Package ‘vortexRdata’

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**Type** Package

**Title** Example Data for R Package 'vortexR'

**Version** 1.0.5

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**Description** Contains selected data from two publications,


  The data is provided both as raw outputs from the population viability

  analysis software 'Vortex' and packaged as R objects.

  The R package 'vortexR' uses the raw data provided here to illustrate its

  functionality of parsing raw 'Vortex' output into R objects.

**URL** https://github.com/carlopacioni/vortexRdata/

**BugReports** https://github.com/carlopacioni/vortexR/issues

**Depends** R (>= 3.1.0)

**License** GPL-3

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 6.1.1

**NeedsCompilation** no

**Repository** CRAN

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**R topics documented:**

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Description


Format

Several .dat and .stdat files.

Source

Campbell et al. (2016). Assessing the economic benefits of starling detection and control to Western

Examples

campbell_dir <- system.file("extdata", "campbell", package="vortexRdata")
cat("campbell example files:\n") dir(campbell_dir)

Description

Subset (only 3 runs) of data from Pacioni et al. (2017) used to conduct a sensitivity analysis on de-
mographic parameters. Vortex outputs, from the project named 'Pacioni_et_al' and (Single-Factor)
sensitivity test scenario 'ST_Classic' (.stdat files), were collated with collate_dat.

Format

a data.frame of 2904 observations of 68 variables.
### Source


### Examples

```r
data("pac.clas")
head(pac.clas)
```

<table>
<thead>
<tr>
<th>pac.clas.lookup</th>
<th>Look-up table</th>
</tr>
</thead>
<tbody>
<tr>
<td>pac.clas.Nadults</td>
<td>Harmonic mean of adults and population sizes</td>
</tr>
</tbody>
</table>

### Description

Data from Pacioni et al. (2017) - sensitivity test scenario 'ST_Classic' - were used to generate a look-up table sizes using `lookup_table`.

### Format

A `data.frame` with 24 observations of 8 variables.

### Source


### Examples

```r
data("pac.clas.lookup")
head(pac.clas.lookup)
```

<table>
<thead>
<tr>
<th>pac.clas.Nadults</th>
<th>Harmonic mean of adults and population sizes</th>
</tr>
</thead>
</table>

### Description

Data from Pacioni et al. (2017) - sensitivity test scenario 'ST_Classic' - were used to calculate the harmonic mean of adults and population sizes using `Nadults`.

### Format

A `data.frame` with 24 observations of 4 variables.
Source


Examples

data("pac.clas.Nadults")
head(pac.clas.Nadults)

<table>
<thead>
<tr>
<th>pac.clas.Ne</th>
<th>Effective population size</th>
</tr>
</thead>
</table>

Description

Data from Pacioni et al. (2017) - sensitivity test scenario 'ST_Classic' - were used to calculate the effective population size sizes using Ne.

Format

A data.frame with 24 observations of 2 variables.

Source


Examples

data("pac.clas.Ne")
head(pac.clas.Ne)

<table>
<thead>
<tr>
<th>pac.clas.pairw</th>
<th>Results of pairwise comparisons of simulation scenarios</th>
</tr>
</thead>
</table>

Description

Results of pairwise comparisons of simulation scenarios included in the sensitivity test scenario 'ST_Classic' using pairwise.

Format

A named list of 12 elements. See documentation for details.
pac.lhs

Source

Examples
data("pac.clas.pairw")
head(pac.clas.pairw)

data("pac.lhs")
head(pac.lhs)

pac.lhs Collated results from Vortex scenarios - Pacioni et al. (2017)

Description
Data from Pacioni et al. (2017) used to conduct a sensitivity analysis on demographic parameters. Vortex outputs, from the project named 'Pacioni_et_al' and (Latin Hypercube Sampling) sensitivity test scenario 'ST_LHS' (.stdat files), were collated with collate.dat.

Format
A data.frame of 6171 observations of 68 variables.

