Rockfish Figures

#library  
library(tidyverse)

── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──  
✔ dplyr 1.1.3 ✔ readr 2.1.4  
✔ forcats 1.0.0 ✔ stringr 1.5.0  
✔ ggplot2 3.4.3 ✔ tibble 3.2.1  
✔ lubridate 1.9.3 ✔ tidyr 1.3.0  
✔ purrr 1.0.2   
── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
✖ dplyr::filter() masks stats::filter()  
✖ dplyr::lag() masks stats::lag()  
ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors

library(ggplot2)  
#data  
RHAUdiets<-readr::read\_csv('https://raw.githubusercontent.com/Lsanahmadi/Bio708/main/data/prboSefiDiet\_e07b\_a098\_2843.csv')

Rows: 33 Columns: 5  
── Column specification ────────────────────────────────────────────────────────  
Delimiter: ","  
dbl (5): year, RHAU\_Rockfish, RHAU\_Anchovy, RHAU\_Saury, RHAU\_Other  
  
ℹ Use `spec()` to retrieve the full column specification for this data.  
ℹ Specify the column types or set `show\_col\_types = FALSE` to quiet this message.

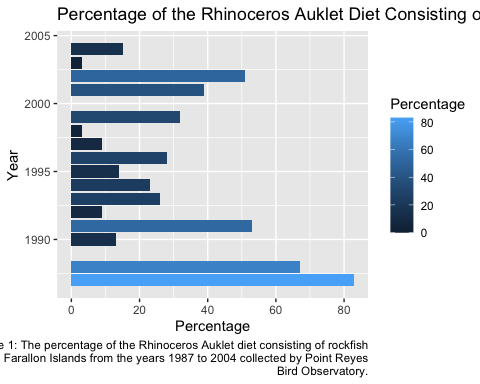
RHAUdiets

# A tibble: 33 × 5  
 year RHAU\_Rockfish RHAU\_Anchovy RHAU\_Saury RHAU\_Other  
 <dbl> <dbl> <dbl> <dbl> <dbl>  
 1 1972 NaN NaN NaN NaN  
 2 1973 NaN NaN NaN NaN  
 3 1974 NaN NaN NaN NaN  
 4 1975 NaN NaN NaN NaN  
 5 1976 NaN NaN NaN NaN  
 6 1977 NaN NaN NaN NaN  
 7 1978 NaN NaN NaN NaN  
 8 1979 NaN NaN NaN NaN  
 9 1980 NaN NaN NaN NaN  
10 1981 NaN NaN NaN NaN  
# ℹ 23 more rows

Percentage<-RHAUdiets$RHAU\_Rockfish  
  
RHAUdiets %>%   
 ggplot(aes(year,y=Percentage,fill=Percentage))+geom\_col(position = "stack", stat="identify")+labs(x="Year", y="Percentage", title="Percentage of the Rhinoceros Auklet Diet Consisting of Rockfish", caption = str\_wrap("Figure 1: The percentage of the Rhinoceros Auklet diet consisting of rockfish from the Farallon Islands from the years 1987 to 2004 collected by Point Reyes Bird Observatory.")) +coord\_flip()

Warning in geom\_col(position = "stack", stat = "identify"): Ignoring unknown  
parameters: `stat`

Warning: Removed 15 rows containing missing values (`position\_stack()`).



library(tidyverse)  
Rockfish<-readr::read\_csv("https://raw.githubusercontent.com/Lsanahmadi/Bio708/5ba01b02f2bb770e9d9262cdab504be925e2f93f/data/FED\_Rockfish\_Catch\_c8e8\_8677\_67a8.csv")

Rows: 4860 Columns: 6  
── Column specification ────────────────────────────────────────────────────────  
Delimiter: ","  
chr (5): common\_name, sci\_name, species\_group, maturity, area  
dbl (1): haul\_no  
  
ℹ Use `spec()` to retrieve the full column specification for this data.  
ℹ Specify the column types or set `show\_col\_types = FALSE` to quiet this message.

Rockfish

# A tibble: 4,860 × 6  
 haul\_no common\_name sci\_name species\_group maturity area   
 <dbl> <chr> <chr> <chr> <chr> <chr>  
 1 NA <NA> <NA> <NA> <NA> <NA>   
 2 1 AURORA ROCKFISH Sebaste… Rockfish Y Gulf…  
 3 1 BANK ROCKFISH Sebaste… Rockfish Y Gulf…  
 4 1 BLACK ROCKFISH Sebaste… Rockfish Y Gulf…  
 5 1 BLACK-YELLOWTAIL ROCKFISH GROUP Sebaste… Rockfish Y Gulf…  
 6 1 BLACKGILL ROCKFISH Sebaste… Rockfish Y Gulf…  
 7 1 BLUE ROCKFISH Sebaste… Rockfish Y Gulf…  
 8 1 BOCACCIO Sebaste… Rockfish Y Gulf…  
 9 1 BROWN ROCKFISH Sebaste… Rockfish A Gulf…  
10 1 BROWN ROCKFISH Sebaste… Rockfish Y Gulf…  
# ℹ 4,850 more rows

colnames(Rockfish)

[1] "haul\_no" "common\_name" "sci\_name" "species\_group"  
[5] "maturity" "area"

bb<-filter(Rockfish, sci\_name %in% c("Sebastes paucispinis","Sebastes flavidus","Sebastes dallii","Sebastes ruberrimus"))  
bb

# A tibble: 565 × 6  
 haul\_no common\_name sci\_name species\_group maturity area   
 <dbl> <chr> <chr> <chr> <chr> <chr>  
 1 1 BOCACCIO Sebastes paucispinis Rockfish Y Gulf…  
 2 1 CALICO ROCKFISH Sebastes dallii Rockfish Y Gulf…  
 3 1 YELLOWEYE ROCKFISH Sebastes ruberrimus Rockfish Y Gulf…  
 4 1 YELLOWTAIL ROCKFISH Sebastes flavidus Rockfish A Gulf…  
 5 1 YELLOWTAIL ROCKFISH Sebastes flavidus Rockfish Y Gulf…  
 6 2 BOCACCIO Sebastes paucispinis Rockfish Y Gulf…  
 7 2 CALICO ROCKFISH Sebastes dallii Rockfish Y Gulf…  
 8 2 YELLOWEYE ROCKFISH Sebastes ruberrimus Rockfish Y Gulf…  
 9 2 YELLOWTAIL ROCKFISH Sebastes flavidus Rockfish A Gulf…  
10 2 YELLOWTAIL ROCKFISH Sebastes flavidus Rockfish Y Gulf…  
# ℹ 555 more rows

Rockfish <-bb$common\_name  
ggplot(bb)+geom\_point(aes(x=maturity, y=haul\_no, color=Rockfish))+labs(x="Age Class", y='Haul Number', title='Age Classes of Rockfish Caught in First Fifty Hauls',caption = str\_wrap("Figure 2: Age classes of four rockfish species caught in the first fifty Rockfish Recruitment Survey trawls in the Gulf of the Farallones by NOAA.")) + facet\_wrap(~common\_name, scales="free")+ylim(c(1,50))

Warning: Removed 410 rows containing missing values (`geom\_point()`).

