Package ‘rYoutheria’

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Type Package
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Description A programmatic interface to web-services of YouTheria. YouTheria is an online database of mammalian trait data <http://www.utheria.org/>.
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getCountries

*Get country names from YouTheria*

**Description**

Retrieves a dataframe of country names and IDs from YouTheria.

**Usage**

getCountries()

**Value**

A dataframe of country names and IDs. These names can be used in getMeasurementData to restrict the search to a specific country.

**Examples**

```r
# Not run:
# Get a dataframe of all countries
getCountries()

# End(Not run)
```

getLocData

*Get location information from YouTheria*

**Description**

Retrieves location information stored on YouTheria.

**Usage**

getLocData(country = NULL, StudyUnitId = NULL)

**Arguments**

- **country**: Character specifying the country within which to search for locations. for a list of countries used getCountries().
- **StudyUnitId**: Numeric specifying the StudyUnitId to search for

**Value**

A dataframe in which each rows gives the details of a study unit.
getMeasurementData

Examples

```r
## Not run:
# Get a dataframe of Indian study units
Indian_StudyUnits <- getLocData(country = 'India')

## End(Not run)
```

description

Retrieves a `data.frame` of trait measurements with facilities to select by location, species name and/or measurement type.

Usage

```r
getMeasurementData(measurementType = NA, MSW93Binomial = NA,
                     MSW05Binomial = NA, country = NULL, StudyUnitId = NULL,
                     locationData = TRUE, locationOnly = FALSE, cast = TRUE,
                     silent = FALSE)
```

Arguments

- **measurementType**
  - Measurement types to collect data for. If `NULL` (default), all measurement types are returned. Can also be `numeric` or `character` (or a list of either type) and will filter by MeasurementTypeID and the measurement respectively. MeasurementTypeIDS and names can be found using `getMeasurementTypes()`.

- **MSW93Binomial**
  - Character giving the latin name of a species (or list of species) for which measurements are required. Naming should follow Mammal Species of the World 1993.

- **MSW05Binomial**
  - Character giving the latin name of a species (or list of species) for which measurements are required. Naming should follow Mammal Species of the World 2005.

- **country**
  - Character specifying the country from which you wish to collect data. If `NULL` all data is retrieved. If specified then `locationOnly` is set to `TRUE`.

- **StudyUnitId**
  - Numeric specifying the StudyUnitId from which you wish to collect data. If `NULL` all data is retrieved.

- **locationData**
  - Logical dictating whether location information should be added to the output. Default is `FALSE` but is set to `TRUE` if either StudyUnitId or country are specified.

- **locationOnly**
  - If `TRUE` data is only be returned if it has location information.

- **cast**
  - If `TRUE` (default) then the data is cast so that each observation is one row in the output. If false then each observation has one row for each data element recorded (i.e. range, mean, units, etc)

- **silent**
  - If `TRUE` progress reporting is silenced
Value

A data.frame with each row giving a trait measurement

Examples

```r
## Not run:
# Select measurement type by id
M14 <- getMeasurementData(14)
M22_7_2 <- getMeasurementData(c(22,7,2))

# Select measurement type by name
WM <- getMeasurementData('Wing Morphology')
WM_TN <- getMeasurementData(c('Wing Morphology','Teat Number'))

# Select by measurement type and species name
PpPr_bodymass <- getMeasurementData(measurementType = 1L,
                                   MSW93Binomial = c('Pongo pygmaeus','Peroryctes raffrayana'))

# Select by measurement type, species name and location
Ob_Activity_Tanz <- getMeasurementData(measurementType = 'Activity Cycle',
                                       MSW05Binomial = 'Oryx beisa',
                                       country = 'Tanzania')

## End(Not run)
```

---

**getMeasurementTypes**  
*Get Measurement Types*

**Description**

Retrieves a data.frame of measurement types available from YouTheria.

**Usage**

```r
getMeasurementTypes(measurementType = NULL)
```

**Arguments**

- `measurementType`
  - If `NULL` (default), then all measurement types are returned. Can also be 'numeric' or 'character' (or a list of either type) and will filter by Id and Name respectively in the resulting data.frame.

**Value**

A dataframe of measurement types giving their Id and Name
**rYoutheria**

### Description

The `rYoutheria` package harnesses the YouTheria website's APIs to give easy access to a large amount of mammal trait data. The package allows the user to select data by species, location and measurement type. More information can be found out about the YouTheria dataset at [http://www.atheria.org/](http://www.atheria.org/)

Click on the index link below for more information on each function

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#### YoutheriaToDF

**Convert data returned from API to a dataframe**

**Description**

Takes the list returned by `fromJSON(getURL(url))`, where `url` is the ValueByType controller in the YouTheria API, and returns a data.frame. This code is faster than using `plyr`.

**Usage**

```r
YoutheriaToDF(x)
```

**Arguments**

- `x`: a list of trait data as returned by `fromJSON(getURL(url))`.

**Value**

A data.frame of melted trait data

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### Examples

```r
## Not run:
# Get a dataframe of all measurement types
AllMT <- getMeasurementTypes()

# Seach by name
BM_MT <- getMeasurementTypes('Body Mass')
BM_LL_MT <- getMeasurementTypes(c('Body Mass', 'Limb Length'))

# Search by ID
MT1 <- getMeasurementTypes(1)
MT123 <- getMeasurementTypes(1:3)

## End(Not run)
```
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