

Package: mammalcol (via r-universe)

June 6, 2026

Title Access to the List of Mammal Species of Colombia

Version 0.3.0

Date 2026-02-02

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Description The goal of 'mammalcol' is to provide easy access to a meticulously structured dataset of Colombian mammal species in R. The 2026 update includes comprehensive, detailed species accounts, and distribution information at departamental and municipal level.

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URL <https://github.com/dlizcano/mammalcol>,
<https://dlizcano.github.io/mammalcol/>

BugReports <https://github.com/dlizcano/mammalcol/issues>

Depends R (>= 3.5.0)

Imports ggplot2, magrittr, sf, geodata,

Suggests dplyr, finch, knitr, readr, readxl, rmarkdown, stringr,
testthat (>= 3.0.0)

Config/testthat/edition 3

Encoding UTF-8

LazyData true

LazyDataCompression xz

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.3

VignetteBuilder knitr

Config/pak/sysreqs libabsl-dev cmake libgdal-dev gdal-bin libgeos-dev libssl-dev libproj-dev libsqlite3-dev libudunits2-dev

Repository <https://dlizcano.r-universe.dev>

Date/Publication 2026-02-06 20:08:41 UTC

RemoteUrl <https://github.com/dlizcano/mammalcol>

RemoteRef HEAD

RemoteSha bb91a39c63ce6b8727415e3bcb79b58bec31646a

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distribution	<i>distribution Dataset</i>
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Description

The distribution dataset comprises a data frame containing information regarding mammal species distribution documented in Colombia, sourced from the "List of the mammals of Colombia" compiled by Ramírez-Chaves 2021. It encompasses various details, including locality, source, threat status and appendix CITES of each species. The table is a variant of the distribution table from [SiB Colombia](#)

Usage

distribution

Format

A data frame with 553 rows and 7 columns:

- id** id from original taxon table.
- locality** Departamento were the mammal is present.
- countryCode** Code for Colombia.
- establishmentMeans** Is endemic?. Endémica=Yes
- threatStatus** categorization previous to 2021
- appendixCITES** Apendix from CITES
- occurrenceRemarks** region were the species occurs.

Details

This dataset is designed to provide users with comprehensive information about the mammal species found in each departamento of Colombia, as documented by Ramírez-Chaves 2021. The data set is organized for easy access and utilization within the R environment.

Author(s)

Data compilation: Ramírez-Chaves 2021, Package implementation: Diego J. Lizcano

References

The dataset is based on the "List of the Mammals of Colombia" by: Ramírez-Chaves H E, Leuro Robles N G, Castaño Rivera A, Morales-Martínez D M, Suárez Castro A F, Rodríguez-Posada M E, Zurc D, Concha Osbahr D C, Trujillo A, Noguera Urbano E A, Pantoja Peña G E, González Maya J F, Pérez Torres J, Mantilla Meluk H, López Castañeda C, Velásquez Valencia A, Zárrate Charry D (2024): Mamíferos de Colombia. v1.14. Sociedad Colombiana de Mastozoología. Dataset/Checklist [SiB Colombia](#)

See Also

For more information about the "mammalcol" package and the data sources, visit the package's GitHub repository: <https://github.com/dlizcano/mammalcol>

Examples

```
library (mammalcol)
head (distribution)
```

mamm_coords_validator *Validate mammal species distribution data based on geographic coordinates.*

Description

This function validates species distribution data provided in a data frame against the known mammal species lists and a departamentos map. It outputs a data frame with validation results and additional information.

