

Catalogue of American Amphibians and Reptiles.

KEISER, EDMUND D., JR. 1982. *Oxybelis aeneus*.***Oxybelis aeneus* (Wagler)**
Neotropical vine snake

Dryinus aeneus Wagler, 1824:12. Type-locality, "Habitat in sylvia adjacentibus flumini Solimöens, prope Ega." Ega, an older name for a mission station and town known as Tefé, is on the south bank of the Amazon River near the junction of the Rio Tefé, in the Brazilian state of Amazonas. Holotype, Zoologisches Staatssammlung München 2645/0, adult female, collector and date unknown. (examined by author).

C. [oluber] acuminatus Wied, 1824:667. Type-locality omitted in 1824 description, but Wied (1825b:326) stated: "—in der Gegend des Flusses *Espirito Santo*," (Rio Espirito Santo, southeastern Brazil). Holotype, AMNH 3886, adult female, collector and date unknown. (examined by author).

[*Dryinus*] *auratus* Bell, 1825:325. Type-locality, "Mexico." Holotype lost. Collector and date unknown.

[*Colubur*] *acuminatus*: Wied, 1825a:1336. Typographical error.

[*Dryophis*] *acuminatus*: Fitzinger, 1826:884.

[*Dryophis*] *aeneus*: Fitzinger, 1826:884.

[*Oxybelis*] *aeneus*: Wagler, 1830:183. First use of combination and new monotypic genus.

Dryinus Veneus: Griffith and Pidgeon, 1831:260. Typographical error.

Oxybelis oeneus: Gray, 1831:93. Typographical error.

D. [ryiophis] aurata: Schlegel, 1837:255.

Dryophis vittatus Girard, 1854:226. Type-locality, "Taboga on the Bay of Panama, Central America." Holotype, USNM 7315, adult female, collector and date unknown (examined by author).

Dryiophis acuminata: Günther, 1858:156.

Cryiophis acuminatus: Reinhardt, 1860:225. Typographical error.

Oxybelis acuminatus: Cope, 1862:356.

Dryiophis acuminatus: Cope, 1871:204.

Oxibelis acuminatus: Garcia Cubas, 1884:177. Incorrect spelling.

Dryophis acuminata: Ferrari-Perez, 1886:185.

Dryiophis aeneus: Garman, 1887:284.

Oxibilis acuminatus: Velasco, 1892:78. Incorrect spelling.

Oxybelis acuminata: Cope, 1893a:347.

Oxybelis accuminatus: Meek, 1910:416. Incorrect spelling.

Oxybelis microphthalmus Barbour and Amaral, 1926:80. Type-locality, "Calabasas Cañon, Arizona." Holotype, MCZ 22417, adult male, collected by S. H. Beattie, April, 1926 (examined by author).

Oxybelis fulgidus: Crimmins [not Daudin], 1937:233. Incorrect identification.

Oxybelis potosiensis Taylor, 1941:128. Type-locality, "38 Km.

northwest Ciudad Maíz, San Luis Potosí (Km. 192)," [Mexico]. Holotype, Univ. Illinois Mus. Natur. Hist. 25069, adult female collected by E. H. Taylor, September 7, 1940 (examined by author).

Oxybelis aeneus aeneus: Bogert and Oliver, 1945:381-392.

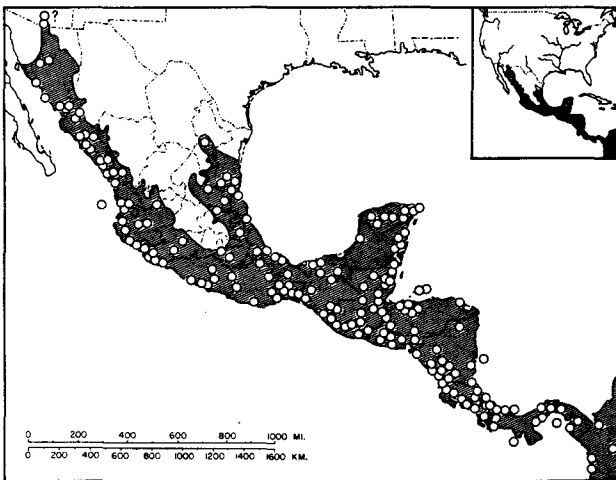
Oxybelis aeneus auratus: Bogert and Oliver, 1945:381.

