

Supplementary file S1. Residual analysis of Näslund's models

To provide the answer to possible, supplementary questions about the ideal and unbiased residuals of Näslund's models, residual plots were displayed all over all predictors and major stand characteristics for Model 1 and Model 2. The selected predictors were explained in Eqs. 9–14 of main manuscript. Parameter estimates and fit statistics were in Table 3 of main manuscript. In order to describe the general application, here only fixed-effect parameters were applied to check the residuals. These supplementary figures proved that both models were not biased over any kind of predictors in residual analyses. Only a residual plot by social status, tree dbh divided by DG (diameter, basal area-weighted mean), presented a subtle bias in Model 1 as explained in main manuscript.

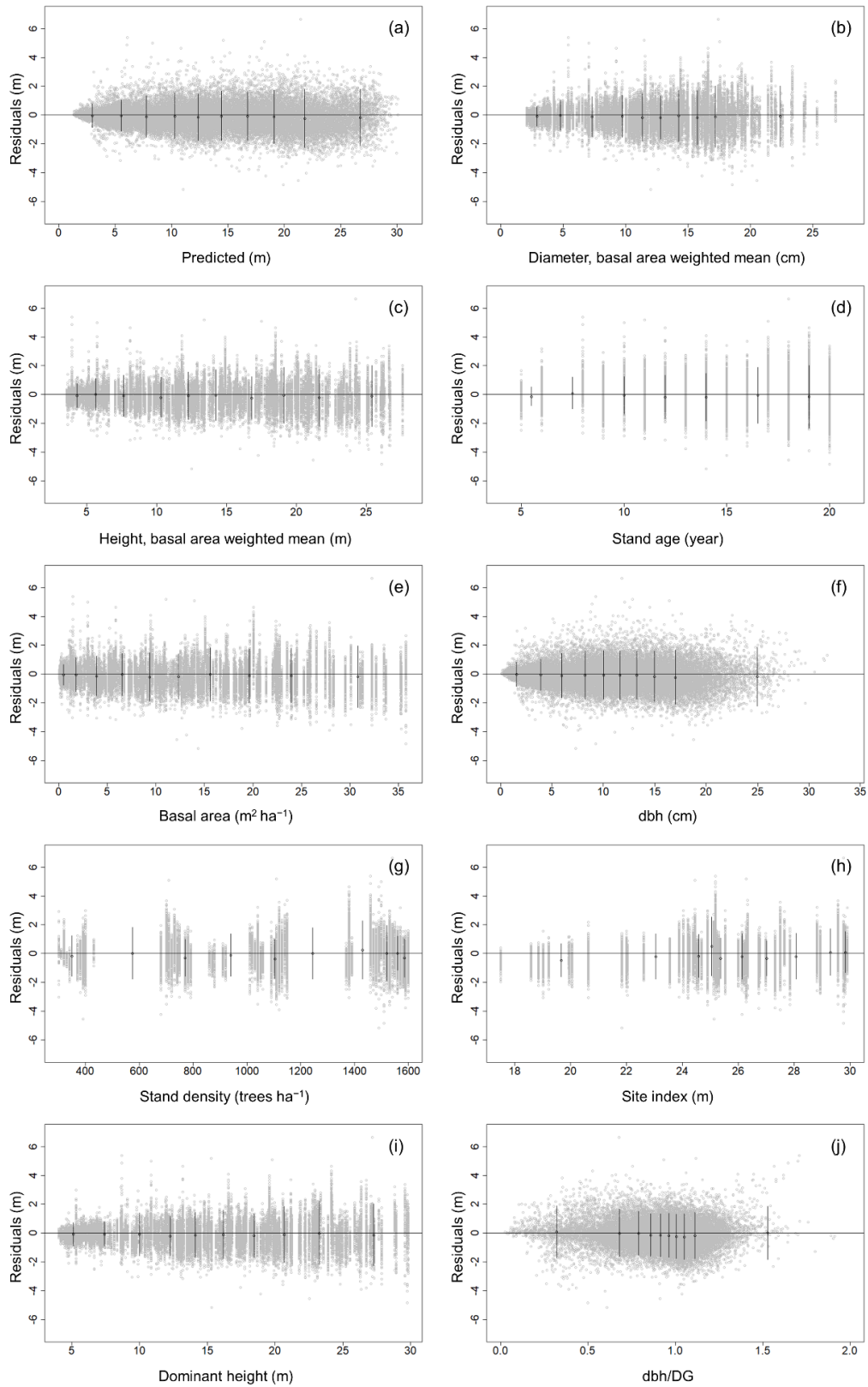


Fig. 1. Residual plots of Näslund's height curve prediction over all predictors and major stand characteristics based on model 1 with only fixed-effect parameters.

