

# Brochure



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Brittany Laurenzo Gopher Tortoise Habitat An experiment was performed involving Gopher tortoises and determining whether tortoises are only found in abundant non-woody vegetation. This experiment was tested to see if there was validity to the statement. Gopher tortoises can be found in the Southeastern United States and prefer areas with abundant non-woody plants. These plants are what the tortoises eat so naturally there burrows can be found in areas with abundant food. The prediction was that Tortoises require non-woody plants as food; therefore tortoises will locate their burrows in areas with abundant food.

The results of the experiment seemed to agree with the hypothesis. The average showed that 77.5% of tortoises in an occupied area contained non woody vegetation compared to the 22.5% of woody vegetation. When it comes to tortoises there are many issues when it comes to a tortoise's habitat and the decline of a species. Many factors such as environmental pollution, global climate change, introduced invasive species, disease, and unsustainable harvesting contribute to these declines. As with amphibians, habitat degradation is the primary cause of reptile declines.

There has not been much research performed when it comes to Gopher tortoises. The objective of this study was to confirm that where you can abundantly find the most Gopher tortoises is in abundant non-woody vegetation. Similar research shows that habitat use within gopher tortoises' home ranges was generally in proportion to the amounts of habitat available, except that gopher tortoises used swales and disturbed areas (e. g. , grassy, mowed road shoulders, pastures, citrus groves, and firebreaks) less than expected based on availability.

For this experiment the study was done at the Preserve facility at Florida Atlantic University. Once in the preserve we worked in groups of three to five students. To perform the following experiment we selected PVC square in two different areas. A part of the experiment is to analyze the different PVC squares in both locations. Analyze the vegetation within your PVC square by estimating the percentage of non-woody and woody plants. Finally, we recorded the data as percentages of woody vegetation compared to non woody vegetation.

The results showed that on average the tortoises in an occupied area were 77.5% non-woody vegetation compared to a 22.5% woody vegetation. In the areas that were not occupied by tortoises were 95.5% woody vegetation compared to a 4.5% non woody vegetation. Quadrat Type| % Woody Vegetation| % Non Woody Vegetation| Average| In tortoise occupied area| 75%; 20%; 10%; 15%; 5%; 10%| 25%; 80%; 90%; 85%; 95%; 90%| 22.5% vs. 77.5%| In area not occupied by tortoises| 90%; 100%; 2%; 95%; 3%; 95%| 0%; 98%; 5%; 95%; 5%; 10%| 95.5% vs. 4.5%|

The data does seem to support the hypothesis. The active tortoise occupied area was a majority between 80-95% non woody vegetation. I do not think this evidence validates the hypothesis because the research is limited. We did not actually see the tortoises in the active occupied tortoise area. Also some other questions to think about is how fresh is the vegetation, what type of vegetation do the turtles prefer, how many burrow are there actively occupies. Another useful tool that should have been used for this experiment is repetition.

Each group should have had to repeat the experiment more than once and look at all 6 quadrants instead of everyone just choosing one quadrant to observe. In conclusion the data did support the hypothesis however there was not enough evidence to actually support the prediction that was made.

References 1. [http://www.fs.fed.us/database/feis/animals/reptile/gopo/all.html#BIOLOGICAL DATA AND HABITAT REQUIREMENTS](http://www.fs.fed.us/database/feis/animals/reptile/gopo/all.html#BIOLOGICAL_DATA_AND_HABITAT_REQUIREMENTS) 2. [http://link.springer.com/article/10.1007%2F978-1-4020-5613-0? LI= true](http://link.springer.com/article/10.1007%2F978-1-4020-5613-0?LI=true)