Color Palettes in R

TF

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Colors, amirite? Finding the right ones to make a plot look good can be hard. I always like to use colors that really help set my plots apart. `tidyverse` and `ggplot` in particular are great at incorporating wonderful palettes. However, recently I was vexed by a plot where I couldnt just use a theme addition to add the colors I wanted and instead had to specify each color I wanted. At the time I wanted to use something from the `ggsci` package but coudlnt find the names or hex codes for the color. This post is meant to be a reference for myself and others on the different hex codes for packages.

#libraries

```
library(tidyverse)
library(scales)
library(RColorBrewer)
library(ggsci)
library(wesanderson)
library(ggthemes)
```

#ggsci colors and Hex (not a complete list)

JAMA

```
show_col(pal_jama("default")(7))
```

#374E55FF	#DF8F44FF	#00A1D5FF
#B24745FF	#79AF97FF	#6A6599FF
#80796BFF		

NEJM

```
show_col(pal_nejm("default")(7))
```

#BC3C29FF	#0072B5FF	#E18727FF
#20854EFF	#7876B1FF	#6F99ADFF
#FFDC91FF		

nature publishing group

```r
show_col(pal_npg("nrc")(10))
```

#E64B35FF	#4DBBD5FF	#00A087FF	#3C5488FF
#F39B7FFF	#8491B4FF	#91D1C2FF	#DC0000FF
#7E6148FF	#B09C85FF		

Univof Chicago

```
show_col(pal_uchicago("default")(9))
```

#800000FF	#767676FF	#FFA319FF
#8A9045FF	#155F83FF	#C16622FF
#8F3931FF	#58593FFF	#350E20FF

```
show_col(pal_uchicago("light")(9))
```

#800000FF	#D6D6CEFF	#FFB547FF
#ADB17DFF	#5B8FA8FF	#D49464FF
#B1746FFF	#8A8B79FF	#725663FF

```
show_col(pal_uchicago("dark")(9))
```

#800000FF	#767676FF	#CC8214FF
#616530FF	#0F425CFF	#9A5324FF
#642822FF	#3E3E23FF	#350E20FF

J of Clin Oncology

```r
show_col(pal_jco("default")(10))
```

#0073C2FF	#EFC000FF	#868686FF	#CD534CFF
#7AA6DCFF	#003C67FF	#8F7700FF	#3B3B3BFF
#A73030FF	#4A6990FF		

Lancet

```r
show_col(pal_lancet("lanonc")(9))
```

#00468BFF	#ED0000FF	#42B540FF
#0099B4FF	#925E9FFF	#FDAF91FF
#AD002AFF	#ADB6B6FF	#1B1919FF

Star Trek

```
show_col(pal_startrek("uniform")(7))
```

#CC0C00FF	#5C88DAFF	#84BD00FF
#FFCD00FF	#7C878EFF	#00B5E2FF
#00AF66FF		

Simpsons

```
show_col(pal_simpsons("springfield")(16))
```

#FED439FF	#709AE1FF	#8A9197FF	#D2AF81FF
#FD7446FF	#D5E4A2FF	#197EC0FF	#F05C3BFF
#46732EFF	#71D0F5FF	#370335FF	#075149FF
#C80813FF	#91331FFF	#1A9993FF	#FD8CC1FF

Rick and Morty

```
show_col(pal_rickandmorty("schwifty")(12))
```

#FAFD7CFF	#82491EFF	#24325FFF	#B7E4F9FF
#FB6467FF	#526E2DFF	#E762D7FF	#E89242FF
#FAE48BFF	#A6EEE6FF	#917C5DFF	#69C8ECFF

#ggthemes colors Stata

```
show_col(stata_pal("s2color")(15))
```

#1a476f	#90353b	#55752f	#e37e00
#6e8e84	#c10534	#938dd2	#cac27e
#a0522d	#7b92a8	#2d6d66	#9c8847
#bfa19c	#ffd200	#d9e6eb	

```
show_col(stata_pal("s1rcolor")(15))
```

#ffff00	#00ff00	#0080ff	#ff00ff
#ff7f00	#ff0000	#add8e6	#ffe474
#00ff80	#c0dcc0	#ff4500	#0000ff
#ff0080	#6e8e84	#a0522d	

```
show_col(stata_pal("s1color")(15))
```

