

EEB 2208E (Introduction to Conservation Biology)

Primary literature readings

In a subset of class meetings, we will spend time (20+ mins) discussing a related paper from the primary peer-reviewed literature. These readings will form the basis of class discussions and short writing assignments that are worth 10% of the final grade. The main goal of these assignments is to teach you how to read scientific papers so that you can better evaluate the evidence for scientific findings. They will also expose you to the type of reading that scientists and users of the primary scientific literature do all the time. Because the discussions are designed to help you use and understand peer-reviewed papers, they will also help develop an essential skill that will be useful for the poster assignment, and in other classes that use the primary scientific literature.

Class discussions (ungraded, but important)

During discussions, I will randomly select people to either summarize key points from the paper or to answer simple questions about the reading. You will not have to talk at length, but you will need to know what the papers are about and to have thought about what they mean. These discussions are not meant to be intimidating (really!), but are to help me get to know you a bit better, to help you practice these skills, and to give you a sense of what current research in conservation biology looks like.

The best way to avoid making this a scary, high-pressure experience is to prepare. For each discussion, you should:

- a) make sure that you have read and thought about the paper,
- b) be able to summarize what the paper is about in one or two sentences (this is the type of thing I will ask people to do in class),
- c) be able to say something about how you think the paper relates to material we have covered in lectures, and
- d) be able to say what you think of the paper (Was it easy to understand? Do you agree with the results? Are the results surprising? etc.).

There are no “right” answers to (d) – if you hate the paper, or found it impossible to understand, then saying that is fine. I do not expect you to understand every detail of every paper. In particular, I don’t expect you to understand the statistical analyses or many of the details of lab and field methods – if you find these parts confusing, just skip over them.

I do expect you to know why the study was done, what the main findings are, and how it relates to the course material. I will also spend time talking about figures and how we interpret what the data show – so try to work this out for yourself before class. If, however, you cannot determine what a paper is saying, or what the data show, do not worry – the reason we will read multiple papers is to help you practice these skills. I do not expect you to spend hours reading these papers – if you are spending more than an hour on each, then you’re doing more than is necessary. You should also feel free to talk about them with others in the class, or on the discussion boards.

Participation: Participation in discussions is not graded, but do not take this to mean that you should not read the papers and participate. It is important to hear a range of voices, and not just the same small group of students all the time – different people have different perspectives, and sometimes that can lead to different (and sometimes better!) interpretations of a study – this is as

important in science as it is in class. Moreover, when a variety of people join in with class discussions you do not have to listen to me drone on so much ... making class more interesting for everyone (especially me).

To help get more people talking about the material, I will pick students at random to answer questions. For some people, this can be uncomfortable because of concerns about making a mistake. I understand that concern (and still experience it myself), but for many careers it is important to be able to speak in public settings and to think on your feet. My goal is for this to be a “low-stakes” opportunity to practice those skills. If you do make a mistake, or think that you said something wrong, please do not dwell on it. Misspeaking and misunderstanding are things every one of us does all the time – to do so is simply human. Reading scientific papers is also hard, especially when you are just starting out. If you interpret something wrong, you can be sure that someone else (in some cases, maybe a majority of the class) was thinking the same. By voicing what you think, you simply help me know where I need to explain things better, and ultimately that will benefit others in the course.

In-class writing assignments (10% of total class grade)

For each discussion paper you will need to respond to the following prompt about the paper:

- 1) Describe one thing from the paper that surprised you.
- 2) Explain why it was surprising.

In each case we are looking for a short simple statement. **Your entire response should be no more than two sentences (one is better) – if you write more, it will not be read and will not contribute to your grade.** (After using this assignment for >15 years, I’ve discovered that long answers are rarely good answers.)

You can refer to the original question, the methods that were used, the interpretation of the results, the conclusions, things that were not discussed in the paper but seem important, etc., etc., etc. But you must justify the reason for your surprise, in relation to ideas we have covered in the class.

For example, an answer like this one would get full points: *“I was surprised the species was listed as endangered because it is a habitat and food generalist, and those types of species are usually secure.”* There is no need to write more than this: the sentence clearly explains what was surprising, then gives an explanation based on general patterns that we will discuss in the class.

IMPORTANT: Simply not knowing something is not a sufficient reason for surprise – I’m looking for signs of a deeper assessment of the information. For example, this answer, or one like it, would get only half points: *“I was surprised the species was listed as endangered because I assumed there were lots of them.”* In this case, the simple fact that the author made an unexplained assumption is not sufficient for full points. Note that if this person had said *“... because I have seen another study that reported extremely large population sizes”* then they would have got the second half point (as long as the statement was correct).

You will also lose points if it is clear that you have not carefully read the paper. For example, if you say you were surprised by things that are not in the paper, refer to things that are not relevant to the study, or make statements that do not follow logically from the findings, etc., you are unlikely to get any points.

Grading: Grading is based on thoughtful participation, rather than a narrow set of specific answers. If your answer meets the criteria described above you will get the points. There are ten readings, each worth 1% of the total class grade. If you do not address both halves of the prompt, you will not get full points.

I encourage you to discuss the papers with others in the class, but your answers should be your own. If we get large numbers of similar responses, we will impose penalties. If patterns of similarity emerge, you will risk getting an F for the class. (I apologize for even bringing this topic up as I know that most students are honorable – unfortunately there are enough who are not, that I am forced to be blunt and to explain how seriously I take cheating.)

Responses must be submitted in class. Everyone can miss up to 3 discussion responses with no penalty (no need to email me, or provide a reason). If you do miss responses, your grade will be averaged over the assignments that you did complete (e.g., if you attend 9 of the 10 discussions and get 7.5/9 points (83%), your grade will be adjusted to 8.3 out of 10). If you miss more than three discussions, though, you will lose points for ALL of the discussions that you missed. Also, notice that when you miss a discussion, the relative effect of each of the others on your final grade increases.

Bonus points

Anyone can gain bonus points for particularly thoughtful responses in either their written answers or the discussions. But such things really have to surprise me or the TA into thinking “Wow, that’s a good point.” These points are given out rarely, and only when people are truly original in their responses. So, if you are surprised by the same thing that your friend is surprised by, you can guarantee that you will not get a bonus.

No one can get more than 10 points total no matter what, but we will keep track of especially good answers from the very first discussion so that you can “stockpile” replacement points in case you lose points later in the semester.