

# Package: starfish (via r-universe)

March 3, 2025

**Title** Internal helpers

**Version** 0.0.9.9001

**Description** Floating deep down in the sea starfish lives healthy and happily.

**License** CC BY 4.0

**Encoding** UTF-8

**Roxygen** list(markdown = TRUE)

**RoxygenNote** 7.3.1

**URL** <https://github.com/cathblatter/starfish>,  
<https://cathblatter.github.io/starfish/>

**BugReports** <https://github.com/cathblatter/starfish/issues>

**Imports** ggplot2, methods, dplyr, tibble, lubridate

**Depends** R (>= 2.10)

**LazyData** true

**Suggests** testthat (>= 3.0.0)

**Config/testthat/edition** 3

**Repository** <https://cathblatter.r-universe.dev>

**RemoteUrl** <https://github.com/cathblatter/starfish>

**RemoteRef** HEAD

**RemoteSha** 4600030c655e74ee28b9066a9cb3c5fdd6fccf79

## Contents

create_table . . . . .	2
dict_hierarchie . . . . .	3
dict_pepzeiten . . . . .	3
facet_custom . . . . .	3
filter_shifts_where . . . . .	5
geom_covid_starfish . . . . .	5

get_starfish_palettes . . . . .	6
scale_custom . . . . .	7
scale_x_date_starfish . . . . .	8
starfish_pal . . . . .	9
tbl_study_period . . . . .	10
theme_starfish . . . . .	10
wd_data_rd . . . . .	11
wd_deidata_rd . . . . .	11
wd_prepdata_rd . . . . .	12
wd_procddata_rd . . . . .	12
wd_rd . . . . .	12

<b>Index</b>	<b>13</b>
--------------	-----------

---

create_table	<i>Reverse engineer a table from its description from a SQL query</i>
--------------	---

---

## Description

Reverse engineer a table from its description from a SQL query

## Usage

```
create_table(tbl_name)
```

## Arguments

tbl_name	Table with holds the value with both the TABLE_NAME as well as the COLUMN_NAME. See details and examples
----------	--

## Details

The table to create derives its name from the TABLE\_NAME column and the columns from the COLUMN\_NAME column. Overall, the output comes from an Oracle DB

## Value

a tibble assigned to the GlobalEnv

## Examples

```
# mockup table description
(tbl_descr <- tibble::tibble(TABLE_NAME = c("my_table"),
                           COLUMN_NAME = c("var1", "var2", "var3")))

# now print the table
## Not run: create_table(tbl_descr)
```

---

dict_hierarchie	<i>dict_hierarchie</i>
-----------------	------------------------

---

**Description**

dict\_tbl about pep\_hierarchie dataset

**Usage**

dict\_hierarchie

**Format**

An object of class tbl\_df (inherits from tbl, data.frame) with 27 rows and 3 columns.

---

dict_pepzeiten	<i>dict_pepzeiten</i>
----------------	-----------------------

---

**Description**

dict\_tbl about pep\_zeiten dataset

**Usage**

dict\_pepzeiten

**Format**

An object of class tbl\_df (inherits from tbl, data.frame) with 32 rows and 6 columns.

---

facet_custom	<i>STARFISH customized facets with units on right side</i>
--------------	--

---

**Description**

STARFISH customized facets with units on right side

**Usage**

```
facet_wrap_starfish(  
  facets = ~anon_unit,  
  ncol = 1,  
  nrow = NULL,  
  strip.position = "right",  
  drop = TRUE,  
  scales = "fixed",  
  shrink = TRUE,  
  labeller = "label_value",  
  as.table = TRUE,  
  switch = NULL,  
  dir = "h",  
  ...  
)
```

```
facet_wrap_sf(  
  facets = ~anon_unit,  
  ncol = 1,  
  nrow = NULL,  
  strip.position = "right",  
  drop = TRUE,  
  scales = "fixed",  
  shrink = TRUE,  
  labeller = "label_value",  
  as.table = TRUE,  
  switch = NULL,  
  dir = "h",  
  ...  
)
```

**Arguments**

facets	defaults to variable anon_unit
ncol	defaults to 1
nrow	defaults to NULL
strip.position	"right"
drop	default: TRUE
scales	default: fixed
shrink	default fixed
labeller	"label_value"
as.table	TRUE
switch	NULL
dir	"h"
...	to pass to ggplot2::facet_wrap

