



2004 – Northeast Blanding's Turtle Working Group formed

















NEW ENGLAND



MINUTES FROM NEW ENGLAND BLANDING'S TURTLE MEETING

Hosted by NH Fish & Game HQ, Concord February 13, 2004

This document provides very general summary notes of presentations & discussions that occurred at the Blanding's turtle meeting. For more details contact Mike Marchand (603-271-3016) or the individual presenter.

List of Participants:

Mike Marchand (NH Nongame & Endangered Species Program), John Kanter (NH Nongame & Endangered Species Program), Kim Babbitt (UNH), Brad Compton (UMASS), Paul Sievert (UMASS), Scott Melvin (MA Natural Heritage), Jon Regosin (MA Natural Heritage), David Hastings (UMASS), Michael Jones (UMASS), Phillip deMaynadier (ME Inland Fisheries & Wildlife), Fred Beaudry (UMaine), Michael Amaral (USFWS), Mark McCollough (USFWS), Alison Whitlock (USFWS), Kim Tuttle (NH Nongame & Endangered Species Program), Vanessa Johnson (USFWS), Alina Pyzikiewicz (NH Nongame & Endangered Species Program, Celine Goulet (NH Nongame & Endangered Species Program), Annie Curtis (Connecticut College)

Welcome: John Kanter and Mike Marchand

John spoke briefly about how this meeting came about and how the Blanding's turtle is a priority species of the NE Endangered Species & Diversity Technical Committee. One goal of this committee is to create a Regional Plan for a few select species, one being the Blanding's turtle.

rlabal distribution of the species and the

Working towards a Regional Conservation Plan Fish & Game Headquarters Concord, NH February 13, 2004

Blanding's Turtles:

Status Assessment for the Blanding's Turtle (Emydoidea blandingii) in the Northeast

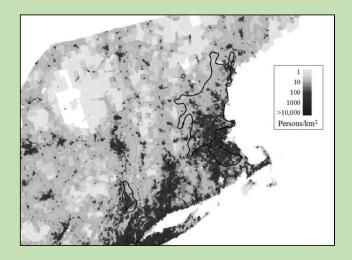


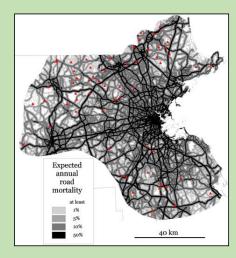
July 30, 2007

Prepared by Bradley W. Compton, Department of Natural Resources Conservation, University of Massachusetts, Amberst, Massachusetts (11003)









Conclusion: Due to natural demographic vulnerability and proximity to urban areas, northeastern Blanding's turtles are threatened by habitat loss and elevated adult mortality rates

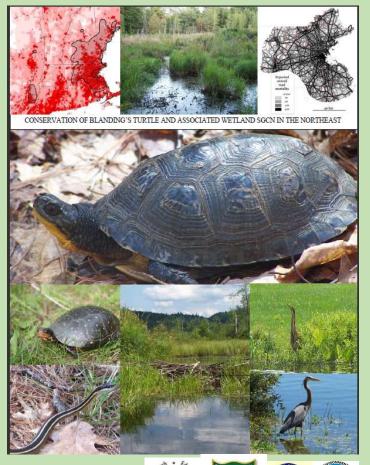
Status Assessment funded by Science Support Partnership Program grant from U.S. Geological Survey Biological Resources Division and U.S. Fish and Wildlife Service (Compton 2007)

GOALS OF THE COORDINATED REGIONAL MONITORING STRATEGY FOR BLANDING'S TURTLE

- 1) Develop baseline of distribution and abundance across the region;
- 2) Quantify density and demographics at key sites;
- 3) Gather information at poorly-known sites;
- 4) Evaluate the influence of habitat and landscape on population size and structure;
- 5) Rank sites for conservation;
- 6) Assess trends over time and evaluate the effectiveness of actions.

Key considerations

- Robust and repeatable, but flexible
- Implementable across a range of habitats in all 5 states
- Overlay ongoing research



2011 – 2014 USFWS Competitive State Wildlife Grant

GRANT OBJECTIVE: To maintain and enhance functional wildlife habitat in New England, New York, and Pennsylvania by applying conservation principles and practices needed to support a healthy Blanding's turtle population.







