



A Quarterly Publication from the RI Department of Environmental Management, Division of Fish and Wildlife

Dragonflies and Damselflies of Rhode Island:

A publication from RIDEM, Division of Fish and Wildlife

Written by Ginger Brown Illustrations by Nina Briggs

Dragonflies and damselflies are members of the insect Order Odonata. They are some of the most beautiful insects on Earth; but in addition to their striking colors and intricate patterns of stripes and spots, they are of interest for their charismatic behavior, ancient evolutionary history, and the important role they play in the ecology of aquatic habitats. Odonates are predators of many other insects in both the adult and larval stages, feeding on whatever they can catch. However, they are also prey to a variety of other organisms, including insects, fish, frogs, turtles, birds, small mammals, and even carnivorous plants. Some species of dragonflies and damselflies are sensitive to degradation of aquatic habitats and loss of forest cover, making them good indicators of aquatic and terrestrial environmental health.



A photo of a meadowhawk dragonfly. Photo courtesy of Peter McCalmont

Much of what is known about Rhode Island's odonates is the result of the Rhode Island Odonata Atlas, an inventory of the state's dragonfly and damselfly fauna that began in 1998 and continued through 2004. During this period, volunteers sampled more than 1,100 sites in all Rhode Island counties and townships. Twenty-one species never reported in Rhode Island were documented during this survey. These included common species of previously under-sampled habitats, as well as rare species, and species not expected to occur here. Volunteers continued on page 2

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Where Does RIDEM Division of Fish & Wildlife's Funding Come From?

By Veronica Masson



The DFW's Great Swamp Field Headquarters located in West Kingston. Photo courtesy of Sarah Riley

Many of you might be curious about where the funding comes from for the Divisions of Fish and Wildlife and Marine Resources. Most of our programs are supported by the federal Wildlife and Sport Fish Restoration Program, or WSFR. The WSFR program is a user-pay, user-benefit funding stream, that is administered through the U. S. Fish and Wildlife Service, and contributes to one of the most successful conservation programs in the world. Through this program, hunters and anglers, shooters and boaters pay excise taxes on specific hunting, shooting, fishing, and boating-related products. Then those funds are distributed to the state Fish and Wildlife agencies to support their wildlife and fisheries projects. The funds are distributed through a specific Continued on page 4

The Division of Fish and Wildlife Mission Statement

Our mission is to ensure that the Freshwater, Marine and Wildlife resources of the State of Rhode Island will be conserved and managed for equitable and sustainable use.



Janet Coit, Director
Rhode Island Department of
Environmental Management

**F. Dean Hoxsie, Acting Associate
Director**

Wild Rhode Island is a quarterly publication of the Rhode Island Department of Environmental Management Division of Fish and Wildlife. Printing is supported by the Aquatic Resource Education program (Federal Aid Grant F-42-E) and the Hunter Safety Education Program.

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discovered dozens of new populations of state-listed species, and documented occurrences of species that had never been reported in New England. They produced more than 11,000 voucher specimens to document the state's odonate fauna. Since the Odonata Atlas, inventory and monitoring of dragonflies and damselflies has continued to produce new records and fill gaps in distribution.

Rhode Island supports a diverse and abundant odonate fauna of 138 species total



Ideal habitat for R.I. odonates. Photo courtesy of Ginger Brown

recorded. This includes 91 species of dragonflies and 47 species of damselflies. Most species (98) are primarily residents of the state's abundant lentic habitats (ponds, lakes, bogs, vernal pools, swamps, and marshes), but some of these can also be found in lotic habitats (rivers, streams, and seeps). 40 species prefer, or are found exclusively in, lotic

habitats. Four species occur in coastal salt and brackish water habitats.

