

ERRATUM

In the paper by Eitzel et al. ("Can't see the trees for the forest: Complex factors influence tree survival in a temperate second growth forest"; *Ecosphere* 6:247), methods for estimating models of tree survival and results for seven species at a site in the Sierra Nevada mountains, California, USA, were presented. One important explanatory variable was basal area of each plot, which was smoothed over time to provide annual values. The authors discovered an error during an early stage of processing basal area values that led to incorrect basal area time series being associated with some trees. The error has been corrected, and all of the models and analyses in the paper were conducted again. There were no other changes to the methods: The models, estimation procedures, and other variables are exactly as depicted in the paper published in 2015. The changes in the results are summarized below, including brief comments on the implications of these changes; corrected parameter values and figures follow. If a result from the original paper is not mentioned, it is unchanged.

While individual parameter estimates were somewhat shifted in any model which contained basal area (see corrected Appendix E tables), these only resulted in different model selection outcomes in two cases: For the all-species-aggregated models and for incense cedar, the secular time trend is now selected and basal area is not. In these cases, adding annual water deficit did not remove the time trend, nor was annual water deficit chosen by the model selection procedure. Therefore, the results now partially agree with van Mantgem and Stephenson (2007): There is a time trend in the species-aggregated model (mortality is increasing even in this second growth forest), but Eitzel et al. cannot conclude that the rising mortality is due to annual climatic water deficit. Also, incense cedar now has a larger linear size effect that is not reflected in the aggregated-species parameter for the same effect.

The majority of the high-level conclusions of the paper are not changed (e.g., within-species

variation remains important and species-aggregated models miss potentially important details). The only conclusions that have changed relate to the time trend and basal area: The authors now observe the following: (1) a time trend in the species-aggregated model parallels a time trend in incense cedar and ponderosa pine but masks a positive trend in survival for sugar pine and a lack of trend for other species and (2) basal area is now not significant for any species, individually or in aggregate. The latter is surprising, and the authors believe that the presence of the time trend in mortality may still depend on stand development in some form. Further work should investigate whether the time trend's dominance over basal area is due to collinearity (as there is a confirmed time trend in basal area which was unaffected by the corrections described here) or whether a different stand development variable or climate variable would explain the trend. Specific corrections follow.

In *Discussion: Species differences in survival*, the corrected ordering of basal area parameter estimate magnitudes is as follows: "black oak (-0.084) < incense cedar (-0.017) < sugar pine (-0.004) < ponderosa pine (-0.003) < white fir (-0.001) < Douglas fir (0.027) < tanoak (0.061).". Note that the variable is not significant for any species, but the comparison is made to determine whether small-but-not-significant estimates matched ecologically based arguments. White fir is unusually sensitive to basal area, as is incense cedar, and ponderosa pine and sugar pine are switched from what would be expected in Niinemets and Valladares (2006). Therefore, the ranking is still surprising. In Table 2, for all species aggregated and for incense cedar, basal area becomes not significant ("NS") and time trend becomes significant and negative ("–"). In addition, the footnote in the published version erroneously refers to arrows. In Table 3, for the "Final model" estimates, the "All species" parameter estimate is 1.16 (0.89, 1.4) and incense cedar's parameter estimate is 1.17 (0.78, 1.58).

