

Supplementary material

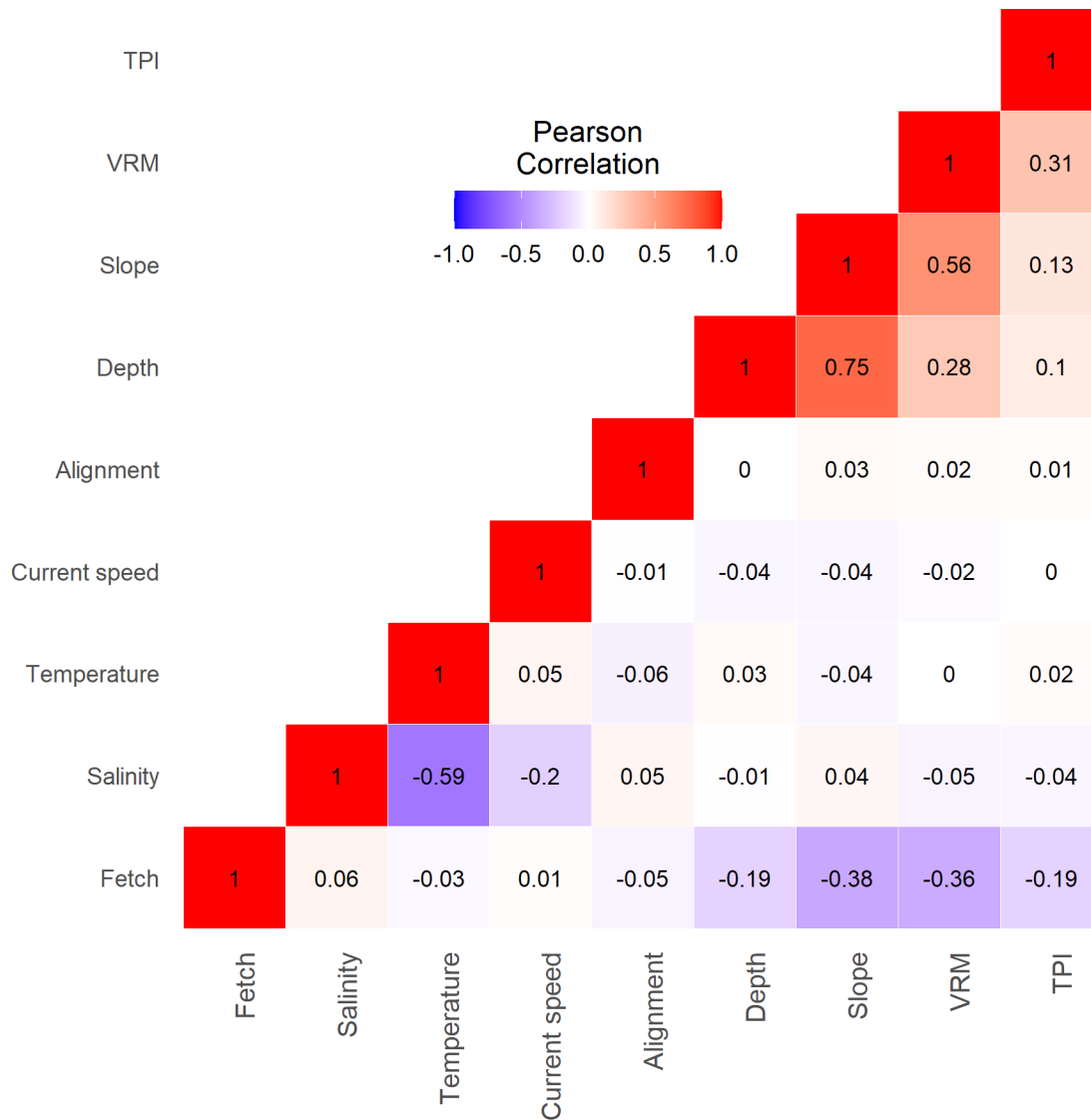


Figure S1. Correlation matrix of habitat variables at each Pacific herring spawn deposition transect that were considered to model the distribution of spawning in British Columbia (1988-2018). VRM: vector ruggedness measure; TPI: Topographic position index