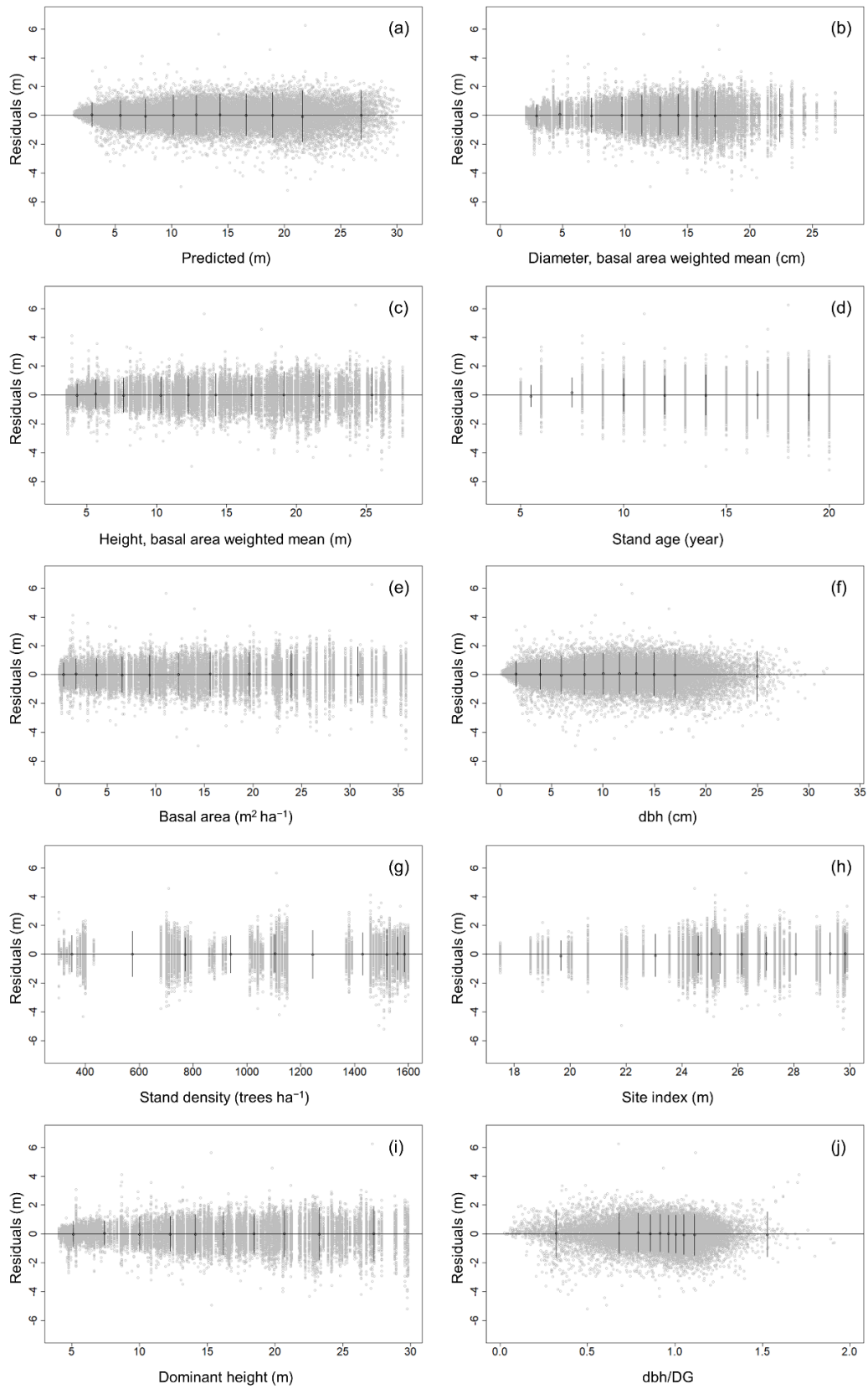


Fig. 2. Residual plots of Näslund's height curve prediction over all predictors and major stand characteristics based on model 2 with only fixed-effect parameters.