

NORTHEAST REGIONAL CONSERVATION NEEDS GRANT 2012 ABSTRACT

Quarter: 2012 3rd

Grant Number and Title: RCN 2011-02: The Wood Turtle (*Glyptemys insculpta*) in the Northeastern United States: A Status Assessment and Conservation Strategy

Grant Receipt/Organization: University of Massachusetts

Grant Project Leader: Dr. Paul R. Sievert

The Wood Turtle (*Glyptemys insculpta*) ranges from Nova Scotia to Minnesota and south to Virginia. The Northeast Region of the United States, from Maine to Virginia, encompasses the majority of the wood turtle's extent of occurrence. Declines and extirpations have been reported or inferred across much of the region. In 2012, the Northeast Wood Turtle Working Group (NEWTWG) initiated a two-year status assessment and conservation strategy for Wood Turtles, with funding from the Northeast Association of Fish and Wildlife Agencies' Regional Conservation Needs (RCN) grant program. The NEWTWG, which includes key collaborators from universities, state and federal agencies, and NGOs (including Northeast PARC) throughout the northeastern United States, developed and launched a two-tiered *Coordinated Monitoring Strategy* as a primary means of assessing populations in the field, refining predictive models of occurrence, and testing detection protocols. Thirty-four sites in Maine, New Hampshire, Massachusetts, and Virginia were assessed in the spring of 2012. As of October 2012, standardized field surveys have been undertaken at additional known and novel sites in Maine, New Hampshire, Vermont, Massachusetts, New York, New Jersey, Pennsylvania, West Virginia, Maryland, and Virginia. Representatives from UMass, which is the coordinating entity, presented initial results at regional and international conferences to obtain feedback on the monitoring strategy and recovery objectives. The NEWTWG is also providing critical feedback on project objectives, project methodology, and the *Coordinated Monitoring Strategy*, as well as providing expert opinion on predictive model parameters. We have combined field survey data from 2012 with existing survey data, long-term datasets, element occurrence information, "herp atlas" data, and expert opinion into a regional, standardized data layer of confirmed wood turtle populations extending from the mid-19th century to the present. This dataset will enable us in the current quarter to build predictive models of the historic extent of wood turtle occurrence and to identify data-deficient regions and watersheds. Several key components need to be completed in the fourth quarter of 2012 and first quarter 2013: (1) finalize the monitoring protocols and site selection protocols for 2013; (2) conduct a peer review of the populations data layer by NEWTWG members; (3) build the initial predictive models using the populations layer as training data; (4) distribute results of predictive models (on a state by state basis) to be used in conjunction with site selection in 2013; (5) solicit additional information from the Working Group, including regulatory thresholds, mitigation criteria, case histories, best management practices, and conservation case histories; (6) begin monthly conference calls in November and sustain these through the spring of 2013; (7) plan a strategic meeting in the Mid-Atlantic region for the coming winter to build the components of an implementation strategy; (8) combine the spatial analyses and field data into a critical analysis of the current and former distribution of wood turtles; (9) develop a critical evaluation of survey and detection protocols; (10) synthesize regulatory information provided by the states.

NORTHEAST REGIONAL CONSERVATION NEEDS GRANT 2012 PROGRESS REPORT

Quarter: 2012 3rd

Grant Number: RCN 2011-02

Grant Title: The Wood Turtle (*Glyptemys insculpta*) in the Northeastern United States: A Status Assessment and Conservation Strategy

Grant Recipient: University of Massachusetts

Grant Project Leader: Dr. Paul R. Sievert

Report #-1

Were planned goals/objectives achieved last quarter? Yes

Regional Conservation Need Addressed: Topic 5 (Conservation strategy); Topic 3 (Identify data deficiencies)

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

The following summary of accomplishments is organized according to the bulleted items under “**Methods**” in the original grant proposal dated 2 March 2011.

Accomplishments in 3rd Quarter 2012

1. Northeastern Wood Turtle Working Group

Accomplished

- a. Convened a *Regional Working Group* with broad participation from twelve NE states;
- b. Identified *project coordinators* within each of twelve participating state agencies;
- c. Convened a *technical review board* with expert involvement from across the range of the wood turtle, related taxa, and other wide-ranging SGCN turtle species;
- d. Coordinating with Wood Turtle conservation efforts underway in Canadian Maritimes;
- e. Two Wood Turtle Working Group meetings at Northeast PARC in New Hampshire were attended by forty people;
- f. Monthly conference calls among group members scheduled to begin in November 2012;
- g. A regional meeting is tentatively scheduled for February 2013;
- h. Web-based two-way data-sharing portal launched.

