

ISSUE 15 | SPRING 2022

WILD RHODE ISLAND EXPLORER



**MEET THE
RINGED
BOGHAUNTER!**



DEM
RHODE ISLAND





DID YOU KNOW?



We do a lot of work to protect, conserve, and learn about Rhode Island's wild creatures and the places they call home. None of this work would be possible without the help of people who hunt and fish in our state.

Hunters and anglers buy a license each year. This license means that they promise to follow all the rules of hunting and fishing in Rhode Island. These rules exist to protect our important natural resources and make sure that people can enjoy hunting and fishing in our state forever. Also, the money from these licenses goes towards important conservation work in Rhode Island.

There's another really cool way that hunters, anglers, and also target shooters (people who may not hunt, but practice their aim with firearms or archery at a range) help with conservation all across the United States. The businesses that make firearms, ammunition, archery equipment, and fishing equipment pay a tax on these items. This raises millions of dollars, which is split up and given to each state by the United States Fish and Wildlife Service.

What do we do with all this money? We use it to help our state's fish and wildlife! This money helps to buy more land for our management areas, which means more habitats will be protected in our state forever. We also use the money to do important research to learn more about our fish and wildlife, and what we can do better to help them.

Much of our work wouldn't be possible without the help of our hunters, anglers, and target shooters. By participating in these types of outdoor activities in a responsible and safe way, you can help support fish and wildlife conservation in Rhode Island too!

CONTACT US

RI DFW FIELD HEADQUARTERS
277 GREAT NECK ROAD, WEST KINGSTON, RI 02892
401-789-0281 | DEM.DFW@DEM.RI.GOV

RI DFW EDUCATION CENTER
1B CAMP E-HUN-TEE, EXETER, RI 02822
401-539-0019

DIVISION OF LAW ENFORCEMENT
24HR VIOLATION LINE: (401) 222-3070

IN THIS ISSUE

Habitat Chat	
Bogs: Squishy, Spooky Wetlands...	3
Maddie's Outdoor Adventures	
Land Navigation.....	4
Critter Cam	5
Smells Fishy News	
What is Fly Fishing?	6
Our Wild Neighbors	
Ringed Boghaunter.....	7
Out in the Field	
Here There Be Dragons!.....	8
Wild Quest.....	10
Critter Cards	11

Want to learn even more about RI's fish and wildlife?

Follow us on
YouTube and Instagram!



Rhode Island Department of Environmental Management



The Wild Rhode Island Explorer | Spring 2022

Writer/Editor: Mary Gannon

Cover photo: CC BY 2.0 Don Henise

Inside cover photo: RIDFW

Contributors: Madison Proulx, Gabrielle DeMeillon, Dana Kopec, Virginia Brown

This program receives federal funds from the U.S. Fish and Wildlife Service. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination in departmental federally assisted programs on the basis of race, color, national origin or ancestry, gender, sexual orientation, age, or disability. Any person who believes he or she has been discriminated against in this program, activity, or facility operated by this recipient of federal assistance should write to: The Office for Equal Opportunity, U. S. Department of the Interior, Office of the Secretary, Washington, D. C. 20240

HABITAT CHAT

Bogs: Squishy, Spooky Wetlands

Wetlands are habitats where water and land come together. They are home to some interesting plants and animals that have different **adaptations** to survive in such a soggy environment. Did you know that there are different kinds of wetlands? In Rhode Island, we have ponds, marshes, swamps, and bogs!

A **bog** is a wetland that is formed slowly over time. The most common plant you find in a bog is called **sphagnum** moss. When this bright green moss dies, it decomposes into a mucky soil called **peat**, and new moss grows on top of that. Over time, the peat forms layers one on top of the other like a lasagna. All of those layers can spread out over water in a wetland to make a floating mat of moss. Walking on a bog is a lot like trying to walk on a big floating sponge...with sinkholes! Bogs can be found as rings around ponds or over low areas that hold water all year long.



