

Comment on the proposed precedence of the specific name of *Euphryne obesus* Baird, 1859 over that of *Sauromalus ater* Duméril, 1856 (Reptilia, Squamata)
(Case 3143; see BZN 58: 37–40, 229, 307–308)

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We write to oppose the proposal by Montanucci et al. to give precedence to the specific name of *Euphryne obesus* Baird, 1859 over *Sauromalus ater* Duméril, 1856. In our view this proposal runs counter to promoting stability and universality in nomenclature.

The proposal is based on two issues: first, uncertainty regarding the type locality of *Sauromalus ater*, and second, a greater number of papers using the name *obesus* than the name *ater*.

The uncertain type locality of *Sauromalus ater* is irrelevant to the precedence of the name *ater* relative to the name *obesus*; uncertainty about a type locality is not usually considered sufficient reason for granting precedence to a junior synonym, provided that the synonymy can be established based on characters of the type specimen.

Sauromalus ater is the type species of the genus *Sauromalus*, and *ater* has been in use as a valid name longer than any other specific name in combination with *Sauromalus*. Moreover, following Bocourt's (1870) and Coues's (1875) treatments of *Euphryne obesus* as a junior synonym of *Sauromalus ater*, *ater* was the name used for all the populations of chuckwalla lizards affected by the proposal of Montanucci et

al. in several important papers published prior to 1923 (Cope, 1875, 1900; Yarrow, 1882; Stejneger, 1891; Stejneger & Barbour, 1917; Van Denburgh, 1922). The names *Sauromalus ater* and *S. obesus* were applied to different putative species by Schmidt (1922), and both names were treated as valid in four successive editions of the influential *Check list of North American amphibians and reptiles* (Stejneger & Barbour, 1923, 1933, 1939, 1943), Shaw's (1945) review of the genus, and several subsequently published works not restricted to the fauna of the United States (Smith & Taylor, 1950; Etheridge, 1982; Flores-Villela, 1993; Liner, 1994; de Queiroz, 1995). In a more recent review of the genus, Hollingsworth (1998) treated the names *Sauromalus ater* and *S. obesus* as synonyms and, following the Principle of Priority, used *S. ater* as the valid name of the taxon, as did Crother et al. (2000). Thus, the senior name *S. ater* has been in continuous use since it was first published in 1856 while, prior to the proposal by Hollingsworth (1998), the junior name *obesus* had been in continuous use only since 1922.

Papers using the name *obesus* are indeed more abundant than those using the name *ater* (para. 6 of the application), but this discrepancy reflects the large number of papers published on taxa occurring in the United States. The source of data used by Montanucci et al. (para. 6) is an extensive bibliography of 626 references on lizards of the genus *Sauromalus* (Beaman et al., 1997). Montanucci et al. point out that over 100 papers dealing with the distribution of chuckwallas used the name *S. obesus*. However, 97 of the 168 papers (58%) included in the Distribution category, the largest of the many subject categories indexed in the bibliography, deal only with populations occurring within the United States. These references, by the nature of their geographic focus, would not be expected to use the name *S. ater*, which from 1922 to 1998 was applied to populations occurring only in Mexico. Moreover, as noted by Montanucci et al., 46 papers used the name *S. ater*, and 46 is not an insignificant number.

Greater discrepancies are found for references indexed under the headings Physiology (124 total references) and Thermoregulation (29), which report the findings of studies that often require extensive instrumentation in laboratory settings and consequently have relied on more accessible mainland populations as the source of research. Populations that occur on uninhabited or sparsely peopled islands, especially those lacking fresh water, are generally less accessible and therefore less studied than comparable mainland populations. From 1945 to 1998 the name *S. ater* was applied to populations restricted to islands in the southern part of the Gulf of California, Mexico. As independently pointed out by the compilers of the bibliography (Beaman et al., 1997), studies requiring large sample sizes and long-term observations, including many behavioral and ecological studies (of which 117 were indexed in the bibliography), also have almost exclusively focused on the more accessible populations of *Sauromalus* from the U.S.A. that were then called *S. obesus*. None of these studies is diminished by a change in the scientific name, nor would a name change have any known harmful effect on the scientific community or the public.

