

# Shiawassee Refuge Uses Radio Telemetry to Study Blanding's Turtles

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The Great Lakes region is considered a stronghold for the Blanding's turtle. However, this turtle is listed as a threatened species in Michigan. Further, Blanding's turtle is listed as endangered in Missouri and threatened in Minnesota, Wisconsin, Iowa, and Illinois. Shiawassee National Wildlife Refuge provides a diverse complex of wetlands occupied by Blanding's turtles, including emergent marsh, wet prairie, forested bayous, shrub marsh, and vernal pools. Consequently, the refuge has an important opportunity to maintain, enhance, and restore Blanding's turtle habitat. However, little is known about the demographics and habitat use of the refuge's turtle population to guide habitat management decisions.



*An adult female Blanding's turtle. Kim Le Blanc; 5/2006*

The refuge began a program to assess its Blanding's turtle population in cooperation with the University of Georgia – Savannah River Ecology Laboratory (SREL) and the National Fish and Wildlife Foundation in 2005. Initial work documented important information including identification of wintering sites and early spring habitats. This year the refuge teamed with SREL, the Friends of Shiawassee NWR, refuge volunteers, and the East Lansing Ecological Services

Field Office to find out even more about its Blanding's turtle population by using radio telemetry to ascertain habitat use by turtles throughout the year.

Much has been learned already in the first year of this multi-year study. For example, adequate nesting habitat may be a primary population limiting factor. Two female turtles were observed attempting to dig nests in the middle of refuge roads and a third was observed carefully inspecting a road for a place to lay eggs. Further, no successful nesting attempts were documented at all. This information is especially important since the Blanding's turtle is characterized as a species with delayed sexual maturity, small clutch size, and low reproductive success.



*Jeremy Banfield of the East Lansing Field Office holds a Blanding's turtle affixed with a radio transmitter. Steven F. Kahl/USFWS; 6/2008*

Also, road mortality could be an important threat to refuge Blanding's turtles. The refuge is crossed by few public roads. However, at least one road appears to lie between turtle nesting habitat and the refuge. A gravid female Blanding's turtle was found dead on Swan Creek Road, just north of the refuge. A few weeks later, a year-old Blanding's turtle was found alive on the shoulder of the same road, less than one mile away.

A clearer picture is emerging about the life history of the Blanding's turtle at Shiawassee Refuge. However, important information is still needed to develop a conservation strategy, including general population size and age and sex demographics.



*One year old Blanding's turtle found crossing road north of Shiawassee Refuge. Kile Kucher; 7/2008*

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