

# Package ‘DOYPAColors’

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**Type** Package

**Title** Don't Overthink Your Palette of Colors

**Version** 0.0.2

**Description** Access diverse 'ggplot2'-compatible color palettes for simplified data visualization.

**License** MIT + file LICENSE

**URL** <https://github.com/jmestret/DOYPAColors>,  
<https://jmestret.github.io/DOYPAColors/>

**BugReports** <https://github.com/jmestret/DOYPAColors/issues>

**Depends** R (>= 3.5.0)

**Imports** ggplot2, grDevices, gridExtra

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## Contents

doypa . . . . .	2
list_doypa_pals . . . . .	3
preview_doypa_pals . . . . .	4
preview_pal . . . . .	5
scale_color_doypa . . . . .	5
scale_colour_doypa . . . . .	7
scale_fill_doypa . . . . .	8

<b>Index</b>	<b>10</b>
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doypa	<i>DOYPAColors Palette Selector</i>
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### Description

This function provides access to the DOYPAColors palettes, which are categorized into sequential, diverging, and qualitative types. You can select a palette, define the number of colors, reverse the order, and interpolate colors as a gradient.

### Usage

```
doypa(
  palette = NULL,
  n = NULL,
  reverse = FALSE,
  gradient = FALSE,
  type = "all",
  colorblind = FALSE
)
```

### Arguments

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	An integer specifying the number of colors to return. If 'NULL', the full palette is returned.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.

**Value**

A character vector of colors.

**See Also**

'list\_doypa\_pals' to list available palettes. 'preview\_doypa\_pals' to preview all color palettes.

**Examples**

```
# Get a palette by name
colors <- doypa("buzz")
print(colors)

# Get a random palette
colors <- doypa()
print(colors)

# Get a palette with a specific number of colors
colors <- doypa("google", n = 3)
print(colors)

# Reverse the order of the palette
colors <- doypa("buzz", reverse = TRUE)
print(colors)

# Interpolate colors as a gradient
colors <- doypa("buzz", n = 10, gradient = TRUE)
print(colors)
```

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list\_doypa\_pals

*List Available DOYPAColors Color Palettes*

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**Description**

This function provides a list of all available DOYPAColors color palettes, categorized by type: sequential, diverging, and qualitative. It helps users to explore the various color palettes available for use in their visualizations.

**Usage**

```
list_doypa_pals()
```

**Value**

A named list containing the names of available color palettes for each type: "sequential", "diverging", and "qualitative".

## Examples

```
# List available DOYPAColors color palettes by type
palette_names <- list_doypa_pals()
print(palette_names)
```

---

preview\_doypa\_pals      *Preview DOYPAColors Palettes*

---

## Description

This function generates a visual preview of DOYPAColors color palettes. It helps users explore and select color schemes for their data visualizations by displaying each palette in a grid format.

## Usage

```
preview_doypa_pals(type = "all", colorblind = FALSE)
```

## Arguments

type	Character string specifying the type of palettes to preview. Options are: "all" (default), "seq" (sequential), "div" (diverging), or "qual" (qualitative).
colorblind	Logical. If 'TRUE', restricts the preview to palettes designed with colorblind individuals in mind.

## Value

A 'ggplot' visualization displaying the DOYPAColors color palettes, facilitating exploration and selection of color schemes for data visualizations.

## Examples

```
# Preview all available DOYPAColors palettes
preview_doypa_pals()

# Preview only sequential DOYPAColors palettes
preview_doypa_pals(type = "seq")

# Preview colorblind-friendly DOYPAColors palettes
preview_doypa_pals(colorblind = TRUE)
```

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preview_pal	<i>Preview a Single Color Palette</i>
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**Description**

This function generates a visual preview of a DOYPAColors palette with multiple plots. It includes a direct palette preview, a scatter plot, a bar plot, and a heatmap, each using the specified palette.

**Usage**

```
preview_pal(palette, seed = NULL)
```

**Arguments**

palette	A character string specifying the name of the palette to use.
seed	An optional seed for reproducibility of random numbers.

**Value**

A 'ggplot' object with multiple plots arranged in a grid, showcasing the color palette in different visualizations.

**Examples**

```
# Preview a DOYPAColors palette with multiple plots
preview_pal(palette = "buzz")
```

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scale_color_doypa	<i>Color scale for ggplot2 with DOYPAColors color palettes</i>
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**Description**

This function sets the color scale for ggplot2 using DOYPAColors color palettes, allowing you to apply these palettes to both discrete and continuous data.