Oxybelis auratus: Hall, 1951:202.

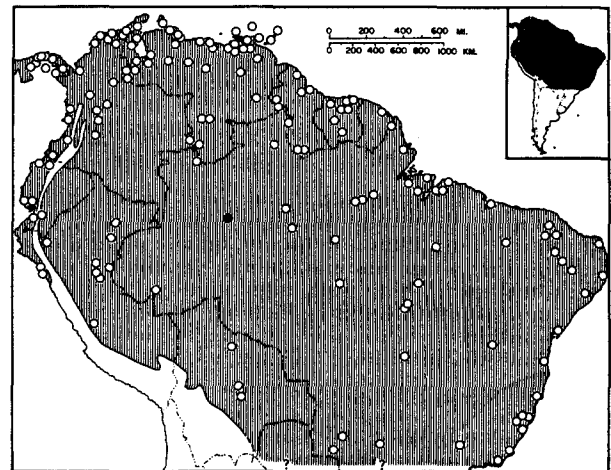
• CONTENT. No subspecies are recognized.

• DEFINITION AND DIAGNOSIS. A long-snouted, slender-bodied, long-tailed arboreal species of the genus *Oxybelis*. This species may be distinguished from others in the genus by combinations of the following characters: loreal scale absent; preocular 1; postoculars 2; supralabials 8 or 9 (extremes 6 and 10), with 2 or 3 scales entering the orbit; infralabials 8 to 10 (extremes 6 and 11), with 4 or 5 scales contacting the anterior chin shields; anal plate divided; dorsal scales 17-17-13, with keels weak or absent; ventrals 173-205 (mean, 186.8); caudals 158-203 (mean for males, 177; mean for females, 173.1), maxillary teeth 16-27, palatine teeth 9 to 16, pterygoid teeth 6 to 14, dentary teeth 18 to 29; hemipenis undivided. Snout-length/head length means for adults are 0.412 (Arizona and Mexico), 0.390 (Central America), and 0.401 (South America). Tail-length/snout-vent length ratio means are 0.686 (Arizona and Mexico), 0.699 (Central America), and 0.665 (South America). Dorsal scales are gray, gray-brown, reddish-brown, or brown, with many individuals having tints of red, orange, yellow, green, or black, and obvious iridescence. Scale interspaces are white, cream, tan, brown, yellow, orange, red, or black and the interspace colors may or may not invade the margins of the scales. Many individuals have prominent checkerboard patterns of black pigment on the dorsal and lateral aspects of the neck and anterior body. A peculiar mottled pattern of alternating pale and dark pigments is occasionally obvious. Stripes are absent, but mid-dorsal pigment concentrations on some specimens give the appearance of a dark vertebral line. The venter is highly variable, but usually gray, tan, cream, or reddish-brown posteriorly and white, cream, or yellow anteriorly and on the chin and throat. Brownish median stripes and narrow, indistinct, brown or black lateral stripes are present on the ventral scales of many specimens.

• DESCRIPTIONS. Bogert and Oliver (1945) and Keiser (1967, 1974) reviewed previous taxonomic literature and discussed and summarized variation in scutellation, coloration, size and proportions, dentition, and aspects of cranial morphology. Additional descriptions are available for the premaxilla (Bogert, 1947), snout bones (Keiser, 1970a), dentition (Taylor, 1941; Wright and Wright, 1957), ear (Miller, 1968; Wever, 1978), hyoid (Langebartel, 1968), Duvernoy's gland (Pough et al., 1978), costal cartilages (Hardaway and Williams, 1976), and hemipenes (Cope, 1893b, 1900; Keiser, 1969). Growth rates are discussed by Henderson (1974), Zug et al. (1979), and Henderson and Binder (1980). Clark (1967) noted low sexual dimorphism in tail length. Apical pits were ob-



MAP 1. Distribution of *Oxybelis aeneus* in Middle America. Open circles indicate locality records. Question mark indicates an uncertain literature record.