#006000	#ff4500	#1a476f	#90353b
#6e8e84	#a0522d	#ff7f00	#ff00ff
#00ffff	#ff0000	#00ff00	#9c8847
#800080	#c0dcc0	#add8e6	

```
show_col(stata_pal("mono")(15))
```

#606060	#a0a0a0	#808080	#404040
#000000	#e0e0e0	#202020	#707070
#909090	#b0b0b0	#d0d0d0	#f0f0f0
#303030	#c0c0c0	#505050	

538 theme colors

```
show_col(fivethirtyeight_pal()(3))
```

<table>
<tr>
<td>#008FD5</td>
<td>#FF2700</td>
</tr>
<tr>
<td>#77AB43</td>
<td></td>
</tr>
</table>

google docs colors

```r
show_col(gdocs_pal()(20))
```

<table>
<tr>
<td>#3366cc</td>
<td>#dc3912</td>
<td>#ff9900</td>
<td>#109618</td>
<td>#990099</td>
</tr>
<tr>
<td>#0099c6</td>
<td>#dd4477</td>
<td>#66aa00</td>
<td>#b82e2e</td>
<td>#316395</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
</tr>
</table>

economist

```r
show_col(economist_pal()(6))
    ## fill palette
    show_col(economist_pal(fill = TRUE)(6))
```

#6794a7	#014d64	#7ad2f6
#01a2d9	#76c0c1	#00887d

colorblind

```
show_col(colorblind_pal()(8))
```

#000000	#E69F00	#56B4E9
#009E73	#F0E442	#0072B2
#D55E00	#CC79A7	

#Display overall Brewer colors

```
display.brewer.all()
```
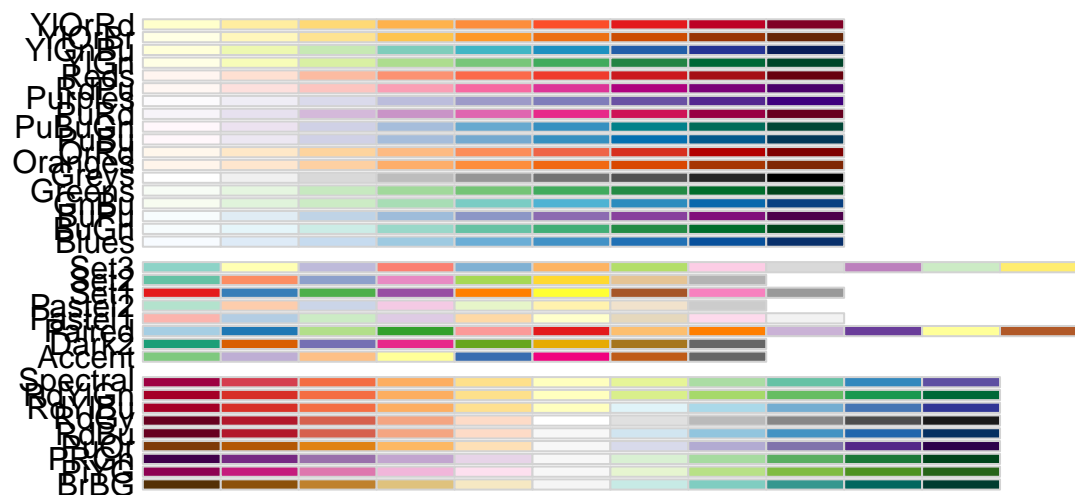
```
brewer.pal.info
```

```
##           maxcolors category colorblind
## BrBG            11      div       TRUE
## PiYG            11      div       TRUE
## PRGn            11      div       TRUE
## PuOr            11      div       TRUE
## RdBu            11      div       TRUE
## RdGy            11      div      FALSE
## RdYlBu          11      div       TRUE
## RdYlGn          11      div      FALSE
## Spectral        11      div      FALSE
## Accent           8     qual      FALSE
## Dark2            8     qual       TRUE
## Paired          12     qual       TRUE
## Pastel1          9     qual      FALSE
## Pastel2          8     qual      FALSE
## Set1             9     qual      FALSE
## Set2             8     qual       TRUE
## Set3            12     qual      FALSE
## Blues            9      seq       TRUE
## BuGn             9      seq       TRUE
## BuPu             9      seq       TRUE
## GnBu             9      seq       TRUE
## Greens           9      seq       TRUE
## Greys            9      seq       TRUE
## Oranges          9      seq       TRUE
## OrRd             9      seq       TRUE
## PuBu             9      seq       TRUE
## PuBuGn           9      seq       TRUE
## PuRd             9      seq       TRUE
## Purples          9      seq       TRUE
## RdPu             9      seq       TRUE
## Reds             9      seq       TRUE
## YlGn             9      seq       TRUE
## YlGnBu           9      seq       TRUE
## YlOrBr           9      seq       TRUE
## YlOrRd           9      seq       TRUE
```