Source

Examples
data("pac.lhs")
head(pac.lhs)

data("pac.run.lhs")
head(pac.run.lhs)

pac.run.lhs Collated results from Vortex scenarios - Pacioni et al. (2017)

Description
Data from Pacioni et al. (2017) used to conduct a sensitivity analysis on demographic parameters. Vortex outputs, from the project named 'Pacioni_et_al' and (Latin Hypercube Sampling) sensitivity test scenario 'ST_LHS' (.run files), were collated with collate.run.

Format
A named list of two data.frames: run (153 obs, 7 var), lrun (153 obs, 8 var).
Source


Examples

data("pac.run.lhs")
head(pac.run.lhs)

---

pac.yr  Collated results from Vortex scenarios - Pacioni et al. (2017)

Description

Data from Pacioni et al. (2017) used to conduct a sensitivity analysis on demographic parameters. Vortex outputs, from the project named 'Pacioni_et_al' and (Single-Factor) sensitivity test scenario 'ST_Classic' (.yr files), were collated with collate_yr.

Format

A named list of two elements: all (8712 obs, 26 var), means (2904 obs, 25 var).

Source


Examples

data("pac.yr")
head(pac.yr)

---

pacioni  Raw Vortex outputs from Pacioni et al. (2017)

Description

A folder with Vortex outputs from Pacioni et al. (2017) used to run examples and Vortex project file. NOTE: these simulations are shorter than those presented in the paper (only 3 runs for 120 'Vortex-years').

Format

One .xml file and several .run and .stdat files.
Source


Examples

pacioni_dir <- system.file("extdata", "pacioni", package="vortexRdata")
cat("pacioni example files:"); dir(pacioni_dir)

sta.ev5

Collated results from Vortex scenarios - Campbell et al (2016)

Description

A dataset with the results from Vortex scenarios used in Campbell et al (2016) to simulate major application of control measures in every 5 year cycle. Vortex outputs, from the project named 'Starlingv3PopBased' and the sensitivity test scenario 'MReductEvy5' (.stdat files), were collated with collate_dat.

Format

da.frame with 1020 observations of 47 variables.

Source


Examples

data("sta.ev5")
head(sta.ev5)

sta.ev5.b11

Collated results from Vortex scenarios - Campbell et al (2016)

Description

A dataset with the results from Vortex scenarios used in Campbell et al (2016) to simulate major application of control measures in every 5 year cycle, maintaining 2011 levels of investment. Vortex outputs, from the project named 'Starlingv3PopBased' and the sensitivity test scenario 'MReduction_B11_09Evy5' (.stdat files), were collated with collate_dat.
Format

a data.frame with 1020 observations of 47 variables.

Source


Examples

data("sta.evy5.b11")
head(sta.evy5.b11)

sta.main

Collated results from Vortex scenarios - Campbell et al (2016)

Description

A dataset with the results from the main Vortex scenarios used in Campbell et al (2016). Vortex outputs, from the project named 'Starlingv3PopBased' (.dat files), were collated with collate_dat.

Format

a data.frame with 1632 observations of 44 variables.

Source


Examples

data("sta.main")
head(sta.main)
**Description**

`vortexRdata` provides real-world example data for `vortexR` in both raw (Vortex output) and binary (R objects) form.

**Details**

`vortexR` uses the raw data provided here to illustrate its capability to parse raw Vortex output files into one R object.

`vortexR` facilitates Post Vortex Simulation Analysis (PVSA) by offering tools to collate multiple Vortex (v10) output files into one R object, generate plots and conduct basic analysis (e.g. pairwise comparisons of scenarios) and more advanced statistics such as fitting of a Generalised Linear Model (GLM) to investigate the main and the interaction effects of the variables of interest.

`vortexR` has a number of functions that are useful during the development of a Vortex project and for its analysis after completion.

`vortexR` facilitates the creation of plots and computation of basic statistics to inspect the effect of changes carried out in the Vortex project. Once the Vortex project development is completed, the same framework used in `vortexR` during the development of the project can be refined and extended to include more advanced statistical analyses or can be easily included in Markdown documents for the creation of reports (by converting them into pdf) or published as web-pages.

The use of `vortexR` ensures reproducibility and standardises analytical approaches in population viability analysis.

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