Comment on egusphere-2022-454
Anonymous Referee #1

Referee comment on "Seed traits and phylogeny explain plant’s geographic distributions" by Kai Chen et al., EGUsphere, https://doi.org/10.5194/egusphere-2022-454-RC1, 2022

The manuscript by Kai Chen et al presents an interesting study about the relationship between seed traits, phylogeny and plant distribution. The authors quantify the joint effects of key seed traits and phylogeny on species distribution. They found that seed mass and its intraspecific variation were also important in limiting species distribution, but their effects were different among species with different dispersal modes. I think the information provided here is relevant for plant geography, as it shows that seed mass, seed mass variability, seed dispersal mode and phylogeny together explained 46.82% of the variance in species range size. This finding underscores the necessity to include seed traits and the phylogenetic history of species in climate-based niche models for predicting the response of plant geographic distribution to climate change.

The manuscript contains a lot of data and analysis, and I thought it would be hard to read, but it is easy to read, because it is short, clear and punchy.