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Eco 602
Week 6 Reading Q's
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1. In the scenario, perhaps it is observed that seeds of one species are disappearing at a different rate than the other, so researchers want to know if this is a statistically significant event. It could just be random chance that the difference is noticed, or it could be that the predator prefers one of the seed types, so running a hypothesis test will help answer this question. In this case the null hypothesis would be that seed predation does not differ between the two species.

2.

```
R 4.1.1 · ~/FALL21/602/environmental_data/data/
> rm(list = ls())
>
> pol_n_predation = 26
> pol_n_no_predation = 184
> pol_n_total = 210
> pol_predation_rate = (26/210)
>
> psd_n_predation = 25
> psd_n_no_predation = 706
> psd_n_total = 731
> psd_predation_rate = (25/736)
> print(
+     paste0(
+         "The seed predation rate for Polyscias fulva is: ",
+         round(pol_predation_rate, digits = 3)))
[1] "The seed predation rate for Polyscias fulva is: 0.124"
>
> print(
+     paste0(
+         "The seed predation rate for Pseudospondias microcarpa is: ",
+         round(psd_predation_rate, digits = 3)))
[1] "The seed predation rate for Pseudospondias microcarpa is: 0.034"
>
```

Values	
pol_n_no_predation	184
pol_n_predation	26
pol_n_total	210
pol_predation_rate	0.123809523809524
psd_n_no_predation	706
psd_n_predation	25
psd_n_total	731
psd_predation_rate	0.0339673913043478

3.

```
               POL     PSD
N_Pred      26.000  25.000
N_NO_Pred 184.000 706.000
N_Tot     210.000 731.000
Pred_Rate   0.124   0.034
>
```

4. The seed ratios would be the total number adjusted for predation, so it would be the two predation rates: .124/.034 = 3.62. If there was no difference in the rates, they would be equal and the ratio would equal 1.