Protect Our Turtles

Snapping Turtle

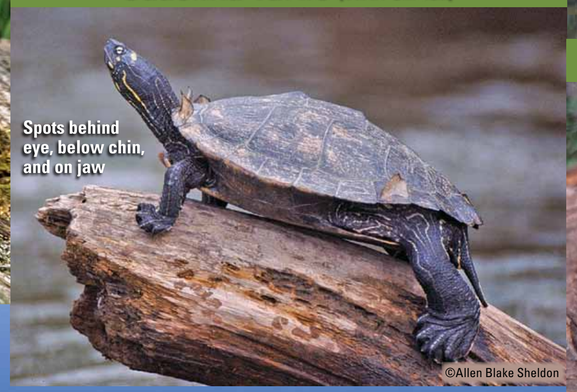
Painted Turtle

Blanding's Turtle

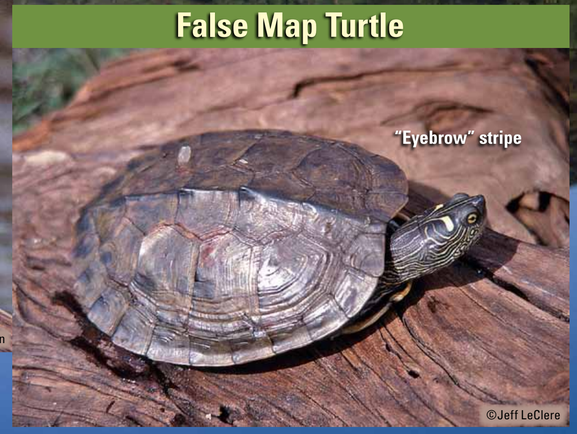
Wood Turtle

Northern Map Turtle

Ouachita Turtle (WAH-shi-tah)



False Map Turtle



Smooth Softshell

Spiny Softshell

- Preserve water quality
- Protect upland turtle habitat
- Leave turtles in the wild
- Do not disturb nesting turtles
- Avoid or brake for turtles if it is safe to do so
- Don't release pet turtles

innesota
DEPARTMENT OF NATURAL RESOURCES

St. Croix River ©Gary Alan Nelson

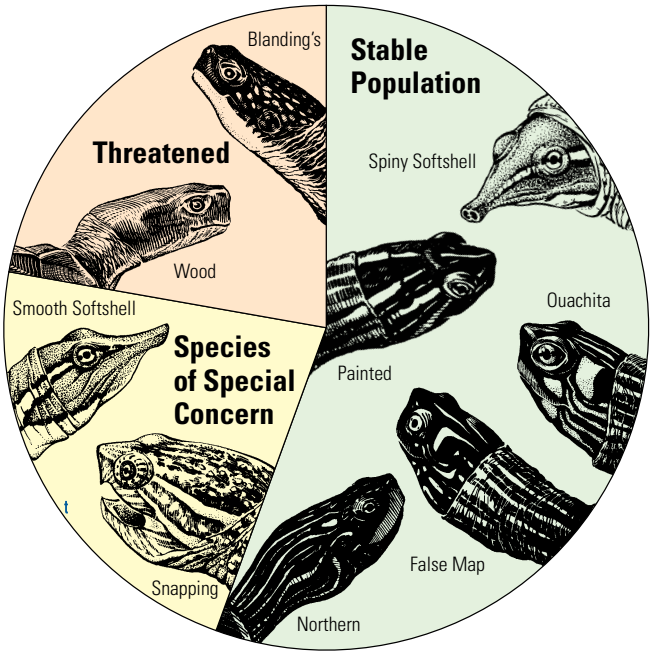
Trouble for Turtles

Fossil records show that turtles have been on our planet since the Triassic Period, over 220 million years ago. Although they have persisted through many tumultuous periods of Earth's history, from glaciations to continental shifts, they are now disappearing from the planet at an alarming rate: over 45% of turtle species are identified as *Threatened* or *Endangered* worldwide. Their plight is part of the ongoing worldwide loss of biodiversity, with about 30% of amphibians, 25% of mammals, and 12% of birds in a similar situation. Conservation action can successfully slow or reverse this trend for turtles.

