

## REPTILIA: SQUAMATA: SERPENTES: COLUBRIDAE

## Catalogue of American Amphibians and Reptiles.

TANNER, WILMER W. 1983. *Lampropeltis pyromelana*.

***Lampropeltis pyromelana* (Cope)  
Sonoran mountain kingsnake**

*Ophibolus pyromelanus* Cope, 1867:305. Type-locality not specified by Cope, "Fort Whipple [Yavapai County, Arizona], August, 1864" according to Coues (1875:619). Syntype, United States Nat. Mus. 7845, collected by E. Palmer (Cochran, 1961) (not examined by author).

*Ophibolus pyrrhomelas*: Cope, 1875:37 (part).

*Ophibolus pyromelas*: Coues, 1875:619.

*Ophibolus getulus pyromelanus*: Garman, 1884:67, 157.

*Coronella zonata*: Boulenger, 1894:202. Considers *pyromelana* a synonym.

*Lampropeltis pyrrhomelas*: Van Denburgh, 1896:347.

*Ophibolus zonatus*: Brown, 1901:79. Includes *pyromelana* in synonymy.

*Lampropeltis pyrrhomelaena*: Stejneger, 1902:152.

*Lampropeltis pyrrhomelaena pyrrhomelaena*: Stejneger and Barbour, 1917:88. Other subspecies recognized by these authors are now referred to different species.

*Lampropeltis pyromelana*: Van Denburgh, 1922:746.

• CONTENT. Four subspecies are recognized: *pyromelana*, *infralabialis*, *knoblochi* and *woodini*.

• DIAGNOSIS. Snout white, rarely with flecks of black or red; white annuli on body 46 to 85. Distinguished from *L. zonata* and *L. triangulum* by its white snout and higher number of white annuli. In *zonata* and *triangulum* the snout is black or black with red markings. White annuli are fewer in all *triangulum*, and only a few *zonata* attain the minimum number in *pyromelana*. The distributions of *pyromelana* and *zonata* are allopatric (Stebbins, 1966). *L. pyromelana* and *L. triangulum taylori* overlap, but are readily distinguished as indicated above, and additionally by the number of ventral scales: 175–198 in *triangulum*, 213–238 in *pyromelana*.

• DESCRIPTIONS. For general morphology and descriptions, see Blanchard (1921) and Van Denburgh (1922). Tanner (1953) presents data on variation in color pattern and scale counts.

• ILLUSTRATIONS. Stebbins (1966) and other handbooks provide color illustrations. Drawings or photos depicting the subspecies appear in Blanchard (1921), Fowle (1965), Tanner (1953), Tanner and Cox (1981), Taylor (1940), and Van Denburgh (1922).

• DISTRIBUTION. This snake ranges from north-central Utah to eastern Nevada, Arizona, extreme western New Mexico and eastern Sonora to southern Chihuahua. It is primarily a species of montane forests and moist canyons, often occurring in isolated populations surrounded by inhospitable, arid lowlands. Tanner (1953) and most papers cited under PERTINENT LITERATURE include locality information. Localities of isolated or range-edge status are in Linsdale (1940), Fowle (1965), and Van Devender and Lowe (1977). Additional records for Sonora mapped here are: Cananea, 23 mi (road) northeast of Baviacora, and Yecora (Univ. Arizona collection); 15 mi southwest of Nacozeni (Univ. Texas, El Paso, collection).

• FOSSIL RECORD. Quaternary cave deposits in Nevada (Brattstrom, 1954) and New Mexico (Van Devender and Worthington, 1978) have yielded vertebrae identified as *pyromelana* or cf. *pyromelana*.

• PERTINENT LITERATURE. Blanchard (1921) firmly established *L. pyromelana* as a distinct species, though Van Denburgh (1922) evidently first used the unemended *pyromelana* in combination with *Lampropeltis*. See Zweifel (1975) for a brief history of taxonomic confusion involving *zonata* and *pyromelana*. Authors discussing taxonomic relationships include: Blanchard (1921), Smith (1942), Tanner (1953), Tanner and Loomis (1957), Van Devender and Lowe (1977), and Zweifel (1952). Anecdotal remarks on habits and habitats are in the following works: Gloyd, 1937; Hulse, 1973; Nickerson and Mays, 1970; Van Denburgh and Slevin, 1913; Van

Devender and Lowe, 1977; Woodin, 1953. Records of feeding are in Gehlbach (1956) and Woodin (1953). Tanner and Cox (1981) and Zweifel (1980) give data on reproduction.

• ETYMOLOGY. *Pyromelana* is from the Greek *pyrrh* (flame-colored) and *mela* (black); *infralabialis* refers to a diagnostic scale character; patronyms *knoblochi* and *woodini* refer to the collector of the holotype and to Arizona herpetologist William H. Woodin.