The titles and author names in the bibliography indicate that the preponderance of publications using the name *Sauromalus obesus* reflects a discrepancy in the numbers of scientists working in the U.S.A. versus Mexico. In a cursory examination, we recorded only 22 papers (3.5%) in the bibliography (Beaman et al., 1997) written in

Spanish by Mexican scientists. Moreover, between the years 1922 and 1998, a time interval that accounts for 580 (93%) of the papers in the bibliography, the name *S. obesus* was applied to the populations of chuckwalla in the United States. It is not surprising, therefore, that more has been written about chuckwalla called, until recently, *S. obesus*, but this has little bearing on the appropriate scientific name for these populations.

Granting the name *obesus* precedence over *ater* on the basis of frequency of use is questionable for several inter-related reasons. First, it trivializes the Principle of Priority. Although any proposal to grant a junior synonym precedence over a senior synonym sets aside priority, this case differs from other such cases in that the senior synonym has been used often and continuously as the valid name of a species since it was first published. Therefore, the proposal to grant precedence to the junior synonym rests entirely on a difference in the numbers of times the two names have been used.

Second, the proposal rests on a misapplication of the concept of stability, by considering the names of only some of the relevant populations. Specifically, it focuses on a change in the species name applied to some populations from *obesus* to *ater*, while disregarding the change in the species name applied to other populations from *ater* to *obesus* that would occur if the order of precedence of these names were to be reversed. The reason that the precedence of these names is at issue is a taxonomic proposal based on the conclusion that two species formerly considered separate constitute a single species (Hollingsworth, 1998). Such a taxonomic proposal will result in a change in the name applied to some of the populations in question regardless of which name has precedence. This situation contrasts sharply with those in which an older name is discovered for what is considered a single species both before and after discovery of that name, and in which nomenclatural stability for all populations in question can be achieved by granting precedence to the junior synonym.

Third, and of considerable concern to us, is the consequences of using the number of citations, rather than priority, to determine precedence in cases involving taxonomic unification. Are we to anticipate that each time a study proposes to unify species that occur on opposite sides of an international border, practiced nomenclaturists in the larger and/or wealthier country will move to set aside priority in an attempt to preserve 'their' name if that name is junior but has been used in more published articles? Such actions will constantly jeopardize nomenclatural stability, as is the case with more than 145 years of use of the name *Sauromalus ater*. This practice is not only contrary to the purpose of the Code but also gives a bad impression to zoologists in the developing world by effectively, though unintentionally, presenting a chauvinistic perspective that results in a form of nomenclatural imperialism. Montanucci and his co-authors could be interpreted as arguing a U.S.-centric view that rests on a discrepancy in the number of biologists in the United States versus Mexico.

We are in a period of unprecedented availability of old literature. This will allow a number of older names for well-known taxa to be found and, in some cases, suppressing such names or reversing their order of precedence will be necessary. Although justification for these actions will often involve the numbers of publications in which competing names have been used, it is critical to distinguish between cases

involving forgotten or long unused names and those involving names that have all been in use, some more frequently than others.

In summary, the proposal to give the specific name *obesus* Baird, 1859 precedence over its senior subjective synonym *ater* Duméril, 1856, is based on questionable reasoning and would not promote nomenclatural stability or continuity. Accordingly, we ask that the Commission reject the proposal.

Two of us (K. de Queiroz and R.W. McDiarmid) have formulated a proposal that the holotype of *Sauromalus ater* should be set aside and that a neotype be designated, fixing the type locality as Isla Espíritu Santo, Gulf of California, Mexico. This was the locality to which Smith & Taylor (1950) restricted the species (para. 2 of the application).

Additional references

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