Geologic Time Table

Years Ago	4,500,000,000	500,000,000	400,000,000	200,000,000	100,000,000	50,000,000
Era	Proterozoic and Archean	Paleozoic (ancient life)		Mesozoic (middle life)		Cenozoic (recent life)
Period	Precambrian	Cambrian	Ordovician	Silurian	Devonian	Permian Pennsylvanian Mississippian	Triassic	Jurassic	Cretaceous	Tertiary	Quaternary
Characteristic Life	First Record of Life	Age of Trilobites	Age of Straight Cephalopods	Age of Corals	Age of Fishes	Age of Amphibians	Age of Reptiles			Age of Mammals	

Note: timeline is not to scale.



In Minnesota, 44% of turtle species are listed as *Threatened* or *Species of Special Concern*. The majority of threats to turtles are caused by humans, which also means that we can work together to address turtle conservation issues and to help ensure the continued survival of these important animals.

Protect, Enhance, and Restore Turtle Habitat

The United States has more native turtle species than any country on Earth. In Minnesota, the land of 10,000 lakes, there are nine species of turtles. With careful stewardship we can help the rare species and keep common species common. The term, "hot spot," refers to areas where there is a higher likelihood for turtles to be killed by vehicles or other human activity. On roads, typical hot spots are: where roads bisect wetlands or lakes; where roads run parallel to a shoreline, or where roads split feeding areas from nesting areas. High traffic volume also increases mortality rates.

The term, "hot spot," refers to areas where there is a higher likelihood for turtles to be killed by vehicles or other human activity.

Actions You Can Take

- Protect nesting areas such as sandbars and upland nesting sites.
- Minimize mowing until late summer, especially at known nesting sites.
- Leave fallen logs in sunny aquatic locations for basking turtles.
- Avoid use of riprap and retaining walls, these are major turtle barriers.
- Protect water quality by reducing chemical usage, choose least toxic chemical and avoid drift.
- Reduce stormwater runoff by installing rain gardens, storm water retention ponds, or landscaping with native vegetation.
- Stop aquatic hitchhikers—drain, inspect boats and equipment, remove invasive species.
- Contact your local natural resources offices about habitat conservation options.
- Purchase Duck Stamps to help protect turtle habitat or support organizations that protect habitat.

Protect Turtle Nests

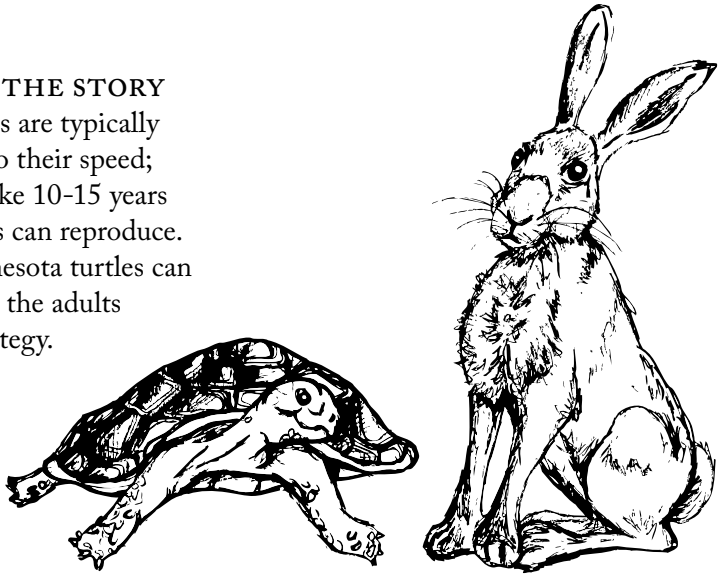
Predation on turtle nests usually occurs within 48 hours after the eggs are laid. Most eggs are eaten by predators, and occasionally nests are lost to flooding. In some areas, nest predation averages 80-90% and Wood Turtle populations can have 100% nest mortality resulting in zero offspring for several years in a row. Nests more than a week old probably do not need additional protection, unless they are in a particularly vulnerable spot.

