

**ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM**

**Animal Abstract**

**Element Code:** ARADE02080

**Data Sensitivity:** YES

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Crotalus pricei*

**COMMON NAME:** Twin-spotted Rattlesnake, Víbora-cascabel motas gemelas (Spanish)

**SYNONYMS:** *Crotalus triseriata pricei*, *Aechmophrys pricei*

**FAMILY:** Serpentes:Viperidae

**AUTHOR, PLACE OF PUBLICATION:** Van Denburgh, 1895. Proc. Calif. Acad. Sci. Ser. 2  
5:856.

**TYPE LOCALITY:** Huachuca Mountains, Cochise County, Arizona.

**TYPE SPECIMEN:** CAS SUR 1702, W.W. Price, 1893-07-01

**TAXONOMIC UNIQUENESS:** There are approximately forty species in the genus *Crotalus*, and two subspecies within this species. *C.p. pricei* is the only subspecies found in the United States (ITIS 2022, Smith 1946b, Crother 2017).

**DESCRIPTION:** This species is short, with a narrow body and head and a small rattle (Holycross and Mitchell 2020). In a sample collected throughout Arizona, total snout-vent length (SVL) in males averaged 366-572 mm (14.40-22.51 in) and 364-540 mm (14.33-21.25 in) in females (Holycross and Mitchell 2020). (Holycross and Mitchell 2020). The longest individual recorded measured 640 mm in total length (25.19 in) (Klauber 1972) Weight in males averaged 29-189 g (1.02-6.66 oz) and 24-155 g (0.84-4.05 oz) in females (Holycross and Mitchell 2020). Males tend to be longer and heavier than females (Prival and Schroff 2012). This species is typically gray to brown in coloration, with occasional purplish individuals being found (Holycross and Mitchell 2020). As indicated by the common name, they display two rows of brown spots that occur in 39-64 pairs dorsolaterally (Holycross and Mitchell 2020; Campbell and Lamar 2004). These spots range from 1.5 to 2 scales in length, are typically 2.5 scales wide, and have thin white edges (Holycross and Mitchell 2020). Posteriorly, these spots can join, forming a transverse bar-like appearance (Campbell and Lamar 2004). Additionally, there are 2-3 rows of lateral spots on each side that are lighter in color and less pronounced (Holycross and Mitchell 2020). The tail exhibits 5-10 crossbands (Campbell and Lamar 2004). Holycross and Mitchell describe this species as having bronze eyes with vertically elliptical pupils and a dark stripe stretching from the eye backwards, with white to cream-colored scales underneath (2020). Ventrally, scales are dark gray with lighter edges (Holycross and Mitchell 2020). Most of rattle resembles the same coloration of the body, but has a salmon-colored base (Holycross and Mitchell 2020). Scales are keeled, and in 19-23 rows dorsally (Campbell and Lamar 2004).

**AIDS TO IDENTIFICATION:** *Crotalus pricei* is somewhat similar to *Hypsiglena spp.*, *Thamnophis elegans*, and *T. rufipunctatus* but is distinguished by the presence of its rattle. In Arizona, *C. pricei* may occur with three other rattlesnake species. *C. lepidus* and *C. willardi* are

distinguished from *C. pricei* by having dorsal bars, whereas *C. pricei* has spots. *C. molossus* is discernable from *C. pricei* through differences in dorsal patterning and size. (Holycross and Mitchell 2020).

**ILLUSTRATIONS:** Color drawing (Stebbins 1966: plate 39)  
Black and white photo (Fowlie 1965:147)  
Color photo (Behler and King 1979: plate 637)  
Color photo (Lowe et al 1986:76)  
Color drawing (Stebbins 1985: plate 45)  
Color photo (Servoss, in Holycross and Mitchell 2020, pg. 579)  
Color photo (Wells, in Holycross and Mitchell 2020, pg. 581)  
Color photo (Babb, in Holycross and Mitchell 2020, pg. 584)  
Color photo (Wyman, in Holycross and Mitchell 2020, pg. 587).

**TOTAL RANGE:** Occurs from the “Sierra Madre Occidental and nearby mountain ranges from Jalisco, Mexico, north into southeastern AZ., as well as within the Sierra Madre Oriental from Tamaulipas to Coahuila. Isolated populations also occur in Aguascalientes and San Luis Potosi, Mexico” (Campbell and Lamar 2004; Bryson et al. 2011a; Heimes 2016; Lesmos Espinal 2011).

**RANGE WITHIN ARIZONA:** This species occurs in southeastern portion of the state, specifically in the Chiricahua, Huachuca, Pinaleño, and Santa Rita Mountains in Cochise, Graham, and Santa Cruz Counties. (Holycross and Mitchell 2020).

### **SPECIES BIOLOGY AND POPULATION TRENDS**

**BIOLOGY:** This species is mostly diurnal, with some nocturnal tendencies during warmer months (Prival and Schroff 2012). Collections of this species have occurred from May to November in Arizona, and activity levels seem to increase during summer monsoons. Snakes move to overwintering areas in late fall (Holycross and Mitchell 2020; Prival et al. 2003). Individuals sought cover when body temperatures become 33-34 °C and have been recorded active at ambient temperatures of 8.3 °C (Prival and Schroff 2012) Records of predation have not been documented for this rattlesnake but potential predators include *Nasua narica* (White-nosed Coati), *Ursus americanus* (Black Bear), *Mephitis mephitis* (Striped Skunk), *Cyanocitta stelleri* (Steller’s Jay), *Corvus corax* (Common Raven), and raptors (Prival and Schroff 2012). Larval tapeworms (*Mesocestoides* sp.) have also been documented in this species (Goldberg and Bursey 1999). *C. Pricei* has been described as having a “decidedly gentle” temperament, and seldom bites unless motivated (Kauffeld 1943b). This snake is venomous, and bites require immediate medical attention (Holycross and Mitchell 2020). Their average life expectancy is 3.9-4.3 years, but older have been recorded (Prival and Schroff 2012).

