

NORTHEAST REGIONAL CONSERVATION NEEDS GRANT

2015 PROGRESS REPORT

Quarter: (circle one)

2015 1st

2015 2nd

2015 3rd

2015 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. sphenoccephala*) and northern leopard frog (*R. pipiens*). Hundreds of person-nights of calling surveys were conducted across the region in late winter and early spring 2014 and 2015. These resulted in detections putatively of the new species, as well as southern and northern leopard frogs, in many locations. Follow-up sampling to photograph frogs and collect tissue for genetic analysis was conducted into fall 2014 and 2015. The fourth quarter of 2015 was spent compiling and entering project data into the project database, building a database of historical records for which species identification is reliable, characterizing photos of the sampled frogs for key characters we hope will help with field ID. In 2016 we will finish compiling all project data, receive the final results of genetic testing of over 200 frogs, conduct data analysis, and write the final report and journal manuscript. In addition, we will present the results of the project at the NEAFWA meeting in Annapolis, MD on April 5, at the New Jersey Pinelands Commission on April 6, and at the NatureServe Biodiversity without Boundaries conference in San Juan, Puerto Rico April 18-22. and The project is on schedule for completion at the end of April 2016, with the final report delivered by May 30, 2016 as per our contract.

Were planned goals/objectives achieved last quarter?

Yes, planned goals and objectives were achieved.

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

In addition to the states that had *Rana kauffeldi* confirmed via the first round of genetic tests (re: Objective 1), we can say that our examination of leopard frog specimens from Rhode Island housed at the American Museum of Natural History showed all those frogs to be *Rana pipiens*. We have some more

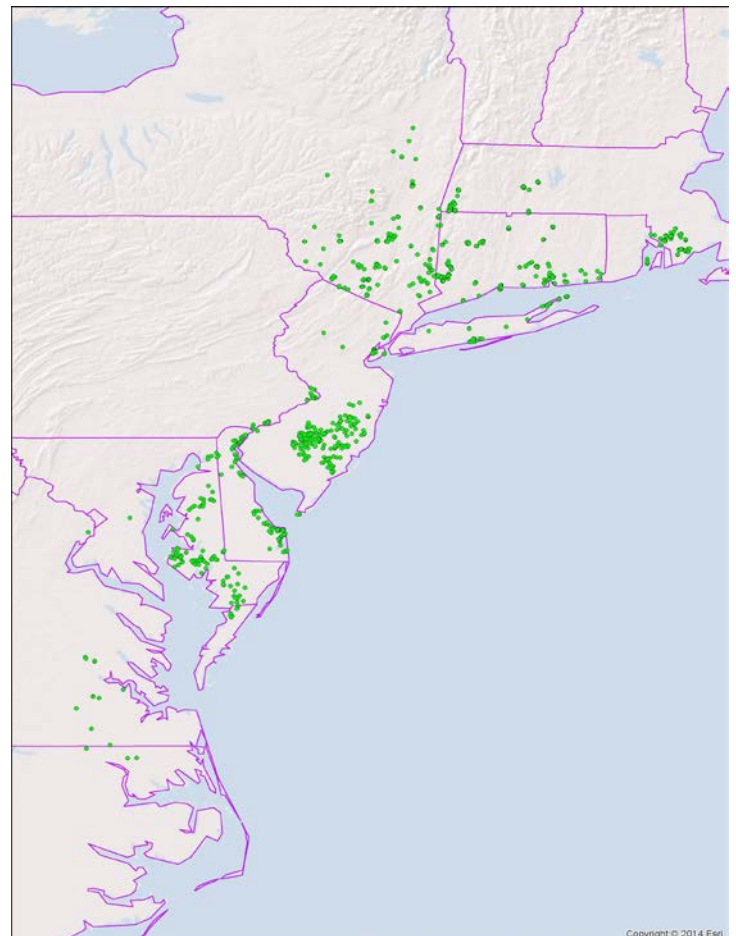


Figure 1. Points where calling surveys were conducted in 2014 and 2015.

museum specimens to examine but to date we have no evidence for *Rana kauffeldi* ever having occurred in Rhode Island.