Many of Rhode Island's dragonflies and damselflies are familiar species that are widespread and common or abundant throughout the state, present in most or all townships and all counties. These include the ebony jewelwing (*Calopteryx maculata*), skimming bluet (*Enallagma geminatum*), common green darner (*Anax junius*), common baskettail (*Epitheca cynosura*), twelve-spotted skimmer (*Libellula pulchella*), widow skimmer (*Libellula luctuosa*), blue dasher (*Pachydiplax longipennis*), and Halloween pennant (*Celithemis eponina*). In contrast, 19 species are restricted in distribution and are quite rare here. Some of these are known from just one township or county, or even a single aquatic site. In this group of species are the southern sprite (*Nehalennia integricollis*), brook snaketail (*Ophiogomphus aspersus*), spiny baskettail (*Epitheca spinigera*), umber shadowdragon (*Neurocordulia obsoleta*), crimson-ringed whiteface (*Leucorrhinia glacialis*), and golden-winged skimmer (*Libellula auripennis*). Our state is also home to many regionally or globally imperiled odonates, such as the ringed boghaunter (*Williamsonia lintneri*) and four Bluet damselflies that are endemic to this

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An amber-winged spreadwing (*Lestes eurinus*) voucher card from the R.I. Odonate Atlas. Photo by Mike Thomas

region and thus of great conservation interest. Several southern species, rare in the northeast, are also found here. These include the southern sprite, blackwater bluet (*Enallagma weewa*), taper-tailed darner (*Gomphaeschna antilope*), Allegheny river cruiser (*Macromia alleghaniensis*), and coppery emerald (*Somatochlora georgiana*).

Rhode Island's large conservation areas (e.g. RIDEM Management Areas, Nature Conservancy Preserves, and Audubon Society Refuges) are extremely important to the long-term viability of the state's odonate fauna. These protected open spaces have a great abundance and diversity of aquatic habitats nestled in mostly-forested landscapes, making them great places to find a large variety of dragonflies and damselflies. The Great Swamp Management Area is a hot-spot for southern odonates, many of which are rare in the region and difficult to find, or not found, elsewhere in New England. Southern species regularly reported in the fields, wetlands, and streams of the Great Swamp Management Area are the blackwater bluet, taper-tailed darner, coppery emerald, Allegheny river cruiser, bar-winged skimmer (*Libellula axilena*), and great blue skimmer (*Libellula vibrans*). Arcadia Management Area is home to a number of odonates that inhabit pristine rivers and streams such as the Wood, Falls, and Flat Rivers. In this group of odonates are the brook snaketail, Maine snaketail (*Ophiogomphus mainensis*), and spine-crowned clubtail (*Gomphus abbreviatus*).



A mated pair of pine barrens bluets (*Enallagma recurvatum*). Photo courtesy of Ginger Brown

These management areas, and other conservation lands throughout the state, are our best opportunity to protect a vibrant odonate fauna, specifically many species of conservation interest. However, dragonflies and damselflies can be found in virtually any aquatic habitat. Some odonates (especially common species) can tolerate disturbance and may occur in habitats with lower water quality in developed areas, so even a suburban neighborhood pond can be a good spot to observe dragonflies and damselflies. This is a



Illustration of a golden-winged skimmer (*Libellula auripennis*) featured in *Dragonflies and Damselflies of Rhode Island*. Illustration by Nina Briggs

fascinating, conspicuous, and readily observable group of insects, many of which are easily identified through binoculars or in hand. As the weather warms, I encourage the reader to find a pond or stream and spend some time watching the local dragonflies and damselflies as they forage for prey, defend territories, and reproduce. Their adult lives are brief, but in those short weeks, there is much to see and learn.



A common green darner (*Anax junius*). Illustration by Nina Briggs

Stay tuned for *Dragonflies and Damselflies of Rhode Island*, a publication from RIDEM's Division of Fish and Wildlife. This book will present the results of odonate inventories conducted in the state since the 1980's. Illustrated with colorful paintings of these striking insects, it will include information on identification, distribution and abundance, natural history, behavior, habitat, seasonality, and conservation. This publication is expected to be available by the end of the year. For more information email DEM.DFW@dem.ri.gov.

DFW Funding continued from page 1

formula, and because of its size and population, Rhode Island is considered a minimum state. Only a small percentage of Rhode Island General Fund dollars (about 6% of our total budget) are used by the Division of Fish and Wildlife, and only to support tasks that are not allowable under the WSFR grant program, like the development of regulations.