MAP 2. Distribution of *Oxybelis aeneus* in South America. Solid circle marks the type-locality; open circles indicate other records.

served by Mole (1924), but not by Taylor (1941) or Keiser (1974). Sexton and Heatwole (1965) gave measurements for two hatchlings. Marx and Rabb (1972) utilized *aeneus* in their analysis of characters of advanced snakes.

Color descriptions since the summary of Keiser (1974) include those of Alvarez Del Toro (1972) and Emsley (1977). Jackson et al. (1976) included this species in a discussion of dorsal pigment pattern as an anti-predator strategy, as did Norris and Lowe (1964) in their paper on background matching. Melanin deposits associated with venom glands were noted by Pough et al. (1978).

● **ILLUSTRATIONS.** Black-and-white drawings are in Wagler (1824), Wied (1830), Bell (1825), Girard (1855), Jan and Sordelli (1869), Bocourt (1897), Taylor (1941), Stebbins (1966), and elsewhere. Drawings in color are in Zim and Smith (1953) and Amaral (1977). Good color photographs are in Shaw and Campbell (1974) and Gans (1975).

Photographs of defensive postures are in Bellairs (1969), Gasc (1971), Henderson (1974), and Kho (1975). Rabb (1972) included a photo series of *aeneus* stalking and feeding. Carr (1963), Gasc (1971), and Kho (1975) have photographs of lizards being ingested. Henderson and Binder (1980) schematically diagrammed the feeding strike. Kennedy (1965) utilized a series of photograph frames to illustrate tongue extension. Drawings of skulls and prefrontal bones are in Bogert and Oliver (1945), of premaxillae, nasal, and prefrontal bones in Keiser (1967), of the maxilla in Bogert (1947), of the snout bones in Keiser (1970a), of the hyoid in Langebartel (1968). Miller (1968) illustrated the cochlear duct and Wever (1978), provided a schematic of the basilar membrane. Hardaway and Williams (1976) figured the costal cartilages and Keiser (1970b), postcloacal vertebrae. Photographs of hemipenes are in Keiser (1967, 1974) and drawings in Cope (1895, 1900) and Wright and Wright (1957). Radiographs of the trunk and head are in Gasc (1971).

● **DISTRIBUTION.** *Oxybelis aeneus* occurs at low to moderate and occasionally higher elevations throughout most of the Neotropical Region, from southern Arizona, south along the eastern and western coasts of México, across the Isthmus of Tehuantepec, throughout most of Central America and into South America. There it ranges west of the Andes south to northern Perú, into the valleys of the Cauca and Magdalena Rivers of Colombia, and throughout most of northern South America from the eastern slopes of the Andes to the Atlantic coast. The species extends southward at least to central Bolivia and southeastern Brazil and may occur in Paraguay and northern Argentina. It is known from the Tres Marias Islands west of Nayarit, México but not from the peninsula of Baja California, from Isla Blanca of northeastern Quintana Roo, México, the Islas de la Bahía of Honduras, Los Blancos Islands of El Salvador, Corn Islands of Nicaragua, Naranjas and Pearl Islands of Panama, and Testigos, Aruba, Margarita, Tobago, Huevos and Trinidad off the northern coast of Venezuela. Schlegel (1837:256) reported *Dryiophis aurata* (*Oxybelis aeneus*) from Martinique but the record is probably in error.

