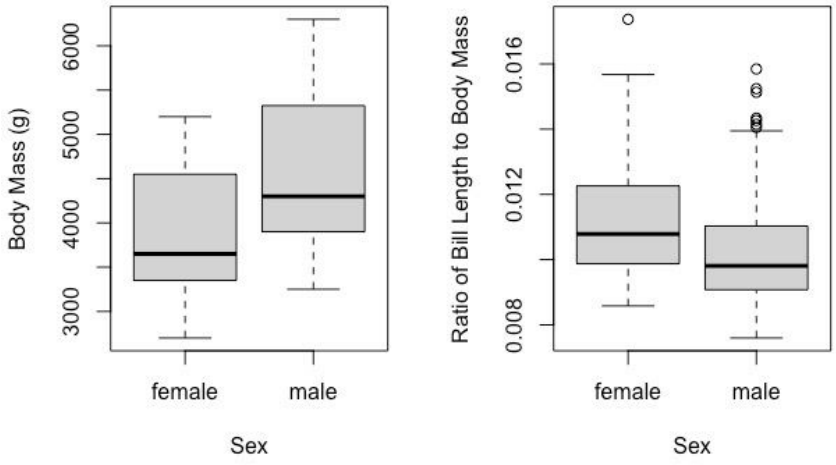
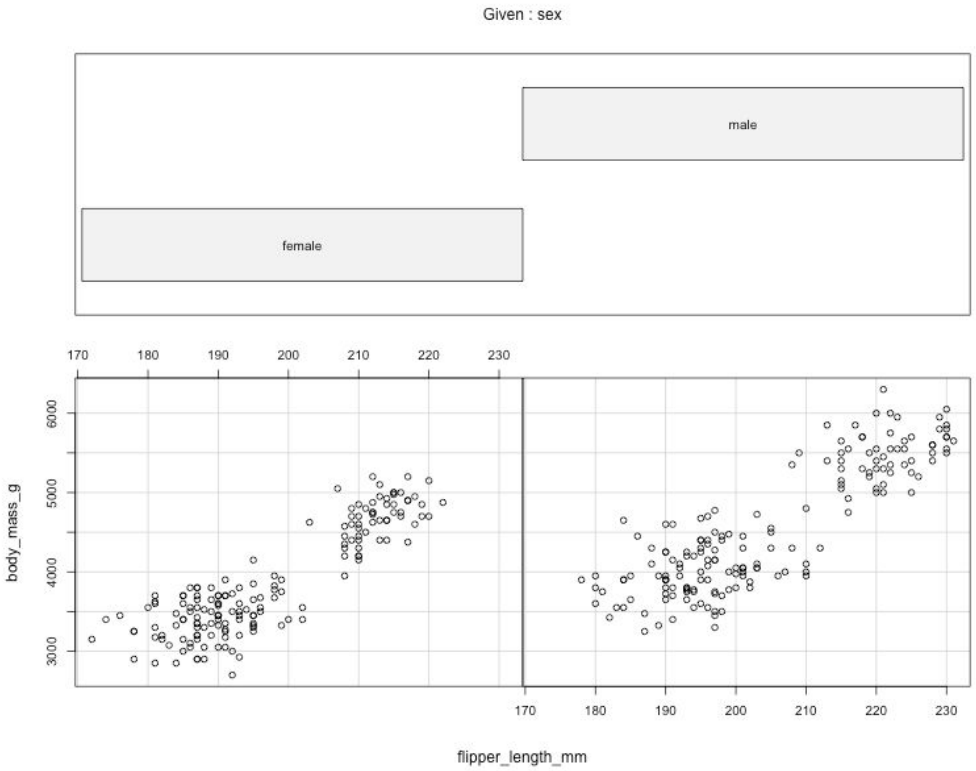
Zachary Bigwood

