Package: NatParksPalettes (via r-universe)

September 17, 2024

Type Package

Title Color Palettes Inspired by National Parks

Version 0.2.0

Author Kevin Blake [aut, cre]

Maintainer Kevin Blake <kevinsblake@gmail.com>

Description Color palettes for data visualization inspired by National Parks. Currently contains 15 color schemes and checks for colorblind-friendliness of palettes.

Imports ggplot2

License MIT + file LICENSE

Encoding UTF-8

LazyData true

RoxygenNote 7.2.1

URL https://github.com/kevinsblake/NatParksPalettes

Repository https://kevinsblake.r-universe.dev

RemoteUrl https://github.com/kevinsblake/natparkspalettes

RemoteRef HEAD

RemoteSha f7ba3b5061829c3f3d332734597f426513c012f6

Contents

colorblind.friendly . . . 2
colorblind_palettes . . . 2
display_all . . . 3
natparks.pals . . . 4
NatParksPalettes . . . 5
scale_color_natparks_c . . . 5
scale_color_natparks_d . . . 6
scale_colour_natparks_c . . . 7
scale_colour_natparks_d . . . 8
scale_fill_natparks_c . . . 9
scale_fill_natparks_d . . . 9

Index **11**

`colorblind.friendly` *Colorblind-Friendly Palette Check*

Description

Checks whether a palette is colorblind-friendly. Colorblind-friendliness tested using the 'colorblindcheck' package. To be colorblind-friendly, all colors in the palettes must be distinguishable with deuteranopia, protanopia, and tritanopia.

Usage

```
colorblind.friendly(palette_name)
```

Arguments

`palette_name`	Name of Palette. Choices are: `Acadia`, `Arches`, `Arches2`, `Banff`, `Bryce Canyon`, `CapitolReef`, `Charmonix`, `Cuyahoga`, `DeathValley`, `Denali`, `Everglades`, `Glacier`, `GrandCanyon`, `Halekala`, `IguazuFalls`, `KingsCanyon`, `LakeNakuru`, `Olympic`, `Redwood`, `RockyMtn`, `Saguaro`, `SmokyMtns`, `SouthDowns`, `Torres`, `Triglav`, `WindCave`, `Volcanoes`, `Yellowstone`, and `Yosemite`.

Value

TRUE/FALSE value whether palette is colorblind-friendly

Examples

```
colorblind.friendly("DeathValley")
```

`colorblind_palettes` *Names of colorblind-friendly palettes*

Description

Lists all palettes that are colorblind-friendly in the package. To be colorblind-friendly, all colors in the palettes must be distinguishable with deuteranopia, protanopia, and tritanopia. Use `natparks.pals` to construct palettes or `colorblind.friendly` to test for colorblind-friendliness.

Usage

```
colorblind_palettes
```

Format

An object of class `character` of length 12.

`display_all` *View all Palettes available*

Description

Function for viewing all palettes available in NatParksPalettes.

Usage

```
display_all(
  n,
  sequential = FALSE,
  colorblind_only = FALSE,
  direction = 1,
  override.order = FALSE
)
```

Arguments

`n`	Number of requested colors. If n is left blank, default palette is returned.
`sequential`	Should palettes displayed all at once, or one at a time. Default is all at once (FALSE).
`colorblind_only`	Should only colorblind friendly palettes be returned? Default is set to FALSE.
`direction`	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed
`override.order`	Colors are picked from palette to maximize readability and aesthetics. This means that colors are not always selected in sequential order from the full palette. If override.order is set to TRUE, colors are selected in sequential order from the full palette instead. Default is FALSE.

Value

Plot of all color palettes available

Examples

```
# All Palettes
display_all(sequential = FALSE, colorblind_only = FALSE)

# All Colorblind Palettes
display_all(sequential = FALSE, colorblind_only = TRUE)

# 5 Colors of all Palettes
display_all(5, sequential = FALSE, colorblind_only = FALSE)
```

`natparks.pals` *National Parks Palette Generator*

Description

Color palettes inspired by National Parks. Complete list of palette colors and the parks that inspired them can be found on Github. Use `colorblind.friendly` to check whether palettes are colorblind-friendly.

Usage

```
natparks.pals(
  name,
  n,
  type = c("discrete", "continuous"),
  direction = c(1, -1),
  override.order = FALSE
)
```

Arguments

`name`	Name of Palette. Choices are: `Acadia`, `Arches`, `Arches2`, `Banff`, `Bryce Canyon`, `DeathValley`, `Everglades`, `Glacier`, `GrandCanyon`, `KingsCanyon`, `Olympic`, `Redwood`, `SmokyMtns`, `Yellowstone`, and `Yosemite`.
`n`	Number of desired colors. If number of requested colors is beyond the scope of the palette, colors are automatically interpolated. If n is not provided, the length of the palette is used.
`type`	Either "continuous" or "discrete". Use continuous if you want to automatically interpolate between colors.
`direction`	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed
`override.order`	Colors are picked from palette to maximize readability and aesthetics. This means that colors are not always selected in sequential order from the full palette. If override.order is set to TRUE, colors are selected in sequential order from the full palette instead. Default is FALSE.

