

Northwestern Pond Turtle (*Actinemys marmorata*)



Photo Credit: Keith Kohl

Range and Distribution

The range of the northwestern pond turtle is primarily west of the Sierra Nevada and Cascade Mountains, stretching from Puget Sound, Washington to Baja California, at elevations ranging from sea level to about 5,000 ft. There are small populations that persist in watersheds east of the Sierra Nevada and Cascade Mountains.

In Oregon, they primarily are found west of the Cascades at elevations lower than 6,000 feet. The largest populations are located in the drainages of the Willamette, Umpqua, Rogue, and Klamath Rivers, but smaller populations are scattered throughout lowland aquatic habitats of western Oregon and the east Cascades.

Habitat Characteristics

Northwestern pond turtles are closely associated with aquatic habitat with muddy bottoms and available basking sites. They are most common in still or slow-moving water, particularly around dense vegetation, which provides a high density of invertebrate prey. Submergent and emergent aquatic vegetation are important habitat components that provide safe nursery habitat for young turtles with plenty of food and cover. Underwater refugia such as submerged logs and cut banks provide protection from underwater predators.

Overwintering sites are along stream banks, and nesting sites are typically within 200 yards of water in areas with little vegetation and plenty of sunlight. Nesting sites are in sparse vegetation with sandy, silt, or gravel soils, and good solar exposure.

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Species Description

The northwestern pond turtle is a mid-sized, semi-aquatic freshwater turtle and is one of Oregon's two native turtle species. They have a smooth, broad carapace (upper shell) that is drab brown to olive in color and low in profile. The plastron (lower shell) is typically light yellow in color, sometimes with a variable number of darker blotches. Their head and limbs are variable in color, typically gray to black with yellow speckling. Males have a lighter colored chin and throat than females, and a longer, thicker tail than females. Adults may grow up to ten inches in length. They are usually seen basking on rocks or floating logs or vegetation in slow-moving bodies of water.

Similar species in Oregon are the western painted turtle and the red-eared slider (a non-native species). All three species can sometimes be found in the same bodies of water, or even on the same log. From a distance, all three species can look similar. Red-eared sliders and western painted turtles are more vibrantly marked than northwestern pond turtles. It may be difficult to distinguish between native northwestern pond turtles and older red-eared sliders whose red markings have faded. A key characteristic to focus on is the shape of marginal scutes (plates that make up the shell); red-eared sliders have serrated marginal scutes above their tail, while northwestern pond turtles' are smooth.



Diet and Foraging

Northwestern pond turtles are omnivores and dietary generalists, with a variable diet that consists mainly of aquatic invertebrates and larvae, as well as some plants, small fish, frogs, and carrion. They are opportunistic feeders, and forage exclusively in water. They have sharp ridges on their jaws that help them tear their food.

Life History and Ecology

Northwestern pond turtles are a long-lived species that mature slowly. Individuals have been recorded living over 40 years. They have a low reproductive rate and delayed sexual maturity. Male northwestern pond turtles typically reach reproductive maturity at five to nine years, while females reach reproductive maturity after seven to ten years.

In Oregon, the nesting season occurs from May through mid-July. Breeding takes place underwater and occurs from late spring to mid-summer. When female turtles are ready to lay their eggs, they fill their bladder with water and emerge from the water to find a suitable nesting spot. Suitable sites are found near their aquatic habitat in areas with sparse vegetation and good solar exposure. Once they select a site, they empty their bladder on the soil and dig with their back legs to create a shallow nesting cavity where they will deposit their eggs. Clutches have been recorded with one to thirteen eggs, with an average of six eggs per clutch. Multiple clutches can be laid in a season. After depositing their eggs, they use the moist soil to create a nest plug which they use to seal their eggs into the chamber for incubation. Eggs receive no parental care, and nests are vulnerable to predation. After the eggs hatch in fall, the young may overwinter in the safety of the nests.

Northwestern pond turtles bask on floating logs, vegetation, or on muddy stream banks to maintain body temperature. Like most reptiles, they rely on the environment to maintain their body temperature (they are ectothermic, or “cold-blooded”). During the winter when it is cool and their metabolism slows down, they become semi-dormant and will overwinter in moist terrestrial and aquatic habitats. They bury themselves in mud, under stream banks, or in leaf litter. In warm weather, they will come out to bask or move to different locations.

They are primarily aquatic, but may move overland when ephemeral waterbodies dry up, to find nesting habitat, and to seek out sites for overwintering. They are not territorial, and often are found sharing basking surfaces with turtles from the same species as well as other species. Home range size for individuals is highly variable, and depends on the size of the aquatic system. They are capable of long distance seasonal movements between aquatic and terrestrial habitats, and long distance dispersal. Overland distance between aquatic and terrestrial habitat can be more than one mile.

Predators of northwestern pond turtles include raccoons, otters, ospreys, coyotes. Hatchlings are eaten by a variety of predators, including corvids, American bullfrogs, weasels, and large fish.

Fun Facts

- If they run out of basking sites on logs or rocks, northwestern pond turtles sometimes conserve warmth by stacking on top of one another.
- Hatchlings are only about the size of a quarter, making them very vulnerable to predators for the first few years of their lives.
- Similar to a fingerprint, turtles have a unique pattern on their plastron that can be used to identify unique individuals.
- At the first sign of danger, basking turtles will dive for cover under water. When threatened, pond turtles can retract their head and legs into the protection of their hard shell

Conservation

Northwestern pond turtles are an Oregon Conservation Strategy Species (Species of Greatest Conservation Need), a state Sensitive Species, and a Federal Species of Concern. Factors influencing northwestern pond turtle populations include loss or alteration of habitat, increased predation of nests and hatchlings from historical levels, invasive species, and road mortality. Introduced species, including bullfrogs and smallmouth bass, predate young turtles. Released pet turtles are a threat to native species because they compete for limited resources and can transmit diseases.

During the breeding season, be on the lookout for turtles crossing the road. If you choose to help a turtle cross the road, be sure to bring it in the direction of travel and leave it on the side of the road; females are driven to get to nesting habitat and deposit their eggs, and they know where they want to go! Wash your hands after you handle any turtles. Otherwise, don't disturb turtles when you see them.

Many of Oregon's northwestern pond turtle populations occur on private land. If you have northwestern pond turtles or their habitat in your backyard, you can take simple steps to enhance the habitat to encourage more turtles to make their home there. You can create basking habitat in waterbodies by putting out logs or branches, remove invasive plants around ponds, and create sunny places.

For more information about the conservation status of northwestern pond turtles including special needs, limiting factors, data gaps, and conservation actions, refer to the Oregon Conservation Strategy.