Turtles lay their eggs in May and June. Turtle egg incubation takes 2-3 months and some hatchlings will not come out until the following spring. Turtle nests can be protected from predators by covering them with a wire fence/cage. It is important that the fencing be removed before August 1st so the young turtles can escape from the nest when they hatch. For more information on protecting turtle nests: mndnr.gov/reptiles_amphibians/turtles. Under Blanding's Turtle, click on the Environmental Review nest fact sheet.

A simple cage can be built to protect turtle eggs.

Slow By Nature

As characterized by the story of *The Tortoise and the Hare,* turtles are typically slow creatures. This isn't limited to their speed; they also mature slowly. It may take 10-15 years before individuals of some species can reproduce. In long-lived species (some Minnesota turtles can live to be 85 years old) protecting the adults is critical to any conservation strategy. A female turtle may produce as many as 500 eggs during her life. Losing even a few of these long-lived females, through habitat loss or direct mortality, can seriously jeopardize the population.



Turtles have relatively long lives with slow rates of reproduction. The loss of only a few adults can severely impact a population.

Major Cause of Decline

Habitat Loss and Degradation

Many turtles have small home ranges; they typically do not travel far from "home." This heightens the risk of population decline when habitat changes occur. Habitat of turtles includes the waters where they live and the surrounding land where they nest. These areas can be subject to many types of human alteration, such as shoreline alteration, wetland loss, and development of upland habitat for agriculture or homes.

When habitat is lost or degraded, local turtle populations can become separated making places to feed, mate, or nest harder to find. This contributes to population instability and over a relatively short time, can lead to population declines of even the most common species. Remnant, very old turtles may survive, but with no upland habitat to complete their life cycle, they no longer produce young.

Habitat degradation can take many forms. Riprap or walls built along shores can be a death trap for hatchling turtles on their way to water. Turtles need sunny, open areas to lay their eggs. Planting sod or trees along shorelines can force females to travel further to lay their eggs or next in unsuitable sites such as along roads or in crop fields.

This Painted Turtle is traveling the same route but the neighborhood is changing.

Threats to Turtles

Turtle mortality is most commonly seen on roads; however that is not the only place they are inadvertently killed. Turtles are victims of agricultural machinery and fishing practices. Predators, such as raccoons and skunks also prey on turtle nests.

All turtles lay their eggs on land, which makes them vulnerable to human activity and predators.

Invasive Species and Diseases

When non-native animal species come into contact with native turtle species, they can compete for food and nesting sites. One invasive turtle species potentially affecting native turtles is the Red-eared Slider. These turtles are commonly found in pet stores but are not native to Minnesota, and have been released into the wild where they are competing with native turtles. It is illegal to release non-native species into the wild. In addition, captive native turtles should not be released because they may carry diseases.

Non-native plants can alter habitats where turtles live, which can affect the availability of their food, water, nesting sites, or shelter.

It is illegal to possess Blanding's or Wood turtles.

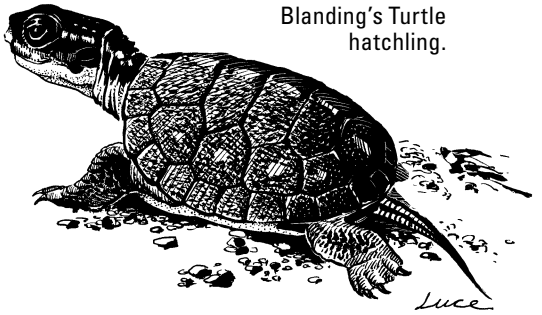
Chemical Pollution

According to a Minnesota Pollution Control Agency study, turtles from the Mississippi River in southeastern Minnesota contain high levels of the toxin *polychlorinated biphenyl* (PCB). Consuming turtles with high levels of PCBs can be dangerous to pregnant women and children. Unfortunately there is little information available about long term impacts of these chemicals on turtles.