**Value**

a facet

---

filter\_shifts\_where *Filter all shifts where a certain condition is met*

---

**Description**

Filter all shifts where a certain condition is met

**Usage**

```
filter_shifts_where(.data, ..., shift_var = shift_id)
```

**Arguments**

.data	a data frame or tibble
...	condition to pass to dplyr::filter
shift_var	variable with the shift_identified, default = "shift_id"

**Value**

a dataframe containing all shift-entries where a condition is met

---

geom\_covid\_starfish *Highlighting Covid timeframe in NH*

---

**Description**

Highlighting Covid timeframe in NH

**Usage**

```
geom_covid_starfish(  
  date1 = "2020-03-17",  
  date2 = "2021-12-01",  
  color = "grey30",  
  linetype = "dashed",  
  alpha = 0.6  
)
```

**Arguments**

date1	default set
date2	default set
color	default set
linetype	default set
alpha	default set

**Value**

a custom geom

---

`get_starfish_palettes` *Get names of all unique palettes provided in starfish*

---

**Description**

Get names of all unique palettes provided in starfish

**Usage**

```
get_starfish_palettes(full = FALSE)
```

**Arguments**

full	Whether to include full palette names (with suffixes, e.g. <code>_cont</code> ) or just stubs
------	---

**Value**

Vector of palette name stubs or full names

**Examples**

```
get_starfish_palettes()
```

---

scale_custom	<i>Custom color and fill scales</i>
--------------	-------------------------------------

---

**Description**

Custom coloring and filling functions based on unique color palettes

**Usage**

```
scale_color_starfish_d(palette = "starfish", extend = FALSE, ...)
```

```
scale_colour_starfish_d(palette = "starfish", extend = FALSE, ...)
```

```
scale_fill_starfish_d(palette = "starfish", extend = FALSE, ...)
```

```
scale_color_starfish_op(  
  palette = "starfish",  
  val_names = c("good", "neutral", "bad"),  
  ...  
)
```

```
scale_colour_starfish_op(  
  palette = "starfish",  
  val_names = c("good", "neutral", "bad"),  
  ...  
)
```

```
scale_fill_starfish_op(  
  palette = "starfish",  
  val_names = c("good", "neutral", "bad"),  
  ...  
)
```

```
scale_color_starfish_div(palette = "starfish", ...)
```

```
scale_colour_starfish_div(palette = "starfish", ...)
```

```
scale_fill_starfish_div(palette = "starfish", ...)
```

```
scale_color_starfish_c(palette = "starfish", ...)
```

```
scale_colour_starfish_c(palette = "starfish", ...)
```

```
scale_fill_starfish_c(palette = "starfish", ...)
```

**Arguments**

palette	Name of color palette
---------	-----------------------

extend	Whether to extend discrete color palette to make sufficient colors for levels needed
...	Additional arguments to be passed to internal scale function
val_names	For opinionated scales, defaults to "good", "neutral", "bad"

## Details

Specific functions include:

- `scale_(color/colour/fill)_starfish_d`: Discrete palette with either fixed or dynamically extended number of shades
- `scale_(color/colour/fill)_starfish_op\b`: Discrete palette with fixed colors for "good", "bad", and "neutral"
- `scale_(color/colour/fill)_starfish_div`: Continuous diverging color palette, must contain negative, neutral, positive values
- `scale_(color/colour/fill)_starfish_c`: Continuous color palette

## Examples

```
library(ggplot2)
library(starfish)
ggplot(diamonds[1:2000,], aes(x = cut, y = carat,
color = cut)) +
  geom_point() +
  scale_color_starfish_d() +
  theme_starfish()
```

---

scale\_x\_date\_starfish *Custom starfish date scale*

---

## Description

Custom starfish date scale

## Usage

```
scale_x_date_starfish(
  date_breaks = "1 year",
  date_labels = "%Y",
  expand = c(0.05, 0),
  ...
)

scale_x_date_sf(
  date_breaks = "1 year",
  date_labels = "%Y",
  expand = c(0.05, 0),
  ...
)
```



**Arguments**

date_breaks	defaults to 1 year
date_labels	defaults to YYYY
expand	how to expand the axes
...	further args passed

**Value**

a custom scale

---

starfish_pal	<i>STARFISH palette with six dimensions</i>
--------------	---

---

**Description**

STARFISH palette with six dimensions

**Usage**

```
starfish_pal  
starfish_pal_op  
starfish_pal_cont  
starfish_pal_div
```

**Format**

An object of class character of length 17.  
An object of class character of length 3.  
An object of class character of length 2.  
An object of class character of length 3.

