

# Package ‘stacomir’

March 6, 2019

**Version** 0.5.4.2

**Date** 2019-02-12

**Title** Fish Migration Monitoring

**Description** Graphical outputs and treatment for a database of fish pass monitoring. It is a part of the 'STACOMI' open source project developed in France by the French Agency for Biodiversity (AFB) institute to centralize data obtained by fish pass monitoring. This version is available in French and English. See <<http://stacomir.r-forge.r-project.org/>> for more information on 'STACOMI'.

**License** GPL (>= 2)

**URL** <http://stacomir.r-forge.r-project.org/>

**BugReports** <https://github.com/MarionLegrandLogrami/stacomir/issues>

**Collate** 'create\_generic.R' 'data.R' 'fun\_table\_per\_dis.R'  
'fun\_write\_monthly.R' 'fungraph.R' 'fungraph\_glasseel.R'  
'funstat.R' 'funstat\_daily.R' 'funtable.R'  
'interface\_report\_annual.R' 'interface\_report\_dc.R'  
'interface\_report\_df.R' 'interface\_report\_env.R'  
'interface\_report\_ge\_weight.R' 'interface\_report\_mig.R'  
'interface\_report\_mig\_char.R' 'interface\_report\_mig\_env.R'  
'interface\_report\_mig\_interannual.R'  
'interface\_report\_mig\_mult.R' 'interface\_report\_sample\_char.R'  
'interface\_report\_sea\_age.R' 'interface\_report\_silver\_eel.R'  
'interface\_report\_species.R' 'ref\_checkbox.R' 'ref\_choice.R'  
'ref\_coe.R' 'ref\_dc.R' 'ref\_df.R' 'ref\_env.R' 'ref\_horodate.R'  
'ref\_list.R' 'ref\_par.R' 'ref\_parqual.R' 'ref\_parquan.R'  
'ref\_period.R' 'ref\_stage.R' 'ref\_taxa.R' 'ref\_textbox.R'  
'ref\_timestep.R' 'ref\_timestep\_daily.R' 'ref\_year.R'  
'report\_annual.R' 'report\_dc.R' 'report\_df.R' 'utilities.R'  
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'report\_mig\_interannual.R' 'report\_sea\_age.R'  
'report\_silver\_eel.R' 'report\_species.R' 'setAs.R' 'stacomir.R'

**LazyLoad** yes

**LazyData** true

**Depends** R (>= 3.5.0), methods, stacomirtools, RODBC

**Imports** magrittr, intervals, RColorBrewer, stringr, gWidgets,  
gWidgetsRGtk2, RPostgreSQL, ggplot2, reshape2, sqldf, graphics,  
utils, stats, lattice, grDevices, Hmisc (>= 4.1-1), RGtk2,  
lubridate, dplyr, xtable, mgcv

**Suggests** testthat, viridis, knitr, rmarkdown

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**RoxygenNote** 6.1.0.9000

**NeedsCompilation** no

**VignetteBuilder** knitr

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**Repository/R-Forge/Project** stacomir

**Repository/R-Forge/Revision** 548

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stacomir-package	<i>Fish Migration Monitoring</i>
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## Description

Graphical outputs and treatment for a database of fish pass monitoring. It is a part of the 'STACOMI' open source project developed in France by the French Agency for Biodiversity (AFB) institute to centralize data obtained by fish pass monitoring. This version is available in French and English. See <http://stacomir.r-forge.r-project.org/> for more information on 'STACOMI'.

## Details

Package:	stacomir
Version:	0.5.4.2
Date:	2019-02-12
Title:	Fish Migration Monitoring
Authors@R:	c(person("Cedric", "Briand", role = c("aut", "cre"), email = "cedric.briand00@gmail.com"))
Description:	Graphical outputs and treatment for a database of fish pass monitoring. It is a part of the 'STACOMI' open source project developed in France by the French Agency for Biodiversity (AFB) institute to centralize data obtained by fish pass monitoring. This version is available in French and English. See <a href="http://stacomir.r-forge.r-project.org/">http://stacomir.r-forge.r-project.org/</a> for more information on 'STACOMI'.
License:	GPL (>= 2)
URL:	<a href="http://stacomir.r-forge.r-project.org/">http://stacomir.r-forge.r-project.org/</a>
BugReports:	<a href="https://github.com/MarionLegrandLogrami/stacomir/issues">https://github.com/MarionLegrandLogrami/stacomir/issues</a>
Collate:	'create_generic.R' 'data.R' 'fun_table_per_dis.R' 'fun_write_monthly.R' 'fungraph.R'
LazyLoad:	yes
LazyData:	true
Depends:	R (>= 3.5.0), methods, stacomirtools, RODBC
Imports:	magrittr, intervals, RColorBrewer, stringr, gWidgets, gWidgetsRGtk2, RPostgreSQL,
Suggests:	testthat, viridis, knitr, rmarkdown
Author:	Cedric Briand [aut, cre], Marion Legrand [aut], Timothee Besse [aut]
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RoxygenNote:	6.1.0.9000
NeedsCompilation:	no
VignetteBuilder:	knitr
Repository:	R-Forge
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Index of help topics:

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barplot,report_annual-method
    barplot method for object report_annual-class
calcmig
    A data frame containing the default connection
    arguments. The program will use a file
    installed in c:/program files/stacomir but if
    not found will switch to this default value
calcule
    Generic method for calculations
calcule,report_ge_weight-method
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    in class
charge,ref_dc-method
    Method to load the counting devices of the
    control station

```



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 charge,ref\_env-method Loading method for ref\_env referential object  
 charge,ref\_list-method Loading method for refliste referential objects  
 charge,ref\_par-method Loading method for Repar referential objects  
 charge,ref\_parqual-method Loading method for Reparqual referential objects  
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 charge,ref\_textbox-method Loading method for ReTextBox referential objects  
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 charge,report\_mig-method Loads additional data on migration control operations, df (fishway) dc (counting device).  
 charge,report\_mig\_env-method charge method for report\_mig\_env class  
 charge,report\_mig\_mult-method charge method for report\_mig\_mult  
 charge\_complement Generic method to load additional data  
 charge\_complement,ref\_parqual-method Loads an additional dataset this method is loaded to obtain the possible values of a qualitative parameter. Here data only contains one line  
 charge\_with\_filter,ref\_par-method Loading method for Repar referential objects searching only those parameters existing for a DC, a Taxa, and a stage  
 charge\_with\_filter,ref\_parqual-method Loading method for Reparqual referential objects searching only those parameters existing for a DC, a Taxon, and a stage  
 charge\_with\_filter,ref\_parquan-method Loading method for Reparquan referential objects searching only those parameters existing for a DC, a Taxon, and a stage

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choicemult, selection method for ref\_dc  
allowing to select several DC

choicemult,ref\_taxa-method  
Multiple Choice method for reftaxa referential  
objects, the graphical interface is built to  
allow for multiple choices. See load for method  
in the command line.

coef\_durif  
Silvering index coefficients from Caroline  
Durif (2009) to predict silvering stage from  
morphological parameters

colortable  
Builds a table with colors to merge with a  
dataframe for later use in ggplot. An initial  
check will be done on the name of the color  
vector. A data frame is built. It contains a  
column color which is a factor. The factor  
order match the order of the vector (not the  
alphabetical order of the colors).

connect,report\_annual-method  
connect method for report\_annual class this  
method performs the sum over the year attention  
this function does not count subsamples.

connect,report\_dc-method

	connect method for report_dc
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connect,report_env-method	connect method for report_env class
connect,report_ge_weight-method	connect method for report_Poids_moyen
connect,report_mig-method	connect method for report_mig
connect,report_mig_char-method	connect method for report_mig_char
connect,report_mig_env-method	connect method for report_mig_env class
connect,report_mig_interannual-method	connect method for report_mig_interannual
connect,report_mig_mult-method	connect method for report_mig_mult
connect,report_ope-method	connect method for report_ope
connect,report_sample_char-method	connect method for report_sample_char
connect,report_sea_age-method	connect method for report_sea_age
connect,report_silver_eel-method	connect method for report_silver_eel
connect,report_species-method	connect method for report_species
createmessage	Generic method to forward outputs
current_end_date,ref_timestep-method	Gets the ending date of a time step for an object of class ref_timestep-class
envir_stacomir	Environment where most objects from the package are stored and then loaded by the charge method
fun_aggreg_for_plot	returns a table where all components within the list calcdatas are aggregated and formatted for plot
fun_char_spe	function used to remove special non utf8 character which cause the gtk interface to crash
fun_date_extraction	This function extracts temporal characteristics from a dataframe
fun_report_mig_interannual	statistics per time period
fun_report_mig_mult	Calculate daily migration by simple repartition
fun_report_mig_mult_overlaps	Function to calculate daily migration using overlaps functions
fun_stage_durif	Function to calculate the stages from Durif

fun_table_per_dis	functions called in DF and DC
fun_weight_conversion	returns a table where weights and number are calculated from number and weights respectively performs a query to collect the conversion coefficients
fun_write_monthly	This writes monthly data in t_reportmensuel_mens table
funbarchart1DC	Handler for barchart for report_df class from the graphical interface
fungraph	Function for report_mig graphs including numbers DF DC operations
fungraph_glasseel	Graph function for glass eel migration. Differs from fungraph as it does not draw the ggplot graph for month
funstat	Function to calculate statistics per month
funstat_daily	function to create daily statistics
funtable	function to print and save statistics in .csv and .html formats for report_mig and report_mig_mult class
getdbname	Retrieves the dbname from a connection using "baseODBC"
getnocurrent_step	Generic method to get current time step
getvalue	Generic method getvalue
getvalue,ref_period-method	Returns the POSIXt value of a given name
graphdate	function used for some lattice graphs with dates
graphe-methods	Methods for Function graphe
model	Generic for prediction
model,report_ge_weight-method	model method for report_ge_weight' this method uses samples collected over the season to model the variation in weight of glass eel or yellow eels.
plot,report_annual,missing-method	Plot method for report_annual
plot,report_dc,ANY-method	Different plots for report_dc
plot,report_df,ANY-method	Different plots for report_df
plot,report_env,missing-method	Plot method for report_env
plot,report_ge_weight,missing-method	Plot method for report_ge_weight'
plot,report_mig,ANY-method	Plots of various type for report_mig.
plot,report_mig_char,missing-method	plot method for report_mig_char

plot,report_mig_env,missing-method	Plot method for report_mig_env
plot,report_mig_interannual,missing-method	Plot method for report_mig_interannual
plot,report_mig_mult,missing-method	Plots of various type for report_mig_mult
plot,report_sample_char,missing-method	Plots of various type for reportcarlot
plot,report_sea_age,missing-method	Plots of various type for report_sea_age
plot,report_silver_eel,missing-method	Plots of various type for report_silver_eel
plot,report_species,missing-method	Plot method for report_species
print,report_dc-method	Method to print the command line of the object
print,report_df-method	Method to print the command line of the object
print,report_mig-method	Method to print the command line of the object
print,report_mig_mult-method	Method to print the command line of the object
print,report_sample_char-method	Method to print the command line of the object
print,report_sea_age-method	Method to print the command line of the object
print,report_silver_eel-method	Method to print the command line of the object
progress_bar	Progress bar using a gtkdialog, the progress bar is assigned in envir_stacomir This progress bar has a button to close.
quitte	function used to clean the objects within the group and the graphs and also elements remaining in the envir_stacomir environment
r_ann	Annual migration of yellow and silver eel for three fishways / counting devices at the Arzal dam (data from 1995 to 2016)
r_ann_adour	Annual migration of salmon in the Adour and tributaries
r_dc	Counting Device (DC) operation from 2000 to 2015 at the Arzal dam (Vilaine, France)
r_df	Overview of the fishway operation at Arzal in (Vilaine France).
r_env	An object of class report_env with data loaded
r_gew	Wet weight of glass eel from the trapping ladder (Arzal, Vilaine France)
r_mig	Video counting of thin lipped mullet (Liza ramada) in 2015 in the Vilaine (France)

r_mig_char	Qualitative and quantitative parameters describing Salmon migration at Decize (Loire)
r_mig_dc	Counting device operation for the video recording (Arzal dam, Vilaine, France).
r_mig_df	Fishway operation for the vertical slot fishway (Arzal dam, Vilaine, France).
r_mig_env	An object of class report_mig_env with data loaded
r_mig_interannual	Daily glass eel and elver migration from 1984 to 2016 in the Sevre Niortaise
r_mig_interannual_vichy	Seasonality of salmon migration at the Vichy counting station (Loire)
r_mig_mult	Anguilla migration at the Arzal station (report_mig_mult-class)
r_mig_mult_dc	Counting device operation for three different counting device in Arzal (Vilaine, France)
r_mig_mult_df	Fishway operation at the Arzal Dam (Vilaine France) (3 Fishways in 2011)
r_mig_mult_ope	Counting operations for three different counting device in Arzal (Vilaine, France)
r_mig_ope	An object of class report_ope-class with data loaded
r_sample_char	Size of yellow and glass eel at the Arzal dam (Vilaine, France) in the fishway and main eel trapping ladder.
r_seaa	An object of class report_sea_age with data loaded
r_silver	Silver eel migration in the Somme
ref_checkbox-class	ref_checkbox referencial class
ref_choice-class	Class "ref_choice"
ref_coe-class	Class "ref_coe"
ref_dc-class	Class "ref_dc"
ref_df-class	Class "ref_df"
ref_env-class	Class "ref_env"
ref_horodate-class	Class ref_horodate
ref_par-class	Class "ref_par"
ref_parqual-class	Class "ref_parqual"
ref_parquan-class	Class "ref_parquan"
ref_period-class	Class "ref_period" referential class
ref_stage-class	Class "ref_stage"
ref_taxa-class	Class "ref_taxa"
ref_textbox-class	ref_textbox referencial class
ref_timestep-class	Class "ref_timestep"
ref_timestepChar-class	Class "ref_timestepChar"
ref_timestep_daily-class	Class "ref_timestep_daily"

```

ref_year-class          Year reference class
report_annual-class     Class "report_annual"
report_dc-class         Class "report_dc" report du fonctionnement du
                        dispositif de comptage
report_df-class         Report on fishway operation
report_env-class        class report_env simple output of one or
                        several environmental conditions...
report_ge_weight-class  Trend of wet weight in glass eel
report_mig-class        Migration report for one DC, one species and
                        one stage
report_mig_char-class   Migration report along with quantitative and
                        qualitative characteristics
report_mig_env-class    Class "report_mig_env"
report_mig_interannual-class
                        Class "report_mig_interannual"
report_mig_mult-class   Migration reports for multiple DC / species /
                        stages
report_ope-class        Report on operations
report_sample_char-class
                        Class "report_sample_char"
report_sea_age-class    Class "report_sea_age"
report_silver_eel-class
                        Class "report_silver_eel"
report_species-class    Counts of number per taxa/stages
setasqualitative        Generic method to transform quantitative par
                        into a qualitative one
setasqualitative,report_mig_char-method
                        Turns a quantitative parameter into qualitative
split_per_day           Create a dataframe suitable for charts per 24h
                        and day
stacomir                Function that loads the loginwindow, tests
                        connection, and then destroys the window
stacomir-package        Fish Migration Monitoring
stacomir_installed      Test that the program is installed.
summary,report_dc-method
                        summary for report_dc, write csv and html
                        output, and prints summary statistics
summary,report_df-method
                        summary for report_df, write csv and html
                        output, and prints summary statistics
summary,report_mig-method
                        summary for report_mig calls functions funstat
                        and funtable to create migration overviews and
                        generate csv and html output in the user data
                        directory
summary,report_mig_char-method
                        summary for report_mig_char

```



summary,report\_mig\_interannual-method  
summary for report\_mig\_interannual provides summary statistics for the latest year (if silent=TRUE), or the year selected in the interface, if silent=FALSE. Mean, min and max are historical statistics with the selected year excluded from the historical dataset.

summary,report\_mig\_mult-method  
summary for report\_mig\_mult calls functions funstat and funtable to create migration overviews and generate csv and html output in the user data directory

summary,report\_sample\_char-method  
summary for report\_sample\_char

summary,report\_sea\_age-method  
summary for report\_sea\_age

summary,report\_silver\_eel-method  
summary for report\_silver\_eel

summary,report\_species-method  
summary for report\_species generate csv and html output in the user data directory

supprime  
Generic method to delete entires from the database

supprime,ref\_coe-method  
supprime method for "ref\_coe" class

supprime,report\_mig\_interannual-method  
supprime method for report\_mig\_interannual class

supprime,report\_sea\_age-method  
supprime method for report\_mig\_interannual class

vector\_to\_listsql  
Transforms a vector into a string called within an sql command e.g. c('A','B','C') => in ('A','B','C')

write\_database  
Generic method write\_database

write\_database,report\_ge\_weight-method  
Function to write data to the stacomi database for report\_ge\_weight-class

write\_database,report\_mig-method  
Command line method to write the daily and monthly counts to the t\_bilanmigrationjournalier\_bjo table

write\_database,report\_sea\_age-method  
Command line method to write the characteristic "sea age" (car\_par\_code='A124') into the tj\_caracteristiquelot\_car table in the user's scheme

xtable,report\_annual-method

```

xtable function for report_annual-class create
an xtable objet but also assigns an
add.to.column argument in envir_stacomi, for
later use by the print.xtable method.
xtable,report_mig_char-method
xtable function for report_mig_char-class
create an xtable objet to be later used by the
print.xtable method.

```

Further information is available in the following vignettes:

stacomir Vignette Title (source)

To use the stacomir package, simply load the library using `library(stacomir)`. Once done, type `stacomir()` in R terminal. The use of `stacomir(gr_interface=FALSE)` allows to launch stacomir without graphical interface from the command line. The program is currently translated to French, to switch to English or French type `Sys.setenv(LANG = "en")` `Sys.setenv(LANG = "fr")`

### Author(s)

Cedric Briand [aut, cre], Marion Legrand [aut], Timothee Besse [aut] Maintainer: Cedric Briand <cedric.briand00@gmail.com>

### See Also

[stacomirtools](#)

### Examples

```
#stacomir()
```

---

barplot,report\_annual-method

*barplot method for object [report\\_annual-class](#)*

---

### Description

barplot method for object [report\\_annual-class](#)

### Usage

```
## S4 method for signature 'report_annual'
barplot(height, legend.text = NULL, ...)
```

**Arguments**

height	An object of class report_annual
legend.text	See barplot help
...	additional arguments passed to barplot

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**See Also**

[report\\_annual-class](#) for examples

---

calcmig	<i>A data frame containing the default connection arguments. The program will use a file installed in c:/program files/stacomis but if not found will switch to this default value</i>
---------	--

---

**Description**

A data frame containing the default connection arguments. The program will use a file installed in c:/program files/stacomis but if not found will switch to this default value

**Usage**

```
calcmig
```

**Format**

An object of class data.frame with 1 rows and 9 columns.

---

calculer	<i>Generic method for calculations</i>
----------	--

---

**Description**

Generic method for calculations

**Usage**

```
calculer(object, ...)
```

**Arguments**

object	Object
...	Additional parms

**Author(s)**

cedric.briand

---

calculer,report\_ge\_weight-method

*Calculer method for report\_ge\_weight*

---

**Description**

Calculer method for report\_ge\_weight

**Usage**

```
## S4 method for signature 'report_ge_weight'  
calculer(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_ge_weight-class</a>
silent	Boolean, if TRUE, information messages are not displayed, only warnings and errors

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

calculer,report\_mig-method

*Transforms migration per period to daily migrations, and performs the conversion from weights to number is data are stored as weights (glass eel).*

---

**Description**

The calculation must be launched once data are filled by the connect method. Currently the negative argument has no effect.

**Usage**

```
## S4 method for signature 'report_mig'  
calculer(object, negative = FALSE,  
         silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_mig-class</a>
negative	a boolean indicating if a separate sum must be done for positive and negative values, if true, positive and negative counts return different rows
silent	Boolean, if TRUE, information messages are not displayed, only warnings and errors

### Value

report\_mig with calcdatas slot filled. It is a list with one element per counting device containing

**method** In the case of instantaneous periods (video counting) the sum of daily values is done by the [fun\\_report\\_mig\\_mult](#) method and the value indicated in method is "sum". If any migration monitoring period is longer than a day, then the migration is split using the [fun\\_report\\_mig\\_mult\\_overlaps](#) function and the value indicated in the method is "overlaps" as the latter method uses the overlap package to split migration period.

**data** the calculated data.

**contient\_poids** A boolean which indicates, in the case of glass eel, that the function [fun\\_weight\\_conversion](#) has been run to convert the weights to numbers using the weight to number coefficients in the database (see linkreport\_ge\_weight).

**negative** A parameter indicating if negative migration (downstream in the case of upstream migration devices) have been converted to positive numbers, not developed yet

### Note

The class report\_mig does not handle escapement rates nor 'devenir' i.e. the destination of the fishes.

---

calculer,report\_mig\_char-method

*Computes data to a standard format for the summary and plot methods.*

---

### Description

Merges the content of the list elements "parqual" and "parquan" in the data slot, and creates a single dataframe with one line per qualitative and quantitative pair. This methods allow to cross one quantity (e.g. length) with a qualitative parameter (e.g. sex).

### Usage

```
## S4 method for signature 'report_mig_char'
calculer(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_mig_char-class</a>
silent	Boolean default FALSE, if TRUE information messages not displayed

---

calculer,report\_mig\_env-method

*Calculations for migration in the class [report\\_mig\\_env-class](#)*

---

**Description**

Runs the calculer method in [report\\_mig\\_mult-class](#)

**Usage**

```
## S4 method for signature 'report_mig_env'
calculer(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_mig_env-class</a>
silent	Boolean default FALSE, if TRUE information messages not displayed

**Value**

[report\\_mig\\_env-class](#) with data in slot r\_mig\_env@report\_mig\_mult@calcddata

---

calculer,report\_mig\_interannual-method

*calculer method for report\_mig\_interannual*

---

**Description**

Performs the calculation of seasonal coefficients for the plot(plot.type="seasonal") method. The numbers are split according to the period chosen, one of "day","week","month","2 weeks", French labels are also accepted as arguments. Once this is done, the seasonality of the migration is displayed using the day when the first fish was seen, then the days (or period) corresponding to 5, 50, 95, and 100 percent of the migration. The duration of 90

**Usage**

```
## S4 method for signature 'report_mig_interannual'
calculer(object, silent = FALSE,
         timesplit = "mois")
```

### Arguments

object	An object of class <a href="#">report_mig_interannual-class</a>
silent	Boolean, if TRUE, information messages are not displayed, only warnings and errors
timesplit	One of "day","week","month","2 weeks", "jour","semaine","quinzaine","mois"

### Value

report\_mig with calcddata slot filled.

### Note

The class report\_mig does not handle escapement rates nor 'devenir' i.e. the destination of the fishes.

### Author(s)

Marion Legrand

calculer,report\_mig\_mult-method

*#' Transforms migration per period to daily migrations, and performs the conversion from weights to number is data are stored as weights (glass eel). This calculation is performed in a loop for all dc.*

### Description

The calculation must be launched once data are filled by the connect method. Currently the negative argument has no effect.

### Usage

```
## S4 method for signature 'report_mig_mult'
calculer(object, negative = FALSE,
         silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_mig_mult-class</a>
negative	a boolean indicating if a separate sum must be done for positive and negative values, if true, positive and negative counts return different rows
silent	Default FALSE, should messages be stopped

**Value**

report\_mig\_mult with a list in slot calcddata. For each dc one will find a list with the following elements

**method** In the case of instantaneous periods (video counting) the sum of daily values is done by the [fun\\_report\\_mig\\_mult](#) method and the value indicated in method is "sum". If any migration monitoring period is longer than a day, then the migration is split using the [fun\\_report\\_mig\\_mult\\_overlaps](#) function and the value indicated in the method is "overlaps" as the latter method uses the overlap package to split migration period.

**data** the calculated data. If weight are present, the columns display weight or numbers, the total number is "Effectif\_total" and corresponds to the addition of numbers and numbers converted from weight, the total weight is "Poids\_total"+"poids\_depuis\_effectifs" and corresponds to weighed glass eel plus glass eel number converted in weights. CALCULE corresponds to calculated number, MESURE to measured numbers, EXPERT to punctual expertise of migration (for instance measured in other path, or known migration of fishes passing the dam but not actually counted, PONCTUEL to fishes counted by visual identification but not by the counting apparatus (in case of technical problem for instance)

**contient\_poids** A boolean which indicates, in the case of glass eel, that the function [fun\\_weight\\_conversion](#) has been run to convert the weights to numbers using the weight to number coefficients in the database (see linkreport\_ge\_weight).

