**Catalogue of American Amphibians and Reptiles.**

LYNCH, JAMES F. AND DAVID B. WAKE. 1974. *Aneides lugubris.*

## *Aneides lugubris* (Hallowell)
## Arboreal salamander

*Triton tereticauda* Eschscholtz, 1883, pt. 5:14. Type-locality, "russischen Niederlassung Ross [Fort Ross, Sonoma County, California]." Name suppressed by action of International Commission on Zoological Nomenclature (Opinion 377, 1956).

*Salamandra lugubris* Hallowell, 1849:126. Type-locality, "Monterey [Monterey County], California." Holotype (not examined), Academy of Natural Sciences, Philadelphia, 1257, collected by Dr. Townsend.

*Aneides lugubris* : Baird *In* Heck, 1849:257. Transfer to new genus.

*Ambystoma punctulatum* Gray, 1850:37. Type-locality, "Monterey, California." Holotype presumably deposited in British Museum. Present status unknown.

*Anaides lugubris* : Girard, 1858:8. Use of variant spelling.

*Plethodon crassulus* Cope, 1886:521. Type-locality, "California." Holotype, U. S. Natl. Mus. 9447 (not examined).

*Autodax lugubris* : Boulenger, 1887:67. Unwarranted transfer to new genus, because *Anaides* (variant spelling) preoccupied.

*Autodax lugubris farallonensis* Van Denburgh, 1905:5. Type-locality, "South Farallon Island [San Francisco County], California." Holotype, California Academy of Sciences, destroyed in 1906 earthquake.

*Aneides lugubris lugubris* : Grinnell and Camp, 1917:134. First use of trinomial.

*Aneides lugubris farallonensis* : Grinnell and Camp, 1917:134. First use of trinomial.

• CONTENT. The species is monotypic (see COMMENT).

• DEFINITION. Adults are large for the genus. Snout-vent length of sexually mature individuals ranges between about 65 and 100 mm. The trunk is rounded to somewhat depressed. The tail is laterally compressed near the tip, strongly tapered from its base, and is prehensile. Tail length is less than snout-vent length. Costal grooves number 15 (usually) or 16. Toes of adpressed limbs overlap by 1 or more costal folds. Digits are long, and show distinct terminal expansions. The vomerine teeth do not extend to the internal nares, and are small and few in number (7–13). The head is grotesquely broadened in large adult individuals. Maxillary and dentary teeth are greatly enlarged and strongly flattened. There are about 9 to 16 maxillary teeth. The posterior portion of the maxillary bone lacks teeth and is enlarged and flattened dorsoventrally, producing a characteristic sinuous jaw line.

Adults are gray-brown to chocolate brown dorsally, and creamy white to grayish ventrally. Whitish or yellowish iridophores usually are present on the dorsum, but the size and abundance of these spots vary widely within and between populations. Small juveniles invariably possess numerous tiny blue-white iridophores and a patchy network of brassy iridophores on the dorsum, and are darker ventrally than adults.

Secondary sexual dimorphism is evident in head shape, males having broader heads than females of equivalent size. Males possess a heart-shaped mental gland and well-developed hedonic glands. The sexes do not differ appreciably in overall body size.

• DESCRIPTIONS. Eggs are described by Ritter and Miller (1899), Ritter (1899, 1903), Storer (1925), Kessel and Kessel (1942), Miller (1944), and Stebbins (1951, 1954, 1966). The developing embryo is described by Ritter (1899), Ritter and Miller (1899), and Storer (1925). Accounts of the general morphology of juveniles can be found in Storer (1925) and Stebbins (1951, 1954, 1966). For coloration and external morphology of adults see Storer (1925), Slevin (1928), Bishop (1943), and Stebbins (1951, 1954, 1959, 1966). Internal anatomy is treated by Cope (1869, 1888, 1889), Mivart (1870), Hoffmann (1873), Wiedersheim (1877), Vaillant (1884, 1886), Moore (1900), Piatt (1935), Hilton (1945, 1952), and Wake (1963, 1966).

