

Package ‘specieshindex’

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Type Package

Title How (scientifically) popular is a given species?

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Description Finds the h-index of a species.

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LazyData true

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wosr,
rbace,
taxize,
dplyr,
tidyr,
data.table,
httr,
XML,
ggplot2,
ggpubr

Suggests devtools,

httpptest,
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RefManageR,
rmarkdown,
roxygen2,
testthat (\geq 3.0.0)

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URL <https://github.com/jessicatytam/specieshindex>

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Allindices	<i>Index summary</i>
------------	----------------------

Description

This function returns a dataframe of the summary of all of the indices.

Usage

Allindices(data, genus, species, sourcetype = 0)

Arguments

- data The dataframe generated from [Fetch](#).
- genus Genus classification from the binomial name.
- species Species classification from the binomial name.
- sourcetype Source type; default is 0, enter 1 to add SourceType variables.

Value

A datarame of all of the indices in the package.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
Allindices(Woylie,
           genus = "Bettongia", species = "penicillata",
           sourcetype = 0)
```

Count	<i>Search count of literature</i>
-------	-----------------------------------

Description

This function counts the total number of search results from Scopus, Web of Science, or BASE. A check will be conducted via [gnr_resolve](#) to validate the genus and species names.

Usage

```
Count(db, search, genus, species = NULL, synonyms, additionalkeywords)
```

Arguments

db	Literature database. Scopus ("scopus"), Web of Science ("wos"), or Base ("base").
search	Search fields. Title only ("t") or title, abstract, and keywords ("tak").
genus	Genus classification from the binomial name.
species	Species classification from the binomial name.
synonyms	Alternate species names.
additionalkeywords	Optional search terms.

Value

Search count of the genus or species with the given **genus** and/or **species**.

Examples

```
## Not run:
Count(db = "scopus",
      search = "t",
      genus = "Osphranter", species = "rufus")

## End(Not run)
## Not run:
Count(db = "scopus",
      search = "t",
      genus = "Osphranter", species = "rufus",
      synonyms = "Macropus rufus",
      additionalkeywords = "conserv*")

## End(Not run)
```

Fetch

Fetch citation records

Description

This function fetches citation information from Scopus, Web of Science, or BASE. Duplicates are to be removed by the user after fetching the data.

Usage

```
Fetch(
  db,
  search,
  genus,
  species = NULL,
  synonyms,
  additionalkeywords,
  language = 0
)
```

Arguments

db	Literature database. Scopus ("scopus"), Web of Science ("wos"), or Base ("base").
search	Search fields. Title only ("t") or title, abstract, and keywords ("tak").
genus	Genus classification from the binomial name.
species	Species classification from the binomial name.
synonyms	Alternate species names.
additionalkeywords	Optional search terms.
language	Language of the paper; default is 0, enter 1 to retrieve the variable. Scopus only.

Value

A dataframe of the genus' or species' citation records with the given **genus** and/or **species**.

Examples

```
## Not run:
Fetch(db = "scopus",
      search = "t",
      genus = "Osphranter", species = "rufus")

## End(Not run)
## Not run:
Fetch(db = "scopus",
      search = "t",
      genus = "Osphranter", species = "rufus",
      synonyms = "Macropus rufus",
      additionalkeywords = "conserv*")

## End(Not run)
```

getYear*Extract year*

Description

Extracts the year of each publication of the output from any of the Fetch functions and counts the number of publications each year.

Usage

```
getYear(data, genus, species)
```

Arguments

data	Output from any of the fetch function.
genus	Genus classification from the binomial name.
species	Species classification from the binomial name.

Value

A dataframe with the year and frequency of the publications

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
getYear(data = Woylie,
        genus = "Bettongia", species = "penicillata")
```

Koala	<i>Koala.</i>
-------	---------------

Description

A dataset with some literature on Koalas

Usage

Koala

Format

A data frame :

citations number of cites

journal journal

authkeywords authkeywords

cover_date cover_date

cover_display_date cover_display_date

dc_creator dc.creator

dc_description dc.description

dc_identifier dc.identifier

description description

doi doi

eid eid

pii pii

prism_aggregationType prism_aggregationType

prism_eIssn prism_eIssn

prism_issn prism_issn

prism_pageRange prism_pageRange

prism_url prism_url

source_id source.id

subtype subtype

title title ...