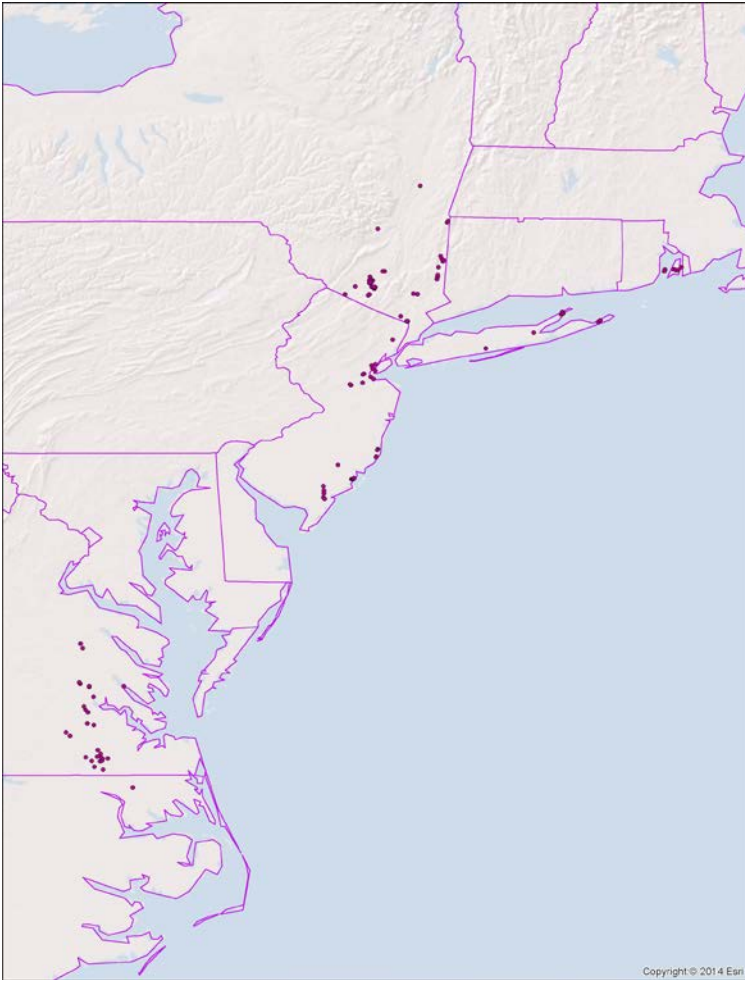


Figure 2. Points where visual surveys were conducted or opportunistic observations were made.

We completed entering calling data and other survey data into the database and made maps of effort for the team to proofread. The figures included are the originals sent to the team and contain some small errors to be corrected in final versions. Figure 1 shows calling survey data, Figure 2 shows other surveys and observations, and Figure 3 shows points where tissue samples were collected.

In addition, Erin White from NYNHP characterized 363 photos of individual leopard frogs for features we hope will help with field identification. Guidance and a data form (which was translated into an Access database form) are attached at the end of this report. The guidance was developed by Matt Schlesinger, Nate Nazdrowicz, and Jeremy Feinberg.

The remaining objectives rely on the final genetic results and the match to the other data this winter.

- 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.

We held project conference calls on October 13 and November 10 to review the calling survey and other effort data maps and to discuss the target journal.

Difficulties Encountered:

No additional difficulties were encountered last quarter.

Activities Anticipated Next Quarter:

In January through March 2016 we will finish compiling all project data, receive the final results of genetic testing of over 200 frogs, conduct data analysis, and start writing the final report, journal manuscript, and April talks. Team conference calls will be held monthly.

Expected End Date: April 30, 2016 (earlier reports said March 31, but the project actually ends in April, with the final report delivered by May 30)

Costs:

Total life to date expenses (include this quarter): \$91,179

Total Approved Budgeted Funds: \$99,764

Are you within the approved budget plan and categories? Yes

Signature:

