Package ‘phenocamapi’
May 21, 2019

Type Package
Title Interacting with the PhenoCam Data and API
Version 0.1.5
Date 2019-05-20
Author Bijan Seyednasrollah
Maintainer Bijan Seyednasrollah <bijan.s.nasr@gmail.com>
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/>.
License AGPL-3 | file LICENSE
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
Repository CRAN
Date/Publication 2019-05-20 22:00:03 UTC

R topics documented:

download_midday_images ........................................... 2
get_awb_table ....................................................... 3
get_midday_list ..................................................... 3
get_phenos .......................................................... 4
get_pheno_ts ......................................................... 4
get_rois ............................................................. 5
parse_phenocam_filenames ........................................ 6
**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**

```r
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**

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

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

Description

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

Usage

```r
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', 'UNKNOWN', 'LIKELY_YES', 'LIKELY_NO')

Examples

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

**get_midday_list**

*Extracting the list of midday images for PhenoCam sites*

Description

Extracting the list of midday images for PhenoCam sites

Usage

```r
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
get_pheno_ts

Value

a vector of URLs to the midday images for a given site

Examples

```r
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

```r
get_phenos()
```

Value

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

Examples

```r
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

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

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

```r
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
Index

*Topic Filename
parse_phenocam_filenames, 6
*Topic Parse
parse_phenocam_filenames, 6

download_midday_images, 2
get_awb_table, 3
get_midday_list, 3
get_pheno_ts, 4
get_phenos, 4
get_rois, 5

parse_phenocam_filenames, 6