

Catalogue of American Amphibians and Reptiles.

PRICE, ANDREW HOYT. 1982. *Crotalus scutulatus*.***Crotalus scutulatus* (Kennicott)
Mojave rattlesnake**

Caudisona scutulata Kennicott, 1861:207. Type-locality not given, restricted to "Wickenburg, Maricopa County, Arizona" by Smith and Taylor, 1950:353. Holotype not designated.

Crotalus scutulatus: Yarrow, 1875:533.

• CONTENT. Two subspecies are recognized: *salvini* and *scutulatus*.

• DIAGNOSIS. A species of *Crotalus* distinguished from its congeners by the following characteristics: minimum scale rows between supraoculars usually 2, rarely 3; usually 2 large plates between the anterior portion of the supraoculars followed by 3 smaller ones; presence of a definite suture on top of the head dividing the scales in front of the supraoculars from those between them, with a reduction of the number of scales in front of the suture; postnasals not in contact with upper preoculars and contact not prevented by upper loreal, which is absent; postocular pale stripe usually only 1 scale wide, passing backward above the angle of the mouth; dorsal body blotches bordered by a complete row of pale, unicolored scales; tail conspicuously ringed by dark and white bands, the dark tail bands considerably narrower than the white ones; color of the dark tail bands changing from brown proximally to black distally.

• DESCRIPTIONS. Gloyd (1940) described the subspecies. Other comprehensive works are those of Klauber (1930a and b, 1952, 1972). Jacob (1977) investigated possible hybridization with *C. atrox*. Cook (1955) described hybrids between *C. scutulatus* and *C. viridis*. Zimmerman and Kilpatrick (1973) described the karyotype.

• ILLUSTRATIONS. Shaw and Campbell (1974) provided a color photograph. Black and white photographs are in Gloyd (1940), Raun (1965), Klauber (1972) and Armstrong and Murphy (1979). Cope (1900), Gloyd (1940) and Klauber (1972) provided line drawings. Black and white photographs of hybrids are in Cook (1955) and Klauber (1972). Black and white photographs of the hemipenis and of pattern aberrations are in Gloyd (1940) and Nickerson and Mays (1968), respectively. Kochva and Gans (1966) provided black and white photomicrographs of the main and accessory venom glands.

• DISTRIBUTION. *Crotalus scutulatus* ranges from the Mojave Desert in southern California, the southern tip of Nevada, and extreme southwestern Utah southeastward through much of Arizona, northern Sonora, extreme southern New Mexico, the Big Bend region of Texas and northeastern Coahuila, and southward to the southern edge of the Mexican Plateau. In much of the United States it is most common in low flat deserts with scattered vegetation below 1524 meters. It occurs from sea level to 2439 meters. In Mexico it is much more of a highland form, most commonly found from 1829 to 2439 meters.

• FOSSIL RECORD. *Crotalus scutulatus* has been reported from Pleistocene deposits in the Distrito de Zumpango, Mexico, Mexico (Brattstrom, 1955).

• PERTINENT LITERATURE. Ecological studies include those of Dammann (1961), Pough (1966), Morafka (1977), and Armstrong and Murphy (1979). McCoy (1961) reported on reproductive aspects. Van Bourgondien and Bothner (1969) and Pough et al. (1978) discussed some anatomical aspects and Brattstrom (1964) presented a detailed osteological discussion. Cohen (1975) and Jacob (1980) presented physiological aspects and Martin and Bagby (1973) studied physio-mechanical muscle properties. Bogert (1941) and Cowles and Phelan (1958) discussed behavior. Babero and Emmerson (1974) and Mankau and Widmer (1977) reported on parasites. The extensive literature on venom includes Bonilla et al. (1971), Byrd and Johnson (1970), Cate and Bieber (1978), Githens (1941), Glenn and Straight (1978), Goldstein et al. (1979), Johnson (1968), Kocholaty et al. (1971), McGrew and Johnson (1973) and Nair et al. (1975, 1976, 1979). Bowler (1977) presented longevity records.

• ETYMOLOGY. The name *scutulatus* (Latin) means "diamond- or lozenge-shaped" and refers to the dorsal pattern. The name *salvini* honors Osbert Salvin, 19th century explorer and ornithologist, who co-initiated and for a time sponsored the expeditions during which the type-specimen was collected.

**1. *Crotalus scutulatus scutulatus* (Kennicott)
Mojave rattlesnake**

Caudisona scutulata Kennicott, 1861:207. See species synonymy. *Crotalus adamanteus scutulatus* Cope, 1875:33.

Crotalus atrox: Stejneger, 1895:436 (part).

Crotalus confluentus kellyi Amaral, 1929:91. Type-locality, "Needles, California." Holotype, San Diego Natur. Hist. Mus. 194, male, collected by O. R. West, 11 July 1926 (not seen by author).

Crotalus scutulatus scutulatus Gloyd, 1940:200.

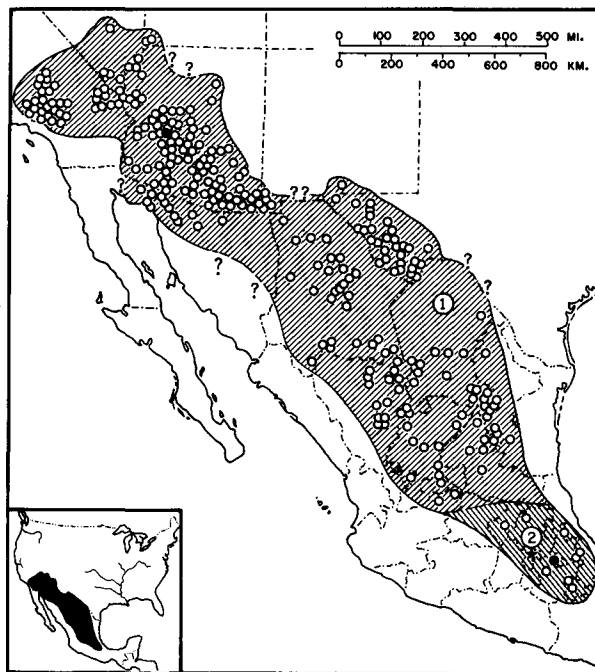
• DIAGNOSIS. Differs from *C. s. salvini* in the following characteristics: row of pale, unicolored scales bordering dorsal body blotches; dark postorbital stripe extending to angle of mouth or beyond; distal dark tail bands black, in contrast to posterior body blotches; upper part of proximal lobe of rattle matrix black (except in juveniles).

**2. *Crotalus scutulatus salvini* Günther
Huamantlan rattlesnake**

Crotalus salvini Günther, 1895:193. Type-locality, "Huamantla (Tlaxcala), Mexico, altitude 8000 ft." Holotype, Brit. Mus. Natur. Hist. 1946.1.19.35, female, collected by T. M. Rymer Jones, date unrecorded but received by the British Museum in January of 1873 (not seen by author).

Crotalus scutulatus salvini Gloyd, 1940:201.

• DIAGNOSIS. Differs from *C. s. scutulatus* in the following characteristics: dorsal body blotches without pale borders; dark postorbital stripe not extending as far as angle of mouth; distal dark tail bands not black, not in contrast to posterior body blotches; upper part of proximal lobe of rattle matrix only slightly, if at all, darkened.



MAP. Solid spots indicate type-localities; open circles mark other records. The star represents a Pleistocene fossil locality. Question marks indicate uncertain range boundaries.

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