Harvesting Pressure

Harvesting turtles from the wild for use as food, pets, or for medicinal purposes can contribute to population declines. Harvest of Painted Turtles in Minnesota have historically exceeded 50,000 per year during peak harvest years (1994 and 1998). Today, commercial harvesting is being phased out in Minnesota. In 2010 there were only 29 licensed turtle harvesters remaining in the state.

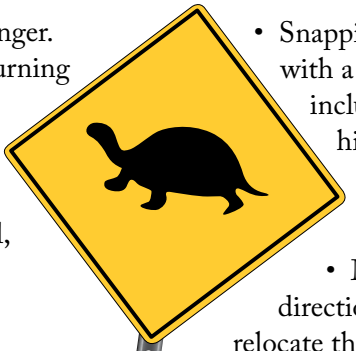
More than 50,000 Painted Turtles have been harvested annually in Minnesota.



Blanding's Turtle hatchling.

Helping Turtles Cross the Road

- Leave them alone if they are not in danger. Turtles crossing roads in late-May and June are often moving to familiar nesting locations. They know where they are going.
- Don't put yourself or others in danger. Simply pulling off the road and turning on your hazard lights may alert other drivers to slow down.
- If you decide to help the turtle cross the road, turn on your signal, slowly pull off the road, turn on your hazard lights, and watch for approaching traffic.
- Pick up the turtle by the back of its shell, NOT by the tail. (Picking up a turtle by the tail can damage their spinal cord.)
- Use caution when handling turtles. All turtles can bite, but Snapping Turtles and Spiny Softshells bite harder and more often.
- Snapping Turtles can be moved with a snow shovel. Other options include picking them up by their hind legs or having them bite down on a stick and carefully dragging them to safety.
- Move the turtle in the direction it is heading. Do not relocate the turtle to a new area, even if the habitat seems unsuitable.
- Wash your hands after handling a turtle.



©Peter Leete

Report turtle sightings to the DNR.

Turtles are tracked to identify movement patterns, behavior, and habitat usage.

Amphibians and reptiles are particularly vulnerable to impacts from roads. Roads can separate foraging areas from breeding or nesting grounds.

Help the DNR Keep Turtle Records

The DNR uses the location of live or road-killed turtles to document species occurrences and help identify areas of high road mortality. Road-killed specimens should be photographed top and bottom and sent to mcbs.e-report@state.mn.us. Do not handle live turtles when taking a photo, especially nesting females. Include an accurate description of the location or a map with the photo voucher.

Laws Protecting Turtles

All turtles are "protected wild animals" under Minnesota state law (MS97A.015); certain restrictions apply to possessing them. Throughout the state, turtles and other wildlife are protected in national parks, state parks, and state scientific and natural areas. On any public lands, check with the land manager for details.

Under Minnesota's Endangered Species law (MS84.0895) the Blanding's Turtle and the Wood Turtle are classified as Threatened Species. The laws and rules prohibit taking, purchasing, importing, possessing, transporting, or selling these species, including their parts, without an Endangered Species Permit. "Taking" includes pursuing, capturing, or killing.

©Gary Alan Nelson

A Painted Turtle hatchling.

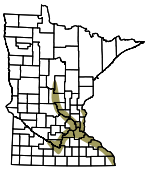
Check the Minnesota Fishing Regulations for current laws regarding harvest or other possession of turtles. Resident licensed anglers and children under 16 may take by angling or by hand, possess, and transport Painted Turtles and Snapping Turtles for personal use. Harvest by traps, nets, or other equipment for personal use requires a recreational turtle license in addition to an angling license. Painted Turtles and Snapping Turtles are also the only species that may be harvested commercially. A DNR permit is required to collect turtle eggs from natural nests. Residents under age 18 may take, possess, rent, or sell up to 25 turtles for use in a nonprofit turtle race (excluding Threatened or Endangered Species).

The Snapping Turtle possession limit is three. Minimum size limit is 12" in shell length. Snapping Turtles may not be taken during May and June.

Painted Turtle maximum size limit is 4" and maximum size limit is 5½" in shell length, except those used in turtle races may be of any length greater than 4".

