the palaeoverse package : : cheat sheet

a community-driven R package to support palaeobiological analysis, developed by palaeobiologists, for palaeobiologists.

Generally handy functions

axis_geo(...)

look_up(data)



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look up interval names and assign international geological stages and ages, including numerical dates to character-based inputs

add the geological time scale to a plot

group_apply(occdf, group, fun)

apply functions over grouping(s) of data

Produce an occurrence dataset from range data



tax_expand_time(taxdf, max_ma, min_ma)

generate pseudo-occurrences from temporal range data



tax_expand_lat(taxdf, bins)

generate pseudo-occurrences from latitudinal range data

Prepare for temporal analyses



time_bins(interval, rank) generate time bins for a given study interval



bin_time(occdf, bins, method)

assign fossil occurrences to time bins using different approaches

Prepare for spatial analyses



palaeorotate(occdf, lng, lat, age)

reconstruct the distribution of occurrences at time of deposition

lat_bins(size) generate latitudinal bins



bin_lat(occdf, bins)



bin_space(occdf, spacing)

assign fossil occurrences to equal-area hexagonal bins



more info on our website! palaeoverse.org Explore your dataset phylo_check(tree, list) check phylogeny tip names from a name list tax_check(taxdf) check the potential misspelling of taxonomic names



tax_range_space(occdf, name, method)

calculate the geographical range of fossil taxa using different approaches

tax_range_time(occdf, name)

calculate the temporal range of fossil taxa



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tax_unique(occdf, resolution)

filter occurrences to unique taxa of a predefined resolution

Example datasets (to play around with)

reefs

a dataset of Phanerozoic reefs from the PaleoReefs Database

tetrapods

a dataset of Carboniferous to Early Triassic tetrapod occurrences from the Paleobiology Database

Handy dataframes

GTS2012 and GTS2020

dataframes of the Geological Time Scale 2012 and 2020

interval kev

example interval key for use with the look_up() function