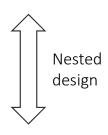






Overview of the Regional Monitoring Strategy: A two-tiered approach

Rapid Assessments



Long-term Intensive Sites Objectives

Evaluate distribution, abundance, trends at the **regional** scale

 Quantify population size, structure, and trends at key sites

2) Inform rapid assessment results

Field Methods

VRA

8 X 10 minute timed surveys X 3 times @ > 50 sites

TRA

20 traps X 4 nights @ > 50 sites

Random sites

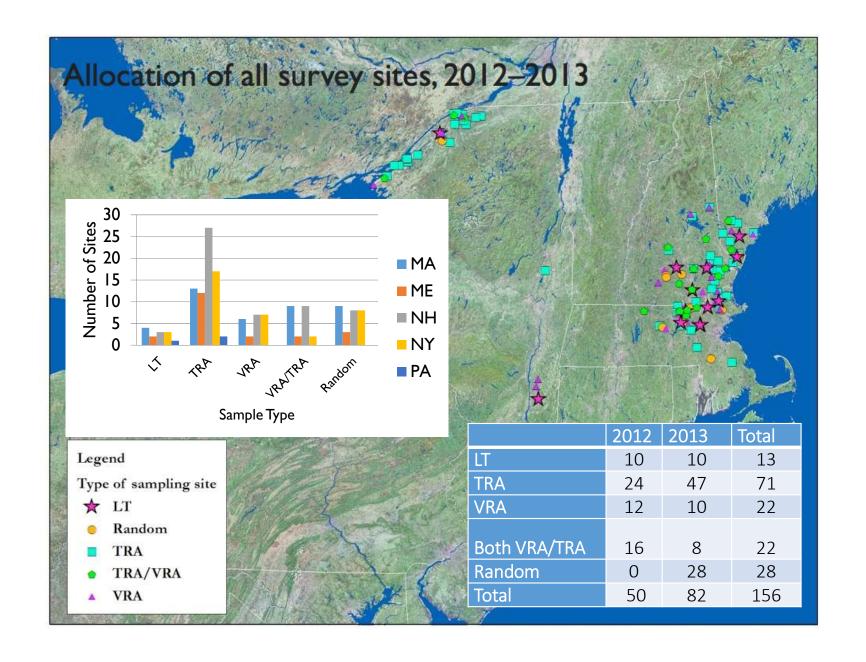
Analysis Methods

Relative abundance estimation using N-mixture models (Royle 2004)

High priority sites

20 traps X 12 nights X 3 seasons @ > 10 sites
(i.e., 9 X TRAs)

Density
estimation using
spatially explicit
capture
recapture
(SECR)/
Loglinear models



Best Management Practices: Nest site management

Guidelines for enhancing and creating nesting habitat for Blanding's turtles in the Northeastern United States in the context of regional conservation

Northeast Blanding's Turtle Working Group (October 1, 2013)

Summary.—This document provides an overview of nesting habitat enhancement and creation for Blanding's turtles in the northeastern United States, based on literature and unpublished data. Suitable nesting areas are essential components of a landscape-based approach to the regional conservation of Blanding's turtle. Because of the expense and monitoring requirements of nesting habitat programs, they should be primarily implemented at regional priority sites. Because of the lack of replicated experimental studies and overall uncertainty, existing nesting areas should be preserved and enhanced unless they are perceived by managers to be an ecological trap. Available case studies, including an analysis of 19 nesting areas in Massachusetts and New Hampshire, indicate that the ideal configuration of nesting habitat would encompass multiple nesting areas near clusters of suitable wetlands in the interior of a site.

Context.-Most species of freshwater turtle in New England, New York, and Pennsylvania are of conservation concern and are likely to decline in number and overall extent as a result of habitat fragmentation and degradation (NEPARC 2010). For the successful conservation of representative populations northeastern freshwater turtles, it is often necessary or ideal to create, maintain, or expand nesting habitat. Blanding's turtle (Emydoidea blandingii) is restricted to small, isolated populations in eastern New England, New York, and Pennsylvania, where populations are often found in conjunction suitable nesting areas. Many authors have reviewed the nesting requirements of Blanding's turtle (Kiviat et al. 2000; Compton 2007; Dowling et al. 2010) or provided new data on nest area characteristics (Kiviat et al. 2000; Beaudry et al. 2010; Jones and Sievert 2012). Several authors have drafted recommended guidelines for the creation and management of nesting habitat (Kiviat et al. 2000; Mass. NHESP 2010), or have undertaken experiments on Blanding's turtle, related species, or surrogates (Marchand and Litvaitis 2004; Dowling et al. 2010; Buhlmann and Osborn 2011; Mass. NHESP unpublished data). Survey protocols to detect nesting activity have also been developed (Ross 2009). Despite considerable attention in recent years, many questions about the usefulness and effectiveness of nesting habitat management remain. In this document, we present a summary of the current knowledge of nest site creation and management as it pertains to Blanding's turtle, and make recommendations for implementation.

