

Subject: Ecology Letters – ELE-00851-2020
From: Nathalie Espuno <onbehalf@manuscriptcentral.com>
Date: 2020-10-02, 10:49 a.m.
To: david.beauchesne@uqar.ca
CC: john@drakeresearchlab.com

Mr. David Beauchesne
Université du Québec à Rimouski
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Athens, 02-Oct-2020

Dear Dr. Beauchesne,

UPDATE:

The coronavirus epidemic is impacting ecologists around the globe, with fieldwork, office work, and lab work all affected as people work from home and self-isolate. In addition, in some countries, schools are shut, which means many of us will be looking after children at home. We appreciate that this disruption can impact all aspects of work and home life. For that reason, we are pleased to provide extensions to manuscript resubmissions. If you miss a deadline to resubmit a manuscript, please do not worry – we will reopen the submission pipeline when you are ready to resubmit. Stay well. Best wishes, from all of us at Ecology Letters.

Manuscript number: ELE-00851-2020

Title: On the sensitivity of food webs to multiple stressors

Author(s): Beauchesne, David; Cazelles, Kevin; Archambault, Philippe; Dee, Laura; Gravel, Dominique

We have now received the Referees' reports on your manuscript, which accompany this letter.

Although based on these reports, I have decided to decline your manuscript for publication consideration in Ecology Letters, if you believe that you can fully address the points raised by the reviewers, then we would be prepared, in principle, to consider a revised and resubmitted manuscript.

Your resubmission should include a point-by-point list of replies to all of the reviewers' comments. We strongly suggest that you carefully lay-out your point-by-point replies (each referring to page and line numbers in the revised manuscript), since they will be provided verbatim to the ensemble of the Reviewers on your submission. Please note that if you should resubmit your study, then we may choose to seek additional reports if we feel that additional expert advice is needed, or if the original reviewers are unavailable.

To upload a resubmitted manuscript, log into <http://mc.manuscriptcentral.com/ele> and enter your Author Centre, where you will find the manuscript title listed under "Manuscripts with Decisions." Under "Actions" click "Create a Resubmission."

It is the policy of Ecology Letters that manuscripts be resubmitted within 3 months of the date of receipt of this letter. Please contact the Editorial Office if you are unable to submit your revision before the option expires.

Finally, it is important to note that this letter does not pre-judge the issue of whether your paper will be finally accepted: a consensus of novelty and generality must be obtained after reassessment if your revision is to be published in our journal.

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Yours sincerely,

Dr John Drake
Senior Editor
Ecology Letters

Referees' comments to the author(s):

Referee: 1

Comments for the Authors

This is a timely area and will be a strong focus of future theoretical and empirical research. As such, the paper is appropriately directed at an excellent journal like Ecology Letters. Further, the authors do a good job sort of setting the stage for future work in this area by creatively outlining a framework for thinking about multi-stressor implications as well as metrics that allow one to look at the nature of multi-stressor interactions on ecological networks (or consumptive food webs). The writing is generally very clear and well done. Having said all this, I do find the manuscript remains quite dense as it attempts to do a lot, and the figures are complex enough that they are tricky for the reader to pull out to find the connection between the authors purported written results and where they are shown clearly in the figures. I see this paper as the presentation of a framework about proceeding with theory in a world rife with stressors (and that the theory does not need to be complete but rather ignites more work) ending with an early attempt at a specific case example. Because of this, and figures that are not direct to the point, the manuscript feels like a framework with theory that does not seem rigorous yet. Perhaps figures that more clearly tie results (e.g. in abstract) to the analysis would help enormously. As a result, I think this could go to Ecology Letters, but I think it needs much further work to make the ideas crystal clear. I think this could be acceptable but as I stands I needs at the least a major revision.

Major comments:

1. The authors try to do a lot here and while this is great, I think in some sense it makes I a difficult read. As said above, while well written and in an area that is timely, the authors need to make the overall narrative a little clearer and at the least link the results to figures more explicitly – as it stands the theory feels light in terms of rigor.
2. With respect to the above, and while I like the attempts of the authors on the figures, the figures are at times overwhelming (the text and the figures just are not easy to move through for the reader) and they are also unfortunately very hard to synthesize for the reader (e.g., Fig. 2 and 3). It feels like the authors are making us do the synthesis. For example, if certain motifs are fundamentally more sensitive (and you can see this after much examination I think in Fig. 2) then the authors need to hit us with a summary figure that

shows this clearly and without question – I do not think this occurs at all. I feel the same for Figure 3, it is not clear exactly how the reader is supposed to summarize the results here. Further, and again in line with a framework paper and less so with new well-developed theory, it would be nice if any of the results some could be backed up more clearly with why the result exists. This is done to some extent but not enough to me. I was left wondering why the competition motifs were sort of neutral, there is a hand-wavy argument why, but I does not come across clearly to me.

Minor comments.

1. While well written and not a lot of errors, some typos and missing words throughout.
2. Absolutely just an opinion and so ignore it if you want but “weak entry” points don’t work for me, I had to repeatedly return to the definition to say what did they mean by that. I like terms that go strongly with the idea and this one doesn’t for me but alas maybe it does for others.

Summary: the paper has potential, is timely, sets up some nice simple ways to look at multi-stressor interactive effects but currently reads like it needs more rigor or at least a cleaner presentation if it is really a framework type paper.

Referee: 2

Comments for the Authors

See attached file

Editor

Editors Comments for the Author(s):

The reviewers and I thought the conceptual basis of the ms. was of wide interest, and that the conceptual approach might advance the field in the area of multiple stressors, which is of high current interest. The reviewers had some difficulty, with aspects of the paper, however. Key among these include:

- 1) Difficulty with the jargon. I can see in particular the "weak entry" problem raised by reviewer #1, and suggest that a more accurate description would be "sensitive entry".
 - 2) We all had some difficulty understanding how the parameters for the St. Lawrence food web were generated. Randomly or through some other method.
 - 3) As noted by Reviewer #2, the position of density dependence is a key factor in mediating indirect effects. More attention to its role seems merited.
 - 4) The reviewers both suggested that a more analytically worked example of an example module would add to the rigor and transparency of the study.
 - 5) I worry about the jump from exploring modules to the full food web. I wonder whether it would be informative to do an analysis in the same spirit of the multiple stressors but ask how summing up expected modular responses compares to responses of the full food web.
 - 6) I and Reviewer #2 wondered about the convention of only examining parameterizations in which no species go extinct is realistic or may result in biased responses.
 - 7) Reviewer #1 makes some helpful suggestion to try to clarify your points in the figures.
- In light of these concerns, I can't recommend the current version of the ms. for acceptance, but suspect that many of these issues could ultimately be resolved.

— Attachments: —

Review of Beauchesnet-etal-EcoLett.pdf

69.8 KB