**negative** A parameter indicating if negative migration (downstream in the case of upstream migration devices) have been converted to positive numbers, not developed yet

**Note**

The class does not handle escapement rates, though structurally those are present in the database. If you want to use those you will have to do the calculation manually from the data in report\_mig\_mult@data.

---

calculer,report\_sample\_char-method

*Calculation for report\_sample\_char*

---

**Description**

In that class, most treatments are done in the query, this method checks that data are available and fills information for year, month, two weeks, week, day

**Usage**

```
## S4 method for signature 'report_sample_char'
calculer(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_sample_char-class</a>
silent	Boolean, if TRUE, information messages are not displayed, only warnings and errors



**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

calculereport\_sea\_age-method

*Split data according to the limits set in the limit1hm, and limit2hm arguments of the [report\\_sea\\_age-class](#).*

**Description**

If no value are provided in the limit1hm slot, an error is returned, if no value is provided in the limit2hm slot a default upper value for salmon size is taken to ensure all salmon are either of age 1 or 2, but no age 3 are returned

**Usage**

```
## S4 method for signature 'report_sea_age'
calculereport_sea_age(object, silent)
```

**Arguments**

object            An object of class [report\\_sea\\_age-class](#)  
 silent            Default FALSE, if TRUE the program should no display messages

**Value**

An object of class [report\\_sea\\_age-class](#) with calculated data in slot calcddata

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

calculereport\_silver\_eel-method

*Calculate individual silver eel parameters.*

**Description**

This calculereport\_silver\_eel method for report\_silver\_eel, will transform data from long (one line per size characteristic, size, weight, eye diameter, pectoral fin measurement, lateral line and constrast) to wide format (one line per silver eel). It will also calculate Durif silvering index and Pankhurst and Fulton's K.

**Usage**

```
## S4 method for signature 'report_silver_eel'
calculereport_silver_eel(object, silent)
```

**Arguments**

object	An object of class <a href="#">report_silver_eel-class</a>
silent	Boolean, if TRUE, information messages are not displayed, only warnings and errors

**Value**

An object of class [report\\_silver\\_eel-class](#) with slot calcddata filled, as a list for each counting device

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

calculereport\_species-method  
*calculereport\_species method for report\_species*

---

**Description**

' the number will be split according to the split argument passed to the class, e.g. per year or month or week. Data from different DC will be grouped. Counts are given per taxa, unless there are several stages, in which case the counts correspond to taxa + stage.

**Usage**

```
## S4 method for signature 'report_species'
calculereport_species(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_species-class</a>
silent	Boolean, if TRUE, information messages are not displayed, only warnings and errors

**Value**

with calcddata slot filled.

---

charge

*Generic method to load referentials*

---

### Description

Generic method to load referentials

### Usage

```
charge(object, ...)
```

### Arguments

object	Object
...	Additional parms

### Author(s)

cedric.briand

---

charge, ref\_checkbox-method

*Loading method for ref\_checkbox referential objects*

---

### Description

Loading method for ref\_checkbox referential objects

### Usage

```
## S4 method for signature 'ref_checkbox'  
charge(object, title, labels, checked)
```

### Arguments

object	An object of class <a href="#">ref_checkbox-class</a>
title	Title of the frame
labels	Labels for checked
checked	Vector of boolean indicating if ref_checkbox are checked

### Value

An object of class [ref\\_checkbox-class](#)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
  object=new("ref_checkbox")
  charge(object,title="essai",labels=c("par1","par2","par3"),checked=c(TRUE,TRUE,TRUE))

## End(Not run)
```

---

charge,ref\_choice-method

*Loading method for Rechoice referential objects*

---

**Description**

Loading method for Rechoice referential objects

**Usage**

```
## S4 method for signature 'ref_choice'
charge(object, vecteur, label, selected)
```

**Arguments**

object	An object of class ref_choice
vecteur	A vector of name, see example code.
label	Labels for the choices
selected	An integer indicating which object is selected at launch

**Value**

An S4 object of class ref\_choice

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**See Also**

Other referential objects: [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

**Examples**

```
## Not run:
object=new("ref_choice")
charge(object,vecteur=c("oui","non"),label="essai",selected=as.integer(1))

## End(Not run)
```

---

charge,ref\_coe-method *loads the coefficients for the period defined in class*

---

**Description**

The slots `datedebut` and `datefin` have to be filled before using `charge`

**Usage**

```
## S4 method for signature 'ref_coe'
charge(object)
```

**Arguments**

`object`            An object of class [ref\\_coe-class](#)

**Value**

Object of class `ref_coe`

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
object<- new("ref_coe")
object@datedebut<-strptime("01/01/1996",format="%d/%m/%Y")
object@datefin<-strptime("01/01/1997",format="%d/%m/%Y")
charge(object)

## End(Not run)
```

---

charge,ref\_dc-method    *Method to load the counting devices of the control station*

---

**Description**

Method to load the counting devices of the control station

**Usage**

```
## S4 method for signature 'ref_dc'  
charge(object)
```

**Arguments**

object            An object of class [ref\\_dc-class](#)

**Value**

Object of class `ref_dc`

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

charge,ref\_df-method    *Loading method for DF referential objects*

---

**Description**

Loading method for DF referential objects

**Usage**

```
## S4 method for signature 'ref_df'  
charge(object)
```

**Arguments**

object            An object of class [ref\\_df-class](#)

**Value**

An object of class `ref_df`

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### Examples

```
## Not run:  
  object=new("ref_df")  
  charge(object)  
  
## End(Not run)
```

---

charge, ref\_env-method *Loading method for ref\_env referential object*

---

### Description

Loading method for ref\_env referential object

### Usage

```
## S4 method for signature 'ref_env'  
charge(object)
```

### Arguments

object            An object of class [ref\\_env-class](#)

### Value

An S4 object of class ref\_env

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### Examples

```
## Not run:  
  object=new("ref_env")  
  charge(object)  
  
## End(Not run)
```

---

charge,ref\_list-method

*Loading method for refliste referential objects*

---

### Description

Loading method for refliste referential objects

### Usage

```
## S4 method for signature 'ref_list'  
charge(object, listechoice, label)
```

### Arguments

object	An object of class <a href="#">ref_list-class</a>
listechoice	A character vector setting the possible values in which the user can select
label	A label for refliste

### Value

An object of class `ref_list`

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### Examples

```
## Not run:  
  object=new("ref_list")  
  charge(object)  
  
## End(Not run)
```

---

charge,ref\_par-method *Loading method for Repar referential objects*

---

### Description

Loading method for Repar referential objects

### Usage

```
## S4 method for signature 'ref_par'  
charge(object)
```



**Arguments**

object            An object of class [ref\\_par-class](#)

**Value**

An S4 object of class ref\_par

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:  
  object=new("ref_par")  
  charge(object)  
  
## End(Not run)
```

---

charge,ref\_parqual-method

*Loading method for Reparqual referential objects*

---

**Description**

Loading method for Reparqual referential objects

**Usage**

```
## S4 method for signature 'ref_parqual'  
charge(object)
```

**Arguments**

object            An object of class [ref\\_parqual-class](#)

**Value**

An S4 object of class ref\_parqual

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:  
object=new("ref_parqual")  
charge(object)  
  
## End(Not run)
```

---

charge,ref\_parquan-method

*Loading method for Reparquan referential objects*

---

**Description**

Loading method for Reparquan referential objects

**Usage**

```
## S4 method for signature 'ref_parquan'  
charge(object)
```

**Arguments**

object            An object of class [ref\\_parquan-class](#)

**Value**

An S4 object of class ref\_parquan

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:  
object=new("ref_parquan")  
charge(object)  
  
## End(Not run)
```

---

charge,ref\_stage-method

*Loading method for ref\_stage referential objects*

---

### Description

Loading method for ref\_stage referential objects

### Usage

```
## S4 method for signature 'ref_stage'  
charge(object)
```

### Arguments

object            An object of class [ref\\_stage-class](#)

### Value

An S4 object of class ref\_stage

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### Examples

```
## Not run:  
object=new("ref_stage")  
charge(object)  
  
## End(Not run)
```

---

charge,ref\_taxa-method

*Loading method for ref\_taxa referential objects*

---

### Description

Loading method for ref\_taxa referential objects

### Usage

```
## S4 method for signature 'ref_taxa'  
charge(object)
```

**Arguments**

object            An object of class [ref\\_taxa-class](#)

**Value**

An S4 object of class ref\_taxa

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:  
object=new("ref_taxa")  
charge(object)  
## End(Not run)
```

---

charge,ref\_textbox-method

*Loading method for ReTextBox referential objects*

---

**Description**

Loading method for ReTextBox referential objects

**Usage**

```
## S4 method for signature 'ref_textbox'  
charge(object, title, label)
```

**Arguments**

object            An object of class [ref\\_textbox-class](#)  
title             A title for the frame  
label             A label for the TextBox

**Value**

An S4 object of class ref\_textbox

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
  object=new("ref_textbox")
  charge(object,title="un titre",label="20")

## End(Not run)
```

---

charge,ref\_year-method

*Loading method for ref\_year referential objects*

---

**Description**

Selects year available either in the bjo table (if report\_object==report\_migInterannelle) or in the t\_operation\_ope table

**Usage**

```
## S4 method for signature 'ref_year'
charge(object, objectreport = "report_ge_weight")
```

**Arguments**

object            An object of class ref\_year  
objectreport     The object report, default "report\_ge\_weight" other possible value report\_mig\_interannual

**Value**

object An object of class ref\_year with slot data filled with the selected value

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**Examples**

```
## Not run:
  object=new("ref_year")
  charge(object)
  validObject(annee)
  showMethods("charge")

## End(Not run)
```

---

charge,report\_ge\_weight-method  
*charge method for report\_ge\_weight class*

---

**Description**

charge method for report\_ge\_weight class

**Usage**

```
## S4 method for signature 'report_ge_weight'
charge(object)
```

**Arguments**

object            An object of class [report\\_ge\\_weight-class](#)

**Value**

report\_ge\_weight with slots filled with user choice

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

charge,report\_mig-method  
*Loads additional data on migration control operations, df (fishway) dc (counting device).*

---

**Description**

this method creates additional classes in envir\_stacomi for later use in plot (operations, DF operation, DC operation). So unlike in most report classes where the charge method is only used by the graphical interface, it is necessary to run charge for report\_mig.

**Usage**

```
## S4 method for signature 'report_mig'
charge(object, silent = FALSE)
```

**Arguments**

object            An object of class [report\\_mig-class](#)  
silent            Should the program be returning messages

**Value**

An object of class [report\\_mig-class](#) with slots filled by user choice

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

charge,report\_mig\_env-method  
*charge method for report\_mig\_env class*

---

**Description**

# Unique the other report classes where the charge method is only used by the graphical interface to collect and test objects in the environment `envir_stacomi`, and see if the right choices have been made in the graphical interface, this methods runs the [charge,report\\_mig\\_mult-method](#) and needs to be called from the command line (see examples)

**Usage**

```
## S4 method for signature 'report_mig_env'
charge(object, silent = FALSE)
```

**Arguments**

<code>object</code>	An object of class <a href="#">report_mig_env-class</a>
<code>silent</code>	Should the function remain silent (boolean)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

charge,report\_mig\_mult-method  
*charge method for report\_mig\_mult*

---

**Description**

Unique the other report classes where the charge method is only used by the graphical interface to collect and test objects in the environment `envir_stacomi`, and see if the right choices have been made in the graphical interface, this method is used to load data on migration control operations fishway operations, and counting devices operations as data from those are displayed in the main plots.

**Usage**

```
## S4 method for signature 'report_mig_mult'  
charge(object, silent = FALSE)
```

**Arguments**

object	An object of class <code>report_mig_mult-class</code>
silent	Default FALSE, if TRUE the program should no display messages

**Value**

report\_mig\_mult with slots filled by user choice

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

chargecomplement-methods

*Methods for Function chargecomplement*

---

**Description**

Methods for function chargecomplement method chargecomplement this method is called after selecting the object (data only counts one line) and allows a request to obtain a complement, for instance possible values for a qualitative parameter

**Methods**

signature(object = "ref\_parqual") collects possible values for a qualitative parameter, for instance for parameter sex would be values male & female

**Examples**

```
## Not run:  
dc_selectionne=6  
taxa_selectionne=2038  
stage_selectionne="AGJ"  
object=new("ref_parqual")  
object<-charge(object)  
chargecomplement(object)  
  
## End(Not run)
```



---

charge\_complement      *Generic method to load additional data*

---

**Description**

Generic method to load additional data

**Usage**

```
charge_complement(object, ...)
```

**Arguments**

object	Object
...	Additional parms

**Author(s)**

cedric.briand

---

charge\_complement, ref\_parqual-method

*Loads an additional dataset this method is loaded to obtain the possible values of a qualitative parameter. Here data only contains one line*

---

**Description**

Loads an additional dataset this method is loaded to obtain the possible values of a qualitative parameter. Here data only contains one line

**Usage**

```
## S4 method for signature 'ref_parqual'  
charge_complement(object)
```

**Arguments**

object	An object of class <a href="#">ref_parqual-class</a>
--------	--

**Value**

An S4 object of class `ref_parqual` with the `valqual` slot filled

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
dc_selectionne=6
taxa_selectionne=2038
stage_selectionne="AGJ"
object=new("ref_parqual")
object<-charge(object)
charge_complement(object)

## End(Not run)
```

---

charge\_with\_filter,ref\_par-method

*Loading method for Repar referential objects searching only those parameters existing for a DC, a Taxa, and a stage*

---

**Description**

Loading method for Repar referential objects searching only those parameters existing for a DC, a Taxa, and a stage

**Usage**

```
## S4 method for signature 'ref_par'
charge_with_filter(object, dc_selectionne,
  taxa_selectionne, stage_selectionne)
```

**Arguments**

object            An object of class [ref\\_par-class](#)  
dc\_selectionne    A counting device selected for the report  
taxa\_selectionne            The taxa selected for the report  
stage\_selectionne            The stage selected for the report

**Value**

An S4 object of class ref\_par

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

## Examples

```
## Not run:  
object=new("ref_par")  
charge_with_filter(object,dc_selectionne=6,taxa_selectionne=2038,stage_selectionne=c("AGJ","CIV"))  
  
## End(Not run)
```

---

charge\_with\_filter,ref\_parqual-method

*Loading method for Reparqual referential objects searching only those parameters existing for a DC, a Taxon, and a stage*

---

## Description

Loading method for Reparqual referential objects searching only those parameters existing for a DC, a Taxon, and a stage

## Usage

```
## S4 method for signature 'ref_parqual'  
charge_with_filter(object, dc_selectionne,  
  taxa_selectionne, stage_selectionne)
```

## Arguments

object	An object of class <a href="#">ref_parqual-class</a>
dc_selectionne	The dc set in the report object
taxa_selectionne	The taxa set in the report object
stage_selectionne	The stage set in the report object

## Value

An S4 object of class [ref\\_parqual-class](#)

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

## Examples

```
## Not run:
dc_selectionne=6
taxa_selectionne=2038
stage_selectionne="AGJ"
object=new("ref_parqual")
charge_with_filter(object,dc_selectionne,taxa_selectionne,stage_selectionne)

## End(Not run)
```

---

charge\_with\_filter,ref\_parquan-method

*Loading method for Reparquan referential objects searching only those parameters existing for a DC, a Taxon, and a stage*

---

## Description

Loading method for Reparquan referential objects searching only those parameters existing for a DC, a Taxon, and a stage

## Usage

```
## S4 method for signature 'ref_parquan'
charge_with_filter(object, dc_selectionne,
  taxa_selectionne, stage_selectionne)
```

## Arguments

object            An object of class [ref\\_parquan-class](#)  
dc\_selectionne    The dc set in the report object  
taxa\_selectionne            The taxa set in the report object  
stage\_selectionne            The stage set in the report object

## Value

An S4 object of class ref\_parqualn

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

## Examples

```
## Not run:
dc_selectionne=6
taxa_selectionne=2038
stage_selectionne="AGJ"
object=new("ref_parquan")
charge_with_filter(object,dc_selectionne,taxa_selectionne,stage_selectionne)

## End(Not run)
```

---

charge\_with\_filter,ref\_stage-method

*Loading method for ref\_stage referential objects searching only those stages existing for a DC and a Taxon*

---

## Description

Loading method for ref\_stage referential objects searching only those stages existing for a DC and a Taxon

## Usage

```
## S4 method for signature 'ref_stage'
charge_with_filter(object, dc_selectionne,
  taxa_selectionne)
```

## Arguments

object            An object of class [ref\\_stage-class](#)  
dc\_selectionne    The selected counting device  
taxa\_selectionne            The selected species

## Value

An S4 object of class [ref\\_stage-class](#)

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### Examples

```
## Not run:
dc_selectionne=6
taxa_selectionne=2038
object=new("ref_stage")
charge_with_filter(object,dc_selectionne,taxa_selectionne)

## End(Not run)
```

---

charge\_with\_filter,ref\_taxa-method

*Loading method for ref\_taxa referential objects searching only taxa existing for a DC*

---

### Description

Loading method for ref\_taxa referential objects searching only taxa existing for a DC

### Usage

```
## S4 method for signature 'ref_taxa'
charge_with_filter(object, dc_selectionne)
```

### Arguments

object            An object of class [ref\\_taxa-class](#)  
dc\_selectionne    A counting device selected, only taxa attached to this dc are selected

### Value

An S4 object of class ref\_taxa

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### Examples

```
## Not run:
dc_selectionne=6
object=new("ref_taxa")
charge_with_filter(object,dc_selectionne=dc_selectionne)
## End(Not run)
```

---

`choicemult,ref_dc-method`*choicemult, selection method for ref\_dc allowing to select several DC*

---

## Description

choicemult, selection method for ref\_dc allowing to select several DC

## Usage

```
## S4 method for signature 'ref_dc'  
choicemult(object, objectreport = NULL,  
           is.enabled = TRUE)
```

## Arguments

object	An object of class ref_dc
objectreport	A report object
is.enabled	A boolean indicating if the widget can be selected at launch

## Note

The choice method has for arguments a report (report) object (e.g) is called from a report report(e.g report\_sample\_char). By default, the value of the objectreport is null. When it is not the method calls daughter widgets (e.g. the dc widget will call species) and fills it with the method [charge\\_with\\_filter,ref\\_taxa-method](#)

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

## Examples

```
## Not run:  
win=gwindow()  
group=gggroup(container=win,horizontal=FALSE)  
object=new("ref_dc")  
object<-charge(object)  
objectreport=new("report_mig_mult")  
choicemult(object=object,objectreport=objectreport)  
  
## End(Not run)
```

---

choicemult,ref\_taxa-method

*Multiple Choice method for reftaxa referential objects, the graphical interface is built to allow for multiple choices. See load for method in the command line.*

---

## Description

Multiple Choice method for reftaxa referential objects, the graphical interface is built to allow for multiple choices. See load for method in the command line.

## Usage

```
## S4 method for signature 'ref_taxa'  
choicemult(object, objectreport = NULL,  
  is.enabled = TRUE)
```

## Arguments

object	An object of class <a href="#">ref_taxa-class</a>
objectreport	An object report which includes the <a href="#">ref_taxa-class</a> , default NULL
is.enabled	Sets if the frame is enabled at launch, default TRUE

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

## Examples

```
## Not run:  
  object=new("ref_taxa")  
  win=gwindow()  
  group=gggroup(container=win,horizontal=FALSE)  
  object<-charge(object)  
  report_mig=new(report_mig)  
  choicemult(object,objectreport=report_mig)  
  
## End(Not run)
```



---

 choice\_c,ref\_choice-method

*Choice\_c method for refchoix referential objects*


---

### Description

Choice\_c method for refchoix referential objects

### Usage

```
## S4 method for signature 'ref_choice'
choice_c(object, selectedvalue)
```

### Arguments

object            An object of class [ref\\_list-class](#)  
 selectedvalue    the value selected in the combo

### Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

### Examples

```
## Not run:
object=new("ref_list")
object<-charge(object,vecteur=c("1","2"),label="please choose")
object<-choice_c(object)

## End(Not run)
```

---

 choice\_c,ref\_dc-method

*Command line interface to select a counting device*


---

### Description

the choice\_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The parameters for dc are transformed to integer as the ref\_dc only takes integer in the dc slots. The method also loads the stations and ouvrages (dams) associated with the counting device (dc). The values passed to the choice\_c method are then checked with the setValidity method. Finally, if an objectreport is passed as a parameter, the method will do a charge\_with\_filter to select only the taxa present in the counting devices

**Usage**

```
## S4 method for signature 'ref_dc'
choice_c(object, dc)
```

**Arguments**

object	an object of class ref_dc
dc	a character vector of dc chosen

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
win=gwindow()
group=ggroup(container=win,horizontal=FALSE)
object=new("ref_dc")
object<-charge(object)
objectreport=new("report_mig_mult")
choice_c(object=object,objectreport=objectreport,dc=1)

## End(Not run)
```

---

choice\_c,ref\_df-method

*Command line interface to choose a fishway*

---

**Description**

the choice\_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The parameters for df are transformed to integer as the ref\_df only takes integer in the df slots. DF are third in hierarchy in the stacomi database Station>ouvrage>DF>DC>operation. This class is only used in the report\_df class.

**Usage**

```
## S4 method for signature 'ref_df'
choice_c(object, df)
```

**Arguments**

object	an object of class <a href="#">ref_df-class</a>
df	a character vector of df chosen

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
win=gwindow()
group=ggroup(container=win,horizontal=FALSE)
object=new("ref_df")
object<-charge(object)
objectreport=new("report_mig_mult")
choice_c(object=object,objectreport=objectreport,dc=1)

## End(Not run)
```

---

choice\_c,ref\_env-method

*Command line interface to select a monitoring station*

---

**Description**

the choice\_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line.

**Usage**

```
## S4 method for signature 'ref_env'
choice_c(object, stationMeasure)
```

**Arguments**

object	an object of class ref_env
stationMeasure	a character vector of the monitoring station code (corresponds to stm_libelle in the tj_stationmesure_stm table)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

 choice\_c,ref\_horodate-method

*Command line*


---

### Description

Command line

### Usage

```
## S4 method for signature 'ref_horodate'
choice_c(object, nomassign = "horodate",
         funoutlabel = "nous avons le choix dans la date\n", horodate,
         silent = FALSE)
```

### Arguments

object	An object of class <a href="#">ref_horodate-class</a>
nomassign	The name assigned in environment <code>envir_stacom</code>
funoutlabel,	text displayed by the interface
horodate	The horodate to set, formats " <code>%d/%m/%Y %H:%M:%s</code> ", " <code>%d/%m/%y %H:%M:%s</code> ", " <code>%Y-%m-%d %H:%M:%s</code> " formats can also be passed with the date set to the minute <code>%d/%m/%Y %H:%M</code> or the day <code>%d/%m/%Y ...</code> are accepted. The <code>choice_c</code> method assigns and
silent	Default FALSE, should messages be displayed

### Value

An object of class [ref\\_horodate-class](#) with slot `horodate` set, and assigns an object of class POSIXt with name `nomassign` in `envir_stacom`

---

 choice\_c,ref\_list-method

*Choice\_c method for ref\_list referential objects*


---

### Description

Choice\_c method for `ref_list` referential objects

### Usage

```
## S4 method for signature 'ref_list'
choice_c(object, selectedvalue)
```

**Arguments**

object            An object of class [ref\\_list-class](#)  
 selectedvalue    the value selected in the combo

**Note**

the choice method assigns an object of class refList named ref\_list in the environment envir\_stacom

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**Examples**

```
## Not run:
object=new("ref_list")
object<-charge(object,vecteur=c("1","2"),label="please choose")
object<-choice_c(object)

## End(Not run)
```

---

choice\_c,ref\_par-method

*Command line interface to select a parameter*

---

**Description**

the choice\_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. If an objectreport is passed as a parameter, the method will do a charge\_with\_filter to select only the taxa present in the counting devices

**Usage**

```
## S4 method for signature 'ref_par'
choice_c(object, par, silent = FALSE)
```

**Arguments**

object            an object of class [ref\\_par-class](#)  
 par                A character vector of par  
 silent            Default FALSE but not used there

**Value**

An object of class [ref\\_par-class](#)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,ref\_stage-method  
*choice\_c method for ref\_stage*

---

**Description**

the choice\_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The values passed to the choice\_c method for stage is the code. Any numeric value will be discarded

**Usage**

```
## S4 method for signature 'ref_stage'  
choice_c(object, stage, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">ref_stage-class</a>
stage	the vector of stages chosen
silent	Boolean, if TRUE, information messages are not displayed

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:  
object=new("ref_taxa")  
object<-charge(object)  
objectreport=new("report_mig_mult")  
choice_c(object=object,objectreport=objectreport,"Anguilla anguilla")  
  
## End(Not run)
```

---

choice\_c,ref\_taxa-method  
*choice\_c method for ref\_taxa*

---

### Description

the choice\_cc method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The values passed to the choice\_c method for taxa can be either numeric (2038 = Anguilla anguilla) or character.

