

# Package ‘tintin’

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**Title** Tintin Palette Generator

**Version** 0.2

**Description** Palettes generated from Tintin covers. There is one palette per cover, with a total of 24 palettes of 5 colours each. Includes functions to interpolate colors in order to create more colors based on the provided palettes. The data is based on Cyr, et al. (2004) <[doi:10.1503/cmaj.1041405](https://doi.org/10.1503/cmaj.1041405)> and Wikipedia <[https://en.wikipedia.org/wiki/The\\_Adventures\\_of\\_Tintin](https://en.wikipedia.org/wiki/The_Adventures_of_Tintin)>.

**License** MIT + file LICENSE

**Encoding** UTF-8

**RoxygenNote** 7.3.1

**Depends** R (>= 2.10)

**LazyData** true

**Imports** dplyr, ggplot2, magrittr, rlang, scales, tidyr

**Suggests** spelling

**Language** en-US

**NeedsCompilation** no

**Author** Mauricio Vargas Sepulveda [aut, cre] (ORCID: <<https://orcid.org/0000-0003-1017-7574>>)

**Maintainer** Mauricio Vargas Sepulveda <m.sepulveda@mail.utoronto.ca>

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## Contents

scale_colour_tintin_d . . . . .	2
tintin_clrs . . . . .	5
tintin_colours . . . . .	7
tintin_head_trauma . . . . .	7
tintin_pal . . . . .	8

<b>Index</b>	<b>10</b>
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scale\_colour\_tintin\_d *Tintin Colour Scales*

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### Description

The tintin scales provide colour maps for the different Tintin covers.

### Usage

```
scale_colour_tintin_d(  
  ...,  
  alpha = 1,  
  begin = 0,  
  end = 1,  
  direction = 1,  
  option = "the_blue_lotus",  
  aesthetics = "colour"  
)
```

```
scale_colour_tintin_c(  
  ...,  
  alpha = 1,  
  begin = 0,  
  end = 1,  
  direction = 1,  
  option = "the_blue_lotus",  
  values = NULL,  
  na.value = "grey50",  
  guide = "colourbar",  
  aesthetics = "colour"  
)
```

```
scale_fill_tintin_d(  
  ...,  
  alpha = 1,  
  begin = 0,  
  end = 1,  
  direction = 1,  
  option = "the_blue_lotus",  
  aesthetics = "fill"  
)
```

```
scale_fill_tintin_c(  
  ...,  
  alpha = 1,  
  begin = 0,  
  end = 1,
```

```

direction = 1,
option = "the_blue_lotus",
values = NULL,
na.value = "grey50",
guide = "colourbar",
aesthetics = "fill"
)

```

## Arguments

...	Other arguments passed on to <code>ggplot2::discrete_scale()</code> , <code>ggplot2::continuous_scale()</code> , or <code>ggplot2::binned_scale()</code> to control name, limits, breaks, labels and so forth.
alpha	The alpha transparency, a number in $[0, 1]$ , see argument alpha in <a href="#">hsv</a> .
begin	The (corrected) hue in $[0, 1]$ at which the color map begins.
end	The (corrected) hue in $[0, 1]$ at which the color map ends.
direction	Sets the order of colors in the scale. If 1, the default, colors are ordered from darkest to lightest. If -1, the order of colors is reversed.
option	A character string indicating the color map option to use. Options are available: <ul style="list-style-type: none"> <li>• "Tintin in the Land of the Soviets"</li> <li>• "Tintin in the Congo"</li> <li>• "Tintin in America"</li> <li>• "Cigars of the Pharaoh"</li> <li>• "The Blue Lotus" (Standard)</li> <li>• "The Broken Ear"</li> <li>• "The Black Island"</li> <li>• "King Ottokar's Sceptre"</li> <li>• "The Crab with the Golden Claws"</li> <li>• "The Shooting Star"</li> <li>• "The Secret of the Unicorn"</li> <li>• "Red Rackham's Treasure"</li> <li>• "The Seven Crystal Balls"</li> <li>• "Prisoners of the Sun"</li> <li>• "Land of Black Gold"</li> <li>• "Destination Moon"</li> <li>• "Explorers on the Moon"</li> <li>• "The Calculus Affair"</li> <li>• "The Red Sea Sharks"</li> <li>• "Tintin in Tibet"</li> <li>• "The Castafiore Emerald"</li> <li>• "Flight 714 to Sydney"</li> <li>• "Tintin and the Picaros"</li> <li>• "Tintin and Alph-Art"</li> </ul>

