

# **The Vermont Reptile and Amphibian Atlas**

**Update**

**2013-2014**

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**For the Vermont Monitoring Cooperative**

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# **Vermont Reptile and Amphibian Atlas Project (2013-2014)**

## **Background**

### Localized intensive monitoring

Amphibian monitoring at Mt. Mansfield and Lye Brook Wilderness provide 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 2013 and 2014 Atlas work

The goals of the VMC funding for the 2011 & 12 field seasons 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 update the hardware and software used for the Atlas.

## Data-reporting schedule

According to contract, these projects continue to be on an every-other-year reporting schedule.

### **Results from 2013**

All the goals listed above have been completed. During 2013, we entered 6,757 new and verified records of Vermont's reptiles and amphibians into our database. These records represent every county in Vermont and 202 Vermont towns, gores, and cities. Over 530 volunteers contributed reports in 2013. These reports included 1,344 reports of S1 species, 153 S2 species, and 2,765 S3 species.

A new addition to our website is a searchable database of needed documentation of common herptiles. The purpose of this online database is to clarify our documentation needs to residents throughout the state in hopes of generating needed documentation. It has been heavily used and appears to be working well.

Our outreach efforts in 2013 were buoyed by regular press coverage on local television and public radio.

Copies of our 2013 data were entered into our database and a copy provided to the Vermont Fish and Wildlife Diversity Program.

A component of the 2013 budget was to upgrade our computers and software. Our computer equipment and software were updated during the summer of 2013 and are working smoothly.

### **Results from 2014**

During 2014, we entered ~2,500 new and verified records of Vermont's reptiles and amphibians into our database. These records represent every county in Vermont and 184 Vermont towns, gores, and cities. Over 480 volunteers contributed reports during 2014. These reports included 40 reports of S1 (very rare) species, 68 S2 (rare) species, and 170 S3 (unusual) species.

There were six newly entered reports of **North American Racer** (*Coluber constrictor*). Four are historic reports but two of these were current reports from Guilford. This species had not been documented in Vermont since 2008. In addition to the recent creation and maintenance of new foraging habitat for this species, the Vermont Department of Fish and Wildlife with the help of the Vermont Agency of Transportation and the cooperation of the Vermont Department of Forests, Parks, and Recreation had just finished creating new denning habitat (with our input) as well, so the documentation of two racers from the same town and one from the same site as the habitat improvements is encouraging.

A new nesting site in Colchester for **Spiny Softshells** (*Apalone spinifera*) is also an important find. The three new reports of **Five-lined Skink** (*Plestiodon fasciatus*) are all from previously known areas for this species as are the single report of **Spotted Turtle** (*Clemmys guttata*), and the 19 reports of **Timber Rattlesnakes** (*Crotalus horridus*). Some of the historic reports for **North American Racers** are from previously unreported sites but from within previously reported towns and a couple reports of **Timber Rattlesnake**, though from known towns, are at the extremes of their travel distances from known dens.

Two S1 species were not reported. One is the **Fowler's Toad** (*Anaxyrus americanus*). Although we did not add a report of this species during 2014, we are holding one while we wait for official release of the data. It is an exciting report of calling **Fowler's Toads** from Stebbin's Island in the Connecticut River near Vernon. Sadly, **Boreal Chorus Frog** (*Pseudacris maculata*) has not been reported for the last 16 years (since 1999).

We gathered reports of two hypothetical species during 2014. We received a report and photo of a juvenile **Eastern Hog-nosed Snake** (*Heterodon platirhinos*) in Colchester. We have only two previous photographic reports from the state. Both of the previous photos were taken in Vernon. The new report is in appropriate habitat near Colchester Bog, but the fact that it is nowhere near any known previous sites makes me suspect it was a released pet or perhaps the offspring of a released pet. However, we don't know that for sure. The second hypothetical species reported is the **Eastern Box Turtle** (*Terrapene carolina*). The report from Thetford is the first from that town. That makes it more likely to be a released pet than a native; however a report from Westminster is part of a cluster of reports from towns in that area that strongly suggest a native population.

Highlights of the 2014 S2 sightings include reports of **Four-toed Salamanders** (*Hemidactylum scutatum*) from two new sites in Castleton. Also the known range of the Connecticut River population of **Mudpuppies** (*Necturus maculosus*) has now been extended north to Waterford with a report from Pulson's Cove in NH. The nearest report was previously three towns to the south in Orange County. It is heartening that the **Eastern Ratsnakes** (*Pantherophis alleghaniensis*) from the Bristol/Monkton/New Haven population are still being seen and confirmation that some of them are clearly moving into the lowland swamps west of North Street is important information for future conservation actions. **Eastern Ribbonsnakes** (*Thamnophis sauritus*) were found at three new sites in the towns of Poultney and Wells. They have been found in both of these towns previously but the new site information is very useful. Locating eight **Eastern Ribbonsnakes** on the same day and at the same site in Fair Haven is reassuring. A new egg-laying location for the **Eastern Musk Turtle** (*Sternotherus odoratus*) in Colchester was also a significant find.

We filled in lots of distribution gaps during the summer of 2014. With a small team of volunteers, I visited the towns (plus cities, gores, and grants) in need of the most photo records (>14). This included Avery's Gore, Craftsbury, Derby, Granby, Irasburg, Mt. Holly, Sharon, St. Albans City, Stockbridge, and Warner's Grant. Now we no longer have any towns in need of more than 14 photo records of common species. In addition, I involved local county foresters and biologists in these efforts. This should help to keep awareness of the Atlas alive and generate some new reports from them.

One exotic was reported in 2014. It was a **Green Anole** (*Anolis carolinensis*) photographed in Waterbury. This species has been reported before in Vermont and almost assuredly came in on plants from the south. It is not likely that it will survive its first winter.

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 2014, have been sent to Vermont Fish and Wildlife where the data are used in their wildlife/habitat protection efforts.

## Listing

During 2014 our data were used to prepare the documentation for listing the Fowler's Toad. This

species was officially listed as Endangered in Vermont in April of 2015.

### Wildlife Action Plan/Species of Greatest Concentration Need

During 2014 our data were also used to revise the reptile and amphibian species accounts for Vermont's Wildlife Action Plan for our species of greatest concentration need.

### Outreach

Outreach and public education efforts continue. I again appeared with Jane Lindholm on VPR's Vermont Edition in 2014, was filmed for an Across the Fence program on WCAX, and we continue to get coverage in and provide material for local newspapers and TV. I also continue to offer herpetology courses at UVM. Most of the material for the courses has been generated through the Atlas.

In addition to press coverage and courses; slide shows, educational displays, workshops, and field trips were used to continue to educate residents and landowners about herptiles. All contributors of reports were contacted and thanked for their contributions if contact information was provided. In addition, many questions were answered and conservation recommendations given. Data requests come in regularly from a wide variety of people and organizations, and for a wide variety of reasons.

### **Acknowledgments**

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