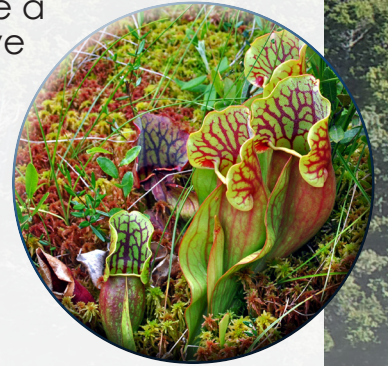
SPHAGNUM
MOSS

All plants need nutrients to survive. The soil in a bog doesn't have a lot of nutrients in it, so the plants that grow there are a little different. Bogs are home to plants like cranberries, blueberries, white cedar and black spruce trees. Some bog plants like the sundew and the purple pitcher plant have created their own unique way to survive. They are **carnivorous**! Wait, plants that eat other things? Creepy!



SUNDEW

Because plants can't chase down their prey like a bobcat, the sundew and the pitcher plant have some crazy leaf adaptations to help them catch their favorite food: bugs! The sundew's leaves have sticky hairs that trap insects long enough for the plant to "digest" them. The pitcher plant's leaves look like little green water pitchers, with tiny hairs inside that trap bugs in a digestion juice made by the plant.



PITCHER
PLANT

Bogs are unique wildlife habitats, so it's important that we protect these special wetlands. State Wildlife Management Areas keep a lot of wetland habitat safe from pollution. These areas will also be kept as habitat forever. This protects our wetlands from being crunched for space by neighborhoods, roads, stores, and parking lots. Bogs and wetlands are amazing!

MADDIE'S OUTDOOR ADVENTURES

LAND NAVIGATION

Spring is here! Let's take advantage of this sunny, beautiful weather and learn some basic land navigation skills. BUT first things first, remember to ALWAYS have an adult with you when you are out in the woods practicing your skills! There is so much to learn about land navigation and how to use a compass. Let's learn the basic parts to start and how to find a bearing and reverse bearing (straight line from one object to another)!

TOOLS YOU WILL NEED:

- ◇ A compass
- ◇ Your best math skills

Hold your compass steady so that the baseplate is level with the ground and your direction of travel arrow is pointing straight in front of you at chest level.

NOTE: A CIRCLE IS 360 DEGREES. HALF OF THAT IS 180.

The compass dial (Azimuth Ring) is a circle which means our compass is based off 360 degrees.

LET'S TAKE A BEARING

North is always 0 degrees, which should be lined up with your direction of travel arrow before beginning. This is called zeroing out your compass.

A **bearing** is the horizontal angle between one point and another (Like from a tree to a house).

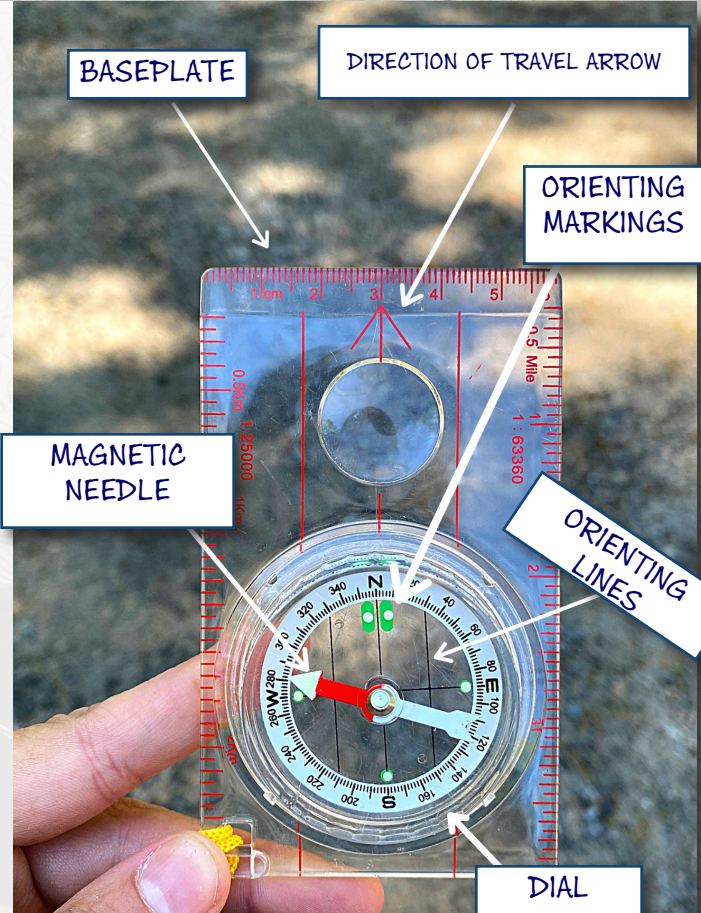
Pick an object outside (a tree, building, flowerpot, etc).

