

Practice Quiz II

1. In ONE sentence, define the following terms. I will grade only the first sentence provided.

Independent variable

Degrees of freedom

2. The staff scientist, Eric Menges, has just told you that he thinks there is a difference in flower size of pawpaws between Red Hill and those behind the station. Furthermore, Eric goes on to say that the difference in flower size is due to the plants association with nitrogen fixing fungi on Red Hill. Being skeptical about his claims, you decide to collect data to test whether flower size differs between locations and whether there is a relationship between the location of plants and their association with fungi.

Location	No. flowers sampled	Mean flower size	Standard deviation	No. plants with fungi	No. plants w/o fungi	Statistics
Red Hill	21	26.8 mm	4.4 mm	15	6	$t = 3.585$
Station	21	22.2 mm	3.9 mm	11	10	$X^2 = 1.62$

Is Eric right? Write out your hypotheses and statistical conclusions. Do you accept or reject the null?

3. Briefly explain the significance of the Lake Wales Ridge and its historical biogeography.

4. Briefly describe one way that sand pines are adapted to pyrogenic ecosystems.