#Brewer Hex and Color palette BrBG can use:

```
brewer.pal(n=11,name="BrBG")
```

```
##  [1] "#543005" "#8C510A" "#BF812D" "#DFC27D" "#F6E8C3" "#F5F5F5" "#C7EAE5"
##  [8] "#80CDC1" "#35978F" "#01665E" "#003C30"
```

```
display.brewer.pal(n=11,name="BrBG")
```
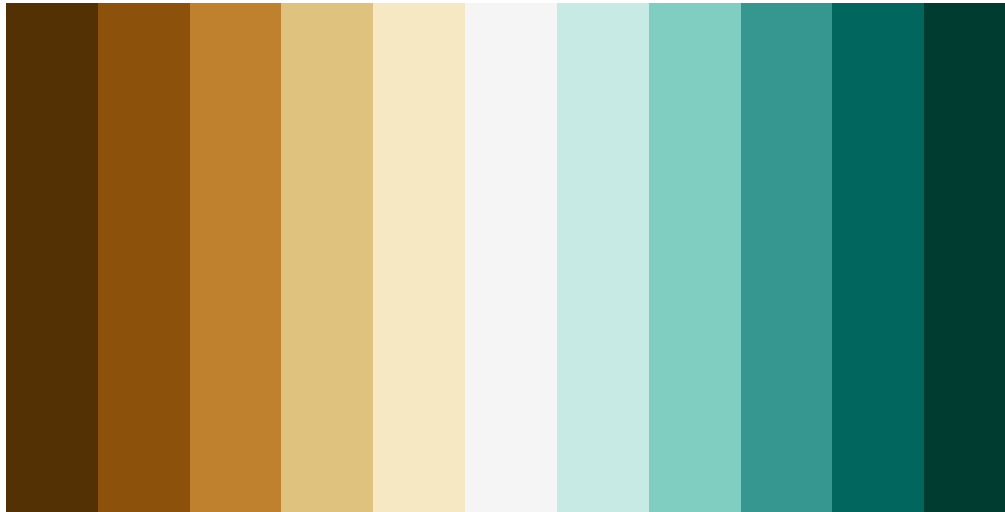

BrBG (divergent)

or can use `show_col` command instead

```
show_col(brewer_pal(palette = "BrBG")(11))
```


#Wes Anderson Movie Color Themes

```
wes_palettes
```

```
## $BottleRocket1
## [1] "#A42820" "#5F5647" "#9B110E" "#3F5151" "#4E2A1E" "#550307" "#0C1707"
##
## $BottleRocket2
## [1] "#FAD510" "#CB2314" "#273046" "#354823" "#1E1E1E"
##
## $Rushmore1
## [1] "#E1BD6D" "#EABE94" "#0B775E" "#35274A" "#F2300F"
##
## $Rushmore
## [1] "#E1BD6D" "#EABE94" "#0B775E" "#35274A" "#F2300F"
##
## $Royal1
## [1] "#899DA4" "#C93312" "#FAEFD1" "#DC863B"
##
## $Royal2
## [1] "#9A8822" "#F5CDB4" "#F8AFA8" "#FDDDA0" "#74A089"
##
## $Zissou1
## [1] "#3B9AB2" "#78B7C5" "#EBCC2A" "#E1AF00" "#F21A00"
##
## $Darjeeling1
## [1] "#FF0000" "#00A08A" "#F2AD00" "#F98400" "#5BBCD6"
##
## $Darjeeling2
## [1] "#ECCBAE" "#046C9A" "#D69C4E" "#ABDDDE" "#000000"
##
## $Chevalier1
## [1] "#446455" "#FDD262" "#D3DDDC" "#C7B19C"
##
## $FantasticFox1
## [1] "#DD8D29" "#E2D200" "#46ACC8" "#E58601" "#B40F20"
##
## $Moonrise1
## [1] "#F3DF6C" "#CEAB07" "#D5D5D3" "#24281A"
##
## $Moonrise2
## [1] "#798E87" "#C27D38" "#CCC591" "#29211F"
##
## $Moonrise3
## [1] "#85D4E3" "#F4B5BD" "#9C964A" "#CDC08C" "#FAD77B"
##
## $Cavalcanti1
## [1] "#D8B70A" "#02401B" "#A2A475" "#81A88D" "#972D15"
##
## $GrandBudapest1
## [1] "#F1BB7B" "#FD6467" "#5B1A18" "#D67236"
##
## $GrandBudapest2
## [1] "#E6A0C4" "#C6CDF7" "#D8A499" "#7294D4"
##
## $IsleofDogs1
```

```
## [1] "#9986A5" "#79402E" "#CCBA72" "#0F0D0E" "#D9D0D3" "#8D8680"
##
## $IsleofDogs2
## [1] "#EAD3BF" "#AA9486" "#B6854D" "#39312F" "#1C1718"
```

