

Catalogue of American Amphibians and Reptiles.

STEWART, GLENN R. 1977. *Charina, C. bottae*.

***Charina* Gray
Rubber Boa**

Charina Gray, 1849:113. Type-species, *Tortrix bottae* Blainville, 1835, by monotypy.

Wenona Baird and Girard, 1852:176. Type-species, *Wenona plumbea* Baird and Girard, 1852, by subsequent designation.

Pseudoeryx Jan, 1862:242. Type-species, *Tortrix bottae* Blainville, 1835, by monotypy.

• CONTENT. A single extant species, *Charina bottae*, is recognized.

• DEFINITION. *Charina* is a small boa (maximal total length, 800 mm) with a short, blunt tail capped by a rounded plate. The head is not distinct from the neck and has large, irregular plates on the dorsal surface. The snout is short, broad, and slightly depressed. The eye is small with a vertical pupil. Chin scales are small, without enlarged plates. Dorsal scales are small, width subequal to length, smooth, and in 32–53 rows. Ventrals range from 182–231. Subcaudals are in a single series, 24–43 in number. The anal plate is entire. The hemipenis is single, clavate and transversely plicate with an apically forked sulcus. The basal portion is smooth. Pelvic spurs are present in both sexes, smaller in females, and often difficult to see. The dorsum typically is uniform in color, ranging from olive green to camel tan, reddish-brown, medium brown and dark chocolate brown. The venter is yellowish and may be mottled with orange or brown. The young generally are pink to tan above and light yellow to cream below.

• DESCRIPTIONS, ILLUSTRATIONS, DISTRIBUTION. See Species account.

• FOSSIL RECORD. Brattstrom (1958) describes *Charina prebottae* on the basis of two mid-thoracic vertebrae from the upper Miocene of California (Barstow Formation, San Bernardino County). Holman (1970, 1976a, 1976b, 1976c) reports additional material from middle and upper Miocene deposits.

• PERTINENT LITERATURE. See species account.

• REMARKS. Jan (1862) and Underwood (1967) suggest that *Charina* is related to the Old World genus *Eryx*. However, *Charina* has what may be considered the "typical" boid karotype; *Eryx*, having one less pair of microchromosomes, may be regarded as distinct and specialized (Gorman and Gress, 1970).

• ETYMOLOGY. *Charina* (feminine gender) is derived from the Greek *charieis*, meaning graceful.

***Charina bottae* (Blainville)
Rubber Boa**

Tortrix bottae Blainville, 1835:289. Type-locality, "Californie"; restricted by Schmidt (1953) to "Coast Range, opposite Monterey." Holotype, Museum National d'Histoire Naturelle (Paris) 730, adult (female?) collected by Paolo Emilio Botta in 1827–28 (not examined by author).

Charina bottae: Gray, 1849:113.

Wenona isabella Baird and Girard, 1852:176. Type-locality, "Puget Sound" [Washington]. Holotype, U.S. Nat. Mus. 7299, adult (male?) collected by the United States Exploring Expedition in 1841 (not examined by author).

Wenona plumbea Baird and Girard, 1852:176. Type-locality, "Puget Sound" [Washington]. Holotype, U.S. Nat. Mus. 4492, adult (male?) collected by the United States Exploring Expedition in 1841 (not examined by author).

Charina plumbea: Cope, 1861:305.

Pseudoeryx bottae: Jan, 1862:242.

Charina brachyops Cope, 1888:88. Type-locality, "Point Reyes [Marin County], California." Holotype, U.S. Nat. Mus. 15524, immature collected by C. A. Allen, date of collection unknown (not examined by author).

• CONTENT. Three subspecies have been described (*bottae*, *utahensis*, and *umbratica*), but *utahensis* is not recognized here. See COMMENT.

• DEFINITION. Same as for genus.

• DESCRIPTIONS AND ILLUSTRATIONS. Based on specimens from western Oregon, Hoyer (1974) provides the most complete description of scutellation and color. Good black and white illustrations appear in Jan and Sordelli (1864, 3^e livr., pl. 2, holotype), Van Denburgh (1922), Ditmars (1936), Stebbins (1954), and Wright and Wright (1957). Good color plates are found in Carr, et al. (1963), Stebbins (1966) and Shaw and Campbell (1974). Nussbaum and Hoyer (1974) describe and illustrate sexual dimorphism of the pelvic spurs. The hemipenes are inaccurately described by Klauber (1943) but correctly illustrated by Dowling and Savage (1960).

• DISTRIBUTION. *Charina bottae* ranges from southern British Columbia, Canada to southern California and eastward to Montana, Wyoming and Utah; altitudinal range is from near sea level to about 2,800 m (Stebbins, 1966). In the southern and interior parts of its range, the distribution is spotty and most records are from mountainous areas. Recent collecting by the author has confirmed its occurrence on Mt. Pinos and in the Tehachapi Mountains of southern California. *Charina* typically is associated with moist coniferous forest and woodland habitats, but Hoyer (1974) also reports it from vacant city lots and large grassy fields.

