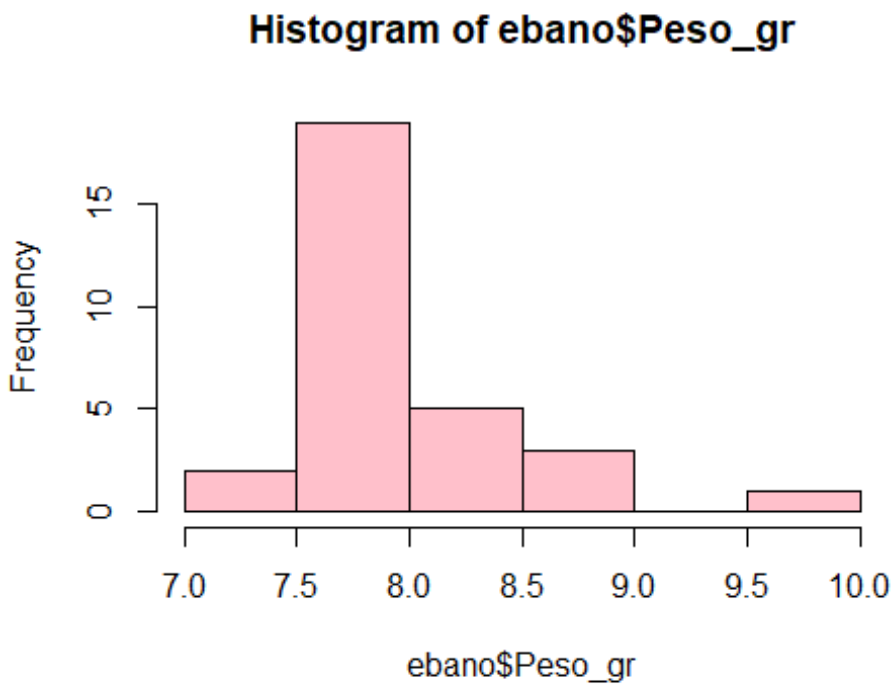
Clase_S10_D1.R

isa_r

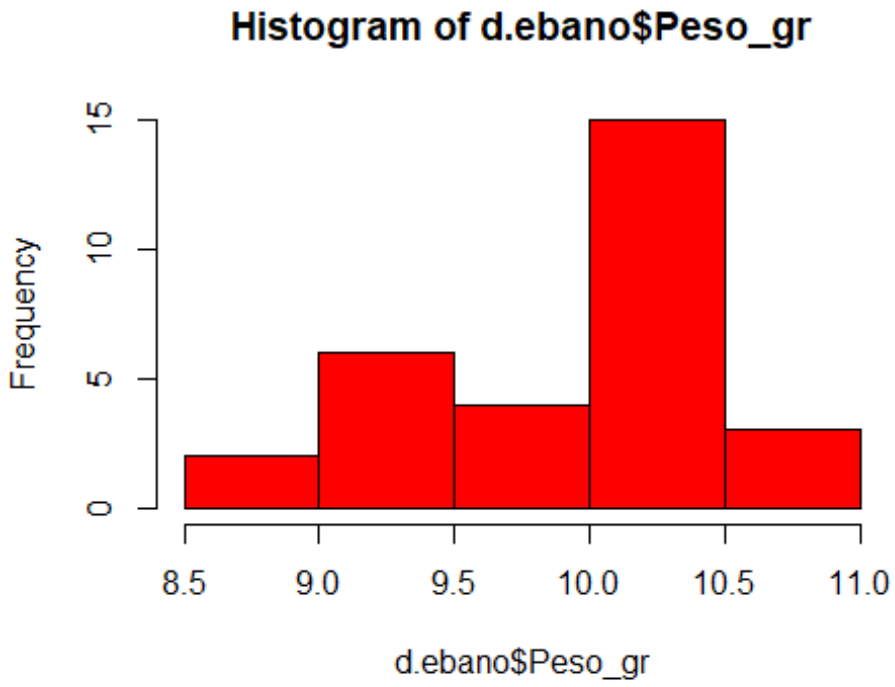
2022-05-20

```
# Amanda
# Semana 10
# 23/03/2022
# PRUEBA DE DOS MUESTRAS


# HIPOTESIS NULA (H0): no hay diferencia entre los pesos entre las
variables Ebano y D.Ebano en la base de datos madera
# HIPOTESIS ALT (H1): hay diferencia entre los pesos de  las especies
Ebano y D.Ebano en la base de datos madera.
# valor alfa= 0.05

# extraer datos
madera <- read.csv("BD.est.madera2x2.csv", header = T)

library(dplyr)

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union

ebano <-  madera %>%
  filter(Sp=="Ebano")

d.ebano <- madera %>%
  filter(Sp=="D. Ebano")

t.test(ebano$Peso_gr, d.ebano$Peso_gr, var.equal = T)

##
##  Two Sample t-test
##
## data:  ebano$Peso_gr and d.ebano$Peso_gr
## t = -15.403, df = 58, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
```

