ggplot_fill_legend

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Load package

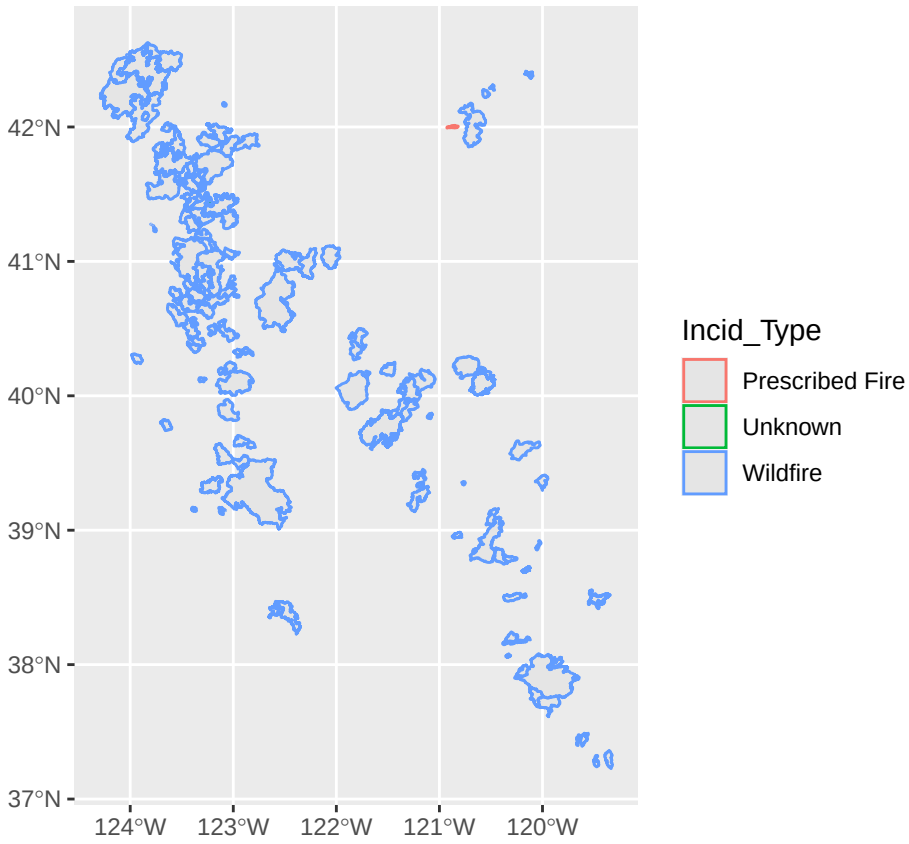
```
library(tidyverse)
library(sf)
#install.packages("ggnewscale")
library(ggnewscale)
```

Read data

```
unzip(zipfile = "mtbs.zip")
fire<-st_read("mtbs/CA_Fire.shp")
unzip(zipfile = "tl_2021_us_uac10.zip")
urban<-st_read("tl_2021_us_uac10/west_city.shp")
```

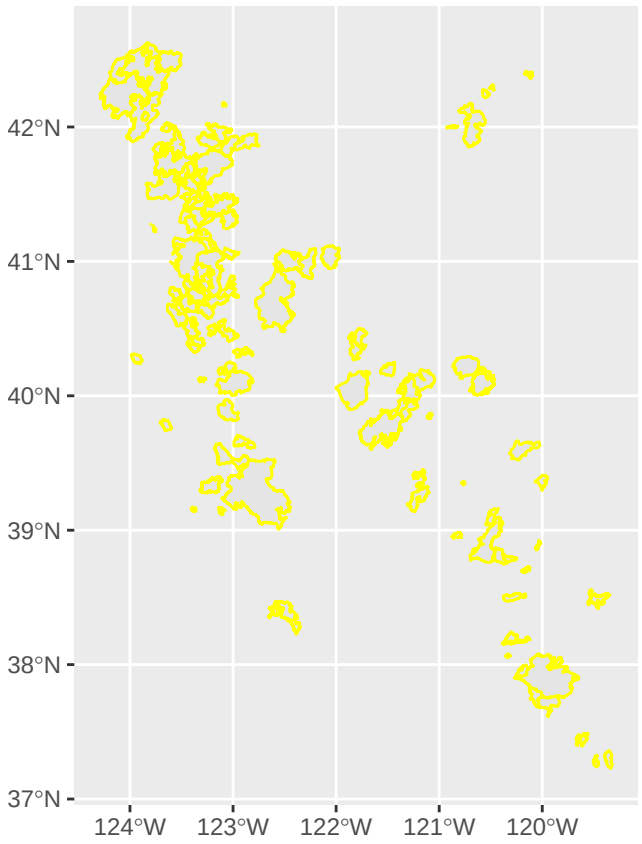
Example 1 basic plot with legend

```
ggplot() +
  geom_sf(data=fire ,aes(color=Incid_Type) )
```