Lucy Cousins

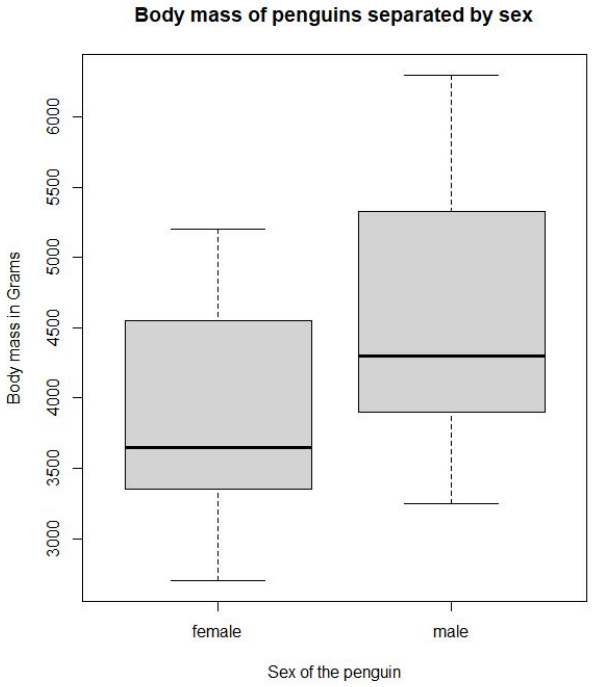
Hailey Erb

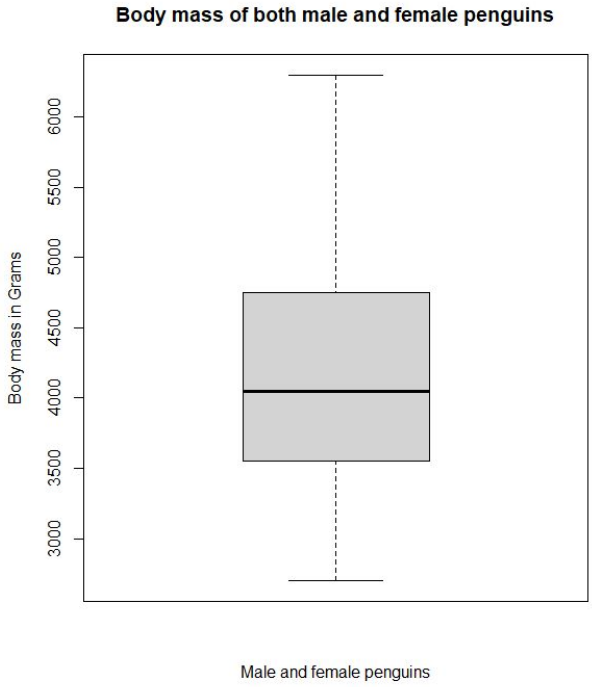


- Boxplots show a graphical summary of the data.
- All of the data were within 1.5 times the interquartile range of body mass conditioned by sex (i.e. there were no outliers for this data set). The data for males seems to be slightly right skewed, considering there is a wider range of data above the median than below the median in the male-condioned boxplot for body mass.
- The ratio of bill length to body mass seems to be right skewed, i.e. there is a wider range of data above the median than below it for both males and females. There are also several outliers.
- An interesting point here is that the body mass of males tends to be larger than the body mass of females, but females tend to have a greater bill length to body mass ratio than males. Whether or not these data are significant is yet understood.



- This plot shows all of the data as individual points, separated by sex.
- It shows that males' body mass is higher (also appears to be more scattered) than females' body mass when compared to flipper length. There also appears to be two distinct groups for both sexes, which is very interesting. Perhaps this represents multiple species. The data appears to be fairly normally dispersed around the (invisible) regression line, but to get a more conclusive answer to that, we would have to make a residual plot.





These boxplots compare the average body mass in grams for both female and male penguins compared to the average when male and female penguins are included together. The graph shows a summary of the data points as not every single data point was included but rather an average of them all together in different forms was graphed. The plot reveals that the average body mass for male penguins is about 600 grams more than female penguins.