Bottle Rocket 1

```r
show_col(wes_palettes$BottleRocket1,(7))
```

#A42820	#5F5647	#9B110E
#3F5151	#4E2A1E	#550307
#0C1707		

Bottle Rocket 2

```r
show_col(wes_palettes$BottleRocket2)
```

#FAD510	#CB2314	#273046
#354823	#1E1E1E	

Rushmore 1

```
show_col(wes_palettes$Rushmore1)
```

#E1BD6D	#EABE94	#0B775E
#35274A	#F2300F	
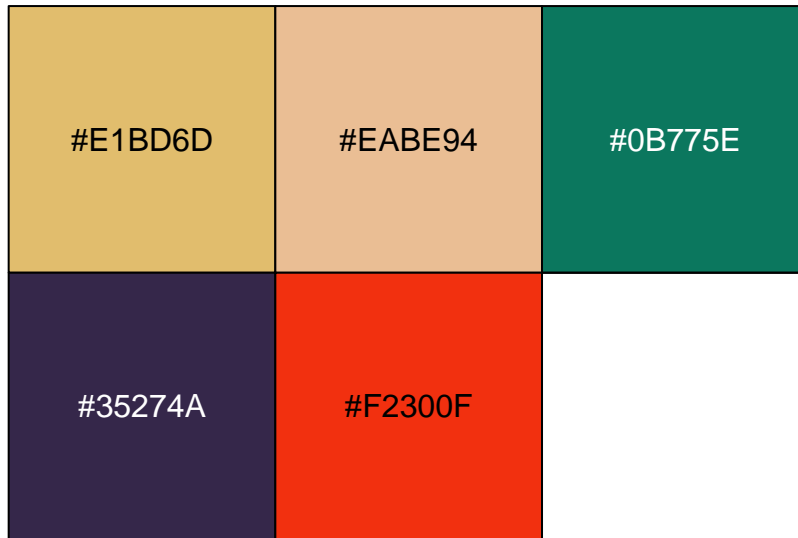
Royal 1

```
show_col(wes_palettes$Royal1)
```

