The Vermont Reptile and Amphibian Atlas

Update

2011-2012

For the Vermont Monitoring Cooperative

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Vermont Reptile and Amphibian Atlas Project (2011-2012)

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. This portion of the project has been funded regularly in recent years by the Vermont Monitoring Cooperative, with additional assistance from the Lintilhac Foundation and State Wildlife Grants from Vermont Fish and Wildlife.

Goals for the 2011 and 2012 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 compile and publish fifty hard copies of an updated Vermont Reptile and Amphibian Atlas.

Data-reporting schedule

This portion of the work also continues an every-other-year reporting schedule. Although not required, a brief summary of the 2011-year's Atlas efforts was included with our last contract proposal. I have included some of that information here again.

2011-2012 Overview

All the goals listed above have been completed. As of December 31, 2012 the VT Herp Atlas database contained almost 85,000 records. During 2011 & 2012 we entered nearly 7,000 new records of Vermont's reptiles and amphibians. These records originate from every county in Vermont and 221 Vermont towns, gores, and cities. During 2012 alone, over 550 volunteers contributed reports. The 2012 reports included 586 reports of our S1 and S2 herptiles. Verified observations seen in 2012 include all S1 and S2 species with the exception of **Fowler's Toad** (last reported in 2007)**, Boreal Chorus Frog** (last reported in 1999)**,** and **North American Racer** (last reported in 2008). We did not receive any additional verified or unverified reports of **Eastern Hog-nosed Snake.** This species had been first documented in Vermont (Vernon) in 2009, but no additional documented reports have come in since then**.** We did receive two reports of **Box Turtles** in Vermont in this two-year period. One, from Mt. Mansfield State Park in Stowe is almost certainly a released pet. The second report was from Rockingham. Rockingham is a more likely location but the report was not well documented and the report was from a highly developed area. We have a cluster of reports of Box Turtles from the southern Connecticut River Valley in the Putney area that may be resident turtles. Both of these species are still considered hypothetical in Vermont.

Some Highlights from 2011

Among the more significant accomplishments for 2011 were new towns added to the ranges of **Four-toed Salamanders** (Jericho), **Eastern Ribbonsnakes** (Fair Haven), and **Eastern Musk Turtles** (Georgia), six previously unknown denning areas for **Eastern Ratsnake**, and a **2001 report of a North American Racer** from a previously unknown location (Ludlow). Although, we were excited to find the new populations of **Eastern Ribbonsnake** in Fair Haven, we had no success at locating this species in historic habitat in Shelburne or anywhere else north of Rutland County.

New Point Maps

In 2011 we generated up-to-date maps showing exact locations (as opposed to towns) for some of our rarest reptiles (**Five-lined Skink, Eastern Ratsnake, North American Racer, and Eastern Ribbonsnake**). These maps help us visualize areas that need additional survey work, areas that are high-priority conservation targets, and help us to determine how many distinct populations we have of each species.

New Town Maps made available on our website (2011)

During 2011 we made an **entire new set of statewide distribution maps** available on our website (VtHerpAtlas.org). These maps include all data through 2010. We try to update these maps every five years. It is exciting to see clear patterns emerging of the current in-state distribution of Vermont's herptiles. In addition, regular updates were made to the website as a result of new discoveries, updated documents, and new press coverage, resources, and educational opportunities.

Listing

During 2011 our data were used by the Reptile and Amphibian Scientific Advisory Group to prepare species documentation and status sheets for a recommended listing of the **Mudpuppy** as a threatened species in Vermont. Dr. C. William Kilpatrick prepared the listing documentation for the Mudpuppy. That listing was recommended by the Endangered Species Committee but later rejected by the Secretary of the Agency of Natural Resources. This listing was controversial in that Mudpuppies primary known threat is lampricides (528 found dead in the 5% of the treated area of the Lamoille River that was checked for non-target mortality). The use of lampricides is a policy supported by Vermont Fish and Wildlife.

Again using our data, Vermont Fish and Wildlife biologist Mark Ferguson prepared listing documentation and status sheets for listing the **Boreal Chorus Frog** as endangered. This was the result of a recent taxonomic change; it had been listed previously under another name. The recommendation was supported by the Endangered Species Committee, accepted by the Secretary of the Agency of Natural Resources, and the listing has taken place.

Highlights from 2012

Among the more significant accomplishments of 2012 are the first report of **Four-toed Salamanders** from Sheldon and the first confirmation of them since 1968 at **Shelburne Pond**. A report and a later confirmation of **Common Five-lined Skink** from Red Rock Bay in Benson add to the already substantial biological significance of that site. A very detailed report of a **Timber Rattlesnake** from Newfane is a first and is worthy of directing some fieldwork to that area. We have had additional reports of rattlesnakes from bordering towns in previous years. However, it should be noted that none of these reports were accompanied by a photograph or specimen. An **Eastern Ratsnake** showed up in Rutland City. Ordinarily this would be considered a released pet, but since Rutland is on the border of this species known range, its status is uncertain. We located **Eastern Ribbonsnakes** from three new sites in towns where they had been reported previously (one in West Haven and two in Benson). However, the **most significant ribbonsnake report** was a photo taken in 2011 in **Athens**, Vermont. This is only the second report from the Connecticut River Valley in the last couple decades.

Hard copy of our New Atlas

In 2012 we made a few corrections to our latest set of town maps and packaged them together with updated relative abundance tables, species lists, information on snake lengths, and a great deal of other information on Vermont reptiles and amphibians and in the spring of 2013 published hard copies of **The Vermont Reptile and Amphibian Atlas, 2013 Update**. They are now available through our website. I have attached a copy to this report.

Listing

During 2012 the Reptile and Amphibian Scientific Advisory Group used our data to prepare and revise the species documentation and status sheets for **the potential listing of the Fowler's Toad** (not reported since 2007). I prepared that documentation. The Vermont Endangered Species committee recommended that the species be listed as threatened. We have not yet heard back from the Secretary on that recommended listing.

Outreach

Outreach and public education efforts continue. I enjoyed doing a program with Jane Lindholm on VPR's Vermont Edition in 2011 and we continue to get coverage in and provide material for local newspapers and TV. I also continue to offer herpetology courses at both UVM and Hogback Community College. Most of the material for the courses has been generated though 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. These requests and reports came in at the rate of approximately eight per day during the field season.

Data requests come in regularly from a wide variety of people and organizations, and for a wide variety of reasons. In addition to requests for data from Conservation Commissions, volunteers, and private landowners and managers, I responded to requests for data from state and federal employees including both NH and VT regarding FERC relicensing of the power dams along the Connecticut River. As a result, surveys are currently being designed for Fowler's Toad in an effort to relocate this species. It was last seen and heard from along the Connecticut River downstream of the Vernon Dam.

Data Provided to the Vermont Wildlife Diversity Program

Copies of all verified in-state reptile and amphibian records entered in 2011 and 2012 were exported in Excel, put on a CD and sent to Mark Ferguson at Vermont Fish and Wildlife. In addition, I forwarded our annual reports of rarities, and an updated copy of the entire Herp Atlas database in an electronic format as per their request.

Acknowledgments

Website upgrades were made by Kir Talmage of Metasilk Webworks. Erin Talmage helped organize the data and write the reports. Kiley Briggs helped with the database and generated maps. Kelly Hunt and Michael Iacchetta assisted with fieldwork. Cindy Brown assisted with data entry and other office work. Many volunteers and collaborating organizations also contributed and we are very grateful for their help.

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