

Week 6 Reading Questions

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Question 1: Seed predation rate may be impacted by species-specific characteristics including size and shape. This rate of predation can be crucial to the dispersal and longevity of a species that relies on seeds for reproduction. To gain a deeper understanding of how seed predation rates may vary between species, we quantified how many times seeds from two different species (*Polyscias fulva* and *Pseudospondias macrocarpa*) disappeared in a study plot in Kibale National Park, Uganda. If seed predation rates varied based on species, possibly due to seed size influencing detectability, the proportion of seeds disappeared to seeds available would differ between the two species. Under the null hypothesis, seed predation rate for the two species would be equal, which could be due to equal detectability of both species' seeds by predators.

Question 2:

pol_n_predation = 26
pol_n_no_predation = 184
pol_n_total = 210
 $\text{pol_predation_rate} = \text{pol_n_predation} / \text{pol_n_total}$

psd_n_predation = 25
psd_n_no_predation = 706
psd_n_total = 731
 $\text{psd_predation_rate} = \text{psd_n_predation} / \text{psd_n_total}$

Question 3:

Species	<i>Polyscias fulva</i> (pol)	<i>Pseudospondias macrocarpa</i> (psd)
Any taken	26	25
None taken	184	706
N	210	731
Predation Rate	0.124	0.034

Question 4: The ratio of seed predation rates is $0.124/0.034 = 3.65$