#899DA4	#C93312
#FAEFD1	#DC863B
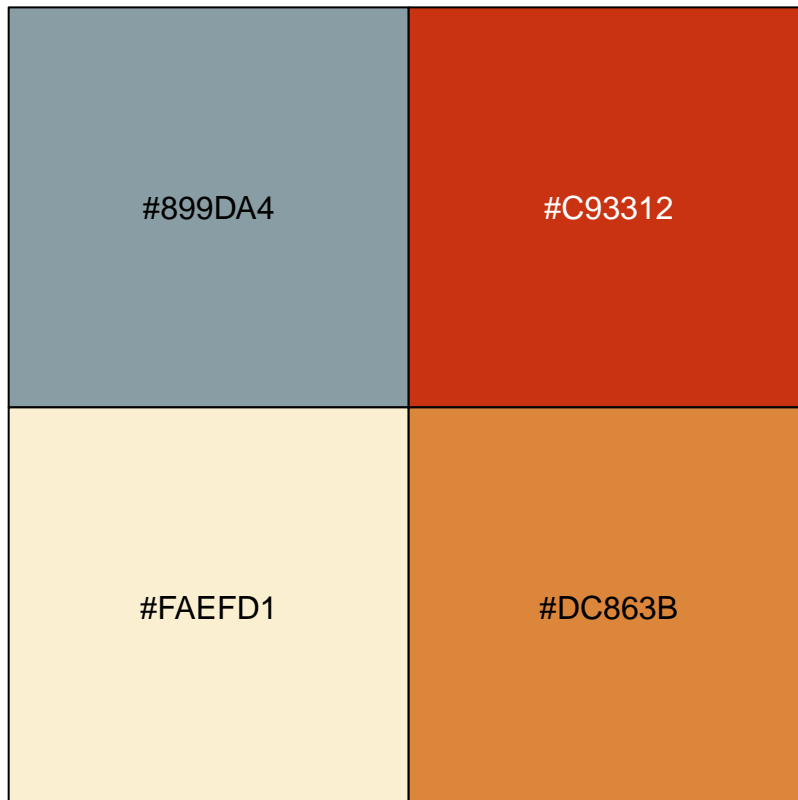
Royal 2

```
show_col(wes_palettes$Royal2)
```

#9A8822	#F5CDB4	#F8AFA8
#FDDDA0	#74A089	

Zissou1

```r
show_col(wes_palettes$Zissou1)
```

#3B9AB2	#78B7C5	#EBCC2A
#E1AF00	#F21A00	

Darjeeling1

```r
show_col(wes_palettes$Darjeeling1)
```

| #FF0000 | #00A08A | #F2AD00 |
| #F98400 | #5BBCD6 | |
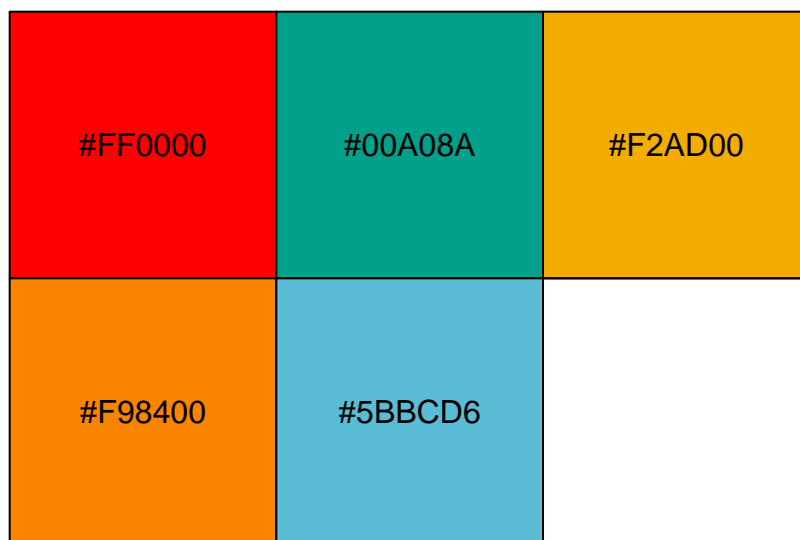
Darjeeling2

```
show_col(wes_palettes$Darjeeling2)
```

| #ECCBAE | #046C9A | #D69C4E |
| #ABDDDE | #000000 | |
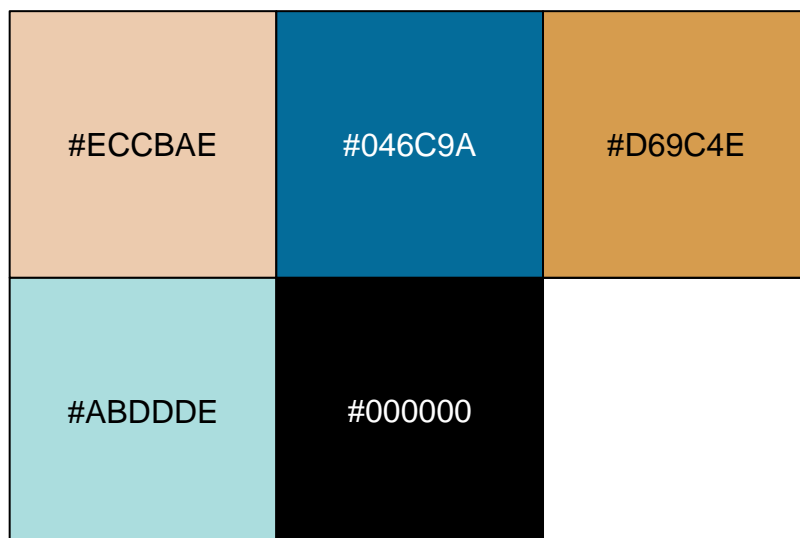
Fantastic Fox 1

```
show_col(wes_palettes$FantasticFox1)
```

