${\bf Suppliment}$

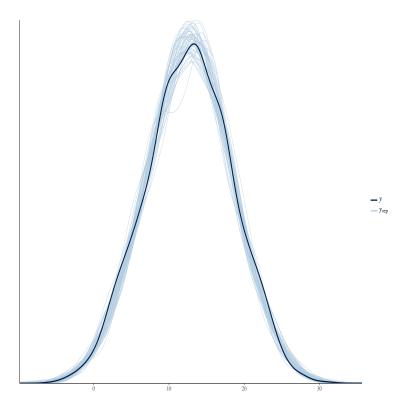


Figure 1: SUPPLIMENT: Posterior predictive checks for model bvol $doy + (doy \mid sp)$ on fake data

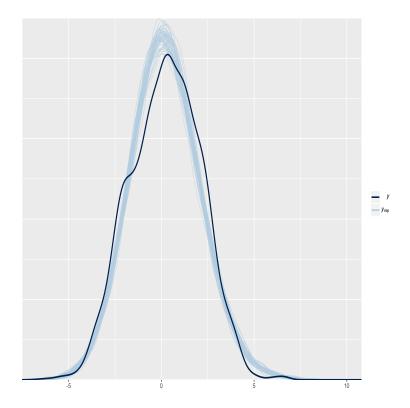
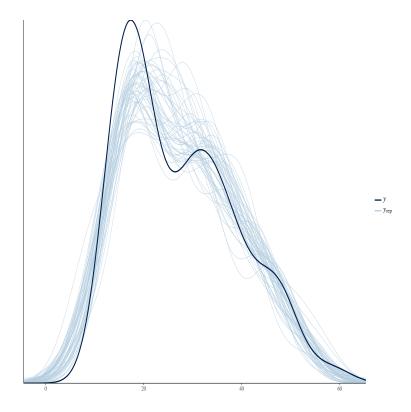


Figure 2: SUPPLIMENT: Posterior predictive checks for model bvol $|\log + (\log \mid \mathrm{sp})|$ on real data



 $\label{eq:suppliment} \mbox{Figure 3: SUPPLIMENT: Posterior predictive check for exploratory model meanbday } \mbox{ meanstemdiam} \\ + \mbox{ meanbvol} + (\mbox{meanstemdiam} + \mbox{ meanbvol} \mid \mbox{SP})$