### Usage

```
## S4 method for signature 'ref_taxa'  
choice_c(object, taxa)
```

### Arguments

object	An object from the class ref_taxa
taxa	The vector of taxa, can be either code (numeric) or latin name

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### Examples

```
## Not run:  
object=new("ref_taxa")  
object<-charge(object)  
objectreport=new("report_mig_mult")  
choice_c(object=object,objectreport=objectreport,"Anguilla anguilla")  
  
## End(Not run)
```

---

choice\_c,ref\_textbox-method  
*Choice\_c method for ReTextBox referential objects*

---

### Description

Choice\_c method for ReTextBox referential objects

### Usage

```
## S4 method for signature 'ref_textbox'  
choice_c(object, value,  
  nomassign = "ref_textbox")
```

**Arguments**

object	An object of class <a href="#">ref_textbox-class</a>
value	The value to set
nomassign	The name with which the object will be assigned in envir_stacomi

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,ref\_timestep\_daily-method  
*choice\_c method for class ref\_timestep\_daily*

---

**Description**

the choice\_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line.

**Usage**

```
## S4 method for signature 'ref_timestep_daily'
choice_c(object, datedebut, datefin)
```

**Arguments**

object	An object of class <a href="#">ref_timestep_daily-class</a>
datedebut	A character (format "15/01/1996" or "1996-01-15" or "15-01-1996"), or POSIXct object
datefin	A character

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
object=new("ref_dc")
object<-charge(object)
choice_c(object=object,datedebut="2012-01-01",datefin="2013-01-01")

## End(Not run)
```



---

choice\_c,ref\_year-method

*choice\_c method for ref\_year referential from the command line*

---

## Description

The choice\_c method will issue a warning if the year is not present in the database Allows the selection of year and the assignment in environment envir\_stacomi

## Usage

```
## S4 method for signature 'ref_year'  
choice_c(object, annee, nomassign = "ref_year",  
         funoutlabel = gettext("Year selected\n", domain = "R-stacomiR"),  
         silent = FALSE)
```

## Arguments

object	An object of class <a href="#">ref_year-class</a>
annee	The year to select, either as a character or as a numeric
nomassign	The name to be assigned in envir_stacomi
funoutlabel	The label that appears in funout
silent	Stops messages from being displayed if silent=TRUE, default FALSE

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

## Examples

```
## Not run:  
object=new("ref_year")  
object<-charge(object)  
win=gwindow(title="test ref_year")  
group=ggroup(container=win,horizontal=FALSE)  
choice(object,nomassign="ref_year",funoutlabel="essai",titleFrame="essai ref_year",preselect=1)  
dispose(win)  
  
## End(Not run)
```

---

choice\_c,report\_annual-method  
*command line interface for [report\\_annual-class](#)*

---

### Description

command line interface for [report\\_annual-class](#)

### Usage

```
## S4 method for signature 'report_annual'
choice_c(object, dc, taxa, stage, aneedebut,
         anneefin, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_annual-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
taxa	Either a species name in latin or the SANDRE code for species (ie 2038=Anquilla anguilla), it should match the ref.tr_taxon_tax referential table in the stacom database, see <a href="#">choice_c,ref_taxa-method</a>
stage	A stage code matching the ref.tr_stadedevloppement_std table in the stacom database, see <a href="#">choice_c,ref_stage-method</a>
anneedebut	The starting the first year, passed as charcter or integer
anneefin	the finishing year
silent	Boolean, if TRUE, information messages are not displayed

### Value

An object of class [report\\_annual-class](#) The choice\_c method fills in the data slot for classes [ref\\_dc-class](#), [ref\\_taxa-class](#), [ref\\_stage-class](#) and two slots of [ref\\_year-class](#)

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_dc-method  
*command line interface for report\_dc class*

---

**Description**

The choice\_c method fills in the data slot for ref\_dc, and then uses the choice\_c methods of these object to "select" the data.

**Usage**

```
## S4 method for signature 'report_dc'  
choice_c(object, dc, horodatedebut, horodatefin,  
         silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">ref_dc-class</a>
dc	The dc to set
horodatedebut	A POSIXt or Date or character to fix the date of beginning of the report
horodatefin	A POSIXt or Date or character to fix the last date of the report
silent	Should program be silent or display messages

**Value**

An object of class [ref\\_dc-class](#) with slots filled

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_df-method  
*command line interface for report\_df class*

---

**Description**

The choice\_c method fills in the data slot for ref\_df, and then uses the choice\_c methods of these object to "select" the data.

**Usage**

```
## S4 method for signature 'report_df'  
choice_c(object, df, horodatedebut, horodatefin,  
         silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">ref_df-class</a>
df	The df to set
horodatedebut	A POSIXt or Date or character to fix the date of beginning of the report
horodatefin	A POSIXt or Date or character to fix the last date of the report
silent	Should program be silent or display messages

**Value**

An object of class [ref\\_df-class](#) with slots filled

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_env-method

*command line interface for report\_env class*

---

**Description**

command line interface for report\_env class

**Usage**

```
## S4 method for signature 'report_env'
choice_c(object, stationMesure, datedebut, datefin,
         silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_env-class</a>
stationMesure	A character, the code of the monitoring station, which records environmental parameters <a href="#">choice_c,ref_env-method</a>
datedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
datefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.
silent	Boolean default FALSE, if TRUE information messages not displayed.

**Value**

An object of class [report\\_env-class](#) The choice\_c method fills in the data slot for ref\_env and then uses the choice\_c methods of these object to select the data.

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr> @aliases choice\_c.report\_env

---

choice\_c,report\_ge\_weight-method

*command line interface for [report\\_ge\\_weight-class](#)*

---

**Description**

command line interface for [report\\_ge\\_weight-class](#)

**Usage**

```
## S4 method for signature 'report_ge_weight'
choice_c(object, dc, aneedebut, aneeefin,
         selectedvalue, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_ge_weight-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
anneedebut	The starting the first year, passed as character or integer
anneefin	the finishing year, must be > aneedebut (minimum one year in august to the next in august)
selectedvalue	A character to select and object in the <a href="#">ref_list-class</a>
silent	Boolean, if TRUE, information messages are not displayed

**Value**

An object of class [report\\_ge\\_weight-class](#) The choice\_c method fills in the data slot for classes [ref\\_dc-class](#) [ref\\_year-class](#) [ref\\_coe-class](#) [ref\\_list-class](#)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_mig-method

*command line interface for report\_mig class*

---

## Description

command line interface for report\_mig class

## Usage

```
## S4 method for signature 'report_mig'  
choice_c(object, dc, taxa, stage, datedebut,  
         datefin)
```

## Arguments

object	An object of class <a href="#">report_mig-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
taxa	Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), these should match the ref.tr_taxon_tax referential table in the stacomi database, see <a href="#">choice_c,ref_taxa-method</a>
stage	A stage code matching the ref.tr_stadedeveloppement_std table in the stacomi database see <a href="#">choice_c,ref_stage-method</a>
datedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
datefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.

## Value

An object of class [report\\_mig-class](#) The choice\_c method fills in the data slot for ref\_dc, ref\_taxa, ref\_stage, and refref\_timestep\_daily and then uses the choice\_c methods of these object to select the data.

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_mig\_char-method  
*command line interface for report\_mig\_char class*

---

### Description

command line interface for report\_mig\_char class

### Usage

```
## S4 method for signature 'report_mig_char'
choice_c(object, dc, taxa, stage,
         parquan = NULL, parqual = NULL, horodatedebut, horodatefin,
         echantillon = gettext("with", domain = "R-stacomir"), silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_mig_char-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
taxa	'2220=Salmo salar', can be a vector with several values these should match the ref.tr_taxon_tax referential table in the stacomir database, see <a href="#">choice_c,ref_taxa-method</a>
stage	The stages selected, can be a vector with several values
parquan	Quantitative parameter
parqual	Qualitative parameter
horodatedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
horodatefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.
echantillon	Default "with" can be "without" (values "avec" and "sans") are accepted, checking without modifies the query in the connect method so that subsamples are not allowed,
silent	Default FALSE, if TRUE the program should no display messages

### Value

An object of class [report\\_sea\\_age-class](#) The choice\_c method fills in the data slot for classes [ref\\_dc-class](#), [ref\\_taxa-class](#), [ref\\_stage-class](#), [ref\\_par-class](#) and two slots of [ref\\_horodate-class](#) and then uses the choice\_c methods of these object to select the data.

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_mig\_env-method

*command line interface for report\_env class*

---

## Description

command line interface for report\_env class

## Usage

```
## S4 method for signature 'report_mig_env'
choice_c(object, dc, taxa, stage, stationMesure,
         datedebut, datefin, silent = FALSE)
```

## Arguments

object	An object of class <a href="#">report_env-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
taxa	'2038=Anguilla anguilla', these should match the ref.tr_taxon_tax referential table in the stacomi database, see <a href="#">choice_c,ref_taxa-method</a>
stage	'AGJ=Yellow eel', 'AGG=Silver eel', 'CIV=glass eel'
stationMesure	A character, the code of the monitoring station, which records environmental parameters <a href="#">choice_c,ref_env-method</a>
datedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
datefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.
silent	Boolean default FALSE, if TRUE information messages not displayed.

## Value

An object of class [report\\_env-class](#) The choice\_c method fills in the data slot for ref\_env and then uses the choice\_c methods of these object to select the data.

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>



---

```
choice_c,report_mig_interannual-method
      command line interface for report_mig_interannual class
```

---

**Description**

command line interface for report\_mig\_interannual class

**Usage**

```
## S4 method for signature 'report_mig_interannual'
choice_c(object, dc, taxa, stage,
         anne debut, anne fin, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_mig_interannual-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer, see <a href="#">choice_c,ref_dc-method</a>
taxa	Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), it should match the ref.tr_taxon_tax referential table in the stacomi database, see <a href="#">choice_c,ref_taxa-method</a>
stage	A stage code matching the ref.tr_stadedeveloppement_std table in the stacomi database, see <a href="#">choice_c,ref_stage-method</a>
anne debut	The starting the first year, passed as character or integer
anne fin	the finishing year
silent	Boolean, if TRUE, information messages are not displayed

**Value**

An object of class [report\\_mig\\_interannual-class](#) The choice\_c method fills in the data slot for classes [ref\\_dc-class](#), [ref\\_taxa-class](#), [ref\\_stage-class](#) and two slots of [ref\\_year-class](#)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_mig\_mult-method

*command line interface for report\_mig\_mult class*

---

## Description

The choice\_c method fills in the data slot for ref\_dc, ref\_taxa, ref\_stage and then uses the choice\_c methods of these object to "select" the data.

## Usage

```
## S4 method for signature 'report_mig_mult'
choice_c(object, dc, taxa, stage, datedebut,
         datefin, silent = FALSE)
```

## Arguments

object	An object of class <a href="#">report_mig-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
taxa	Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), these should match the ref.tr_taxon_tax referential table in the stacomi database, see <a href="#">choice_c,ref_taxa-method</a>
stage	A stage code matching the ref.tr_stadedeveloppement_std table in the stacomi database see <a href="#">choice_c,ref_stage-method</a>
datedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
datefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.
silent	Should messages be hided default FALSE

## Value

An object of class [report\\_mig\\_mult-class](#)

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_sample\_char-method  
*command line interface for report\_sample\_char class*

---

## Description

command line interface for report\_sample\_char class

## Usage

```
## S4 method for signature 'report_sample_char'
choice_c(object, dc, taxa, stage, par,
         horodatedebut, horodatefin, silent = FALSE)
```

## Arguments

object	An object of class <a href="#">report_sample_char-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
taxa	Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), these should match the ref.tr_taxon_tax referential table in the stacomi database, see <a href="#">choice_c,ref_taxa-method</a>
stage	A stage code matching the ref.tr_stadedeveloppement_std table in the stacomi database, see <a href="#">choice_c,ref_stage-method</a>
par	A parameter matching th ref.tg_parametre_par table in the stacomi database, see <a href="#">choice_c,ref_par-method</a>
horodatedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
horodatefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.
silent	Boolean, if TRUE, information messages are not displayed

## Value

An object of class [report\\_mig-class](#) The choice\_c method fills in the data slot for classes [ref\\_dc-class](#), [ref\\_taxa-class](#), [ref\\_stage-class](#), [ref\\_par-class](#) and two slots of [ref\\_horodate-class](#) and then uses the choice\_c methods of these object to select the data.

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_sea\_age-method  
*command line interface for report\_sea\_age class*

---

## Description

command line interface for report\_sea\_age class

## Usage

```
## S4 method for signature 'report_sea_age'
choice_c(object, dc, taxa = 2220,
  stage = c("5", "11", "BEC", "BER", "IND"), par = c("1786", "1785",
  "C001", "A124"), horodatedebut, horodatefin, limit1hm, limit2hm,
  silent = FALSE)
```

## Arguments

object	An object of class <a href="#">report_sea_age-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
taxa	'2220=Salmo salar', these should match the ref.tr_taxon_tax referential table in the stacomi database, see <a href="#">choice_c,ref_taxa-method</a>
stage	'5','11','BEC','BER','IND'
par	Parameters chosen for the report are measured body size (1786), measured fork length (1785),video size (C001) and number of year at sea (A124)
horodatedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
horodatefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.
limit1hm	Size limit of a salmon for an one sea winter fish
limit2hm	Size limit of a salmon for a two sea winter fish
silent	Default FALSE, if TRUE the program should no display messages

## Value

An object of class [report\\_sea\\_age-class](#) The choice\_c method fills in the data slot for classes [ref\\_dc-class](#), [ref\\_taxa-class](#), [ref\\_stage-class](#), [ref\\_par-class](#) and two slots of [ref\\_horodate-class](#) and then uses the choice\_c methods of these object to select the data.

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_silver\_eel-method  
*command line interface for report\_silver\_eel class*

---

### Description

command line interface for report\_silver\_eel class

### Usage

```
## S4 method for signature 'report_silver_eel'
choice_c(object, dc, taxa = 2038,
  stage = "AGG", par = c("1786", "CCCC", "BBBB", "CONT", "LINP",
    "A111", "PECT"), horodatedebut, horodatefin, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_silver_eel-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer, see <a href="#">choice_c,ref_dc-method</a>
taxa	'2038=Anguilla anguilla', these should match the ref.tr_taxon_tax referential table in the stacomi database, see <a href="#">choice_c,ref_taxa-method</a>
stage	'AGG'
par	Parameters chosen for the report are body size (1786), vertical eye diameter (BBBB), horizontal eye diameter (CCCC), body contrast (CONT), presence of punctuation on the lateral line (LINP), length of the pectoral fin (PECT)
horodatedebut	The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
horodatefin	The finishing date of the report, for this class this will be used to calculate the number of daily steps.
silent	Boolean, if TRUE, information messages are not displayed

### Value

An object of class [report\\_mig-class](#) The choice\_c method fills in the data slot for classes [ref\\_dc-class](#), [ref\\_taxa-class](#), [ref\\_stage-class](#), [ref\\_par-class](#) and two slots of [ref\\_horodate-class](#) and then uses the choice\_c methods of these object to select the data.

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

choice\_c,report\_species-method  
*command line interface for [report\\_species-class](#)*

---

### Description

command line interface for [report\\_species-class](#)

### Usage

```
## S4 method for signature 'report_species'
choice_c(object, dc, split = "none",
         anneebut, anneefin, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_species-class</a>
dc	A numeric or integer, the code of the dc, coerced to integer,see <a href="#">choice_c,ref_dc-method</a>
split	one of c("none","week","month","year")
anneebut	The starting the first year, passed as character or integer
anneefin	the finishing year
silent	Boolean, if TRUE, information messages are not displayed

### Value

An object of class [report\\_species-class](#)

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

coef\_durif                    *Silvering index coefficients from Caroline Durif (2009) to predict sil-  
 vering stage from morphological parameters*

---

### Description

Classification scores are calculated by multiplying the metrics BL = body length, W = weight, MD = mean eye diameter (Dv+Dh)/2, and FL length of the pectoral fin, with each parameter p as  $S=Constant+BL*p(bl)+W*p(W)...$  The stage chosen is the one achieving the highest score

### Usage

coef\_durif

**Format**

An object of class `matrix` with 5 rows and 6 columns.

**References**

Durif, C.M., Guibert, A., and Elie, P. 2009. Morphological discrimination of the silvering stages of the European eel. In American Fisheries Society Symposium. pp. 103-111. <http://fishlarvae.org/common/SiteMedia/durif%20et%20al%202009b.pdf>

---

colortable	<i>Builds a table with colors to merge with a dataframe for later use in ggplot. An initial check will be done on the name of the color vector. A data frame is built. It contains a column color which is a factor. The factor order match the order of the vector (not the alphabetical order of the colors).</i>
------------	---

---

**Description**

Builds a table with colors to merge with a dataframe for later use in `ggplot`. An initial check will be done on the name of the color vector. A data frame is built. It contains a column color which is a factor. The factor order match the order of the vector (not the alphabetical order of the colors).

**Usage**

```
colortable(color = NULL, vec, palette = "Set2",
           color_function = "brewer.pal")
```

**Arguments**

color	Either null (default) or a named vector of colors, the names should correspond to the values of <code>vec</code>
vec	The vector to match the color with, if a named vector or color is supplied the names should match
palette,	the name of the <code>RColorBrewer</code> palette, defaults to "Set2", ignored for other color gradient functions and if a named vector of colors is provided
color_function,	the name of the function used to brew the colors, one for "brewer.pal", "gray.colors", default to "brewer.pal, this argument is ignored if a named vector of color is passed.

**Value**

A dataframe with two columns, the vector (name) and the color (color) as a reordered factor

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

connect,report\_annual-method

*connect method for report\_annual class this method performs the sum over the year attention this function does not count subsamples.*

---

### Description

connect method for report\_annual class this method performs the sum over the year attention this function does not count subsamples.

### Usage

```
## S4 method for signature 'report_annual'
connect(object, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_annual-class</a>
silent	Stops messages from being displayed if silent=TRUE, default FALSE

### Value

An instantiated object with values filled with user choice  
 A dataframe with column effectif, comprising the sum of report\_mig counts

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

connect,report\_dc-method

*connect method for report\_dc*

---

### Description

loads the working periods and type of arrest or disfunction of the DC

### Usage

```
## S4 method for signature 'report_dc'
connect(object, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_dc-class</a>
silent	boolean, default FALSE, if TRUE messages are not displayed



**Value**

An object of class [report\\_dc-class](#)

**Author(s)**

cedric.briand

---

connect,report\_df-method

*connect method for report\_df*

---

**Description**

connect method for report\_df

**Usage**

```
## S4 method for signature 'report_df'  
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_df-class</a> loads the working periods and type of arrest or disfunction of the DF
silent	Boolean, TRUE removes messages.

**Value**

An object of class report\_df

**Author(s)**

cedric.briand

connect,report\_env-method

*connect method for report\_env class*

---

### Description

connect method for report\_env class

### Usage

```
## S4 method for signature 'report_env'  
connect(object, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_env-class</a>
silent	Default FALSE, if TRUE the program should no display messages

### Value

an object of report\_env class

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

connect,report\_ge\_weight-method

*connect method for report\_Poids\_moyen*

---

### Description

connect method for report\_Poids\_moyen

### Usage

```
## S4 method for signature 'report_ge_weight'  
connect(object)
```

### Arguments

object	An object of class <a href="#">report_ge_weight-class</a>
--------	---

**Value**

report\_Poids\_Moyen request corresponding to user choices, mean weight  $w$  is calculated as  $\text{car\_valeur\_quantitatif/lot\_effectif}$ . These coefficients are stored in the database, and the connect method loads them from the table using the [ref\\_coe-class](#)

**Note**

dates for the request are from august to august (a glass eel season)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

connect,report\_mig-method  
*connect method for report\_mig*

---

**Description**

uses the report\_mig\_mult method

**Usage**

```
## S4 method for signature 'report_mig'  
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_mig-class</a>
silent	Boolean default FALSE, if TRUE information messages not displayed

**Value**

report\_mig with slot @data filled from the database

---

connect,report\_mig\_char-method  
*connect method for report\_mig\_char*

---

**Description**

uses the report\_mig\_mult method

**Usage**

```
## S4 method for signature 'report_mig_char'
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_mig_char-class</a>
silent	Boolean default FALSE, if TRUE information messages not displayed

**Value**

report\_mig\_char with slot @data filled from the database

---

connect,report\_mig\_env-method  
*connect method for report\_mig\_env class*

---

**Description**

connect method for report\_mig\_env class

**Usage**

```
## S4 method for signature 'report_mig_env'
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_mig_env-class</a>
silent	Default FALSE, if TRUE the program should no display messages

**Value**

an object of report\_mig\_env class

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

```
connect,report_mig_interannual-method  
    connect method for report_mig_interannual
```

---

## Description

This method will check if the data in the `t_reportjournalier_bjo` table has no missing data, if missing the program will load missing data. As a second step, the program will check if the numbers in the table `t_reportjournalier_bjo` differ from those in the database, and propose to re-run the `report_mig` (which has a `write_database` method to write daily reports) for those years.

## Usage

```
## S4 method for signature 'report_mig_interannual'  
connect(object, silent = FALSE,  
        check = TRUE)
```

## Arguments

<code>object</code>	An object of class <a href="#">report_mig_interannual-class</a>
<code>silent</code>	Stops messages from being displayed if <code>silent=TRUE</code> , default <code>FALSE</code>
<code>check</code>	Checks that data are corresponding between <code>report_annual</code> and <code>report_mig</code>

## Value

`report_mig_interannual` an instantiated object with values filled with user choice

## Note

We expect different results between daily reports from the `t_reportjournalier_bjo` table and the annual sums from `report_annual` for glass eels as those may have been weighted and not only counted. The `t_reportjournalier_bjo` table used by `report_mig_interannual` contains the sum of glass eel numbers converted from weights and those directly counted. The `report_annual` does not.

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

connect,report\_mig\_mult-method

*connect method for report\_mig\_mult*

---

### Description

this method loads data from the database for report\_mig but also fills the table of conversion coefficient, if the taxa is eel. It also calls connect method for [report\\_df-class](#), [report\\_dc-class](#) and [report\\_ope-class](#) associated with the report and used by the [fungraph](#) and [fungraph\\_glasseel](#) functions.

### Usage

```
## S4 method for signature 'report_mig_mult'
connect(object, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_mig_mult-class</a>
silent	Boolean, if TRUE messages are not displayed

### Value

An object of class [report\\_mig\\_mult-class](#) with slot @data filled from the database

---

connect,report\_ope-method

*connect method for report\_ope*

---

### Description

connect method for report\_ope

### Usage

```
## S4 method for signature 'report_ope'
connect(object, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_ope-class</a> load data from the operation table, one dataset per DC
silent	Boolean, TRUE removes messages.

**Value**

An object of class [report\\_ope-class](#)

**Author(s)**

cedric.briand

---

connect,report\_sample\_char-method  
*connect method for report\_sample\_char*

---

**Description**

connect method for report\_sample\_char

**Usage**

```
## S4 method for signature 'report_sample_char'  
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_sample_char-class</a>
silent	Boolean if TRUE messages are not displayed

**Value**

An object of class [report\\_sample\\_char-class](#)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

connect,report\_sea\_age-method  
*connect method for report\_sea\_age*

---

**Description**

connect method for report\_sea\_age

**Usage**

```
## S4 method for signature 'report_sea_age'  
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_sea_age-class</a>
silent	Default FALSE, if TRUE the program should no display messages

**Value**

An object of class [report\\_sea\\_age-class](#)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

connect,report\_silver\_eel-method  
*connect method for report\_silver\_eel*

---

**Description**

connect method for report\_silver\_eel

**Usage**

```
## S4 method for signature 'report_silver_eel'  
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_silver_eel-class</a>
silent	Boolean if TRUE messages are not displayed

**Value**

An object of class [report\\_silver\\_eel-class](#)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>



---

connect,report\_species-method  
*connect method for report\_species*

---

**Description**

connect method for report\_species

**Usage**

```
## S4 method for signature 'report_species'  
connect(object, silent = FALSE)
```

**Arguments**

object	An object of class report_species
silent	Boolean, if TRUE, information messages are not displayed

**Value**

An object of class report\_species with data slot filled

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

createmessage            *Generic method to forward outputs*

---

**Description**

Generic method to forward outputs

**Usage**

```
createmessage(object, ...)
```

**Arguments**

object	Object
...	Additional parms

**Author(s)**

cedric.briand

---

current\_end\_date, ref\_timestep-method

*Gets the ending date of a time step for an object of class [ref\\_timestep-class](#)*

---

### Description

Gets the ending date of a time step for an object of class [ref\\_timestep-class](#)

### Usage

```
## S4 method for signature 'ref_timestep'
current_end_date(object)
```

### Arguments

object            An object of class [ref\\_timestep-class](#)

### Value

Currentend\_date, The ending date for the current timestep

---

envir\_stacom            *Environment where most objects from the package are stored and then loaded by the charge method*

---

### Description

envir\_stacom envir\_stacom <- new.env(parent = baseenv()) is the environment where most object created by the interface are stored

This is where the graphical interface stores its objects try ls(envir=envir\_stacom)

This is where the graphical interface stores its objects try ls(envir=envir\_stacom)

### Usage

```
envir_stacom
```

```
envir_stacom
```

```
envir_stacom
```

### Format

An object of class environment of length 0.