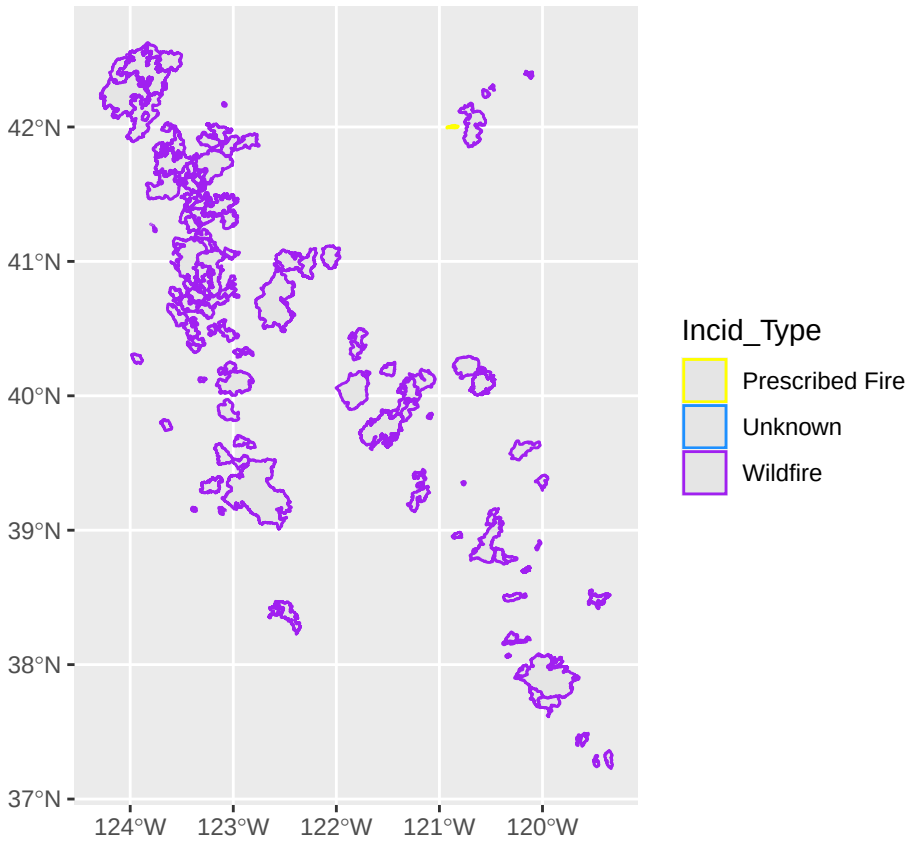
Example 2 aes(color=) is not in the legend anymore (compared to Example 1)

```
ggplot() +
  geom_sf(data=fire ,aes(color=Incid_Type) , color="yellow" )
```



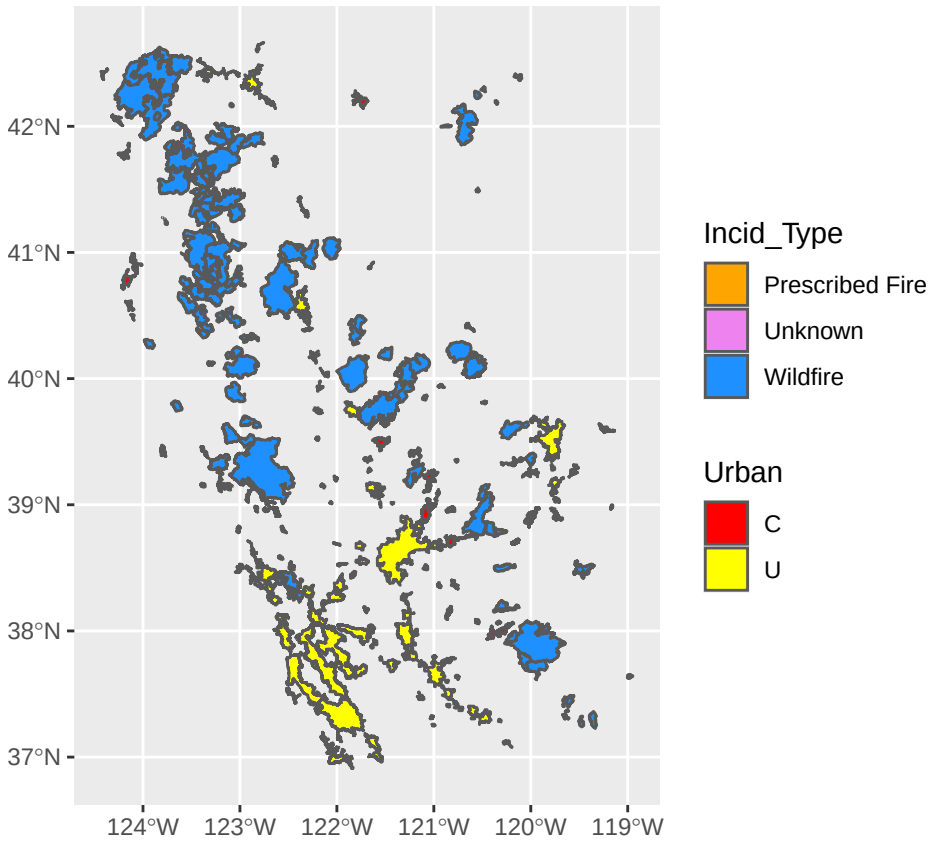
Example 3 the legend is back again

```
ggplot() +
  geom_sf(data=fire ,aes(color=Incid_Type)   )+
  scale_color_manual( name = "Incid_Type", values = c("yellow","dodgerblue","purple"))
```



Example 4 use two aes(fill) in a plot

```
ggplot() +
  geom_sf(data=urban ,aes(fill= UATYP10) )+
  scale_fill_manual(name="Urban", values = c( "UATYP10"="red","yellow"  ))+
  new_scale_fill()+ #every geom after this will not be affected the scale_fill_manual before
  geom_sf(data=fire ,aes(fill=Incid_Type) )+
  scale_fill_manual(values = c("Type" = "orange","violet","dodgerblue" ))
```


42°N
41°N
40°N
39°N
38°N
37°N
124°W
123°W
122°W
121°W
120°W
119°W
Incid_Type
Prescribed Fire
Unknown
Wildfire
Urban
C
U