

Ecological opportunity shapes a large Arctic charr species radiation

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Review timeline

Original submission: 27 August 2019
Revised submission: 20 September 2019
Final acceptance: 30 September 2019

Note: Reports are unedited and appear as submitted by the referee. The review history appears in chronological order.

Review History

Decision letter (RSPB-2019-1992.R0)

10-Sep-2019

Dear Ms Doenz

I am pleased to inform you that your Review manuscript RSPB-2019-1992 entitled "Ecological opportunity shapes a large Arctic charr species radiation" has been accepted for publication in Proceedings B.

The referee(s) do not recommend any further changes. Therefore, please proof-read your manuscript carefully and upload your final files for publication. Because the schedule for publication is very tight, it is a condition of publication that you submit the revised version of your manuscript within 7 days. If you do not think you will be able to meet this date please let me know immediately.

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Once again, thank you for submitting your manuscript to Proceedings B and I look forward to receiving your final version. If you have any questions at all, please do not hesitate to get in touch.

Sincerely,
Professor Gary Carvalho
<mailto:proceedingsb@royalsociety.org>

Associate Editor Board Member: 1

Comments to Author:

This study received two favourable reviews in the first submission, with both Referees supportive of a study on the role of ecological opportunity in adaptive radiations, a topic that is

ubiquitous throughout theory regarding the ecology of adaptive radiations, but has rarely been empirically tested in the context of its role in the extent and bounds that radiating taxa expand resource use and phenotypic variation in young radiations – which is novel. With a great deal of sampling effort and a combination of phenotypic, genetic and stable isotope analysis, the authors test the expectation of greater ecological specialization (more extreme trait values) with increasing ecological opportunity. Supporting their prediction, lake size was positively correlated with the extent of ecomorphological specialization. Furthermore, assemblage-wide morphospace increased when more than one genetic cluster is present, collectively demonstrating that ecological opportunity and speciation jointly determine phenotypic expansion in this charr radiation and contribute an important empirical piece supporting the ecological theory of adaptive radiation. In my own review of this resubmission, this revision largely addresses previous concerns about the clarity and scope of the findings. Nonetheless, there are some points that would still benefit from revision. I would recommend accept following these minor changes.

Line 63 – The definition and significance of ecological opportunity could be bolstered, especially in the context of the objectives. For example, Wellborn and Langerhans (Ecol Evol 2015) provide a framework that ties nicely into the concept of both niche availability and niche expansion – which would help clarify the importance of the objectives in the MS

Line 67 – does it also determine the pace of adaptive radiation?

Line 393 – Given the limitations in the genetic data – considering these genetic clusters “from now on as two distinct species” is an overstatement not fully supported by the data and does not contribute to the findings of the paper. Please remove this sentence or scale it down.

Author's Response to Decision Letter for (RSPB-2019-1992.R0)

See Appendix A.

Decision letter (RSPB-2019-1992.R1)

30-Sep-2019

Dear Ms Doenz

I am pleased to inform you that your manuscript entitled "Ecological opportunity shapes a large Arctic charr species radiation" has been accepted for publication in Proceedings B.

You can expect to receive a proof of your article from our Production office in due course, please check your spam filter if you do not receive it. PLEASE NOTE: you will be given the exact page length of your paper which may be different from the estimation from Editorial and you may be asked to reduce your paper if it goes over the 10 page limit.

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Thank you for your fine contribution. On behalf of the Editors of the Proceedings B, we look forward to your continued contributions to the Journal.

Sincerely,

Professor Gary Carvalho
Editor, Proceedings B
<mailto:proceedingsb@royalsociety.org>

Associate Editor:

Board Member

Comments to Author:

(There are no comments.)