aesthetics	Character string or vector of character strings listing the name(s) of the aesthetic(s) that this scale works with. This can be useful, for example, to apply colour settings to the colour and fill aesthetics at the same time, via <code>aesthetics = c("colour", "fill")</code> .
values	if colours should not be evenly positioned along the gradient this vector gives the position (between 0 and 1) for each colour in the colours vector.
na.value	If <code>na.translate = TRUE</code> , what aesthetic value should the missing values be displayed as? Does not apply to position scales where NA is always placed at the far right.
guide	A function used to create a guide or its name. See <code>guides()</code> for more information.

### Value

A `ggproto` object for use with `ggplot2`.

### Examples

```
library(dplyr)
library(ggplot2)
library(tintin)

total_head_trauma <- tintin_head_trauma %>%
  arrange(-loss_of_consciousness_length) %>%
  filter(row_number() <= 5)

# discrete scale

ggplot(total_head_trauma) +
  geom_col(aes(x = cause_of_injury, y = loss_of_consciousness_length,
             fill = book_title), position = "dodge") +
  labs(x = "Cause of injury", y = "Loss of consciousness length",
       title = "Top five causes of injury") +
  theme_minimal() +
  scale_fill_tintin_d(option = "cigars_of_the_pharaoh", direction = -1) +
  coord_flip()

# continuous scale

# continuous scale
ggplot(total_head_trauma) +
  geom_col(aes(
    x = cause_of_injury, y = loss_of_consciousness_length,
    fill = year
  ), position = "dodge") +
  labs(
    x = "Cause of injury", y = "Loss of consciousness length",
    title = "Top five causes of injury"
  ) +
  theme_minimal() +
  scale_fill_tintin_c(option = "cigars_of_the_pharaoh", direction = -1)
```

---

tintin\_clrs

*Tintin Colour Palettes*


---

### Description

This function creates a vector of colours along the selected colour map.

### Usage

```
tintin_clrs(
  n = 5,
  alpha = 1,
  begin = 0,
  end = 1,
  direction = 1,
  option = "the_blue_lotus"
)
```

### Arguments

n	The number of colors ( $\geq 1$ ) to be in the palette.
alpha	The alpha transparency, a number in $[0, 1]$ , see argument alpha in <a href="#">hsv</a> .
begin	The (corrected) hue in $[0, 1]$ at which the color map begins.
end	The (corrected) hue in $[0, 1]$ at which the color map ends.
direction	Sets the order of colors in the scale. If 1, the default, colors are ordered from darkest to lightest. If -1, the order of colors is reversed.
option	A character string indicating the color map option to use. Options are available with tidy names (i.e., 'the_blue_lotus'): <b>"Tintin in the Land of the Soviets"</b> <b>"Tintin in the Congo"</b> <b>"Tintin in America"</b> <b>"Cigars of the Pharaoh"</b> <b>"The Blue Lotus" (Standard)</b> <b>"The Broken Ear"</b> <b>"The Black Island"</b> <b>"King Ottokar's Sceptre"</b> <b>"The Crab with the Golden Claws"</b> <b>"The Shooting Star"</b> <b>"The Secret of the Unicorn"</b> <b>"Red Rackham's Treasure"</b> <b>"The Seven Crystal Balls"</b>

```

"Prisoners of the Sun"
"Land of Black Gold"
"Destination Moon"
"Explorers on the Moon"
"The Calculus Affair"
"The Red Sea Sharks"
"Tintin in Tibet"
"The Castafiore Emerald"
"Flight 714 to Sydney"
"Tintin and the Picaros"
"Tintin and Alph-Art"

```

### Details

Check the README for the display of the color palettes. Semi-transparent colors ( $0 < \alpha < 1$ ) are supported only on some devices (see [rgb](#)).

### Value

A character vector of colors.

### Examples

```

# without extrapolation: 5 or fewer colors
n <- 5

tintin_clrs(n, option = "the_blue_lotus")

image(
  1:n, 1, as.matrix(1:n),
  col = tintin_clrs(n, option = "the_blue_lotus"),
  xlab = "Tintin darkblue n", ylab = "", xaxt = "n", yaxt = "n", bty = "n"
)

# with extrapolation: 6 or more colors
n <- 20
image(
  1:n, 1, as.matrix(1:n),
  col = tintin_clrs(n, option = "the_blue_lotus"),
  xlab = "Tintin darkblue n", ylab = "", xaxt = "n", yaxt = "n", bty = "n"
)

```

---

tintin_colours	<i>Tintin Colours</i>
----------------	-----------------------

---

**Description**

A list with 23 vectors (one per Tintin book) containing the five most frequent colors per cover. White tones were removed to balance the palettes. Alph-Art is Herge's unfinished book, it was published posthumously, so we don't consider it in the list.

