

To: Jon Kart

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

Date: December 10, 2019

This is my annual report as required for Scientific Collection Permit SR-2015-02(a1) expiring on 12/31/2019. I sent along a request for updating and renewing this permit earlier today.

### **Contributed records**

Between January 1 and December 10, 2019 over 880 contributors (651 new and 229 repeat) provided 2,769 new records that were entered into the Vermont Reptile and Amphibian Atlas Database. This brings the total number of reports entered to 109,581.

The 2019 reports included 24 verified reports of S1 species, 138 verified reports of S2 species, 248 verified reports of S3 species, 193 verified reports of S4 species, and 2,031 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 228 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, Boreal Chorus Frog (probably extirpated), and North American Racer.**

### **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. This year a **Carolina Anole** (*Anolis carolinensis*) was reported from Gardener's Supply in Burlington. 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. A **Pond Slider** (*Trachemys scripta*), a common pet turtle species, was reported from Hildred Drive in Burlington. This turtle was laying eggs. That is unusual. The Pond Slider will probably survive, but hopefully the eggs will not hatch. This species has become invasive in southern New England. As our climate continues to warm, they could become invasive in Vermont.

### **Hypothetical species**

Once again, we received a report and photo of a **Blanding's Turtle** (*Emydoidea blandingii*). This time from Wardsboro. This species has populations south and northwest of us, so it could potentially be native and breeding here. It is also a popular pet turtle. At this point we still consider this species hypothetical in Vermont.

We also had four reports of **Eastern Box Turtles** (*Terrapene carolina*). One of these was a 2019 report with photos from Brookline in what appears to be appropriate habitat and a second old photo-documented report from 2003 in nearby Dummerston was also added to the database. 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. A survey group spent part of day searching the area but did not find this or other box turtles. Still, more extensive surveying would be required to find members of a small and dispersed population.

Additional **Eastern Box Turtle** reports came in from Georgia (sight-2009) and Whitingham (photo-2019). Both of these appear to have been pets captured from out of state.

## **New locations for S1 species**

We received a report and photo of a **Common Five-lined Skink** (*Plestiodon fasciatus*) from a new location in West Haven. This location is in the same town as, and not far from, previous reports, but it is a new site for this species.

We received a sight record of a **Spiny Softshell** (*Apalone spinifera*) from Lake Champlain in Shoreham in 2015. This is well south of this species known range. A photograph would be very helpful in confirming softshells that far south in Lake Champlain.

Another **Spiny Softshell** was seen and photographed from the **Winooski River** in Burlington. This is very exciting in that it is the first report of this species in that historic part of its range in many decades.

## **Targeted survey efforts**

This year I personally took employees or volunteers to over 30 towns in 11 counties in an effort to fill in distribution or photo-documentation gaps.

## **Progress on needed documentation**

Over the last five years we (volunteers and employees) have filled in 538 data gaps (new town records with photo-documentation) for S1-S3 species.

## **Quality control, maintenance of the Atlas database, data requests**

I reviewed all records, contact was made to all contributors, data were entered into our database and rare species reports will soon be forwarded to the Wildlife Diversity Program of Vermont Fish and Wildlife. We continually check for mistakes and typos in our database and make corrections. We have made tremendous progress in assigning latitude and longitude coordinates to almost all old S1 through S3 reports as well as all new reports of any species.

We have started a multi-year project to digitize all of our original reports. Currently we have digitized all old print photographs and just over half of our original written reports.

## **Data sharing**

In 2019, I met with and provided data to the **Natural Resource Conservation Service** for herpetile conservation efforts at a variety of their conservation sites in Vermont and I will be providing data for them regularly over the next few years. Data on rare turtles is exported regularly to the **Oriante Society**. Data on all *Ambystoma* was provided to **Miami University** for a PhD research project. **Merck Forest** in Pawlet requested data on all herps on their property. A conservation consultant requested data on all reptiles and amphibians found at **North Beach** in Burlington. The **Green Mountain National Forest** requested and was provided data on a Common Five-lined Skink sighting on their property. Reptile and amphibian data were requested and provided to **Putney Central School** for their school forest. Data on amphibian crossing areas was provided for an **Act 250 review** of a proposed development site in East Montpelier.

I have been 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 or providing habitat for rarer species, I include our list of herpetiles that should always be documented. I provided this sort of data to residents of over twenty towns. Many of these exchanges resulted in new town records.

## **Monitoring**

We are monitoring **Red-bellied Snakes** (*Storeria occipitomaculata*), **Common Gartersnakes** (*Thamnophis sirtalis*), **Eastern Milkshakes** (*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. Sadly, **snake fungal disease (SFD)** has also appeared for the first time on at our study site in Lincoln. At our Lincoln monitoring site, we have only seen **Eastern Milksnakes** with SFD. No other snakes have shown any symptoms of this disease at this location.

We once again had funding from the Forest Ecosystem Monitoring Cooperative (FEMC formerly VMC) amphibian drift-fence monitoring on Mt. Mansfield. Consequently we gathered a complete year of data from that site for our long-term monitoring data set. The Snake Mountain fence was also opened for two nights for my UVM class.