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

funbarchart1DC                    *Handler for barchart for report\_df class from the graphical interface*

---

**Description**

Handler for barchart for report\_df class from the graphical interface

**Usage**

```
funbarchart1DC(h, ...)
```

**Arguments**

h	handler
...	additional parameters

**Note**

The program cuts periods which overlap between two month

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fungraph                         *Function for report\_mig graphs including numbers DF DC operations*

---

**Description**

This graph is for species other than glass eel

**Usage**

```
fungraph(report_mig, tableau, time.sequence, taxa, stage, dc = NULL,  
          silent, color = NULL, color_ope = NULL, ...)
```

**Arguments**

report_mig	An object of class <code>report_mig</code>
tableau	A data frame with the with the following columns : No.pas,debut_pas,fin_pas,ope_dic_identifiant,lot_tax_code,lot_std_code,type_de_quantite,MESURE,CALCULE,EXPERT,PONCTUEL,Effectif_total,taux_d_echappement,coe_valeur_coefficient
time.sequence	A vector POSIXt
taxa	The species
stage	The stage
dc	The DC
silent	Message displayed or not
color	Default NULL, a vector of color in the following order, working, stopped, 1...5 types of operation for the fishway or DC, measured, calculated, expert, direct observation. If null will be set to <code>brewer.pal(12,"Paired")[c(8,10,4,6,1,2,3,5,7)]</code>
color_ope	Default NULL, a vector of color for the operations. Default to <code>brewer.pal(4,"Paired")</code>
...	additional parameters passed to <code>matplot</code> , <code>main</code> , <code>ylab</code> , <code>ylim</code> , <code>lty</code> , <code>pch</code> , <code>bty</code> , <code>cex.main</code> , it is currently not a good idea to change <code>xlim</code> (numbers are wrong, the month plot covers all month, and legend placement is wrong)

**Note**

this function is intended to be called from the plot method in `report_mig_mult` and `report_mig`

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fungraph_glasseel	<i>Graph function for glass eel migration. Differs from fungraph as it does not draw the ggplot graph for month</i>
-------------------	---

---

**Description**

This graph will also plot numbers and bars according to whether the glass eel have been counted through weight or numbers

**Usage**

```
fungraph_glasseel(report_mig, table, time.sequence, taxa, stage,
  dc = null, silent, color = NULL, color_ope = NULL, ...)
```

**Arguments**

report_mig	an object of class <a href="#">report_mig-class</a> or an object of class <a href="#">report_mig_mult-class</a>
table	a data frame with the results
time.sequence	a vector POSIXt
taxa	the species
stage	the stage
dc	the counting device, default to null, only necessary for <a href="#">report_mig_mult-class</a>
silent	Message displayed or not
color	Default NULL, a vector of length 11 of color in the following order, numbers, weight, working, stopped, 1...5 types of operation, the 2 latest colors are not used but kept for consistency with fungraph for the fishway, if null will be set to <code>brewer.pal(12,"Paired")[c(4,6,1,2,3,5,7,8,10,11,12)]</code>
color_ope	Default NULL, a vector of color for the operations. Default to <code>brewer.pal(4,"Paired")</code>
...	additional parameters passed to plot, main, ylab, cex.main, font.main, type, xlim, ylim, lty, bty, pch it is not possible to change xlim

**Author(s)**

Cedric Briand <[cedric.briand@eptb-vilaine.fr](mailto:cedric.briand@eptb-vilaine.fr)>

---

funstat

*Function to calculate statistics per month*

---

**Description**

Function to calculate statistics per month

**Usage**

```
funstat(tableau, time.sequence, taxa, stage, DC, silent)
```

**Arguments**

tableau	A table with the following columns : No.pas,debut_pas,fin_pas, ope_dic_identifiant,lot_tax_code,lot_std_EXPERT,PONCTUEL,Effectif_total,taux_d_echappement,coe_valeur_coefficient
time.sequence	Passed from report_mig or report_mig_mult
taxa	Taxa
stage	The Stage
DC	The counting device
silent	Message displayed or not

**Note**

this function is intended to be called from within the summary method

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

funstat_daily	<i>function to create daily statistics</i>
---------------	--

---

**Description**

function to create daily statistics

**Usage**

```
funstat_daily(tableau, time.sequence, taxa, stage, DC)
```

**Arguments**

tableau	A table
time.sequence	Time sequence from report_mig and report_mig_mult
taxa	A taxa
stage	A stage
DC	A counting device

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

futable	<i>function to print and save statistics in .csv and .html formats for report_mig and report_mig_mult class</i>
---------	---

---

**Description**

function to print and save statistics in .csv and .html formats for report\_mig and report\_mig\_mult class

**Usage**

```
futable(tableau, time.sequence, taxa, stage, DC, resum, silent)
```

**Arguments**

tableau	A table with the following columns : No.pas,debut_pas,fin_pas, ope_dic_identifiant,lot_tax_code,lot_std_EXPERT,PONCTUEL,Effectif_total,taux_d_echappement,coe_valeur_coefficient
time.sequence	Passed from report_mig or report_mig_mult
taxa	Taxa
stage	The Stage
DC	The counting device
resum	A summary table generated by funstat
silent	If TRUE, all messages turned off (except warnings and errors)

**Note**

this function is intended to be called from within the summary method

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fun\_aggreg\_for\_plot    *returns a table where all components within the list calcdata are aggregated and formatted for plot*

---

**Description**

returns a table where all components within the list calcdata are aggregated and formatted for plot

**Usage**

```
fun_aggreg_for_plot(object)
```

**Arguments**

object            An object of class `report_mig_mult-class`

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fun_char_spe	<i>function used to remove special non utf8 character which cause the gtk interface to crash</i>
--------------	--

---

**Description**

function used to remove special non utf8 character which cause the gtk interface to crash

**Usage**

```
fun_char_spe(text)
```

**Arguments**

text	a text string which might contain no utf8 characters
------	--

**Value**

text

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fun_date_extraction	<i>This function extracts temporal characteristics from a dataframe</i>
---------------------	---

---

**Description**

This function extracts temporal characteristics from a dataframe

**Usage**

```
fun_date_extraction(data, nom_coldt, annee = TRUE, mois = TRUE,  
  quinzaine = FALSE, semaine = TRUE, semaine_std = FALSE,  
  jour_an = FALSE, jour_mois = TRUE, heure = FALSE)
```

**Arguments**

data	a data frame containing a Date or POSIXt column
nom_coldt	the name of the column containing date or POSIXt entry to be processed
annee	logical do you want a column describing year to be added to the dataframe
mois	logical, add column with month
quinzaine	logical, add column with 15 days



semaine	logical, add column with weeks
semaine_std	logical, add column with standard weeks (using isoweek from lubridate)
jour_an	logical, add column with day of year
jour_mois	logical, add column with day of month
heure	logical, add column with hour

**Value**

data The dataframe with date column filled

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fun\_report\_mig\_interannual  
*statistics per time period*

---

**Description**

function called for bilamMigrationInterannuelle objects renames columns replaces nulls, and calculates reports with time period larger than day

**Usage**

```
fun_report_mig_interannual(dat, annee = NULL, timesplit = NULL)
```

**Arguments**

dat	a data frame with columns ("bjo_annee", "bjo_jour", "bjo_labelquantite", "bjo_valeur")
annee	The year to exclude from the historical series (it will be plotted against the historical series)
timesplit	"week" "2 week" "month" as provided to seq.POSIXt, default NULL

**Value**

a data frame with mean, max, and min calculated for each timesplit

---

fun\_report\_mig\_mult     *Calculate daily migration by simple repartition*

---

### Description

Function to calculate daily migration from migration monitoring whose length is less than one day, typically video recording whose period are instant events.

### Usage

```
fun_report_mig_mult(time.sequence, datasub, negative = FALSE)
```

### Arguments

time.sequence	the time sequence to be filled in with new data
datasub	the initial dataset
negative	"boolean", default FALSE, TRUE indicates a separate sum for negative and positive migrations

### Value

A data.frame with number summed over over the time.sequence. The function returns the same output than [fun\\_report\\_mig\\_mult\\_overlaps](#) but is intended to work faster. In the data.frame, the total number is "Effectif\_total" and corresponds to the addition of numbers and numbers converted from weight, the total weight is "Poids\_total"+"poids\_depuis\_effectifs" and corresponds to weighed glass eel plus glass eel number converted in weights.

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fun\_report\_mig\_mult\_overlaps  
*Function to calculate daily migration using overlaps functions*

---

### Description

Function to calculate daily migration from migration monitoring whose length is more than one day, this calculation relies on the (false) assumption that migration is evenly spread over time.

### Usage

```
fun_report_mig_mult_overlaps(time.sequence, datasub, negative = FALSE)
```

**Arguments**

time.sequence	the time sequence to be filled in with new data
datasub	the initial dataset
negative	"boolean", default FALSE, TRUE indicates a separate sum for negative and positive migrations to time.sequence period and summed over the new sequence. A migration operation spanning several days will be converted to "daily" values assuming that the migration was regular over time. The function returns one row per taxa, stages, counting device. It does not account for the destination of taxa. It returns separate rows for quantities and numbers. Several columns are according to the type of measure (MESURE, CALCULE, PONCTUEL or EXPERT).

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**See Also**

calculer,report\_mig\_mult-method

---

fun\_stage\_durif      *Function to calculate the stages from Durif*

---

**Description**

Function to calculate the stages from Durif

**Usage**

```
fun_stage_durif(data)
```

**Arguments**

data	A dataset with columns BL, W, Dv, Dh, FL corresponding to body length (mm), Weight (g), vertical eye diameter (mm), vertical eye diameter (mm), and pectoral fin length (mm)
------	--

**Author(s)**

Laurent Beaulaton <laurent.beaulaton"at"onema.fr>

---

fun\_table\_per\_dis      *functions called in DF and DC*

---

**Description**

functions called in DF and DC

**Usage**

```
fun_table_per_dis(typeperiode, tempsdebut, tempsfin, libelle,
  date = TRUE)
```

**Arguments**

typeperiode	ref.tr_typearretdisp_tar(per_tar_code) the code of the period (see table ref.tr_typearretdisp_tar)
tempsdebut	ref.tr_typearretdisp_tar(per_date_debut) starting timestamp of the period
tempsfin	The posgres column ref.tr_typearretdisp_tar(per_date_fin) ending timestamp of the period
libelle	The posgres column ref.tr_typearretdisp_tar(libelle )description of the period type
date	Boolean, should the function return a POSIXt or date value

**Value**

A list

**Note**

returns either POSIXt or date if date=TRUE

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fun\_weight\_conversion      *returns a table where weights and number are calculated from number and weights respectively performs a query to collect the conversion coefficients*

---

**Description**

returns a table where weights and number are calculated from number and weights respectively performs a query to collect the conversion coefficients

**Usage**

```
fun_weight_conversion(tableau, time.sequence, silent)
```

**Arguments**

tableau	Table issued from report_mig
time.sequence	Time sequence from report_mig
silent	If silent=TRUE do not display messages

**Value**

tableau, the data frame

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

fun\_write\_monthly      *This writes monthly data in t\_reportmensuel\_mens table*

---

**Description**

This writes monthly data in t\_reportmensuel\_mens table

**Usage**

```
fun_write_monthly(report_mig, resum, silent)
```

**Arguments**

report_mig	an object of class <a href="#">report_mig</a>
resum	data frame with summary per month
silent	Suppresses messages

**Note**

This function is launched by fun\_Ecritreport\_daily, the resum dataset is created by the [funstat](#) function

---

getdbname	<i>Retrieves the dbname from a connection using "baseODBC"</i>
-----------	--

---

### Description

When running a connection using ODBC, the connection string does not contain the name of the database. Pointing to the database is done while setting the ODBC connection, but the program has no "way" to know what the name of the database is. Since we are using sqldf to connect to the base, we need to know the database name, fortunately it is stored in the ODBC connection string. This method gets this name, from a "trial" connection to one of the table of the database.

### Usage

```
getdbname()
```

### Value

A string with the name of the database

---

getnocurrent_step	<i>Generic method to get current time step</i>
-------------------	--

---

### Description

Generic method to get current time step

### Usage

```
getnocurrent_step(object, ...)
```

### Arguments

object	An object
...	Additional parameters passed to the method

---

getvalue	<i>Generic method getvalue</i>
----------	--------------------------------

---

**Description**

Generic method getvalue

**Usage**

```
getvalue(object, ...)
```

**Arguments**

object	Object
...	Additional parms

**Author(s)**

cedric.briand

---

getvalue, ref_period-method	<i>Returns the POSIXt value of a given name</i>
-----------------------------	---

---

**Description**

Returns the POSIXt value of a given name

**Usage**

```
## S4 method for signature 'ref_period'  
getvalue(object, id)
```

**Arguments**

object	An object of class <a href="#">ref_period-class</a>
id	one of "jour", "semaine", "quinzaine", "mois"

**Value**

"a character to be used in seq.POSIXt

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**Examples**

```
## Not run:  
  getvalue(new("ref_period"), "quinzaine")  
  
## End(Not run)
```

---

graphdate                    *function used for some lattice graphs with dates*

---

**Description**

function used for some lattice graphs with dates

**Usage**

```
graphdate(vectordate)
```

**Arguments**

vectordate      date or POSIXt

**Value**

vectordate (without class)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

graphe-methods                *Methods for Function graphe*

---

**Description**

method with a parameter choice to join several graphs called by several handlers (buttons)

**Methods**

signature(object = "report\_migPar") method with a parameter choice to join several graphs called by several handlers (buttons)



---

model	<i>Generic for prediction</i>
-------	-------------------------------

---

**Description**

Generic for prediction

**Usage**

```
model(object, ...)
```

**Arguments**

object	Object
...	Additional parms

**Author(s)**

cedric.briand

---

```
model,report_ge_weight-method
```

*model method for report\_ge\_weight' this method uses samples collected over the season to model the variation in weight of glass eel or yellow eels.*

---

**Description**

model method for report\_ge\_weight' this method uses samples collected over the season to model the variation in weight of glass eel or yellow eels.

**Usage**

```
## S4 method for signature 'report_ge_weight'
model(object, model.type = "seasonal",
       silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">report_ge_weight-class</a>
model.type	default "seasonal", "seasonal1", "seasonal2", "manual".
silent	Default FALSE, if TRUE the program should no display messages

## Details

Depending on model.type several models are produced

- model.type="seasonal". The simplest model uses a seasonal variation, it is fitted with a sine wave curve allowing a cyclic variation  $w \sim a \cdot \cos(2 \cdot \pi \cdot (d' - T) / 365) + b$  with a period T. The modified day d' used in this model is set at 1 the 1st of august  $doy = d' + d0$ ;  $d0 = 212$ ,  $doy = \text{julian days}$
- model.type="seasonal1". A time component is introduced in the model, which allows for a long term variation along with the seasonal variation. This long term variation is fitted with a gam, the time variable is set at zero at the beginning of the first day of observed values. The seasonal variation is modeled on the same modified julian time as model.type="seasonal" but here we use a cyclic cubic spline cc, which allows to return at the value of  $d0=0$  at  $d=365$ . This model was considered as the best to model size variations by Diaz & Briand in prep. but using a large set of values over years.
- model.type="seasonal2". The seasonal trend in the previous model is now modelled with a sine curve similar to the sine curve used in seasonal. The formula for this is  $\sin(\omega vt) + \cos(\omega vt)$ , where vt is the time index variable  $\omega$  is a constant that describes how the index variable relates to the full period (here,  $2\pi/365 = 0.0172$ ). The model is written as following  $w \cos(0.0172 * doy) + \sin(0.0172 * doy) + s(time)$ .
- model.type="manual". The dataset don (the raw data), coe (the coefficients already present in the database, and newcoe the dataset to make the predictions from, are written to the environment envir\_stacomi. please see example for further description on how to fit your own model, build the table of coefficients, and write it to the database.

## Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

plot,report\_annual,missing-method  
*Plot method for report\_annual*

---

## Description

Plot method for report\_annual

## Usage

```
## S4 method for signature 'report_annual,missing'
plot(x, plot.type = "point",
     silent = FALSE)
```

**Arguments**

x	An object of class <a href="#">report_annual-class</a>
plot.type	Default point
silent	Stops displaying the messages. <ul style="list-style-type: none"> <li>• plot.type="point": ggplot+geom_point'</li> </ul>

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**See Also**

[report\\_mig\\_interannual-class](#) for examples

---

plot,report\_dc,ANY-method

*Different plots for report\_dc*

---

**Description**

- plot.type=1 A barplot of the operation time per month
- plot.type=2 Barchat giving the time per type of operation
- plot.type=2 Rectangle plots drawn along a line
- plot.type=4 Plots per day drawn over the period to show the operation of a df, days in x, hours in y

**Usage**

```
## S4 method for signature 'report_dc,ANY'
plot(x, y, plot.type = 1, silent = FALSE,
     main = NULL)
```

**Arguments**

x	An object of class <a href="#">report_dc-class</a>
y	From the formals but missing
plot.type	One of barchart,box. Defaut to barchart showing a summary of the df operation per month, can also be box, a plot with adjacent rectangles.
silent	Stops displaying the messages.
main	The title of the graph, if NULL a default title will be plotted with the number of the DF

**Value**

Nothing but prints the different plots

**Note**

The program cuts periods which overlap between two month. The splitting of different periods into month is assigned to the `envir_stacom` environment

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

`plot,report_df,ANY-method`

*Different plots for report\_df*

---

**Description**

- `plot.type=1` A barplot of the operation time per month
- `plot.type=2` Barchat giving the time per type of operation
- `plot.type=2` Rectangle plots drawn along a line
- `plot.type=4` Plots per day drawn over the period to show the operation of a `df`, days in `x`, hours in `y`

**Usage**

```
## S4 method for signature 'report_df,ANY'
plot(x, y, plot.type = 1, silent = FALSE,
     main = NULL)
```

**Arguments**

<code>x</code>	An object of class <code>report_df-class</code>
<code>y</code>	From the formals but missing
<code>plot.type</code>	One of <code>barchart,box</code> . Defaut to <code>barchart</code> showing a summary of the <code>df</code> operation per month, can also be <code>box</code> , a plot with adjacent rectangles.
<code>silent</code>	Stops displaying the messages.
<code>main</code>	The title of the graph, if <code>NULL</code> a default title will be plotted with the number of the <code>DF</code>

**Value**

Nothing but prints the different plots

**Note**

The program cuts periods which overlap between two month. The splitting of different periods into month is assigned to the `envir_stacom` environment

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_env,missing-method  
*Plot method for report\_env*

---

**Description**

Plot method for report\_env

**Usage**

```
## S4 method for signature 'report_env,missing'
plot(x, silent = FALSE)
```

**Arguments**

x	An object of class <a href="#">report_env-class</a>
silent	Stops displaying the messages

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_ge\_weight,missing-method  
*Plot method for report\_ge\_weight'*

---

**Description**

Plot method for report\_ge\_weight'

**Usage**

```
## S4 method for signature 'report_ge_weight,missing'
plot(x, plot.type = "point",
     silent = FALSE)
```

**Arguments**

x	An object of class <a href="#">report_ge_weight-class</a>
plot.type	Default "1". "1" plot of mean weight of glass eel against the mean date of operation (halfway between start, and end of operation). The ggplot "p" can be accessed from <code>envir_stacomi</code> using <code>get("p",envir_stacomi)</code> . "2" standard plot of current coefficient. "3" same as "1" but with size according to number.
silent	Stops displaying the messages.

**Note**

the model method provides plots for the fitted models

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_mig,ANY-method

*Plots of various type for report\_mig.*

---

**Description**

- plot.type="standard" calls [fungraph](#) and [fungraph\\_glasseel](#) functions to plot as many "report\_mig" as needed, the function will test for the existence of data for one dc, one taxa, and one stage
- plot.type="step" creates Cumulated graphs for report\_mig\_mult. Data are summed per day for different dc taxa and stages
- plot.type="multiple" Method to overlay graphs for report\_mig\_mult (multiple dc/taxa/stage in the same plot)

**Usage**

```
## S4 method for signature 'report_mig,ANY'
plot(x, y, plot.type = "standard",
     color = NULL, color_ope = NULL, silent = FALSE, ...)
```

**Arguments**

x	An object of class report_mig
y	From the formals but missing
plot.type	One of "standard","step". Default to standard the standard report_mig with dc and operation displayed, can also be step or multiple
color	Default NULL, argument passed for the plot.type="standard" method. A vector of color in the following order : (1) working, (2) stopped, (3:7) 1...5 types of operation, (8:11) numbers, weight, NULL, NULL (if glass eel), (8:11) measured, calculated, expert, direct observation for other taxa. If null will be set to brewer.pal(12,"Paired")[c(8,10,4,6,1,2,3,5,7)]
color_ope	Default NULL, argument passed for the plot.type="standard" method. A vector of color for the operations. Default to brewer.pal(4,"Paired")
silent	Stops displaying the messages.
...	Additional arguments passed to matplot or plot if plot.type="standard", see ... in <a href="#">fungraph_glasseel</a> and <a href="#">fungraph</a>

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_mig\_char,missing-method  
*plot method for report\_mig\_char*

---

**Description**

plot method for report\_mig\_char

**Usage**

```
## S4 method for signature 'report_mig_char,missing'
plot(x, color_parm = NULL,
     plot.type = "qual", silent = FALSE, ...)
```

**Arguments**

x	An object of class report_mig_char
color_parm	A named vector for the colors of either parameters (if plot.type=quant) or levels for parameters (if plot.type=qual).
plot.type	One of "qual", "quant" "crossed" default to qual
silent	Boolean default FALSE, if TRUE information messages not displayed
...	Additional parameters

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_mig\_env,missing-method  
*Plot method for report\_mig\_env*

---

**Description**

Plot method for report\_mig\_env

**Usage**

```
## S4 method for signature 'report_mig_env,missing'
plot(x, color_station = NULL,
     color_dc = NULL, silent = FALSE)
```

**Arguments**

x	An object of class <code>report_mig_env</code>
color_station	A named vector of station color (e.g. <code>c("temp_gabion"="red","coef_maree"="blue","phases_lune"="green")</code> ) default null
color_dc	A named vector giving the color for each dc default null (e.g. <code>c("5"="#4D4D4D","6"="#E6E6E6","12"="")</code> )
silent	Stops displaying the messages.

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

plot,report\_mig\_interannual,missing-method  
*Plot method for report\_mig\_interannual*

---

**Description**

Several of these plots are scaled against the same year, ie the comparison is based on year 2000, meaning that day 1 would correspond to the first date of 2000, which is also a saturday, the last day of the week.

**Usage**

