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.

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Author  Cory McCartan [aut, cre]
Maintainer  Cory McCartan <cmccartan@g.harvard.edu>
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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.
scale_color_wa_d

Usage

```r
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

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

scale_color_wa_d

Color palettes for `ggplot2`

Description

Color palettes for `ggplot2`

Usage

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

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

```r
scale_color_wa_c(
  palette = "sound_sunset",
  which = NULL,
  midpoint = NULL,
```

```r
```
...,
   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)) +
```r
# Example code using wacolors

# Example code using wacolors

ggplot(mtcars, aes(mpg, wt)) +
  geom_point(aes(color = 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

```r
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

- **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. If printed to the console, will plot the palette as well.

Examples

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