Point the direction of the travel arrow at it, rotate your whole body, not just the compass.

Turn the dial (Azimuth Ring) on the compass so that the needle is in the middle of the orienting markings.

Now, read the number (degree) that lines up with the direction of travel arrow. That number is your bearing! You are going to follow this number to get to your destination (Let's use 11 for example). If you are traveling from a tree to a house, the house will now be marked on the compass as 11 degrees.

Stay tuned for more land navigation tips. For more information and to view a video series on land navigation, check out our YouTube Channel!



ONCE AT YOUR DESTINATION, HOW DO WE GET BACK?

You will need to find the reverse bearing! How do we do that?

Reverse bearing rules:

If the original bearing is:

Less than 180, add 180 to it

Greater than or equal to 180, subtract 180 from it

EXAMPLE: 11 degrees is less than 180 so we will add 180 to 11 giving us the reverse bearing of 191. This number will get us back to the tree where we started from the house.

Keep practicing finding bearing and reverse bearings to different objects outside!

About the Author

Hi everyone! My name is Maddie; I am the administrative assistant at the Outdoor Education office. I have the best job ever because I encourage people to go explore the great outdoors! I love to practice archery, learn about wild game animals (turkeys are my favorite), go fishing, and cook up seafood with my family! I did not grow up in a hunting family, so I relied on RIDEM Hunter Education programs to learn and to connect me with awesome mentors who helped me get to where I am today. I am still learning and growing, and now I am here to help you do the same!



CRITTER CAM



Whooo's there? It's a barred owl! The barred owl is one of the most common owl species in Rhode Island. They have been spotted all over the state, from deep in the forest all the way to downtown Providence! Listen for their funny hooting call, which sounds like they are saying, "Who cooks for you? Who cooks for you all?"



You can see how the white-tailed deer gets its name in this photo. Check out all that white fluffy hair on this deer's tail! When deer are afraid or running from danger, they raise up their tails like a flag as they run. These two don't look too scared...They seem pretty interested in our trail camera!

About our trail camera study:

A trail camera is a small, waterproof camera that can be strapped to a tree. It takes photos when it senses something moving in front of the lens. We've teamed up with wildlife biologists from the University of Rhode Island to learn more about our state's mammals with trail cameras. A whopping 248,743 photos were taken during our bobcat project! We are currently working on new projects studying beavers, muskrats, otters, and fisher.

UPCOMING EVENTS



Did you know that we have lots of events and classes where you can learn outdoor skills like archery, fishing, and first aid?

Follow us on Facebook or Instagram to check out more upcoming events!

Visit dem.ri.gov/fishwildlife for more info and to sign up!

"SMELLS FISHY" NEWS

WHAT IS FLY FISHING?

Fly fishing is a type of fishing that uses artificial insects as bait. These insects are typically hand tied directly onto a hook using various materials like thread, feathers, and fur along with special tools in a process called fly-tying.



Flies come in many different patterns, but there are two main categories. The first is surface flies, which float on the water. The second is sub-surface, which sink below the surface. Flies can be further categorized into patterns for each stage in an insect's life cycle. For example, a **nymph** is an insect that has just hatched, then it grows to what is called an **emerger**, and finally, it is considered a full adult.

A fly reel and rod are very different from other types of fishing rods. The line is heavy and usually floats on the surface, although certain types sink. The weight of the line is what helps to feed the line out of the rod when casting.

It takes a lot of practice to become good at fly fishing, and it is always a good idea to go with someone knowledgeable and experienced your first few times out. Whether you plan to fish in saltwater or fresh, you can fly fish. It is important to research the type of fish you are targeting and the body of water you plan to fish from so that you can choose the correct fly as a lure.