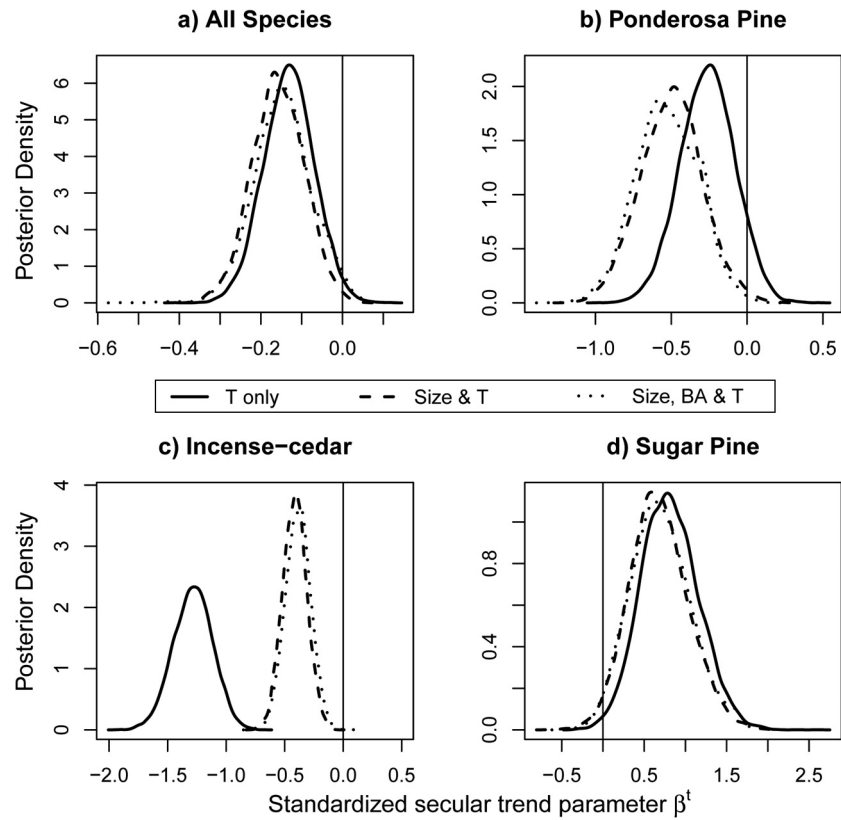


Fig. 1. Parameter posteriors for the time trend in different models for all species aggregated together (a), ponderosa pine (b), incense cedar (c), and sugar pine (d). Solid lines indicate models with only a time trend, while dashed lines represent models with tree size (including the quadratic term if selected for that species) along with the time trend, and dotted lines indicate models with size, basal area, and the time trend. For ponderosa pine, the topographic slope is also included in the latter two models as it was consistently important in the model selection.

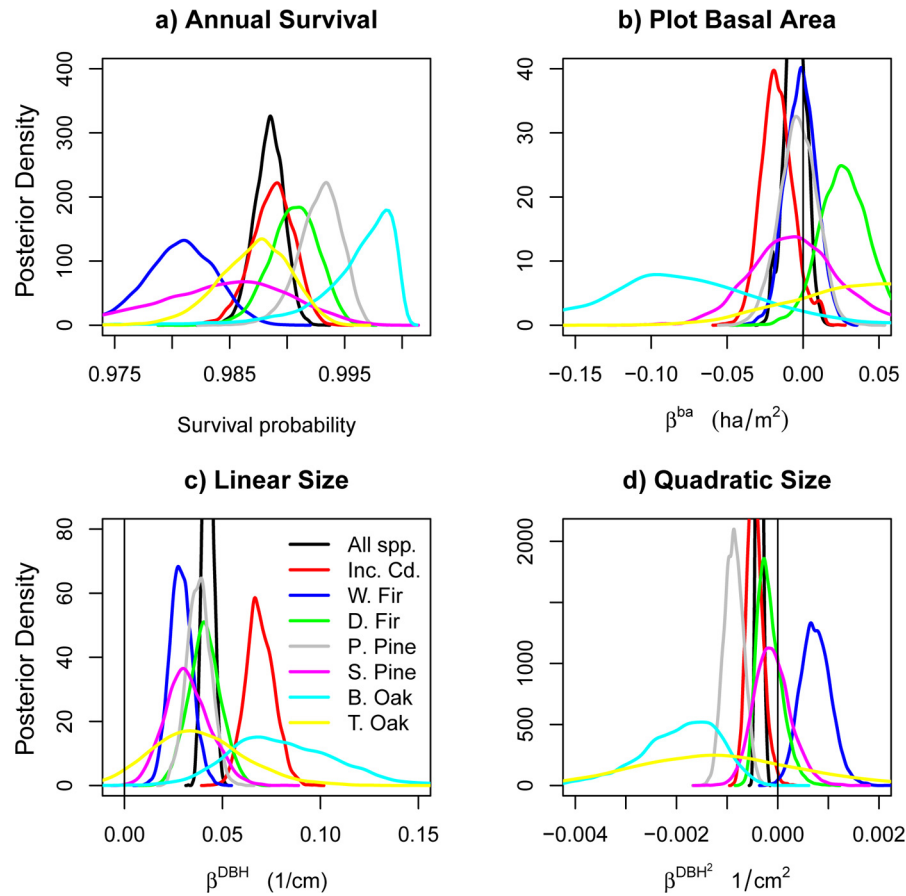


Fig. 2. Rescaled parameter posteriors from similar models for all species. These models include a random plot effect, size (linear and quadratic), and basal area. For tanoak, basal area and size posteriors are from separate models (tanoak's survival for an average tree, $\text{expit}(b)$, in (a) is from the basal area model). Posteriors have been rescaled in order to compare estimates between species. (a) Survival of an average tree in an average plot ($\text{expit}(b)$) for each species. Panels (b–d) show estimates of the effects of basal area (b), linear size term (c), and quadratic size term (d).

