

# Alpha-taxonomy in world mammals

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Species & speciation module deliverable

For A/Prof A.M. Muasya



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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**

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### **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/>.