

Catalogue of American Amphibians and Reptiles.

Nieto-Román, S. and M.H. Wake. 2012. *Oscaecilia ochrocephala*.

***Oscaecilia ochrocephala* (Cope)
Yellow-headed Caecilian**

Caecilia ochrocephala Cope 1866:132. Type-locality “Panama”, restricted to the “Atlantic side of the Isthmus of Panama (Darien)” by Taylor (1968). Holotype (Cochran 1961; see **Remarks**), National Museum of Natural History (USNM) 29764, young female, collected by J. Gallaer and J.L. LeConte sometime during 1849 (examined by MHW).

Caecilia gracilis: Garman 1876:412.

Herpele ochrocephala: Cope 1885:171.

Coecilia sabogae Barbour 1906:228. Type-locality “Saboga Id., Bay of Panama, [Panama]”. Syn-types, Museum of Comparative Zoology, Harvard University (MCZ) 2425, 2 specimens, age and sex unknown, collected by W.W. Brown and J.E. Thayer in 1905 (not examined by authors).

Herpele ochrocephalum: Norris and Hughes 1918: 493.

Caecilia sabogae: Barbour and Loveridge 1929:234. Emendation.

Oscaecilia ochrocephala: Taylor 1968:611.

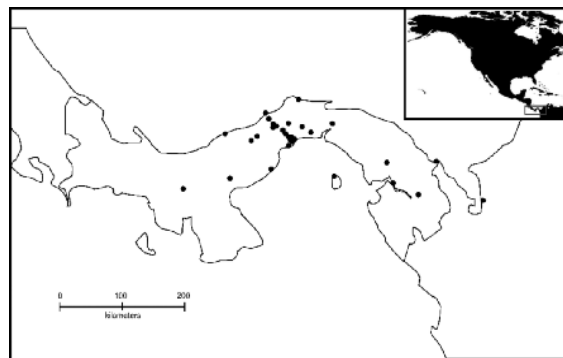
• **CONTENT.** No subspecies have been described.

• **DEFINITION.** Adult *Oscaecilia ochrocephala* are medium-sized caecilians (total length to 617 mm). The species has 169–189 primary folds and 17–31 secondaries (Savage and Wake 2001). Dermal scales and subdermal scales are present. The eyes are reduced structurally and covered by bone and skin. The tentacles are below and slightly anterior to the nostrils. Splenial teeth are present (2–4 on each jaw ramus). The tongue is a fleshy pad in the floor of the mouth with two narial plugs. A terminal shield is absent. The reproductive mode of this species is not known. Coloration in life is light gray dorsally, the sides and venter gray-white; the annular grooves are dark gray. The head is pale yellow to pink, lighter on the sides of the head, the upper and lower lips and the tip of the snout. The area surrounding the vent is cream. Color in ethanol-preserved specimens is usually light olive-gray dorsally with a yellowish head. The lower sides and venter are light greyish or yellowish-grey, with darker annular grooves.

• **DIAGNOSIS.** The distribution of *Oscaecilia elongata* overlaps the southern part of the range of *O. ochrocephala*, but *O. elongata* is distinguished by the absence of secondary folds. Other sympatric species of caecilians (*Caecilia nigricans* and *C. volcani*) have their eyes in open sockets, so are referred to the genus *Caecilia*. The color pattern of *O. ochrocephala* is very similar to that of *O. polyzona*, but the latter species has an unsegmented terminal shield and a higher number of primary annuli and fewer secondaries



FIGURE 1. *Oscaecilia ochrocephala*, Círculo Herpetológico de Panamá, 8 March 2006, at Gamboa, Provincia de Colón, Panamá. Photograph by C.A. Jaramillo.



MAP. Distribution of *Oscaecilia ochrocephala*. The type-locality is not known; black dots indicate reported localities.

ies (*O. ochrocephala*: primaries 169–198, secondaries 17–31; *O. polyzona*: primaries 202–206, secondaries 10–17).

• **DESCRIPTIONS.** Cope’s (1866) description of *Caecilia ochrocephala* was brief. Dunn (1942) provided detailed descriptions and measurements of a large series of specimens. Taylor (1968) redescribed the species and erected the genus *Oscaecilia* to include those relatives of *Caecilia* that have the eyes under bone, including *ochrocephala*. He also amended the type-locality, without stating the basis for the change.

• **ILLUSTRATIONS.** Photographs of the species include color plates in Brocchi (1883) and Ibañez et al. (1999), and black-and-white photos in Duellman and Trueb (1986) and Wells (2007). Taylor (1969c) provided a black-and-white photograph of a preserved specimen he considered different enough from other specimens examined that he referred to it as *Oscaecilia ochrocephala* var. Taylor (1968) provided drawings of three views of the head, a ventral view of the body terminus, and the upper and lower jaws, black-and-white photographs of the skull (Taylor 1969b), scales (Taylor 1972), and illustrated five cervical ver-

tebrae (Taylor 1977). Maddin (2011) provided a black-and-white photograph of a posterior view of the sphenethmoid. Wake (2003) included line drawings of the skull (dorsal, ventral and lateral views), the hyobranchial skeleton, and the 4th vertebra and its ribs. Ramaswami (1944) provided line drawings of the heart and circulatory system. Photographs and/or line drawings of various morphological features of the species are included in the publications cited in the **Pertinent Literature** section.

