Supplementary Material for **Stabilizing niche differences are still required to maintain species-rich communities in temporally variable environments** - Picoche, C. & Barraquand, F.

A Supplementary Figures

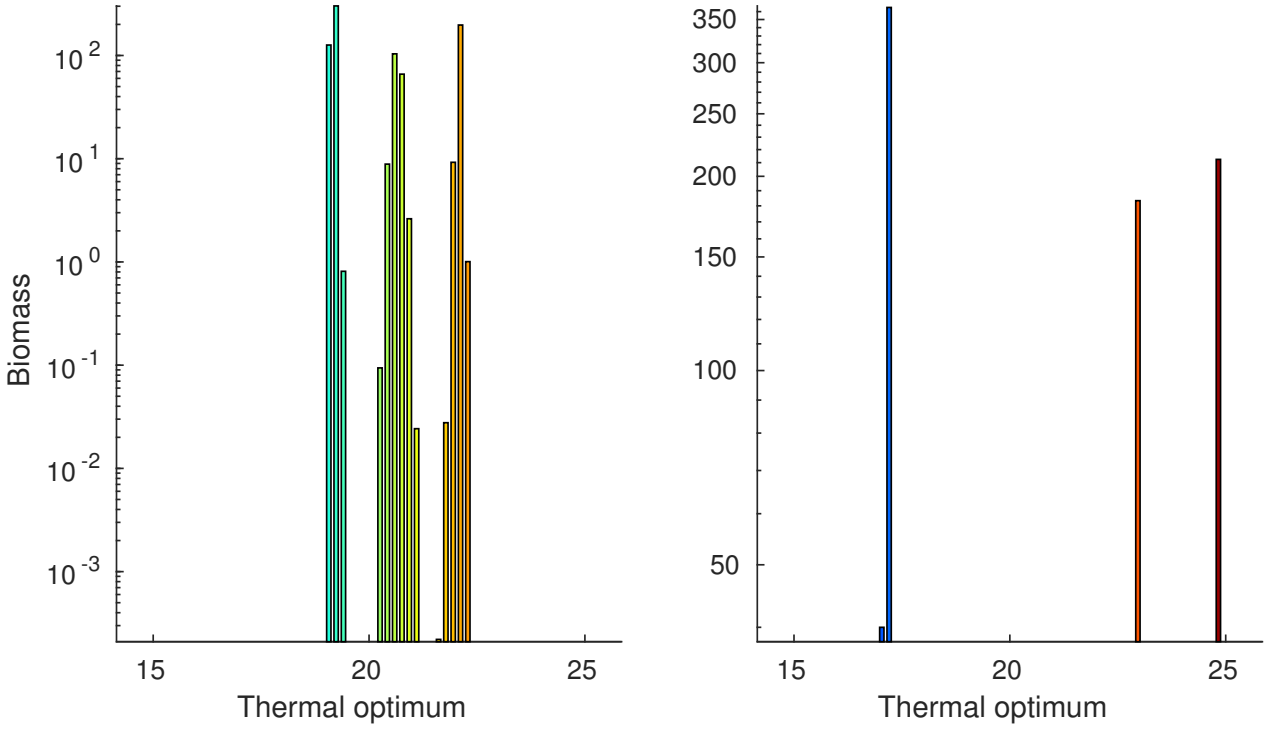

Figure A.1: Temporal mean of biomass, taken over the last 200 years, for XXX 5000-years simulations as a function of the thermal optimum defining each species, for a white noise (left) or a seasonal signal (right). The coexistence mechanism implemented is the storage effect, and no stabilizing niche differences were considered (same competition inter- and intra-specific). This simulation is the one described in Fig.1 in main text.