```
## S4 method for signature 'report_mig_interannual,missing'
plot(x,
     plot.type = "standard", timesplit = "mois", silent = FALSE)
```

**Arguments**

x	An object of class <code>report_mig_interannual</code>
plot.type	Default standard
timesplit	Used for plot.type barchart or dotplot, Default mois (month) other possible values are semaine (week), quinzaine (2 weeks), English values within parenthesis are also accepted.
silent	Stops displaying the messages. <ul style="list-style-type: none"> <li>• plot.type="line": one line per daily report_mig</li> <li>• plot.type="standard": the current year is displayed against a ribbon of historical values"</li> <li>• plot.type="density": creates density plot to compare seasonality, data computed by 15 days period</li> <li>• plot.type="step" : creates step plots to compare seasonality, the year chosen in the interface is the latest if silent=TRUE, or it can be selected in the droplist. It is highlighted against the other with a dotted line</li> </ul>



- `plot.type="barchart"`: comparison of daily migration of one year against periodic migration for the other years available in the chronicle, different periods can be chosen with argument `timesplit`
- `plot.type="pointrange"`: Pointrange graphs, different periods can be chosen with argument `timesplit`
- `plot.type="seasonal"`: plot to display summary statistics about the migration period

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_mig\_mult,missing-method

*Plots of various type for report\_mig\_mult*

---

### Description

- `plot.type="standard"` calls `fungraph` and `fungraph_glasseel` functions to plot as many "report\_mig" as needed, the function will test for the existence of data for one dc, one taxa, and one stage
- `plot.type="step"` creates Cumulated graphs for `report_mig_mult`. Data are summed per day for different dc taxa and stages
- `plot.type="multiple"` Method to overlay graphs for `report_mig_mult` (multiple dc/taxa/stage in the same plot)

### Usage

```
## S4 method for signature 'report_mig_mult,missing'
plot(x, plot.type = "standard",
     color = NULL, color_ope = NULL, silent = FALSE, ...)
```

### Arguments

<code>x</code>	An object of class <code>report_mig_mult</code>
<code>plot.type</code>	One of "standard", "step", "multiple". Default to standard the standard <code>report_mig</code> with dc and operation displayed, can also be <code>step</code> or <code>multiple</code>
<code>color</code>	Default NULL, argument passed for the <code>plot.type="standard"</code> method. A vector of color in the following order : (1) working, (2) stopped, (3:7) 1...5 types of operation, (8:11) numbers, weight, NULL, NULL (if glass eel), (8:11) measured, calculated, expert, direct observation for other taxa. If null will be set to <code>brewer.pal(12,"Paired")[c(8,10,4,6,1,2,3,5,7)]</code>
<code>color_ope</code>	Default NULL, argument passed for the <code>plot.type="standard"</code> method. A vector of color for the operations. Default to <code>brewer.pal(4,"Paired")</code>
<code>silent</code>	Stops most messages from being displayed
<code>...</code>	Additional arguments passed to <code>matplot</code> or <code>plot</code> if <code>plot.type="standard"</code> , see ... in <code>fungraph_glasseel</code> and <code>fungraph</code>

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_sample\_char,missing-method

*Plots of various type for reportcarlot*

---

**Description**

Plots of various type for reportcarlot

**Usage**

```
## S4 method for signature 'report_sample_char,missing'
plot(x, plot.type = "1",
     silent = FALSE)
```

**Arguments**

x	An object of class report_sample_char
plot.type	One of "1","violin plot". Defaut to 1 , can also be 2 boxplot or 3 points.
silent	Stops displaying the messages.
...	Additional arguments, see plot, plot.default and par

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_sea\_age,missing-method

*Plots of various type for report\_sea\_age*

---

**Description**

Plots of various type for report\_sea\_age

**Usage**

```
## S4 method for signature 'report_sea_age,missing'
plot(x, plot.type = "1",
     silent = FALSE)
```

**Arguments**

x	An object of class <a href="#">report_sea_age-class</a>
plot.type	Default "1" <ul style="list-style-type: none"> <li>• plot.type="1" density plot by sea age</li> <li>• plot.type="2" Density plot by sea age and dc</li> </ul>
silent	Default FALSE, if TRUE the program should no display messages.

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_silver\_eel,missing-method

*Plots of various type for report\_silver\_eel*

---

**Description**

Plots of various type for report\_silver\_eel

**Usage**

```
## S4 method for signature 'report_silver_eel,missing'
plot(x, plot.type = "1",
     silent = FALSE)
```

**Arguments**

x	An object of class <a href="#">report_silver_eel-class</a>
plot.type	Default "1" <ul style="list-style-type: none"> <li>• plot.type="1" Lattice plot of Durif's stages according to Body Length and Eye Index (average of vertical and horizontal diameters). If several DC are provided then a comparison of data per dc is provided</li> <li>• plot.type="2" Lattice plot giving a comparison of Durif's stage proportion over time, if several DC are provided an annual comparison is proposed, if only one DC is provided then the migration is split into month.</li> <li>• plot.type="3" Series of graphs showing mean Fulton's coefficient, Pankhurst eye index, along with a size weight analysis and regression using robust regression (rlm more robust to the presence of outliers)</li> <li>• plot.type="4" Lattice cloud plot of Pankurst~ Body Length ~ weight)</li> </ul>
silent	Stops displaying the messages.

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

plot,report\_species,missing-method  
*Plot method for report\_species*

---

### Description

Plot method for report\_species

### Usage

```
## S4 method for signature 'report_species,missing'
plot(x, plot.type = "pie",
     color = NULL, silent = FALSE)
```

### Arguments

x	An object of class <a href="#">report_species-class</a>
plot.type	Default pie #' <ul style="list-style-type: none"> <li>• plot.type="pie": A pie'</li> <li>• plot.type="barchart" : A barchart</li> </ul>
color	Default NULL, a vector of colors of length corresponding to the number of taxa-stage different values, use <code>unique(bilesp@calcddata\$taxa_stage)</code> to get that number. The color applies to both pie and barchart plots
silent	Stops displaying the messages.

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

print,report\_dc-method  
*Method to print the command line of the object*

---

### Description

Method to print the command line of the object

### Usage

```
## S4 method for signature 'report_dc'
print(x, ...)
```

**Arguments**

x                    An object of class report\_dc  
...                  Additional parameters passed to print

**Author(s)**

cedric.briand

---

print,report\_df-method

*Method to print the command line of the object*

---

**Description**

Method to print the command line of the object

**Usage**

```
## S4 method for signature 'report_df'  
print(x, ...)
```

**Arguments**

x                    An object of class report\_df  
...                  Additional parameters passed to print

**Author(s)**

cedric.briand

---

print,report\_mig-method

*Method to print the command line of the object*

---

**Description**

Method to print the command line of the object

**Usage**

```
## S4 method for signature 'report_mig'  
print(x, ...)
```

**Arguments**

x                    An object of class report\_mig  
...                   Additional parameters passed to print

**Author(s)**

cedric.briand

---

print,report\_mig\_mult-method

*Method to print the command line of the object*

---

**Description**

Method to print the command line of the object

**Usage**

```
## S4 method for signature 'report_mig_mult'  
print(x, ...)
```

**Arguments**

x                    An object of class report\_mig\_mult  
...                   Additional parameters passed to print

**Author(s)**

cedric.briand

---

print,report\_sample\_char-method

*Method to print the command line of the object*

---

**Description**

Method to print the command line of the object

**Usage**

```
## S4 method for signature 'report_sample_char'  
print(x, ...)
```

**Arguments**

x                    An object of class report\_sample\_char  
...                   Additional parameters passed to print

**Author(s)**

cedric.briand

---

print,report\_sea\_age-method

*Method to print the command line of the object*

---

**Description**

Method to print the command line of the object

**Usage**

```
## S4 method for signature 'report_sea_age'  
print(x, ...)
```

**Arguments**

x                    An object of class report\_sea\_age  
...                   Additional parameters passed to print

**Author(s)**

cedric.briand

---

print,report\_silver\_eel-method

*Method to print the command line of the object*

---

**Description**

Method to print the command line of the object

**Usage**

```
## S4 method for signature 'report_silver_eel'  
print(x, ...)
```

**Arguments**

x                    An object of class report\_silver\_eel  
 ...                  Additional parameters passed to print

**Author(s)**

cedric.briand

---

progress\_bar                    *Progress bar using a gtkdialog, the progress bar is assigned in env-  
 vir\_stacom* This progress bar has a button to close.

---

**Description**

Progress bar using a gtkdialog, the progress bar is assigned in env-  
 vir\_stacom This progress bar has a button to close.

**Usage**

```
progress_bar(title, progress_text, width = 400, height = 50,  
             pulse = TRUE)
```

**Arguments**

title                The title of the bar  
 progress\_text      The text to display for progression  
 width               Width of the progress bar  
 height              Height of the progress bar  
 pulse               Do you want the widget to pulse

**Value**

nothing

**Note**

The name of the progress bar is progres, it will be assigned in env-  
 vir\_stacom, it contains a progress bar widget named progress bar, also assigned in env-  
 vir\_stacom See example for use.

**Author(s)**

cedric.briand



**Examples**

```
## Not run:
progress_bar(title="Trial",progress_text="progress text")
fraction_progressed=seq(0,1,length.out=50)
progress_bar<-get("progress_bar",envir_stacomi)
for(i in fraction_progressed){
  Sys.sleep(0.1)
  progress_bar$setText(sprintf("%d%% progression",round(100*i)))
  progress_bar$setFraction(i)
}
dispose(progres)

## End(Not run)
```

---

quitte	<i>function used to clean the objects within the group and the graphs and also elements remaining in the envir_stacomi environment</i>
--------	--

---

**Description**

function used to clean the objects within the group and the graphs and also elements remaining in the envir\_stacomi environment

**Usage**

```
quitte(...)
```

**Arguments**

... additional arguments passed to the function

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

ref_checkbox-class	<i>ref_checkbox referencial class</i>
--------------------	---------------------------------------

---

**Description**

referencial class allows to choose for several parms with checkbox

**Slots**

title A "character", the title of the box giving the possible choices

labels The logical parameters choice

checked A boolean vector

**Objects from the Class**

Objects can be created by calls of the form `new("ref_checkbox", ...)`.

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_choice-class	<i>Class "ref_choice"</i>
------------------	---------------------------

---

**Description**

ref\_choice referential class allows to choose within several values with radiobuttons

**Slots**

listechoice A character vector giving possible choices

label A character, title of the box giving the possible choices

selected An Integer the initial selected value (as an index), first=1 used in gradio

**Objects from the Class**

Objects can be created by calls of the form `new("ref_choice", listechoice=character() ,label=character() ,selected=integer())`.

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_coe-class	Class "ref_coe"
---------------	-----------------

---

**Description**

Enables to load conversion coefficients quantity-number. This class only exists to load the data with its method charge. It is not used directly as component of the graphical interface, as the year is already loaded in the different report objects

**Slots**

data A data.frame  
datedebut A "POSIXlt"  
datefin A "POSIXlt"

**Objects from the Class**

Objects can be created by calls of the form `new("ref_coe")`.

**Note**

Class loading coefficient of conversion between quantity (weights or volumes of glass eel) and numbers between a starting and finishing date

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_dc-class	Class "ref_dc"
--------------	----------------

---

**Description**

Description of a control device.

**Slots**

dc\_selectionne Object of class "integer", The selected device  
 ouvrage Object of class "integer", the attached dam  
 station Object of class "character", the attached migration monitoring station, this is necessary to join the table of escapements calculated at the station level.  
 data Object of class "data.frame" data pertaining to the control device

**Objects from the Class**

Objects can be created by calls of the form `new("ref_dc", dc_selectionne=integer(), ouvrage=integer(), data=dat`

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref\_df-class

*Class "ref\_df"*

---

**Description**

Representation of a fishway, contains description data of all fishways from the database along with the selected fishways (df) (integer) Objects from the Class: Objects can be created by calls of the form `new("ref_df", df_selectionne=integer(), ouvrage=integer(), data=data.frame())`.

**Arguments**

df\_selectionne Object of class "integer" The identifier of the fishway  
 ouvrage Object of class "integer" The attached dam  
 data Object of class "data.frame" Data concerning the fishway

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_env-class	<i>Class "ref_env"</i>
---------------	------------------------

---

**Description**

Enables to load measure stations and to select one of them

**Slots**

dataframe Data concerning the measure station

**Objects from the Class**

Objects can be created by calls of the form `new("ref_env", ...)`.

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

---

ref_horodate-class	<i>Class ref_horodate</i>
--------------------	---------------------------

---

**Description**

choice of date with method to show current and previous year

**Slots**

horodate a "POSIXt"

**Objects from the Class**

Objects can be created by calls of the form `new("ref_horodate", ...{ })`.

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref\_par-class      *Class "ref\_par"*

---

### Description

Class enabling to load the list of parameters and select one of them

### Slots

data A data.frame  
 par\_selected A character vector corresponding to par\_code  
 data="data.frame" the list of parameters

### Objects from the Class

Objects can be created by calls of the form

### Author(s)

cedric.briand"at"eptb-vilaine.fr

### See Also

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref\_parqual-class      *Class "ref\_parqual"*

---

### Description

Class enabling to load the list of qualitative parameters and to select one of them. It inherits from 'ref\_par', uses its 'choice' method

### Slots

valqual="data.frame" the list of qualitative parameters

### Author(s)

cedric.briand"at"eptb-vilaine.fr

### See Also

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_parquan-class	<i>Class "ref_parquan"</i>
-------------------	----------------------------

---

**Description**

Class enabling to load the list of quantitative parameters and to select one of them. It inherits from 'ref\_par', uses its 'choice' method

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_period-class	<i>Class "ref_period" referential class</i>
------------------	---

---

**Description**

ref\_period referential class to choose a period

**Slots**

data="data.frame" providing correspondance between period and their English names

**Objects from the Class**

Objects can be created by calls of the form `new("ref_period", ...)`.

**Note**

pgval are used by seq.POSIXt

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_stage-class	<i>Class "ref_stage"</i>
-----------------	--------------------------

---

**Description**

Representation of a fish phase

**Objects from the Class**

Objects can be created by calls of the form `new("ref_stage", data="data.frame")`.

**list("data")** Object of class "data.frame" ~ The phases available in the database

: Object of class "data.frame" ~ The phases available in the database

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_taxa-class](#), [ref\\_year-class](#)

---

ref_taxa-class	<i>Class "ref_taxa"</i>
----------------	-------------------------

---

**Description**

Loading and selection of fish species. This class is a referential class, and it is integrated into refreport objects.

**Slots**

data A "data.frame" of species available in the database

**Objects from the Class**

Objects can be created by calls of the form `new("ref_taxa", ...)`.

**Author(s)**

cedric.briand"at"eptb-vilaine.fr



**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_year-class](#)

---

ref\_textbox-class      *ref\_textbox referencial class*

---

**Description**

allows to a put a value within a glabel

**Slots**

title="character" the title of the box giving the possible choices

labels the logical parameters choice

checked a vector

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

---

ref\_timestep-class      *Class "ref\_timestep"*

---

**Description**

Describes a time step

**Objects from the Class**

Objects can be created by calls of the form `new("ref_timestep", dateDebut="POSIXt", step_duration=numeric(), nb_s`

**list("dateDebut")** Object of class "POSIXt" Starting date

: Object of class "POSIXt" Starting date

**list("step\_duration")** Object of class "numeric" Step length

: Object of class "numeric" Step length

**list("nb\_step")** Object of class "numeric" Number of steps

: Object of class "numeric" Number of steps

**list("nocurrent\_step")** Object of class "integer" Number of the current step

: Object of class "integer" Number of the current step

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

[ref\\_timestep\\_daily](#)

---

ref\_timestepChar-class

*Class "ref\_timestepChar"*

---

**Description**

Character to represent a ref\_timestep

**Objects from the Class**

Objects can be created by calls of the form `new("ref_timestepChar", ...{})`

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

[ref\\_timestep](#)

**Examples**

```
showClass("ref_timestepChar")
```

---

ref\_timestep\_daily-class

*Class "ref\_timestep\_daily"*

---

**Description**

Representation of a ref\_timestep object with a step length equal to one day. It receives an inheritance from ref\_timestep

**Details**

validity\_ref\_timestep\_daily

**Objects from the Class**

Objects can be created by calls of the form `new("ref_timestep_daily", dateDebut="POSIXt", step_duration=numeric())`

**list("dateDebut")** Object of class "POSIXt" Starting date

: Object of class "POSIXt" Starting date

**list("step\_duration")** Object of class "numeric" Step length

: Object of class "numeric" Step length

**list("nb\_step")** Object of class "numeric" Number of steps

: Object of class "numeric" Number of steps

**list("nocurrent\_step")** Object of class "integer" Number of the current step

: Object of class "integer" Number of the current step

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

[ref\\_timestep](#)

---

ref\_year-class

*Year reference class*

---

**Description**

Class used to select one or several years

**Slots**

`data` A `data.frame` with the list of possible years selected as numerics

`annee_selectionnee` A numeric vector

**Objects from the Class**

Objects can be created by calls of the form `new("ref_year", data=data.frame(), annee_selectionnee=numeric())`.

**Author(s)**

cedric.briand"at"eptb-vilaine.fr

**See Also**

Other referential objects: [charge](#), [ref\\_choice-method](#), [ref\\_checkbox-class](#), [ref\\_choice-class](#), [ref\\_coe-class](#), [ref\\_dc-class](#), [ref\\_df-class](#), [ref\\_horodate-class](#), [ref\\_list-class](#), [ref\\_par-class](#), [ref\\_parqual-class](#), [ref\\_parquan-class](#), [ref\\_period-class](#), [ref\\_stage-class](#), [ref\\_taxa-class](#)

---

report\_annual-class    *Class "report\_annual"*

---

### Description

This class displays annual migration counts, for several counting device, taxa or stages.

### Slots

dc Object of class [ref\\_dc-class](#), the counting device, multiple values allowed

data Object of class "data.frame" data for report lot

taxa An object of class [ref\\_taxa-class](#), multiple values allowed

stage An object of class [ref\\_stage-class](#), multiple values allowed

anneedebut Object of class [ref\\_year-class](#). ref\_year allows to choose year of beginning

anneefin Object of class [ref\\_year-class](#) ref\_year allows to choose last year of the report

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### See Also

Other report Objects: [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

### Examples

```
require(stacomir)
# launching stacomir without selecting the scheme or interface
stacomir(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
# the following script will load the Arzal dataset if connected to iav schema
```

```
baseODBC<-get("baseODBC",envir=envir_stacomir)
baseODBC[c(2,3)]<-rep("iav",2)
assign("baseODBC",baseODBC,envir_stacomir)
sch<-get("sch",envir=envir_stacomir)
assign("sch","iav.",envir_stacomir)
r_ann<-new("report_annual")
r_ann<-choice_c(r_ann,
dc=c(5,6,12),
taxa=c("Anguilla anguilla"),
stage=c("AGJ","AGG"),
```

```

anneedebut="1996",
anneefin="2015",
silent=FALSE)
r_ann<-connect(r_ann)

# the following dataset has been generated by the previous code
data(r_ann)
xtr_ann<-stacomIR::xtable(r_ann,
dc_name=c("Passe bassins","Piege anguille RG","Piege anguille RD"),
tax_name="Anguille",
std_name=c("Arg.", "Jaun. "))
# below not run but one can create a file as following
## Not run:
path=file.path(path.expand(get("datawd",envir=envir_stacomir)),
paste(paste(r_ann@dc@dc_selectionne,collapse="+"), "_",
paste(r_ann@taxa@data$tax_code,collapse="+"), "_",
paste(r_ann@stage@data$std_code,collapse="+"), "_",
r_ann@anneedebut@annee_selectionnee,":",
r_ann@anneefin@annee_selectionnee,".html",sep=""),fsep ="/")
# here you can add an argument file=path
print(xtr_ann,type="html")

# the following uses the "addtorow" argument which creates nice column headings,
# format.args creates a thousand separator
# again this will need to be saved in a file using the file argument
print(xtr_ann,
add.to.row=get("addtorow",envir_stacomir),
include.rownames = TRUE,
include.colnames = FALSE,
format.args = list(big.mark = " ", decimal.mark = ","))
)
# barplot transforms the data, further arguments can be passed as to barplot
barplot(r_ann)
barplot(r_ann,
args.legend=list(x="topleft",bty = "n"),
col=c("#CA003E", "#1A9266", "#E10168", "#005327", "#FF9194"))

# An example with custom arguments for legend.text (overriding plot defaults)
data(r_ann_adour)
if (requireNamespace("RColorBrewer", quietly = TRUE)){
lesdc<-r_ann_adour@dc@data$dc_code[r_ann_adour@dc@data$dc%in%r_ann_adour@dc@dc_selectionne]
barplot(r_ann_adour,
legend.text=lesdc,
args.legend=list(x="topleft",bty = "n"),
col=RColorBrewer::brewer.pal(9,"Spectral"),
beside=TRUE)
}
plot(r_ann_adour)

## End(Not run)

```

---

report_dc-class	<i>Class "report_dc" report du fonctionnement du dispositif de comptage</i>
-----------------	---

---

### Description

The counting device is not always working. It may be stopped either following a monitoring protocol, or due to malfunction of the device, this class allows to draw graphics allowing an overview of the device operation

### Slots

data A data frame  
 dc An object of class ref\_dc-class  
 horodatedebut An object of class ref\_horodate-class  
 horodatefin An object of class ref\_horodate-class

### Objects from the Class

Objects can be created by calls of the form `new("report_dc", ...)`.

### Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

### See Also

Other report Objects: [report\\_annual-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

### Examples

```
require(stacomIR)
stacomI(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
#####
## An example that will work only if the database is present
## and the program installed and comprises the schema iav
#####
## Not run:
  r_dc=new("report_dc")
  r_dc<-choice_c(r_dc,
  5,
  horodatedebut="2000-01-01",
  horodatefin="2015-12-31",
  silent=TRUE)
```

```

Sys.setenv(TZ='GMT')
# This dataset format is GMT. If this option is not set
# the dataset is tranformed from timestamp to date
r_dc<-connect(r_dc)
# this dataset has been loaded by the previous lines
#####
# Without connexion to the database (use dataset r_dc)
#####
data("r_dc")
plot(r_dc,plot.type="1")
plot(r_dc,plot.type="2")
plot(r_dc,plot.type="3",main="trial title")
plot(r_dc,plot.type="4",main="trial title")
# the following will write in the datawd folder
summary(r_dc)

## End(Not run)
##

```

---

report\_df-class

*Report on fishway operation*


---

## Description

Fishways (DF) are of various nature, from very simple eel ladders fed by water discharged from the river, to more complex fishways with levels adjusted by the opening of various gates and regulators. The objective of this class is to provide an assessment of the working status of a fishway throughout the year. A number of fishes ascending a fishway has meaning only if we know that the fishway is operational, and that the counting operated on the fishway has remained operational. In the database the operation of the fishway (DF) and counting device (DC) is agregated in one table (t\_periodefonctdispositif\_per). The column per\_etat\_fonctionnement indicates whether the fishway is operational (with a boolean) and the column per\_tar\_code indicates the status of either the fishway or DC. In the database four types of operation are set, "1"=normal operation, "2"=Device stopped in normal operation (ie lift ascending, high tide...), "3"="Stopped for maintenance or other problem", "4"="Works but not fully operational, ie flow problem, flood, clogged with debris...", "5"="Not known")

## Slots

data A data frame

df An object of class ref\_df-class

horodatedebut An object of class ref\_horodate-class

horodatefin An object of class ref\_horodate-class

## Objects from the Class

Objects can be created by calls of the form `new("report_df")`.

## Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

## See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

## Examples

```
require(stacomiR)
stacomi(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
## An example that will work with the database installed only
## Not run:
  r_df=new("report_df")
  r_df<-choice_c(r_df,
  1,
  horodatedebut="2015-01-01",
  horodatefin="2015-12-31",
  silent=TRUE)
  Sys.setenv(TZ='GMT')
  # the times at Arzal are recorded continuously
  # they are converted to date when a time appears while the hour is changing
  # hence the following
  r_df<-connect(r_df)

