

NORTHEAST REGIONAL CONSERVATION NEEDS GRANT

2014 PROGRESS REPORT

Quarter: (circle one)

2014 1st

2014 2nd

2014 3rd

2014 4th

Grant Program, Number and Title: Distribution and Conservation Status of the Newly Described Species of Leopard Frog in the Coastal NE

Organization: New York Natural Heritage Program

Project Leader: Matthew Schlesinger

Abstract: The objectives of our project are to define the distribution, status, field characters, and habitat use of the newly described species of leopard frog (*Rana kauffeldi*) in comparison to that of the southern (*R.*

sphenocephala) and northern leopard frog (*R. pipiens*). We ramped up quickly this past winter to be able to conduct calling surveys for leopard frogs in the southern states starting in February. Given how quickly we needed to get started after funds became available, our project team decided to conduct targeted surveys this first year—in other words, nonrandom and nonsystematic surveys simply to confirm locations of the different species for follow-up sampling. Hundreds of person-nights of calling surveys were conducted across the region in late winter and early spring. These resulted in detections of the new species in many locations, as well as southern and northern leopard frogs. We have monthly conference calls during which we discuss field methodologies and project deadlines.

Our paper formally describing this new species as *Rana kauffeldi*, the Atlantic Coast leopard frog, came out in October:

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0108213>.

Some news stories followed, including a few mentioning this project:

<http://www.northjersey.com/community-news/meet-the-meadows-new-species-of-frog-1.1188222>

<http://www.esf.edu/communications/view.asp?newsID=3042>

<http://news.nationalgeographic.com/news/2014/10/141029-frog-species-new-york-city/>

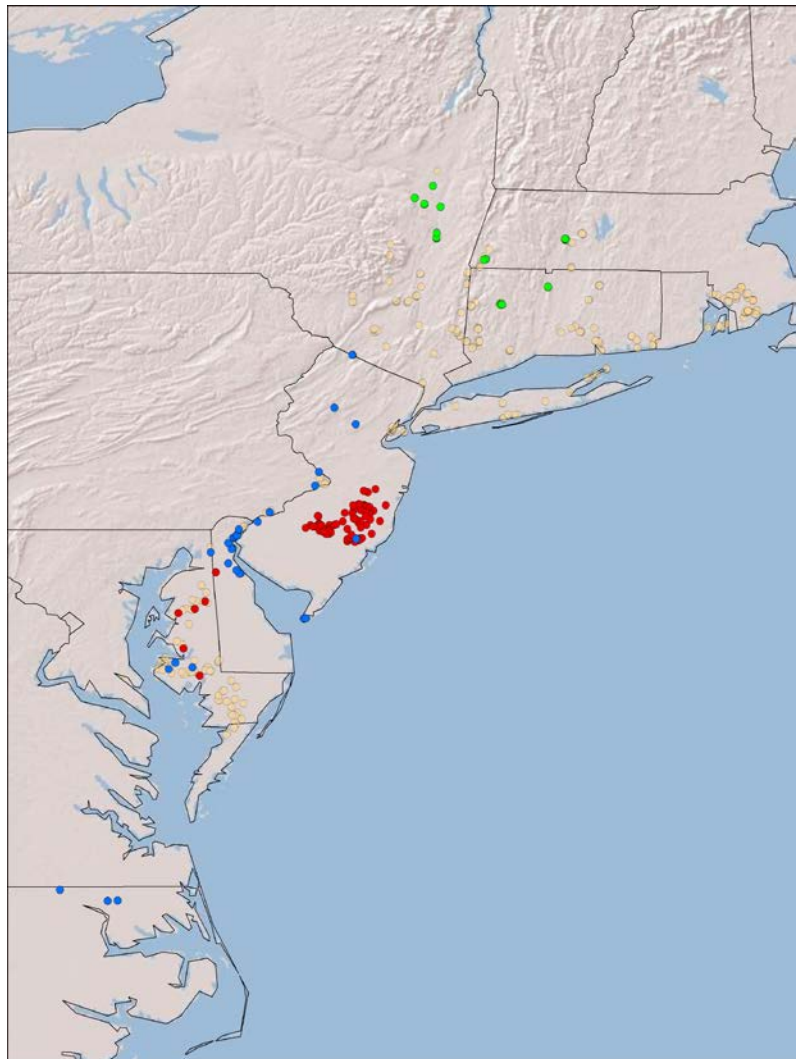


Fig. 1. Calling stations sampled in 2014. UPDATED. Green = likely *Rana pipiens*, Blue = likely *Rana kauffeldi*, Red = likely *Rana sphenocephala*, Tan = sites visited with no leopard frogs heard.

And NJ DEP came out with this field guide, largely written and put together by Jeremy Feinberg:

http://www.njfishandwildlife.com/ensp/pdf/leopardfrog_guide.pdf

We have received 2014 data from all project partners apart from a few pesky volunteers. A total of 603 points were surveyed for calling frogs in late winter and early spring (Fig. 1), and 152 tissue samples (along with photographs) were collected (Fig. 2). The contractual agreement with UCLA's lab is nearly in place and we will be shipping tissue samples in the next few days so they can provide genetic confirmation of the species.

