

Reply Third Review Round

We are grateful to our recommender for its latest feedback and are pleased to provide here the latest version of the manuscript, including the improvements suggested during this third round of review.

Critical points

1. On the methodological justification of using RBA

- Figure S.7: we added a double y axis figure (Fig. S.7A) to allow the reader to see the change over time of both the median across replicates of the basal area and the median tree number in parallel for the h^2 and $VR = 0.3$ scenario.
- Figure S.8: The information regarding which species corresponds to which row was indicated by a colored frame as in Fig. 2. The information that population size directly corresponds to the BA in Figure 2B was also added in the figure's legend.
- The sentence formerly on L368 was replaced by a more appropriate formulation suggested by the recommender: (L373-377).

2. On evolutionary rates

- The statement concerning the validity of the Haldane rate for the "short term" only has been removed as it is effectively inaccurate. The text was modified according to the recommender's suggestions (L390-400).
- The $\Delta DrTol$ calculation method and its purpose were unclear; they are now more detailed and justified (L400-406).

Minor comments

1. All the suggestions were applied regarding the description of the regeneration (L150-185).
2. We included the suggested explanations regarding the dynamic behavior of the realized heritabilities and traits variances (L280-284).
3. Simulation dates were added in the climatic period description (L297-303).
4. Simulation plan parts were reversed as requested by the recommender, the questions are presented first, then the technical details are provided in a new subsection called "Simulating initial conditions".
5. The titles of the method sub-sections have been modified as suggested to improve the clarity of the article structure.
6. The sentences formerly on L473 was replaced as suggested (L483).
7. The suggestions regarding the "model and simulation plan limitations" section were applied.

8. "assisted gene flows are also advocated" was corrected to "assisted gene flow is also advocated" (L579).

9. Other small corrections were also made:

- We replaced the word "population" and its letter p in equations by replicates, r where it is more explicit. Otherwise, "population" is used as it is commonly defined in the field of ecology.
- In Figure 1: "Drift" was added to "natural selection" in the purple box.