Package 'wacolors'

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Title Colorblind-Friendly Palettes from Washington State

Version 0.3.1

Description Color palettes taken from the landscapes and cities of Washington
state. Colors were extracted from a set of photographs, and then combined to
form a set of continuous and discrete palettes. Continuous palettes were
designed to be perceptually uniform, while discrete palettes were chosen to
maximize contrast at several different levels of overall brightness and
saturation. Each palette has been evaluated to ensure colors are
distinguishable by colorblind people.

Depends R (>= 3.0)

Imports graphics, grDevices, ggplot2, scales

Suggests cli, rstudioapi, colorspace, viridis, knitr, rmarkdown,
testthat (>= 3.0.0)

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URL <https://github.com/CoryMcCartan/wacolors>

Encoding UTF-8

RoxygenNote 7.1.2

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Repository CRAN

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R topics documented:

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pal_functions   *Output a character vector containing code for a* ggplot2 *scale*

Description

Call this function to get the code for the scale_* functions for a palette. If using RStudio, the code
will be loaded at the console prompt; otherwise, it will be printed at the terminal. Assumes that
ggplot2 has been loaded into the namespace, or will be by the time the scales are used.

Usage

```
pal_functions(
  palette,
  which = NULL,
  type = c("discrete", "continuous"),
  reverse = FALSE
)
```

Arguments

palette	a [wacolors] palette or palette name.
which	if not NULL, the indices or names of a subset of colors to use.
type	Either continuous, discrete, or binned. Use continuous if you want to auto-matically interpolate between colors. Custom scale midpoints are not supported (see [scale_fill_wa_c()](#)).
reverse	TRUE if the colors should be reversed.

Value

The generated code, invisibly, as a character vector.

Examples

```
pal_functions("rainier")
```

---

pal_vector   *Output a character vector containing code for a palette*

Description

Call this function to get the code for a character vector containing a palette. If using RStudio, the code will be loaded at the console prompt; otherwise, it will be printed at the terminal.

Usage

```
pal_vector(
  palette,
  n,
  which = NULL,
  type = c("discrete", "continuous"),
  reverse = FALSE
)
```

Arguments

palette	The name of the palette (partial matching supported), or an actual palette from [wacolors].
n	The number of colors in the palette. If this exceeds the actual number and type is not provided, it will be set to continuous.
which	if not NULL, the indices or names of a subset of colors to use.
type	Either continuous or discrete. Use continuous if you want to automatically interpolate between colors.
reverse	TRUE if palette should be reversed.

Value

The generated code, invisibly, as a character vector.

Examples

```
pal_vector("rainier", 4)
```

---

scale_color_wa_d   *Color palettes for* ggplot2

Description

Color palettes for ggplot2

Usage

```
scale_color_wa_d(palette = "rainier", which = NULL, ..., reverse = FALSE)

scale_fill_wa_d(palette = "rainier", which = NULL, ..., reverse = FALSE)

scale_color_wa_c(
  palette = "sound_sunset",
  which = NULL,
  midpoint = NULL,
  ...,
  reverse = FALSE
)

scale_fill_wa_c(
  palette = "sound_sunset",
  which = NULL,
  midpoint = NULL,
  ...,
  reverse = FALSE
)

scale_color_wa_b(palette = "sound_sunset", which = NULL, ..., reverse = FALSE)

scale_fill_wa_b(palette = "sound_sunset", which = NULL, ..., reverse = FALSE)

scale_colour_wa_d(palette = "rainier", which = NULL, ..., reverse = FALSE)

scale_colour_wa_c(
  palette = "sound_sunset",
  which = NULL,
  midpoint = NULL,
  ...,
  reverse = FALSE
)

scale_colour_wa_b(palette = "sound_sunset", which = NULL, ..., reverse = FALSE)
```

Arguments

palette   a wacolors palette or palette name.

which	if not NULL, the indices or names of a subset of colors to use.
...	Other arguments passed on to [ggplot2::discrete_scale()](), [ggplot2::continuous_scale()](), or [ggplot2::binned_scale()]() to control name, limits, breaks, labels and so forth.
reverse	TRUE if the colors should be reversed.
midpoint	if not NULL and at least one limit is not provided, the value to center the scale at. Useful for diverging scales.

Value

A [ggplot2::Scale]() object.

