

To: Jon Kart

From: Jim Andrews
642 Smead Road
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Re: **Annual report for my Scientific Collection Permit SR-2015-02(a1)**

Date: January 26, 2024

This is my annual report as required for Scientific Collection Permit SR-2020-1 expiring on 12/31/2024.

Contributed records

Between January 1, 2023 and December 31, 2023, 828 contributors (608 new) provided 3382 new records that were entered into the Vermont Reptile and Amphibian Atlas Database. This brings the total number of reports entered to 123,019.

The 2023 reports included 53 verified reports of S1 species, 262 verified reports of S2 species, 397 verified reports of S3 species, 190 verified reports of S4 species and 2,426 verified reports of S5 species. Reports also include unverified and negative records, amphibian and reptile road crossing locations, vernal pools, turtle egg-laying sites, snake dens and other significant herptile habitats. Sightings came from 240 towns, cities, grants, and gores and all Vermont counties. They included all of Vermont's native species except Boreal Chorus Frog (probably extirpated from Vermont, last reported in 1999). We received and entered two old (1852 & 1980) reports of North American Racers, but we have not received any well-documented reports of this species since 2014. All S1-S3 reports were exported to Jodi Shippee of Vermont Fish and Wildlife last week.

Exotic species

Every year we receive a few reports of non-native reptiles and amphibians that were either released or escaped pets or were accidentally transported via boats, trucks, RVs, and cars. We received a report of a Green Anole (*Anolis carolinensis*) from East Montpelier that appears to have come to Vermont on an imported house plant. We received a report of an African Spurred Tortoise (*Centrochelys sulcata*) in Albany that was an escaped pet. We received a report of a River Cooter (*Pseudemys concinna*) in Burlington that is now in a classroom. This also was likely an escaped or released pet. We entered a report of a Cuban Treefrog (*Osteopilus septentrionalis*, from early 2022) found in a house in Burlington. It also likely came in with house plants. An Eastern Fence Lizard (*Sceloporus undulatus*) showed up on a porch in Rutland (unknown origin). Lastly, two Pond Sliders (*Trachemys scripta*) were reported. One was in Arlington and the other in Windsor. This is a common pet turtle species that has become invasive in southern New England. As our climate continues to warm, they could become invasive in Vermont.

Hypothetical species

We received no additional reports or photos of Eastern Box Turtles (*Terrapene carolina*). Our most recent reports were in 2021. They may be (or may have been) part of a population of Vermont natives, but we won't know for sure until we capture one and do some genetic comparisons.

New locations

We personally found a dead Eastern Ratsnake (*Pantherophis alleghaniensis*) on Route 7 in Pittsford adjacent to the Pomainville Wildlife Management Area. This is the first documented report from Pittsford. We reached out to town residents using Front Porch Forum but did not get any other reliable reports from Pittsford. We also received our first report of a Four-toed Salamander (*Hemidactylium scutatum*) from Pittsford, but this is less of a surprise, since the distribution of this secretive and small salamander is not well known. We also filled in over 50 data gaps (town/species combinations) for many more common species.

Targeted survey efforts

During this period, we personally visited 59 towns (or cities, gores, or grants) to gather new records. Many survey trips focused on those “towns” (including cities, gores, and grants) that have had the least survey effort. This is usually the result of low numbers of residents. Other trips focused on species that are not often reported by citizen scientists. These include the Northern Dusky Salamander (*Desmognathus fuscus*) and Spring Salamander (*Gyrinophilus porphyriticus*). We filled in many data gaps (species/town combinations) with these trips.

No reptiles or amphibians were killed or harmed during any of these activities.

Review of data

As usual, all these reports have been personally reviewed by me or one of my assistants and when at all possible, the contributors have been personally contacted and thanked. Scores of ID and conservation questions have been personally responded to as well.

Field trips, presentations, classes, and media outreach

During this time, I met with writers and press for a number of interviews and news pieces on Vermont herptiles. These included shows on Vermont snakes and climate changes impacts on Vermont herptiles for WCAX TV, an interview on Vermont herptiles for Vermont Public’s Vermont Edition, and a film on snake monitoring for a private film maker.

I also did two vernal pool trainings for staff of the Natural Resource Conservation Service (NRCS), helped with herp field trips for the Northeast Natural History Conference and the International Conference on Ecology and Transportation, and did a training series called Habitats and Highways for the Vermont Agency of Transportation.

I did a remote presentation for Calais Elementary School and led field trips and/or gave in person presentations for the Lewis Creek Association, Burr and Burton Academy, the Salisbury Conservation Commission, Dead Creek Wildlife Festival, and the Herricks Cove Wildlife Festival.

All these educational events were provided for free except for the trainings for NRCS and VTrans which were paid.

Data sharing

This past year, we provided Vermont distribution records of herptile species to the US Geological Survey, the Vermont Endangered Species Committee, The Nature Conservancy of Vermont, the Vermont Land Trust, Vermont Fish and Wildlife, the Green Mountain National Forest, the University of Vermont, and a steering committee for a future Monkton Town Forest. Wood Turtle records were again provided to Kiley Briggs of the Orianna Society and distribution data on a variety of herptiles was provided for the Natural Resource Conservation Service for land under their conservation easements.

I continue to be more aggressive about providing data to contributors from target towns where we need more data. What I provide to these people is a list of common reptiles and amphibians that are expected to be in their towns but have not yet been photo documented. For towns that have a good chance of providing habitat for rarer species, I include our list of herptiles that should always be documented. Like last year, we provided this sort of data to residents of over twenty towns. Many of these exchanges resulted in new town records.

The Forest Ecosystem Monitoring Cooperative and the Colby Hill Ecological Project continue to get exported monitoring data and reports, but they paid for the monitoring and reports.

Significant sightings were shared with state herpetologist Luke Groff as they were received and reports of all S1-S3 herptiles are forwarded to Vermont Fish and Wildlife annually.

Monitoring

We continue to monitor Red-bellied Snakes (*Storeria occipitomaculata*), Common Gartersnakes (*Thamnophis sirtalis*), Eastern Milksnakes (*Lampropeltis triangulum*), and Eastern Red-backed Salamanders (*Plethodon cinereus*) using artificial cover and Wood Frogs (*Lithobates sylvaticus*) and Spotted Salamanders (*Ambystoma maculatum*) using egg-mass counts in Lincoln through the Colby Hill Ecological Project. Neither of these two methods trap or hold organisms, nor do they result in any mortalities. DeKay's Brownsnake (*Storeria dekayi*) once again showed up at our Lincoln monitoring site after showing up for the first time in 2019. It appears that we found two different brownsnakes this year.