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ECo 602

Week 6 Reading Questions

1. In a short paragraph, describe a baseline scenario regarding seed predation. At the end, state the null hypothesis for seed predation.
   1. In this case, the baseline scenario regarding seed predation is a dataset showing the rate at which seeds from two species (polyscias fulva and pseudospondias microcarpa) were taken (presumed to be a result of seed predation), t, and the total number of seeds observed, N. The null hypothesis is that there is no difference in the predation rates of the two species.
2. 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 mocrocarpa 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 | .124 | .034 |

1. Use the seed predation proportions you calculated to determine the ratio of seed predation proportions.
   1. In this case, the predation proportion would be pol\_predation\_rate / psd\_predation\_rate, or .124/.034 = 3.62. In this case, I used psd as the denominator as it is the second column in the table/in the book it is labeled at t2 and N2.