#DD8D29	#E2D200	#46ACC8
#E58601	#B40F20	
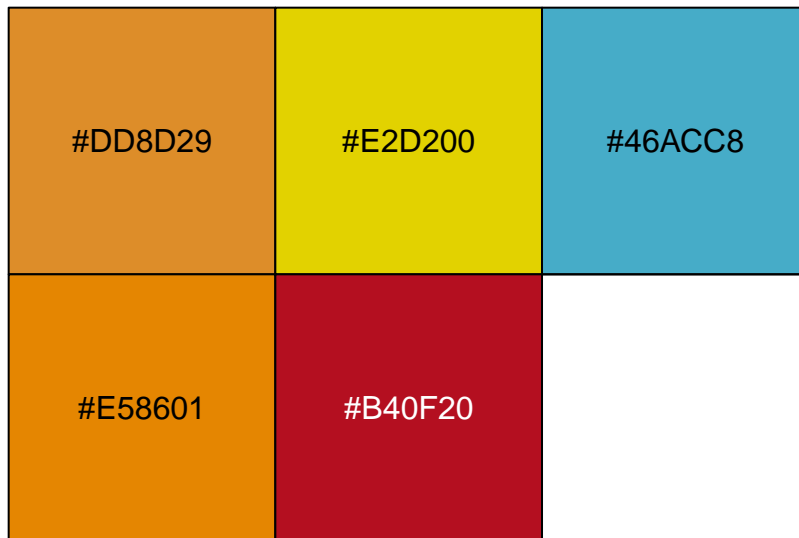
Moonrise1

```
show_col(wes_palettes$Moonrise1)
```

#F3DF6C	#CEAB07
#D5D5D3	#24281A
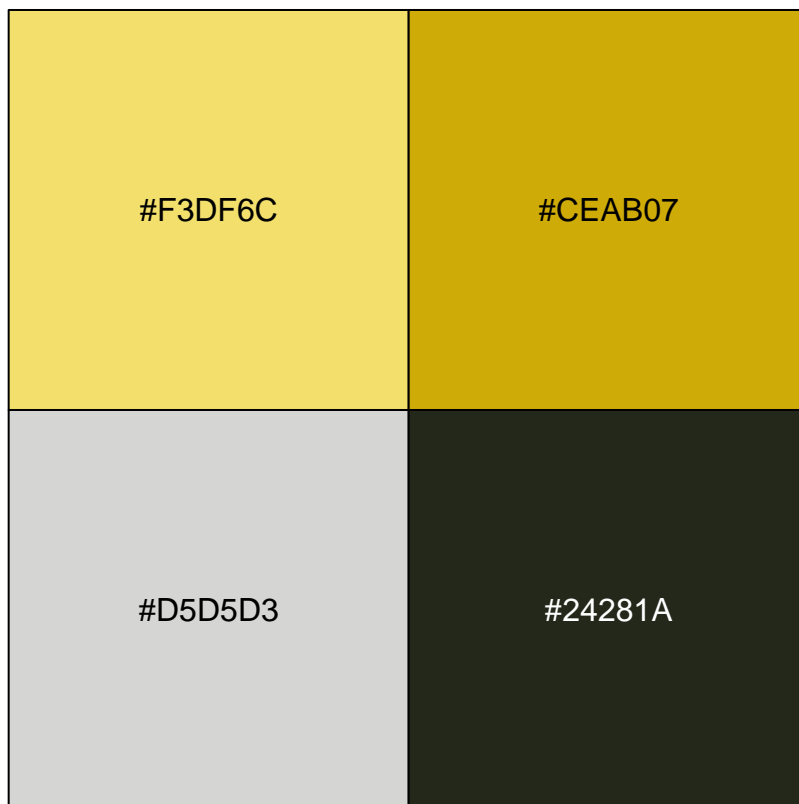
Moonrise2

```
show_col(wes_palettes$Moonrise2)
```

