

Dear authors and recommender

First of all, I would like to apologize for my delay in the review process. Having said that, I would like to say that it was a pleasure to read this work. The topic is very interesting, the paper is very well written, it follows a very clear outline, the methodologies applied are, in my opinion, appropriate for the aim of the paper (from the downscaling of the climate variables, a key point to me in this work and a major constraint in ecological studies in polar or sub-polar regions, to the SDMs), and the results are clear and very interesting. I have just some minor comments that I feel could improve even more the manuscript.

Title

I really like the title, but I miss something there related to the traits, which are in my opinion a key aspect of this work. As it is, it seems that you only address the drivers of invasion, and not the plant traits conferring invasiveness. Rephrasing the second part of the title would make it easier to pass both messages to the reader.

Abstract

Line 21 shouldn't it be "being more invasive" or "being the most invasive" instead of "being most invasive"?

Material & methods

1. In the M&M, when describing species traits, it would be important to add a table with the six species traits. That, in my opinion, would facilitate understanding the results, as the readers would already have in mind if a species is, e.g., tall or short, or an old or new resident. Not all readers will be familiar with the species, and this would make the flow of the paper easier to follow and would be helpful to understand the invasion patterns related to the traits. It would prevent readers to go back and forth in results to try to figure this out in the text (as happened to me).

Discussion

2. In the Discussion, line 363 when you first introduce the two main invasion patterns, I missed here, along with what you said, a clear description on the traits associated with each of these strategies. Similar to what you have in the abstract. In my opinion, it is always good to first clearly state these key findings in the first sentences of the discussion. This will serve as an interest teaser to the reader and engage him to read the rest. And would make this clear, because I felt that, apart from the abstract, this was not clearly mentioned in the main text.

3. Also, in the discussion, sentences in lines 359, 377 and 403, are somewhat confusing to read, because it seems you are concluding something based on your results, but then you attribute other works references to those sentences content. Is it a mix of both? You saw that, and those patterns had already been highlighted in previous works? It wasn't clear to me what the intention was. Please clarify these sentences.

4. Line 391 maybe you mean "temperate latitudes" instead of temperature?

5. Line 392 maybe remove "only" from the "a single weather station only"

6. When you highlight the limitations of your work, I feel you missed an important one. This work was based on presence/absence data. How do you feel the results would be with abundance data? Would the patterns observed sustain? Do you feel it could have, e.g., helped emerged relationships in the traits whose relationships were weak or inexistent (e.g.

reproduction, or leaf traits)? Could this be the reason why models weren't as good for those two species? Maybe these environmental variables are related to their abundance patterns and not their presence. I suggest you add something related to this issue in the limitations.

Finally, just as an extra suggestion, I believe that a graphical scheme summarizing the results would help readers grasp better the message, and it could also serve as a graphical abstract. A scheme (maybe with icons) showing the main drivers of invasiveness, the two strategies of invasion and the traits mediating them.

Best regards