

NORTHEAST REGIONAL CONSERVATION NEEDS GRANT

2016 PROGRESS REPORT

Quarter: (circle one)

2016 1st

2016 2nd

2016 3rd

2016 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. We had hoped for the genetic analysis to be completed by December 2015, but the analysis proved complex. We presented preliminary 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. We received the final genetic analysis in June 2016, which genotyped 294 leopard frogs from this and our previous study. From July-September we have been compiling all project data, conducting data analysis, and drafting the final report and journal manuscript. Owing to the unforeseen delays in the genetic analysis, we requested and received an extension to the project, which is now scheduled for completion by April 30 2017, with the final report delivered by May 30, 2017.

Were planned goals/objectives achieved last quarter?

Our original project schedule had genetic analysis final in December 2015, with data analysis and writing in winter and early spring 2016. Initial genetic analyses led to confusing results, however, and the analysis was not completed to everyone's satisfaction until June 2016. Therefore, we requested and received a project extension until spring 2017. Based on this new schedule, we made good progress on data analysis in July-September given the busyness of the summer field season.

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

Field sampling (calling surveys, visual surveys, specimen collection, photography) proceeded as expected and was completed in 2015 as documented in earlier reports. These surveys partially satisfied objective 1, which was to determine which states had which species (the genetics were the other important piece). We present this simply in Table 1 for now. Range maps for all three species are being produced and reviewed by the team this quarter, and analyses to address objectives 3-5 are ongoing this quarter.

- 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.

Table 1. Occurrence of leopard frog species by state: “x” = present currently; “h” present historically.

State	<i>Rana kauffeldi</i>	<i>Rana pipiens</i>	<i>Rana sphenoccephala</i>
MA		x	
RI		h	
CT	x	x	
NY	x	x	
PA	x	x	
NJ	x		x
DE	x		x
MD	x		x
VA	x		x
NC	x		x

We held a project conference call on September 13 to review final genetic results and discuss a plan for analysis and writing.

Difficulties Encountered:

No additional difficulties were encountered last quarter.

Activities Anticipated Next Quarter:

In October through December 2016 we are finalizing the analysis of field characters (as determined from photographs) with knowledge of each frog’s genetic identity, completing a landscape-level habitat analysis, creating updated range maps for the three species, and writing the final report and journal manuscript. We intend to have a draft report/manuscript available for the team’s review by the end of December.

Expected End Date: April 30, 2017 (with the final report delivered by May 30)

Costs:

Total life to date expenses (include this quarter): \$105,763

Total Approved Budgeted Funds: \$105,764

Are you within the approved budget plan and categories? Yes

Signature: 

Date: November 28, 2016