

The Vermont Reptile and Amphibian Atlas

Update

2016

August 21, 2017

For the Forest Ecosystem Monitoring Cooperative

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Vermont Reptile and Amphibian Atlas Project (2016)

Background

Localized intensive monitoring

Amphibian monitoring at Mt. Mansfield and Lye Brook Wilderness provides locally intensive data on a subset of amphibian species. While these data are particularly valuable and allow us to see year-to-year population changes of the monitored species at these sites and provide local information on abnormalities, and natural history, they do not allow us to see more widespread changes in the distribution and/or natural history (calling times, migration dates, etc.) of the full range of reptiles and amphibians statewide. Nor do they allow us to see changes in forest health, or the impacts of forest fragmentation and consumption on a larger scale. In addition, there is a real need to get reptile and amphibian natural history and management information out to a wide variety of landowners and land managers as well as other natural resource professionals.

Statewide extensive monitoring

The Vermont Reptile and Amphibian Atlas is an effort begun in 1994 by the Reptile and Amphibian Scientific Advisory Group for the Vermont Endangered Species Committee. The atlas project initially began as an effort to gather data for use by this committee. Data were needed in order to make informed recommendations regarding the appropriate status and conservation of these species. Since then, the goals have widened to incorporate education, citizen involvement, and dissemination of information. The ultimate goal of the Atlas is to gather and disseminate data on the reptiles and amphibians of Vermont in a way that involves and informs Vermont individuals and organizations so that they will become more informed and effective stewards of wildlife habitat. The Atlas Project has grown since its inception in 1994 to involve over 3,500 volunteers and thirty-five private organizations and government agencies. With the help of organizations, agencies, volunteers, and staff members, we are continuing to collect information and broaden our knowledge base regarding the natural history, distribution, and effective conservation of Vermont's reptiles and amphibians. By providing the best and most up-to-date information on the conservation of these species in Vermont, we have become a trusted party in many conservation activities throughout the state.

Goals for the 2016 Atlas work

The goals of the VMC funding for the 16 field season were: (1) to gather data for the Vermont Reptile and Amphibian Atlas; (2) to update and improve the Atlas website; (3) to review and enter current and previous years' herpetological reports; (4) to forward electronic files of the most recent data annually to the VT F & W Wildlife Diversity Program, (5) to respond to daily requests for information on the identification, conservation, natural history, and management of Vermont's reptiles and amphibians; and (6) to provide data and information to other researchers and the public.

The Atlas during 2015

There was no funding available for the statewide Atlas from the Vermont Monitoring Cooperative (VMC now Forest Ecosystem Monitoring Cooperative) during the 2015 field season. Still, data from 2015 were gathered through funding from other sources. A summary was provided to VMC and an update was developed by VMC staff and reviewed and edited by Atlas staff.

Results from 2016

The Atlas Project 2016

Although funding for 2016 was on a different schedule than usual (May 2016 through August 2017), this report continues our previous tradition of covering a calendar year (January 1 through December 31, 2016). Data gathered for the Atlas from January 1, 2017 through August 31, 2017 will be reported on in the 2017 Atlas report.

During 2016 we entered 25 new reports of S1 species, 79 reports of S2 species, 196 reports of S3 species, and a combined total of ~3,656 new verified records. These reports were from all counties and 205 towns, cities, and gores. Reports came from a total of 502 different people. Of these 353 were new reporters. These included 98 new town/species documentations for S4 and S5 species and at least five non-native species.

A sample of interesting reports from 2016

A new town record with a photo of a **Four-toed Salamander** from Shaftsbury is also the first well-documented report of that species in that entire county. It is a species that is often overlooked or misidentified. We are still trying to get more exact location information on that report.

A new town record of a **Mink Frog** in Burke was exciting and two reports of dead single **Mudpuppies** along the Connecticut River in Thetford and Hartland were unusual. We had a report of a new egg-laying site for **Spiny Softshells** on private property in St. Albans and multiple new town reports for Wood Turtles, primarily from a Project Orianna-funded study. These are in addition to new site locations for a variety of other S2 and S3 species.

Non-native species or transported individuals

A **Russian Tortoise** (*Agrionemys horsfieldii*) was found in a recreational area in Burlington. This is a common imported pet species and was clearly released at some point, probably during the spring of 2016. A **Tropical House Gecko** (*Hemidactylia mabouia*) showed up in Middletown Springs. This species is originally from sub-Saharan Africa but it has colonized Florida. The owners of the property had been to Florida a month previously. A **Cope's Gray Treefrog** (*Hyla chrysoscelis*) made the trip from Florida to Essex sealed in a package of bananas. Two **Central Bearded Dragons** (*Pogona vitticeps*) were seen on a tree in Burlington. This is an Australian species that is common in the pet trade. None of these species are likely to survive a winter outdoors in Vermont.