• **DISTRIBUTION.** Neotropical. The species occurs in Panama, perhaps exclusively (see **Remarks**). Its reported range is from Cocle (Panama) to Turbo (Colombia), from sea level to 610 m. In Panama it has been recorded from central Pacific low islands, Isla Saboga in the Archipelago de las Perlas, cordilleras to the southeast of Darien, several localities along the Panama Canal, Ancon Hill, Albrook and Clayton military bases, central Panama City, and from a number of protected areas including Parque Nacional Altos de Campana, Parque Nacional Soberania, and Barro Colorado Island (HerpNet 2009; IUCN 2009).

The species is apparently highly fossorial, seldom seen on the surface but occasionally found in excavations such as freshly dug graves. It also can be found when building foundations are dug (to 10 m) and when new roads are developed. Residents of Gamboa have reported seeing it on the surface after flooding rains, and at dusk and dawn.

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** Most of the literature describes the morphology and discusses the systematics of the species. Distribution is summarized in the IUCN Red List (Lynch et al. 2004), and by Dunn (1942), Lynch (1999), Lynch and Acosta (2004), Savage and Wake (2001), and Taylor (1968). Habitat features are discussed by Ibañez et al. (1999). Ecological notes are provided by Evans (1947), Fouquette (1960), and Swanson (1945), and predation was noted by Hallinan (1920) and Schmidt (1932). Osteology, especially of the head, was described by de Jager (1939), Maddin (2011), Taylor (1969b, 1977) and Wake (2003). Myology of the head was discussed by de Jager (1939) and of the body by Nussbaum and Naylor (1982). Fritzsche and Wake (1988) described the inner ear, Norris (1917), de Jager (1939) and Wake (1985) the eye, and de Jager (1939), Jurgens (1971), and Schmidt and Wake (1990) the olfactory and vomeronasal organs. Norris and Hughes (1918) extensively described the brain and cranial and anterior spinal nerves. The innervation of the tongue and the hyobranchial apparatus were analysed by Wake (1992, 1993a,b), and other aspects of neuroanatomy by de Jager (1939) and Wake (1993a,b, 1994). Ramaswami (1944) described the heart and circulatory system. Scales were described by Taylor (1972). The urogenital system was described by Wake (1968, 1970a,b, 1972). Renous and Gasc (1989) compared body and verte-

bral proportions of this species with other caecilians. Jenkins et al. (2007) used specimens of *O. ochrocephala* as comparative material in their treatise on a fossil species. Cope (1886) cursorially mentioned the structure of the copulatory organ. Most of the morphological publications mentioned include photographs and/or line drawings of sections of organs and/or whole structures. Phylogenetic analyses that include *O. ochrocephala* appeared in Boulenger (1895), Nussbaum and Wilkinson (1989), Wake (1993a), Wake et al. (2005), Walsh (1988), Wilkinson (1997), Wilkinson and Nussbaum (1996, 2006), and Zhang and Wake (2009). Systematic discussions or lists that include the species are in Acosta-Galvis (2000), Auth (1994), Cope (1885, 1886), Dubois (2005), Frost (2007), Frost et al. (2006), Ibañez D. et al. (2000), Laurent (1984), Lescure et al. (1984), Nussbaum (1979), Schmidt (1933), Smith and Smith (1972), Taylor (1969b), and Wake (1986). Taxonomic keys that include *O. ochrocephala* are provided by Lahanas and Savage (1999), Lynch (1999), Savage and Wake (1972, 2001), and Taylor (1968, 1969a, 1973). Partial sequences of mitochondrial genes 16S and cytb are available in GenBank, as is the whole mitochondrial genome (Zhang and Wake 2009).

• **REMARKS.** Cochran (1961) indicated that the specimen referred to by Cope (1866), including reference to the collectors, is the USNM specimen listed as the type, but it is not clear how that specimen came to the USNM, nor whether it is the same one, given that data other than the locality "Panama" did not accompany the specimen.

Dunn (1942) examined 101 specimens from museum collections; 99 are from several areas of Panama, 1 specimen is from Turbo, Colombia (MCZ 1492), and 1 is recorded from Brazil without locality or museum specimen number. Taylor (1968) examined the specimen from Turbo and suggested that it is morphologically similar to *O. polyzona*, which occurs in northern Colombia, including Turbo. Because no additional specimens of *O. ochrocephala* had been reported from there, Taylor inferred that the Turbo specimen could be an *O. polyzona*. Taylor then (1973) recognized *polyzona* as a subspecies of *ochrocephala*. Acosta-Galvis (2000) and Lynch (1999) included *O. ochrocephala* in their lists of caecilians from Colombia. Lynch (1999) discussed the Turbo specimen, which he did not examine, and noted that still no specimens of the species are in Colombian collections, but he left the presence of *O. ochrocephala* in Colombia an open question, pending examination of the Turbo specimen and additional material. We suggest that the specimen is not likely to be *O. polyzona*, however, because Lynch and Acosta (2004) state that *O. polyzona* has a higher number of primary annuli and that the number does not overlap that of *O. ochrocephala*. The number of primary annuli of the Turbo specimen falls within the range of those for *O. ochrocephala*. We concur that additional collection and study is warranted.

The generic character of the eye not being in an open socket, but covered by bone, is usually accu-

rate, but is subject to some variation. The junior author has observed, but rarely, both partial coverage by bone and coverage on one side but not the other in *O. ochrocephala* and other species in the genus.

• **ETYMOLOGY.** The specific epithet is derived from the Greek “ΟΧΡΟ”, yellow, and “ΚΕΦΑΛΑ” referring to the head. It is the basis for the common name.

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