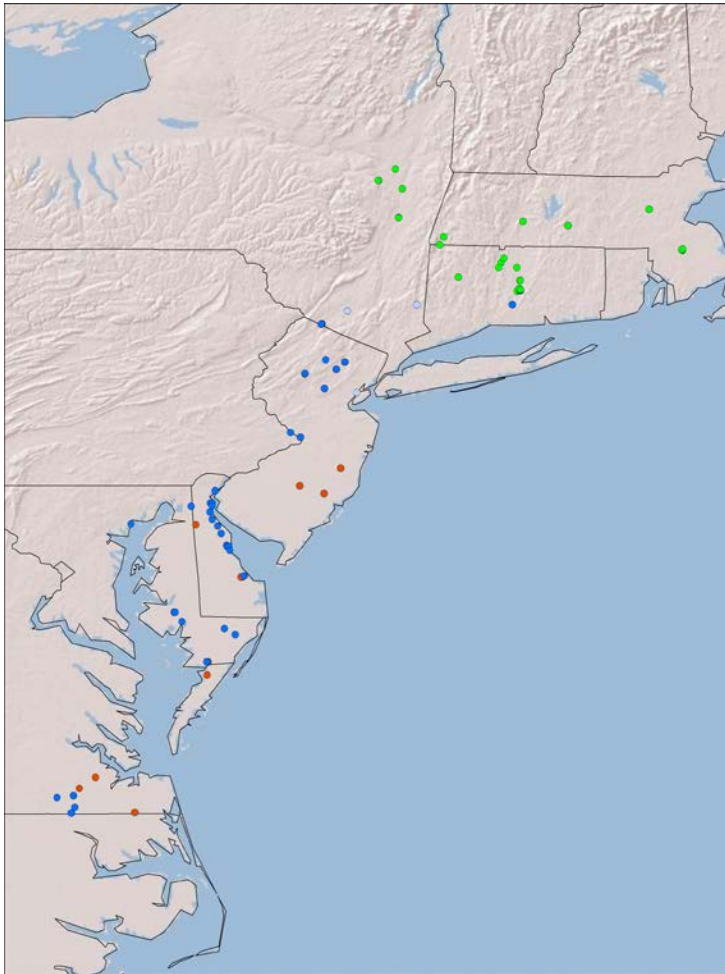


Fig. 2. Sites of photography and tissue samples in 2014.
UPDATED. Green = likely *Rana pipiens*, Blue = likely *Rana kauffeldi*, Red = likely *Rana sphenoccephala*,

On our January 13 conference call, the project team decided that year 2 will focus on additional targeted surveys to fill holes in the known distribution of the three species. The team decided that efforts were better spent on filling these data gaps than on the originally planned occupancy-based surveys to inform estimates of detectability and rarity. Our data will still be able to inform these parameters. In addition, the team decided that fine-scale (i.e., point-of-capture) assessment of habitat differences among the three species would be challenging given the inaccessibility of many breeding wetlands. Instead the project will focus on landscape-level and meso-scale habitat differences.

The project is on schedule for completion in winter 2015-2016.

Were planned goals/objectives achieved last quarter?

Yes, planned goals and objectives were achieved. Field sampling was completed, or nearly so. Project collaborators were informed of deadlines for data, photograph, and tissue submission.

Progress Achieved: (For each Goal/Objective, list Planned and Actual Accomplishments)

All of the objectives below that appeared in our proposal rely on confirmation of species identity via genetics. Since preliminary genetic results will not likely be available until spring 2015, our accomplishments to date have involved only sampling to address these objectives eventually. Through calling surveys, project participants identified dozens of locations with each species suspected according to the call. Many of these sites have received follow-up visits to photograph frogs and obtain genetic samples. Numbers of surveys will be available in the next progress report, and the number of samples obtained should be available in the next progress report or the one after.

- 1) Determine conclusively which leopard frog species occur presently and occurred historically in the nine states (CT, DE, MA, MD, NJ, NY, PA, RI, VA);
- 2) Refine the northeastern distribution of the new species relative to the two other leopard frogs;
- 3) Refine the conservation status in areas where the new species is already known to be of concern;
- 4) Contrast multi-level habitat associations among the three species; and

- 5) Refine the separation of species via field characters (calls, morphology) to facilitate future inventory, monitoring, and status assessments of the new species without reliance on genetic testing.

Difficulties Encountered:

No additional difficulties were encountered last quarter.

Activities Anticipated Next Quarter:

In January – March 2015, we will finalize the database that houses the calling survey data and information on photographs and tissue samples. We have project conference calls on January 13, February 10, and March 10 to finalize plans for field sampling in 2015.

Expected End Date:

March 31, 2016

Costs:

Total life to date expenses (include this quarter): \$46,718

Total Approved Budgeted Funds: \$99,764

Are you within the approved budget plan and categories? Yes

Signature:



Date: February 13, 2015