**1. *Lampropeltis pyromelana pyromelana* (Cope)**

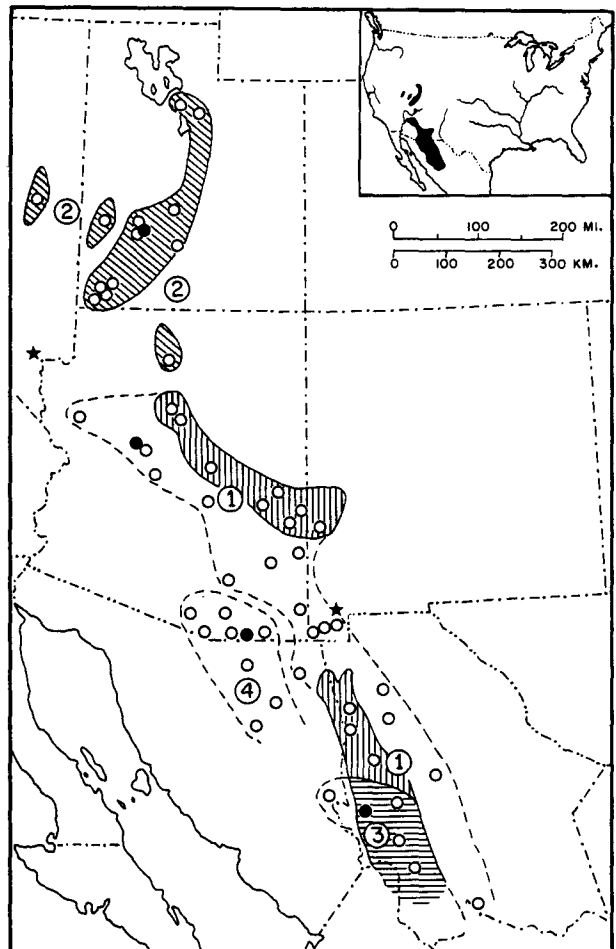
*Ophibolus pyromelanus* Cope, 1867:305. See species account.

*Lampropeltis pyromelana pyromelana*: Tanner, 1953:52.

• DIAGNOSIS. Distinguished from *L. p. woodini* in having slightly smaller triads and more white annuli; caudals minus total white annuli equal 17 or fewer, average 9; white annuli high, 45–75, average 60.7. Ventrals average lower, 214–228, average 221. Infralabials 10–10; readily distinguished from *infralabialis* which has only 9–9 infralabials.

**2. *Lampropeltis pyromelana infralabialis* Tanner**

*Lampropeltis p[ro]melana*. *infralabialis* Tanner, 1953:56. Type-locality, Beaver Canyon, "Beaver County, Utah." Holotype,



MAP. Shaded areas are presumably continuous range; symbols within broken lines mark disjunct montane populations. Solid circles mark type-localities; open circles indicate other localities. Stars indicate Quaternary fossil sites.

Brigham Young Univ. 10340, adult male, collected by R. Liechty in August 1950 (examined by author).

• **DIAGNOSIS.** Banding more nearly complete ventrally than in other subspecies—the white, red and often the black bands cross the ventrals as irregular but usually continuous bands. White annuli average fewer and caudals slightly higher than in *L. p. pyromelana*: caudals minus white annuli rarely fewer than 17, average 21.2. Infralabials 9-9, rarely with 10 on even one side.

### 3. *Lampropeltis pyromelana knoblochi* Taylor

*Lampropeltis knoblochi* Taylor, 1940:253. Type-locality, "Mojárichic, Chihuahua, Mexico." Holotype, adult male, Field Museum of Natural History 100013 (formerly E. H. Taylor-H. M. Smith 23016, see REMARKS), collected in 1939 by Irving Knobloch (examined by author).

*Lampropeltis pyromelana knoblochi*: Tanner, 1953:50.

• **DIAGNOSIS.** Distinguished by a higher number of white transverse bars (63-85, mean 74) which do not reach the ventrals but terminate in an irregular lateral light stripe between the 3rd to 5th rows of dorsal scales, and by an anterior expansion of the first white annulus to the orbit. Ventrals 225-238 and white bars equal in number to or more than the total number of caudals.

• **REMARKS.** Taylor (1940:253) cited EHT-HMS 23017 (now FMNH 100275) as type, and EHT-HMS 23016 as paratype. In two figures, however, 23016 is illustrated and called "type" in the captions. Taylor wrote that the head of the paratype was "badly smashed," and this applies to FMNH 100275 (EHT-HMS 23017) rather than to the other specimen. Taylor's specimen catalogue (kindly furnished by H. Marx) shows "type" written at no. 23016. It seems clear that Taylor intended 23016 to be the holotype.

### 4. *Lampropeltis pyromelana woodini* Tanner

*Lampropeltis [pyromelana]. woodini* Tanner, 1953:54. Type-locality, "Carr Canyon, Huachuca Mountains, Cochise County, Arizona." Holotype, Univ. Michigan Mus. Zool. 69653, adult female collected 20 July 1930 by H. K. Gloyd (examined by author).

• **DIAGNOSIS.** Distinguished from the other subspecies by its higher ventral count and fewer white annuli—usually fewer than 43 on the body. Caudals minus white body annuli equals 16 or more. Triads and white annuli reach the ventrals as in *pyromelana* and *infralabialis*, in contrast to the condition in *knoblochi*.

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WILMER W. TANNER, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH 84602.

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