

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: List of all species used in the study including estimates of species' adult mass, generation time, mutation rate, and accession codes for reference genome sequences and short-read data.

File Name: Supplementary Data 2

Description: List of species with classification with respect to biogeographic realm, biome and human biogeography.

File Name: Supplementary Data 3

Description: PSMC trajectories of species.

File Name: Source Data 1

Description: PSMC trajectories of species for Fig. 1a.

File Name: Source Data 2

Description: Piecewise linear model fit for Fig. 1a.

File Name: Source Data 3

Description: Slope values for Fig 1b.

File Name: Source Data 4

Description: Decline severity values for Fig 1c.

File Name: Source Data 5

Description: PSMC trajectories of species for the last 742 ky for Fig. 2a.

File Name: Source Data 6

Description: Average population size of species before and after 100 kya for Fig. 2a.

File Name: Source Data 7

Description: Temperature values for the last 742 ky for Fig. 2a.

File Name: Source Data 8

Description: Observed and predicted population size values - climate-only model for Fig. 2b.

File Name: Source Data 9

Description: Mean squared error (MSE) - climate-only model for Fig. 2b.

File Name: Source Data 10

Description: Log-score model values for Fig. 3a.

File Name: Source Data 11

Description: Mean squared error (MSE) - all models for Fig. 3b.

File Name: Source Data 12

Description: Per-species mean squared errors (MSE) - all models for Fig. 3c.

File Name: Source Data 13

Description: Megafauna parameters - 139 species for Fig. 4a.

File Name: Source Data 14

Description: Megafauna parameters - all species for Fig. 4b.