Value

A vector of colors.

Examples

```
natparks.pals("Yellowstone")

natparks.pals("Glacier", direction=-1)
```

```
natparks.pals("DeathValley", 4, override.order=TRUE)

library(ggplot2)
ggplot(data=iris, aes(x=Species, y=Petal.Length, fill=Species)) +
geom_violin() +
scale_fill_manual(values=natparks.pals("Yellowstone", 3))

ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) +
geom_point(size=2) +
scale_color_manual(values=natparks.pals("Banff", 3))

ggplot(data=iris, aes(x=Species, y=Sepal.Width, color=Sepal.Width)) +
geom_point(size=3) +
scale_color_gradientn(colors=natparks.pals("Arches2"))
```

`NatParksPalettes` *Complete list of palettes.*

Description

Use names(NatParksPalettes) to return all possible palette names. Current choices are: `Acadia`, `Arches`, `Arches2`, `Banff`, `Bryce Canyon`, `CapitolReef`, `Charmonix`, `Cuyahoga`, `DeathValley`, `Denali`, `Everglades`, `Glacier`, `GrandCanyon`, `Halekala`, `IguazuFalls`, `KingsCanyon`, `LakeNakuru`, `Olympic`, `Redwood`, `RockyMtn`, `Saguaro`, `SmokyMtns`, `SouthDowns`, `Torres`, `Triglav`, `WindCave`, `Volcanoes`, `Yellowstone`, and `Yosemite`. Use `natparks.pals` to construct palettes.

Usage

```
NatParksPalettes
```

Format

An object of class `list` of length 30.

`scale_color_natparks_c` *NatParksPalettes for plotting with ggplot2*

Description

Function for using `NatParksPalettes` colors schemes in `ggplot2`. Use `scale_color_natparks_d` and `scale_fill_natparks_d` for discrete scales and `scale_color_natparks_c` and `scale_fill_natparks_c` for continuous scales.

Usage

```
scale_color_natparks_c(name, direction = 1, ...)
```

Arguments

name	Name of Palette. Choices are: Acadia, Arches, Arches2, Banff, Bryce Canyon, CapitolReef, Charmonix, Cuyahoga, DeathValley, Denali, Everglades, Glacier, GrandCanyon, Halekala, IguazuFalls, KingsCanyon, LakeNakuru, Olympic, Redwood, RockyMtn, Saguaro, SmokyMtns, SouthDowns, Torres, Triglav, WindCave, Volcanoes, Yellowstone, and Yosemite.
direction	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed
...	Other arguments passed on to scale_color_gradientn

Value

A function that returns a continuous color scale.

Examples

```
library(ggplot2)
ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Sepal.Length)) +
geom_point() +
scale_color_natparks_c("Arches2", direction=-1)
```

---

scale_color_natparks_d

NatParksPalettes for plotting with ggplot2

Description

Function for using NatParksPalettes colors schemes in ggplot2. Use scale_color_natparks_d and scale_fill_natparks_d for discrete scales and scale_color_natparks_c and scale_fill_natparks_c for continuous scales.

Usage

```
scale_color_natparks_d(name, direction = 1, override.order = FALSE, ...)
```

Arguments

name	Name of Palette. Choices are: Acadia, Arches, Arches2, Banff, Bryce Canyon, CapitolReef, Charmonix, Cuyahoga, DeathValley, Denali, Everglades, Glacier, GrandCanyon, Halekala, IguazuFalls, KingsCanyon, LakeNakuru, Olympic, Redwood, RockyMtn, Saguaro, SmokyMtns, SouthDowns, Torres, Triglav, WindCave, Volcanoes, Yellowstone, and Yosemite.
direction	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed

override.order	Colors are picked from palette to maximize readability and aesthetics. This means that colors are not always selected in sequential order from the full palette. If override.order is set to TRUE, colors are selected in sequential order from the full palette instead. Default is FALSE.
...	Other arguments passed on to discrete_scale

Value

A function that returns a discrete color scale.

Examples

```
library(ggplot2)
ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) +
geom_point() +
scale_color_natparks_d("SmokyMtns")
```

---

scale_colour_natparks_c

NatParksPalettes for plotting with ggplot2

Description

Function for using NatParksPalettes colors schemes in ggplot2. Use scale_color_natparks_d and scale_fill_natparks_d for discrete scales and scale_color_natparks_c and scale_fill_natparks_c for continuous scales.

Usage

```
scale_colour_natparks_c(name, direction = 1, ...)
```

Arguments

name	Name of Palette. Choices are: Acadia, Arches, Arches2, Banff, Bryce Canyon, CapitolReef, Charmonix, Cuyahoga, DeathValley, Denali, Everglades, Glacier, GrandCanyon, Halekala, IguazuFalls, KingsCanyon, LakeNakuru, Olympic, Redwood, RockyMtn, Saguaro, SmokyMtns, SouthDowns, Torres, Triglav, WindCave, Volcanoes, Yellowstone, and Yosemite.
direction	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed
...	Other arguments passed on to scale_color_gradientn

Value

A function that returns a continuous colour scale.

