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PCI Ecology
Editorial office

Manuscript #633

Object: Submission of a revised version of "Habitat structural complexity increases age-class coexistence and population growth rate through relaxed cannibalism in medaka fish" authored by Eric Edeline, Yoann Bennevault and David Rozen-Rechels.

Dear Editors,

We are very pleased that Matthew Bracken positively considered the revisions we made to our manuscript, and we thank him for his sharp and constructive comments. We have carefully addressed all of them, as detailed below.

The new version of the manuscript is available online at:
https://www.biorxiv.org/content/10.1101/2023.07.18.549540v4.

All persons entitled to authorship have been included and all authors have read and approved the revised version of this manuscript.

On behalf of the authors,

Sincerely yours,

Eric Edeline.

##

Detailed answers to Matthew Bracken's comments.

##

I really like this contribution, and I think that you have done a good job of addressing reviewer concerns. I have several recommendations aimed at the overarching themes of the manuscript.

First, unless you're aiming for a fish-focused journal (e.g., Ichthyology and Herpetology), I'd drop "medaka" from the title. I suggest, "Habitat structural complexity increases age-class coexistence and population growth rate through relaxed cannibalism in a freshwater fish."
We have now changed manuscript's title as advised.

Second, the overall pitch of the manuscript "challenges" links between structural complexity and taxonomic diversity. Because the paper does not examine multiple species, I think that challenging the basis for links between habitat complexity and community-level diversity patterns is a stretch. You've shown that important, population-level attributes can arise based on intraspecific interactions, but extending these processes to community diversity isn't appropriate, especially in the abstract and as a major conclusion of the paper. As you note in the introduction, one well-studied mechanism by which complexity begets diversity is via relaxation of predation. Your study highlights that this community-level mechanism can also operate at the population level. A quick fix could be to change "challenge" on Line 21 to "extend." You're not challenging this view – it still "works" – but you are highlighting that similar mechanisms can emerge at the population level.
This a very good point, thank you. As advised, we have now changed "challenge" to "extend" in line 22.

Other comments:

Line 64: Suggest changing "selectively" to "disproportionately" – "selectively" makes me think of "selection" in an evolutionary context.
Now done.

Line 71: Suggest rewording "with, to our knowledge, a poor consideration for intraspecific interactions." This may trigger potential reviewers and could be softened to "with more limited consideration of intraspecific interactions."
Now done.

Line 92: Suggest changing "check that" to "evaluate the potential for"
Now done.

Line 571: Suggest rewording "Our present results in medaka fish show…" to "Our results show…".
Now done.

Lines 573-574: Suggest changing "provide a substantial, but currently neglected, contribution" to "contribute" – i.e., "intraspecific processes may contribute to the positive effects…". You cannot judge the degree to which these mechanisms contribute.
Now done.

Lines 593-594: How does this interact with filamentous algal abundance? Are algae less abundant because fish are more abundant or because there is less available space for the algae to grow?
This is, again, a good point. We now write in lines 587-589: "Filamentous algae, one of the main food sources for medaka, were less abundant in high-complexity than in low-complexity

ponds, probably due to higher fish densities and/or to artificial structures directly impeding algal growth".