



May 7, 2021

Dear Dr. Welch:

Please consider our revised manuscript, “How phenological tracking shapes species and communities in non-stationary environments,” for consideration in *Biological Reviews*.

This paper presents the first review of phenological tracking—how much an organism can shift the timing of key life history events in response to the environment. Our review unites empirical and theoretical approaches to provide a framework to advance research in phenological tracking towards prediction. We examine how well community assembly theory—especially priority effects and modern coexistence theory—can be extended to predict the community consequences of climate change, and highlight how theory supports empirical work showing a trade-off where trackers are also inferior resource competitors. We close by reviewing the major hurdles to linking empirical estimates of phenological tracking and new theory in the future. We believe the article will reach a wide audience, providing an introduction to phenological tracking and a path forward for a field that needs the expertise of empiricists studying global change, as well as experts on theory for plasticity and community assembly.

Comments from two reviewers helped us improve the manuscript. We have better defined our aim and main findings in the abstract, introduction and conclusions, and added a new glossary (Table 1) to help readers with the many terms from the phenological and community assembly literatures. We have adjusted our section on future research directions (‘Linking empirical and theoretical research’) to include two new sections based on reviewer comments. Finally, we have streamlined the text for clarity, with edits throughout.

We feel the new submission is much improved and detail our changes in the following pages (reviewer comments are in *italics*, while our responses are in regular text). We provide a file with track changes, as requested; given the extensive edits throughout we also provide a file without track changes. We hope that you will find it suitable for publication in *Biological Reviews* and look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, which appears to read 'Elizabeth M. Wolkovich', is positioned below the word 'Sincerely,'.

Elizabeth M Wolkovich
Associate Professor of Forest & Conservation Sciences
University of British Columbia