

Taxonomic Status of the Frog Genus *Centrolenella* Noble (Anura: Centrolenidae)

ROY W. McDIARMID, *U.S. Fish and Wildlife Service,
National Museum of Natural History, Washington, D.C.
20560, USA.*

JAY M. SAVAGE, *Department of Biology, University of
Miami, Coral Gables, Florida 33124, USA.*

In 1894, Werner described the genus *Hyalopsis* and the species *H. platycephalus* based on a single specimen from "South America." The description was brief (13 lines) and was repeated in Nieden's (1923) compilation of living frogs. Gorham (1966, 1974) also listed these names in his world checklists but queried their taxonomic affinity by placing a question mark before the genus and species. Each of these authors referred the species to the family Leptodactylidae (=Cystignathidae). In 1971, Lynch (p. 69) reviewed Werner's description and concluded that *Hyalopsis* was not a leptodactylid

frog. He remarked that "If the genus is a bufonoid genus, then it must be close to or identical with *Hyla* (assuming Werner correctly presented the characters of the holotype)."

Ten years later, Lynch (1981) presented a different interpretation of the identity of *Hyalopsis platycephalus* and argued that it represented a previously undescribed species of *Centrolenella* from a remote area of the Sierra Nevada de Santa Marta in northern Colombia. Acceptance of Lynch's interpretation requires that *Centrolenella* Noble (1920) be placed in the synonymy of *Hyalopsis* Werner (1894). We have examined Lynch's proposal in detail and reject his conclusions on several grounds.

Lynch's case (1981) rests upon a series of assumptions regarding the features given for the no longer extant holotype. These include the explicit statements in the original description (Werner 1894:156) that the toes are fully webbed, that an omosternum is present, and that the outer metatarsals are separated. Each of these characteristics is easily discernible and seems less likely to be the result of an interpretive error than certain other characters (e.g., tooth characters). Lynch argued (1981) that if these characters were incorrectly stated in the original description, then the Colombian form of *Centrolenella* would fit Werner's description rather well. If Lynch's logic is followed regarding the other features recorded by Werner (i.e., they were incorrectly described), then the description does not fit *Centrolenella* at all. Or, what if the features questioned by Lynch were correctly described and some or all of the remaining features were incorrectly recorded by Werner? How does one decide which features were correctly described and which were not in this situation? Finally, the very significant character of the presence of intercalary cartilages in the digits is not mentioned by Werner, although Lynch's argument requires their presence.

Besides the three highly questionable assumptions regarding character states that must be made to fit the Colombian *Centrolenella* into *Hyalopsis*, several features (in addition to the three mentioned above) from Werner's description do not or apparently do not fit Lynch's (1981:288) redescription of "*H. platycephala*" based on the Colombian material. Included are the following, with Werner's data compared to Lynch's redescription (in parentheses): length 33 mm (29.5-31.3 mm); projecting snout rounded (snout round in dorsal view, slightly sloping and truncate in profile, not projecting); snout somewhat longer than length of eye (snout short, 61.5-74.3% of eye length); fingers half-webbed, toes fully webbed (no webbing between fingers I and II, vestigial between II and III, and less than half-webbed between fingers III and IV, toes less than fully webbed); omosternum cartilaginous, very small (omosternum absent); outer metatarsals separated (outer metatarsals united); side of head vertical (loreal region weakly concave, lips flared, especially posteriorly); in-

terorbital distance $\frac{1}{2}$ width of upper eyelid (upper eyelid width 70.6–96.7% interorbital distance); tympanum indistinct, small (tympanum concealed); color and pattern? = bleached (color in preservative pale lavender—all dorsal surfaces densely peppered with pale violet melanophores).

For some reason, Lynch (1981:283) did not provide a complete translation of Werner's description of *H. platycephalus* and omitted the following section: "Tibiotarsal joint reaches to the posterior edge of the tympanum." (Werner 1894:156). We asked David Cannatella who is knowledgeable of *Centrolenella* and familiar with characteristics used in frog taxonomy, to check the length of the tibiotarsal joint in relationship to the body size of the Colombian *Centrolenella* with which Lynch associated the name *Hyloopsis platycephalus*. In four specimens examined "The tibiotarsal joint extended to a point anterior to the eye but not to the tip of the snout" (D. Cannatella, pers. comm.). Obviously the Colombian *Centrolenella* sp. has much longer legs than Werner's *Hyloopsis platycephalus*, which was either relatively short-legged or long-bodied. Obviously it did not have the same proportion as the Colombian form, even though it was of about the same size.

A final point arguing against the association of *Hyloopsis platycephalus* with the *Centrolenella* from the Sierra Nevada de Santa Marta in northern Colombia is the extreme unlikelihood that Werner's specimen came from that remote area of South America. Carriker (1922) reviewed the scientific work that had been done in the Sierra Nevada de Santa Marta and commented on its inaccessibility up to that time. Because all the material of Lynch's *Centrolenella* is from elevations between 1220 and 2000 m in areas that were very difficult to reach until recently, it seems unlikely that Werner's specimen came from this region. The fact that the only locality data published with the specimen were "South America" makes it even more suspect. We have no knowledge of other material deposited in Vienna prior to 1894 that was from the Santa Marta area. Other material described by Werner (1894) in the same paper came from New Britain (=Papua New Guinea), East Indies, Tehuantepec (Mexico), and Ecuador. No reference to a collector is provided. We strongly suspect that the frog described by Werner was not from the Sierra Nevada de Santa Marta and raise the possibility that it may not have been from South America. Because the specimen was part of the comparative anatomy collection of the University of Vienna, which included material from all over the world and frequently was obtained from animal (pet) dealers, the possibility of a mix up in its provenance cannot be ignored.

To summarize, the case for associating Werner's *Hyloopsis platycephalus* with a population of *Centrolenella* from Colombia is clearly inadequate. Depending on interpretation, more than half of the 20 characters Werner used to describe the genus

Hyloopsis and *H. platycephalus* do not apply to the Santa Marta *Centrolenella*. Lynch (1981) forced *Centrolenella* into *Hyloopsis* by assuming that Werner incorrectly described three major traits of his specimen of *Hyloopsis platycephalus*. We have found that three other character states of *Hyloopsis platycephalus* clearly do not agree with the Colombian *Centrolenella* and five others are questionable as to their congruence with the same features of the Colombian form described by Lynch. From our comparison of Werner's and Lynch's descriptions, the Colombian *Centrolenella* and *Hyloopsis platycephalus* are two very distinct species. Our morphological comparison of the descriptions forces us to reject Lynch's decision that *Centrolenella* Noble is a subjective synonym of *Hyloopsis* Werner. Unfortunately, the type and only known specimen of *Hyloopsis platycephalus* is lost, precluding a satisfactory resolution of the issue.

In view of the above arguments and the new data presented, and because, in our opinion, Lynch's proposal is contrary to the primary principle of zoological nomenclature (Art. 23, International Code of Zoological Nomenclature, 1964; Bull. Zool. Nomen., 1974), i.e., the maintenance of stability, we have petitioned the International Commission on Zoological Nomenclature to conserve the generic name *Centrolenella* and to suppress the generic name *Hyloopsis*. Until the Commission rules on our request, the Rules (Art. 80) require the continued use of the generic name *Centrolenella* for the species of glass-frogs (about 70 known species) commonly encountered along streams in the wet Neotropical forests of Central and South America from Mexico to Argentina as listed by Duellman (1977) or subsequently added to the genus.

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