#798E87	#C27D38
#CCC591	#29211F

Moonrise3

```
show_col(wes_palettes$Moonrise3)
```

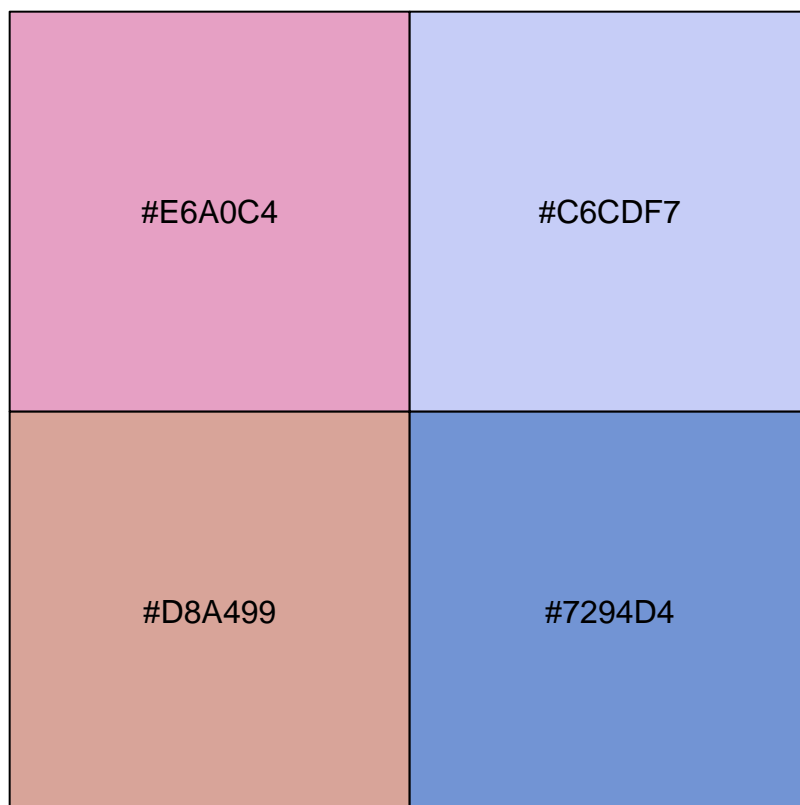|		
#85D4E3	#F4B5BD	#9C964A
#CDC08C	#FAD77B	
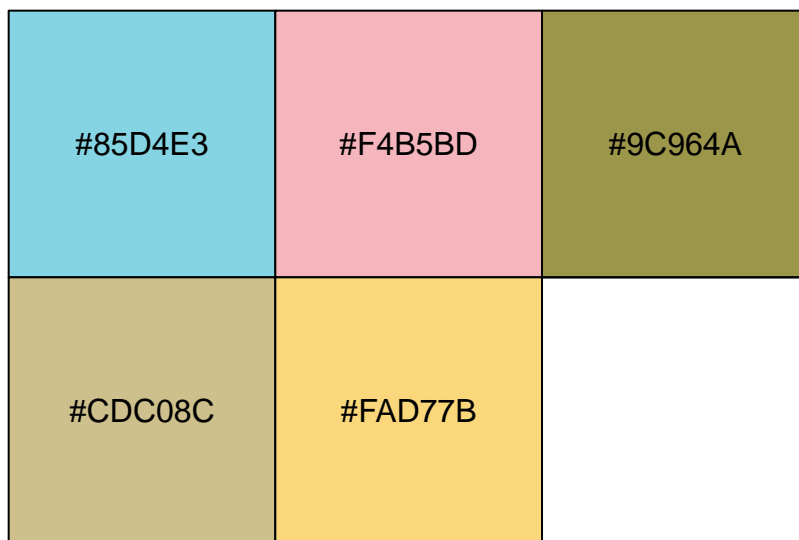
GrandBudapest1

```
show_col(wes_palettes$GrandBudapest1)
```