## End(Not run)

data("r_df")
plot(r_df,plot.type="4")
# the following examples work but take a while to compute
## Not run:
  plot(r_df,plot.type="1")
  plot(r_df,plot.type="2",main="A nice title")
  plot(r_df,plot.type="3",main="A nice title")

## End(Not run)
```



---

report_env-class	<i>class report_env simple output of one or several environmental conditions...</i>
------------------	---

---

## Description

Annual overview of environmental conditions. This class enables to draw some plot, but will mostly used to build joined graphs crossing the information from [report\\_mig\\_mult-class](#) and [report\\_mig\\_env-class](#)

## Slots

horodatedebut [ref\\_horodate-class](#)

horodatefin [ref\\_horodate-class](#)

stationMesure [ref\\_env-class](#)

data data.frame

## Author(s)

cedric.briand"at"eptb-vilaine.fr

## See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

## Examples

```
require(stacomIR)
stacomI(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
## Not run:
  r_env<-new("report_env")
  r_env<-choice_c(r_env,
stationMesure=c("temp_gabion", "coef_maree"),
datedebut="2008-01-01",
datefin="2008-12-31",
silent=FALSE)
  r_env<-connect(r_env)

## End(Not run)

data("r_env")
plot(r_env, silent=TRUE)
```

---

 report\_ge\_weight-class

*Trend of wet weight in glass eel*


---

### Description

In trapping ladders, glass eel are seldom counted, as they are too tiny to handle and too numerous to count. The usual operation is to weight them, or to use a bucket to measure their volume. These weights or volumes will later need to be converted to numbers. The glass eel weight may follow a seasonal pattern. It's the case for *Anguilla anguilla* glass eel in the Bay of Biscay. Weights can be modelled using sine wave curves, or more complex gam models. This class has a model method to try those models, which can also be used to extract coefficients manually to manually test more complex models. Some plots are provided to display the coefficients stored in the database, and the model results. A parameter provided in the graphical interface or in the command line (slot liste) takes values "1", ">1", "tous" which mean respectively use only individual sample of glass eels, or use "group weights" which can be more close to the real weight of glass eel during counts as glass eel are not completely drained from their water during handling to preserve their mucus. The list choice "tous" means that both individual and group weights are selected.

### Slots

data A "data.frame" data for report lot

calcddata A list containing two processed data frames, data and coe

dc Object of class [ref\\_dc-class](#), the counting device

anneedebut Object of class [ref\\_year-class](#). ref\_year allows to choose the year of beginning

anneefin Object of class [ref\\_year-class](#) ref\_year allows to choose last year of the report

coe Object of class [ref\\_coe-class](#) class loading coefficient of conversion between quantity (weights or volumes of glass eel) and numbers

liste Object of class [ref\\_list-class](#) ref\_list referential class choose within a list, here the choice is whether subsamples or not. Subsamples in the stacomi database are samples with a non null value for parent sample. Migration counts are never made on subsamples but those can be integrated to calculate mean weights.

### Note

In this class some tools are available to import glass eel measurement from experimental fishing in the estuary. For the charge method dates for the request are from august to august (a glass eel season)

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**See Also**

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

**Examples**

```
require(stacomIR)
# launching stacomI without selecting the scheme or interface
stacomI(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
## Not run:
#create an instance of the class
r_gew<-new("report_ge_weight")
baseODBC<-get("baseODBC",envir=envir_stacomI)
baseODBC[c(2,3)]<-rep("iav",2)
assign("baseODBC",baseODBC,envir_stacomI)
sch<-get("sch",envir=envir_stacomI)
assign("sch","iav.",envir_stacomI)
r_gew@liste<-charge(object=r_gew@liste,listechoice=c("=1", ">1", "tous"),label="")
# here I'm using weights when number are larger than 1 ie wet weight
# always choose a date from one year to the next eg 2010 to 2011
# as the dates are from august to august
r_gew<-choice_c(r_gew,
dc=c(6),
annee debut="2009",
annee fin="2015",
selectedvalue=">1",
silent=FALSE)
r_gew<-connect(r_gew)
r_gew<-calcule(r_gew)

## End(Not run)
# load the dataset generated by previous lines
data("r_gew")
# the calculation will fill the slot calcdata

# A ggplot showing the trend in weight
plot(r_gew, plot.type=1)
# A plot showing both the data and the trend as recorded in the database
plot(r_gew, plot.type=2)
# Same as plot.type=1 but with size according to size of the sample,
# usefull for wet weights where weight are recorded on a number of glass eel
plot(r_gew, plot.type=3)
## Not run:
# First model with nls, see Guerault and Desaunay (1993)
model(r_gew,model.type="seasonal")
model(r_gew,model.type="seasonal1")

## End(Not run)
```

---

report_mig-class	<i>Migration report for one DC, one species and one stage</i>
------------------	---

---

### Description

This class performs a migration summary. A migration monitoring operation can correspond to a single horodate (in the case of some video monitoring operation) or comprise a period which does not necessarily span a full day. The daily migration is calculated by splitting the operation between days, and the migration is either grouped or split according to the length of the different time spans.

### Slots

dc Object of class [ref\\_dc-class](#): the control device  
 taxa Object of class [ref\\_taxa-class](#): the species  
 stage Object of class [ref\\_stage-class](#) : the stage of the fish  
 timestep Object of class [ref\\_timestep\\_daily-class](#) : the time step constrained to daily value and 365 days  
 data Object of class `data.frame` with data filled in from the connect method  
 calcdata A "list" of calculated daily data, one per dc, filled in by the calcule method  
 coef\_conversion A `data.frame` of daily weight to number conversion coefficients, filled in by the connect method if any weight are found in the data slot.  
 time.sequence Object of class `POSIXct` : a time sequence of days generated by the calcule method

### Note

In practise, the `report_mig` class uses methods (`calcule`, `connect`...) from the more elaborate [report\\_mig\\_mult-class](#)

### Author(s)

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### See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

### Examples

```
library(stacomiR)

stacomi(gr_interface=FALSE,login_window=FALSE,database_expected=FALSE)
## launches the application in the command line
## here an example of loading
```

```

## not run as the program is possibly not installed
## this example generates the r_mig dataset
## Not run:
  stacomi(gr_interface=FALSE,
  login_window=FALSE,
  database_expected=TRUE)
  r_mig=new("report_mig")
  r_mig=choice_c(r_mig,
  dc=5,
  taxa=c("Liza ramada"),
  stage=c("IND"),
  datedebut="2015-01-01",
  datefin="2015-12-31")
  r_mig<-charge(r_mig)
  # launching charge will also load classes associated with the report
  # e.g. report_ope, report_df, report_dc
  r_mig<-connect(r_mig)
  #####
# calculations
  #####
  r_mig<-calcule(r_mig,silent=TRUE)

## End(Not run)
#####
# loading data
## use the following to get the raw data loaded by the connect method
# not shown there as the database and program might not be installed
# All three classes report... were created by the charge and connect method
# of report_mig_mult
# in the previous example
#####
data("r_mig")
data("r_mig_ope")
assign("report_ope",r_mig_ope,envir=envir_stacomi)
data("r_mig_df")
assign("report_df",r_mig_df,envir=envir_stacomi)
data("r_mig_dc")
assign("report_dc",r_mig_dc,envir=envir_stacomi)

#Individual plot for all DC (standard), taxa and stage where data present
#silent argument to stop all messages
plot(r_mig,plot.type="standard",silent=TRUE)
#cumulated migration at the station (all stages and DC grouped)
plot(r_mig,plot.type="step")

# data will be written in the data directory specified in the stacomi/calcmig.csv
#file

## Not run:
  summary(r_mig,silent=TRUE)

## End(Not run)

```

```
# this will write the daily report for later in in the reportnMigrationInterannuelle-class
## Not run:
  write_database(r_mig,silent=TRUE,dbname="bd_contmig_nat",host="localhost",port=5432)

## End(Not run)
```

---

report\_mig\_char-class *Migration report along with quantitative and qualitative characteristics*

---

## Description

Migration along with qualitative or quantitative characteristics or both (e.g.) weight of eels according to the size class per period of time, weight of fish according to gender, number of fish per age class. This class does not split migration evenly over time period. So, unlike calculations made in class `report_mig` and `report_mig_mult` the whole time span of the migration operation is not considered, only the date of beginning of the operation is used to perform calculations.

## Slots

`calcddata` A "list" of calculated data, filled in by the `calcule` method  
`data` A data.frame inherited from `report_sample_char-class`  
`dc` An object of class `ref_dc-class` inherited from `report_sample_char-class`  
`taxa` An object of class `ref_taxa-class` inherited from `report_sample_char-class`  
`stage` An object of class `ref_stage-class` inherited from `report_sample_char-class`  
`horodatedebut` An object of class `ref_horodate-class` inherited from `report_sample_char-class`  
`horodatefin` An object of class `ref_horodate-class` inherited from `report_sample_char-class`  
`par` An object of class `ref_par-class` inherited from `report_sample_char-class`  
`echantillon` An object of class `ref_choice-class`, vector of choice  
`parquan` An object of class `ref_parquan-class`, quantitative parameter  
`parqual` An object of class `ref_parqual-class`, qualitative parameter

## Objects from the Class

Objects can be created by calls of the form `new("report_mig_char", ...)`. they are loaded by the interface using `interface_report_mig_char` function.

## Note

The main difference between this class and `report_sample_char-class` is that this class allows to select (or not) the samples, and that it handles quantitative and qualitative parameters separately.

## Author(s)

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**See Also**

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

**Examples**

```
require(stacomir)

stacomir(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)

## Not run:
r_mig_char<-new("report_mig_char")
baseODBC<-get("baseODBC",envir=envir_stacomir)
baseODBC[c(2,3)]<-rep("logrami",2)
assign("baseODBC",baseODBC,envir_stacomir)
sch<-get("sch",envir=envir_stacomir)
assign("sch","logrami.",envir_stacomir)
# here parqual is not in the list
# so this is equivalent to parqual=NULL
# default for echantillon is "with"
r_mig_char<-choice_c(r_mig_char,
dc=c(107,108,101),
taxa=c("Salmo salar"),
stage=c('5','11','BEC','BER','IND'),
parquan=c('A124','C001','1786','1785'),
horodatedebut="2012-01-01",
horodatefin="2012-12-31",
silent=FALSE)
# r_mig_char<-charge(r_mig_char) not necessary there
r_mig_char<-connect(r_mig_char)

## End(Not run)
# load the dataset generated by previous lines
data("r_mig_char")
# age will be plotted as a qualitative variable
r_mig_char<-setasqualitative(r_mig_char,par='A124',
breaks=c(0,1.5,2.5,10),
label=c("age 1","age 2","age 3"))
r_mig_char<-calcule(r_mig_char,silent=TRUE)
plot(r_mig_char,plot.type="quant",silent=TRUE)
# one quantitative parameter found, manual choice of color
plot(r_mig_char,plot.type="quant",color_parm=c("C001"="red"),silent=TRUE)
plot(r_mig_char,plot.type="qual",silent=TRUE)
plot(r_mig_char,plot.type="crossed")
plot(r_mig_char,plot.type="crossed",
color_parm=c("age 1"="#379ec6","age 2"="#173957","age 3"="#b09953"))
xt<-xtable(r_mig_char)
```

```

# use method print.xtable to get the output
## Not run:
# An example with several years
r_mig_char<-new("report_mig_char")
baseODBC<-get("baseODBC",envir=envir_stacomi)
baseODBC[c(2,3)]<-rep("logrami",2)
assign("baseODBC",baseODBC,envir_stacomi)
sch<-get("sch",envir=envir_stacomi)
assign("sch","logrami.",envir_stacomi)
# here parqual is not in the list
# so this is equivalent to parqual=NULL
r_mig_char<-choice_c(r_mig_char,
  dc=c(107,108,101),
  taxa=c("Salmo salar"),
  stage=c('5','11','BEC','BER','IND'),
  parquan=c('A124','C001','1786','1785'),
  horodatedebut="2009-01-01",
  horodatefin="2012-12-31",
  #echantillon="with", # alternative "without"
  silent=FALSE)
# r_mig_char<-charge(r_mig_char) not necessary there
r_mig_char<-connect(r_mig_char)
# load the dataset generated by previous lines
r_mig_char<-setasqualitative(r_mig_char,par='A124',
  breaks=c(0,1.5,2.5,10),
  label=c("age 1","age 2","age 3"))
r_mig_char<-calcule(r_mig_char,silent=TRUE)

## End(Not run)

```

---

```
report_mig_env-class  Class "report_mig_env"
```

---

## Description

Enables to compute an annual overview of fish migration and environmental conditions in the same chart. Environmental conditions may trigger migration events, variation in flow or temperatures can be plotted along migration to check graphically for a possible relation. To enable this, environmental conditions are loaded from an "environmental monitoring station", which records environmental parameters and is attached to a migratory station in the database. This class enables both continuous output (temperature -flow) as well as discrete parameters (qualitative = moon phase, type of operation of a gate, opening of a gate...) which will be displayed on the graph. Values are scaled so that single plot can display migration numbers and environmental parameters. Environmental parameters when stored at a time scale lower than a day are averaged per day, unless they are qualitative parameters, in which case only the first event of the day is displayed on the annual plot.



**Slots**

report\_mig\_mult [report\\_mig\\_mult-class](#)  
 report\_env [report\\_env-class](#)

**Author(s)**

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**See Also**

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

**Examples**

```
require(stacomIR)
stacomI(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
# the following will load the data provided the user has access to the database
# with data in the iav example scheme.
## Not run:
r_mig_env<-new("report_mig_env")
r_mig_env<-choice_c(r_mig_env,
dc=c(5,6,12),
taxa=c("Anguilla anguilla"),
stage=c("AGJ", "AGG", "CIV"),
stationMesure=c("temp_gabion", "coef_maree", "phases_lune"),
datedebut="2008-01-01",
datefin="2008-12-31",
silent=FALSE)
r_mig_env<-charge(r_mig_env) # this is necessary to load operations, DF and DC
r_mig_env<-connect(r_mig_env)
r_mig_env<-calculer(r_mig_env,silent=TRUE)

## End(Not run)

data("r_mig_env")
# An example of plot with custom colors.
plot(r_mig_env,
color_station=c("temp_gabion"="red", "coef_maree"="blue", "phases_lune"="pink"),
color_dc=c("5"="yellow", "6"="orange", "12"="purple")
)
```

---

```
report_mig_interannual-class
      Class "report_mig_interannual"
```

---

## Description

When daily report are written in the `t_reportjournalier_bjo` table by the [report\\_mig-class](#) they can be used by this class to display interannual comparisons of migration. When running its `connect` method, this class will run the [report\\_mig-class](#) for each year where data are missing, or where the annual sum in the `t_reportjournalier_bjo` table differs from the counts generated by the [report\\_annual-class](#) : rows have been changed in the database. Different charts are produced with different period grouping. See [write\\_database.report\\_mig-method](#) for details about how this method inserts data in the `t_reportjournalier_bjo` table.

## Slots

`dc` An object of class [ref\\_dc-class](#), the counting device  
`data` A data.frame data loaded from the daily migration table `t_bilanmigrationjournalier_bjo`  
`taxa` An object of class [ref\\_taxa-class](#)  
`stage` An object of class [ref\\_stage-class](#)  
`start_year` An object of class [ref\\_year-class](#). `ref_year` allows to choose year of beginning  
`end_year` An object of class [ref\\_year-class](#) `ref_year` allows to choose last year of the report  
`calcdata` A list of calculated data, filled in by the `calcule` method

## Author(s)

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## See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

## Examples

```
require(stacomIR)
# launching stacomI without selecting the scheme or interface
stacomI(gr_interface=FALSE,
        login_window=FALSE,
        database_expected=FALSE)
##### If you have connection to the database with the pmp scheme #####
## Not run:

# overriding user schema to point to Parc Marais Poitevin
```

```

# (longest historical dataset available
# in France for eel ...) this suppose you have access to the pmp schema...
# a glimpse of the dataset is still available in the r_mig_interannual dataset
# loaded in the package...
baseODBC<-get("baseODBC",envir=envir_stacomi)
baseODBC[c(2,3)]<-rep("pmp",2)
assign("baseODBC",baseODBC,envir_stacomi)
sch<-get("sch",envir=envir_stacomi)
assign("sch","pmp.",envir_stacomi)
# Note in some cases you will want to change host and port setting
# sqldf.options<-get("sqldf.options",envir=envir_stacomi)
# sqldf.options["sqldf.RPostgreSQL.host"]<-"www.myhostname.com"
# sqldf.options["sqldf.RPostgreSQL.port"]<-5433
# assign("sqldf.options",sqldf.options,envir_stacomi)
r_mig_interannual<-new("report_mig_interannual")
r_mig_interannual<-choice_c(r_mig_interannual,
dc=c(16),
taxa=c("Anguilla anguilla"),
stage=c("AGJ"),
annee debut="1990",
annee fin="2015",
silent=TRUE)
r_mig_interannual<-charge(r_mig_interannual)
r_mig_interannual<-connect(r_mig_interannual,check=TRUE)
r_mig_interannual<-calculer(r_mig_interannual,silent=TRUE)

## End(Not run)
#####otherwise use this #####
# load the dataset generated by previous lines
data("r_mig_interannual")

#####
# the first plot is of little interest, it allows to see what data
# are available... simple lines
# For irregular operations like those reported at the enfrenaux eel ladder...
plot(r_mig_interannual,plot.type="line",silent=TRUE)

# a plot to show the seasonality, this graph may be misleading if the
# migration is not monitored all year round. Note the y unit is not very informative
# you need to have the viridis package loaded to run this example
plot(r_mig_interannual,plot.type="density",silent=TRUE)
## Not run:
  if (requireNamespace("ggplot2", quietly = TRUE)&
      requireNamespace("viridis", quietly = TRUE)){
g<-get("g",envir=envir_stacomi)
g+
ggplot2::scale_fill_manual(values=viridis::viridis(22))+
ggplot2::ggtitle("Saisonnalite de la migration aux Enfrenaux")
  }
#####
# the standard plot is showing daily values
#####
plot(r_mig_interannual,plot.type="standard",silent=TRUE)

```

```

# Manual edition of the graph produced
if (requireNamespace("ggplot2", quietly = TRUE)){
  g1<-get("g1",envir=envir_stacomi)
  g1<-g1+ggplot2::ggtitle("Les Enfrenaux")+
ggplot2::scale_fill_manual(name="Source",
values=c("purple", "#0A0C01"),
labels = c("historical set", "2015 values"))+
ggplot2::scale_colour_manual(name="Source", values="#B8EA00",
labels = c("historical mean")) +
ggplot2::ylab("Nombre d'anguilles")
  print(g1)
}
#####
# Another graph to show a "manual" processing of the data
# and their extraction from the data slot
#####
if (requireNamespace("ggplot2", quietly = TRUE)&
requireNamespace("viridis", quietly = TRUE)){
  dat<-fun_date_extraction(r_mig_interannual@data, # data to import
"bjo_jour", # name of the column where dates are found
annee=FALSE,
mois=TRUE,
semaine =TRUE,
jour_mois=FALSE)
# sum per month
  res<-dplyr::select(dat,bjo_valeur,bjo_annee,semaine)
  res<-dplyr::group_by(res,bjo_annee,semaine)
  res<-dplyr::summarize(res,effectif=sum(bjo_valeur))
  ggplot2::ggplot(res, ggplot2::aes(x = semaine, y = bjo_annee,fill=effectif)) +
  ggplot2::geom_tile(colour="black") + ggplot2::coord_fixed() +
  viridis::scale_fill_viridis(begin=0,option="D") + ggplot2::theme_bw()+
  ggplot2::theme(panel.background= ggplot2::element_rect(fill = "#9360A9"),
panel.grid.major=ggplot2::element_line(colour="#C1DB39"),
panel.grid.minor=ggplot2::element_line(colour="#7DD632"))+
  ggplot2::ylab("year")+ggplot2::xlab("week")+
  ggplot2::ggtitle("Historical trend at Les Enfrenaux Eel trap")

}
#####
# barchart with different splitting periods
# the migration is displayed against seasonal data
# extacted from all other years loaded in the report
#####
# available arguments for timesplit are "quinzaine" and "mois" and "semaine"
# with the silent=TRUE argument, it's always the latest year that is selected,
# otherwise the user is prompted with a choice, to select the year he wants
# to compare will all others...
  plot(r_mig_interannual,plot.type="barchart",timesplit="quinzaine",silent=TRUE)
# Comparison with historical values. Each year and 2 weeks values
# is a point on the graph...
  plot(r_mig_interannual,plot.type="pointrange",timesplit="mois",silent=TRUE)
#####
# Step plot

```

```

# different years shown in the graph
# the current year (or the selected year if silent=FALSE)
# is displayed with a dotted line
#####
plot(r_mig_interannual,plot.type="step",silent=TRUE)
if (requireNamespace("ggplot2", quietly = TRUE)&
requireNamespace("viridis", quietly = TRUE)){
g<-get("g",envir=envir_stacomi) + ggplot2::theme_minimal()
g+viridis::scale_color_viridis(discrete=TRUE)+
ggplot2::ggtitle("Cumulated migration step plot
at les Enfrenaux eel trap")

}
#####
# Plots for seasonality of the salmon migration
# using a Loire river dataset (Vichy fishway)
#####
data("r_mig_interannual_vichy")
# the following show how data are processed to get
# statistics for seasonal migration, daily values
r_mig_interannual_vichy<-calculer(r_mig_interannual_vichy,timesplit="jour",silent=TRUE)
#r_mig_interannual_vichy@calldata #check this to see the results
# statistics for seasonal migration, weekly values
r_mig_interannual_vichy<-calculer(r_mig_interannual_vichy,timesplit="semaine",silent=TRUE)
#r_mig_interannual_vichy@calldata

# the plot method also runs the calculer method
plot(r_mig_interannual_vichy,plot.type="seasonal",timesplit="semaine",silent=TRUE)
plot(r_mig_interannual_vichy,plot.type="seasonal",timesplit="mois",silent=TRUE)
plot(r_mig_interannual_vichy,plot.type="seasonal",timesplit="jour",silent=TRUE)

#####
# Plots for seasonality using another Loire river dataset
# with the migration of Lampreys (Petromyzon marinus)
# recorded at the the Descarte DF (Vienne)
#####
# run this only if you are connected to the logrami dataset
baseODBC<-get("baseODBC",envir=envir_stacomi)
baseODBC[c(2,3)]<-rep("logrami",2)
assign("baseODBC",baseODBC,envir_stacomi)
sch<-get("sch",envir=envir_stacomi)
assign("sch","logrami.",envir_stacomi)
bmi_des<-new("report_mig_interannual")
bmi_des<-choice_c(bmi_des,
dc=c(23),
taxa=c("Petromyzon marinus"),
stage=c("5"),
annee debut="2007",
annee fin="2014",
silent=TRUE)
bmi_des<-connect(bmi_des)
bmi_des<-calculer(bmi_des,timesplit="semaine")

```

```

plot(bmi_des,plot.type="seasonal",timesplit="semaine")
plot(bmi_des,plot.type="seasonal",timesplit="jour")
plot(bmi_des,plot.type="seasonal",timesplit="mois")

## End(Not run)

```

---

report\_mig\_mult-class *Migration reports for multiple DC / species / stages*

---

### Description

Migration counts for several Fish counting devices (DC), several taxa and several stages. This migration count can be built either by the graphical interface or from the command line (see examples).

### Slots

dc An object of class `ref_dc-class`  
taxa An object of class `ref_taxa-class`  
stage An object of class `ref_stage-class`  
timestep An object of class `ref_timestep_daily-class`  
data A data.frame containing raw data filled by the connect method  
calcddata A "list" of calculated daily data, one per dc, filled in by the calcule method  
coef\_conversion A data frame of daily weight to number conversion coefficients, filled in by the connect method if any weight are found in the data slot.  
time.sequence A POSIXt time sequence

### Note

A Migration report comes from a migration monitoring : the fishes are monitored in a section of river, this section is called a control station (station). Most often, there is a dam, one or several fishways (DF) which comprise one or several counting devices (DC). On each counting device, the migration is recorded. It can be either an instant recording (video control) or the use of traps, Operations are monitoring operations during a period. For each operation, several species of fishes can be recorded (samples). In the case of migratory fishes the stage of development is important as it may indicate generic migrations, to and fro, between the river and the sea.

Hence a Multiple Migration report is built from several one or several counting devices (DC), one or several Taxa (Taxon), one or several stages (stage). The migration can be also recorded not as numbers, but in the case of glass eels, as weight, which will be later transformed to number, from daily conversion coefficients. The methods in this class test whether the counts are numbers or another type of quantity. This class makes different calculations than `report_mig`, it does not handle escapement coefficients, it uses quantities other than numbers if necessary (only used for glass eel in the connect method).

**Author(s)**

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**See Also**

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

**Examples**