This program was initiated 80 years ago to address and reverse the near extinction of many wildlife species caused by habitat degradation, and hunting and trapping pressure by the commercial market. There are two primary companion acts of Congress that began it all. The first one was the Pittman-Robertson Wildlife Restoration Act, which was passed in 1937 and signed into law by Franklin D. Roosevelt. It essentially diverted an existing tax from being deposited into the general treasury, to a separate account where the funding is then apportioned to states solely for use by their Fish and Game agencies.

Wildlife

The funding can only be used by State Fish and Wildlife agencies for specific projects. These include land acquisition, hunter education, wildlife research and restoration, habitat management, technical assistance and outreach.



Funding sources help provide hunters with better hunting opportunities. Photo courtesy of Jessica Peña.

The Wildlife Restoration Act has been amended a few times over the years, mostly to include additional taxes to support the program. Items taxed to support this program include (percent contribution): pistols and revolvers (25%), other firearms (32%), ammunition (34%) and archery equipment (9%) (See Chart 1). The vast majority of the revenue is generated from the sale of firearms and ammunition.

Here in Rhode Island, the Division of Fish and Wildlife is responsible for utilizing this funding to benefit the people who have contributed with their purchases of taxable items. There are over 9,000 licensed hunters in the state, whose license revenue is used to match the federal funds. The Wildlife section uses the funding to monitor the state's populations of deer, turkeys, upland game birds and other animals, for the privilege of those who are licensed to hunt. There is also a public shooting range located at the Great Swamp Management Area. The range is currently under renovation and the upgraded facility will have 16 shooting lanes, 8 of which will be 100

yards long. This facility allows hunters to "sight-in" their firearms in anticipation of the hunting season. It also provides an opportunity for gun owners to fire their weapons at a certified gun range with experienced professional supervision. In addition to these benefits, the funding is used to purchase land to expand existing wildlife management areas and increase opportunities for public access, wildlife watching and hunting, and to provide education for potential and existing hunters.

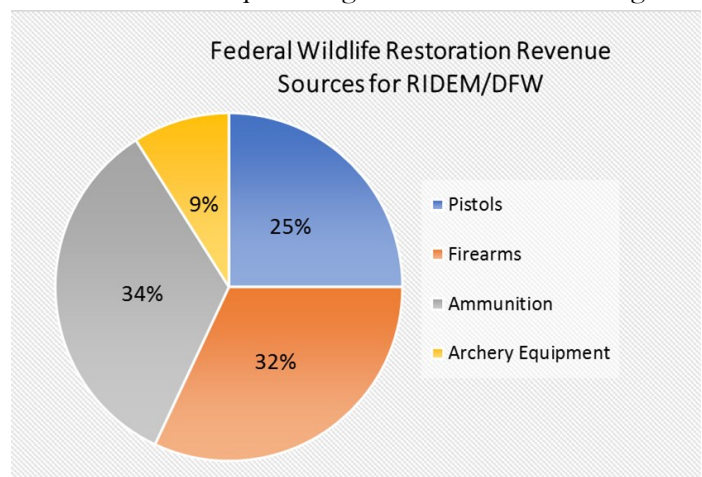


Chart 1: Revenue sources for RIDEM/DFW wildlife restoration

Sport Fish

Since the Pittman-Robertson Act was so successful, a second, companion act for sport fish was passed in 1954 and was sponsored by Senators Dingell and Johnson, known as the Dingell - Johnson Act for Sport Fish Restoration. It included an excise tax on sport fishing equipment, but there was an element that had been overlooked initially. Many anglers fish from motor boats, so in the mid-1980s a Senator from Wyoming by the name of Malcolm Wallop and a

Representative from Louisiana named John Breaux introduced a bill that would amend the Dingell-Johnson Act to include revenue from the gas tax on motor boat fuel. This would allow states to expand opportunities for anglers, create a funding source for aquatic resource conservation, and to support facilities for boaters. This reauthorization allowed dedicated funding to go directly from motorboat gas taxes to assist states in creating and maintaining boat ramps. Other reauthorizations of the act have provided states with the Clean Vessel Act program to provide pump-out facilities, and with the Boating Infrastructure program to provide access for transient boaters with boats 26 feet or greater. The amount that is identified as motorboat fuel tax is directly related to the number of registered vessels in the country. Funding from excise taxes comes from motorboat fuel (~65%), small engine gas (15%), imported goods (6%), electric outboard motors (~0.5%) and domestic fishing equipment (14.5%) (See Chart 2).