---

tbl_study_period	<i>tbl_study_period</i>
------------------	-------------------------

---

**Description**

a table containing all days of the study period

- as dates
- as integer representation
- days in month
- weekdays
- months
- weekends

**Usage**

```
tbl_study_period
```

**Format**

An object of class `data.frame` with 1826 rows and 5 columns.

---

theme_starfish	<i>STARFISH ggplot theme</i>
----------------	------------------------------

---

**Description**

[ggplot2](#) plot theme based on...

**Usage**

```
theme_starfish(base_theme = ggplot2::theme_minimal(), ...)
```

**Arguments**

base_theme	A base theme upon which additional theme-specific options are applied
...	Frurther arguments passed to <code>ggplot2::theme()</code>

**References**

[https://github.com/gadenbuie/ggpomological/blob/master/R/theme\\_pomological.R](https://github.com/gadenbuie/ggpomological/blob/master/R/theme_pomological.R)

**See Also**

[ggplot2::theme](#)

**Examples**

```
## Not run:  
library(ggplot2)  
data <- data.frame(x = 1:10, y = 1:10)  
ggplot(data, aes(x, y)) + geom_point() + theme_starfish()  
  
## End(Not run)
```

---

wd\_data\_rd

*Internal directories*

---

**Description**

paths to the project directory - data folder

**Usage**

wd\_data\_rd

**Format**

An object of class character of length 1.

---

wd\_deidata\_rd

*Internal directories*

---

**Description**

paths to the project directory - de-id'd data folder

**Usage**

wd\_deidata\_rd

**Format**

An object of class character of length 1.

---

wd_prepdata_rd	<i>Internal directories</i>
----------------	-----------------------------

---

**Description**

paths to the project directory - prepared data folder

**Usage**

wd\_prepdata\_rd

**Format**

An object of class character of length 1.

---

wd_procdata_rd	<i>Internal directories</i>
----------------	-----------------------------

---

**Description**

paths to the project directory - prepared data folder

**Usage**

wd\_procdata\_rd

**Format**

An object of class character of length 1.

---

wd_rd	<i>Internal directories</i>
-------	-----------------------------

---

**Description**

paths to the project directory

**Usage**

wd\_rd

**Format**

An object of class character of length 1.

# Index

## \* datasets

dict\_hierarchie, 3  
dict\_pepzeiten, 3  
starfish\_pal, 9  
tbl\_study\_period, 10  
wd\_data\_rd, 11  
wd\_deidata\_rd, 11  
wd\_prepdata\_rd, 12  
wd\_procdata\_rd, 12  
wd\_rd, 12

create\_table, 2

dict\_hierarchie, 3  
dict\_pepzeiten, 3

facet\_custom, 3  
facet\_wrap\_sf (facet\_custom), 3  
facet\_wrap\_starfish (facet\_custom), 3  
filter\_shifts\_where, 5

geom\_covid\_starfish, 5  
get\_starfish\_palettes, 6  
ggplot2, 10  
ggplot2::theme, 10

scale\_color\_starfish\_c (scale\_custom), 7  
scale\_color\_starfish\_d (scale\_custom), 7  
scale\_color\_starfish\_div  
(scale\_custom), 7  
scale\_color\_starfish\_op (scale\_custom),  
7  
scale\_colour\_starfish\_c (scale\_custom),  
7  
scale\_colour\_starfish\_d (scale\_custom),  
7  
scale\_colour\_starfish\_div  
(scale\_custom), 7  
scale\_colour\_starfish\_op  
(scale\_custom), 7  
scale\_custom, 7

scale\_fill\_starfish\_c (scale\_custom), 7  
scale\_fill\_starfish\_d (scale\_custom), 7  
scale\_fill\_starfish\_div (scale\_custom),  
7  
scale\_fill\_starfish\_op (scale\_custom), 7  
scale\_x\_date\_sf  
(scale\_x\_date\_starfish), 8  
scale\_x\_date\_starfish, 8  
starfish\_pal, 9  
starfish\_pal\_cont (starfish\_pal), 9  
starfish\_pal\_div (starfish\_pal), 9  
starfish\_pal\_op (starfish\_pal), 9

tbl\_study\_period, 10  
theme\_starfish, 10

wd\_data\_rd, 11  
wd\_deidata\_rd, 11  
wd\_prepdata\_rd, 12  
wd\_procdata\_rd, 12  
wd\_rd, 12