```
library(stacomiR)

stacomi(gr_interface=FALSE,login_window=FALSE,database_expected=FALSE)
## launches the application in the command line
## here an example of loading
## the following lines will only run if you have the program installed
## and the iav scheme available in the database
## this example generates the r_mig_mult dataset
## Not run:
  stacomi(gr_interface=FALSE,
    login_window=FALSE,
    database_expected=TRUE)
  r_mig_mult=new("report_mig_mult")
  r_mig_mult=choice_c(r_mig_mult,
    dc=c(5,6,12),
    taxa=c("Anguilla anguilla"),
    stage=c("AGG", "AGJ", "CIV"),datedebut="2011-01-01",datefin="2011-12-31")
  r_mig_mult<-charge(r_mig_mult)
  # launching charge will also load classes associated with the report
  # e.g. report_ope, report_df, report_dc
  r_mig_mult<-connect(r_mig_mult)
  # calculations
  r_mig_mult<-calcule(r_mig_mult,silent=TRUE)

## End(Not run)

# Use this as example if you don't have a connexion to the database
data("r_mig_mult")
# The following re-create the object at the time of loading
# All three classes were created by the charge and connect
# method of report_mig_mult in the previous example
data("r_mig_mult_ope")
assign("report_ope",r_mig_mult_ope,envir=envir_stacomi)
data("r_mig_mult_df")
assign("report_df",r_mig_mult_df,envir=envir_stacomi)
data("r_mig_mult_dc")
assign("report_dc",r_mig_mult_dc,envir=envir_stacomi)
# use the following to get the raw data loaded by the connect method
```

```

# not shown there as the database and program might not be installed

#Individual plot for all DC, taxa and stage where data present
#Silent=TRUE to turn off messages
# not run because of multiple graphical devices

plot(r_mig_mult,plot.type="standard",silent=TRUE)
## Not run:
# colors in the following order (glass eel)
# working, stopped, 1..5 types of operation,numbers, weight, 2 unused colors
# for yellow eel and other taxa
# stopped, 1..5 types of operation, ponctuel, expert, calcule,mesure,working,
  plot(r_mig_mult,plot.type="standard",
    color=c("#DEF76B","#B950B5","#9ABDDA","#781A74","#BF9D6E","#FFC26E",
      "#A66F24","#012746","#6C3E00","#DC7ED8","#8AA123"),
    color_ope=c("#5589B5","#FFDB6E","#FF996E","#1C4D76"),
    silent=TRUE)
#For the following plot, beware, all stages and DC are grouped. This can make sense
# for instance if you want to display the cumulated migration for one species
# in several counting devices located on the same dam...
  plot(r_mig_mult,plot.type="step",silent=TRUE)

# Combined plot for ggplot2
  plot(r_mig_mult,plot.type="multiple",silent=TRUE)
# Data will be written in the data directory specified in
# the stacomi/calcmig.csv file
  summary(r_mig_mult,silent=FALSE)

## End(Not run)

```

---

report\_ope-class

*Report on operations*


---

### Description

Operations are monitoring operations generated between two dates. In the case of video monitoring or similar, they can be instantaneous

### Objects from the Class

Objects can be created by calls of the form `new("report_ope")`.

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>



---

report\_sample\_char-class  
*Class "report\_sample\_char"*

---

### Description

The report\_sample\_char class is used to load and display sample characteristics, which can be either continuous or discrete variable, for instance, it can be used to analyze size or sex structure during a given period.

### Slots

data A data frame  
dc An object of class [ref\\_dc-class](#): the control devices  
taxa An object of class [ref\\_taxa-class](#): the species  
stage An object of class [ref\\_stage-class](#) : the stages of the fish  
par An object of class [ref\\_par-class](#): the parameters used  
horodatedebut An object of class [ref\\_horodate-class](#)  
horodatefin An object of class [ref\\_horodate-class](#)

### Objects from the Class

Objects can be created by calls of the form `new("report_sample_char", ...)`

### Note

This class is displayed by `interface_report_sample_char`, in the database, the class calls the content of the view `vue_lot_ope_car`

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

**Examples**

```

require(stacomIR)
# launching stacomI without selecting the scheme or interface
stacomI(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
# the following script will load the Arzal dataset
#if connected to iav schema
## Not run:
# create an instance of the class
r_sample_char<-new("report_sample_char")
# the following will load data for size,
# parameters 1786 (total size) C001 (size at video control)
# dc 5 and 6 are fishways located on the Arzal dam
# two stages are selected
r_sample_char<-choice_c(r_sample_char,
dc=c(5,6),
taxa=c("Anguilla anguilla"),
stage=c("AGJ","CIV"),
par=c(1785,1786,1787,"C001"),
horodatedebut="2013-01-01",
horodatefin="2013-12-31",
silent=FALSE)
# two warning produced, ignored if silent=TRUE
r_sample_char<-connect(r_sample_char)
r_sample_char<-calcule(r_sample_char,silent=TRUE)

## End(Not run)
# load the dataset generated by previous lines
data("r_sample_char")

# A "violin" plot
plot(r_sample_char,plot.type="1",silent=TRUE)
# get the plot from envir_stacomI to change labels for name
# if you use require(ggplot2) the :: argument is not needed
# e.g. write require(ggplot2);g<-get("g",envir=envir_stacomI)
# g+xlab("size")+ylab("year")
if (requireNamespace("ggplot2", quietly = TRUE)){
  g<-get("g",envir=envir_stacomI)
  g+ggplot2::xlab("size")+ggplot2::ylab("year")
}
# A boxplot per month
plot(r_sample_char,plot.type="2",silent=TRUE)
# A xyplot
plot(r_sample_char,plot.type="3",silent=TRUE)

## Not run:

#####
# an example graph created manually from data
#####

```

```

# two variables one on DC, one on stage
# passing dc information to the stage variable
r_sample_char@data$std_libelle[r_sample_char@data$ope_dic_identifiant==5]<-
  "Yellow eel (vert. slot fishway)"
r_sample_char@data$std_libelle[r_sample_char@data$std_libelle=="Anguille jaune"]<-
  "Yellow eel (ramp)"
r_sample_char@data$std_libelle[r_sample_char@data$std_libelle=="civelle"]<-
  "Glass eel (ramp)"
# creating a boxplot with custom output : an example
# again if you use require(ggplot2) the :: argument is not needed

  if (requireNamespace("ggplot2", quietly = TRUE)){
g<-ggplot2::ggplot(r_sample_char@data)+
ggplot2::geom_boxplot(ggplot2::aes(x=annee,
y =car_valeur_quantitatif,
fill = std_libelle))+
ggplot2::xlab("size")+ggplot2::ylab("year")+
ggplot2::scale_fill_manual("stage & fishway",
values=c("Yellow eel (vert. slot fishway)"="blue",
"Yellow eel (ramp)"="turquoise3",
"Glass eel (ramp)"="Cyan"))+
ggplot2::theme_bw()
print(g)
  }

# get a simple summary using Hmisc::describe

  summary(r_sample_char)
# get the command line to create the object using choice_c
# when the graphical interface has been used
  print(r_sample_char)

## End(Not run)

```

---

report\_sea\_age-class    *Class "report\_sea\_age"*

---

## Description

the report\_sea\_age class is used to dispatch adult salmons to age class according to their size and to basin dependent limits set by the user. Once checked with graphs and summary statistics, the results are to be written to the database.

## Slots

**data** A data frame with data generated from the database

**calcddata** A list of dc with processed data. This lists consists of two elements

- (1) data A dataset with age set to be used by the plot and summary methods
- (2) tj\_caracteristitiquelot\_car A dataset to import into the database

dc Object of class [ref\\_dc-class](#): the control devices  
 taxa Object of class [ref\\_taxa-class](#): the species  
 stage Object of class [ref\\_stage-class](#) : the stages of the fish  
 par Object of class [ref\\_par-class](#): the parameters used  
 horodatedebut An object of class [ref\\_horodate-class](#)  
 horodatefin An object of class [ref\\_horodate-class](#)  
 limit1hm The size limit, in mm between 1 sea winter fishes and 2 sea winter fishes  
 limit2hm The size limit, in mm between 2 sea winter fishes and 3 sea winter fishes

### Objects from the Class

Objects can be created by calls of the form `new("report_sea_age", ...)`

### Note

This class is displayed by `interface_report_sea_age`

### Author(s)

Cedric Briand <[cedric.briand@eptb-vilaine.fr](mailto:cedric.briand@eptb-vilaine.fr)>

### See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_silver\\_eel-class](#), [report\\_species-class](#)

### Examples

```
require(stacomir)
stacomir(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
## Not run:
#create an instance of the class
r_seaa<-new("report_sea_age")
baseODBC<-get("baseODBC",envir=envir_stacomir)
baseODBC[c(2,3)]<-rep("logrami",2)
assign("baseODBC",baseODBC,envir_stacomir)
sch<-get("sch",envir=envir_stacomir)
assign("sch","logrami.",envir_stacomir)
r_seaa<-choice_c(r_seaa,
dc=c(107,108,101),
horodatedebut="2012-01-01",
horodatefin="2012-12-31",
limit1hm=675,
limit2hm=875,
silent=FALSE
```

```

)
r_seaa<-connect(r_seaa)
r_seaa<-calcule(r_seaa)

## End(Not run)
# load the dataset generated by previous lines
# Salmons from the loire on two dams
data("r_seaa")
# the calculation will fill the slot calcdata

# stages are in r_seaa@calcdata[["6"]][,"stage"]
#look at data structure using str(r_seaa@calcdata[["6"]])

# plot data to confirm the split by limits is correct
plot(r_seaa, plot.type=1)

# if there are several dc, data it split by dc
plot(r_seaa, plot.type=2)
## Not run:
# print a summary statistic, and save the output in a list for later use
stats<-summary(r_seaa)

write_database(r_seaa)

## End(Not run)

```

---

```
report_silver_eel-class
```

```
Class "report_silver_eel"
```

---

## Description

the `report_silver_eel` class is used to calculate various statistics about the silver eel run. It comprises calculation of various maturation index such as Durif's stages and Pankhurst eye index. The objective is to provide standardized output to the stations monitoring the silver eel run.

## Slots

`data` A data frame with data generated from the database

`calcdata` A list of dc with processed data. Each dc contains a data frame with

- (1) qualitative data on body contrast (CONT), presence of punctuation on the lateral line (LNP)
- (2) quantitative data "BL" Body length,"W" weight,"Dv" vertical eye diameter,"Dh" horizontal eye diameter,"FL" pectoral fin length
- (3) calculated durif stages, Pankhurst's index, Fulton's body weight coefficient `K_ful`

- (4) other columns containing data pertaining to the sample and the control operation: lot\_identifiant, ope\_identifiant, ope\_dic\_identifiant, ope\_date\_debut, ope\_date\_fin, dev\_code (destination code of fish), dev\_libelle (text for destination of fish)

dc Object of class [ref\\_dc-class](#): the control devices

taxa An object of class [ref\\_taxa-class](#): the species

stage An object of class [ref\\_stage-class](#) : the stages of the fish

par An object of class [ref\\_par-class](#): the parameters used

horodatedebut An object of class [ref\\_horodate-class](#)

horodatefin An object of class [ref\\_horodate-class](#)

### Objects from the Class

Objects can be created by calls of the form `new("report_silver_eel", ...)`

### Note

This class is displayed by `interface_report_silver_eel`

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_species-class](#)

### Examples

```
require(stacomir)
# launching stacomir without selecting the scheme or interface
stacomir(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
# the following script will load data from the two Anguillere monitored in the Somme

## Not run:
#create an instance of the class
r_silver<-new("report_silver_eel")
baseODBC<-get("baseODBC",envir=envir_stacomir)
baseODBC[c(2,3)]<-rep("fd80",2)
assign("baseODBC",baseODBC,envir_stacomir)
sch<-get("sch",envir=envir_stacomir)
assign("sch","fd80.",envir_stacomir)
r_silver<-choice_c(r_silver,
dc=c(2,6),
horodatedebut="2010-09-01",
```

```

horodatefin="2016-10-04",
silent=FALSE)
r_silver<-connect(r_silver)

## End(Not run)
# load the dataset generated by previous lines
data("r_silver")
# the calculation will fill the slot calcdata
r_silver<-calcule(r_silver)
# stages are in r_silver@calcdata[["6"]][,"stage"]
#look at data structure using str(r_silver@calcdata[["6"]])

# standard plot as drawn by Laurent Beaulaton (Analyse des donnees d'argentine acquises en France)
# showing Durif's stage according to size and eye diameter
plot(r_silver, plot.type=1)

# number per month or year and Durif's stage (year if number of dc >1)
plot(r_silver, plot.type=2)

# plot showing fulton's coefficient, and size weight graphs
# inspired from Acou et al., 2009
# Differential Production and Condition Indices of Premigrant
# Eels in Two Small Atlantic Coastal Catchments
# of France
plot(r_silver, plot.type=3)
# get a list of summary data and print output to screen

plot(r_silver, plot.type=4)
# print a summary statistic, and save the output in a list for later use
stats<-summary(r_silver)

```

---

report\_species-class    *Counts of number per taxa/stages*

---

### Description

This class is used to make the assessment of all species, and their number. It is intended as a simple way to check what fishes are present (taxa + development stage). Unlike the report\_annual, it is not restricted to chosen taxa or stages but gives counts for all species present. The taxa is reported unless a taxa has several case, in which case the different stages for the taxa will be reported Using the split arguments the calc method of the class will count numbers, subsamples are not accounted for in the Overview. The split argument currently takes values year or month. The class is intended to be used over long periods e.g years. The plot method writes either an histogram or a pie chart of number per year/week/month.

### Slots

dc an object of class [ref\\_dc-class](#)

anneeдебут Object of class [ref\\_year-class](#)

anneefin Object of class [ref\\_year-class](#)  
 data data.frame  
 calcddata data.frame with data processed by the calc method  
 split Object of class [ref\\_list-class](#) ref\_list referential class choose within a list

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

### See Also

Other report Objects: [report\\_annual-class](#), [report\\_dc-class](#), [report\\_df-class](#), [report\\_env-class](#), [report\\_ge\\_weight-class](#), [report\\_mig-class](#), [report\\_mig\\_char-class](#), [report\\_mig\\_env-class](#), [report\\_mig\\_interannual-class](#), [report\\_mig\\_mult-class](#), [report\\_sample\\_char-class](#), [report\\_sea\\_age-class](#), [report\\_silver\\_eel-class](#)

### Examples

```
require(stacomIR)
stacomI(gr_interface=FALSE,
login_window=FALSE,
database_expected=FALSE)
## Not run:
  bilesP<-new("report_species")
  # split is one of "none", "year", "week", "month
  bilesP<-choice_c(bilesP,
dc=c(5,6,12),
split="year",
anneedebut="2008",
anneefin="2012",
silent=FALSE)
#bilesP<-charge(bilesP) this is used by the graphical interface
bilesP<-connect(bilesP)
bilesP<-calcule(bilesP)
plot(bilesP,plot.type="pie",silent=FALSE)
plot(bilesP,plot.type="barplot",silent=FALSE)
bilesP<-choice_c(bilesP,
dc=c(5,6,12),
split="month",
anneedebut="2015",
anneefin="2016",
silent=FALSE)
bilesP<-charge(bilesP)
bilesP<-connect(bilesP)
plot(bilesP,plot.type="pie",silent=FALSE)
plot(bilesP,plot.type="barplot",silent=FALSE)
#length(unique(bilesP@calcddata$taxa_stage)) # 15
# here creating a vector of length 15 with nice blending colours
color<-c(mycolorrampblue(5),
mycolorrampyellow(5),
mycolorrampred(5))
```



```
plot(bilesp,plot.type="barplot",color=color,silent=TRUE)
summary(bilesp)

## End(Not run)
```

---

r_ann	<i>Annual migration of yellow and silver eel for three fishways / counting devices at the Arzal dam (data from 1995 to 2016)</i>
-------	--

---

### Description

The dataset corresponds to the three fishways located on the Arzal dam, filled with annual data

### Usage

```
r_ann
```

### Format

An object of class [report\\_annual-class](#) with data slot loaded.

---

r_ann_adour	<i>Annual migration of salmon in the Adour and tributaries</i>
-------------	--

---

### Description

The dataset corresponds to the fishways DC=33:40 of the Adour for adult migrant salmon from 1996 to 2005 (annual counts). It has been kindly provided as an example set by the Migradour association.

### Usage

```
r_ann_adour
```

### Format

An object of class [report\\_annual-class](#) with data slot loaded.

---

r_dc	<i>Counting Device (DC) operation from 2000 to 2015 at the Arzal dam (Vilaine, France)</i>
------	--

---

### Description

This data corresponds to the data collected at the vertical slot fishway camera from 2000 to 2015. It represents an object of class [report\\_dc-class](#) with data loaded

### Usage

r\_dc

### Format

An object of class report\_dc with 4 slots:

**data** A dataframe with 544 obs. of 7 variables

**per\_dis\_identifiant** The number of the DC

**per\_date\_debut** Starting time a POSIXct

**per\_date\_fin** Ending time a POSIXct

**ope\_dic\_identifiant** DC id

**per\_commentaires** A comment

**per\_etat\_fonctionnement** Integer 1= working, 0 not working

**per\_tar\_code** The type of operation ("1"=normal operation, "2"=Device stopped in normal operation (e.g. the trap is disactivated for the duration of the fish sorting and counting by operators), "3"=Stopped for maintenance or other problem", "4"="Works but not fully operational, i.e. the camera is not working properly because of high turbidity...", "5"="Not known")

**libelle** label corresponding to per\_tar\_code

**df** the ref\_dc object with 3 slots filled with data corresponding to the iav postgres schema

**horodatedebut** the ref\_horodate with horodate set for starting date

**horodatefin** the ref\_horodate with horodate set for ending date

---

r_df	<i>Overview of the fishway operation at Arzal in (Vilaine France).</i>
------	--

---

### Description

This dataset corresponds to the data collected at the vertical slot fishway in 2015, the fishway is working daily with a cycle depending on tide. This dataset is used to show an example of detailed output for an object of class [report\\_df-class](#) with data loaded

**Usage**

r\_df

**Format**

An object of class report\_df with 4 slots:

**data** A dataframe with 4261 obs. of 7 variables

**per\_dis\_identifiant** The number of the DF

**per\_date\_debut** Starting time a POSIXct

**per\_date\_fin** Ending time a POSIXct

**ope\_dic\_identifiant** DF id

**per\_commentaires** A comment

**per\_etat\_fonctionnement** Integer 1= working, 0 not working

**per\_tar\_code** The type of operation ("1"=normal operation, "2"=Device stopped in normal operation (ie lift ascending, high tide...), "3"="Stopped for maintenance or other problem", "4"="Works but not fully operational, ie flow problem, flood, clogged with debris...", "5"="Not known")

**libelle** label corresponding to per\_tar\_code

**df** the ref\_df object with 3 slots filled with data corresponding to the iav postgres schema

**horodatedebut** the ref\_horodate with horodate set for starting date

**horodatefin** the ref\_horodate with horodate set for ending date'

---

r\_env

*An object of class report\_env with data loaded*

---

**Description**

The dataset corresponds to the daily temperatures and moon phases in Arzal (Vilaine estuary, France). This environmental station is used to analyze conditions in which fish migrated at Arzal dam

**Usage**

r\_env

**Format**

An object of class [report\\_env-class](#) with data slot loaded:

**stationMeasure** the ref\_env object with 5 slots filled with data corresponding to the iav postgres schema

**horodatedebut** object of class ref\_horodate-class : the start date selected

**horodatefin** object of class ref\_horodate-class : the end date selected

**data** A dataframe with 723 rows and 6 variables

- env\_date\_debut** start date
- env\_date\_fin** end date
- env\_methode\_obtention** method of data collection, measured, calculated...
- env\_val\_identifiant** the value of the parameter if qualitative
- env\_valeur\_quantitatif** the value of the parameter if quantitative
- env\_stm\_identifiant** station id

---

r_gew	<i>Wet weight of glass eel from the trapping ladder (Arzal, Vilaine France)</i>
-------	---

---

### Description

Data correspond to glass eel collected in the Vilaine at the trapping ladder (Arzal, France). The years selected are 2009 to 2012, the query used in the [report\\_ge\\_weight-class](#) loads from 2008-08-01 to 2012-08-01 Glass eel are too numerous to be counted. They are weighted and in the stacomi database, a table with daily coefficients (in N glass eel/g) to transform weight into number. The weight is called a "wet weight" as we don't want to drain any of the mucus in glass eel when weighting them. Samples of 50 to 200 glass eel are weighted and then counted to provide an idea of the seasonal evolution of wet weight.

### Usage

r\_gew

### Format

An object of class report\_ge\_weight of length 1.

---

r_mig	<i>Video counting of thin lipped mullet (Liza ramada) in 2015 in the Vilaine (France)</i>
-------	---

---

### Description

This dataset corresponds to the data collected at the vertical slot fishway in 2015, video recording of the thin lipped mullet *Liza ramada* migration

### Usage

r\_mig

**Format**

An object of class report\_mig with 8 slots:

**dc** the ref\_dc object with 4 slots filled with data corresponding to the iav postgres schema

**taxa** the ref\_taxa the taxa selected

**stage** the ref\_stage the stage selected

**timestep** the ref\_timestep\_daily calculated for all 2015

**data** A dataframe with 10304 rows and 11 variables

**ope\_identifiant** operation id

**lot\_identifiant** sample id

**lot\_identifiant** sample id

**ope\_dic\_identifiant** dc id

**lot\_tax\_code** species id

**lot\_std\_code** stage id

**value** the value

**type\_de\_quantite** either effectif (number) or poids (weights)

**lot\_dev\_code** destination of the fishes

**lot\_methode\_obtention** method of data collection, measured, calculated...

**coef\_conversion** A data frame with 0 observations : no quantity are reported for video recording of mullets, only numbers

**time.sequence** A time sequence generated for the report, used internally

---

r\_mig\_char

*Qualitative and quantitative parameters describing Salmon migration at Decize (Loire)*

---

**Description**

The dataset corresponds to the characteristics (qualitative and quantitative) of salmo salar migrating at Decize (Loire river) and Vichy (Allier river) counting device in 2012. It has been loaded as an example for the report\_mig\_char-class and kindly provided by Loire Grands Migrateurs (LOGRAMI).

**Usage**

r\_mig\_char

**Format**

An object of class [report\\_mig\\_char-class](#) with data slot loaded:

**calcddata** slot to be filled with the calcule method

**data** A list of 2 elements

**parqual** values of all the qualitative parameters

**parquan** values of all the quantitative parameters

**dc** the ref\_dc : the control devices selected

**taxa** the ref\_taxa : Salmo salar selected

**stage** the ref\_stage : the stages selected

**par** an object of class [ref\\_par-class](#): the parameters used

**horodatedebut** an object of class [ref\\_horodate-class](#) : the start date selected

**horodatefin** an object of class [ref\\_horodate-class](#) : the end date selected

---

r\_mig\_dc

*Counting device operation for the video recording (Arzal dam, Vilaine, France).*

---

**Description**

This dataset corresponds to the data collected in the vertical slot fishway for the video recording operation. It is loaded along with [r\\_mig](#) to demonstrate the use of the [report\\_mig-class](#) when the database is not loaded

**Usage**

r\_mig\_dc

**Format**

An object of class [report\\_dc-class](#)

---

r_mig_df	<i>Fishway operation for the vertical slot fishway (Arzal dam, Vilaine, France).</i>
----------	--

---

### Description

This dataset corresponds to the data collected at in the vertical slot fishway it is loaded along with [r\\_mig](#) and used to demonstrate the [report\\_mig-class](#) when the database is not installed.

### Usage

```
r_mig_df
```

### Format

An object of class [report\\_df-class](#)

---

r_mig_env	<i>An object of class report_mig_env with data loaded</i>
-----------	---

---

### Description

The dataset correspond to data loaded for the Arzal dam (Vilaine) in 2008, two quantitative parameters (temperature and tide coefficient) and a qualitative parameter (moon phase) are loaded.

### Usage

