

Package ‘wacolors’

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Title Colorblind-Friendly Palettes from Washington State

Version 0.2.1

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

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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 automatically 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)

```

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 palettes (use [wa_pal\(\)](#) to visualize):

- rainier
- washington_pass
- palouse
- forest
- larch
- coast
- uw

- fort_worden
- skagit
- flag
- sound_sunset
- ferries
- forest_fire
- sea
- sea_star
- volcano
- baker
- diablo
- mountains
- gorge
- foothills
- olympic
- vantage

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

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

Value

A vector of colors of type `palette`. If printed to the console, will plot the palette as well.

Examples

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

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