

Supplementary material for:

**Morphology captures diet and locomotor types in rodents**

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**Data definition**

The following files can be downloaded from:

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**Ecological data (DietLocomotion.csv).** Diet type and locomotion categories and the data sources used to assign them, following the numbered reference lists below (Reference Lists 3 and 4).

**Body size data (bodySizes.csv).** Body size data for all 208 species with data sources, following the numbered reference list below (Reference List 2).

**Specimens examined (measurementsFinal.csv).** Original measurements taken by LDVA. The *mus* field identifies the collections that house the specimens. QM = Queensland Museum (Brisbane, Australia), AusMus = Australian Museum (Sydney, Australia), MZFC = ‘‘Alfonso L. Herrera’’ Zoology Museum (UNAM, Mexico City, Mexico). See main text for measurement methods and definitions.

**Species means (meansMasses.csv).** Mean values for all 14 measurements with their data source. Values derived from specimens measured by LDVA are identified with in the *dataProv* field as ‘‘LD’’. Other values were collated from the sources in Reference List 1 and updated from amended tables and correspondence with the lead author (identified in the table as ‘‘AM’’). Sources for body mass data are detailed separately. See main text for measurement methods and definitions.

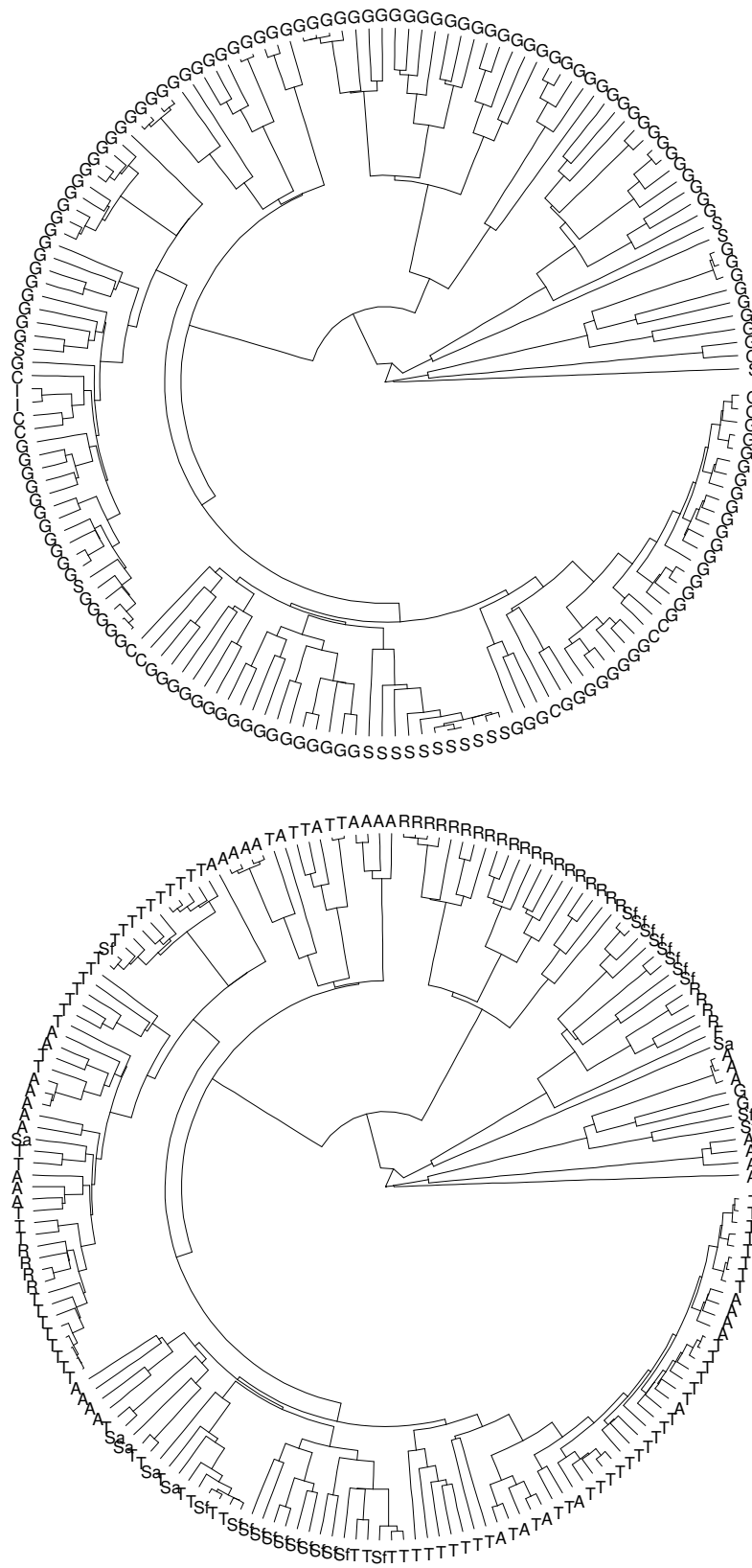
All other tables are produced as intermediate or final outputs of the analysis scripts provided. The R scripts are named in the order in which they can be used. ‘‘phylo.fda.v0.2noPlotting’’ needs to be sourced for several of the analyses.

**Table S1.** Taxonomic context of species examined in this study.

Family	Total species	Species examined
MURIDAE	719	54
CRICETIDAE	710	84
SCIURIDAE	279	7
ECHIMYIDAE	90	0
HETEROMYIDAE	62	14
NESOMYIDAE	61	15
CTENOMYIDAE	60	0
DIPODIDAE	50	28
GEOMYIDAE	39	1
GLIRIDAE	29	3
CAPROMYIDAE	27	0
SPALACIDAE	21	0
CAVIIDAE	19	0
ERETHIZONTIDAE	18	1
BATHYERGIDAE	15	0
DASYPROCTIDAE	13	0
HYSTRICIDAE	13	0
OCTODONTIDAE	13	0
ABROCOMIDAE	10	0
CALOMYSCIDAE	8	0
ANOMALURIDAE	7	0
CHINCHILLIDAE	7	0
CTENODACTYLIDAE	5	0
CASTORIDAE	3	1
CUNICULIDAE	2	0
PEDETIDAE	2	0
PLATACANTHOMYIDAE	2	0
THRYONOMYIDAE	2	0
APLODONTIIDAE	1	0
DIATOMYIDAE	1	0
DINOMYIDAE	1	0
MYOCASTORIDAE	1	0
PETROMURIDAE	1	0

**Table S2.** Parameter estimates from PGLS size correction (mean and 95% CI for 100 phylogenetic trees)

Character	intercept	intercept 95% CI	slope	slope 95% CI
LR	1.129	0.007	0.252	0.001
ZB	1.916	0.007	0.25	0.001
BIT	-0.564	0.004	0.307	0.001
LMT	0.475	0.007	0.299	0.001
HMC	0.432	0.006	0.3	0.001
T	3.495	0.01	0.292	0.002
E	1.985	0.01	0.188	0.002
Vib	2.699	0.016	0.237	0.003
HF	2.232	0.011	0.29	0.002
FF	1.315	0.009	0.291	0.002
UM	-0.701	0.011	0.323	0.002



**Figure S1.** Distribution of diet types and locomotor modes on a randomly-selected phylogenetic tree (from the set of 100) from the mammalian phylogeny of Faurby and Svenning (2015). Abbreviations for diet types - C: carnivore, G: generalized herbivore, I: insectivore, S: specialized herbivore. Abbreviations for locomotion modes - T: terrestrial, Sa: semiaquatic A: arboreal, Sf: semifossorial, F: fossorial, R: ricochetal, G: gliding.

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