



## REPTILES

Status: Common, Native Resident

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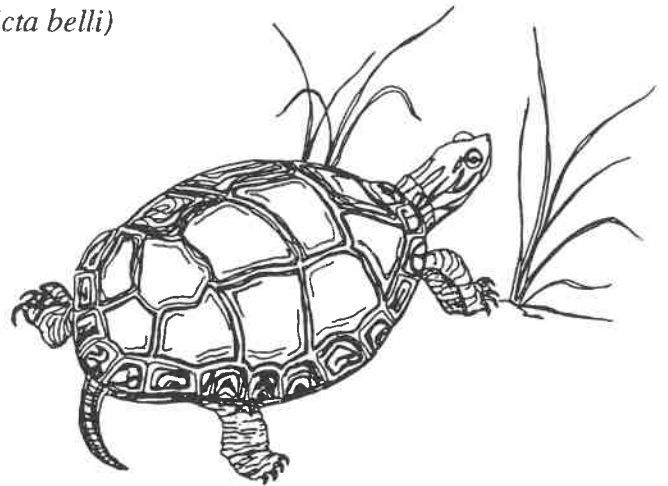
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# WESTERN PAINTED TURTLE

(*Chrysemys picta belli*)

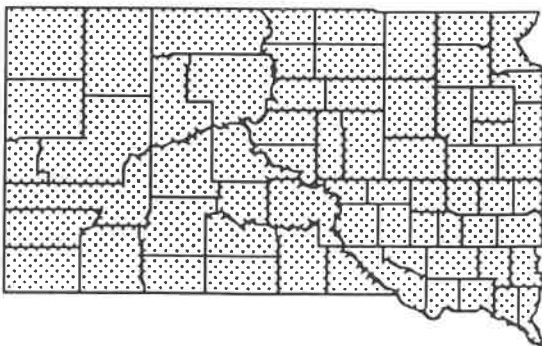
## Description

Western painted turtles are called painted turtles because their lower shell is brightly colored in red with yellow and olive designs. The olive or black top shell is oval, slightly flattened and smooth. They do not have a ridge down the middle of the top shell as young snapping turtles do when they are the same size. Western painted turtles are the largest of the 4 species of painted turtles and the species with the most intricate pattern on their bottom shells. Their length ranges from about 4 to 10 inches (10 - 25 cm). Painted turtles are *aquatic* with webbed feet for swimming. They can also be identified by the yellow lines of approximately equal width on their necks that continue on to the head.



Painted turtles are the most widespread turtles in North America. The western painted turtle is found throughout South Dakota wherever there is permanent water.

## Distribution



## Natural History

Painted turtles spend most of their time in shallow streams, lakes and rivers. They can also be found in prairie sloughs, cattle tanks, and farm ponds. Water that is slow-moving with a soft, muddy bottom with vegetation and submerged logs is ideal habitat for painted turtles. Painted turtles can occasionally be found attempting to cross highways in the summer. Why would an *aquatic* turtle be on a highway? These are usually females attempting to travel to nesting sites to lay their eggs. It is best not to transport or

keep them, but simply to let them be or help them cross the roadway.

Painted turtles are mainly *carnivorous*, but as they mature they eat more vegetation. They forage for insects, crayfish, small *mollusks*, worms, minnows, and *aquatic* plants. They are also scavengers that eat *carrion* and clean up much of the organic garbage of ponds, thus keeping the water fresh. Turtles do not have teeth and simply swallow their food whole or tear it with their beak or claws.

Like all *reptiles*, turtles are cold-blooded and cannot control the temperature of their bodies. Painted turtles are basking turtles, which means they spend as much time as they can in the sun to warm themselves after a long swim or a chilly night. They bask on a log or rock with their necks and legs stretched out and their toes spread wide apart to catch as much of the sun's warmth as possible. Basking also allows their body to produce vitamins and helps to kill fungi. Sometimes, if good sunning space is scarce, one turtle sprawls on top of a larger one's shell. Basking turtles are largely *diurnal*. Among the adaptations turtles have for living in water is the ability to slow down their heartbeat when they are underwater so that their body needs less oxygen.

Western painted turtles survive the winter by *hibernating*. In the fall they put on extra fat and, as the temperature drops, they gradually become less active. Finally they burrow deep into the mud at the bottom of ponds and go into hibernation. Scientists have found that the blood of *hibernating* turtles actually changes. Like the antifreeze used in the winter to keep the water in car radiators from freezing, turtle blood changes so that it can withstand cold temperatures. As a result, turtle body temperatures can drop to only a few degrees above freezing -- much lower than that of most animals that *hibernate*. As they warm up, turtles wake up and slowly become active. Early warm spells can be dangerous because if

they wake up too soon, a sudden return to cold weather may catch them unprepared and they may freeze. In fact, winter weather can be the biggest danger a turtle faces in its adult life. Painted turtles are hardy though, and it is not unusual to see them swimming under ice during the winter.

