ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Animal Abstract **Element Code: ARADB07010**
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Coluber constrictor* Linnaeus, 1758
COMMON NAME: North American Racer

SYNONYMS:
OTHER COMMON NAME: Eastern Racer
Racer
Culebra-corredora constrictor (Spanish)
FAMILY: Colubridae

AUTHOR, PLACE OF PUBLICATION: Linnaeus, C. [= Linné, C. von] 1758. Systema naturæ per regna tria naturæ, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Tomus I. Editio decima, reformata. Laurentii Salvii, Holmiæ. 10th Edition: 824 pages.

TYPE LOCALITY: "America septentrionale," restricted to "Canada" by Schmidt (1953), but Dunn and Wood (1939) indicated that the type locality is probably in the vicinity of Philadelphia.

TYPE SPECIMEN: Holotype not designated (Wilson 1978)

TAXONOMIC UNIQUENESS: The only species in the genus *Coluber* (Uetz 2025). Eleven subspecies are currently recognized across the continental range of this species (Wilson 1978, Holycross and Mitchell 2020, Nicholson 2025), with two (*Coluber constrictor flaviventris* and *C. constrictor mormon*) occurring in the west (Holycross and Mitchell 2020). *C. c. flaviventris* is the only subspecies found in Arizona (Tom Jones, personal communication 2024-12-13). Myers et al. (2024) did not find strong support for some of these subspecies, but further research is needed to clarify species delineations (Nicholson 2025).

Nagy et al. (2004) restricted the genus *Coluber* to the new World and suggested that *Masticophis* might be paraphyletic with respect to *Coluber*. Utiger et al. (2005) supported Nagy et al. and found *Masticophis* paraphyletic with respect to *Coluber* and synonymized *Masticophis* and *Coluber* (the oldest available name). This arrangement was also recovered in Pyron et al.'s (2013) phylogeny of Squamata, though based on much of the same data (Crother 2017). Using combined mtDNA and nDNA data, Myers et al. (2017) demonstrated that *C. constrictor* and *Masticophis* spp. were sister taxa. Therefore Nichols (2025) recognized *Masticophis* as a genus.

DESCRIPTION: A long and slender snake with a length of 20−77 inches (50−195.5 cm) (Stebbins 2003, Behler and King 1979). Racers from the West are smaller than those from the central and eastern regions of North America (Holycross and Mitchell 2020), with western lengths usually under 36 inches (90 cm) (Stebbins 2003, Murphy 2018). The tale is long, with males usually having slightly longer tails than those of females (Holycross and Mitchell 2020). The head is distinct from the neck, with large eyes having round pupils and brown or reddish-brown irises (Holycross and Mitchell 2020). Its body is slim with smooth scales, in 15−17 rows at midbody (15 rows in front of the vent). The lower preocular is wedged between the upper labials. Usually 8 upper labials and 85 or more caudals. The anal is divided (Stebbins 2003).

In the west, this snake is plain brown, olive, or bluish above, and unmarked whitish or pale yellow below. Young are typically gray, with 70−85 brown, reddish-brown, or dark gray saddles on the back, and smaller blotches on the sides, with fading on the tail (Stebbins 2003).

AIDS TO IDENTIFICATION: Young resemble the young of the Gophersnake (*Pituophis melanoleucus*), but have smooth scales and wedged preocular. Racer young also resemble the Nightsnake (*Hypsiglena torquata*), except they have round pupils, and the Nightsnake has vertical pupils (Stebbins 2003). Whipsnakes (genus *Masticophis*) are striped or more or less crossbarred, and the young generally resemble adults (Stebbins 2003). Green Ratsnakes (*Senticolis triaspis*) are superficially similar at corresponding ages, but their ranges in Arizona do not overlap, and Green Ratsnakes have a flattened venter and 25 or more dorsal scale rows at mid-body, the central ones of which are weakly keeled (Holycross and Mitchell 2020).

ILLUSTRATIONS:
Color photo (Behler and King 1979: plates 468, 478, 480, 486)
Color drawing (Stebbins 2003: plate 43)
Color photo (Degenhardt et al 1996: plate 82)
Color photos (Holycross and Mitchell 2020)
Color photo (Holycross et al. 2022)

TOTAL RANGE: From southern Maine and extreme southern Ontario westward to Washington and Southern British Columbia extending southward in the eastern and central United States to the Gulf of Mexico and southward in the western U.S. through Mexico and Central America to Guatemala. The range is disjunct in the southwestern United States, Mexico, and northern Central America is disjunct with North American racers absent from deserts, restricted to mountains and river valleys in arid Southwest (Wilson 1978, Stebbins 2003). Distribution in the southwestern United States is spotty (Holycross and Mitchell 2020).

RANGE WITHIN ARIZONA: Extremely rare in Arizona; documented in the vicinity of Eager, Apache County and near Stronghold Canyon in the Dragoon Mountains, Cochise County (Holycross and Mitchell 2020).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: The North American Racer is mainly a ground-dwelling snake, but it may climb shrubs and trees where branches are available for support (Degenhardt et al. 1996, Stebbins 2003). It is large, slender, agile, and fast moving. This species is highly active and diurnal, with basking and hunting behaviors regulated by body temperatures (Degenhardt et al. 1996). Typically, they hibernate underground during the winter months, returning to the same hibernacula year after year. There are numerous accounts of aggregations with conspecifics and other species (Brown and Parker 1976, Rosen 1991). Adults dispersed from major hibernacula for 2.2 km or farther (Rosen 1991).

