

Catalogue of American Amphibians and Reptiles.

WORTHINGTON, RICHARD D. 1980. *Elaphe subocularis*.

***Elaphe subocularis* (Brown)**
Trans-Pecos rat snake

Coluber subocularis Brown, 1901:492. Type-locality, "Davis Mountains, fifty miles southwest of Pecos, near the head of Toyah Creek." Holotype, Acad. Natur. Sci. Philadelphia 13733, adult male, collected by Mr. E. Mayenberg, 1901 (not examined by author).

Elaphe subocularis: Stejneger and Barbour, 1917:84. Name validated by Internatl. Comm. Zool. Nomencl., 1965:182.

Elaphe sclerotica: Smith, 1941:135. Substitute name for *Coluber subocularis* Brown, a secondary homonym of *Bascanian subocularis* Cope, 1866; name invalidated by Internatl. Comm. Zool. Nomencl., 1965:182.

- CONTENT. No subspecies are recognized.

- DEFINITION. This large rat snake (hatchlings from 280 mm total length; maximum total length about 1,676 mm) is stout at midbody, tapering markedly toward either end. The tail is up to 15% of total length and the neck is slender. The head is broad and flat dorsally; the temporal areas are relatively massive and rounded; the eyes are large; the snout is broad and rounded. Seven or more rows of dorsal scales are weakly keeled in 28–33 anterior rows, 31–35 rows at midbody, and 20–25 rows near the tail. Supralabials vary from 9 to 12 on each side, infralabials from 13 to 17; the nasal is divided; the preocular is single; the loreal separates the preocular from the posterior nasal; postoculars are two; lorilabials are 3 to 6 and extend from the anterior end of the loreal to the anterior corner of the ninth supralabial; temporals are in five irregular rows. Ventrals are 263 to 277 in males, 260 to 275 in females; subcaudals are 70 to 79 in males, 69 to 77 in females. The anal plate is divided. The dorsum is bright yellowish buff with an orange tint anteriorly. The unmarked head is pale ash-gray or grayish olive and may have a yellowish tint. Dark brown H-shaped body blotches number 21 to 28. The centers of the lateral arms of the H have white-edged scales. Anteriorly the lateral longitudinal extensions of the blotches are connected by a black line about one scale wide and the crossbands of the blotches may be lost. Posteriorly the blotches are not connected. Tail blotches number 7 to 10. The ventral surface is immaculate white to yellowish white, except posteriorly where the blotches reach the lateral edges of the ventrals and on the undersurface of the tail which may be somewhat blotched with clusters of buffy brown specks. Maxillary teeth range from 19 to 21. The hemipenis is small, extending to the ninth or tenth caudal when inverted, lacks basal hooks or distal lobes, and has the proximal third covered with fine spinules. The chromosome count ($2n = 40$) is rare among snakes.

- DESCRIPTIONS. Dowling (1957) provided a comprehensive description that includes variation in scutellation, coloration, data on tooth counts, and a description of the structure of the hemipenis. Wright and Wright (1957) described adult coloration in detail. Dial (1965) described juvenile coloration. Brattstrom (1967) described vertebrae. Baker et al. (1971) and Mengden and Stock (1980) described the karyotype. Taub (1967) described the salivary glands.

- ILLUSTRATIONS. Drawings of the head are in Brown (1901) and Dowling (1957). A drawing of midbody dorsal blotches is in Schmidt and Davis (1941). A photograph of the head and anterior parts of the type is in Brown (1901). Dowling (1957) and Wright and Wright (1957) provided photographs of living adult snakes and Dial (1965) and Campbell (1972) present photographs of juveniles. Color illustrations are in Shaw and Campbell (1974), Conant (1975), Behler and King (1979), and Stebbins (1966). Brattstrom (1967) illustrated several distinctive vertebral characters. Holman (1973) provided a phylogeny of *Elaphe*. The hemipenis is illustrated in Dowling (1957). Distribution maps are in Conant (1975), Degenhardt and Degenhardt (1965), Morafka (1977), Raun and Gehlbach (1972), and Stebbins (1966). A photograph of a section through a mucous supralabial gland is in Taub (1967).