Revenue sources for sport fish restoration benefits freshwater and saltwater species. Photo courtesy of Corey Pelletier.

Sport Fish funding is used by the Division of Fish and Wildlife and the Division of Marine Resources to enhance recreational fishing opportunities in both marine and freshwaters of the state. As with Wildlife Restoration, the money can only be used on specific things, which include hatchery operations and fish stocking, research and restoration of recreationally important marine, anadromous and freshwater finfish, habitat research and restoration, public access construction and maintenance, and aquatic resource education. Fifteen percent of all sport fish restoration funding in Rhode Island is required to fund boating access projects. In recent years, the DFW has used that funding, with the assistance of partners, to build and renovate many boat ramps.

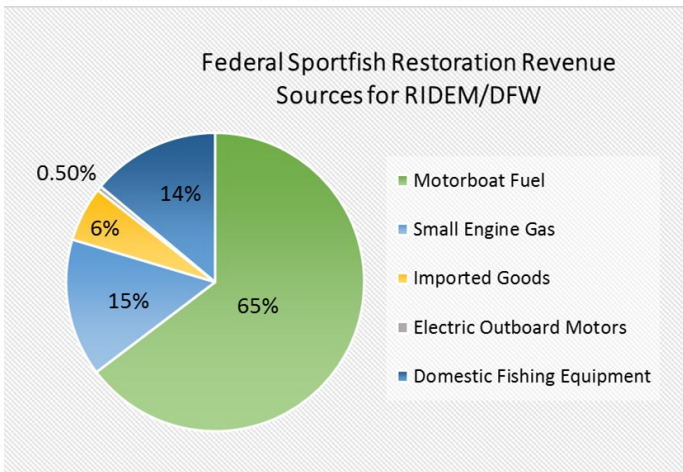


Chart 2: Revenue sources for RIDEM/DFW sport fish restoration

funding supports the operation and crew of the R/V Chafee, which conducts scientific research trawl surveys 12 months of the year and numerous other vessels that are used for research. The aquatic resource education program offers a wide variety of educational opportunities for all ages, from fishing and fly-fishing classes in fresh and saltwater, to partnering with schools and supporting aquatic environmental programming, and many other educational opportunities.

In Summary

Over the past 10 years Rhode Island’s Wildlife funding has increased dramatically, due primarily to an increase in sales of guns and ammunition, and our Sport Fish funding has remained relatively stable. We have countless programs that are too numerous to list comprehensively. Please visit our website, which has additional information about the extensive research, programming and public access for Wildlife, Marine and Freshwater. Go to: www.dem.ri.gov/programs/fish-wildlife/ for more information. Additionally, more information about the Wildlife and Sport Fish Restoration Program can be found in the following publication: Celebrating the Wildlife and Sport Fish Restoration Program – 75 Years of Conservation and Partnership Success, which can be found here: wsfrprograms.fws.gov/Subpages/AboutUs/AboutUs1.htm

Come Clam With Me Workshop Great Success, Join Us Again in 2018

Written by Kim Sullivan

Three years ago RIDEM Division of Fish and Wildlife's Aquatic Resource Education program launched its first ever 'Come Clam with Me' workshop at North Kingstown Town Beach. Twenty-five participants gathered wearing water shoes, shorts, and bathing suits, expecting to simply learn how and where to find the elusive quahog. They were pleasantly surprised to come out of the workshop learning so much more from commercial quahogger, Jody King.

The 'Come Clam with Me' workshop originated six years ago as an outreach program to inform the public about the Rhode Island Shellfish Management Plan. The URI Coastal Resource Center, RI Sea Grant, and commercial fisherman Jody King, designed and implemented a hands-on program where participants learned about Rhode Island's shellfish and their management, learned how to dig for quahogs, and even learned how to prepare them. The 'field to table' workshop technique proved to be a successful educational model, and was transferred to the RIDEM Division of Fish and Wildlife's ARE program in 2015. Over the past three years, the program has not only taught participants safe and responsible shellfishing techniques, but has also emphasized the importance of shellfish to the health of marine ecosystems for the sustainability of sportfish.