There is nothing like the feeling of accomplishment that you get from catching a fish on a lure that you created. So, go out and have some fun trying this challenging and rewarding sport!



Check out Dana's "Fast Fly" videos on the Rhode Island Department of Environmental Management's YouTube channel to see how to create lures for fly fishing.

We also host free fly-tying classes throughout the year where you can try out fly tying!



About the Author

My name is Dana, and I am the Technical Assistant at the Division of Fish and Wildlife Outdoor Education Office. I love fishing, mainly fly fishing, and fly tying. A big part of my job is helping people learn to fish. My favorite part is when someone catches a fish, especially if it's their first!

OUR WILD NEIGHBORS

RINGED BOGHAUNTER

HABITAT: The ringed boghaunter lives up to its name! This species can be found in bogs, as well as other wetland habitats found close to bogs, like **fens** or white cedar swamps.

FOOD: Dragonflies are amazing predators and feed on many different flying insects.

BREEDING: Female ringed boghaunters lay their eggs in areas of wetlands that have lots of **sedges** (plants that look a bit like grass that grow in soggy spots). The eggs are laid in small pools that form on top of sphagnum moss. The **larvae** (baby dragonflies) hatch in the summer and take a year to mature. Once they are ready to become an adult dragonfly, the larvae climb up the sedges and break out of their outer layer of skin (called an **exuvia**). It sounds kind of creepy, but think of it like a butterfly hatching out of its cocoon. Dragonflies come out of their exuvia in their adult form with wings.



DID YOU KNOW?

There are 91 species of dragonflies in Rhode Island! The Rhode Island Division of Fish and Wildlife published a book in 2020 with information about all our state's amazing dragonfly species. Turn the page to read about the author of the book, Virginia Brown!

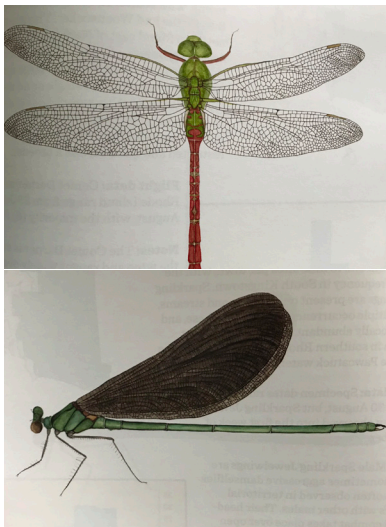
OUT IN THE FIELD

HERE THERE BE DRAGONS!



Hi everyone! Mary here! Ok, I admit, there aren't any real, fire-breathing dragons in Rhode Island. But, we do have a lot dragonflies and their close relatives, damselflies, here in our state. Odds are, you've probably seen one of these fast-flying, glittery predators during the summer. Follow me out into the field with Virginia (Ginger) Brown, author of *Dragonflies and Damselflies of Rhode Island*, as we talk about the fieldwork she did to write about these incredible insects!

Mary: Hi Ginger! First of all, can you explain the difference between a dragonfly and damselfly?



Drawings from Ginger's book of a Comet Darner dragonfly (top) and an Ebony Jewelwing damselfly. Can you see the differences between dragonflies and damselflies that Ginger is describing?

Ginger: Dragonflies and damselflies are really closely related. They're in the same insect order, called Odonata. They share a number of features, but when you look closely you can see some differences, and they are actually quite easy to tell apart. Adult dragonflies are usually larger than damselflies, with a fatter **abdomen** (lower part of their body) and eyes that wrap around their head like a helmet. When they perch, dragonflies hold their four wings flat like an airplane. Damselflies have a more slender

abdomen and their eyes are separated and oriented sideways. When damselflies perch, they hold their wings folded together above their abdomen or slightly parted. Dragonfly and damselfly larvae also look different too. The most obvious difference is that damselfly larvae have three tail-like gills on the end of their abdomen.

Mary: These insects are common today, but aren't there also records of prehistoric dragonflies?

Ginger: Yes, dragonflies and damselflies have been living on the Earth for a very long time. Their fossils date back almost 300 million years, well before there were even dinosaurs!

Mary: That is so cool! How many species of dragonflies and damselflies do we have in Rhode Island? Do we have any rare species here?

