

Package: iucnrdata (via r-universe)

October 1, 2026

Title Data from the 'IUCN' Red List of Threatened Species

Version 0.1.0

Description Provides local access to global species conservation status, taxonomy, and vernacular names from the International Union for Conservation of Nature ('IUCN') Red List of Threatened Species. Integrates open data from the Global Biodiversity Information Facility ('GBIF') Darwin Core Archive into standardized 'R' data structures. Designed as an offline dataset provider for the 'iucnr' package and general biodiversity research.

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Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

LazyData true

Encoding UTF-8

Roxygen list(markdown = TRUE)

LazyDataCompression xz

URL <https://github.com/PaulESantos/iucnrdata>,
<https://paulesantos.github.io/iucnrdata/>

BugReports <https://github.com/PaulESantos/iucnrdata/issues>

Depends R (>= 4.1)

Imports cli, data.table, rvest, stringr, tibble

Config/roxygen2/version 8.0.0

Config/pak/sysreqs libicu-dev libxml2-dev libssl-dev

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

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RemoteUrl <https://github.com/PaulESantos/iucnrdata>

RemoteRef HEAD

RemoteSha 6ec8300ef11106656c5e9a1a38741c368f07085c

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download_iucn_gbif	<i>Download IUCN Red List Darwin Core Archive from GBIF</i>
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Description

Downloads the latest IUCN Red List dataset hosted on GBIF as a Darwin Core Archive (DwC-A) ZIP file.

Usage

```
download_iucn_gbif(  
  dest_dir = tempdir(),  
  overwrite = FALSE,  
  url = "https://hosted-datasets.gbif.org/datasets/iucn/iucn-latest.zip"  
)
```

Arguments

- dest_dir Character. Directory where the ZIP file and extracted contents will be saved. Defaults to a temporary directory tempdir().
- overwrite Logical. Whether to overwrite existing downloaded zip files. Default is FALSE.
- url Character. The download URL for the GBIF IUCN dataset ZIP. Defaults to "https://hosted-datasets.gbif.org/datasets/iucn/iucn-latest.zip".

Details

Dataset Citation: IUCN (2026). The IUCN Red List of Threatened Species. Version 2026-1. Hosted by GBIF Secretariat. DOI: 10.15468/0qnb58. URL: <https://www.gbif.org/dataset/19491596-35ae-4a91-9a98-85cf505f1bd3>

Value

A character string representing the file path of the directory containing the unzipped Darwin Core files.

Examples

```
## Not run:
dwc_path <- download_iucn_gbif()
datasets <- process_iucn_gbif(dwc_path)
head(datasets$iucn_taxon)

## End(Not run)
```

get_iucn_version	<i>Get IUCN Red List Version Online</i>
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Description

Retrieves the current version of the IUCN Red List from its official citation information webpage.

Usage

```
get_iucn_version()
```

Value

A character string representing the current online version of the IUCN Red List (e.g. "Version 2026-1"), or "Version not found" if the version cannot be located on the webpage.

Examples

```
## Not run:
version <- get_iucn_version()
print(version)

## End(Not run)
```

iucn_check_version	<i>Check if the Packaged Version of iucnrdata is Up to Date</i>
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Description

Compares the packaged dataset version string against the latest published version on the official IUCN website.

Usage

```
iucn_check_version(silent = FALSE)
```

Arguments

silent Logical. If TRUE, suppresses warning messages when out of date. Default is FALSE.

Value

Logical TRUE invisibly if up to date, FALSE if out of date.

Examples

```
## Not run:
iucn_check_version()

## End(Not run)
```

iucn_taxon	<i>IUCN Red List Taxonomy Dataset from GBIF (Darwin Core Archive)</i>
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Description

Complete taxonomic classification, authorship, rank, taxonomic status (accepted or synonym), and bibliographic citation for taxa in the IUCN Red List of Threatened Species, derived from the GBIF Darwin Core Archive core file (taxon.txt). Column names preserve the Darwin Core terms defined in meta.xml.

Usage

```
data(iucn_taxon)
```

Format

A tibble with 310,544 rows and 16 columns:

taxonID Character. Unique taxon identifier.

scientificName Character. Full scientific name of the taxon with authorship.

kingdom Character. Kingdom classification.

phylum Character. Phylum classification.

class Character. Class classification.

order Character. Order classification.

family Character. Family classification.

genus Character. Genus name.

specificEpithet Character. Specific epithet of the species.

scientificNameAuthorship Character. Taxonomic authority who described the taxon.

taxonRank Character. Rank of the taxon (e.g., "species", "subspecies").

- infraspecificEpithet** Character. Infraspecific epithet if applicable.
- taxonomicStatus** Character. Status of the taxon name ("accepted" or "synonym").
- acceptedNameUsageID** Character. ID of the accepted name if the row represents a synonym.
- bibliographicCitation** Character. Complete bibliographic citation for the individual species assessment.
- references** Character. URL link to the official IUCN Red List species page.

Source

International Union for Conservation of Nature (IUCN) hosted on GBIF.

Dataset Information:

- Title: The IUCN Red List of Threatened Species (Taxon Core)
- Publisher: International Union for Conservation of Nature (IUCN)
- License: Creative Commons Attribution 4.0 International (<https://creativecommons.org/licenses/by/4.0/legalcode>)
- DOI: <https://doi.org/10.15468/0qnb58>
- GBIF Dataset URL: <https://www.gbif.org/dataset/19491596-35ae-4a91-9a98-85cf505f1bd3>

References

International Union for Conservation of Nature (2026). The IUCN Red List of Threatened Species. Version 2026-1. Hosted by GBIF Secretariat. <https://doi.org/10.15468/0qnb58> accessed via GBIF.org.

