few years, we have used a variety of innovative methods to find these secretive nests.
Radio Telemetry

Shortly after woodcock return to Rhode Island from their southern wintering range, they begin thinking about nesting. During the spring (March – May) male woodcock display during crepuscular periods and females visit males before breeding and eventually laying eggs. The research team uses mist nets (fine mesh nets) strung between two poles to capture some females as they visit males prior to breeding. Once in hand, the females receive a leg band with a unique identification number, so it can be identified if it is ever captured again, and a small transmitter on their back. The transmitter allows the team to track the woodcock post-release using a specialized antenna and radio receiver. The transmitter and antenna allow us to track the female right to her nest.

Thermal Scope

We also use an interesting application of physics to locate some nesting females. Every warm-blooded animal is constantly shedding their body heat into the air around them. When our bodies release heat, they are actually releasing infrared light waves, that our eyes cannot detect. However, by using a specially designed thermal (or infrared) scope, we can see these infrared light waves and detect the “glow” of a warm-blooded animal. Nesting woodcock are so camouflaged, they are nearly impossible to see with our naked eye, but we can detect their heat signature to locate their nests. All you have to do is walk through the woods and look through the scope until you see the ‘glow’ of the mother woodcock. However, vegetation such as grass can obscure or hide a woodcock’s body heat, so in reality you need to be close and have an unobstructed view to actually see the nesting bird. We do not disturb any incubating female on their nest, but this allows us to locate nests and determine if the eggs successfully hatch.

Trained Dogs

We also take advantage of some very well-trained mammals to locate some nesting females. Woodcock, like most birds, have a unique smell associated with the oil they use to waterproof their feathers, and this odor can be used to help locate a nest. Predatory mammals, such as coyotes, foxes, and skunks use this smell to locate nesting woodcock and eat the eggs. Likewise, a well-trained pointing dog can smell a woodcock incubating a nest but is trained to stay far enough away that the female stays on the nest and is not disturbed. For the past 2 years, a dedicated group of highly skilled volunteers and their dogs have spent hundreds of hours helping to find woodcock nests in Rhode Island.

Once a nest is located, the nest is monitored a few times a week to document nest survival. Additionally, we determine the date the nest was initiated by ‘floating’ an egg from each nest. All eggs contain a yolk, albumen (white), and a small air pocket.
Selecting the Right Dog to Help Find Nests

If you have ever spent much time around a dog, you have probably noticed that they “see” the world through their nose and spend much of their time following animal trails and things that we just cannot detect with our own nose. Certain breeds of dogs have been bred to have a more developed sense of smell and are primarily used for search and rescue or hunting.

Most hunting dogs for upland game birds fall into two different categories: flushing or pointing. The Labrador Retriever is one of the most popular dog breeds in the U.S. and labs are flushing dogs... meaning that they follow the scent trail of an animal until the animal finally burst from cover and ‘flushes’ to get away from the dog. Labs would flush a woodcock off of the nest, so for this reason labs are not used by us to locate nests. Another category of dogs, called pointers, instead follow the scent of an animal until they are a few feet away, and then their body goes stiff and they ‘point’ their noses towards the animal/nest. Hence, pointing dogs help us find animals, but keep their distance so the animal is not disturbed unless the dog trainer gives a specific command, making them the perfect nest finding companion.

that increases in volume as the chick develops inside the egg. Recently laid eggs will sink to the bottom of a water glass and lay horizontally. But as the egg develops, it will lay progressively vertically in the water, and near hatching it will actually float. Woodcock chicks remain close to the nest soon after hatching and so we visited each nest site shortly after we expected it to hatch so we could find the brood (newly hatched chicks). Up to two chicks were captured from each brood and had small radio transmitters attached similar in design to a dog collar. Chicks were monitored daily to verify survival or to determine the cause of mortality. Woodcock chicks are commonly predated by a variety of predators, but chicks can also die from disease or hypothermia from cool/wet weather.

Woodcock females and broods were tracked throughout the summer to determine survival rates, habitat selection, and determine their home range size. This information will be used to create a woodcock management plan for Rhode Island to help ensure healthy woodcock populations remain in the Ocean State for future generations to enjoy.

Each spring, RI DEM outreach staff offer guided walks to connect the public to the charismatic breeding display of woodcock, also called the "Sky Dance." Outreach events can be located on the DEM Division of Fish and Wildlife website.

Hunters and Woodcock Conservation

Woodcock are a popular upland game species in Rhode Island and throughout eastern North America. Each year approximately 300,000 woodcock are sustainably harvested by hunters throughout eastern North America. Along with other species of wild game, woodcock provide healthy organic meat that is low in fat and cholesterol and high in omega-3 fatty acids, vitamin B, and has more protein per pound than commercially raised meat.

Hunting has a long tradition in Rhode Island, supporting family customs, connecting people with nature, and attracting tourism to the state. Hunters help provide funding for wildlife conservation through their purchase of firearms and ammunition through the U.S. Fish & Wildlife Service’s Wildlife and Sport Fish Restoration program (WSFR) and generate more matching federal funds ($3 federal match for every $1 state contributed) through the purchase of their state hunting licenses and permits. Hunters are integral to wildlife conservation and their contributions through the WSFR program help support research and conservation efforts for Rhode Island woodcock.
NOTICE: Wild Rhode Island

Printing Temporarily Put on Pause

Due to impacts on the Division related to COVID-19, Wild Rhode Island hard copy printing will be temporarily suspended, making them unavailable for our usual quarterly mailing. This will likely impact the next several issues. However, we will continue to create these publications quarterly, and they will still be available by email, and as PDFs on the RIDEM website.

If you would like to change your subscription from the mailing list to the email list, please email Sarah.Riley@dem.ri.gov, or call 401-789-0281, to continue receiving Wild Rhode Island.