GrandBudapest2

```r
show_col(wes_palettes$GrandBudapest2)
```

#E6A0C4	#C6CDF7
#D8A499	#7294D4
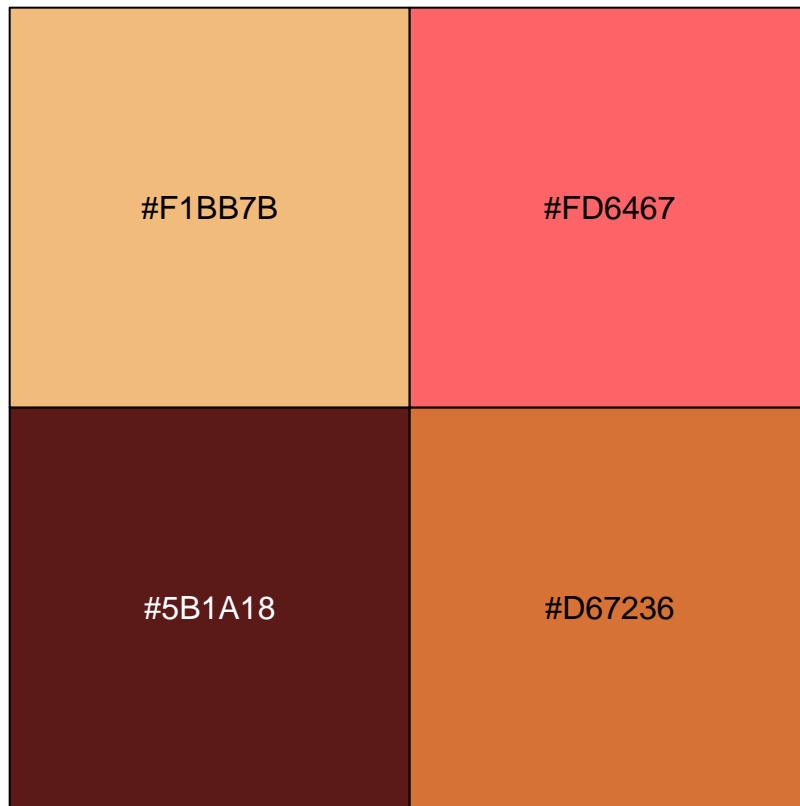
IsleofDogs1

```
show_col(wes_palettes$IsleofDogs1)
```

#9986A5	#79402E	#CCBA72
#0F0D0E	#D9D0D3	#8D8680
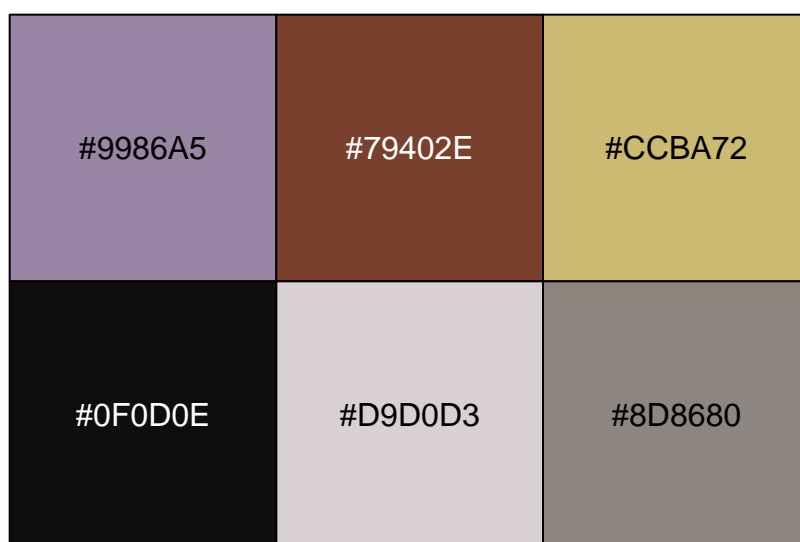
IsleofDogs2

```
show_col(wes_palettes$IsleofDogs2)
```

#EAD3BF	#AA9486	#B6854D
#39312F	#1C1718	

#References:

https://rpubs.com/anhld/169514 https://www.nceas.ucsb.edu/~frazier/RSpatialGuides/colorPaletteCheatsheet.pdf https://cran.r-project.org/web/packages/ggsci/ggsci.pdf http://www.sthda.com/english/wiki/colors-in-r https://github.com/EmilHvitfeldt/r-color-palettes