**REPRODUCTION:** Viviparous. Mating has been observed throughout August into early September (Prival et al.2002; Ball et al. 2003; Prival 2016). Larger females are more likely to be reproductive than smaller females (Holycross and Mitchell 2020). Females tend to give birth during mid-July and throughout August (Prival and Schroff 2012). Interestingly, mating does not result in immediate pregnancy, but rather females will store the sperm over winter until the

following spring when they ovulate, and then will give birth in the summer (Aldridge and Duvall 2002; Prival and Schroff 2012). Litter sizes tend to vary from 1-9 offspring (Kauffeld 1943b; Klauber 1972; Van Devender and Lowe 1977; Armstrong and Murphy 1979; Tanner 1985; Mahaney 1997a; Mahaney 1997b; Goldberg 2000e). Newborns average 150-185 mm TL (5.90-7.28 in) (Kauffeld 1943b; Armstrong and Murphy 1979; DBP, pers. Obs.)

**FOOD HABITS:** Carnivorous. Analysis of fecal samples collected from the Chiricahua and Pinaleno mountains indicated this species utilizes *Sceloporous jarrovii* (Yarrow's Spiny Lizard) as a main food source., but also preys upon other lizards, mammals, birds, and other snakes (Prival and Schroff 2012). Is possible this species also preys on eggs (Gumbart and Sullivan 1990). *C. pricei* tends to strike and then hold onto lizards, but will release mammal prey (Kauffeld 1943b; Armstrong and Murphy 1979; Chiszar et al. 1986a). Prey are envenomated (Cruz et al. 1987). *C. pricei* is not known to consume invertebrates (Ernst 1992, Prival et al. 2002).

**HABITAT:** This species is most frequently found on talus slopes, rocky outcrops, and other open, rocky areas within pine and pine-oak forests, but may also be found on ridgetops, grassy areas, and dry streambeds (Van Denburgh and Slevin 1913; Gloyd 1937; Kauffeld 1943a; Johnson and Mills 1982).

**ELEVATION:** In Arizona, found from 1,860 - 3,250 m (6,102 - 10,662 ft), but most frequently found above 2,400 m (7,874 ft) (Prival 2016). In Mexico, vouchered from 1,495 - 3,305 m (4,904 - 10,843 ft) (Contreras-Lozano et al. 2011).

**PLANT COMMUNITY:** In Arizona, *C. Pricei* is found most abundant in Rocky Mountain Montane Forests, but is also associated with Madrean Evergreen Woodlands and Rocky Mountain Subalpine Conifer Forests (Holycross and Mitchell 2020). Plants connected to this species include *Pinus arizonica* (Arizona Pine), *Quercus gambelii* (Gambel Oak), *Pericome caudata* (Mountain Leaf-tail), *Robina neomexicana* (New Mexico Locust), *Pinus ponderosa* (Ponderosa Pine), *Populus tremuloides* (Quaking Aspen), *Holodiscus dumosus* (rockspirea), and *Quercus hypoleucoides* (Silverleaf Oak) (Prival and Schroff 2012). In the Sierra Madre Occidental and Oriental, it is found in pine and pine-oak forests, grassy mountain valleys, among agaves and manzanita, and in areas dominated by evergreen oaks such as *A. staphylos spp.* and *Q. ilicifolia* (Armstrong and Murphy 1979; Lesmos Espinal 2005; Heimes 2016, Bryson et al. 2002b; Lesmos Espinal and Smith 2007a; Bryson et al. 2008; Lesmos Espinal 2011; Axtell and Sabath 1963; Bryson et al. 2003; Lesmos Espinal and Smith 2007b; Contreras-Lozano et al. 2011).

**POPULATION TRENDS:** Appears stable. Within Arizona, it is most abundantly found in the Chiricahua Mountains (Klauber 1952b; Ruby and Dunham 1984; Prival and Schroff 2012). Estimates of total population size in the state range from 1000-4000 snakes (Prival and Schroff 2012). Population was considered stable from 1997-2009 (Holycross and Mitchell 2020).

**SPECIES PROTECTION AND CONSERVATION**

<b>ENDANGERED SPECIES ACT STATUS:</b>	None.
<b>STATE STATUS:</b>	1 (AZGFD, AWCS 2022) [1A (AGFD SWAP 2012)]
<b>OTHER STATUS:</b>	Forest Service Sensitive Species (USDA FS Region 3 2013, 2007) PR, Determined Subject to Special Protection in Mexico (NORMA Oficial Mexicana NOM-059- SEMARNAT-2010)

**MANAGEMENT FACTORS:** As *C. pricei* is restricted to disjunct distributions near the peaks of mountain ranges in Arizona, and may be unable to shift its distribution in response to changing temperature and humidity, climate change is the primary conservation concern for this taxa (Rehfeldt et al. 2006, IPCC 2014, Seagar and Vecchi 2010). Other potential conservation concerns include increased wildfire activity affecting prey populations, the illegal pet trade, mining, grazing, logging, and development (Prival and Schroff 2012, Prival 2016, Prival 2007, NatureServe 2022).

**PROTECTIVE MEASURES TAKEN:** Some protection afforded by occurrence on federal land.

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

**LAND MANAGEMENT/OWNERSHIP:** USFS - Coronado National Forest; DOD – Fort Huachuca; NPS – Chiricahua National Monument.

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**ADDITIONAL INFORMATION:**

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