1. In a short paragraph, describe a baseline scenario regarding seed predation. At the end, state the null hypothesis for seed predation.

According to Bolker, seed predation quantifies species seed disappearance of Polyscias fulva (pol) and Pseudospondias macrocarpa (psd) at observation stations, assumed to be due to seed predators. The predictor variables are the number of times a seed species disappears, the total observations of each species and the observations of a species not taken. The null hypothesis is that there are no differences in predation rates between the two seed species.

1. Paste the R code you used to complete the table and calculate the rates.

rm(list = ls())

pol\_n\_predation = 26

pol\_n\_no\_predation = 184

pol\_n\_total = 210

pol\_predation\_rate = pol\_n\_predation/pol\_n\_total

psd\_n\_predation = 25

psd\_n\_no\_predation = 706

psd\_n\_total = 731

psd\_predation\_rate = psd\_n\_predation/psd\_n\_total

print(

paste0(

"The seed predation rate for Polyscias fulva is: ",

round(pol\_predation\_rate, digits = 3)))

print(

paste0(

"The seed predation rate for Pseudospondias microcarpa is: ",

round(psd\_predation\_rate, digits = 3)))

1. Create a table and fill in the missing values:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| species | Polyscias fulva (pol) | Pseudospondias microcarpa (psd) |
| Any taken | 26 | 25 |
| None taken | 184 | 706 |
| N | 210 | 731 |
| Predation rate | 0.124 | 0.034 |

1. Use the seed predation proportions you calculated to determine the ratio of seed predation proportions.

The ratio of seed predation proportions of pol and psd is 3.62

Code used:

ratio\_seed\_predation\_rate = pol\_predation\_rate/psd\_predation\_rate

print(

paste0(

"The ratio of seed predation proportions is: ",

round(ratio\_seed\_predation, digits = 3)))