Broad-scale Characteristics of Confirmed Nesting Areas in the Northeast,—Although nest-site selection at a broad scale has not been systematically surveyed, Blanding's turtles females are known to nest both in concentrated aggregations and in dispersed, remote sites where only one turtle may nest at a site in a given year (Beaudry et al. 2010; B.W. Compton et al., unpublished data). Replicating the phenomena observed at concentrated nesting areas is probably preferable to the dispersed model, which puts females at greater risk of road mortality. Further, Blanding's turtles are known to nest in a very wide variety of

Table 1. Key aspects of Blanding's turtle nesting habitat in the Northeast Anthropogenic habitats commonly used for

Parameter	Description
Total area	0.01 to 4.4 ha; median = 0.74 ha; some larger mosaics
Aspect	A range of primarily southerly aspects are ideal
Topography	Gently rolling, stable terrain with berms and mounds
Vegetation	Cespitose grasses and sedges with bryophytes and lichens
Sall	Well-crained, well-graded sand, gravel, or sandy team
Other	Near known cocupied wetlands, containing staging wetlands, away from roads; site-tailored monitoring plan

anthropogenic and natural nesting sites. nesting include borrow pits, dredge piles, vineyards, residential yards and gardens, areas recently cleared for development, selection cuts or clear cuts, playing fields, abandoned gravel pits, road shoulders and causeways, ATV trails. powerlines, military training areas, wasteland areas, and berms or clearings constructed for Blanding's turtle (Dowling et al. 2010; Beaudry et al. 2010; Grgurovic, pers. comm.; NE Blanding's Turtle Working Group, unpublished data). In the northeastern United States, natural nesting areas



Figure 1. The largest known communal nesting area in New England (Worcester Co., MA) Figure 2. This nesting area in Jefferson Co., NY has a gently rolling topography, relatively dense cover of cespitose grasses and sedges, with exposed sand blowouts and tire ruts.

consists of poorly graded sand interspersed with





Figure 3. A major nesting area in St. Lawrence
Co., NY is dominated by rolling topography, sand
in Saratoga Co., NY. The site is a gently rolling hillside interspersed with mature cake. The

appear to be relatively rare, and consist mostly of rocky outcrops in Maine (Beaudry et al. 2010) and possibly disturbed dune areas in the St. Lawrence Valley. In Nova Scotia, Blanding's turtles are known to nest on cobble lakeshores (Standing et al. 1999), and so they may sometimes nest on beaches in New England and New York. Of 19 confirmed communal nesting areas (>2 Blanding's turtle nests per year) in Massachusetts and New Hampshire, many are situated in abandoned gravel pits and residential landscapes (Grgurovic 2006; Jones and Sievert 2012). The contiguous open area of these features ranged from 0.01 to 4.4 ha and the median size was 0.74 ha.

Fine-scale Characteristics of Confirmed Nesting Areas in the Northeast.-Although some nest-site creation guidelines call for broad, level areas (MA NHESP 2010), most known communal nesting areas have pronounced topography in the form of gravel pit walls, mounds, berms, and ditches in addition to broad, level areas. The largest known nesting area in New England (MA-WO-OX), as well as most other communal nesting areas, has a gently rolling topography (Figs. 1-4). The substrate is usually a mix of well-

www.blandingsturtle.org www.northeasturtles.org Conservation Plan for the Blanding's Turtle and associated Species of Conservation Need in the Northeastern United States



Eastern Blanding's Turtle
Technical Committee
With support from the U.S. Fish and Wildlife Serv

With support from the U.S. Fish and Wildlife Service Competitive State Wildlife Grant Program









COMP SWG GRANT 2016-2019 (EXTENDED – 2021)

ADAPTIVE
IMPLEMENTATION OF
THE REGIONAL
CONSERVATION PLAN
FOR BLANDING'S TURTLE
AND ASSOCIATED
WETLAND SGCN IN THE
NORTHEAST



