2025-02-20

Dear Editor,

I am pleased to submit our manuscript, “*Summing the parts: Improving population estimates using a state-space multispecies production model*,” for consideration for publication in the *Journal of Northwest Atlantic Fishery Science*. On behalf of my co-authors, I kindly request that this manuscript be considered for inclusion in the upcoming special collection of articles stemming from the “*Applying the Ecosystem Approach to Fisheries Management in ABNJ*” symposium.

Our manuscript introduces and applies a novel state-space multispecies production model that leverages commonly available landings and survey data to estimate the population dynamics of multiple fish stocks simultaneously. By examining interactions among species and explicitly accounting for shared environmental drivers, we present a framework that has the potential to inform ecosystem-based fisheries management. Although the case study focuses on demersal fish communities off the east coast of Canada, the model can be generalized to other regions where data to support complex ecosystem analyses might be limited.

Key points of our study include:

* A flexible multispecies production model that enables estimation of both intra- and interspecific density-dependent effects within the same framework.
* Empirical support for common bottom-up drivers influencing multiple stocks, demonstrating that fishing alone may not fully explain major stock declines.
* Evidence that, by drawing on relatively minimal data requirements, this approach can bridge the gap between single-species and ecosystem-based fisheries assessments.

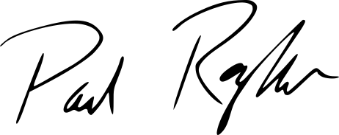
We believe that the following two reviewers have the necessary expertise to provide critical feedback on our manuscript:

* Christoffer Albertsen, Technical University of Denmark (DTU), [cmoe@aqua.dtu.dk](mailto:cmoe@aqua.dtu.dk)
* Sarah Gaichas, NOAA Fisheries, [sarah.gaichas@noaa.gov](mailto:sarah.gaichas@noaa.gov)

This manuscript has been posted as a preprint on bioRxiv but has not undergone peer review, nor is it under consideration by any other journal. All authors have contributed to this work and have approved the manuscript for submission. We have no conflicts of interest to disclose.

Thank you for your time and consideration. We would be grateful for the opportunity to publish our work in your journal and look forward to your response.

Sincerely,



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