Examples

```
library(ggplot2)

ggplot(mtcars, aes(mpg, wt)) +
    geom_point(aes(color = factor(cyl), size=hp)) +
    scale_color_wa_d()

ggplot(mtcars, aes(mpg, wt)) +
    geom_point(aes(color = hp)) +
    scale_color_wa_c("palouse",  which=c("snake", "wheat"))

ggplot(diamonds) +
    geom_bar(aes(x = cut, fill = clarity)) +
    scale_fill_wa_d(wacolors$sound_sunset, reverse=TRUE)
```

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wacolors	*Washington State Color Palettes*

Description

A collection of colorblind-friendly color palettes for various settings in the state of Washington. Colors were extracted from a set of photographs, and then combined to form a set of continuous and discrete palettes. Continuous palettes were designed to be perceptually uniform, while discrete palettes were chosen to maximize contrast at several different levels of overall brightness and saturation. Each palette has been evaluated to ensure colors are distinguishable by colorblind people.
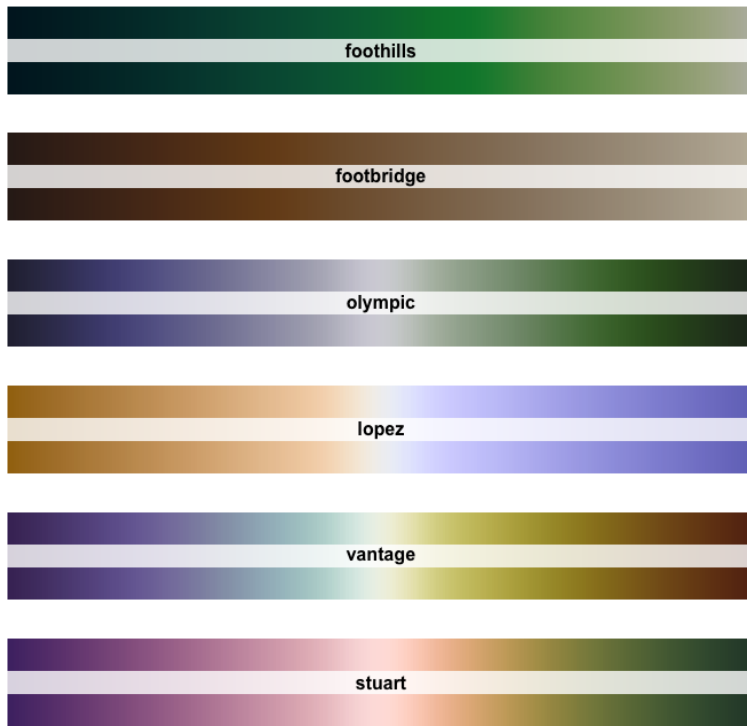
Usage

```
wacolors
```

Format

A list of character vectors containing the color palettes. Discrete palette vectors contain names for each color.

Details

Discrete palettes contain at most seven colors. Don't create graphics that use more than seven discrete colors. You can color a map with four. Anything more risks confusion. Consider differentiating through faceting or labels, instead.

Available continuous palettes:

sound_sunset

ferries

forest_fire

sea_star

sea

volcano

baker

diablo

puget

mountains

gorge

foothills

footbridge

olympic

lopez

vantage

stuart

Available discrete palettes:

lake	ragwort	lodge	trees	ground	winter_sky	paintbrush
			rainier			

trees	stone	tips	road	sunbreak	stump
		washington_pass			

snake	wheat	fallow	hills	canyon	sky
		palouse			

trees	stream	fern	bark	mountains
		forest		

larch	shrub	rock	moss	sky	dirt
		larch			

surf	sea	rocks	sand	sunset	sky
		coast			

trees	grass	sea	driftwood	clouds
		san_juan		

purple	gold	brick	cherry	stone
		uw		

sea	shrub	lighthouse	rust
		fort_worden	

red	yellow	violet	orange	purple	mountains
			skagit		

green	yellow	blue	tan
		flag	

Examples

```
wacolors$rainier
wacolors$palouse[1:4]
```

---

wa_pal   *Washington State Color Palette Generator*

Description

Generate `palette` objects from the `wacolors` list

Usage

```
wa_pal(
  palette,
  n,
  which = NULL,
  type = c("discrete", "continuous"),
  reverse = FALSE
)
```

Arguments

palette	The name of the palette (partial matching supported), or an actual palette from [wacolors].
n	The number of colors in the palette. If this exceeds the actual number and type is not provided, it will be set to continuous.
which	if not NULL, the indices or names of a subset of colors to use.
type	Either continuous or discrete. Use continuous if you want to automatically interpolate between colors.
reverse	TRUE if palette should be reversed.

Value

A vector of colors of type palette. Use the plot() function to plot the palette. If the cli package is installed, printing the palette to the console will also show its colors.

Examples

```
wa_pal("rainier")
wa_pal(wacolors$rainier)
wa_pal("sound_sunset", 20, "continuous")
wa_pal("washington_pass", reverse=TRUE)
```

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