

# NORTHEAST REGIONAL CONSERVATION NEEDS GRANT

## 2015 PROGRESS REPORT

Quarter: (circle one)

2015 1<sup>st</sup>

2015 2<sup>nd</sup>

2015 3<sup>rd</sup>

2015 4<sup>th</sup>

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 third quarter of 2015 was spent obtaining photographs and tissue of frogs and examining the initial results of genetic analysis. The Project Leader presented the results to date at the NEPARC meeting. The remainder of 2015 will include finalizing sampling to photograph frogs and collect tissue, delivering the next 100 samples to UCLA, continued compilation of all project data, and data analysis and writing. 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.

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

Results of the first 100 samples were delivered to us in this quarter (Figure 1). For the first time, we have confirmation of *R. kauffeldi* genetically in the following states: DE, MD, PA, and VA (meeting part of Objective 1). Frogs from MA were *R. pipiens* only. In addition, we have evidence of admixture, likely resulting from ongoing or past hybridization among species. Implications of admixture will be explored in our final report. Analyses to be conducted this winter, once the remaining samples have been run, will match those genetic results to calling data and morphometric analysis via photographs. The remaining objectives rely on the final genetic results and the match to the other data this winter.

- 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.

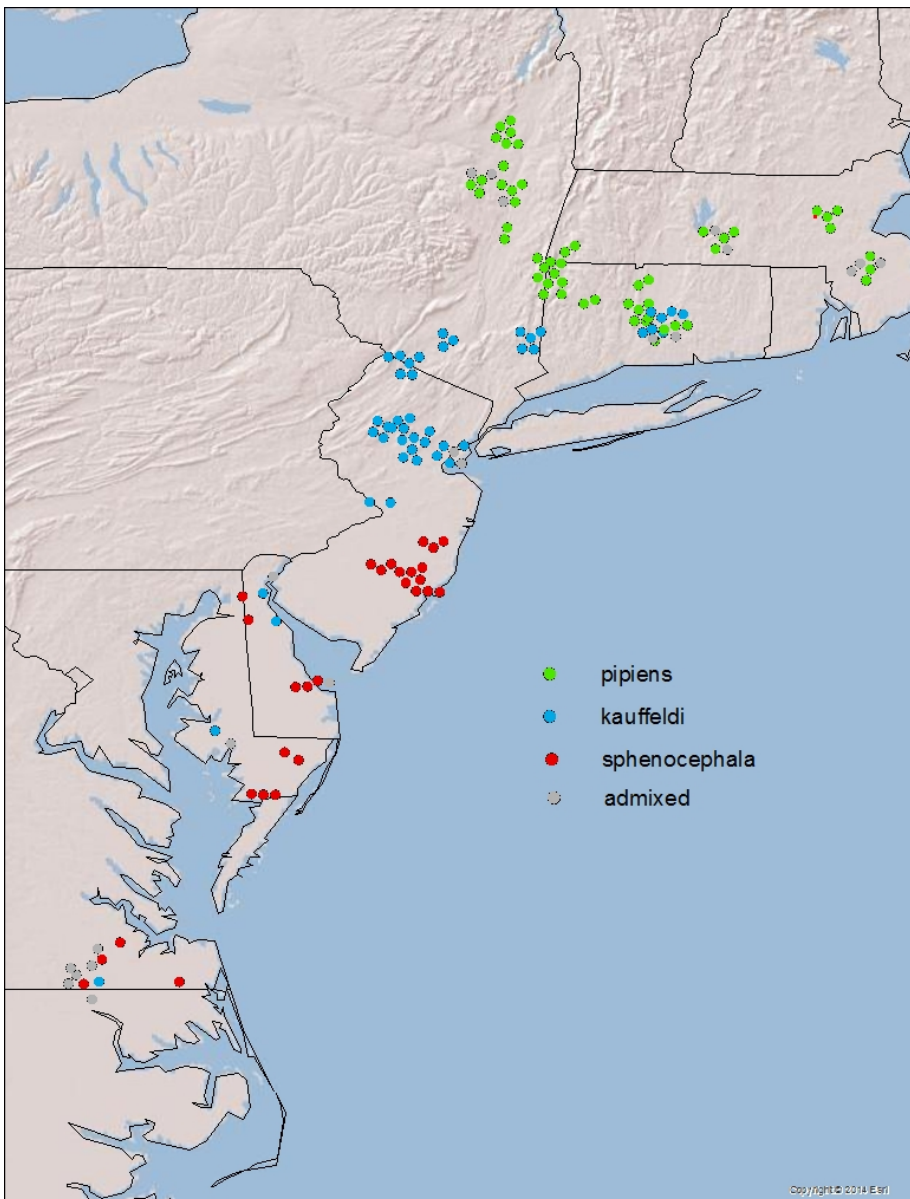


Figure 1. Results of genetic analysis of 100 leopard frog samples. Colors are 90% or greater “pure” individuals.

Expected End Date: March 31, 2016

Costs:

Total life to date expenses (include this quarter): \$78,161

Total Approved Budgeted Funds: \$99,764

Are you within the approved budget plan and categories? Yes

Signature: 

Date: November 13, 2015

A project conference call was held on September 8 to review the initial genetic results and discuss their implications for which samples to include in the final 100 (we have more samples than we can run). In mid-August, MS attended the Northeast Partners in Amphibian and Reptile Conservation (NEPARC) meeting in Rhode Island and presented on the project. He imitated leopard frog calls in front of everyone.

Difficulties Encountered:

No additional difficulties were encountered last quarter.

Activities Anticipated Next Quarter:

October 1 through December 31, 2015, we will finish catching frogs for tissue samples and photography and submit the next 100 tissue samples to UCLA. Calling data will be compiled and recordings confirmed. Team conference calls will be held monthly.