**Usage**

```
tintin_colours
```

**Format**

A list with 23 vectors.

**Source**

Tintin covers obtained from Wikipedia and processed with ImageMagick.

**Examples**

```
head(tintin_colours)
```

---

tintin_head_trauma	<i>Tintin Head Trauma</i>
--------------------	---------------------------

---

**Description**

Neurological traumas sustained by the subject (by book title)

**Usage**

```
tintin_head_trauma
```

**Format**

A data frame with 50 rows and 4 variables

**Details**

year Release year of the comic, first occurrence was used for titles with a b&w and colour edition

book\_title English title of the books

page Page number where the traumas happen

cause\_of\_injury What causes the trauma (i.e., explosion)

loss\_of\_consciousness\_length Loss of consciousness length measured by the number of cartoon frames before subject returns to normal activity.

loss\_of\_consciousness\_severity Loss of consciousness severity measured by the number of objects revolving above Tintin's head

**Source**

Cyr, Antoine, Louis-Olivier Cyr, and Claude Cyr. "Acquired growth hormone deficiency and hypogonadotropic hypogonadism in a subject with repeated head trauma, or Tintin goes to the neurologist." *CMAJ* 171, no. 12 (2004): 1433-1434. The book release year was obtained from Wikipedia.

**Examples**

```
tintin_head_trauma
```

---

```
tintin_pal
```

```
Tintin Colour Palettes
```

---

**Description**

A wrapper function around `Tintin_clr`s to turn it into a palette function compatible with `discrete_scale`.

**Usage**

```
tintin_pal(
  alpha = 1,
  begin = 0,
  end = 1,
  direction = 1,
  option = "the_blue_lotus"
)
```

**Arguments**

alpha	The alpha transparency, a number in $[0, 1]$ , see argument alpha in <a href="#">hsv</a> .
begin	The (corrected) hue in $[0, 1]$ at which the color map begins.
end	The (corrected) hue in $[0, 1]$ at which the color map ends.
direction	Sets the order of colors in the scale. If 1, the default, colors are ordered from darkest to lightest. If -1, the order of colors is reversed.



option            A character string indicating the color map option to use. Options are available:

- "Tintin in the Land of the Soviets"
- "Tintin in the Congo"
- "Tintin in America"
- "Cigars of the Pharaoh"
- "The Blue Lotus" (Standard)
- "The Broken Ear"
- "The Black Island"
- "King Ottokar's Sceptre"
- "The Crab with the Golden Claws"
- "The Shooting Star"
- "The Secret of the Unicorn"
- "Red Rackham's Treasure"
- "The Seven Crystal Balls"
- "Prisoners of the Sun"
- "Land of Black Gold"
- "Destination Moon"
- "Explorers on the Moon"
- "The Calculus Affair"
- "The Red Sea Sharks"
- "Tintin in Tibet"
- "The Castafiore Emerald"
- "Flight 714 to Sydney"
- "Tintin and the Picaros"
- "Tintin and Alph-Art"

### Details

See `Tintin_clr`s for more information on the color palettes.

### Value

A function that takes an integer argument and returns a character vector of colors.

### Examples

```
tintin_pal()
```

```
scales::show_col(tintin_pal()(5))
```

# Index

## \* colour scales

scale\_colour\_tintin\_d, 2

## \* datasets

tintin\_colours, 7

tintin\_head\_trauma, 7

discrete\_scale, 8

ggplot2::binned\_scale(), 3

ggplot2::continuous\_scale(), 3

ggplot2::discrete\_scale(), 3

guides(), 4

hsv, 3, 5, 8

rgb, 6

scale\_colour\_tintin\_c

(scale\_colour\_tintin\_d), 2

scale\_colour\_tintin\_d, 2

scale\_fill\_tintin\_c

(scale\_colour\_tintin\_d), 2

scale\_fill\_tintin\_d

(scale\_colour\_tintin\_d), 2

tintin\_clrs, 5

tintin\_colours, 7

tintin\_head\_trauma, 7

tintin\_pal, 8