Guidelines for Writing Final Papers for EEB 469, EEB 470 Tutorial

After spending a whole semester reading, thinking and having discussions about several aspects of your chosen topic with your advisor, you should have an idea of what you would like to say in your final paper. (If you have question about this, please talk to your advisor).

You are expected to form a claim (thesis) about a significant issue in evolutionary biology, ecology or other related disciplines. The main purpose of your paper will be to support this claim using data from the *primary literature*. Your claim should be synthetic and rely for support or integration of data from a variety of sources. Your paper should be about 20 pages long and cite a minimum of 10-15 references from the primary literature.

Organization of the paper

Because you are writing a review paper rather than presenting new results, the paper's structure will be different from that of primary literature (which follows the introduction/methods/results/discussion format). Your paper should be divided up into sections as indicated below:

- Title: Pleaes include your name & advisors's name
- Abstract
- Introduction
- Body of the text (divided into sections)
- Conclusion
- Literature Cited

Title—The title should be brief and informative. This is the bait that lures the potential reader to continue, so it is worth choosing carefully.

Abstract—This brief section (less than a page) gives a concise, specific, balanced summary of the main points of your paper. It should present both your thesis (i.e. main claim) and major lines of argument. Write it after you have finished a full draft of the paper.

Introduction—This section will probably be one to several pages long. The purposes of the introduction are to create a general framework, provide necessary background information, present your specific question, and motivate interest in your topic. The introduction should also include a clear statement of your thesis.

If your topic is a question, state the specific question and describe your explanatory plan. Place the topic in a general context so that your reader understands its interest and importance. For example, if your question is "Why do century plants reproduce only once, at the end of their lives, while oak trees reproduce every year throughout their lives?," then the context might be the ecological forces shaping the evolution of different life-history strategies.

Also use the introduction to explain HOW you are going to go about addressing the topic. Having a clear structure will make it easier for the reader to follow your arguments. In the above example, you might state that you are going to 1) summarize several hypotheses specific to long-lived organisms, 2) place long-lived organisms in the more general context of the r-selection/k-selection, 3) briefly discuss the strengths and weaknesses of each hypothesis, and finally 4) argue for a particular one of these hypotheses to explain the century plant and oak patterns (#4 is your thesis statement).

Body of the text—This section should present an objective, unbiased account of relevant information from the primary literature and your critical evaluation of it. It is most effective to present information

organized around key points that support your hypothesis. Each key point should be identified by an informative header. This will help readers follow the structure of your paper. Each key point will typically be supported by multiple paragraphs presenting evidence for the claim.

Conclusions—Present your own conclusions or analysis of the information you have synthesized. The quality of your paper rests on how well you support your view, not on what position you choose to support. If there is no controversy, then use this section to synthesize the major conclusions of the papers you have reviewed. Be sure to return to the general context you established in the Introduction.

Literature cited—This is exactly what it says: a list of all the papers that you have cited in the body your paper. Be sure to include all papers that are mentioned by author/date in your text. It is not appropriate to list papers that may have something to do with your topic but that are not cited in the text. Follow the format of the journal *Evolution*.

Tips for success

- Do not simply summarize the papers you discuss. Instead, give readers enough information about the data to follow your arguments and evaluate your opinions.
- Being critical does not necessarily mean finding flaws. Rather, it involves expressing a reasoned opinion, and judging correctness, value, or significance.
- Each paragraph should have a single main point that is supported by evidence. This evidence is usually stronger when it comes from multiple sources.
- Make sure that all evidence is documented by appropriate citations within the text. Every statement that is not common knowledge and not your own conclusion must be attributed to a source, using an in-text citation.
- Use proper citation format when presenting data or conclusions from the papers you have read.
- Once you have completed the body of the text, check its organization and logical flow by making a reverse outline. Start with your section headings, and then identify the main point of each paragraph within the section.