Examples

```
data(iucn_taxon)
head(iucn_taxon)
```

iucn_threatstatus	<i>IUCN Red List Threat Status Dataset from GBIF (Darwin Core Archive)</i>
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Description

IUCN Red List conservation category (threatStatus), assessment locality scope, occurrence status, and citation metadata for taxa in the IUCN Red List of Threatened Species, derived from the GBIF Darwin Core Archive distribution extension (distribution.txt). Note that specific country-level spatial distribution data is not present in this GBIF release.

Usage

```
data(iucn_threatstatus)
```

Format

A tibble with 178,011 rows and 5 columns:

taxonID Character. Foreign key linking the assessment record to iucn_taxon\$taxonID.

locality Character. Geographic scope of the assessment (e.g., "Global").

source Character. Citation or source reference for the IUCN Red List assessment.

threatStatus Character. IUCN Red List conservation category (e.g., "Critically Endangered", "Endangered", "Vulnerable", "Near Threatened", "Least Concern", "Data Deficient", "Extinct").

occurrenceStatus Character. Status of occurrence (e.g., "Present", "Absent").

Source

International Union for Conservation of Nature (IUCN) hosted on GBIF.

Dataset Information:

- Title: The IUCN Red List of Threatened Species (Distribution Extension)
- Publisher: International Union for Conservation of Nature (IUCN)
- License: Creative Commons Attribution 4.0 International (<https://creativecommons.org/licenses/by/4.0/legalcode>)
- DOI: <https://doi.org/10.15468/0qnb58>
- GBIF Dataset URL: <https://www.gbif.org/dataset/19491596-35ae-4a91-9a98-85cf505f1bd3>

References

International Union for Conservation of Nature (2026). The IUCN Red List of Threatened Species. Version 2026-1. Hosted by GBIF Secretariat. <https://doi.org/10.15468/0qnb58> accessed via GBIF.org.

Examples

```
data(iucn_threatstatus)
head(iucn_threatstatus)
```

iucn_vernacularname	<i>Vernacular (Common) Names Data from GBIF (Darwin Core Archive)</i>
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Description

Vernacular (common) names for taxa in the IUCN Red List of Threatened Species, derived from the GBIF Darwin Core Archive vernacular names extension (vernacularname.txt). Column names preserve the Darwin Core and GBIF terms defined in meta.xml.

Usage

```
data(iucn_vernacularname)
```

Format

A tibble with 182,200 rows and 4 variables:

taxonID character. Foreign key linking the vernacular name to iucn_taxon\$taxonID.

language character. Language code of the common name (e.g., "eng", "fra", "spa").

vernacularName character. Vernacular or common name of the taxon.

isPreferredName logical. TRUE if the name is designated as the preferred vernacular name, FALSE otherwise.

Source

International Union for Conservation of Nature (IUCN) hosted on GBIF.

Dataset Information:

- Title: The IUCN Red List of Threatened Species (Vernacular Names Extension)
- Publisher: International Union for Conservation of Nature (IUCN)
- License: Creative Commons Attribution 4.0 International (<https://creativecommons.org/licenses/by/4.0/legalcode>)
- DOI: <https://doi.org/10.15468/0qnb58>
- GBIF Dataset URL: <https://www.gbif.org/dataset/19491596-35ae-4a91-9a98-85cf505f1bd3>

References

International Union for Conservation of Nature (2026). The IUCN Red List of Threatened Species. Version 2026-1. Hosted by GBIF Secretariat. <https://doi.org/10.15468/0qnb58> accessed via GBIF.org.

Examples

```
data(iucn_vernacularname)
head(iucn_vernacularname)
```

iucnrdata_version	<i>View the Version of iucnrdata Available</i>
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Description

Retrieves the package version and publication date for iucnrdata.

Usage

```
iucnrdata_version(long = TRUE)
```

Arguments

long	Logical. Whether to return the version date alongside the version number. Default is TRUE.
------	--

Value

A character string representing the package version (e.g. "0.1.0" or "Version 0.1.0 (2026-08-01)").

Examples

```
iucnrdata_version()
iucnrdata_version(long = FALSE)
```

process_iucn_gbif	<i>Process IUCN Darwin Core Archive Data from GBIF into 3 Core Datasets</i>
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Description

Reads Darwin Core text files (taxon.txt, distribution.txt, vernacularname.txt) extracted from the GBIF IUCN archive into three data frames using the column names defined by the archive meta.xml. Note that distribution.txt is parsed into iucn_threatstatus, retaining key fields (threatStatus, source, locality, occurrenceStatus) while dropping empty country-level distribution columns.

Usage

```
process_iucn_gbif(dwc_dir)
```

Arguments

dwc_dir	Character. Path to the directory containing the unzipped GBIF Darwin Core text files (taxon.txt, distribution.txt, vernacularname.txt).
---------	---

Value

A named list containing three tibbles:

iucn_taxon A tibble with taxonomic classification, authorship, taxonomic status, and references.

iucn_threatstatus A tibble with IUCN Red List category (threatStatus), assessment citations, locality, and occurrence status.

iucn_vernacularname A tibble with vernacular names linked to taxonID, languages, and preferred name status.

Examples

```
## Not run:
dwc_dir <- download_iucn_gbif()
gbif_data <- process_iucn_gbif(dwc_dir)
taxon <- gbif_data$iucn_taxon
threat_status <- gbif_data$iucn_threatstatus
vernacular <- gbif_data$iucn_vernacularname

## End(Not run)
```

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