



## High level Mammalian taxonomy: a response to Hedges (2011)

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Hedges (2011) recently published a critique of our 2010 *BMC Evolutionary Biology* article (Asher and Helgen 2010) in which he expressed a preference for the name Afrosoricida Stanhope et al. 1998 to signify the mammalian clade of tenrecs (Tenrecidae) and golden moles (Chrysochloridae). He disagreed with what he claimed to be our rationale for preferring another name for this group, Tenrecoidea McDowell 1958. Here is his portrayal of our taxonomic philosophy: "[Asher & Helgen] suggested that strict priority be used as a criterion for high-level names and that such priority be based on group content rather than the procedure used for low-level taxa, anchored to constituent taxa. ... [They] have proposed a radical departure from convention" (Hedges 2011:67–68).

Here is what we actually wrote: "We recommend application of the principles of priority and stability, as laid down by G.G. Simpson in 1945, to discriminate among proposed names for high-level taxa. ... Systematists should apply new names reluctantly, deferring to those already published and maximizing consistency with existing nomenclature" (Asher and Helgen 2010: 1). This point was reiterated in our conclusions: "[r]egardless of disagreements over individual cases, we hope that our larger point is broadly accepted, i.e., that new names should be coined with great reluctance, relying whenever possible on existing terms, following Simpson's emphases on priority and stability" (Asher and Helgen 2010: 7).

Hedges repeatedly mentioned "community consensus" as a means to arbitrate among names. However, such consensus is obviously absent regarding a taxon when it is coined *de novo*. When "Afrosoricida" was named in 1998, *Afrosorex* Hutterer 1986 was a genus of soricid and McDowell had used the taxon Tenrecoidea in 1958 for the identical tenrecid-chrysochlorid clade.

We pointed out, but did not invent, the inapplicability of the type concept to Linnean units above the family. Hedges (2011) misleadingly implies that we advocate such a disjunction; we don't. We merely recognize its existence, as the ICZN does not apply above the level of the family. In fact, were Hedges to apply the type-anchor concept to this particular case, he would be compelled to reject Afrosoricida (which implies a crocidurine shrew) and favor a name such as Tenrecoidea (which implies a tenrec).

Hedges claimed that his preferred taxon "has a more typical suffix (-a) for a mammalian order" (2011:67) and that "Tenrecoidea, with its superfamily suffix, would be inappropriate to use as an order" (2011: 68). Firstly, and obviously, the two competing names in this case (Tenrecoidea vs. Afrosoricida) both end in "a". Secondly, we already noted that "Simpson did not regard 'oidea' as exclusively a superfamilial ending and used it at least once as an ordinal suffix (Hyracoidea)" (Asher and Helgen 2010:7).

Asher and Helgen (2010) discussed at length the history of several mammalian taxa, among which the tenrec-golden mole clade was just one example of how nomenclature above the level of the family should be standardized following Simpson (1945). We acknowledged that arbitration among high-level names can be controversial. More important than any individual case was our point that taxonomists should not invent a name for a group that already has one. We leave it to fair-minded readers to decide if this recommendation is a "radical departure" from the principles of GG Simpson (1945:13): "the primary purpose of classification [is] simply to provide a convenient, practical means by which zoologists may know what they are talking about."

**References**

- Asher, R.J. & Helgen, K.M. (2010) Nomenclature and placental mammal phylogeny. *BMC Evolutionary Biology*, 10, 102.
- Hedges, S.B. (2011) On the use of high-level taxonomic names. *Zootaxa*, 2867, 67–68.
- Hutterer, R. (1986) African shrews allied to *Crocidura fischeri*: taxonomy, distribution and relationships. *Cimbebasia Series A*, 8, 24–35.
- McDowell, S.B. (1958) The Greater Antillean insectivores. *Bulletin of the American Museum of Natural History*, 115, 113–214.
- Simpson, G.G. (1945) The principles of classification and a classification of mammals. *Bulletin of the American Museum of Natural History*, 85, 1–350.
- Stanhope, M.J., Waddell, V.G., Madsen, O., de Jong, W., Hedges, S.B., Cleven, G.C., Kao, D., & Springer, M.S. (1998) Molecular evidence for multiple origins of Insectivora and for a new order of endemic African insectivore mammals. *Proceedings of the National Academy of Science USA*, 95, 9967–9972.