

**Title:** Does Height Matter?  
Determining Frugivore Seed  
Preference by Elevation Level



PRESENTERS:

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**BACKGROUND:** We wanted to determine if animals' seed preference differed based on elevation. Understanding animals' seed preferences will help us better understand seed dispersal.

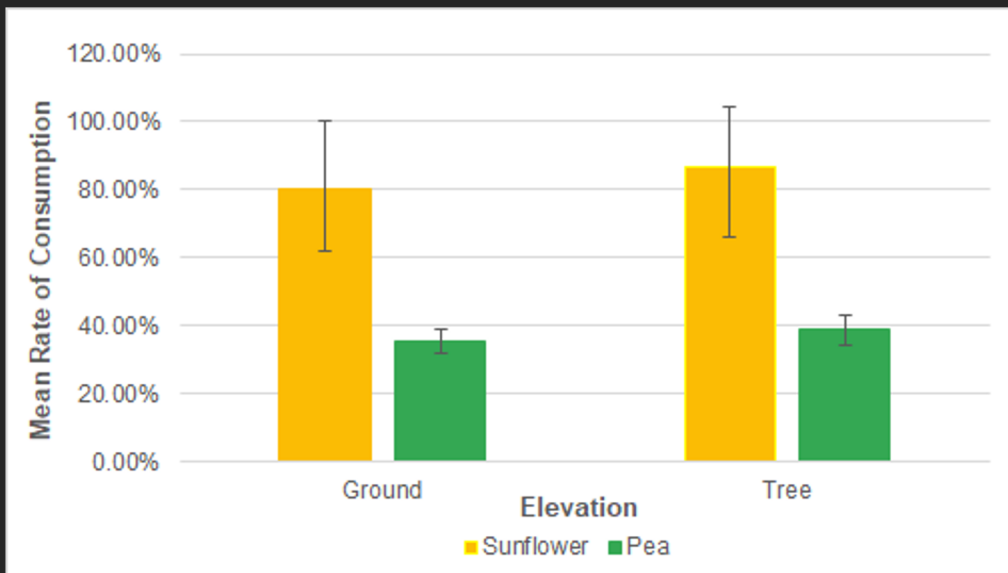
**Hypothesis:** Seed consumption is highest at the ground level, especially for the hard-shelled sunflower seeds.

We predicted this because seeds at the ground level are accessible to all species and sunflower seeds are more abundant in the area with a higher nutritional value.

#### METHODS

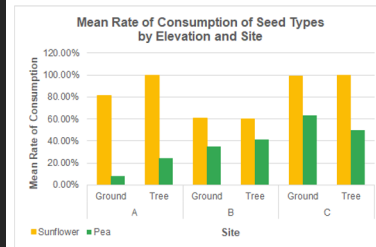
1. Fill 6 dishes with an equal mass of sunflower seeds (200) and peas (40) mix
2. Hang dish on a tree branch and below on the ground with three replicates
3. Count the amount of seeds left in each dish after 2 days
4. Perform five trials
5. Calculate the consumption rates

# Local seed-eating animal species' preference for sunflower seeds is consistent, regardless of elevation.



**Figure 1:** Average consumption rates of peas and sunflower seeds across three different sites, measured at two heights: ground level and elevated in a tree.

#### RESULTS:



	Sunflower Seeds (¼ cup)	Peas (¼ cup)
Calorie	207 calories	31 calories
Protein	5.8 grams	2.05 grams
Fat	19.3 grams fat	0.1 grams

**Discussion:** Seed consumption did not differ significantly based on elevation. However there was a significant difference between sunflower and pea consumption. This preference might be due to the nutritional content of the seeds. Sunflower seeds have much higher calorie, fat, and protein content per serving than peas making sunflower seeds have a higher nutritional content. Another possible explanation is that the same animal species were consuming seeds at all heights. So any food preference they had would be consistent across both heights.