Examples

```
library(ggplot2)
ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Sepal.Length)) +
geom_point() +
scale_colour_natparks_c("Arches2", direction=-1)
```

---

scale_colour_natparks_d

NatParksPalettes for plotting with ggplot2

Description

Function for using NatParksPalettes colors schemes in ggplot2. Use scale_color_natparks_d and scale_fill_natparks_d for discrete scales and scale_color_natparks_c and scale_fill_natparks_c for continuous scales.

Usage

```
scale_colour_natparks_d(name, direction = 1, override.order = FALSE, ...)
```

Arguments

name	Name of Palette. Choices are: Acadia, Arches, Arches2, Banff, Bryce Canyon, CapitolReef, Charmonix, Cuyahoga, DeathValley, Denali, Everglades, Glacier, GrandCanyon, Halekala, IguazuFalls, KingsCanyon, LakeNakuru, Olympic, Redwood, RockyMtn, Saguaro, SmokyMtns, SouthDowns, Torres, Triglav, WindCave, Volcanoes, Yellowstone, and Yosemite.
direction	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed
override.order	Colors are picked from palette to maximize readability and aesthetics. This means that colors are not always selected in sequential order from the full palette. If override.order is set to TRUE, colors are selected in sequential order from the full palette instead. Default is FALSE.
...	Other arguments passed on to discrete_scale

Value

A function that returns a discrete colour scale.

Examples

```
library(ggplot2)
ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) +
geom_point() +
scale_colour_natparks_d("Yellowstone")
```

scale_fill_natparks_c *NatParksPalettes for plotting with ggplot2*

Description

Function for using NatParksPalettes colors schemes in ggplot2. Use scale_color_natparks_d and scale_fill_natparks_d for discrete scales and scale_color_natparks_c and scale_fill_natparks_c for continuous scales.

Usage

```
scale_fill_natparks_c(name, direction = 1, ...)
```

Arguments

name	Name of Palette. Choices are: Acadia, Arches, Arches2, Banff, Bryce Canyon, CapitolReef, Charmonix, Cuyahoga, DeathValley, Denali, Everglades, Glacier, GrandCanyon, Halekala, IguazuFalls, KingsCanyon, LakeNakuru, Olympic, Redwood, RockyMtn, Saguaro, SmokyMtns, SouthDowns, Torres, Triglav, WindCave, Volcanoes, Yellowstone, and Yosemite.
direction	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed
...	Other arguments passed on to scale_color_gradientn

Value

A function that returns a continuous color scale.

scale_fill_natparks_d *NatParksPalettes for plotting with ggplot2*

Description

Function for using NatParksPalettes colors schemes in ggplot2. Use scale_color_natparks_d and scale_fill_natparks_d for discrete scales and scale_color_natparks_c and scale_fill_natparks_c for continuous scales.

Usage

```
scale_fill_natparks_d(name, direction = 1, override.order = FALSE, ...)
```

Arguments

name	Name of Palette. Choices are: Acadia, Arches, Arches2, Banff, Bryce Canyon, CapitolReef, Charmonix, Cuyahoga, DeathValley, Denali, Everglades, Glacier, GrandCanyon, Halekala, IguazuFalls, KingsCanyon, LakeNakuru, Olympic, Redwood, RockyMtn, Saguaro, SmokyMtns, SouthDowns, Torres, Triglav, WindCave, Volcanoes, Yellowstone, and Yosemite.
direction	Sets order of colors. Default palette is 1. If direction is -1, palette color order is reversed
override.order	Colors are picked from palette to maximize readability and aesthetics. This means that colors are not always selected in sequential order from the full palette. If override.order is set to TRUE, colors are selected in sequential order from the full palette instead. Default is FALSE.
...	Other arguments passed on to discrete_scale

Value

A function that returns a discrete color scale.

Examples

```
library(ggplot2)
ggplot(data=iris, aes(x=Species, y=Sepal.Length, fill=Species)) +
geom_violin() +
scale_fill_natparks_d("KingsCanyon")
```

Index

∗ **colors**
    natparks.pals, 4
∗ **datasets**
    colorblind_palettes, 2
    NatParksPalettes, 5

colorblind.friendly, *2*, 2, *4*
colorblind_palettes, 2

discrete_scale, *7, 8*, *10*
display_all, 3

natparks.pals, *2*, 4, *5*
NatParksPalettes, 5

scale_color_gradientn, *6, 7*, *9*
scale_color_natparks_c, *5*, 5, *6–9*
scale_color_natparks_d, *5, 6*, 6, *7–9*
scale_colour_natparks_c, 7
scale_colour_natparks_d, 8
scale_fill_natparks_c, *5–9*, 9
scale_fill_natparks_d, *5–9*, 9