Data Papers

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COMBINE: a coalesced mammal database of intrinsic and extrinsic traits

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Abstract. The use of species' traits in macroecological analyses has gained popularity in the last decade, becoming an important tool to understand global biodiversity patterns. Currently, trait data can be found across a wide variety of data sets included in websites, articles, and books, each one with its own taxonomic classification, set of traits, and data management methodology. Mammals, in particular, are among the most studied taxa, with large sources of trait information readily available. To facilitate the use of these data, we did an extensive review of published mammal trait data sources between 1999 and May 2020 and produced COMBINE: a COalesced Mammal dataBase of INtrinsic and Extrinsic traits. Our aim was to create a taxonomically integrated database of mammal traits that maximized trait number and coverage without compromising data quality. COMBINE contains information on 54 traits for 6,234 extant and recently extinct mammal species, including information on morphology, reproduction, diet, biogeography, life habit, phenology, behavior, home range, and density. Additionally, we calculated other relevant traits such as habitat and altitudinal breadths for all species and dispersal for terrestrial non-volant species. All data are compatible with the taxonomies of the IUCN Red List v. 2020-2 and PHYLACINE v. 1.2. Missing data were adequately flagged and imputed for non-biogeographical traits with 20% or more data available. We obtained full data sets for 21 traits such as female maturity, litter size, maximum longevity, trophic level, and dispersal, providing imputation performance statistics for all. This data set will be especially useful for those interested in including species' traits in large-scale ecological and conservation analyses. There are no copyright or proprietary restrictions; we request citation of this publication and all relevant underlying data sources (found in Data S1: trait_data_sources.csv), upon using these data.

Key words: body size; comparative analyses; diet; hibernation; life history; longevity; macroecology; mammals; mass; sexual maturity; traits.

The complete data sets corresponding to abstracts published in the Data Papers section in the journal are published electronically as Supporting Information in the online version of this article at http://onlinelibrary.wiley.com/doi/10.1002/ecy.3344/suppinfo.

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Associated data are also available on Figshare: https://doi.org/10.6084/m9.figshare.13028255.v4

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