Matthew Ahej

Date: February 12, 2016

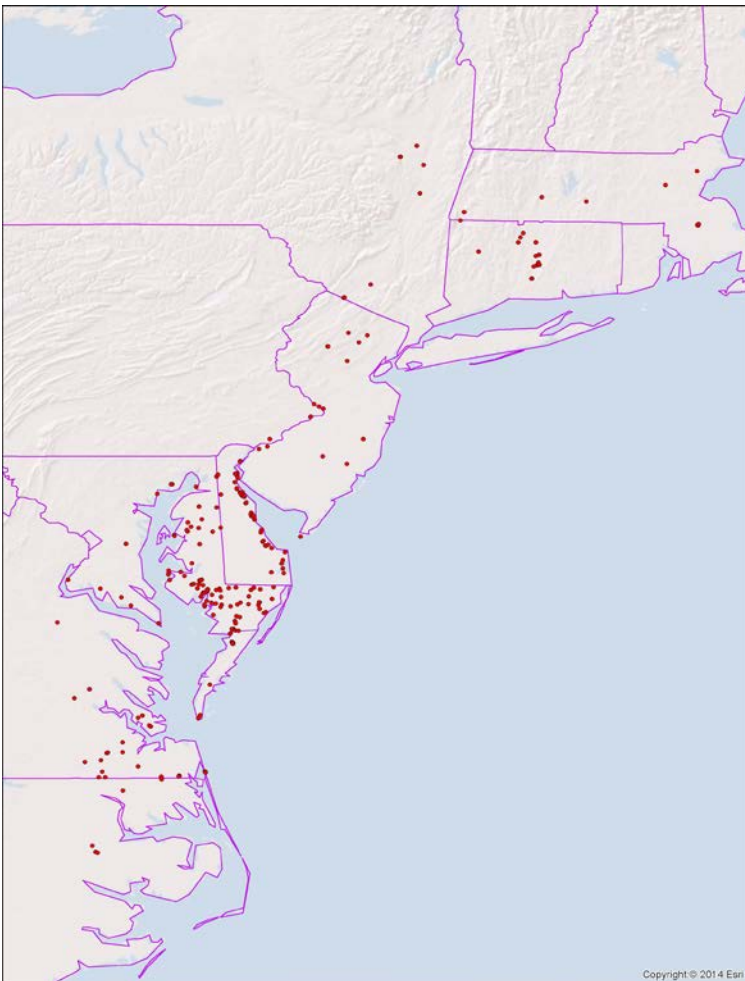


Figure 3. Points where tissue samples were collected in 2014 and 2015.

RCN leopard frog photo analysis

11/6/2015 mds

Frog ID _____ Photo analyzer initials _____ Date _____ __Adult __Juvenile

Photo filenames:

_____	_____	_____
_____	_____	_____
_____	_____	_____



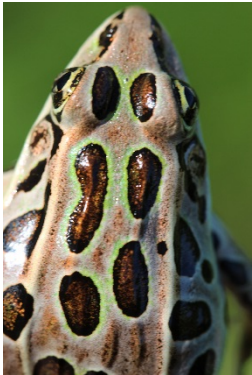

Dorsum

☐ Spots mainly smaller than eye ☐ Spots mainly larger than or equal to eye ☐ Photo inconclusive ☐ No photo

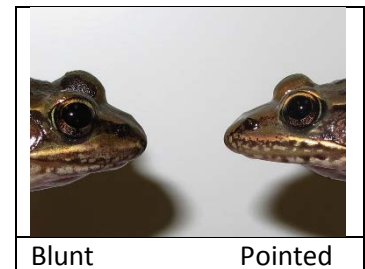
Number of spots: ☐ Unconnected ☐ Connected

Snout spot: ☐ Large ($\geq 50\%$ of the size of the smallest dorsal spot) ☐ Small ($< 50\%$ of the size of the smallest dorsal spot)

☐ Absent ☐ Photo inconclusive ☐ No photo

			
Area of dorsum within which to count spots: between dorsolateral folds and from snout to vent, outlined in orange. Note that multiple photos may be necessary to count fully. 17 spots counted on this frog.	Large snout spot, spots larger than or equal to eye	Snout spot absent, spots larger than or equal eye	Small snout spot, spots smaller than eye

Snout shape: ☐ Pointed ☐ Blunt ☐ In between ☐ Photo inconclusive ☐ No photo













Left tympanum spot: ☐ Sharp dot ☐ Sharp blotch ☐ Present; indistinct ☐ None ☐ Photo inconclusive ☐ No photo

☐ White/cream ☐ Green ☐ Brown/bronze ☐ Other: _____

Right tympanum spot: ☐ Sharp dot ☐ Sharp blotch ☐ Present; indistinct ☐ None ☐ Photo inconclusive ☐ No photo

☐ White/cream ☐ Green ☐ Brown/bronze ☐ Other: _____







				
Sharp dot, white/cream	Sharp blotch, white/cream	Present; indistinct, white/cream	Present; indistinct, white/cream	Sharp blotch, green
				
None	None	None	Sharp dot, white/cream	Present; indistinct, green

Femoral reticulum (butt)

☐ Predominantly dark (>50%) ☐ Predominantly light (>50%) ☐ About 50/50 ☐ Photo inconclusive ☐ No photo

☐ Mostly large connected splotches ☐ Many small unconnected splotches

Color of light areas: ☐ Cream ☐ Green




		
Predominantly dark, many small splotches, cream	Predominantly dark, many small splotches, cream	Predominantly light, mostly large connected splotches, cream
		
Predominantly light, mostly large connected splotches, cream	Predominantly light, mostly large connected splotches, green	Predominantly dark, many small splotches, green

Foot 1

☐ Webbing on first toe curves to tip ☐ Webbing on first toe stops midway up ☐ Photo inconclusive ☐ No photo

Foot 2

☐ Webbing on first toe curves to tip ☐ Webbing on first toe stops midway up ☐ Photo inconclusive ☐ No photo

		
Webbing on first toe (at bottom) stops midway up	Webbing on first toe (at top) curves to tip	Photo inconclusive