

Blanding's Turtle Population Augmented at Shiawassee Refuge

August 25, 2009

The Great Lakes region is considered a stronghold for the Blanding's turtle. Still, this turtle is listed as a threatened species in Michigan. Further, the 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 contribute to Blanding's turtle conservation.



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

Even among turtles, the Blanding's is a long-lived species. In fact, these turtles have been documented to successfully breed past 70 years of age. Like most long-lived creatures they have a lower reproductive rate. Compared to most Midwestern turtles, Blanding's lay smaller clutches of eggs and lay less frequently. This strategy worked well for the species until roads were built across the landscape which increased the turtle's mortality rate. Perhaps more threatening to the species is the decreased nest success from a burgeoning raccoon population. It is very common for refuge staff and visitors to find turtle nests of all species that have been dug up by raccoons along trails and dikes.

Further, refuge turtles may lack sufficient nesting sites. An ongoing radiotelemetry study of eight female Blanding's turtles at the refuge found four of them attempting to nest in the middle of hard, gravel roads.



Blanding's turtle hatchlings. Steven F. Kahl/USFWS; 8/2009

Fifteen Blanding's turtle hatchlings were released on the refuge in 2009. This likely represents the biggest addition to this turtle's population on the refuge in several decades. These hatchlings came from two female Blanding's turtles that were found on the refuge laying eggs in locations where their survival was virtually impossible. In fact, at one site, two raccoons had to be repeatedly shooed away as the female laid. Thirty-three eggs were collected from these nests and were placed in incubators at refuge headquarters. Fifteen eggs hatched, which is about the average rate in the wild without predation.

The hatchlings were released at locations on the refuge with thick emergent and submergent vegetation. This vegetation provides good cover from potential predators and good habitat for invertebrate prey. The release sites were also near areas that the radiotelemetry study documented as Blanding's turtle overwintering habitat.



*Refuge SCEP employee Natasha Urban holds hatchling Blanding's turtles near release site.
Steven F. Kahl/USFWS; 8/2009*

The refuge hopes to continue the Blanding's turtle egg incubation project in future years. Hopefully, this augmentation will offset road mortality, raccoon predation, and poor nesting sites so that this rare species can continue to live a long time at Shiawassee Refuge.

Valuable technical support was provided by the University of Georgia – Savannah River Ecological Laboratory.