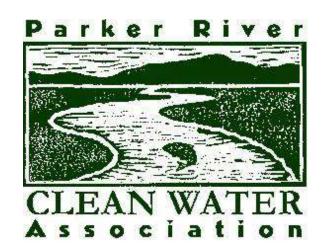


Photo Credits: George Comiskey



Nest site creation and management



Population management: Headstarting





ZOO NEW ENGLAND'S

Grassroots

Wildlife
Conservation





RADIO-TELEMETRY GPS LOGGERS AT HIGH PRIORITY SITES





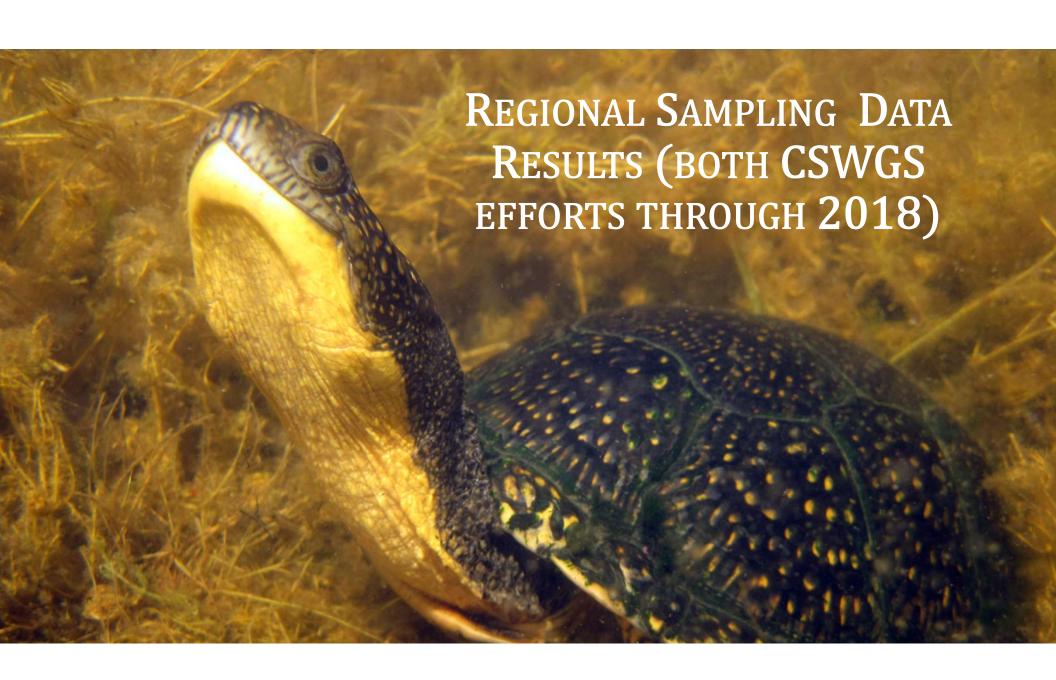




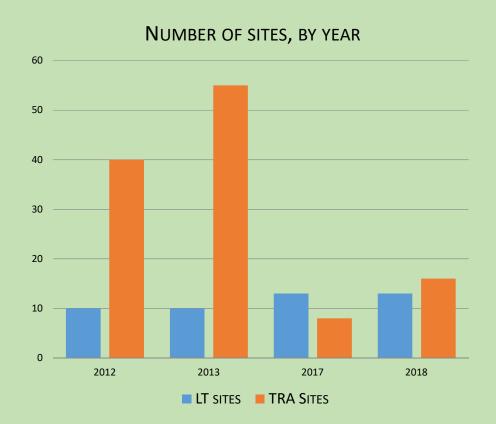


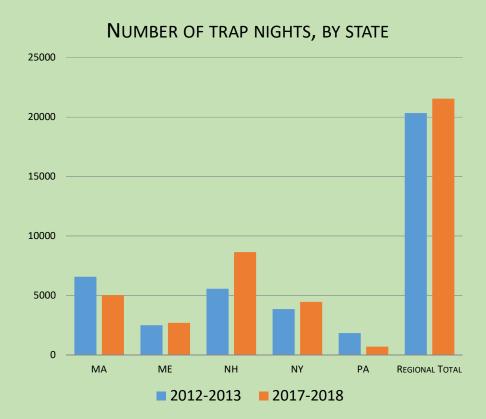






TRAP EFFORT





Blanding's Turtle Trap Success



By-CATCH







NEXT....

- Incorporate 2019 data
- RERUN OCCUPANCY/ABUNDANCE ANALYSIS
- ADDITIONAL SITE SPECIFIC COMPARISONS
- RE-EVALUATE CONSERVATION AREA NETWORK
- UPDATE SITE-SPECIFIC
 MANAGEMENT PLANS AS
 NEEDED



Turtle RCN 2017 Draft

Strategic Implementation of Regional Conservation Priorities for Freshwater Turtles at Risk in the Northeast



Regional Conservation Needs (RCN) 2017 DRAFT Pre-proposal 19/26/17

Northeast Regional Conservation Needs Grant Program 2018-2022

- Road Mitigation Project
- Wood and Blanding's Turtle Conservation Project

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Melissa Doperalski, Josh Megyesy & Michael Marchand, New Hampshire Fish and Game Department; Lisabeth Willey, Antioch University New England and American Turtle Observatory; Michael T. Jones, Massachusetts Division of Fisheries and Wildlife; Glenn Johnson, State University of New York, Potsdam; Angelena Ross, New York Department of Environmental Conservation; Derek Yorks & Phillip **DeMaynadier**, Maine Department of Inland Fisheries and Wildlife; Kathy Gipe & Chris Urban, Pennsylvania Fish & Boat Commission; Mark **Grgurovic**, Parker River Clean Water Association; Bryan Windmiller, Grassroots Wildlife Conservation; Stephanie Koch, US Fish and Wildlife Service