Ginger: There are 139 different kinds (species) of dragonflies and damselflies in Rhode Island. Most of them are pretty common critters, but about 30 species are considered rare here.

Mary: You wrote this amazing book about dragonflies and damselflies, which must have taken a lot of work and time out in the field. What types of habitats did you visit to gather information for the book?

Ginger: We went to every different type of aquatic habitat, both fresh water and salt water, and because dragonflies and damselflies live on land for part of their life, we also visited **upland** habitats like fields, forest openings, gravel pits, and sand dunes. We waded in rivers, streams, lakes, ponds, swamps, bogs, fens, and freshwater and saltwater marshes!

Mary: It must have been so awesome to check out all those cool wetland habitats! Do some dragonfly and damselfly species like a particular habitat type? For example, can you only find some species in ponds and others in swamps?

Ginger: Yes, it was wonderful to get into these beautiful aquatic habitats! We usually waded in them to get to the dragonflies, but sometimes we kayaked. Many dragonfly and damselfly species are found only in flowing water, like rivers and streams. Examples of river and stream species would be the Dragonhunter (it has a really cool name!), the Swift River Cruiser (another really cool name!), and the Sparkling Jewelwing. Others are found only in still water, including lakes, ponds, swamps, and bogs. These include our only State Endangered dragonfly, the Ringed Boghaunter, and the New England Bluet, a common damselfly



of weedy ponds. And just four species are found only in saltmarshes and salt ponds. A couple of examples of saltwater species are Seaside Dragonlets and Rambur's Forktails.

Mary: Those are some really cool names! What can be done to help dragonflies and damselflies here in Rhode Island?

Ginger: Because they are aquatic creatures, we have to take care of our aquatic habitats by keeping the water clean and pollution-free. And we should protect the forests and open spaces that surround these habitats, because dragonflies and damselflies spend part of their lives in forests and fields and other upland places. And they eat other insects, so we should be careful using chemicals that are harmful to insects. Dragonflies and damselflies are eaten by a lot of other animals that we care about, including many species of birds, fish, frogs, and turtles, so when we do things that help dragonflies, we are also helping those creatures that eat them!

Mary: What sparked your interest in studying insects?

Ginger: I was a wildlife biology major in college, and always wanted to study big animals like birds and mammals. When I took **entomology** (the study of insects) in college and got to look inside a grasshopper's body, I was fascinated. And when I began to catch insects in a net and hold them in my hand to look at them up close, I was hooked.

Mary: What was your favorite thing about writing this book?

Ginger: Dragonflies and damselflies are amazing animals, and I really enjoyed writing about their anatomy, natural history, interesting behaviors, and importance in the ecosystem. I wanted to write about things that would make readers interested in learning more about dragonflies and damselflies, things that might encourage them to go out to a nearby pond or stream to observe them in their natural habitats. I also love writing about the experiences I've had with dragonflies and damselflies over the years, like watching a big Dragonhunter devour an Ebony Jewelwing, and witnessing several thousand Common Green Darners migrating along a beach!

Mary: And lastly, what is your favorite Rhode Island critter?

Ginger: Hmmm, that's the hardest question you've asked! I love all animals, so it's difficult to pick just one. I could name 139 dragonflies and damselflies that are my favorite Rhode Island critters, but if I had to pick one that's NOT a dragonfly or damselfly, I would probably choose the Common True Katydid. I love hearing their wonderful night songs in the late summer and autumn. They are huge green katydids with wings that look like leaves! You can't see them up in the trees, but their loud "katy-did, katy-did" calls coming from the tops of the trees can't be missed.



About Ginger

Ginger studied Wildlife Biology at Kansas State University. After college, she worked for the Cape Cod Museum of Natural History, the Nature Conservancy, and the Rhode Island Natural History Survey. In addition to *Dragonflies and Damselflies of Rhode Island*, she is also the author of *Dragonflies and Damselflies of Cape Cod*. She currently teaches environmental and nature science, conducts inventory and monitoring of rare dragonflies and damselflies, and gets out to chase these fascinating insects as often as possible! Want to learn more about dragonflies? Visit www.dem.ri.gov/bookorder to get your very own copy of *Dragonflies and Damselflies of Rhode Island*.