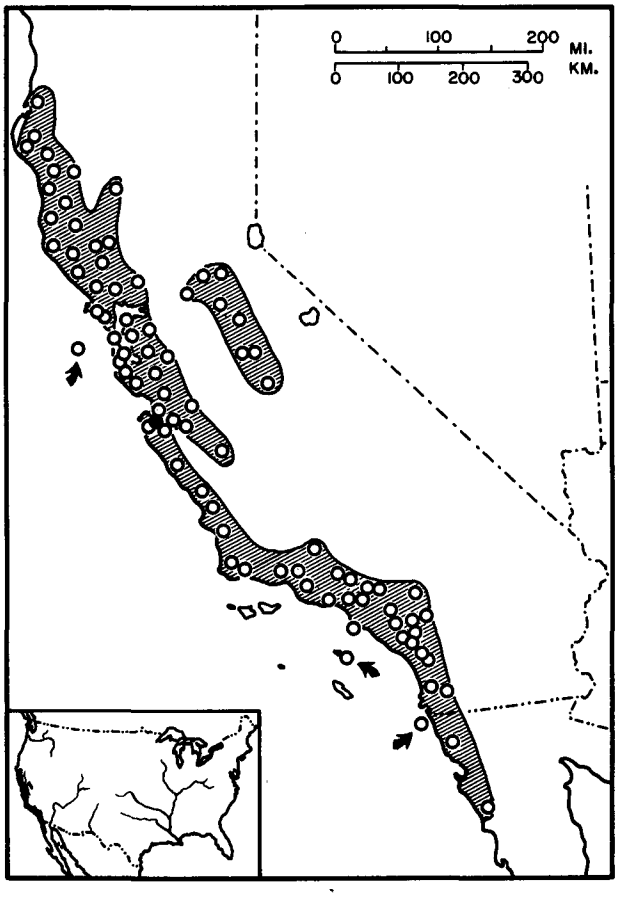
• ILLUSTRATIONS. Eggs and juveniles are illustrated by Miller (1944), and Stebbins (1951, 1954, 1959, 1966, 1972). Miller (1944) contains drawings of embryos. Storer (1925), Slevin (1928), Bishop (1943), and Cochran (1961) contain photographs of adults. Drawings of adults can be found in Cope (1889), Miller (1944), and Stebbins (1951, 1954, 1959, 1966, 1972). The last three references by Stebbins include full-color portraits. Features of the skull are figured by Wiedersheim (1877), Hilton (1945), and Wake (1963, 1966).

• DISTRIBUTION. *Aneides lugubris* generally occurs at elevations below 600 m in the coast ranges of California and extreme northwestern Mexico. The northern limit of the range is in the vicinity of Eureka, Humboldt County, California; the southernmost station is in the vicinity of Santo Tomas, Baja California del Norte, Mexico. Populations inhabiting the foothills of the central Sierra Nevada of California are isolated from the main portion of the range by the xeric Central Valley. Insular populations are known from South Farallon Island (45 km west of San Francisco), several islands within San Francisco Bay, Santa Catalina Island (45 km southwest of Long Beach), and Los Coronados (14 km west of Rosarito, Mexico).

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. Discussions of habitats and habits may be found in Ritter and Miller (1899), Ritter (1903), Storer (1925), Lowe (1950b), Stebbins (1951, 1954, 1959, 1966), and Rosenthal (1957). Food habits have been studied by Zweifel (1949), and Lynch (Ms.). Cohen (1952), Rosenthal (1957), and Ray (1958) examined water economy and thermal relationships. Brattstrom (1963) recorded microhabitat temperatures. Arnold (1972) studied courtship. Evolution and phylogeny of this and related species are treated by Dunn (1926), Myers and Maslin (1948), Lowe (1950a, 1950b), and Wake (1963, 1966).

• ETYMOLOGY. The name "*lugubris*" comes from the Latin word for "sad" or "mournful," possibly in reference to the dull




MAP. Circles mark locality records, solid symbol indicates type-locality, shaded area estimates total range.

pigmentation of the species. Alternately, the specific name may be an ironic reference to the "smiling" appearance resulting from the sinuous jaw line.

## Comment

The subspecies *farallonensis* was described by Van Denburgh (1905) on the basis of material collected on South Farallon Island. The main character said to distinguish this race was presence of large and numerous yellowish iridophores. It has been noted subsequently (Slevin, 1928; Stebbins, 1966; Banta and Morafka, 1968) that mainland populations from several areas in central California are as heavily spotted as those from the Farallones, and recent authors (e.g. Stebbins, 1966) have chosen not to recognize *farallonensis*.

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