

## Catalogue of American Amphibians and Reptiles.

PRICE, ANDREW HOYT. 1980. *Crotalus molossus*.***Crotalus molossus* Baird and Girard  
Black-tailed rattlesnake**

*Crotalus molossus* Baird and Girard, 1853:10. Type-locality, "Fort Webster, St. Rita del Cobre [Grant Co.], N[ew]. Mex[ico]." Holotype, U.S. Nat. Mus. 485, male, collected by J. H. Clark, date of collection unknown (not seen by author).

*Crotalus ornatus* Hallowell, 1854:192. Type-locality, "between El Paso and San Antonio, Pecos River, Texas." Holotype, U.S. Nat. Mus. 486, female skin, collected by A. L. Heermann, date of collection unknown (not seen by author).

*Crotalus terrificus*: Boulenger, 1896:574 (part).

• CONTENT. Three subspecies are recognized: *estebanensis*, *nigrescens*, and *molossus*.

• DIAGNOSIS. A species of *Crotalus* distinguished from all other species of the genus by the following characteristics: lack of a conspicuous vertebral ridge and tuberculated scales; presence of large flat scales on the crown of the head; a marked tendency towards subdivision of the scales on the side of the head, resulting in relatively high numbers of labials, loreals and prefoveals; unicolor scales comprising the dorsal pattern; union of primary dorsal blotches with lateral secondary ones to form crossbands; presence of groups of pale unicolor scales within the dark dorsal blotches; a black tail in sharp contrast to the rest of the body and with the usual tail crossbands almost or entirely lacking. The head in proportion to the body is much larger than in other species of the genus.

• DEFINITION. *Crotalus molossus* is a large species ranging in size from 250 mm at birth to 1257 mm (largest measured specimen; Klauber, 1952). Scutellation as follows: 23–31 dorsal scale rows at midbody, all keeled except for the lowest 1–4 (mode 2) on each side; 166–199 ventrals and 16–30 subcaudals in males, 168–199 and 16–26 in females; supralabials 13–20; infralabials 14–21; preoculars 2; postoculars 3; loreals 2–9 (mean 4); prefoveals 2–20; scales occupying the internasal-prefrontal area 4–12 (mode 4). There is a great deal of variation in pattern and color, both individually and geographically. The ground color varies from yellow through olive-green, greenish-gray to black. The tail and rattle matrix are black. The dorsal pattern consists of 20–41 brown or red-brown rhomboids bordered by unicolor scales varying from cream to buff. There is a lateral series of blotches on each side.

• DESCRIPTIONS. The most comprehensive works are those of Gloyd (1940) and Klauber (1949, 1952, 1972). Prieto and Jacobson (1968) described melanistic specimens. Zimmerman and Kilpatrick (1973) described the karyotype.

• ILLUSTRATIONS. Shaw and Campbell (1974) provided a color photograph. Black and white photographs are in Gloyd (1940) and Klauber (1949, 1952, 1972). Cope (1900) provided line drawings of the head, tail and body and, along with Gloyd (1940) and Klauber (1972), illustrated the hemipenis.

• DISTRIBUTION. *Crotalus molossus* ranges from the Kofa, Castle Dome and Hualapai Mountains in western Arizona through the Edwards Plateau in west-central Texas and from the Grand Canyon in northern Arizona and north-central New Mexico southward to the southern edge of the Mexican Plateau. It also occurs on Tiburon and San Esteban Islands in the Gulf of California (Soule and Sloan, 1966). It occurs from sea level to 2945 m, but is found primarily in rocky areas from the paloverde-cactus-thornbush association of foothills and bajadas (ca. 1240 m) to the pine-oak belt (ca. 2325 m) (Stebbins, 1966; pers. obs.). Populations in southeastern Arizona, southern New Mexico and west Texas, although geographically variable and striking in color pattern, are cryptically colored in their natural habitats. This, combined with the relatively docile nature of the species, makes individuals quite easy to overlook in the field (pers. obs.). Klauber (1952) reported that specimens of *C. molossus* from southern Sonora show intergradation in several characters with *C. basiliscus*, but that no actual overlap in the ranges of the two species had been demonstrated. Hardy and McDiarmid (1969) stated that the

two species are probably sympatric in northern Sinaloa. Gehlbach and Collette (1957) reported on a specimen from Puebla possessing *C. basiliscus* traits.

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. Biogeographical studies include those of Smith and Buechner (1947), Lewis (1950), Milstead (1960), Dammann (1961), Duellman (1965), Gehlbach (1965) and Morafka (1977). Mora et al. (1965) and Punzo (1976) presented physiological aspects. Van Bourgondien and Bothner (1969) discussed some anatomical aspects and Brattstrom (1964) presented a detailed osteological discussion. Bonilla et al. (1973) and Foote and MacMahon (1977) treated venom characteristics. Funk (1964) reported an adult *Heloderma suspectum* eaten by an adult snake. Bowler (1977) presented longevity records.

