Human diseases often have an ecological component. One such disease, bartonellosis, occurs primarily in Africa. This paper describes some recent research examining how the incidence of bartonellosis can be related to the presence of large animals interacting with the biological community.

The reading is available on the class website (http://ww2.coastal.edu/jjhutche/bio370.htm). After reading the paper, please answer the following questions. Some rules to follow:

- Answers must be typed.
- You do not need to include the questions; just provide the answers.
- If you refer to organisms using their scientific name, you must italicize the genus and species names (e.g., *Homo sapiens*, not *Homo sapiens*).
- Points also will be taken away for errors in spelling and grammar, so proofread!
- When writing your answers, USE YOUR OWN WORDS. For example, do not just copy the figure captions to interpret the graphs or slightly change the order of wording found in the text.

This assignment is due Friday, 8 September 2017; turn in a printed copy (you’ll give a job to a tree planter!).

Questions:

1) What is the major hypothesis being tested? My view of a hypothesis is that it is a prediction coupled with a mechanism, so include both aspects.

2) What questions or hypotheses are the authors addressing with each of the three graphs (not the picture) in Figure 1? What conclusions do the authors draw from these data shown in each graph? As a critical reader, do you agree that the data support these conclusions? Explain why. To do this you need to look at the data. (For example, do the error bars for each treatment overlap?) In your answer, also explain how these graphs go together.

3) What questions or hypotheses are the authors addressing with each of the three graphs shown in Figure 3? In 3A, what does infection prevalence refer to? What conclusions do the authors draw from these data in each graph? As a critical reader, do you agree that the data support these conclusions? Explain why. Again, you will need to look at the data. In your answer, explain how these graphs go together.

4) Based on this reading, explain why the distinction between *per capita effects* and *effects due to abundance* is important. In your answer, describe what the authors are talking about for each of these effects (hint, you will need to define each term).