

Diamondback Water Snake - *Nerodia rhombifer*

By: Jeff LeClere

Status

THREATENED. It is illegal to kill or collect this species by law in Iowa. There are very few records for this water snake in Iowa. Please report sightings to us or the DNR.

Description

Diamondback water snakes are one of the larger medium sized Iowa snakes, and the largest Iowa water snake. They range in length from 48 to 63 inches and may be quite heavy bodied as adults. The dorsal ground color is green, olive, brownish, or grayish.

The term diamondback is rather misleading; instead of having diamond shaped markings down the back, it has a reticulated pattern. There are rather small (compared to other snake species) blotches found on the middle of the back and large bars that extend up from the ventral line. There are often small lines that connect the blotches to the bars. All of these markings are brown or grayish. Larger adults may be a solid brown or olive when they are dry.

The tail is ringed and the rings are the same color as the dorsal markings. The belly is entirely yellow or cream anteriorly changing to yellow with brown half-moon shaped markings. These markings may be sparse or absent in the center and become much more numerous at the edges of the belly. The labials are bright yellow. Newborn diamondback water snakes look like light versions of the adults.

Subspecies

The diamondback water snake, *Nerodia rhombifer rhombifer*, occurs in Iowa.

Range

The diamondback water snake is found only in southeastern Iowa near the Mississippi River. Any reports of this snake are appreciated.

Habitat

The diamondback water snake inhabits rivers, sloughs, ponds, backwaters, and oxbows. It does not live in clear gravelly streams, and seems to avoid heavily wooded ponds.

Habits

This is a rare water snake which may be mistaken for the venomous cottonmouth, which is not found in Iowa. This snake is diurnal, but during hot weather, it may become active at night. It may be observed basking upon branches, shrubs, tree roots, and along the banks of waterways. They are wary and will slip off their basking perch at any sign of danger and will dive to the bottom and anchor themselves to logs, branches, rocks, or other debris.

If cornered, they will flatten their jaws and bodies. They will strike and bite viciously and repeatedly. If picked up, they will release a very unpleasant musk and fecal matter, and in very nervous specimens, regurgitating any recently eaten meal. Even after being held for some time, they will not miss an opportunity to bite, and since they are rather large snakes they have long teeth that make the lacerations bleed profusely. The treatment, however, is only soap and water. These are non venomous snakes! The famous, and venomous, cottonmouth (or water moccasin), *Agkistrodon piscivorus*, is not found in Iowa. The farthest north cottonmouths have been recorded is central Missouri.

Diamondback water snakes are probably active from April to October, spending their winters underground.

Copulation probably takes place right after emergence from hibernation. Many males may court one female at the same time. The females are usually quite a bit larger than the males. The pair usually will select a basking perch such as a shrub or branch overhanging water for copulation. Matings have been observed on the banks or even in the water, however.

During breeding, both snakes may make undulating movements with their bodies and the pair may remain locked up for an hour or more. Young are born alive in late June into August. A female I found in Louisa County on --- was very gravid and was ready to give birth within the next week. The young are from 9 - 13 1/8 inches at birth (Conant, 1975) and are pugnacious like the adults. An average of 30 young may be produced in a single litter.

Food

Diamondback water snakes are active hunters and may hunt both day and night. They feed on a wide variety of animals associated with water. Fish, amphibians, baby turtles, young snakes, worms, leeches, insects, crayfish, and mammals are consumed. A wider variety of prey is utilized at higher temperatures. They hunt by patrolling the water next to the shore for food. They sometimes swim through a school of small fish with their mouths wide open and swallow anything they can catch or herd fish into a shallow area of water and then create a barrier with a loose coil of its body. These snakes are not constrictors and simply swallow prey alive.