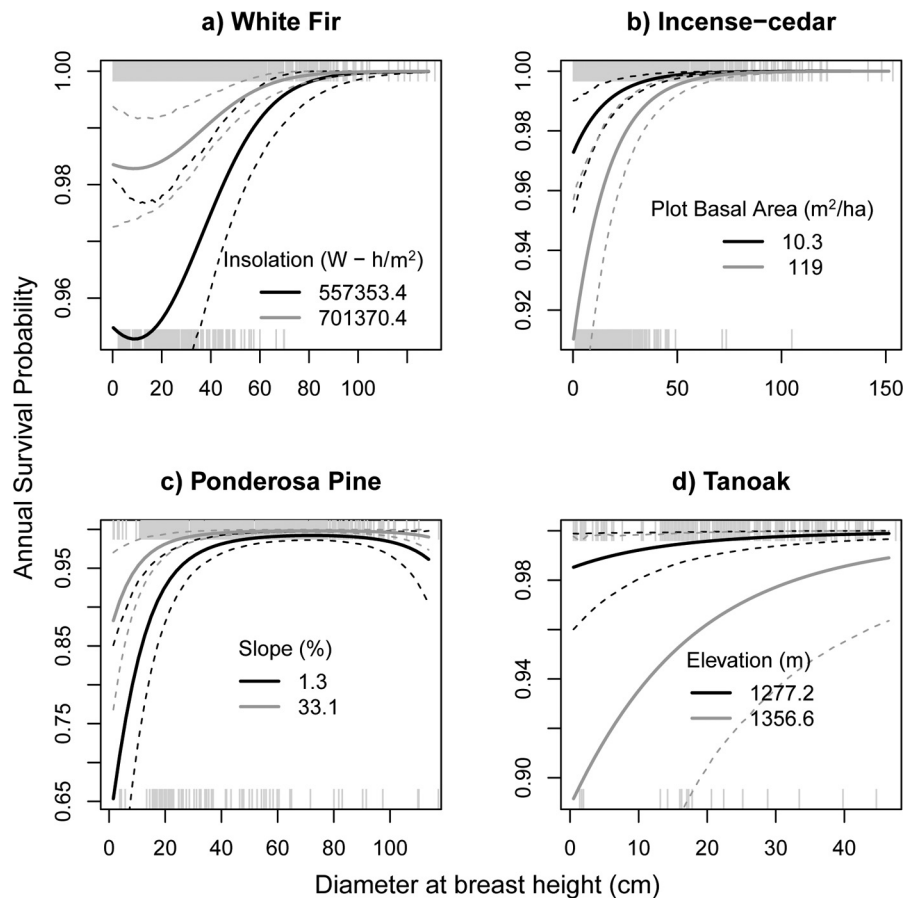


Fig. 3. Size relationships with survival probability for four species: white fir (a), incense cedar (b), ponderosa pine (c), tanoak (d). Black and dark gray lines show the effects of high and low values of additional variables for each species: insolation (a), plot basal area (b), topographic slope (c), elevation (d). Black lines are two standard deviations below the mean value of the variable, and dark gray are two standard deviations above. Dashed lines indicate 95% credible intervals due to uncertainty in other parameters. Data are shown as light gray tick marks with live trees at the top of the plot and dead trees at the bottom. The parameter estimates in these figures are from “full models” including all the forward-selected variables, as indicated in Table 2 (see Appendix G for other species and variables), with the exception of (b), in which incense cedar’s basal area effect is shown although it is not selected in the final model. See Appendix G for the equivalent figure for incense cedar’s secular time trend.

LITERATURE CITED

- Eitzel, M. V., J. Battles, R. York, and P. de Valpine. 2015. Can’t see the trees for the forest: Complex factors influence survival in a temperate second-growth forest. *Ecosphere* 6:247.
- Niinemets, U., and F. Valladares. 2006. Tolerance to shade, drought, and waterlogging of temperate northern hemisphere trees and shrubs. *Ecological Monographs* 76:521–547.
- van Mantgem, P. J., and N. L. Stephenson. 2007. Apparent climatically induced increase of tree mortality rates in a temperate forest. *Ecology Letters* 10:909–916.

SUPPORTING INFORMATION

Additional Supporting Information may be found online at: <http://onlinelibrary.wiley.com/doi/10.1002/ecs2.1423/supinfo>