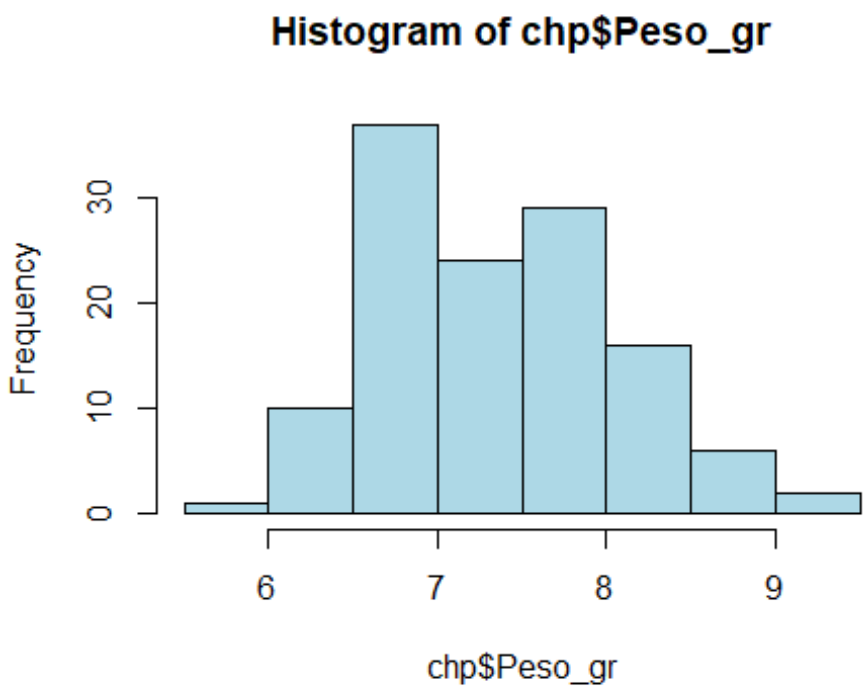
```
## 95 percent confidence interval:
##  -2.224132 -1.712535
## sample estimates:
## mean of x mean of y
##  7.971667  9.940000

mean(ebano$Peso_gr)

## [1] 7.971667

mean(d.ebano$Peso_gr)

## [1] 9.94

# valor de p-value  < 2.2e-16
# se acepto la hipotesis alternativa: hay diferencia en la media del peso
de las observaciones de  Ebano y D.Ebano

chp <- madera %>%
  filter(Sp=="Chp")

bar <- madera %>%
  filter(Sp=="Bar")

t.test(chp$Peso_gr, bar$Peso_gr, var.equal = T)

##
##  Two Sample t-test
##
## data:  chp$Peso_gr and bar$Peso_gr
## t = 0.68919, df = 248, p-value = 0.4913
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.1046324  0.2172724
## sample estimates:
## mean of x mean of y
##   7.36344   7.30712

mean(chp$Peso_gr)

## [1] 7.36344

mean(bar$Peso_gr)

## [1] 7.30712

# valor de p-value = 0.4913
# se acepto la hipotesis nula
# se rechazo la hipotesis alternativa

hist(ebano$Peso_gr, col = "pink")
```



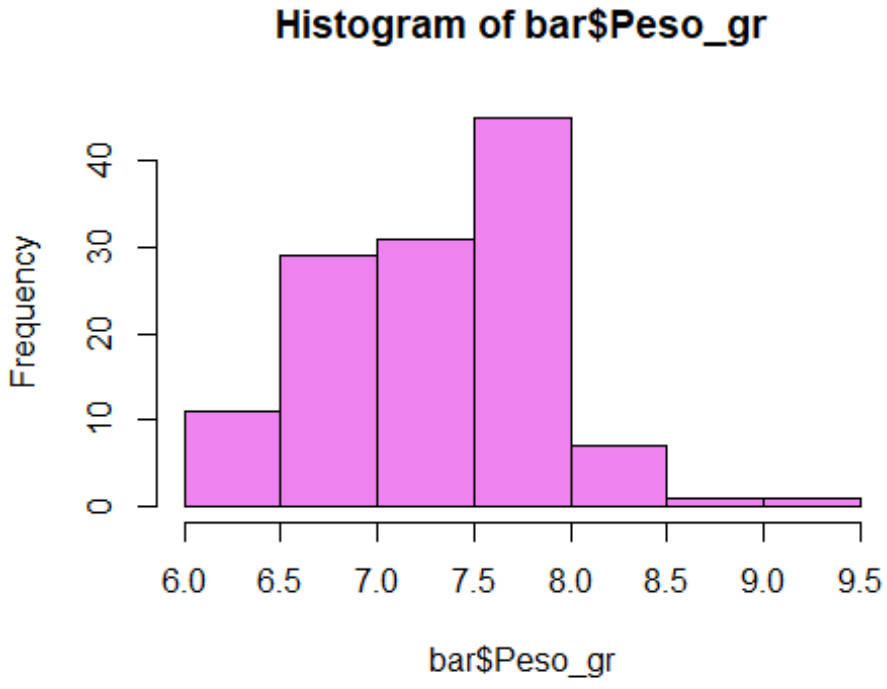

```r
hist(d.ebano$Peso_gr, col = "red")
```