WILD QUEST

SPRING SCAVENGER HUNT

The first frog to call in the spring is the wood frog. They sound like quacking ducks! Soon to follow are spring peepers which make a high-pitched "peep!"



WOOD FROG

I HEAR

A bird singing
The wind blowing
A frog calling



SPRING PEEPER

I SEE

Buds on trees
A bug crawling
A flower blooming



Look for the red buds sprouting on red maple trees. During late winter, you can harvest sap from these trees to make maple syrup!

Bark provides food for animals like deer and rabbits in the wintertime when grass and other plants are covered by snow or have gone dormant.



I FEEL

Dew on the grass
The bark on a tree
The moss on stone

I HELP

Pick up litter
Share facts that I learn
Recycle



The way plastic is made is harmful to the environment and plastic litter can harm wildlife. Try to use reusable metal or glass containers or recycle plastic so it can be turned into something new.

Sharing your knowledge about wildlife is a fun and easy way to help others respect and appreciate nature!

CRITTER CARDS

Rhode Island is home to many different wild animals. Some are very common and easy to spot. Others are rare and hard to find. Some are doing great and have healthy **populations**, while other species are threatened or endangered. At the Division of Fish and Wildlife, we've created a list of Species of Greatest **Conservation** Need (Marked as SGCN on the cards). We focus a lot of our work on helping these species. We do this by studying their populations, protecting special habitats, and spreading the word about these cool critters.

Cut out and collect these Critter Cards to learn about Rhode Island's wildlife species!



Fold in half



SOUTHERN BOG LEMMING (SGCN)

5

I am very cute little critter that lives in wet meadows and fresh-water marsh habitats. I am very rare in Rhode Island and have only been seen in the Great Swamp Wildlife Management Area in South Kingstown in recent years.

WHICH ACTIONS WILL HELP ME?

I am very secretive and hard to study! I might be hiding in other places, but biologists will have to do some work to try and find me. Gathering more information on my population will help biologists learn where my most important habitat locations in RI might be.



RINGED BOGHAUNTER (SGCN)

3

I am Rhode Island's only State Endangered dragonfly species. I like bogs and fens, but can sometimes be found flying around nearby wetland habitats too. I am an important predator of other insects. You can thank dragonflies for natural pest control!

WHICH ACTIONS WILL HELP ME?

I can only be found in a handful of places in Rhode Island. Making sure that those habitats are kept safe is the most important thing for my survival. Also, please don't use pesticides or other chemicals. They kill my food source and can pollute wetland habitats.



NORTHERN HARRIER (SGCN)

5

I am a bird of prey that lives in grasslands and freshwater marsh habitats. I'm a bit different than other birds of prey because I build my nest on the ground, hidden by grasses, cattails, and reeds. In Rhode Island, I've only been seen nesting on Block Island in recent years. But if you're out birdwatching during migration time or winter, you might spot me hunting for mice over an open field on the mainland.

WHICH ACTIONS WILL HELP ME?

Protecting grassland, meadow, and marsh habitat is very important for me. Working on creating new grassland habitat will be a big help!



FOWLER'S TOAD (SGCN)

3

I like to hop around habitats with dry sandy soils, like pitch pine barrens. I can be found scattered throughout the state, but most of my populations can be found in Kent county. I look a lot like the very common American toads that you might see hopping around in your garden. I make a very loud whirring call during the breeding season when I am searching for a mate.

WHICH ACTIONS WILL HELP ME?

Dry sandy soils are popular building spots for houses, so protecting as much habitat from being harmed by new building projects is important for me. Some of the spots where I live are also popular for riding ATVs. Sometimes, people break the rules and ride their ATVs in habitat that is supposed to be protected. Please be polite and respect my home!



BIRD'S EYE VIEW: The Division of Fish and Wildlife recently got a drone to check on habitat and to search for secretive turtle species, like the spotted turtle and the diamondback terrapin. Here's a view of beautiful wetland habitat at Durfee Hill Management Area!



RI Department of Environmental Management

DIVISION OF FISH & WILDLIFE

Great Swamp Field Headquarters

277 Great Neck Road

West Kingston, RI 02892



TO: