# Bates College Department of Biology PEER REVIEW FORM

**Reviewer's Bates ID#: _____**          **Authors' Bates ID#'s: _____**

**Overview:** Scientific peer review is done by anonymous reviewers to assure an honest and open critique of the scientific merit and written communication of the work. Your task, as a reviewer is to help the author to write a better, more readable, and scientifically sound paper. For this you just need to be a good, attentive, **reader**. The process asks you to read the paper at different levels, starting with a global perspective addressing the purpose of the work and the telling of the story of how and what the researchers learned. From there, you will read more closely focusing on specifics of the writing and organization to help the authors are clear and concise in their presentation.

## EVALUATION:

<u>REVIEWERS:</u> **You will be evaluated on how well you identify the strengths/weaknesses in the paper and on the quality and accuracy of your suggestions for improving the paper.** Remember that you role is a concerned colleague whose goal is to help the authors improve their paper. <u>You are not a line editor</u>. **To get started, your focus should be informed by the authors' cover letter outlining where they feel they need the most help**. We assume that you have a working familiarity with the "How to Write…" guide and Hofmann (2016) and that one or both are open on the desk beside you. <u>The review counts 30 points (total project counts 130 pt).</u>

<u>AUTHORS:</u> **You will be evaluated on how well you respond to and incorporate suggestions provided by your reviewer(s).** To help facilitate our evaluation of your peer review effort, we <u>require</u> (1) that you check off any suggested changes <u>on this document</u> as you make them, and (2) that you also check off your changes on the <u>draft manuscript</u>. **If you opt not to make a suggested change, please provide a brief, reasoned explanation as to why.** You will also complete the last page of this form where you'll outline how you will undertake the revision of your paper based on this review. This helps us know quickly where you have focused your revision effort. <u>Your response to reviewers' suggestions counts 20 points on your paper score (20/100 pt).</u>

**Tips for reviewing a manuscript effectively:**

- **Imagine you're having a dialog with the authors about the draft, especially as you identify concerns and consider possible solutions.**
- **Be kind and constructive.** Be the kind of READER you would like to have read your draft.
- **Give concrete, specific, honest praise.** *Example:* "I like the way the data are presented in Figure 1. The important features are well labeled on the image and explained in the legend."
- **Give concrete, specific, honest <u>constructive</u> feedback.** *Example***: "**I find it difficult to follow the logical flow of information in this paragraph. A clear topic sentence is needed and then perhaps reordering the sentences…"
- **Write comments upon which the authors can act;** provide enough information that the authors will know the basis for your concerns without becoming directive about solutions.
- **Ask lots of questions if you do not fully understand aspects of the paper.** *Example:* Your introduction presents conflicting arguments, but I am unsure of your thesis. Can you explain what side of the controversy you defend?
- **Mirror for clarity –** Say: "It sounds like you are saying…. Is that right?"
- **Move from global to local issues.** For example, start with overall organization and cohesiveness of the paper (the story), rather than wording of individual sentences.
- **Don't try to "FIX" everything.** DO NOT line-edit the paper; let the authors deal with the nitty gritty in the context of their revisions. If there are abundant grammatical issues, simply note that this is an issue that needs to be addressed in revision.
- **Avoid comments that start "You should…" –** allow the authors the opportunity to process your comments and determine how best to revise their work.

## References

Hofmann, A. 2013. *Writing in the Biological Sciences* Oxford University Press, New York. 290 pp.

## SCIENTIFIC MERIT OF THE WORK

This section asks you to think about how well the researchers carried out their study. Was the study designed and controlled such that they were able to answer the question they intended to answer? Did they accomplish what they say they intended to do based on the stated purpose of their study? As you read the paper, check off the items below if they are addressed and well done. Circle those items that are missing or are not developed adequately. When possible, direct the authors' attention to the specific location in the draft where the issue comes up.

### *Purpose and Interpretation – The Introduction-Discussion Connection*

☐   Is the overall purpose of the study and /or central question clearly stated in the Introduction?

☐   Does the authors' interpretation of the findings answer the overall question of the paper and support it with clear evidence?

☐   Did the authors explain any deficiencies of experimental or study design that were within their control and how that might impact their interpretations/conclusions?

### *Evidence – Do the Results and Discussion do the job?*

☐   Do the data presented provide <u>sufficient</u> evidence to answer the main question(s) of the study?

☐   Are there data that you would say were <u>necessary</u> to answer the question)s), but may not have been obtained in the study?

☐   Are the data presented effectively in figures and /or Tables?

☐   Does the Results text adequately bring out and highlight the key findings from each Figure or Table?

☐   Do the authors discuss the results in a way that avoids stating conclusions as facts and uses appropriate hedging language (e.g., may be, suggests that) to appropriately indicate their confidence in the results and conclusions?

### *Overall – Have we moved our knowledge forward?*

☐   Does the paper advance our understanding of the scientific question that was investigated?

☐   Does it provide interesting and important insights into the topic of interest?

☐   Have power positions (reporting most important information in the correct location) been considered (*Introduction, Results and Discussion*)? (see **Hofmann 2016, pp 47,53, 115-116 if needed**).

### *Overall Organization – Global Aspects of the Paper*

☐   Does the overall organization of the paper clearly and effectively present the story of the work?

☐   Are there disorganized parts?

☐   Could the <u>clarity</u> be improved by adding or removing subheadings? Changes in the order of the paragraphs? Improving sentence structure?

☐   Does the language seem appropriate for its intended audience?

# INDIVIDUAL SECTIONS

In this section we ask you to focus, as a reader, on the communication of the work with an eye toward **clarity** (organization, paragraph and sentence level) and **concision** (language, sentence structure) in the writing. If you have not done so, we recommend reading chapters Ch. 3 (Style) and 4 (Composition) in Hofmann (2016).

**Introduction**:

- ☐ Does the Introduction clearly state the overall BIG question of the study?
- ☐ Do/Does the specific study question(s) follow the unknown?
- ☐ Has the topic been reviewed, i.e., <u>what do we know</u> going into the study?
- ☐ Are all elements (*known, unknown, question, purpose, and experimental approach*) clearly signaled?
- ☐ Do the authors briefly summarize their key finding at the end of the Introduction? (optional)

2-3 most important suggestions for improvement: _____
_____
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**Materials and Methods:**

- ☐ <u>If it is a field study</u>, has the study location(s) been described adequately for the relevant biotic and abiotic features? (n/a for Bio 242)
- ☐ Would the section benefit from using <u>subheadings</u> to organize it?
- ☐ Have the experiments/ sampling schemes been adequately described in a <u>concise</u> manner?
- ☐ Has each experiment been fully described – question, experimental design/procedures, what data were collected, analysis?
- ☐ Do the Methods provide sufficient procedural detail and quantitative aspects (e.g., units, concentrations, working concentrations, times, force, etc.) that the study can be repeated by others?
- ☐ Have the authors avoided unnecessary details that are implicitly understood in the conduct of the work?
- ☐ Has the data analysis been described adequately and in terms of the kinds of questions addressed?

2-3 most important suggestions for improvement: _____
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**Results:**

- ☐ Does the Results section start with text?
- ☐ Do the tables and figures come only after the reference to them in the text?
- ☐ Are all tables and figures explained adequately in the legend or caption?
- ☐ Are the results presented in a logical sequence that builds the evidence needed to answer the question?
- ☐ Have the main findings been clearly presented for each experiment in a Figure or Table as well as being elucidated in the Results text?
- ☐ Are there errors in factual information, logic, analysis, statistics, or mathematics?
- ☐ Are there results that should be in a table or figure rather than the results text? Or vice versa?

2-3 most important suggestions for improvement: _____
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**Discussion:**

☐ Does the Discussion clearly link back to the Introduction?  Did the authors adequately remind you of the purpose/question

☐ Has the overall interpretation(s) of the results been clearly stated?

☐ Have the authors considered alternative explanations/interpretations when appropriate?

☐ Did the authors utilize relevant primary literature in discussing and interpreting their results?

☐ Has a clear conclusion <u>that addresses the main question</u> been provided?

☐ Does the evidence of the data support the conclusion(s)?

☐ Do the authors bring their discussion back to the BIG question (usually at the end of the discussion)?

2-3 most important suggestions for improvement: _____

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**Abstract:**

☐ Does the Abstract adequately summarize the paper?

☐ Have all necessary content elements been included (*purpose/question, key design/methodology, key results, conclusion/implications*)?

☐ Does the information in the abstract agree with the corresponding information in the body of the paper?

☐ Is the Abstract concise (typically 250-300 words)?

2-3 most important suggestions for improvement: _____

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**Title:  WHAT DOES THE TITLE TELL YOU ABOUT THE WORK?**

☐ Is the title strong? Does it effectively describe the paper?

2-3 most important suggestions for improvement: _____

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**STYLE AND COMPOSITION:** For any of these aspects that are not yet adequately addressed, direct the authors to specific examples in the paper where they need improvement. **Remember, you are not line editing**. If there is a short passage that you could line edit to demonstrate ways to improve sentence level clarity and concision, go ahead and do so, but leave it that with the understanding that the authors will use it as a model throughout.

☐ Are clear <u>topic sentences</u> used for each paragraph?  **(clarity)**

☐ Do the <u>sentences in each paragraph adhere to the topic</u> of the paragraph?  **(clarity)**

☐ Are the <u>transition sentences</u> between sections and paragraphs logical?  (clarity)

☐ Are the <u>key words</u> used correctly and consistently?  **(clarity and concision)**

☐ Is the <u>scientific terminology</u> used correctly and consistently?  **(clarity and concision)**

☐ Has <u>word location</u> within sentences been considered (to emphasize the most important information)? (clarity)

☐ Is the style of the prose <u>concise</u>? **(clarity and concision)**

☐ Are there any <u>wordy passages</u>?  **(clarity and concision)**

☐ Are there any <u>grammar, punctuation, or spelling problems</u>?  **(clarity and concision)**

☐ What other problems exist?

2-3 most important suggestions for improvement: _____
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**OVERALL RECOMMENDATIONS FOR IMPROVING THE EFFECTIVENESS OF THE PAPER**

**<u>What are the paper's main strengths? Identify 2-3 aspects that should not be lost in revision.</u>**

1. (Global)

2. (Paragraph)

3. (Sentence)

**What are the paper's main weaknesses? Identify 2-3 aspects that should be primary foci during revision.** For each, suggest how the authors might go about improving them.

1. (Global)

2. (Paragraph)

3. (Sentence)

**Summary of suggestions for improving overall ORGANIZATION (structure, flow of information) of the paper:**
(NOTE: grammar and spelling ARE not organizational features of a paper – this is about the telling of the story)

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### Acknowledgements

**This document should stay with the peer review form and be returned to the reviewer.**

## AUTHORS' RESPONSE TO REVIEWER'S COMMENTS: (to be completed by the authors)

**Authors**: Your comments provide feedback to the reviewer as to how helpful their review of your paper was in your group's planning for revising your paper. Your response is taken into account as part of your grade for how well you utilize the reviewer's comments to revise your paper.

**Reviewers**: You should use these comments to reflect on the efficacy of your comments in service to the authors.

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Did the reviewer attend to the specific aspects of the paper that you identified in your cover letter?  ___ Yes ___ No

Did the reviewer avoid the specific "off-limits" aspects of the paper as identified in your cover letter?  ___ Yes ___ No

**Authors' Summary of the Reviewer's Critique:**

Write a <u>short</u> narrative of the substantive comments made by your Reviewer that help you to focus on/identify the major <u>strengths</u> and <u>weaknesses</u> of your paper.

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**AUTHORS:  This page should be stapled to your peer reviewed draft when you hand in the final draft of your paper.**

**AUTHORS' PLAN FOR REVISION:**  Describe your group's plan for revising your paper incorporating <u>this</u> reviewer's comments, starting with global revisions and then moving toward more paragraph level revisions.  Include an explanation of how your group will integrate the reviewer's comments.  Likewise, if your group decides not to utilize some comments, provide an evidence-based reason for your choice. <u>These should be noted clearly where they apply on the draft as well</u>.  The group will use the collective advice of ALL peer reviews to revise their paper.

**Global:**




**Paragraph:**




**Sentence level:**




**Other:**