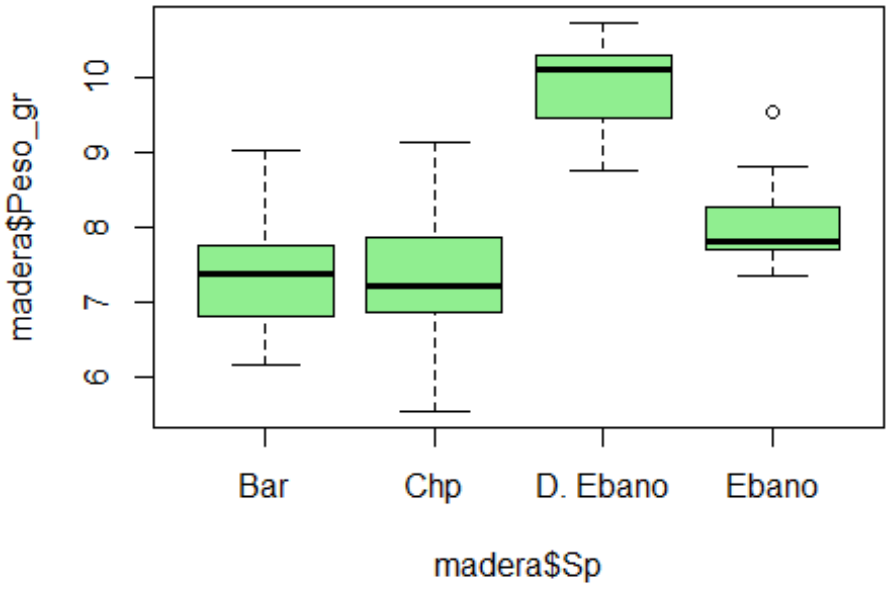

```r
hist(chp$Peso_gr, col = "lightblue")
```



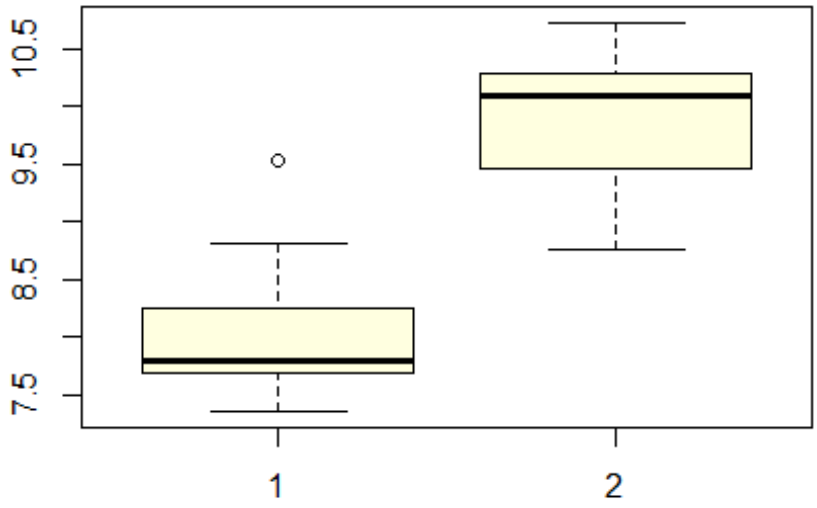

```
hist(bar$Peso_gr, col = "violet")
```



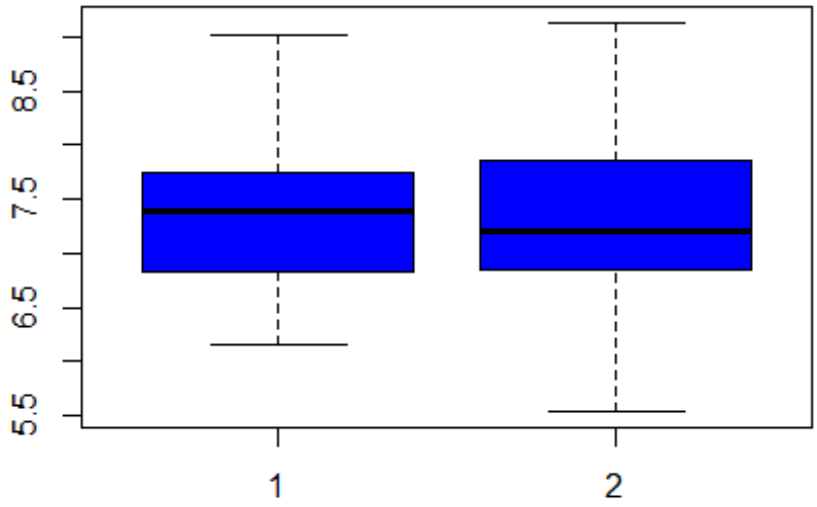

```
boxplot(madera$Peso_gr ~ madera$Sp, col="lightgreen")
```




```
boxplot(ebano$Peso_gr, d.ebano$Peso_gr, col = "lightyellow")
```




```
boxplot(bar$Peso_gr, chp$Peso_gr, col = "blue")
```


8.5
7.5
6.5
5.5
1
2