Usage

```
mamm_coords_validator(  
  df,  
  sp_names,  
  taxon = NULL,  
  colmap_d = NULL,  
  lon = NULL,  
  lat = NULL,  
  adm_names = NULL,  
  oceanmap = NULL,  
  oce_adm_names = NULL  
)
```

Arguments

df	A data frame containing species distribution data with columns 'species', 'decimalLongitude', and 'decimalLatitude'.
sp_names	Name of the column containing species names (Genus + Specific Epithet).
taxon	A data frame with distribution information, including 'scientificName' and 'distribution'. The scientificName must be in binomial form, and the distribution should contain names separated by . By default, the function uses the checklist available at https://www.gbif.org/dataset/e8b9ed9b-f715-4eac-ae24-772fbf40d7ae .
colmap_d	A spatial object in vector format representing the geographic area to validate against. By default, the function uses the Colombia Administrative Boundaries available in the geodata package.
lon	Name of the column containing longitude values in df. Default is 'decimalLongitude'.
lat	Name of the column containing latitude values in df. Default is 'decimalLatitude'.
adm_names	Name of the column in colmap representing administrative boundaries. Default is 'NAME_1'.
oceanmap	A spatial object representing the ocean area to validate against.
oce_adm_names	Name of the column in oceanmap representing administrative boundaries for ocean areas. Default is 'ocean'.

Details

This function validates species distribution data by checking species names against a known list and verifying geographic coordinates against political maps ('colmap_d' and 'oceanmap'). 'colmap_d' is downloaded internally using the geodata package. It assigns a validation result ('validation_result') where 1 means coincidence and 0 means no match. Additional details are provided in the returned data frame.

Value

A data frame with validated species records and validation results.

Examples

```
validated_data <- mamm_coords_validator (df = test_data_coordiantes, sp_names = "species")
```

`mammalmap`*Plot a map for one species of the List of the Mammals of Colombia*

Description

This function retrieve the locality data for one species in the mammalcol pacakage dataset, and returns a map using ggplot2 of the departamentos where the species has been recorded.

Usage

```
mammalmap(species, legend = TRUE)
```

Arguments

<code>species</code>	A character string containing the name of one species present in Colombia to plot a map of presence by departamento.
<code>legend</code>	A logical (TRUE or FALSE) to get the legend in the map when is TRUE, or not if it is FALSE.

Details

The function does not allows fuzzy matching, so the specie name should be correct. It is advised to run first the `search_mammalcol` function.

Value

A ggplot2 map for the species.

Examples

```
library (mammalcol)
species <- "Tapirus pinchaque"
mammalmap (species, legend = FALSE)
```

`search_mammalcol`*Retrieve Data from the List of the Mammals of Colombia*

Description

This function takes a list of Mammal species names, searches for their data in the MammalCol pacakage dataset, and returns a data frame containing the relevant information for each species.

Usage

```
search_mammalcol(splist, max_distance = 0.2)
```

Arguments

splist	A character vector containing the names of the species to search for.
max_distance	The maximum allowed distance for fuzzy matching of species names. Defaults to 0.2.

Details

The function allows fuzzy matching for species names with a maximum distance threshold to handle potential typos or variations in species names.

Value

A data frame containing the retrieved information for each species.

Examples

```
library(mammalcol)

splist <- c("Tapirus bairdii", "Tapirus pinchaque", "Tapirus terrestris",
           "Tapirus terrestris", "tapir terrestre", "Pudu mephistophiles")

search_mammalcol(splist)
```

sp_by_depto

Mammal occurrence by departamento

Description

Find the mammal species that occur in a given departamento of Colombia

Usage

```
sp_by_depto(states, type = c("any", "only", "all"), taxa = NULL)
```

Arguments

states	a character vector with one or more departamento names
type	type of matching to be used. any will return the mammal species that occur in any of the passed states. only matches mammal species that occur only in all provided (no more, no less) states and all matches mammal species that occur at least in all states passed. See examples.
taxa	optional character vector to match against the departamentos. Use the order name

Value

a data frame

Examples

```
library (mammalcol)

occ.any <- sp_by_depto(c("Arauca", "Norte de Santander"), type = "any")
occ.only <- sp_by_depto(c("Norte de Santander"), type = "only")
occ.all <- sp_by_depto(c("Arauca", "Norte de Santander"), type = "all")
occ.taxa <- sp_by_depto(c("Arauca", "Norte de Santander"), type = "all", taxa = "Chiroptera")

head(occ.any)
head(occ.only)
head(occ.all)
head(occ.taxa)
```

taxon

taxon Dataset

Description

The taxon dataset comprises a tibble containing information regarding mammal species documented in Colombia, sourced from the "List of the mammals of Colombia" compiled by Ramírez-Chaves 2024. It encompasses various details, including scientific names, English names, Spanish names, order, family, threat status and distribution of each species. The table is a variant of the taxon table from [SiB Colombia](#)