The racer is one of our swiftest snakes and depends on speed to escape enemies and capture prey. When cornered or captured, the racer usually bites and chews aggressively and may discharge musk and feces (Degenhardt et al. 1996). They make poor captives because they are excitable and nervous and seldom live more than a few years even when they can be induced to feed. They swim at the surface with the head well elevated, and most individuals will readily cross bodies of water (Degenhardt et al. 1996).

The racer is vulnerable to visually hunting raptors and some mammals. Documented avian predators include the Red-tailed Hawk (*Buteo jamaicensis*), Swainson's Hawk (*B. swainsoni*), Ferruginous Hawk (*B. regalis*), and others (Holycross and Mitchell 2020). Mammalian predators such as skunks, badgers, foxes, and bobcats are less common, but opportunistically prey on racers (Degenhardt et al. 1996).

REPRODUCTION: Mates April to late May in most of range. Eggs are laid between June and August in rotting tree stumps, sawdust piles, under rocks or in small mammal tunnels (Holycross and Mitchell 2020). Occasionally a number of females deposit their eggs in a communal nest. Clutch sizes are between 2−31 eggs laid June−August (Behler and King 1979, Stebbins 2003), with averages of 3−7 in the west. Eggs are soft and leathery with a rough granular texture, ranging in lengths of 1−1 7/8 inches (25−48 mm). Incubation time averages about 50 days but is inversely correlated with temperature. Young hatch in 6−9 weeks from July to September, and are 8−13 inches long (20−33 cm). They mature in 2−3 years (Behler and King 1979).

FOOD HABITS: North American Racer depends primarily on eyesight and speed to locate and capture prey which they swallow alive during the daytime hunting forays. Racers are opportunistic, feeding on a variety of vertebrate and invertebrate prey, including insects (crickets, grasshoppers, caterpillars), frogs, reptiles (snakes, lizards, hatchling turtles), small mammals, and birds (usually nestlings) and their eggs (Stebbins 2003, Holycross and Mitchell 2020). The diet of North American Racers shifts as snakes grow, with vertebrate prey more prevalent in the diet of larger snakes. Although there is no data on the diet of North American Racer in Arizona, orthopteran prey is likely the primary prey item (Holycross and Mitchell 2020).

HABITAT: North American Racers are found in variety of habitats but tend to favor open habitats such as abandoned fields, grassland, meadows, prairies, sagebrush flats, open

chaparral, sparse brushy areas along prairie land, open woodland, pinyon-juniper woodland, forest glades, rocky wooded hillsides, grassy-bordered streams, and pine flatwoods (Behler and King 1979, Stebbins 2003) They can be found in both semiarid and moist environments, but are absent from extremely dry regions and high mountain areas. North American Racers are often found in grassy areas near rocks, logs, and other baking sites preferred by lizards, or in the grasses along stream banks (Stebbins 2003).

ELEVATION: Sea level to 7,000 feet (2,150 m).

PLANT COMMUNITY: At the Eager site, Plains and Great Basin Grasslands and transitional between Great Basin Grasslands and Great Basin Conifer Woodland. The grassland at the Eager site is dominated by Blue Gamma (*Bouteloua gracilis*) (Holycross and Mitchell 2020). Madrean Evergreen Woodland and Semidesert Grassland in Dragoon Mountains. The woodland contains a mix of Arizona white oak (*Quercus arizonica*), honey mesquite (*Prosopis glandulosa*), netleaf hackberry (*Celtis reticulata*), and *Agave* and *Yucca* spp., and the grassland contains a dense mix of grama (*Bouteloua* spp.), lovegrass (*Eragrostis* spp.), and muhly (*Muhlenbergia* spp.).

POPULATION TRENDS: The status and trends of populations in Arizona and New Mexico is unknown due to a lack of sufficient quantitative information. Populations are apparently stable and locally common in Colorado, and appear to have increased in some areas of Utah. However, the failure to reconfirm the isolated populations at St. George and Moab for nearly 80 years may represent a contraction of the species' range in the southwest (Holycross and Mitchell 2020).

SPECIES PROTECTION AND CONSERVATION

Status definitions: https://bit.ly/hdms-status-definitions
Heritage Network Conservation Status Rank definitions: https://bit.ly/hdms-rank-definitions

ENDANGERED SPECIES ACT STATUS:	None
STATE STATUS:	None (AZGFD, AWCS 2022)
HERITAGE NETWORK STATUS:	G5
	S1
OTHER STATUS:	LC (IUCN, Hammerson et al. 2013)

PREVIOUS STATUS

STATE STATUS:	1B, as *C. constrictor flaviventris* (AZGFD, SWAP 2012)

MANAGEMENT FACTORS: Has limited distribution in Arizona, where it occurs on the extreme edge of its range.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Distribution, habitat, population and life history studies.

LAND MANAGEMENT/OWNERSHIP:
Private

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

The generic name *Coluber* means “snake” in Latin, while *constrictor* refers to the coiling motion of snakes rather than actual constricting behavior. The subspecific name *mormon* references the settlers from the region where the holotype was collected, and *flaventris* describes the yellow belly characteristic of that subspecies, with *flavus* meaning yellow and *venter* meaning belly (Holycross and Mitchell 2020).

Revised: 1991–03–22 (???)
1997–01–13 (SMS)
2023–04–02 (MBL)
2025–05–02 (NRF)

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