

Turtle POWER



Prehistoric creatures covered in **armor**, turtles have many amazing tricks for survival.

By Mary Hoff

IMAGINE CARRYING YOUR HOME with you wherever you go. Imagine eating snails for breakfast, fish eggs for lunch, and crayfish for dinner. Imagine spending winter underwater, chin deep in mud, waiting for the ice above your head to thaw.

If all that sounds good to you, you'd probably make a great turtle!

With their sturdy shells, their whimsical faces, and their pondering paces, turtles are among the most interesting and observable of Minnesota's common creatures. Nine turtle species are native to the state, and each one has its own lifestyle and a unique set of traits that help it survive. Let's take a look!

LEFT: RICHARD HAMILTON SMITH. TOP: SPARKY STENSAAS.

Painted turtles (left) bask along a wetland edge. A wood turtle (above) rests.



Basking in the sun helps painted turtles warm up and rid themselves of leeches.

Turtles 101

A turtle is a reptile—an animal that breathes air and has scales. Like snakes, lizards, and other reptiles, Minnesota's turtles do not keep a constant body temperature, but warm up or cool down with their environment. Unlike other reptiles, they wear part of their skeleton on the outside of their bodies in the form of a shell.

Most turtles have five toes on each foot. They use their senses of sight and smell to help them find food. They don't have ears you can see, but they can sense sound. They don't have vocal cords, but some can make small sounds anyway.

Different Turtles, Different Places

Turtles have been around for more than 200 million years—and they lived at the same time as the dinosaurs. One turtle expert calls them “one of the greatest success stories in all of nature.”

Turtles live throughout Minnesota. Dif-

ferent kinds of turtles live in different places. Some prefer quiet, muddy ponds. Others like flowing streams. Some live a good portion of their lives on land instead of water.

In winter, some turtles sink to the bottom of a lake, pond, river, or wetland. They slow down their bodies so they don't need much oxygen to stay alive.

What's for Dinner?

When it comes to food, turtles are not very fussy. Most of them eat a variety of plants and animals, including fish, insects, and crayfish. Some will even eat dead things.

Turtles don't have teeth. But they do have rough edges on their jaws that they can use to catch, bite, and tear up prey.

Raccoons, skunks, coyotes, and foxes may dig up turtle eggs and eat them. Some animals eat adult turtles by chewing off any parts of their legs and head they can reach.



ALLEN BLAKE SHELTON
FAR RIGHT: LIURANDA BROWN, DNR. RIGHT: DEBORAH ROSE, DNR.

A radio-tagged Blanding's turtle (above) lays eggs in a cavity she dug in a cornfield. A Blanding's turtle hatchling (right) fits in a person's hand.

A New Generation

Most Minnesota turtles mate in the early spring. Several weeks after mating, the female turtle drinks a lot of water and then crawls onto land—often in the same area from year to year—to look for a sunny place with soil where she can build a nest. She digs a hole in the ground with her claws, and when the hole is deep enough, she backs into it. She moistens the soil by peeing on it, then lays a couple to over 50 leathery eggs. It might take her longer than three hours to lay all of the eggs. When she's done, she uses her hind feet to cover them with soil.

The sun beats on the nest, warming

the tiny turtles growing within the eggs. After about two months, the baby turtles poke their way out of the shell using a tool on their upper jaw called a *caruncle*, sometimes called an *egg tooth*. Some turtle species hatch in summer, dig their way out, and head for the nearest body of water. Others hatch later. They may stay in their underground nest for the winter, or they may dig out and winter on land.

As they grow and mature, the young turtles become familiar with a home range or territory that includes places where they feed, overwinter, mate, and nest—starting the cycle of life all over again.

Shell Story

Have you ever seen a picture or cartoon depicting a turtle escaping its shell? In real life, that's impossible. A turtle's shell is part of its skeleton, so it can't leave its shell behind any more than you can leave behind a finger or toe or rib.

Most turtle shells are made up of bone covered by *keratin*, the same material that makes up your fingernails. The shell comes in two parts: the top, known as a *carapace*, and the bottom, called the *plastron*. When threatened, a turtle draws its legs and head into the space between the carapace and plastron, where they are more protected. In many turtles the top and bottom are held together with a bridge. In some species the plastron is hinged, allowing the shell to close up tightly and protect the turtle's limbs.

When a baby turtle is developing in the egg, it forms plates called *scutes* that join together to create the form of the shell. Its ribs flatten out to form a platelike bone structure beneath the scutes. Most turtles have 54 scutes on their carapace and plastron.



The top of a turtle shell, the carapace (top), is made up of plates called scutes. The turtle's vertebrae and rib bones can be seen (middle) on the underside of the carapace. A snapping turtle (bottom) crosses a road.