• ETYMOLOGY. The name *molossus* (Latin) refers to a famous breed of dog, the Molossian hound of antiquity; *nigrescens* (Latin) is derived from the word *nigresco*, meaning "to become dark in color"; *estebanensis* (Latin) refers to the island to which this subspecies is restricted.

**1. *Crotalus molossus molossus* Baird and Girard  
Northern black-tailed rattlesnake**

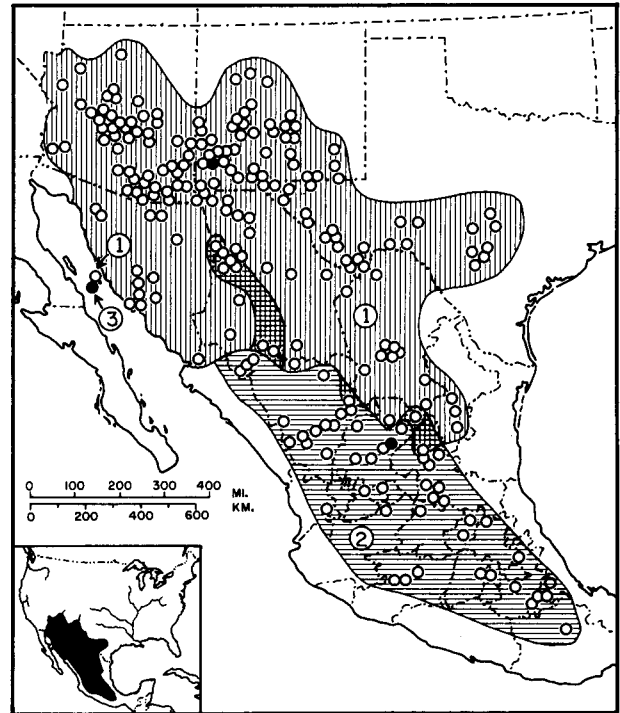
*Crotalus molossus* Baird and Girard, 1853:10. See species synonymy.

*Crotalus ornatus* Hallowell, 1854:192. See species synonymy.

*Crotalus durissus* var. *molossus*: Garman, 1884:171.

*Crotalus molossus molossus*: Gloyd, 1936:2. First use of trinomial.

• DIAGNOSIS. Differs from *C. m. nigrescens* in the following characteristics: 27 or more scale rows at midbody; higher number of ventrals (range 178–199, mean 188.7 in males; range 185–199, mean 193 in females); greater subdivision of lateral head scales; dark snout area in contrast to light occipital area; dark longitudinal lines or dots in occipital area; light streak, above the dark postocular streak, 3 or more scales wide; greater contrast between dark color of middorsal blotch series and lateral inter-



MAP. Solid circles mark type-localities, open circles indicate other records. Overlapping shading patterns cover apparent areas of intergradation, though not all specimens conform.

spaces with less contrast between the light borders of the former and the interspaces; greater tendency for middorsal blotches to merge with the lateral blotches to form crossbands, usually well in advance of midbody.

## 2. *Crotalus molossus nigrescens* Gloyd Mexican black-tailed rattlesnake

*Crotalus molossus nigrescens* Gloyd, 1936:2. Type-locality, "4 miles west of La Colorada, Zacatecas, Mexico." Holotype, Univ. Michigan Mus. Zool. 77833, male, collected by Hobart M. Smith, 10 June 1934 (not seen by author).

• **DIAGNOSIS.** Differs from *C. m. molossus* in the following characteristics: 25 or fewer scale rows at midbody; fewer ventrals (range 166–186, mean 174 in males; range 168–187, mean 177 in females); lesser subdivision of lateral head scales; both snout and occipital area dark; light longitudinal lines or dots in occipital area; light streak, above the dark postocular streak, only 1 or 2 scales wide; less contrast between the dark color of the middorsal blotch series and lateral interspaces with more contrast between the light borders of the former and the interspaces; posterior part of the body usually black, sometimes so much so that all of the dorsal pattern is obscured except for the light borders of the body blotches; middorsal blotches usually closed laterally, not merging with the lateral blotches to form crossbands, or, if so, occurring only well posterior on the body.

## 3. *Crotalus molossus estebanensis* Klauber San Esteban Island rattlesnake

*Crotalus molossus molossus*: Klauber, 1936:249.  
*Crotalus molossus estebanensis* Klauber, 1949:104. Type-locality, "San Esteban Island, Gulf of California, Mexico." Holotype, San Diego Natural History Museum 26792, adult female, taken by an expedition under Capt. G. Allan Hancock, 17 April 1937 (not seen by author).

• **DIAGNOSIS.** *C. m. estebanensis* is an endemic island form possessing all the characteristics that distinguish *C. m. molossus* from *C. m. nigrescens*. It differs from *C. m. molossus* in the following characteristics: head shorter in proportion to body size; rattle reaching parallelism at a considerably smaller width (9.7 mm vs. 14.5 mm) and peculiarly compressed longitudinally and transversely; possession of smaller, paler and more numerous dorsal blotches (usually more than 37 vs. usually less than 38); absence of the dark brown patch on the crown of the head in the internasal-prefrontal region.

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