On the other hand, single **Red-eared (Pond) Sliders** (*Trachemys scripta*) were found in three towns (Norwich, Pittsford, & Winooski). This species is also a common turtle in the pet trade, but it can survive our winters and it has established populations in southern New England.

A **Common Five-lined Skink** (*Pleistiodon fasciatus*) reported at the Lake Rescue access area in **Ludlow** is a native species, but likely hitchhiked to that location on a boat or vehicle from either West Haven, Vermont or perhaps out of state. One report of a **Box Turtle** (*Terrapene carolina*) from Woodstock is also likely a released pet. We have what appears to be a native population in the Putney area, but not in Woodstock.

Missing Species

Three native species were not reported again this year:

Fowler's Toad (State-Endangered) was last reported from Vermont in 2007; however, as mentioned above, reports

of breeding on Stebbin's Island in NH near Vernon have been confirmed.

Boreal Chorus Frog (State-Endangered) was last heard in 1999. Sadly it has also disappeared from the NY Champlain Valley and much of its habitat in Quebec and eastern Ontario. We do not know why. We work to remind our fellow Vermonter's that this species has disappeared.

North American Racer (State-Threatened) was reported in 2008, then again in 2014, but not in 2016.

Outreach and related activities

During 2016, I gave nine presentations/workshops/field trips across the state and a keynote address on the Vermont Herp Atlas for the Northeast Partners in Amphibian and Reptile Conservation annual meeting. Continued press coverage helps to keep the VT Herp Atlas in the public's awareness and we have had regular coverage this past year in newspapers, online, and on radio. A **new Facebook page** for the Atlas was created and has generated a following and seasonal press releases by Vermont Fish and Wildlife have generated additional reports and raised awareness of the Herp Atlas.

Of course we continue to involve and guide working professionals, students, and lay people in direct experiences as colleagues, volunteers, interns, and by serving as informal or formal advisors. We continue to draw attention to spring summer and fall amphibian migrations and the threats of habitat fragmentation by roads, through promoting and participating in spring amphibian crossing nights. Increased awareness is needed to fund the projects and make the systemic changes needed to move us toward sustainable forest management practices.

As a result of the Atlas, a significant amphibian crossing location was discovered on the Monkton/Vergennes Road in October of 1993. In 2015 the town of Monkton built two **amphibian underpasses** at the site. This year, during the first spring after construction, over 2200 amphibian crossings were recorded on remote cameras. As many as 15 amphibians were in a single underpass at a given time on a migration night. A video of the migration viewable on Facebook has generated over 29,000 views. Amphibians generally took about 5 minutes to traverse the underpasses. In addition; porcupine, rabbit, squirrel, opossum, raccoon, and bobcats have been using the underpasses. We are thrilled with its success and other states have requested our design plans.

The Natural Resource Conservation Service (NRCS) can now provide funding and advice on the conservation of Wood Turtles on working lands. Both the NRCS office and the Green Mountain National Forest requested distribution information on this species for future conservation efforts. Most of this information would not be available without our efforts. In fact the state nongame biologist referred the NRCS to us for this information.

Excel files of all verified Hypothetical, S1 and S2 species (and Wood Turtles) found in Vermont and entered into the database between January 1 and December 31 of 2016, have been sent to Jodi Shippee of Vermont Fish and Wildlife's Diversity Program.

Our targeted survey efforts

Targeted survey efforts during this field season included checking on ratsnake dens in Orwell, turtle trapping in new sections of Lake Champlain and other lakes, surveying for road-killed and crossing snakes in towns short on snake data, filling in gaps in our knowledge of stream salamander distribution, and a survey visit to Glastenbury to increase our data on its herpetofauna.

Acknowledgments

Website upgrades were made by Kir Talmage of Metasilk Webworks. Erin Talmage helped organize the data and write reports. Megan Kane, Adrienne Fortune, and Cynthia Sprague assisted with fieldwork. Cindy Brown assisted with data entry and other office work. David Brynn and Vermont Family Forests helped oversee grants

and administration. Many volunteers and collaborating organizations also contributed and we are very grateful for their help.

In addition to funding in 2016 by the Forest Ecosystem Monitoring Cooperative, this work was also funded by the Lintilhac Foundation, and a Vermont Fish and Wildlife SWG grant.