

Science Writing Workshop activities: Results and Discussion

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In MARN 3001, the instructor has identified difficulties distinguishing material appropriate for the “Results” (Results and observations are reported) and the Discussion (Results and observations are analyzed).

Here are the sentences from both sections of the sample lab report you just reviewed. Which sentences belong in which sections? Check your answers against the lab report.

Distinguishing between Results and Discussion

The **Results** section describes and organizes your data and observations. The **Discussion** section analyzes and interprets those results.

Result (R) or Discussion (D)?

Compare with lab report.

Other studies suggested that beavers avoid trees that have chemical defenses that make the tree unpalatable to beavers (Muller-Schwarze et al. 1994). (D)

Measurements taken at the study site show that beavers avoided oaks and musclewood (Fig. 1) and show a significant food preference ($\chi^2=447.26$, d.f.=9, $P<.05$). (R)

Although beavers are described as generalized herbivores, the finding in this study related to species selection suggests that beavers are selective in their food choice. (D)

No avoidance or particular preference was observed for the other tree species. (R)

Although beaver selection of certain species of trees may be related to the nutritional value, additional information is needed to determine why beavers select some tree species over others. (D)

Overall, beavers showed a preference for certain species of trees, and their preference was based on distance from the central place. (R)

This finding agrees with our hypothesis that beavers are likely to show a preference for certain tree species. (D)

These studies also suggested that beavers prefer trees with soft wood, which could possibly explain the observed avoidance of musclewood and oak in our study. (D)



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The result that chewed trees were closer to the water accounts for the time and energy spent gathering and hauling. (D)

The tree species that were avoided were not significantly farther from the water ($t=.4277$, $d.f.=268$, $P>.05$) than selected trees. For the selected tree species, no significant difference in circumference was found between trees that were not chewed (mean=16.03 cm) and chewed (mean=12.80 cm) ($t=1.52$, $d.f.=268$, $P>.05$) (Fig. 3). (R)

This is in accordance with the optimal foraging theory and agrees with our hypothesis that beavers will choose trees that are close to the water. (D)

The mean distance of 8.42 m away from the water for not-chewed trees was significantly greater than the mean distance of 6.13 m for chewed trees ($t=3.49$, $d.f.=268$, $P<.05$) (Fig. 2). (R)

As distance from the water increases, a tree's net energy yield decreases because food that is farther away is more likely to increase search and retrieval time. This finding is similar to Belovsky's finding of an inverse relationship between distance from the water and percentage of plants cut. (D)

The lack of any observed difference in mean circumference between chewed and not chewed trees does not agree with our hypothesis that beavers will prefer smaller trees to larger ones. (D)

Our hypothesis was based on the idea that branches from smaller trees will require less energy to cut and haul than those from larger trees. (D)

Our finding is in accordance with other studies (Schoener 1979), which have suggested that the value of all trees should decrease with distance from the water but that beavers would benefit from choosing large branches from large trees at all distances. This would explain why there was no significant difference in circumference between chewed and not-chewed trees. (D)

Although beavers adhere to the optimal foraging theory, without additional information on relative nutritional value of tree species and the time and energy costs of cutting certain tree species, no optimal diet predictions may be made. (D)

Other information is also needed about predatory risk and its role in food selection. Also, due to the large number of students taking samples in the field, there may have been errors which may have affected the accuracy and precision of our measurements. (D)