2. Gather and standardize available population data

Accomplished

- a. Gathered and standardized confirmed population occurrence data for 12 northeastern states from a variety of sources, including: Natural Heritage Programs, Reptile and

Amphibian Atlases, literature records, gray literature, field surveys (led by UMass and described in detail below), expert surveys, rapid assessments conducted by Working Group members, and web-based online data submission;

- b. Completed a fall season of population assessment in ME, NH, VT, NY, PA, NJ, MD, WV, and VA;
- c. Compiled occurrence data into a regional layer of *confirmed wood turtle populations*;
- d. Delineated known and confirmed populations (multiple animals or evidence of reproduction);
- e. Reported population data gathered through novel means to respective state agencies.

Planned

- f. Continue field surveys at two scales (intensive and rapid) in 2013;
- g. Complete analysis of 2012 field data, including detection protocols and abundance estimates.

3. Analysis of occurrence, occupancy, and historic range

Accomplished

- a. Developed a *Coordinated Monitoring Strategy for Wood Turtles in the Northeastern United States*;
- b. Initiated the implementation of a two-year monitoring strategy with Long-Term Intensive Study Sites established in ten northeastern States;
- c. Developed a protocol for the site selection and implementation of randomized *Rapid Assessments* throughout the Northeast Region in 2013.

Planned

- d. Build spatially-explicit predictive models of occurrence using the populations data outlined in 2(b);
- e. Distribute state-specific predictive models to individual state project leaders;
- f. Complete analyses of historic range and likely range contraction;
- g. Use predictive model as a base layer for randomized rapid assessments in 2013;
- h. Use predictive model as base layer to identify need for surveys in data-deficient areas.

Summary of Progress: We identified key collaborators from universities, state agencies, and NGOs throughout the northeastern region, who contribute to this project as members of the Northeast Wood Turtle Working Group (NEWTWG) or in a technical review capacity. As a team, we have successfully developed and launched a multi-tiered, flexible, and rigorous *Coordinated Monitoring Strategy*, and standardized field surveys have been undertaken at known and novel sites in Maine, New Hampshire, Vermont, Massachusetts, New York, New Jersey, Pennsylvania, West Virginia, Maryland, and Virginia. The NEWTWG is efficiently providing critical feedback on project objectives, project methodology, the *Coordinated Monitoring Strategy*, as well as providing expert opinion on predictive model parameters. Field survey data from the 2012 season have been combined with element occurrence information, herp atlas data, expert information, and existing field survey data into a regional layer of *confirmed wood turtle populations* to enable us to build predictive models of the historic extent of wood turtle occurrence to identify data-deficient regions. Several key components need to be completed in the next quarter: (1) finalize the monitoring protocols and site selection protocols for 2013; (2) conduct a peer review of the populations data layer by working group members; (3) build the initial predictive models using the populations layer as training data; (4) distribute

results of predictive models (on a state by state basis) to be used in conjunction with site selection in 2013; (5) solicit additional information from the Working Group, including regulatory thresholds, mitigation criteria, case histories, and conservation case histories; (6) begin monthly conference calls in November and sustain these through the holiday season and winter; (7) plan a strategic meeting in the Mid-Atlantic region for the coming winter to build the components of an implementation strategy; (8) combine the spatial analyses and field data into a critical analysis of the current and former distribution and abundance of wood turtles; (9) develop a critical evaluation of survey and detection protocols; (10) synthesize regulatory information provided by the states.

Difficulties Encountered: None

Activities Anticipated Next Quarter: Planned activities in the fourth quarter and 2013 include finalizing the monitoring protocols and site selection protocols for 2013; conducting a peer review of the populations data layer by working group members; building the initial predictive models using the populations layer as training data; distribution of model results (on a state by state basis) to be used in conjunction with site selection in 2013; solicit additional regulatory and enforcement information from the Working Group, including regulatory thresholds, mitigation criteria, case histories, best management practices, and conservation case histories; begin monthly conference calls in November 2012 and sustain these through the holiday season and winter and spring field season; plan a strategic meeting in the Mid-Atlantic region for the coming winter to build the framework of a long-term conservation implementation strategy.

Expected End Date: 12/31/2013

Costs:

Are you within the approved budget plan? Yes

Are you within approved budget categories? Yes

Signature: 

USGS MA Cooperative Fish and Wildlife Research Unit

By: _____

Date: 13 November 2012

Name: Dr. Paul R. Sievert

Title: Research Associate Professor