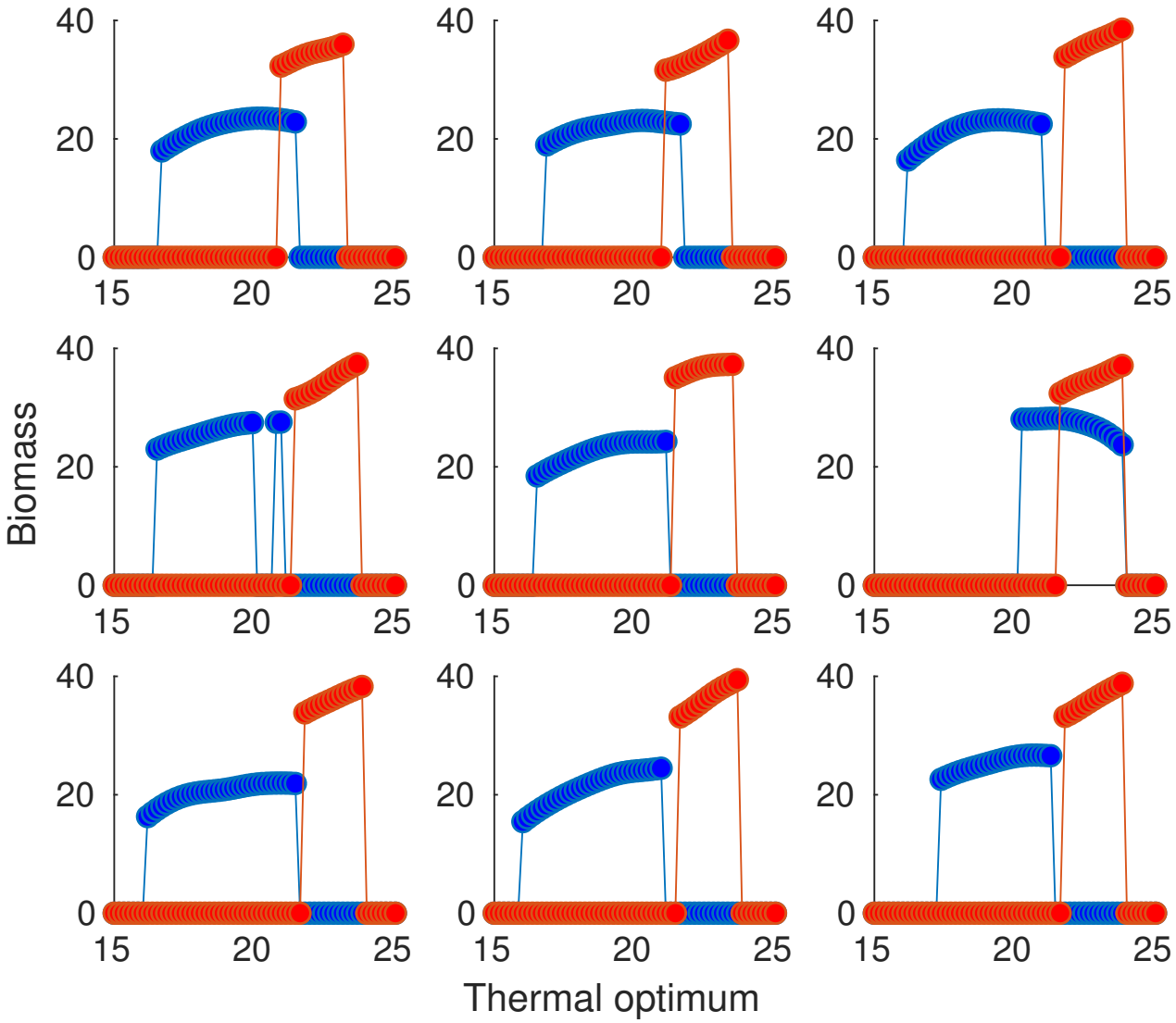

Figure A.2: Temporal mean biomass distribution, taken over the last 200 years, for 9 representative simulations, as a function of the thermal optima of the species. These simulations are done without storage effect but with stabilizing niche differences. Temperature is either a seasonal signal (in red) or a white noise (in blue). The distribution induced by a white noise forcing overlaps the one obtained with a seasonal forcing signal in only 2 simulations out of 50, hence the two signals lead in general to very different biomass distributions on the environmental trait axis.