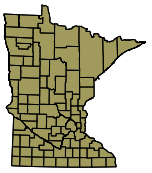
Turtle Distribution

What part of Minnesota is your favorite turtle from? These maps show where the nine different turtle species live in Minnesota (in their preferred habitat).



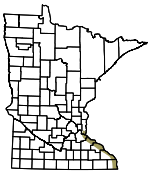
Northern Map Turtle
Graptemys geographica

Prefers rivers.



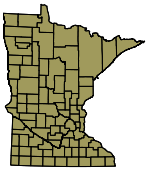
Snapping Turtle
Chelydra serpentina

Prefers lakes but will use all three habitats.



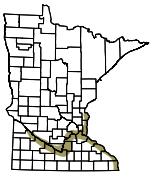
Ouachita Map Turtle
Graptemys ouachitensis

Prefers rivers.



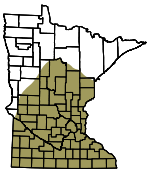
Painted Turtle
Chrysemys picta

Prefers lakes but will use all three habitats.



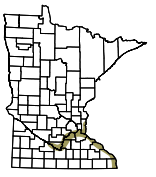
False Map Turtle
Graptemys pseudogeographica

Prefers rivers.



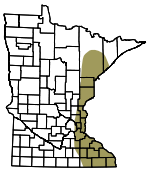
Blanding's Turtle
Emydoidea blandingii

Prefers marshes, meandering streams, seasonal pools, and uplands.



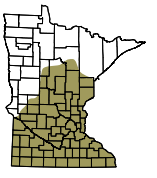
Smooth Softshell
Apalone mutica

Prefers rivers.



Wood Turtle
Glyptemys insculpta

Mainly a terrestrial turtle, prefers clear, sandy-bottomed streams for hibernation.



Spiny Softshell
Apalone spinifera

Prefers rivers. Spiny Softshells are more common in Minnesota than Smooth Softshell.

For More Information

This is a publication of the Minnesota Department of Natural Resources, published in cooperation with Partners in Amphibian and Reptile Conservation (PARC).

Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4040
651-296-6157 (Metro Area)
1-888-MINNDNR (646-6367) (MN Toll Free)
mndnr.gov

Websites

MN DNR

MN's Native Turtles: **mndnr.gov/reptiles_amphibians/turtles**

MN Turtle Research: **mndnr.gov/eco/nongame/projects/research_reports/reptiles.html**

Field Guide to Reptiles & Amphibians of Minnesota & Iowa: **herpnet.net**

Roadsides for Wildlife: **mndnr.gov/roadsidesforwildlife**

Best Practices for Meeting DNR Waters Permit (GP 2004-0001): **mndnr.gov/waters**

Restore Your Shore: **mndnr.gov/restoreyourshore**

The Waters Edge—Helping fish and wildlife on your lakeshore property: **mndnr.gov/shorelandmgmt**

Aquatic Hitchhikers: **mndnr.gov/invasives**

Midwest PARC

Partnership for Amphibian and Reptile Conservation: **mwparc.org**

Turtle Conservation and Raccoons: **mwparc.org/products/raccoons/**

The Year of the Turtle: **parcplace.org**

Federal Highway

The Wildlife Vehicle Collision Reduction Study (Report No. FHWA-HEP-09-022) **fhwa.dot.gov/environment/hconnect/wvc/index.htm**

Books

Turtles and Turtle Watching for the North Central States by John J. Moriarty, 2004, published by the Minnesota Nongame Program.

Amphibians and Reptiles Native to Minnesota by Barney Oldfield and John J. Moriarty, 1994, University of Minnesota Press.

Turtles in Minnesota, Natural History Leaflet Number 9—James Ford Bell Museum of Natural History by John J. Moriarty, 1989.

Acknowledgements

Written by Carmelita Nelson, Roadsides for Wildlife Program, DNR, carmelita.nelson@state.mn.us; Deanna H. Olson, US Forest Service, Pacific Northwest Research Station, dedeolson@fs.fed.us; A. Ross Kiester, The Turtle Conservancy and John L. Behler Chelonian Center; ross@turtleconservancy.org.

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