Practice Questions for Labs 6-8
Which of the following is true for an r-selected species?

a. very long-lived
b. reproduce later in life
c. produce a lot of offspring
d. better competitors than K-selected species
e. are more common in marine habitats than terrestrial habitats
How do modular organisms differ from unitary organisms?
For lab 6, you calculated a Shannon-Wiener Index, just as you did in lab 1. There were two distinct differences in this lab, however. One difference dealt with how you calculated the index and the other dealt with the context of the calculation.

Explain what those differences were.

\[
H' = -\sum_{i=1}^{s} p_i \log_2 p_i
\]
What does the graph below indicate?
Based on the data below, what conclusions can you make about competition?
Based on the data here, you hypothesize that r-selected species facilitate the colonization of K-selected species. What experimental result would refute this hypothesis?
Which plate would you expect to be early in succession? Late in succession?

Figure 6-11  Figure 6-12

Are r-selected organisms more likely to be found on the 3 month plates or the 9 month plates? How about K-selected organisms?
What does this represent?

What is an example of a primary producer?

A primary consumer? A secondary consumer?
What trade-offs are there for a mosquito for feeding? For breathing? For hiding?
What is a refuge in time? In space? In body size? How does this help prevent from being eaten?
What does the graph below tell you about mosquito feeding behavior?

Are these data highly variable?
If you were to eliminate the bird in this trophic system, what should happen to the population size of the plant species?

Is the bird maintaining the plants at $K$, above $K$, or below $K$?
What is a biological species?

How does this species concept differ from the concept you used in Lab 1?

How does a species differ from a population, from a community, and from an individual?

What is incipient speciation?
Explain ecological, temporal, mechanical, behavioral, gametic, and geographic isolation.

Which reproductive isolating mechanism applies best to the soap berry bugs from Lab 8?

Figure 8-1
Why is beak length in a soapberry bug so important for feeding?

Why might natural selection favor one beak size for another beak size?

How does phenotypic variation apply to beak lengths in soapberry bugs?
If soapberry bug beak lengths ultimately fit the distribution above, what type of selection is this? (note: for this question assume all bugs came from one population initially)