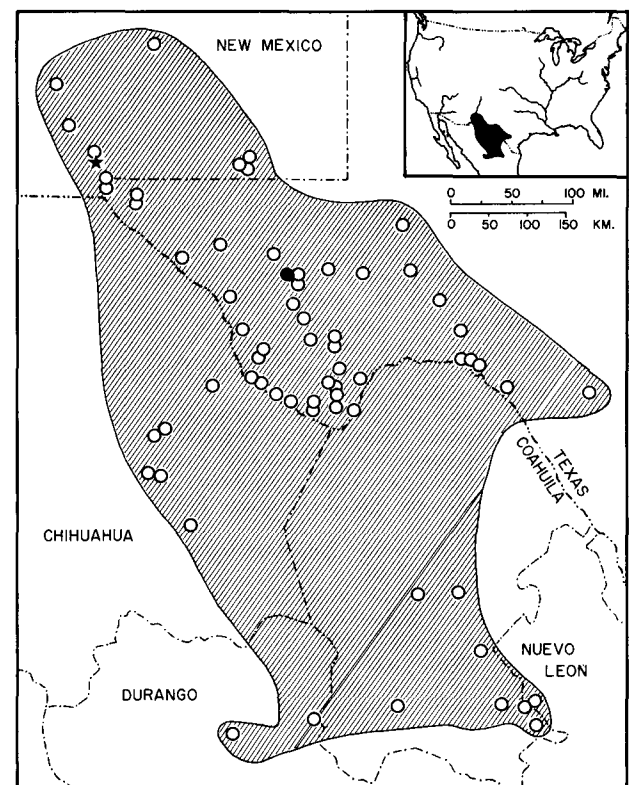
- DISTRIBUTION. The species ranges from southcentral New Mexico through Trans-Pecos Texas and the southwestern edge

of the Edwards Plateau south through Coahuila and Chihuahua, Mexico, including portions of eastern Durango and western Nuevo Leon. Literature records include the following: New Mexico (Lewis, 1948, 1950; Dowling, 1957; Jameson, 1957; Gehlbach, 1959); Texas (Raun and Gehlbach, 1972 and references therein; Mather and Dixon, 1976; Tryon, 1976; Worthington, 1976); Chihuahua (Axtell and Webb, 1963); Coahuila (Smith, 1939; Schmidt and Owens, 1944); Durango (Webb, 1960); Nuevo Leon (Martín del Campo, 1953; Conant, 1965).

- FOSSIL RECORD. Brattstrom (1964) reported *Elaphe subocularis* from several Pleistocene cave deposits on the western flank of Pyramid Peak, Organ Mountains, Dona Ana County, New Mexico.

- PERTINENT LITERATURE. Important reviews are Dowling (1957), Wright and Wright (1957), Degenhardt and Degenhardt (1965), and Broome (1973). The following report aspects of the biology of the species: habitat (Axtell, 1959; Axtell and Webb, 1963; Degenhardt and Degenhardt, 1965; Jameson and Flury, 1949; Lewis, 1950; Milstead, Mecham, and McClintock, 1950; Minton, 1959; Morafka, 1977; Worthington, 1976); natural food (Minton, 1959; Dowling, 1957); captive feeding (Ditmars, 1939; Davis, 1973; Degenhardt and Degenhardt, 1965); longevity (Bowler, 1977); ability to constrict two prey items simultaneously (Jameson, 1956); reflective eyes (Jameson and Flury, 1949); possible character displacement with Mexican *Pituophis* (Morafka, 1977); host relationship to the tick *Aponomma elaphensis* (Degenhardt and Degenhardt, 1965; Price, 1958); reproduction (Campbell, 1972; Davis, 1973; Degenhardt and Degenhardt, 1965; Duplaix-Hall, 1973; Goellner, 1973; McIntyre, 1977a, 1977b, 1978; Root, 1977; Swinford, 1974; Tryon, 1976); skeletal anatomy (Dowling, 1957; Holman, 1973; Brattstrom, 1967); relationship to other advanced snakes (Marx, 1972).

- ETYMOLOGY. The name *subocularis* combines the Latin prefix *sub*, meaning below or under, and the noun *oculus*, meaning eye, referring to the lorilabial scales.



MAP. The closed circle marks the type-locality, open circles indicate other localities and the star marks a fossil site.

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