

Package ‘phenocamapi’

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Type Package

Title Interacting with the PhenoCam Data and API

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Description A bundle to facilitate working with PhenoCam time-series and data. The user would be able to obtain phenological time-series and site meta-data from the PhenoCam network <<https://phenocam.sr.unh.edu/webcam/>>.

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Encoding UTF-8

LazyData true

Depends R (>= 3.4.0), data.table, rjson, RCurl, utils,

Suggests testthat, knitr, rmarkdown, jpeg,

RoxygenNote 6.1.1

VignetteBuilder knitr

URL <https://github.com/bnasr/phenocamapi/>

BugReports <https://github.com/bnasr/phenocamapi/issues>

NeedsCompilation no

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download_midday_images

Downloading the midday images for PhenoCam sites given a time range

Description

Downloading the midday images for PhenoCam sites given a time range

Usage

```
download_midday_images(site, y = year(Sys.Date()), months = 1,  
  days = 1, download_dir)
```

Arguments

site	a character string, the PhenoCam site name
y	integer numeric, the year for which midday images are downloaded
months	a vector of integer numeric, months for which midday images are downloaded
days	a vector of integer numeric, days for which midday images are downloaded
download_dir	a character string, path to directory where images are downloaded

Value

a character string, path to directory where images are downloaded

Examples

```
download_dir <- download_midday_images('dukehw',  
  y = 2018,  
  months = 2,  
  days=1,  
  download_dir= tempdir())
```

get_awb_table	<i>Extracting Auto-White-Balance (AWB) status of images for PhenoCam sites</i>
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Description

Extracting Auto-White-Balance (AWB) status of images for PhenoCam sites

Usage

```
get_awb_table(site)
```

Arguments

site a character string of the PhenoCam site name

Value

a data.table of two columns: midday images and their AWB status ('ON', 'OFF', 'UNKOWN', 'LIKELY_YES', 'LIKELY_NO')

Examples

```
awb_table <- get_awb_table('dukehw')  
head(awb_table)
```

get_midday_list	<i>Extracting the list of midday images for PhenoCam sites</i>
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Description

Extracting the list of midday images for PhenoCam sites

Usage

```
get_midday_list(site, direct = TRUE)
```

Arguments

site a character string of the PhenoCam site name
direct logical value indicating whether obtain the list from directly from the API or from the file on the server, default is TRUE

Value

a vector of URL's to the midday images for a given site

Examples

```
midday_url <- get_midday_list('dukehw', direct = FALSE)
head(midday_url)
```

get_phenos

Full list of PhenoCam sites and metadata

Description

Full list of PhenoCam sites and metadata

Usage

```
get_phenos()
```

Value

a data.table with a list of all the PhenoCam sites and their metadata

Examples

```
phenos <- get_phenos()
head(phenos)
```

get_pheno_ts

Obtain phenological time-series from the PhenoCam server

Description

Obtain phenological time-series from the PhenoCam server

Usage

```
get_pheno_ts(site, vegType, roiID, type = "3day")
```

Arguments

site	site name as character string
vegType	2-letter character string indicating the vegetation type
roiID	four-digit integer number indicating the ROI number
type	a character string indicating what data to be obtained, can be '1day', '3day', or 'roistats'.

Value

a data.table containing phenological data over time.

Examples

```
ts <- get_pheno_ts(site = 'dukehw', vegType = 'DB', roiID = 1000)
head(ts)
```

get_rois

Full list of PhenoCam ROI's and metadata

Description

Full list of PhenoCam ROI's and metadata

Usage

```
get_rois()
```

Value

a data.table with a list of all the PhenoCam ROI's and their metadata

Examples

```
rois <- get_rois()
head(rois)
```

parse_phenocam_filenames

Parse Phenocam filenames

Description

This function parse filename to extract sitename, date and timing of the images based on the phenocam naming convention.

Usage

```
parse_phenocam_filenames(filepaths)
```

Arguments

filepaths a character vector of filenames

Value

a datatable containing filenames, with site name, date and timing

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