

Methods and Permissions – BiodiversityMapping.org

20 December 2016

Primary species range map data to create the diversity maps on BiodiversityMapping.org are from the IUCN (mammals, amphibians, and marine species), jointly from BirdLife International and NatureServe (birds), from NatureServe (reptiles and freshwater fish of the USA), or from the U.S. Geological Survey (trees of the USA). Range maps for mammals, amphibians, and marine species can be found at, <http://www.iucnredlist.org/technical-documents/spatial-data>

Range maps for birds can be requested at, <http://datazone.birdlife.org/species/requestdis>

Range maps for reptiles and freshwater fish of the USA can be requested at, <http://www.natureserve.org>

Range maps for trees can be downloaded at, <http://gec.cr.usgs.gov/data/little>

Species richness and other metrics for the maps on the BiodiversityMapping website were calculated with ArcGIS 10.x using equal area grids (Eckert IV or Albers Equal Area Conic). In all cases, extinct species were removed, as were non-native distributions of extant species. Polygons listed with the attribute Vagrant were also removed. In cases where a species range was split into multiple subspecies, these were merged to create a range map for the full species when possible.

Richness was calculated using a 10×10km or 100×100km grid, depending on the study. For each grid cell, any species that overlapped any part of the cell counted as a presence of that species. For some groups or areas, a uniform grid was not appropriate (e.g., watersheds for freshwater fish), and a decision was made on the best spatial unit to use that would maintain the highest data quality.

Versions of many of the maps on this site originally appeared in the scientific articles below,

Jenkins, C.N. & K. Van Houtan. (2016). [Global and regional priorities for marine biodiversity protection](#). *Biological Conservation* doi:10.1016/j.biocon.2016.10.005 ([PDF](#))

Jenkins CN, Alves MAS, Uezu A, Vale MM (2015) Patterns of Vertebrate Diversity and Protection in Brazil. [PLoS ONE 10\(12\): e0145064. doi:10.1371/journal.pone.0145064](#)

Jenkins, CN, KS Van Houtan, SL Pimm, JO Sexton (2015) US protected lands mismatch biodiversity priorities. [PNAS 112\(16\), pp.5081-5086](#).

Jenkins, CN, SL Pimm, LN Joppa (2013) Global Patterns of Terrestrial Vertebrate Diversity and Conservation. [PNAS 110\(28\): E2602-E2610. doi: 10.1073/pnas.1302251110](#) ([PDF](#))

Pimm, SL, CN Jenkins, R Abell, TM Brooks, JL Gittleman, LN Joppa, PH Raven, CM Roberts, JO Sexton (2014) The biodiversity of species and their rates of extinction, distribution, and protection. [*Science* 344\(6187\): 1246752](#)

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Clinton N. Jenkins
IPÊ - Instituto de Pesquisas Ecológicas
Email: Clinton.Jenkins@gmail.com