The 2017 'Come Clam with Me' season was an overwhelming success. Not only did the program increase in number of participants, but it also became more accessible by inviting participants to Colt State Park, Rocky Point State Park, and North Kingstown Town Beach. During the summer of 2017, the ARE program offered six 'Come Clam with Me' workshops and aided in arranging two clamming programs for the Great Outdoors Pursuit. Each of the six workshops capped registration off at 55 participants with an average of 45 participants attending. A total of 270 people attended the six classes. In addition, at least 200 people attended the clamming programs in association with the Great Outdoors Pursuit. In all, over 470 people attended the classes and brought away an abundance of knowledge on clamming, tides, saltwater regulations, and other information pertaining to the ARE program and other Division programs.

With such a successful year of quahogging, the ARE program is looking forward to the 2018 'Come Clam with Me' season. If you would like to be placed on our email list, please contact Kimberly Sullivan at 401-539-0019 or Kimberly.sullivan@dem.ri.gov.

Here are the dates of upcoming Come Clam with Me classes (REGISTRATION REQUIRED):

Saturday, June 16, 2018 – 3pm-6pm Bristol

Thursday, July 12, 2018 – 12p-3p, Warwick

Friday, August 10, 2018 – 11a-2p, Bristol

Tuesday, August 14, 2018 – 3p-6p, North Kingstown

Monday, August 27, 2018 – 1p-4p, Warwick

Saturday, September 8, 2018 – 11a-2p, Warwick



Other Summer Programming (to register contact me at kimberly.sullivan@dem.ri.gov or 401-539-0019):

Saturday, **June 9** – 9am-3pm - Intermediate Saltwater Fly Fishing on the Narrow River. Fee: \$15.00. Registration Required. Saturday, **June 23** – 9am-3pm – Women's Introduction to Fly Fishing. Carolina Trout Hatchery. Registration Required. Equipment and lunch included courtesy of TU/UFT. RISAA/DEM Youth Fish Camp – **June 26-28**, 2018. Introductory saltwater fishing camp designed to introduce children to the sport of fishing. This three day camp (8:30am-3pm) acquaints children to fishing from shore, on a charter vessel and on a recreational vessel. Free of charge. Must register with Rhode Island Saltwater Anglers Association (RISAA). For more information call 401-826-2121.

Kid's Corner! Presented by the Aquatic Resource Education Program

Nothing beats fishing on a beautiful summer morning! Below are the RIDEM's kids-only trout ponds (14 years or younger):

- Frosty Hollow Pond, Exeter
- Geneva Brook & Pond, North Providence
- Lapham Pond, Burrillville
- Lloyd Kenney Pond, Hopkinton
- Seidel's Pond, Cranston
- Silvy's Pond, Cumberland

*A fishing license is not required of any person under 15 years of age



Find all the hidden words to help gather your fishing gear for this summer!

- | | | |
|-------------|-------------|-----------|
| FishingLine | CastingRod | Waders |
| Bait | Reel | Baitcast |
| LifeJacket | SpinningRod | TackleBox |
| Hook | Lure | Kayak |



News from the Division of Fish and Wildlife

Come clam with me is back! Check out the article on page 6 for more information.

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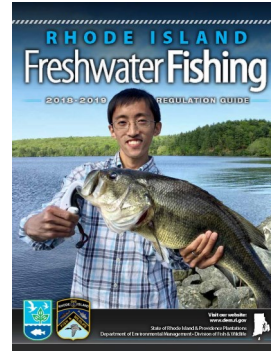
For more information, contact Jessica.Pena@dem.ri.gov, or visit the Rhode Island Division of Fish and Wildlife Outdoor Education Facebook page for updates on upcoming programs.



Follow us on Twitter
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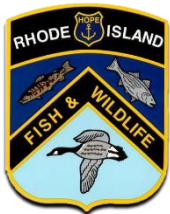


Visit our Facebook page
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The Freshwater and Saltwater Fishing magazines are available now! You can pick them up at your local bait and tackle shop, at the RIDEM headquarters in Providence, or at the Great Swamp Field Headquarters in West Kingston. They are also available online at <http://www.eregulations.com/rhodeisland/fishing/freshwater/>

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