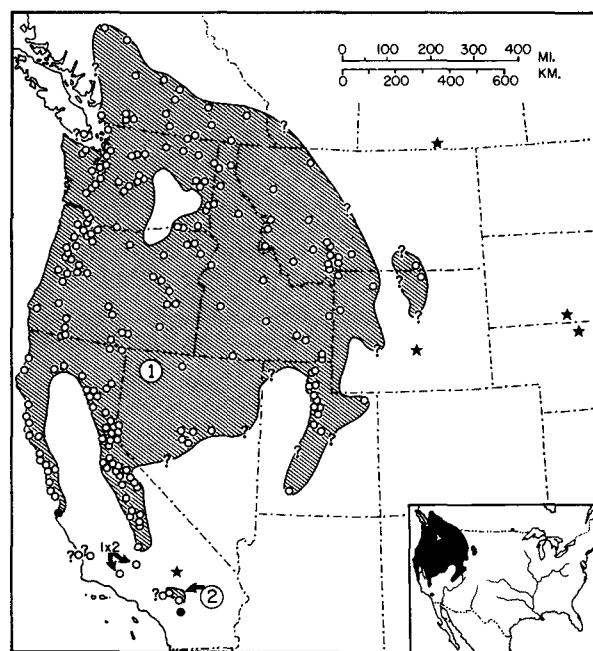
• FOSSIL RECORD. None.

• PERTINENT LITERATURE. The most recent taxonomic works are by Erwin (1974) and Nussbaum and Hoyer (1974), but neither is comprehensive (see COMMENT). The account by Klauber (1943) supersedes that of Stejneger (1890) and is supplemented by Cunningham (1966). References providing additional taxonomic, natural history and/or distribution data are: Cope (1900), Slater (1963), Erwin (1964) and Peabody, et al. (1975). (See also the reports cited by Wright and Wright [1957].) Brief references to anatomy are in Underwood (1967).

• ETYMOLOGY. The name *bottae* honors Paolo Emilio Botta, 19th Century explorer, archaeologist, and diplomat who collected the type; *umbratica* is derived from the Latin *umbraticus*, meaning shade or seclusion.

1. *Charina bottae bottae* (Blainville)

Tortrix bottae Blainville, 1835:289. See species account.



MAP. Closed circles indicate type-localities, open circles mark other localities for *C. bottae*. Stars mark fossil sites of Miocene *C. prebottae*.

- Wenona isabella* Baird and Girard, 1852:176. See species account.
- Wenona plumbea* Baird and Girard, 1852:176. See species account.
- Charina bottae* var. *plumbea* Garman, 1883:131.
- Charina brachyops* Cope, 1888:88. See species account.
- Charina bottae utahensis* Van Denburgh, 1920:31. Type-locality, "Little Cottonwood Canyon, Wasatch Mountains, Wasatch County, Utah." Holotype, California Acad. Sci. 38421, adult female collected by J. R. Slevin, 28 June 1913 (examined by author).
- Charina bottae bottae* Van Denburgh, 1920:31.

• **DEFINITION.** A subspecies characterized by relatively high scale counts (dorsals 39–53, $\bar{x} \approx 44$; ventrals 188–231, $\bar{x} \approx 206$; subcaudals 24–43, $\bar{x} \approx 36$), frontal plate usually with distinctly convex or angular posterior margin, large size (average total length over 400 mm), and dark dorsal color (adults usually olive green to medium brown in life).

2. *Charina bottae umbratica* Klauber

- Charina bottae* (part) Klauber, 1929:19.
- Charina bottae umbratica* Klauber, 1943:83. Type-locality, "Fern Valley, near Idyllwild, Riverside County, California." Holotype, San Diego Natur. Hist. Mus. 12101, male (probably immature) collected by Clyde Searl, 1 July 1929 (examined by author).

• **DEFINITION.** A subspecies characterized by relatively low scale counts (dorsals 32–42, $\bar{x} \approx 39$; ventrals 182–217, $\bar{x} \approx 191$; subcaudals 25–34, $\bar{x} \approx 31$), frontal plate usually with straight or only slightly convex posterior margin, small size (average total length under 400 mm), and light dorsal color (adults usually camel tan).

COMMENT

Ortenburger (1921), Ruthven (1926), and Tanner (1933) question the validity of *utahensis* and Stull (1935) does not recognize the subspecies. Klauber (1943) argues for the recognition of *utahensis* and also describes *umbratica*. Cunningham (1966) supports Klauber's interpretation. Examining a large series from the northern half of the range, Nussbaum and Hoyer (1974) demonstrate that *bottae* and *utahensis* are indistinguishable. Without examining *umbratica* specimens, however, the latter authors conclude that the concept "umbratica" is meaningless. They fail to note that *umbratica* does appear to have a set of characters that differ concordantly from those of the northern populations. Erwin (1974) suggests that *umbratica* might even be considered a full species. Further study of the populations on Mt. Pinos, the Tehachapi Mountains, and the Sierra Nevada is needed to clarify the status of *umbratica*, but it seems best now to retain two subspecific designations and classify the Mt. Pinos and Tehachapi mountain populations as *umbratica* × *bottae* intergrades.

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