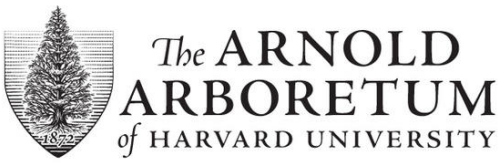

1300 Centre Street
Boston, MA, 20131

Dear Dr. Pinfield-Wells:

Please consider our manuscript entitled 'Climate change reshapes the drivers of false spring risk across European trees' as a Full Paper for *New Phytologist*. Climate change has brought renewed interest to late spring freeze events—commonly called 'false springs'—which shape the life history of many temperate and boreal plant species. Increased interest has led to a growing number of studies, but results are often contradictory, suggesting an increased or decreased risk of false spring with warming, sometimes even for the same region. We argue these discrepancies may come from a lack of focus on how the drivers of false spring risk have changed. By combining multiple, known climatic and geographic factors that contribute to a plant's false spring risk with data from 66 years and across 11648 sites, we show which predictors most influence risk across species and how these predictors have changed with recent warming.

What hypotheses or questions does this work address? Recent major climate change has increased interest in false spring events, which affect plant performance, survival and shape species distributions. We ask which climatic and geographic factors are the strongest predictors of false springs across six tree species, and how these predictors have shifted with climate change.

How does this work advance our current understanding of plant science? By investigating leafout observations of six deciduous tree species from Europe, we unravel the effects of species, spring temperature, elevation, distance from the coast and NAO index on false spring risk with climate change. We found that recent warming has reshaped the influence of these factors and magnified species-level variation in false spring risk.

Why is this work important and timely? Recent studies assess the effects of one predictor (e.g. temperature, elevation or distance from the coast), rendering inconsistent predictions for false springs. Our study shows how robust forecasting must integrate major climatic and geographic factors that underlie false spring, and allow for variation across species and time as warming continues.

It has shifted the influence of climatic and geographic factors, Our author team provides an international and interdisciplinary approach to understand the drivers of false spring risk. The manuscript is 5211 words, with a 198 word summary and five figures. We hope that you will find it suitable for publication in *New Phytologist*. Thank you for your consideration.

Sincerely,

Catherine Chamberlain (on behalf of my co-authors)

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