



**ILLINOIS NATURAL
HISTORY SURVEY**
PRAIRIE RESEARCH INSTITUTE

**A LIMITED ASSESSMENT OF AMPHIBIANS AND REPTILE RESOURCES
ASSOCIATED WITH THE ILLINOIS ROUTE 83 (IDOT FAP 866) /
ILLINOIS ROUTE 137 (IDOT FAP 352) CORRIDOR, BETWEEN
ILLINOIS ROUTE 132 AND U.S. ROUTE 45 IN
LAKE COUNTY, ILLINOIS**

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Report Prepared For

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**INHS/IDOT STATEWIDE BIOLOGICAL SURVEY & ASSESSMENT
PROGRAM REPORT 2012(17): 1-8.**

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INTRODUCTION

In a transmittal dated 13 March 2012, the Illinois Department of Transportation (IDOT) Bureau of Design and Environment tasked the Illinois Natural History Survey (INHS) to prepare a report on the potential impact of vehicle traffic along the Illinois Route 83 / Illinois Route 137 corridor on amphibian and reptile species, with specific focus placed on species listed as threatened or endangered in the state of Illinois. This corridor, approximately 11 miles in length, passes through the municipalities of Lake Villa, Round Lake Beach, and Grayslake, Illinois. The northern terminus of this corridor is just north of Illinois Route 132 (East Grand Avenue); the corridor extends south along Illinois Route 83 (IDOT FAP 866), becoming Illinois Route 137 (IDOT FAP 352) at the intersection of Illinois Route 120 (Belvedere Road) just south of Grayslake, and then terminates at Peterson Road, just east of U.S. Route 45. This report summarizes the results of database reviews and examination of this project area using aerial and satellite images, site surveys, and turtle trapping.

METHODS

A search of both vouchered and un-vouchered specimens in the Illinois Natural History Survey (INHS), University of Illinois Museum of Natural History (UIMNH), and non-INHS Illinois Amphibian and Reptile databases maintained by the Illinois Natural History Survey was conducted. Together these databases are merged and accessed through the All_IL_Herps database at INHS. Additionally, the Illinois Natural Heritage Database maintained by the Illinois Department of Natural Resources (IDNR) was queried for Element Occurrence Records (EOR) of threatened and endangered amphibians and reptiles within a mile of the project corridor. Each EOR may be subdivided into multiple Element of Occurrence Identification numbers (EOID) to record separate identification events or sub-locations. These results were plotted onto aerial photographs of the project area and examined to search for suitable habitat for the species. Finally, site surveys and trapping were conducted from 01 through 03 July 2012.

RESULTS

DATABASE RECORDS

At the time of tasking transmittal, the only listed amphibian or reptile near the Illinois 83/127 corridor was for a Blanding's Turtle captured on 13 July 2011 in Sun Lake Forest Preserve, which is located approximately 1.6 miles north of the northern terminus of the corridor (EOR 174). Subsequently, on 09 June 2012, a gravid female Blanding's Turtle was observed crossing Illinois Route 83, approximately 500' north of East Grand Avenue. This record does not have an official EOR number but is currently referred to by its Record Tracking #2439. The female was taken to the Lake County Forest Preserve District (LCFPD) outdoor nesting enclosure where she laid eggs. The female was fitted with a radio-transmitter and released at Sun Lake Forest Preserve on 22 June 2012. The eggs are being incubated in captivity, and the hatchlings will be raised in captivity for a future release to a LCFPD property.

SITE SURVEYS

The corridor was traversed on 01 July 2012 to search for suitable habitats for Blanding's Turtles and other amphibians and reptiles. Collapsible hoop traps baited with canned sardines were placed in two water bodies (**Figure 1**). Four traps were placed in a pond north of Bretons Drive (WGS 84: 42.41213; -88.06892) that had some emergent vegetation around the periphery and was covered with duckweed (**Figure 1, Plate 1**). Two turtle traps were placed in a recently created retention pond (WGS 84: 42.37625; -88.05754) near Grayslake High School (**Figure 2, Plate 2**). Traps were pulled on 03 July 2012. Three captures of two Painted Turtles (*Chrysemys picta*) were made in the pond north of Bretons Drive. No turtles were captured in the retention pond near Grayslake High School.

