

MIERCOLES 7 – GRAFICOS AVANCADOS

Exercise 1. The use of the pie function using the avian influenza data.

we used the total number of bird flu cases per year. Make a pie chart to illustrate the totals by country. Place the labels such that they are readable. The file BirdFludeaths.txt contains the data on deaths from the disease. Make a pie chart showing total deaths per year and one showing deaths per country.

Exercise 2. The use of the barchart and stripchart functions using a vegetation dataset.

we calculated species richness, as well as its mean values and standard deviations, in eight transects. Make a bar chart for the eight mean values and add a vertical line for the standard error. Make a graph in which the means are plotted as black points, the standard errors as lines around the mean, and the observed data as open dots.

Exercise 3. The use of the boxplot function using a vegetation dataset.

Using the vegetation data in Exercise 2, make a boxplot showing the richness values.

Exercise 4. The use of the boxplot function using a parasite dataset. In Section 6.3.3, a cod parasite dataset was used. Make a boxplot of the number of parasites (Intensity) conditional on area, sex, stage, or year. Try combinations to detect interactions.

Exercise 5. The use of the dotchart function using the owl data.

we used the owl data. Make two Cleveland dotplots of nestling negotiation and arrival time. Make a Cleveland dotplot showing arrival time per night. The nest and food treatment variables show which observations were made on the same night.

Exercise 6. The use of the dotchart function using the parasite data.

Make a Cleveland dotplot for the parasite data that were used in Exercise 4. Use the number of parasites (Intensity), and group the observations by area, sex, stage, or by year. Make a Cleveland dotplot showing depth, and group the observations by prevalence.

Exercise 7. The use of the plot and axis functions using the owl data.

Apply a logarithmic transformation (use 10 as the base) on the nestling negotiation data. Add the value of 1 to avoid problems with the log of 0. Plot the transformed nestling negotiation data versus arrival time. Note that arrival time is coded as 23.00, 24.00, 25.00, 26.00, and so on. Instead of using the labels 25, 26, etc. for arrival time, use 01.00, 02.00, and so on. Make the same graph, but use back-transformed values as labels along the vertical axis. This means using the log-transformed nestling negotiation data but with the label 1 if the log-transformed value is 0, 10 if the log-transformed value is 1, and so on.

Exercise 8. The use of the legend function using the owl data.

Add a smoother (see Chapter 5) to the graph created in Exercise 7 to visualise the pattern for the male data and for the female data. Extract the data from the males, fit a smoother, and superimpose this line onto the graph. Do the same for the female data. Use a legend to identify the different curves. Do the same for food treatment and night.

Exercise 9. The use of the pairs function using the vegetation data.

Make a pairplot for all the climatic variables in the vegetation data. Add correlation coefficients in the lower panels. What does the graph tell you?

Exercise 10. The use of the coplot function using the vegetation data.

Plot species richness versus a covariate of your choice conditional on transect.