```
r_mig_env
```

### Format

An object of class [report\\_env-class](#) with data slot loaded:

**report\_mig\_mult** An object of class [report\\_mig\\_mult-class](#)

**report\_env** An object of class [report\\_env-class#'](#)

---

r_mig_interannual	<i>Daily glass eel and elver migration from 1984 to 2016 in the Sevre Niortaise</i>
-------------------	---

---

### Description

The first eel trapping ladder in France was built by Antoine Legault and the team from Rennes in the Sevre Niortaise, Marais Poitevin. Also refurbished several times since 1984 it has been operational at the same location and provides one of the longest series of eel migration. For this reason, the dataset has been loaded as an example for the `report_mig_interannual-class`. It has been kindly provided by the parc du Marais Poitevin.

### Usage

```
r_mig_interannual
```

### Format

An object of class `report_mig_interannual-class` with data loaded.

---

r_mig_interannual_vichy	<i>Seasonality of salmon migration at the Vichy counting station (Loire)</i>
-------------------------	--

---

### Description

This data corresponds to the data collected at the Vichy fishway between 1997 and 2012, video recording of the *Salmo salar* upstream migration. This dataset has been kindly provided by Loire Grands Migrateurs.

### Usage

```
r_mig_interannual_vichy
```

### Format

An object of class `report_mig_interannual-class` with 7 slots:

**dc** the `ref_dc` object with 4 slots filled with data corresponding to the `iav` postgres schema

**taxa** the `ref_taxa` the taxa selected

**stage** the `ref_stage` the stage selected

**start\_year** the `ref_timestep_daily` calculated for all 2015

**end\_year** the `ref_timestep_daily` calculated for all 2015

**data** A dataframe with 7138 rows and 10 variables



**bj\_o\_identifiant** sample id  
**bj\_o\_dis\_identifiant** dc id  
**bj\_o\_tax\_code** species id  
**bj\_o\_std\_code** stage id  
**bj\_o\_annee** year  
**bj\_o\_jour** date  
**bj\_o\_labelquantite** method of data collection, measured, calculated...  
**bj\_o\_horodateexport** date with special format for export  
**bj\_o\_org\_code** organisme provided the data

r\_mig\_mult

*Anguilla migration at the Arzal station (report\_mig\_mult-class)*

### Description

This data corresponds to data collected from three fishways and correspond to the migration station at Arzal (Vilaine estuary, France) in 2011 for three continental stages of eel (*Anguilla anguilla*) : glass eel, yellow eel and silver eel.

### Usage

r\_mig\_mult

### Format

An object of class `report_mig_mult` with slots:

**dc** the `ref_dc` object filled with data  
**taxa** the `ref_taxa` object filled in with data corresponding to `dc`  
**stage** the `ref_stage` object filled in with data corresponding to `dc`, and `taxa`  
**timestep** the `ref_timestep_daily` calculated for all 2011  
**data** A dataframe with 400 rows and 11 variables
 

- ope\_identifiant** operation id
- lot\_identifiant** sample id
- lot\_identifiant** sample id
- ope\_dic\_identifiant** dc id
- lot\_tax\_code** species id
- lot\_std\_code** stage id
- value** the value
- type\_de\_quantite** either effectif (number) or poids (weights)
- lot\_dev\_code** destination of the fishes
- lot\_methode\_obtention** method of data collection, measured, calculated...

**calcddata** slot to be filled with the `calcule` method  
**coef\_conversion** A data frame with 364 observations with daily coefficients to convert from weight to numbers  
**time.sequence** A time sequence generated for the report, used internally by the object

---

r_mig_mult_dc	<i>Counting device operation for three different counting device in Arzal (Vilaine, France)</i>
---------------	---

---

### Description

This dataset corresponds to data collected at three different control devices. This object is of class `report_dc-class` with data loaded it is loaded along with `r_mig_mult` and used in demonstration for the `report_mig_mult-class`

### Usage

```
r_mig_mult_dc
```

### Format

An object of class `report_dc` with 4 slots

**data** A dataframe with 25 rows and 7 variables

**per\_dis\_identifiant** the df or dc unique id

**per\_date\_debut** the starting date of the counting device operation POSIXct

**per\_date\_fin** the ending date of the counting device operation POSIXct

**per\_commentaires** comments on the counting device operation

**per\_etat\_fonctionnement** Boolean, is the counting device working ?

**lot\_std\_code** stage id

**per\_tar\_code** The type of operation for the DC, 1 normal operation, 2 device stopped in normal operation (the stop is considered as normal, e.g. you don't monitor video if a cage has been placed to trap fishes), 3 stopped for maintenance or other problem, 4 the DC is working but not well (escapement in a tank, high turbidity preventing video counting...), 5 unknown operation.

**libelle** The label for the type or operation

**dc** the ref\_dc the DC with 4 slots

**dc\_selectionne** the selected device

**ouvrage** the dam

**station** the monitoring station, a section of river

**data** A dataset of all dc present in the database with 10 observations

**horodatedebut** the beginning date, a `ref_horodate-class`

**horodatefin** the ending date, a `ref_horodate-class`

---

r_mig_mult_df	<i>Fishway operation at the Arzal Dam (Vilaine France) (3 Fishways in 2011)</i>
---------------	---

---

**Description**

This dataset corresponds to the data collected at three different fishways it is loaded along with [r\\_mig\\_mult](#) and used in demonstration for the [report\\_mig\\_mult-class](#)

**Usage**

```
r_mig_mult_df
```

**Format**

An object of class `report_df` [report\\_df-class](#)

---

r_mig_mult_ope	<i>Counting operations for three different counting device in Arzal (Vilaine, France)</i>
----------------	---

---

**Description**

This dataset corresponds to the data collected at three different control devices It is an object of class [report\\_ope-class](#) with data loaded. it is loaded along with [r\\_mig\\_mult](#)

**Usage**

```
r_mig_mult_ope
```

**Format**

An object of class `report_ope`

---

r_mig_ope	<i>An object of class <a href="#">report_ope-class</a> with data loaded</i>
-----------	---

---

### Description

This dataset corresponds to the data collected at the vertical slot fishway in Arzal (Vilaine river estuary, France). The operation of the fishway is dependent on tide and is recorded every 10 minutes. This dataset has to be loaded along with [r\\_mig](#) to demonstrate the use of the [report\\_mig-class](#)

### Usage

r\_mig\_ope

### Format

An object of class report\_ope

---

r_sample_char	<i>Size of yellow and glass eel at the Arzal dam (Vilaine, France) in the fishway and main eel trapping ladder.</i>
---------------	---

---

### Description

This dataset corresponds to the data collected at two different control devices at the Arzal control station (see example in [report\\_sample\\_char-class](#)), all body size parameters (total size, size converted from pixel in video control) are used in example

### Usage

r\_sample\_char

### Format

An object of class [report\\_sample\\_char-class](#)

---

r\_seaa                      *An object of class report\_sea\_age with data loaded*

---

### Description

This dataset corresponds to the data collected at Vichy (left and right bank fishways) and Decize-Saint Leger des Vignes fishways (respectively on the Allier and Loire river, France) in 2012 on the size structure of *Salmo salar*. It has been kindly provided by the Loire Grands Migrateurs (LOGRAMI) association.

### Usage

r\_seaa

### Format

An object of class [report\\_sea\\_age-class](#) with 8 slots:

**dc** the ref\_dc : the control devices selected

**taxa** the ref\_taxa : *Salmo salar* selected

**stage** the ref\_stage : the stages selected

**par** Object of class [ref\\_par-class](#): the parameters used

**horodatedebut** object of class ref\_horodate-class : the start date selected

**horodatefin** object of class ref\_horodate-class : the end date selected

**limit1hm** The size limit, in mm between 1 sea winter fishes and 2 sea winter fishes

**limit2hm** The size limit, in mm between 2 sea winter fishes and 3 sea winter fishes

**data** A dataframe with 898 rows and 20 variables

**ope\_identifiant** operation id

**lot\_identifiant** sample id

**ope\_dic\_identifiant** dc id

**ope\_date\_debut** start date

**ope\_date\_fin** end date

**lot\_effectif** number of fishes

**lot\_tax\_code** species id

**lot\_std\_code** stages id

**tax\_nom\_latin** species latin names

**std\_libelle** stages names

**dev\_code** destination of the fishes id

**dev\_libelle** destination of the fishes names

**par\_nom** parameter name

**car\_par\_code** parameter id

**car\_methode\_obtention** method of data collection, measured, calculated...

**car\_valeur\_quantitatif** the value of the parameter

---

r_silver	<i>Silver eel migration in the Somme</i>
----------	--

---

**Description**

The dataset corresponds to the silver eel traps ("anguilleres) for 2015-2016. This dataset has been kindly provided by the Federation de Peche de la Somme, given the upstream location of the trap, most individuals are female

**Usage**

```
r_silver
```

**Format**

An object of class [report\\_silver\\_eel-class](#) with data slot loaded.

---

setasqualitative	<i>Generic method to transform quantitative par into a qualitative one</i>
------------------	--

---

**Description**

Generic method to transform quantitative par into a qualitative one

**Usage**

```
setasqualitative(object, ...)
```

**Arguments**

object	Object
...	Additional parms

**Author(s)**

cedric.briand

---

```
setasqualitative,report_mig_char-method
    Turns a quantitative parameter into qualitative
```

---

**Description**

Turns a quantitative parameter into qualitative

**Usage**

```
## S4 method for signature 'report_mig_char'
setasqualitative(object, par, silent = FALSE,
  ...)
```

**Arguments**

object	An object of class <a href="#">ref_parquan-class</a>
par	The code of a quantitative parameter
silent	Default FALSE, if TRUE the program should not display messages
...	Additional parms to the cut method <a href="#">cut</a>

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

```
split_per_day          Create a dataframe suitable for charts per 24h and day
```

---

**Description**

This functions takes a data frame with a column with starting time and another with ending time If the period extends over midnight, it will be split into new lines, starting and ending at midnight

**Usage**

```
split_per_day(data, horodatedebut, horodatefin)
```

**Arguments**

data	The dataframe
horodatedebut	The beginning time
horodatefin	The ending time

**Value**

A data frame with four new columns, Hmin (hour min), Hmax (hmax), xmin (day) and xmax (next day), and new rows

**Author(s)**

cedric.briand

**Examples**

```
datatemp<-structure(list(per_dis_identifiant = c(1L, 1L, 1L),
per_date_debut = structure(c(1420056600,
1420071000, 1420081200), class = c("POSIXct", "POSIXt"), tzzone = ""),
per_date_fin = structure(c(1420071000, 1420081200, 1421000000
), class = c("POSIXct", "POSIXt"), tzzone = ""), per_commentaires = c("fonct calcul",
"fonct calcul", "fonct calcul"), per_etat_fonctionnement = c(1L,
0L, 0L), per_tar_code = 1:3, libelle = c("Fonc normal", "Arr ponctuel",
"Arr maint")), .Names = c("per_dis_identifiant", "per_date_debut",
"per_date_fin", "per_commentaires", "per_etat_fonctionnement",
"per_tar_code", "libelle"), row.names = c(NA, 3L), class = "data.frame")
newdf<-split_per_day(data=datatemp,horodatedebut="per_date_debut",
horodatefin="per_date_fin")
```

---

stacom

*Function that loads the loginwindow, tests connection, and then destroys the window*

---

**Description**

Function that loads the loginwindow, tests connection, and then destroys the window

**Usage**

```
stacom(gr_interface=TRUE,login_window=TRUE,database_expected=TRUE)
```

**Arguments**

**gr\_interface** Boolean, if TRUE the program will launch the graphical interface

**login\_window** Boolean, if TRUE a login window will be displayed asking the user to specify user name.

**database\_expected** Boolean, if TRUE pre launch tests will be run to test the connection validity



**Note**

The default behaviour of the program is to run through the following elements

- login window The program opens a login window to prompt the user to give his usernames and passwords. default values will proposed from "C:/program files/stacomir/calcmig.csv" and if this file does not exists, from `file.path(.libPaths(), "stacomir", "config", "calcmig.csv")` as a default. If `login_window=FALSE` the program will skip the login window and use calcmig values for user (uid) and password(pwd) as a default.
- tests for connection Test for the existence of a calcmig.csv file, and then the existence of the file `usr.tr_taxon_tax` where `usr` is the username extracted from calcmig. These tests are only done if `database_expected=TRUE`. If the test don't pass, then the user is prompted for a "login window" even if argument `login_window` was set to `FALSE` at launch.
- graphical interface When either, previous tests have been run successfully, or the value for `database_expected=FALSE` the program will launch. If `graphical_interface` is `TRUE`, the program will use a graphical interface [interface\\_graphique](#) to build the graphical interface, otherwise the program is expected to run through the command line.

When `database_expected=FALSE` a connection to the database is not expected. Therefore test are run by calling examples object stored in Rdata. To change the language use `Sys.setenv(LANG = "fr")` or `Sys.setenv(LANG = "en")`

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
require(stacomir)
#launch stacomir with the graphical interface
## Not run:
stacomir()

## End(Not run)
# launch stacomir but do not prompt for password
## Not run:
stacomir(login_window=FALSE)

## End(Not run)
#launch stacomir without connection to the database
stacomir(gr_interface=FALSE,login_window=FALSE,database_expected=FALSE)
```

---

stacomir\_installed      *Test that the program is installed.*

---

**Description**

Test that the program is installed.

**Usage**

```
stacomi_installed()
```

**Value**

A logical checking if there is calcmig.csv folder

---

summary,report\_dc-method

*summary for report\_dc, write csv and html output, and prints summary statistics*

---

**Description**

summary for report\_dc, write csv and html output, and prints summary statistics

**Usage**

```
## S4 method for signature 'report_dc'  
summary(object, silent = FALSE, ...)
```

**Arguments**

object	An object of class <a href="#">report_dc-class</a>
silent	Should the program stay silent or display messages, default FALSE
...	Additional parameters (not used there)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_df-method

*summary for report\_df, write csv and html output, and prints summary statistics*

---

**Description**

summary for report\_df, write csv and html output, and prints summary statistics

**Usage**

```
## S4 method for signature 'report_df'  
summary(object, silent = FALSE, ...)
```

**Arguments**

object            An object of class [report\\_df-class](#)  
silent            Should the program stay silent or display messages, default FALSE  
...                Additional parameters (not used there)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_mig-method

*summary for report\_mig calls functions funstat and funtable to create migration overviews and generate csv and html output in the user data directory*

---

**Description**

summary for report\_mig calls functions funstat and funtable to create migration overviews and generate csv and html output in the user data directory

**Usage**

```
## S4 method for signature 'report_mig'  
summary(object, silent = FALSE, ...)
```

**Arguments**

object            An object of class [report\\_mig-class](#)  
silent            Should the program stay silent or display messages, default FALSE  
...                Additional parameters (not used there)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_mig\_char-method  
*summary for report\_mig\_char*

---

**Description**

summary for report\_mig\_char

**Usage**

```
## S4 method for signature 'report_mig_char'
summary(object, silent = FALSE, ...)
```

**Arguments**

object	An object of class <a href="#">report_mig_char-class</a>
silent	Should the program stay silent or display messages, default FALSE
...	Additional parameters

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_mig\_interannual-method  
*summary for report\_mig\_interannual provides summary statistics for the latest year (if silent=TRUE), or the year selected in the interface, if silent=FALSE. Mean, min and max are historical statistics with the selected year excluded from the historical dataset.*

---

**Description**

summary for report\_mig\_interannual provides summary statistics for the latest year (if silent=TRUE), or the year selected in the interface, if silent=FALSE. Mean, min and max are historical statistics with the selected year excluded from the historical dataset.

**Usage**

```
## S4 method for signature 'report_mig_interannual'
summary(object, silent = FALSE, ...)
```

**Arguments**

object	An object of class <a href="#">report_mig_interannual-class</a>
silent	Should the program stay silent or display messages, default FALSE
...	Additional parameters (not used there)

**Value**

A list, one element per DC

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_mig\_mult-method

*summary for report\_mig\_mult calls functions funstat and funtable to create migration overviews and generate csv and html output in the user data directory*

---

**Description**

summary for report\_mig\_mult calls functions funstat and funtable to create migration overviews and generate csv and html output in the user data directory

**Usage**

```
## S4 method for signature 'report_mig_mult'  
summary(object, silent = FALSE, ...)
```

**Arguments**

object	An object of class <a href="#">report_mig_mult-class</a>
silent	Should the program stay silent or display messages, default FALSE
...	Additional parameters (not used there)

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_sample\_char-method

*summary for report\_sample\_char*

---

**Description**

summary for report\_sample\_char

**Usage**

```
## S4 method for signature 'report_sample_char'  
summary(object, silent = FALSE, ...)
```

**Arguments**

object           An object of class [report\\_sample\\_char-class](#)  
silent           Should the program stay silent or display messages, default FALSE  
...               Additional parameters

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_sea\_age-method  
*summary for report\_sea\_age*

---

**Description**

summary for report\_sea\_age

**Usage**

```
## S4 method for signature 'report_sea_age'  
summary(object, silent = FALSE, ...)
```

**Arguments**

object           An object of class [report\\_sea\\_age-class](#)  
silent           Default FALSE, if TRUE the program should no display messages.  
...               Additional parameters

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_silver\_eel-method  
*summary for report\_silver\_eel*

---

**Description**

summary for report\_silver\_eel

**Usage**

```
## S4 method for signature 'report_silver_eel'  
summary(object, silent = FALSE, ...)
```

**Arguments**

object            An object of class [report\\_silver\\_eel-class](#)  
 silent            Should the program stay silent or display messages, default FALSE  
 ...                Additional parameters

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

summary,report\_species-method

*summary for report\_species generate csv and html output in the user data directory*

---

**Description**

summary for report\_species generate csv and html output in the user data directory

**Usage**

```
## S4 method for signature 'report_species'
summary(object, silent = FALSE)
```

**Arguments**

object            An object of class [report\\_species-class](#)  
 silent            Should the program stay silent or display messages, default FALSE

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

supprime

*Generic method to delete entires from the database*

---

**Description**

Generic method to delete entires from the database

**Usage**

```
supprime(object, ...)
```

**Arguments**

object	Object
...	Additional parms

**Author(s)**

cedric.briand

---

supprime,ref\_coe-method

*supprime method for "ref\_coe" class*

---

**Description**

supprime method for "ref\_coe" class

**Usage**

```
## S4 method for signature 'ref_coe'  
supprime(object, tax, std, silent = FALSE)
```

**Arguments**

object	An object of class <a href="#">ref_coe-class</a>
tax	'2038=Anguilla anguilla'
std	'CIV=civelle'
silent	Default FALSE, if TRUE the program should no display messages

**Value**

nothing

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>



---

supprime,report\_mig\_interannual-method  
*supprime method for report\_mig\_interannual class*

---

**Description**

supprime method for report\_mig\_interannual class

**Usage**

```
## S4 method for signature 'report_mig_interannual'  
supprime(object)
```

**Arguments**

object            An object of class [report\\_mig\\_interannual-class](#)

**Value**

nothing

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

supprime,report\_sea\_age-method  
*supprime method for report\_mig\_interannual class*

---

**Description**

supprime method for report\_mig\_interannual class

**Usage**

```
## S4 method for signature 'report_sea_age'  
supprime(object, silent = FALSE)
```

**Arguments**

object            An object of class [report\\_sea\\_age-class](#)  
silent            Default FALSE, if TRUE the program should no display messages

**Value**

nothing

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

vector\_to\_listsql      *Transforms a vector into a string called within an sql command e.g.  
c('A','B','C') => in ('A','B','C')*

---

**Description**

Transforms a vector into a string called within an sql command e.g. c(A,B,C) => in ('A','B','C')

**Usage**

```
vector_to_listsql(vect)
```

**Arguments**

vect                    a character vector

**Value**

listsq a list of value

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

write\_database      *Generic method write\_database*

---

**Description**

Generic method write\_database

**Usage**

```
write_database(object, ...)
```

**Arguments**

object                Object  
...                    Additional parms

**Author(s)**

cedric.briand

---

write\_database,report\_ge\_weight-method

*Function to write data to the stacomi database for [report\\_ge\\_weight-class](#)*

---

### Description

Data will be written in tj\_coefficientconversion\_coe table, if the class retrieves some data from the database, those will be deleted first.

### Usage

```
## S4 method for signature 'report_ge_weight'  
write_database(object, silent = FALSE)
```

### Arguments

object	An object of class <a href="#">report_ge_weight-class</a>
silent	Boolean, if TRUE, information messages are not displayed

### Value

An object of class [report\\_ge\\_weight-class](#)

### Author(s)

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

write\_database,report\_mig-method

*Command line method to write the daily and monthly counts to the [t\\_bilanmigrationjournalier\\_bjo](#) table*

---

### Description

Daily values are needed to compare migrations from year to year, by the class [report\\_mig\\_interannual-class](#). They are added by by this function.

### Usage

```
## S4 method for signature 'report_mig'  
write_database(object, silent = TRUE,  
  check_for_bjo = TRUE)
```

**Arguments**

object            an object of class [report\\_mig](#)  
 silent            : TRUE to avoid messages  
 check\_for\_bjo    : do you want to check if data are already present in the bjo table, and delete them, this param was added otherwise connect method when called from report\_mig\_interannual runs in loops

**Note**

the user is asked whether or not he wants to overwrite data, if no data are present in the database, the import is done anyway. The name of the database is retrieved from the odbc link

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

**Examples**

```
## Not run:
stacomi(gr_interface=FALSE,login_window=FALSE,database_expected=FALSE)
data("r_mig")
r_mig<-calculer(r_mig)
write_database(report_mig=r_mig,silent=FALSE)

## End(Not run)
```

---

```
write_database,report_sea_age-method
```

*Command line method to write the characteristic "sea age" (car\_par\_code='A124') into the tj\_caracteristiquelot\_car table in the user's scheme*

---

**Description**

The sea age characteristic is calculated from the measured or calculated size of salmon and with a size/age rule defined by the user . the name of the database is retrieved from the odbc link defined in calcmig.csv

**Usage**

```
## S4 method for signature 'report_sea_age'
write_database(object, silent = TRUE)
```

**Arguments**

object            an object of class [report\\_sea\\_age-class](#)  
 silent            : Default FALSE, if TRUE the program should no display messages.

**Author(s)**

Cedric Briand <cedric.briand"at"eptb-vilaine.fr>

---

xtable,report\_annual-method

*xtable function for [report\\_annual-class](#) create an xtable objet but also assigns an `add.to.column` argument in `envir_stacomi`, for later use by the `print.xtable` method.*

---

**Description**

xtable function for [report\\_annual-class](#) create an xtable objet but also assigns an `add.to.column` argument in `envir_stacomi`, for later use by the `print.xtable` method.

**Usage**

```
## S4 method for signature 'report_annual'  
xtable(x, caption = NULL, label = NULL,  
       align = NULL, digits = 0, display = NULL, auto = FALSE,  
       dc_name = NULL, tax_name = NULL, std_name = NULL)
```

**Arguments**

<code>x</code> ,	an object of class "report_annual"
<code>caption</code> ,	see xtable
<code>label</code> ,	see xtable
<code>align</code> ,	see xtable, overridden if NULL
<code>digits</code>	default 0
<code>display</code>	see xtable
<code>auto</code>	see xtable
<code>dc_name</code>	A string indicating the names of the DC, in the order of <code>x@dc@dc_selectionne</code> if not provided DC codes are used.
<code>tax_name</code>	A string indicating the names of the taxa, if not provided latin names are used
<code>std_name</code>	A string indicating the stages names, if not provided then <code>std_libelle</code> are used

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xtable,report\_mig\_char-method

*xtable function for [report\\_mig\\_char-class](#) create an xtable objet to be later used by the print.xtable method.*

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### Description

xtable function for [report\\_mig\\_char-class](#) create an xtable objet to be later used by the print.xtable method.

### Usage

```
## S4 method for signature 'report_mig_char'  
xtable(x, caption = NULL, label = NULL,  
       align = NULL, digits = NULL, display = NULL, auto = FALSE, ...)
```

### Arguments

x,	an object of class "report_mig_char"
caption,	see xtable
label,	see xtable
align,	see xtable, overridden if NULL
digits,	see xtable
display	see xtable
auto	see xtable
...	Additional parameters

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