

Pennsylvania's *Not-so-bland* Blanding's Turtle

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photo-Andrew L. Shiels

Bland it is not—the Blanding's turtle in Pennsylvania is intriguing in many ways. The Blanding's turtle is known from the rather large *Emydidae* family, which is comprised of the semi-aquatic pond and marsh turtles. The Blanding's turtle is one of Pennsylvania's largest pond turtles, with the adult carapace (top shell) reaching lengths of 10.8 inches. The carapace is oblong, smooth, domed and dark with small yellow to tan spots that sometimes resemble slightly radiating "starbursts." This spotted pattern is thought to help it blend in to pond-like settings where duckweed is common. The plastron (bottom part of shell) is dark and has one hinge that allows it to partially close. Besides the rather large size of the Blanding's turtle, one striking visual feature that separates it from the eastern box turtle and other Pennsylvania turtles is its characteristic bright yellow chin, throat and long neck. The top and sides of the rather flat head are gray with some tan colored spots or mottling. The Blanding's turtle's jaw is slightly notched, and it has curious, protruding eyes. As with other pond turtles, the Blanding's turtle sports webbed feet that it uses for getting around in a watery world.

Blanding's turtles prefer slow moving to still water habitats, like ponds and emergent marsh complexes and slow-moving streams that contain soft, organic bottoms and abundant aquatic vegetation. Unlike most Pennsylvania turtles, the main food staples for this species are crayfish and snails. However, it is an opportunist that will also eat other aquatic insects, small fish, frogs, frog tadpoles and even some aquatic vegetation. Blanding's turtles often ambush their prey. The turtle will sit on the pond bottom and wait for an unsuspecting crayfish to walk within striking range. Then, with a quick thrust of its long neck, it will deftly strike the crayfish head first and quickly consume it.

Blanding's turtles are known to be shy and reclusive. They are diurnal, or active in the day. Like other pond turtles, Blanding's turtles are fond of basking in the sun on banks of ponds, muskrat lodges or logs where they can drop easily off into the water for a quick get-away if a predator gets too close. At night, they rest in the middle of the pond or marsh, safely suspended on or beneath aquatic vegetation. Beginning in late September and October, the Blanding's turtle will hibernate in shallow water partially submerged in the muddy bottoms of the pond. They emerge from their overwintering areas in the spring (mid-March) when water temperatures reach approximately 50 degrees F.

Like most rare species, the Blanding's turtle's number one threat across its range is habitat destruction—draining of wetlands and marshes, and disturbance of nearby upland habitats that provide nesting habitat. A critical problem that affects all turtles is nest predation, mainly from mid-sized predators such as raccoons, opossums, skunks and foxes, which excavate the nests and eat a large proportion of eggs and young turtles. Another form of significant mortality with Blanding's turtles across their range is roadkills. These turtles live in wetland and pond complexes and will move through these systems, which means crossing roads, especially during the breeding season when females are leaving the wetlands to find suitable upland areas (sandy or silty loam soils) to dig nests and deposit their eggs.

The North American range of the Blanding's turtle shows this turtle as mainly a northerly and mid-western (Great Lakes) turtle species. It has populations as far west as Iowa, Missouri, South Dakota and Nebraska. In the east, it occurs as far north as Nova Scotia and Maine and also occurs in New Hampshire, Massachusetts, southeastern New York and Ontario. In Pennsylvania, its historic range includes Erie and



photo-Tom Diez

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Crawford counties. However, Blanding's turtles have not been confirmed in Crawford County for over 100 years. This area has undergone extensive habitat manipulation since the early 1930s such as the damming of the Shenango River and flooding of Pymatuning swamp to develop Pymatuning Reservoir in 1935. It is still unknown if a population occurs in Crawford County. Recent studies have confirmed Blanding's turtles still exist in Erie County. However, this population is known from one area with very few individuals; population viability is a serious concern. Some scientists believe that the origin of the Erie population may be related to turtles that have floated across Lake Erie from Ontario on debris rafts. Others believe that these turtles were captive animals that were released. More study is needed to answer these questions.

The Pennsylvania status of the Blanding's turtle is a candidate species. This is a status designated for species whose current distribution is under study. Given their limited numbers, they could potentially be listed as

threatened or endangered, or if the population has been introduced or is not viable, they will be considered extirpated from Pennsylvania. A recent State Wildlife Grant project confirmed Blanding's turtles still exist in Erie County but not in Crawford County. However, given the large size and extent of the wetland complexes in Crawford County, more study is needed.

As part of an upcoming amphibian and reptile atlas project, the Mid-Atlantic Center for Herpetology and Conservation (MACHAC) and the Commission will have focal teams looking closely at the Blanding's turtle across its Pennsylvania range. The Commission is also working with several northeastern states (Massachusetts, Maine, New York and New Hampshire) on a regional conservation project that aims to study various aspects of the northeastern Blanding's turtle populations in the United States, including population monitoring, habitat management and population genetics, with hopes of determining the status and origin of the Pennsylvania populations. The Commission also plans to conduct radio telemetry studies on the Erie population to determine habitat use, focusing on locating nesting and overwintering areas. In areas where we know it already occurs, we plan to protect, conserve and enhance the Blanding's turtle and its habitat by working with other conservation partners to conduct more education and outreach and assist the turtles where we can through habitat enhancement including installation of habitat structures to optimize basking opportunities and creating nesting areas. If needed, we may need to augment these populations using turtles from neighboring states that have sustainable populations.

This rare, shy, yellow-chinned marsh turtle has been somewhat of a mystery in Pennsylvania. In the coming years, we hope to do what we can to further understand this species' status and protect, conserve and enhance the existing population. ☐



photo-Kathy Gipe