TOP AND MIDDLE: CAROL HALL, DNR. BOTTOM: RICHARD HAMILTON SMITH.



COURTESY OF PETER LEETE, DNR-MNDOT LIAISON

Turtles, such as this painted turtle, often cross roads during the nesting season.

Turtle Troubles

In nature, turtles face threats from animals that eat turtle eggs and sometimes adult turtles.

In a world filled with people, turtles face other threats too. Turtles ran into trouble in Minnesota when people started destroying their habitat to make farms and neighborhoods. Today, laws protecting turtles and the places they live are helping them survive alongside humans.

One of the biggest threats turtles face from humans is being run over by cars and trucks. It's hard for a turtle to get across a busy road without being hit. Drivers should avoid running over turtles if they can do so safely. If it's safe to help a turtle across a road, you can do so by picking it up by the shell (only the rear part of a snapping turtle) and carrying it in the direction it's headed.

Here are some *other ways* you can help turtles thrive:

- Help keep lakes, rivers, fields, and forests free from pollution.
- Pick up trash and litter, which can attract turtle predators, from shores, beaches, and sandbars.
- Leave wild turtles in the wild, and don't release pet turtles.
- If you see a turtle lay eggs, surround the nest for a week or two with a cage or fencing to protect it from predators.
- If you see a Blanding's turtle or a wood turtle, take a picture and send it along with information on the date and location to the DNR at mbs.report@state.mn.us.

MINNESOTA Turtles

Painted Turtle

The painted turtle (*Chrysemys picta*) is Minnesota's most common turtle. In fact, it is one of the most common turtles in the United States. It gets its name from the bright orange, red, and yellow marking on its body and shell.

Painted turtles like to live in ponds and

lakes with soft bottoms. Their diet largely consists of plants, fish, and invertebrates such as insects and crayfish. They lay their eggs from late May to July in loose sand or soil, and the young begin to hatch in late summer. They often stay in the nest for the winter and emerge in spring.



Fun Fact

Painted turtles may live to be 50 years old or older.

ALLEN BLAKE SHELDON

Softshell Turtles

Sometimes called "pancake turtles," softshells are relatively flat. As their name suggests, their shells are rubbery.

Softshell turtles tend to spend more of their time in the water than other turtles do. They lurk on the bottom of a river, mostly buried in muck, with their tube-shaped snouts stuck out into the



Fun Fact

Because they spend so much time in water, softshell turtles are especially sensitive to pollution.

ALLEN BLAKE SHELDON



Fun Fact

Lines on map turtles look like those on a topographic map.

Map Turtles

Minnesota is home to three species of map turtles. The false map turtle (*Graptemys pseudogeographica*) and the northern map turtle (*Graptemys geographica*) are found mostly in the Mississippi River and waterways that drain into it. The

southern map turtle (*Graptemys ouachitensis*) is mainly found along the Mississippi River where it forms the border with Wisconsin.

Map turtles live on vegetation, insects, snails, and mussels.

air. They eat fish and invertebrates such as crayfish and worms.

The smooth softshell (*Apalone mutica*) grows up to 14 inches long. It is found mainly in or near the Minnesota River, the St. Croix River, and the Mississippi River south of the Twin Cities. The spiny softshell (*Apalone spinifera*) is also flat as a pancake, but it usually has bumps poking out of the front edge of its carapace. It tops out at about 18 inches.



Fun Fact

Minnesota's largest turtle, the snapper can grow to weigh 75 pounds.

MIKE DVORAK

Snapping Turtle

Snapping turtles (*Chelydra serpentina*) are found throughout Minnesota. They spend most of their time in the mud or lying on the bottom of lakes, ponds, and

streams, where they eat plants, fish, and other small animals. They have strong jaws that make them good at chomping their food.



Fun Fact

When feeding on earthworms, wood turtles stamp their feet on the ground. The worms come to the surface and the turtles then eat them.

SPARKY STENSAAS

Wood Turtle

The wood turtle (*Glyptemys insculpta*) lives in and along rivers and streams that run through forests. In Minnesota, it is found mainly along the eastern edge of the state. It spends more time on land than other

Minnesota turtles do, eating land plants and animals such as berries, snails, and worms. It is classified as a threatened species because habitat loss, roads, logging, and water pollution all threaten its survival.



Fun Fact

One Blanding's turtle lived to be at least 75 years old.

TOP AND BOTTOM: DEBORAH ROSE, DNR

Blanding's Turtle

You can tell a Blanding's turtle (*Emydoidea blandingii*) from other Minnesota turtles by its tall, dome-shaped

shell and its bright yellow throat. Blanding's turtles live in ponds, wetlands, and streams. 📖



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