Source

<http://www.diamondse.info/>

languages

languages

Description

A dataset with some literature on languages

Usage

languages

Format

A data frame :

language names of languages ...

Source

somewhere?

Platypus

Platypus

Description

A dataset with some literature on Platypus

Usage

Platypus

Format

A data frame :

citations number of cites

journal journal

authkeywords authkeywords

cover_date cover_date

cover_display_date cover_display_date

dc_creator dc_creator

dc_description dc_description
dc_identifier dc_identifier
description description
doi doi
eid eid
pii pii
prism_aggregationType prism_aggregationType
prism_eIssn prism_eIssn
prism_issn prism_issn
prism_pageRange prism_pageRange
prism_url prism_url
source_id source_id
subtype subtype
title title ...

Source

WOS

plotAllindices	<i>Index plot</i>
----------------	-------------------

Description

Plots the indices of a single species or combined.

Usage

plotAllindices(data)

Arguments

data The dataframe generated from [Allindices](#).

Value

ggplot

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")
Quokka <- Fetch(db = "scopus",
               search = "tak",
               genus = "Setonix", species = "brachyurus")
Platypus <- Fetch(db = "scopus",
                 search = "tak",
                 genus = "Ornithorhynchus", species = "anatinus")
Koala <- Fetch(db = "scopus",
               search = "tak",
               genus = "Phascolarctos", species = "cinereus")

## End(Not run)
W <- Allindices(Woylie,
               genus = "Bettongia", species = "penicillata")
Q <- Allindices(Quokka,
               genus = "Setonix", species = "brachyurus")
P <- Allindices(Platypus,
               genus = "Ornithorhynchus", species = "anatinus")
K <- Allindices(Koala,
               genus = "Phascolarctos", species = "cinereus")
CombineSp <- dplyr::bind_rows(W, Q, P, K)
plotAllindices(CombineSp)
```

plotPub

Publication plot

Description

Plots the publication by year of a single species or combined.

Usage

```
plotPub(data)
```

Arguments

`data` The dataframe generated from [getYear](#).

Value

ggplot

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")
Quokka <- Fetch(db = "scopus",
               search = "tak",
               genus = "Setonix", species = "brachyurus")
Platypus <- Fetch(db = "scopus",
                 search = "tak",
                 genus = "Ornithorhynchus", species = "anatinus")
Koala <- Fetch(db = "scopus",
               search = "tak",
               genus = "Phascolarctos", species = "cinereus")

## End(Not run)
extract_year_W <- getYear(data = Woylie,
                        genus = "Bettongia", species = "penicillata")
extract_year_Q <- getYear(data = Quokka,
                        genus = "Setonix", species = "brachyurus")
extract_year_P <- getYear(data = Platypus,
                        genus = "Ornithorhynchus", species = "anatinus")
extract_year_K <- getYear(data = Koala,
                        genus = "Phascolarctos", species = "cinereus")
Combine_pub <- rbind(extract_year_W, extract_year_Q, extract_year_P, extract_year_K)
plotPub(Combine_pub)
```

Quokka

Quokka

Description

A dataset with some literature on Quokka

Usage

Quokka

Format

A data frame :

citations number of cites

journal journal

authkeywords authkeywords

cover_date cover_date

cover_display_date cover_display_date

dc_creator dc_creator
dc_description dc_description
dc_identifier dc_identifier
description description
doi doi
eid eid
pii pii
prism_aggregationType prism_aggregationType
prism_eIssn prism_eIssn
prism_issn prism_issn
prism_pageRange prism_pageRange
prism_url prism_url
source_id source_id
subtype subtype
title title ...

Source

WOS

SourceType	<i>Source type</i>
------------	--------------------

Description

This function calculates the total number of items for each document type.

Usage

SourceType(data)

Arguments

data The dataframe generated from [Fetch](#).