Keiser (1967) summarized ecological and distributional comments from the literature prior to 1967. Localities for specimens examined since 1966 were included on the distribution maps of Keiser (1974), but not listed. Locality records subsequent to 1966 include the following: **MEXICO:** Dixon et al., 1972; McDiarmid et al., 1976; Henderson and Nickerson, 1977; Lee, 1980; Powell and Parmer-Lee, 1980; **BELIZE:** McCoy, 1970; Henderson, 1974, 1976; Henderson and Hoovers, 1977; Henderson and Nickerson, 1977; Henderson and Binder, 1980; Lee, 1980; **HONDURAS:** Meyer, 1969; Wilson and Hahn, 1973; **PANAMA:** Myers and Rand, 1969; **COLOMBIA:** Dugand, 1975; Rivero-Blanco and Dixon, 1979; **VENEZUELA:** Staton and Dixon, 1977; Emsley, 1977; Rivero-Blanco and Dixon, 1979.

This snake is known from arid and moist tropical and subtropical lowlands and uplands from sea level to at least 2500 m, although it is most common at lower elevations. It has been reported from dense and open moist forests, dry forests, disturbed forests, arid scrub forests, coffee and banana groves, orchards, grassy and bushy areas bordering clearings, gullies, ponds, lakes, streams, and rivers, even on sand dunes and on lawns, golf courses, and bushes within densely populated areas.

● **FOSSIL RECORD.** None.

● **PERTINENT LITERATURE.** Keiser (1967) summarized the literature on foods, drinking, predators, parasites, reproduction, venom and bites, and behavior. Works not covered or since published include those on: reproduction (Hardy and McDiarmid, 1969; Fitch, 1970; Emsley, 1977), hatchlings (Sexton and Heat-

wole, 1965), growth (Henderson, 1974; Zug et al., 1979; Henderson and Binder, 1980), population density and/or seasonal abundance (Dunn, 1949; Zweifel and Norris, 1955; Villa, 1962; Perez-Hilgareda and Navarro L., 1970; Henderson, 1974), foods and/or prey (Hardy and McDiarmid, 1969; Lancini, 1970; Alvarez Del Toro, 1972; Rabb, 1972; Hoogsmoed, 1973; Henderson, 1974; Shaw and Campbell, 1974; Keiser, 1975; Kho, 1975; Amaral, 1977; Emsley, 1977; Henderson and Nickerson, 1977; Greene et al., 1978; Henderson and Binder, 1980), drinking (Fischer, 1882; Henderson and Nickerson, 1977), venom and/or bite (Bates, 1928; Santos, 1955; Wright and Wright, 1957; Malkin, 1956; Lancini, 1970; Alvarez Del Toro, 1972; Rabb, 1972; Shaw and Campbell, 1974; Amaral, 1977; the bite of *Oxybelis fulgidus* noted by Crimmins, 1937 and Gans, 1978 is that of *aeneus*), parasites and/or predators (Shaw and Campbell, 1974; Amaral, 1977), ecdysis (Stabler, 1939), myths (Zweifel and Norris, 1955), ethnozoology (Malkin, 1956), longevity (Bowler, 1975; Rundquist, 1981), general behavior (Mertens, 1946; Klingelhöffer, 1959; Villa, 1962; Alvarez Del Toro, 1972; Rabb, 1972; Henderson, 1974; Keiser, 1975; Kho, 1975; Burghardt, 1977; Carpenter and Ferguson, 1977; Emsley, 1977; Henderson and Nickerson, 1977; Shaw and Campbell, 1974; Gove, 1979; and Henderson and Binder, 1980).

● **REMARKS.** Keiser (1967, 1974) synonymized the subspecies *aeneus* and *auratus* and reviewed the nomenclatural history of the species.

The vernacular name "Mexican Vine Snake" (Collins et al., 1978) is a misnomer for this wide-ranging, primarily Neotropical species. Most other English names are inappropriate because they refer to the paler color phases or extremely attenuated snouts of specimens in limited portions of the range. "Neotropical vine snake" is the name most frequently utilized in recent publications and it more aptly describes the range of this widely distributed species.

● **ETYMOLOGY.** The name *aeneus* (Latin *aeneus*, of bronze or copper) was used by Wagler (1824) to describe the dorsal pigmentation of the holotype. Wagler's vernacular name was "La Dryine bronze." Although various color phases exist, the name is descriptive of most specimens.

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