**Usage**

```
scale_color_doypa(
  palette = NULL,
  n = NULL,
  reverse = FALSE,
  gradient = FALSE,
  discrete = FALSE,
  type = "all",
  colorblind = FALSE,
  ...
)
```

**Arguments**

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	Number of colors needed. If 'NULL', it will default to the number of levels for discrete scales or to a continuous gradient for continuous scales.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.
discrete	Boolean indicating whether to generate a discrete or continuous palette (default: continuous).
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.
...	Additional parameters passed to ggplot2's 'scale_color_*' functions.

**Value**

A 'ggplot2' color scale suitable for adding to a 'ggplot2' object to control color aesthetics.

**Examples**

```
library(ggplot2)

# Discrete data
data(iris)
disc <- ggplot(iris, aes(x = Petal.Width, y = Petal.Length, color = Species)) +
  geom_point() + theme_classic()
disc <- disc + scale_color_doypa(palette = "buzz", discrete = TRUE)
print(disc)

# Continuous data
cont <- ggplot(iris, aes(x = Petal.Width, y = Petal.Length, color = Sepal.Length)) +
  geom_point() + theme_classic()
cont <- cont + scale_color_doypa(palette = "buzz")
print(cont)

# Colorblind-friendly palette
disc_colorblind <- ggplot(iris, aes(x = Petal.Width, y = Petal.Length, color = Species)) +
  geom_point() + theme_classic()
disc_colorblind <- disc_colorblind + scale_color_doypa(colorblind = TRUE, discrete = TRUE)
print(disc_colorblind)
```

---

scale\_colour\_doypa      *Color scale for ggplot2 with DOYPAColors color palettes*

---

## Description

This function sets the color scale for ggplot2 using DOYPAColors color palettes, allowing you to apply these palettes to both discrete and continuous data.

## Usage

```
scale_colour_doypa(  
  palette = NULL,  
  n = NULL,  
  reverse = FALSE,  
  gradient = FALSE,  
  discrete = FALSE,  
  type = "all",  
  colorblind = FALSE,  
  ...  
)
```

## Arguments

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	Number of colors needed. If 'NULL', it will default to the number of levels for discrete scales or to a continuous gradient for continuous scales.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.
discrete	Boolean indicating whether to generate a discrete or continuous palette (default: continuous).
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.
...	Additional parameters passed to ggplot2's 'scale_colour_*' functions.

## Value

A 'ggplot2' color scale suitable for adding to a 'ggplot2' object to control color aesthetics.

---

scale\_fill\_doypa      *Fill scale for ggplot2 with DOYPAColors color palettes*

---

### Description

This function sets the fill scale for ggplot2 using DOYPAColors color palettes, allowing you to use these palettes in your ggplot2 visualizations for both discrete and continuous data.

### Usage

```
scale_fill_doypa(
  palette = NULL,
  n = NULL,
  reverse = FALSE,
  gradient = FALSE,
  discrete = FALSE,
  type = "all",
  colorblind = FALSE,
  ...
)
```

### Arguments

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	Number of colors needed. If 'NULL', it will default to the number of levels for discrete scales or to a continuous gradient for continuous scales.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.
discrete	Boolean indicating whether to generate a discrete or continuous palette (default: continuous).
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.
...	Additional parameters passed to ggplot2's 'scale_fill_*' functions.

### Value

A 'ggplot2' fill scale suitable for adding to a 'ggplot2' object to control fill aesthetics.

**Examples**

```
library(ggplot2)

# Discrete data
data(iris)
disc <- ggplot(iris, aes(x = Species, y = Petal.Length, fill = Species)) +
  geom_boxplot() + theme_classic()
disc <- disc + scale_fill_doypa(palette = "buzz", discrete = TRUE)
print(disc)

# Continuous data
cont <- ggplot(faithfuld, aes(waiting, eruptions, fill = density)) +
  geom_tile() + theme_classic()
cont <- cont + scale_fill_doypa(palette = "buzz")
print(cont)

# Colorblind-friendly palette
disc_colorblind <- ggplot(iris, aes(x = Species, y = Petal.Length, fill = Species)) +
  geom_boxplot() + theme_classic()
disc_colorblind <- disc_colorblind + scale_fill_doypa(colorblind = TRUE, discrete = TRUE)
print(disc_colorblind)
```

# Index

doypa, [2](#)

list\_doypa\_pals, [3](#)

preview\_doypa\_pals, [4](#)

preview\_pal, [5](#)

scale\_color\_doypa, [5](#)

scale\_colour\_doypa, [7](#)

scale\_fill\_doypa, [8](#)