

Alpha-taxonomy in world mammals

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Introduction

Herein I discuss the progress of mammalian alpha-taxonomy from 1975 to 2005. First, I discuss the new species and groups discovered in this period. Second, I focus on the methods employed to diagnose and delimit these mammal species and how these have changes over the the past 30 to 40 years. Third, I will attempt to draw conclusions, if possible, about the speciation mechanisms at work in mammal populations based on the evidence use to delimit those mammal species. And lastly, I will frame these discussions in the context of the species concepts (or lack thereof) typically used in mammalogy and mammalian taxonomy.

Mammal Species of the World, 3rd Edition (MSW3) (Wilson & Reeder 2005) is a reputable database of mammalian taxa (species, sub-specific, and super-specific) and information concerning their treatments (e.g. scientific name, authors' name and year described, original publication citation, distribution, etc. (Wilson & Reeder 2005)) from 1702 to 2005 AD. This data product is a boon to the discussions here. Using the .csv file from the MSW3 webpage (<https://www.departments.bucknell.edu/biology/resources/msw3/>), I explored this dataset in R (R Core Team 2017), primarily using the tidyverse suite of packages for exploration and visualisation (Wickham 2017)

Mammal discoveries, 1975—2005

Lines of evidence

Modes of mammalian speciation

Mammalogical species concepts

Concluding remarks

References

- R Core Team. 2017. *R: A Language and Environment for Statistical Computing*. 2017. Vienna, Austria: R Foundation for Statistical Computing. Available: <https://www.r-project.org/>.
- Wickham, H. 2017. *tidyverse: Easily Install and Load 'Tidyverse' Packages*. 2017. Available: <https://cran.r-project.org/package=tidyverse>.
- Wilson, D. & Reeder, D.-A. Eds. 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference*. 3rd edition. 2005. Baltimore: John Hopkins University Press. Available: <https://www.departments.bucknell.edu/biology/resources/msw3/>.