Usage

```
taxon
```

Format

A tibble with 548 rows and 19 columns:

id id from original taxon table.
scientificName Scientific name of the mammal species.
kingdom kingdom name of the mammal species.
phylum phylum name of the mammal species.
class class name of the mammal species.
order order name of the mammal species.
family family name of the mammal species.
genus genus name of the mammal species.

specificEpithet specificEpithet name of the mammal species.
taxonRank taxon Rank name of the mammal species.
scientificNameAuthorship species name 's author of the mammal species.
taxonRemarks elevation of the mammal species.
bibliographicCitation bibliographicCitation of the mammal species.
inMDD 1 if it is included on the Mammal Diverity Data Base, 0 not included.
Col_redlist conservation status in Colombia for the mammal species.
distribution Departamento were the mammal is present.
source reference for the distribution.
endemic Yes if it is endemic from Colombia, otherwise No.
english_name english_name of the mammal species.

Details

This dataset is designed to provide users with comprehensive information about the mammal species found in Colombia, as documented by Ramírez-Chaves, et al. 2025. It is organized for easy access and utilization within the R environment.

Author(s)

Data compilation: Ramírez-Chaves 2021, Function and Package implementation: Diego J. Lizcano

References

The dataset is based on the "List of the Mammals of Colombia" by: Ramírez-Chaves H E, Leuro Robles N G, Castaño Rivera A, Morales-Martínez D M, Suárez Castro A F, Rodríguez-Posada M E, Zurc D, Concha Osbahr D C, Trujillo A, Noguera Urbano E A, Pantoja Peña G E, González Maya J F, Pérez Torres J, Mantilla Meluk H, López Castañeda C, Velásquez Valencia A, Zár-rate Charry D (2024): Mamíferos de Colombia. v1.14. Sociedad Colombiana de Mastozoología. Dataset/Checklist [SiB Colombia](#)

See Also

For more information about the "mammalcol" package and the data sources, visit the package's GitHub repository: <https://github.com/dlizcano/mammalcol>

Examples

```
# Load the mammalcol package
library(mammalcol)

# Access the mammalcol_tab dataset
data("taxon")

# Display the first few rows
head(taxon)
```

test_data_coordiantes *test_data_coordiantes Dataset*

Description

A test data set for the function `mamm_coords_validator`

Usage

```
test_data_coordiantes
```

Format

A tibble with 20 rows and 50 columns:

species scientific name in binomial form

decimalLatitude latitude

decimalLongitude longitude

Details

This data set provides a sample from GBIF to test the function `mamm_coords_validator`

Author(s)

Data compilation: Ramírez-Chaves 2021, Function implementation: Cristian A. Cruz-R.

References

The dataset is based on the "List of the Mammals of Colombia" by: Ramírez-Chaves H E, Leuro Robles N G, Castaño Rivera A, Morales-Martínez D M, Suárez Castro A F, Rodríguez-Posada M E, Zurc D, Concha Osbahr D C, Trujillo A, Noguera Urbano E A, Pantoja Peña G E, González Maya J F, Pérez Torres J, Mantilla Meluk H, López Castañeda C, Velásquez Valencia A, Zárrate Charry D (2024): Mamíferos de Colombia. v1.14. Sociedad Colombiana de Mastozoología. Dataset/Checklist [SiB Colombia](#)

See Also

For more information about the "mammalcol" package and the data sources, visit the package's GitHub repository: <https://github.com/dlizcano/mammalcol>

Examples

```
# Load the mammalcol package
library (mammalcol)

# Access the mammalcol_tab dataset
data ("test_data_coordiantes")

# Display the first few rows
head (test_data_coordiantes)
```

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