

Comment on bg-2021-119

Anonymous Referee #1

Referee comment on "Evaluating the dendroclimatological potential of blue intensity on multiple conifer species from Tasmania and New Zealand" by Rob Wilson et al.,
Biogeosciences Discuss., <https://doi.org/10.5194/bg-2021-119-RC1>, 2021

The overall impression is very positive. The manuscript presents ambitious project of assessing usefulness Blue Intensity as climate proxy for Australia region. Although several interesting and valuable dendroclimatic studies exist for that part of world, a lot of though-provoking questions remain without answers. Substantial field, lab and intellectual effort back the manuscript. Needless to say the exploratory character of the research sometimes results in some incompleteness and shortcomings. It is untestable since the research is setting up the new directions of tree-ring studies in the region, not summing up some long persuaded topics. One of the shortcomings his is very much visible in way how the methods and results are handled.

It is difficult to follow the terminology, authors are joggling different BI parameters without proper descriptions, and what is worse without reasoning why they decided to use particular one instead of other. All these are rushed and create impression of rather chaotic structure. I strongly recommend putting some effort to make the manuscript clear and consistent it this aspect. Most of the elements are there therefore and it would be easy to improve the manuscript in terms of fluent presentation of research. Again the really missing pieces of information is how and why certain BI parameter were selected, e.g. it is first time that earlywood maximum blue reflectance intensity, latewood minimum blue reflectance intensity were employed in dendroclimatic analyses thus authors are obligated to provide the proper description of the parameter, especially what Blue Reflectance registers and what are the possible errors while measuring it. The publication of Buckley et al. 2018 is very good example how the introduction of the relatively new parameter can and should be done.

The additional recommendation would be to describe vegetation and climate of the studied region in comprehensive way. The tree species, forest, and climate are exotic to most of the readers. We would be able to appreciate the importance of results much better knowing basic information about subject of the research – trees and forest of this part of New World. The traditionally included in papers chapter description of the study site could be seen as outdated and not relevant but sometimes is beneficial and discussed manuscript is good example of it.

The last but not least issue concerns the title. It is inadequate to entitle manuscript "*Evaluating the dendroclimatological potential of blue intensity on multiple conifer species from Australasia*" having virtually zero data from main part of that region – the Australia continent. I suggest authors try to imagine their reaction to the publication "*Evaluating the dendroclimatological potential of blue intensity on multiple conifer species from Italy*" based on sites only from Sicily and Sardinia. Technically this is territory of Italy but it is kind of obvious that something is missing, isn't it. Thus the title should be corrected to adjust to real geographical coverage of the research.