During the writing of this report, LCFPD personnel told me (ARK) that they had been unable to pick up the signal of the relocated Blanding's Turtle near where she was released. On 28 August I attempted to radio-locate the individual from her capture location near the corridor. At this time a third pond north of the intersection of Illinois Route 83 and Illinois Route 132 (WGS 84: 42.41637; -88.07180) was trapped with two baited hoop traps overnight from 28-29 August 2012 (**Figure 1, Plate 3**). I was unable to pick up a signal of the turtle in or near the corridor. Two Painted Turtles were captured from the pond.

DISCUSSION/SUMMARY

The Blanding's Turtle, *Emydoidea blandingii*, is distinguishable from other North American species by its hinged plastron and bright yellow chin and throat (Ernst et al. 1994). The species is long lived, with individuals over 77 years of age having been documented in the field (Congdon et al. 2001). Females typically mature between 14 and 20 years of age (Congdon et al. 1983; Ross 1989). Blanding's turtles in northern Illinois are active from late March through October (Rowe and Moll 1991; Kuhns et al. 2007) with the greatest trapping success occurring from May through mid-July (Benda et al. 2007). Females lay only one clutch of eggs per year but may not nest annually. Throughout their range, *E. blandingii* occupy eutrophic habitats with clear water and abundant aquatic vegetation with adjacent uplands available for nesting (Ernst et al. 1994). Females can travel considerable distances (1620 m) from their activity areas to nest (Congdon et al. 1983; Ross and Anderson 1990; Joyal et al. 2001; Kuhns et al. 2006). Nests of up to 19 eggs are laid in sand or sandy loam soils with good drainage and low canopy cover (Ross and Anderson 1990; Kuhns et al. 2007). Within Illinois, *E. blandingii* was historically present in the extensive marsh systems of the northern half of the state (Kennicott 1855). Blanding's Turtles are listed as endangered in the state of Illinois (Illinois Endangered Species Protection Board 2011). Habitat loss, habitat fragmentation, and an increase in nest predators (e.g., raccoons) have all been implicated in contributing to the species' decline.

Despite the recent discovery of a gravid female Blanding's Turtle from within the corridor, I did not find suitable habitat for any threatened or endangered amphibian or reptile species in the Illinois Route 83 / Illinois Route 137 corridor. The female may have travelled from a considerable distance while searching for a suitable nesting location (perhaps from Sun Lake to the north, or from Grants Woods to the west – as reports of Blanding's Turtles occasionally come from both sites). An attempt to radio-locate the turtle

in the corridor on 29 August 2012 was unsuccessful. Although the retention pond does not appear suitable for any threatened or endangered species, it was sampled because this pond is located between Illinois Route 83 and a large natural wetland surrounding Grayslake High School. It is unlikely that Blanding's Turtles occur in the large wetland and have escaped the notice of science instructors at the school. Both of the other two ponds are too small to support populations of Blanding's Turtles and do not have adjacent natural upland habitat necessary for nesting.

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Figure 2. Location of retention pond (WGS 84: 42.37625; -88.05754) near Grayslake High School (red polygon) Lake County, Illinois trapped for turtles as part of the Illinois Route 83 (IDOT FAP 866) / Illinois Route 137 (IDOT FAP 352) amphibian and reptile resource assessment. The pond was trapped from 01 through 03 June 2012. No amphibians or reptiles were captured in this pond.



Plate 1. Lake County, Illinois pond (WGS 84: 42.41213; -88.06892) in the Illinois Route 83 (IDOT FAP 866) / Illinois Route 137 (IDOT FAP 352) corridor that was trapped for turtles from 01 through 03 July 2012 by INHS personnel A.R. Kuhns, J.S. Tiemann, and S. Jaworski. Two Painted Turtles were captured in this pond.



Plate 2. Lake County, Illinois retention pond (WGS 84: 42.37625; -88.05754) in the Illinois Route 83 (IDOT FAP 866) / Illinois Route 137 (IDOT FAP 352) corridor that was trapped for turtles from 01 through 03 July 2012 by INHS personnel A.R. Kuhns, J.S. Tiemann, and S. Jaworski. No turtles were captured in this retention pond.



Plate 3. Lake County, Illinois pond (WGS 84: 42.41637; -88.07180) in the Illinois Route 83 (IDOT FAP 866) / Illinois Route 137 (IDOT FAP 352) corridor that was trapped for turtles from 28 through 30 August 2012 by INHS personnel A.R. Kuhns and E.J. Kessler (pictured). Two Painted Turtles were captured in this pond.

