

# FIELDNOTES

## Northern Mexican Gartersnake

**DESCRIPTION:** The northern Mexican gartersnake (*Thamnophis eques*) is one of five gartersnake species in Arizona. The medium-sized, nonvenomous snake has a brown or olive-colored body up to 44 inches long, with females measuring larger than males. There is a light-colored crescent shape just behind the mouth. A cream stripe runs down the snake's "dorsum" or back, and another stripe runs laterally down each side. The location of the side stripes allows biologists to distinguish this species from the three other striped gartersnakes in Arizona. The narrow-headed gartersnake (*T. rufipunctatus*) is the only gartersnake in Arizona that does not have stripes.

Similar to all gartersnakes, the northern Mexican gartersnake has "keeled" scales, meaning each individual scale has a narrow ridge running down the middle. These ridges make the snake appear rougher and less shiny than those snakes with smooth scales.

**DISTRIBUTION:** Northern Mexican gartersnakes range from central to southeastern Arizona into extreme southwestern New Mexico. This species also occurs in the highlands of western and southern Mexico. Historically in Arizona, this species was broadly distributed throughout parts of the Colorado and Gila river drainages; however, current populations are restricted to a few locations along the Verde River and its tributaries; the Bill Williams River; and streams, cienegas and ponds in the Sky Island mountain ranges of southeastern Arizona.

**HABITAT:** In Arizona, northern Mexican gartersnakes prefer densely vegetated habitats surrounding streams, springs, cienegas or earthen cattle tanks between 3,000 and 5,000 feet elevation. They also use rock or boulder piles near these areas for protection against predators and weather. Vegetation zones inhabited include Sonoran Desert, semidesert grasslands, chaparral and Madrean evergreen woodland.

**BIOLOGY:** This diurnal snake is considered both aquatic and terrestrial and is most active during warmer months of the year. It forages on frogs, toads, tadpoles, fish, invertebrates and the occasional small rodents and lizards. If threatened or captured, the northern Mexican

gartersnake often flattens its head and body while emitting a foul-smelling musk from glands near the base of the tail.

Many people believe all reptiles are "oviparous," meaning they lay eggs. This is true for many species native to Arizona, including gophersnakes, kingsnakes, Gila monsters and chuckwallas. However, gartersnakes are "viviparous," which means they give birth to live young. Pregnant northern Mexican gartersnakes normally move to warmer areas a few meters away from water and give birth between June and early July.

**STATUS:** The northern Mexican gartersnake has declined throughout its range due to habitat loss and the presence of nonnative aquatic predators such as crayfish and American bullfrogs. In 2014, the U.S. Fish and Wildlife Service listed the northern Mexican gartersnake as threatened under the Endangered Species Act of 1973.

**MANAGEMENT NEEDS:** The Arizona Game and Fish Department works with a variety of partners to manage this species, but more data on habitat use and population dynamics are needed. To gain a better understanding, the department implements monitoring projects that include the use of telemetry and mark-recapture. These techniques — in conjunction with genetic analysis, removal of nonnative predators and habitat enhancement — will provide insight on the conservation needs of the northern Mexican gartersnake. The department also partners with the Arizona-Sonora Desert Museum and others in the private sector to develop captive breeding colonies for future re-establishment in the wild. —Christina Akins



ILLUSTRATION BY  
ZACKERY ZDINAK