Painted turtles mate from May to July, and lay 1 to 2 clutches of eggs a year. Mature males are smaller than the females and have elongated claws on their forefeet. In courtship, the male swims to the front of the female and caresses the sides of her head with the backs of the claws on his outstretched forelegs. After mating, the female travels to nesting grounds that have been used for generations. The mother's desire to lay her eggs in a certain place is very strong. This can be a hazardous time as she will try to cross any barrier including, backyards, fences and busy highways to reach her nesting site. Turtles are occasionally hit by cars as they cross busy roads on their way to lay their eggs. The mother turtle often waits until the middle of the night and lays her eggs in the safety of darkness.

Using her hind legs, she digs a nest 4 to 6 inches (10-15 cm) deep in the soil in which she lays 5 to 15 eggs. It may seem strange that an aquatic turtle lays its eggs on land. However, this is a requirement for all reptiles; their shelled eggs would drown if laid under water. Covering the nest, she packs down the loose soil with her body. She may pack the soil for quite a distance in order to confuse predators. Having finished her maternal duties, the mother turtle returns to her *aquatic* home. The ten week incubation is not a safe time for the turtles in the eggs although they are buried. During incubation the leathery, roundish eggs may be found and eaten by foxes, skunks, raccoons or other animals. The nest may also be flooded during heavy rains and the eggs washed away, or the eggs may dry out if they are not buried deep enough. The incubation temperature of the eggs determines the sex of the turtle

hatchlings. About two-thirds of the hatchlings will be male if the eggs are kept at 82 degrees F (28 degrees C), two-thirds of the hatchlings will be female if the temperature is kept above 86 degrees F (30 degrees C) and a temperature between 82 and 86 degrees F (82-30 degrees C) will produce mixed male and female clutches.

Turtle hatchlings are tiny, about the size of a quarter. Once the turtles are out of their egg shell, they climb up through the soil or sand to the surface. They set out to find water and, even if they cannot see the water, they seem to know instinctively in which direction to go. This is another dangerous time in the lives of young turtles. Hawks, gulls, raccoons, skunks and even fish see the tiny baby turtles as an easy meal. If they survive, the males will reach maturity in 2 to 5 years and the females in 4 to 8 years. Painted turtles may live 20 years.

## Significance

The Lakota name for turtle is "keya" and they are often portrayed in Lakota stories, artwork and crafts. Western painted turtles are beautiful animals that

are frequently sold in pet shops. They are an important link in the food chain as both predator and prey. Although hardy themselves, western painted turtles consume quantities of amphibians and small invertebrates which can be very sensitive to pollution and water quality. Maintenance of high quality wetlands is probably the most important thing we can do to preserve western painted turtles. Painted turtles are no threat to game fish although they may steal the bait off a fishing line.

## Management Considerations

The collection of many species of amphibians and reptiles is regulated by state fishing laws. If you have a fishing license it is legal to collect these animals for personal use. For commercial harvest, you would need a commercial collector's permit. Some people like to keep turtles for pets. Turtles can carry salmonella, a bacterial disease that can cause human intestinal illness. For this reason, keeping turtles for pets is discouraged.

## Glossary

**Aquatic** - referring to fresh water.

**Carnivorous** - meat-eating.

**Carrion** - dead or decaying animal matter.

**Diurnal** - active during the daytime rather than at night.

**Hibernate** - to pass the winter in a dormant or inactive state with lowered metabolism and heart rate.

**Mollusks** - invertebrate animals, most of which have calcium carbonate shells, such as clams.

**Reptiles** - the class of vertebrate animals that have scaly skin and either lay eggs on land, or give birth to live young, such as snakes, lizards, and turtles.

### **Selected References**

- Conant, Roger, 1975. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. The Peterson Field Guide Series. Boston. Houghton Mifflin Co.
- Halliday, Tim and Kraig Adler, ed., 1986. The Encyclopedia of Reptiles and Amphibians. New York: Facts On File.

### **Selected Resources for Teachers**

- Caduto, Michael and Joseph Bruchac. Keepers of the Earth: Native American Stories and Environmental Activities for Children. Golden, CO: Fulcrum Press. 1988.
- Caduto, Michael and Joseph Bruchac. Keepers of the Animals: Native American Stories and Wildlife Activities for Children. Golden, CO: Fulcrum Press. 1991
- Aquatic Project Wild has some excellent activities related to turtles, especially "Turtle Hurdles" and "Migration Headache" and "Are You Me?".
- There are several Internet pages about turtles. The Gulf of Main Aquarium has a page called All About Turtles: <http://octopus.gma.org/turtles/tale.htm>.

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