Value

A dataframe with each document and their counts.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
SourceType(Woylie)
```

SpH5

Species h5 index

Description

This function calculates the h-index of a species in the past 5 years.

Usage

```
SpH5(data)
```

Arguments

`data` The dataframe generated from [Fetch](#).

Value

H5 index.

References

Suzuki, H. (2012). *Google Scholar Metrics for Publications*. Retrieved from <https://scholar.googleblog.com/2012/04/google-scholar-metrics-for-publications.html>.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
SpH5(Woylie)
```

SpHAfterdate	<i>Species h-index with a given time frame</i>
--------------	--

Description

This function calculates the h-index using a given date up till the newest record.

Usage

```
SpHAfterdate(data, date)
```

Arguments

data	The dataframe generated from Fetch .
date	The lower limit of the timeframe.

Value

H-index of the given time period.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
SpHAfterdate(Woylie, "2000-01-01")
```

SpHindex	<i>Species h-index</i>
----------	------------------------

Description

This function calculates the h-index of a species.

Usage

```
SpHindex(data)
```

Arguments

data	The dataframe generated from Fetch .
------	--

Value

H-index.

References

Bertoli-Barsotti, L. & Lando, T. (2015). On a formula for the h-index. *Journal of Informetrics*, 9(4), 762-776.

Hirsch, J. (2005). An index to quantify an individual's scientific research output. *Proceedings of the National Academy of Sciences of the United States of America*, 102(46), 16569-16572.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
SpHindex(Woylie)
```

Spi10

Species i10 index

Description

This function calculates the i10 index of a species. i10 index counts all of the publications with 10 or more citations.

Usage

```
Spi10(data)
```

Arguments

data The dataframe generated from [Fetch](#).

Value

i10 index.

References

Cornell University (2019). *i10-index*. Retrieved from <https://guides.library.cornell.edu/c.php?g=32272&p=203393>.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
Spi10(Woylie)
```

SpMindex

Species m-index

Description

This function calculates the m-index of species. M-index uses the h-index and divides it by the number of years of activity.

Usage

```
SpMindex(data)
```

Arguments

data The dataframe generated from [Fetch](#).

Value

M-index.

References

University of Pittsburgh (2019). *Research Impact and Metrics: Author metrics*. Retrieved from <https://pitt.libguides.com/bibliometricIndicators/AuthorMetrics>.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
SpMindex(Woylie)
```

TotalCite	<i>Total citations</i>
-----------	------------------------

Description

This function calculates the total number of citations.

Usage

```
TotalCite(data)
```

Arguments

data The dataframe generated from [Fetch](#).

Value

A numerical value of the total number of citations.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
TotalCite(Woylie)
```

TotalJournals	<i>Total journals</i>
---------------	-----------------------

Description

This function calculates the total number of journals.

Usage

```
TotalJournals(data)
```

Arguments

data The dataframe generated from [Fetch](#).

Value

An integer of the total number of journals.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
TotalJournals(Woylie)
```

TotalPub	<i>Total publications</i>
----------	---------------------------

Description

This function calculates the total number of publications.

Usage

```
TotalPub(data)
```

Arguments

data The dataframe generated from [Fetch](#).

Value

An integer of the total number of publications.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
TotalPub(Woylie)
```

Woylie	<i>Woylie</i>
--------	---------------

Description

A dataset with some literature on Woylie

Usage

Woylie

Format

A data frame :

citations number of cites

journal journal

authkeywords authkeywords

cover_date cover_date

cover_display_date cover_display_date

dc_creator dc_creator

dc_description dc_description

dc_identifier dc_identifier

description description

doi doi

eid eid

pii pii

prism_aggregationType prism_aggregationType

prism_eIssn prism_eIssn

prism_issn prism_issn

prism_pageRange prism_pageRange

prism_url prism_url

source_id source_id

subtype subtype

title title ...

Source

WOS

YearsPublishing	<i>Years since first publication</i>
-----------------	--------------------------------------

Description

The number of years since the first publication in relation to the species.

Usage

```
YearsPublishing(data)
```

Arguments

data	The dataframe generated from Fetch .
------	--

Value

Number of years.

Examples

```
## Not run:
Woylie <- Fetch(db = "scopus",
               search = "tak",
               genus = "Bettongia", species = "penicillata")

## End(Not run)
YearsPublishing(Woylie)
```

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