

To: Jon Kart

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

Date: January 8, 2021

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

### **Contributed records**

Between January 1, 2020 and December 3, 2020 over 900 contributors provided 3,603 new records that were entered into the Vermont Reptile and Amphibian Atlas Database. This brings the total number of reports entered to 113,179.

The 2020 reports included 82 verified reports of S1 species, 191 verified reports of S2 species, 342 verified reports of S3 species, 272 verified reports of S4 species, and 2,185 verified reports of S5 species. Reports also include unverified and negative records, amphibian and reptile road crossing locations, vernal pools, turtle egg-laying sites, and snake dens. Sightings came from 224 towns, cities, grants, and gores and all Vermont counties. They included verified reports of all of Vermont's native species with the **exception of Fowler's Toad and Boreal Chorus Frog (probably extirpated)**. **North American Racer** reports that were entered this year were **all historic**.

Records are coming in faster than usual and from more people. I believe the increase is due in part to the Covid pandemic. More people have been outside working on gardens, taking hikes, and enjoying other sorts of outdoor recreation and finding reptiles and amphibians.

### **Exotic species**

Every year we receive a few reports of non-native reptiles and amphibians that were either released pets or were accidentally transported via boats, trucks, RVs, and cars. We received a report of a **Black and White Tegu** (*Salvator merianae*) from Shaftsbury. This is an Argentinian lizard that is sold through the pet trade. We received three different reports of **Carolina Anole** (*Anolis carolinensis*) during this time period. It is not unusual for southern lizards to hitch hike on plants brought up from the south; however, this anole and most other southern species will not survive a Vermont winter outdoors. Two **Pond Sliders** (*Trachemys scripta*) were reported. 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 a report, photo, and shell of an **Eastern Box Turtle** (*Terrapene carolina*) this summer. This time from Brattleboro. This was a dead specimen and the shell is now in our possession. This adds to a series of reports from that area of Vermont. As a result of this cluster of reports we suspect that we may well have a small and dispersed population of native box turtles in Vermont. The shell is labelled and in my office.

### **New locations out of the expected range**

We received a report and photo of a **Common Watersnake** (*Nerodia sipedon*) from Weathersfield. This is considerably further north than any other current record in the Connecticut River Valley. The nearest known population of this species is ~ 40 miles south in Vernon.

## Targeted survey efforts

In 2020, I personally visited over 25 towns 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. Our recent trip to Somerset (two residents) added **Spring Salamander** (*Gyrinophilus porphyriticus*) and **Pickerel Frog** (*Lithobates palustris*) to the list of known herptile species from that town. And our hike into Warners Grant (0 residents) added **American Bullfrog** (*Lithobates catesbeianus*), **Eastern Newt** (*Notophthalmus viridescens*), and **Spotted Salamander** (*Ambystoma maculatum*) to the list of known herptile species from the grant.

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

## Review of data

As usual, all of these reports have been personally reviewed by me 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, and media outreach

In 2020, almost all planned field trips and in-person presentations were cancelled due to the pandemic. I did provide an in-person presentation to the New Haven Conservation Commission on February 19. On April 29<sup>th</sup> I provided an on-line training for NRCS, on May 7 I gave an online presentation for the Vermont Nature Conservancy, and on May 12, I was the guest (by phone) of Jane Lindholm on VPR’s Vermont Edition.

## Data sharing

In 2020, I provided records of *Ambystoma laterale/jeffersonianum* complex to a genetics researcher in the mid-west. Location data were also provided to Brittany Mosher, a new herpetologist at UVM. Wood Turtle records were provided to Kiley Briggs of the Orianne Society. Location data were again provided to the Natural Resource Conservation Service for their conservation easements. Record data was also provided to the Vermont Center for Ecostudies for their vernal-pool monitoring effort.

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. I provided this sort of data to residents of over forty 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.

## Monitoring

We are monitoring **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. A single **DeKay’s Brownsnake** (*Storeria dekayi*) showed up at our Lincoln monitoring site for the first time in 2019 and we found what was probably the same snake again in 2020. In 2019, **snake fungal disease (SFD)** appeared for the first time at our study site in Lincoln. It was only found on **Eastern Milksnakes**. No snakes with obvious physical signs of SFD were found at our Lincoln site in 2020.