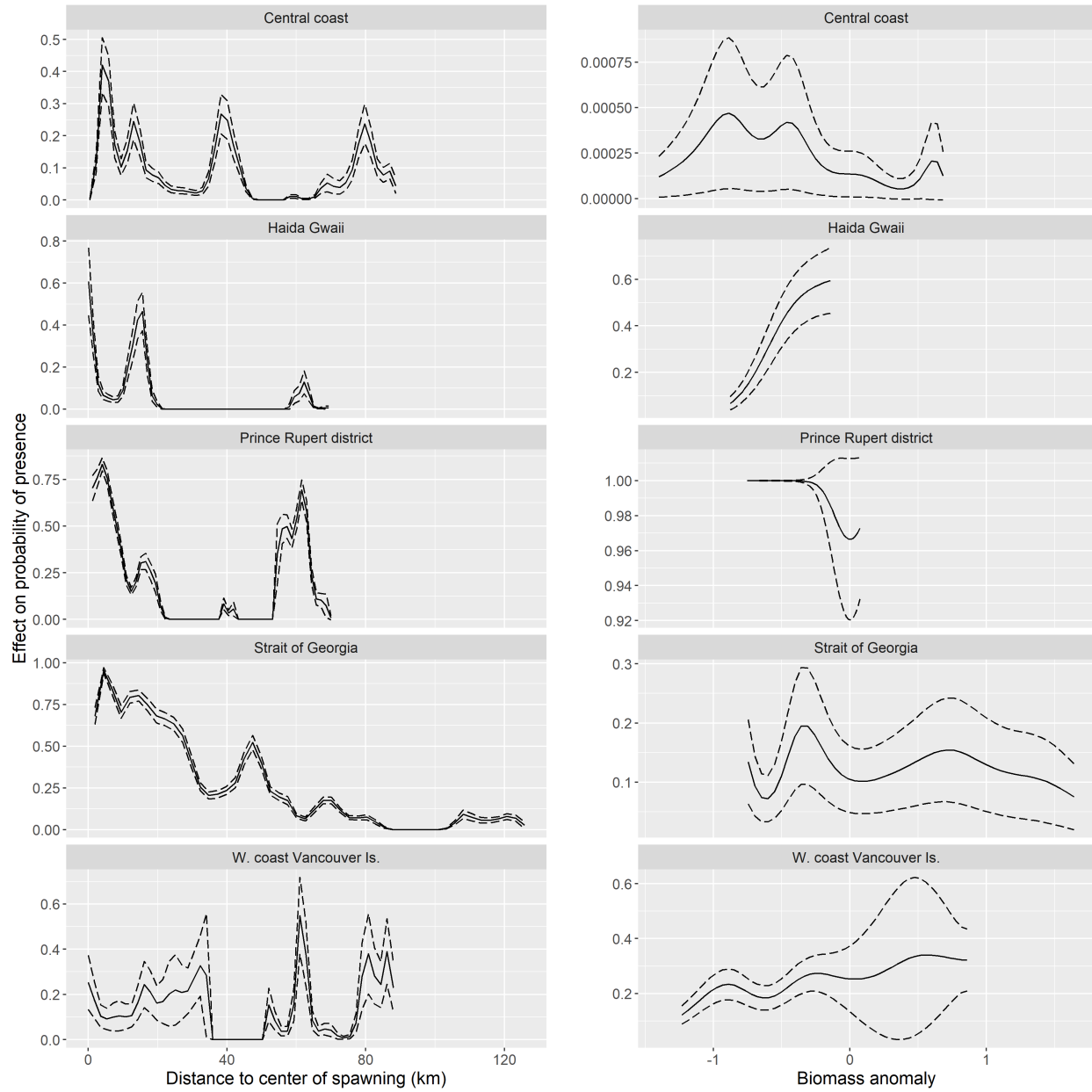


Figure S2. Response plots for the main effects of the probability of spawn presence predicted for the distance of each transect from the center spawning location (left column) and the biomass anomaly for each Pacific herring stock (right column)

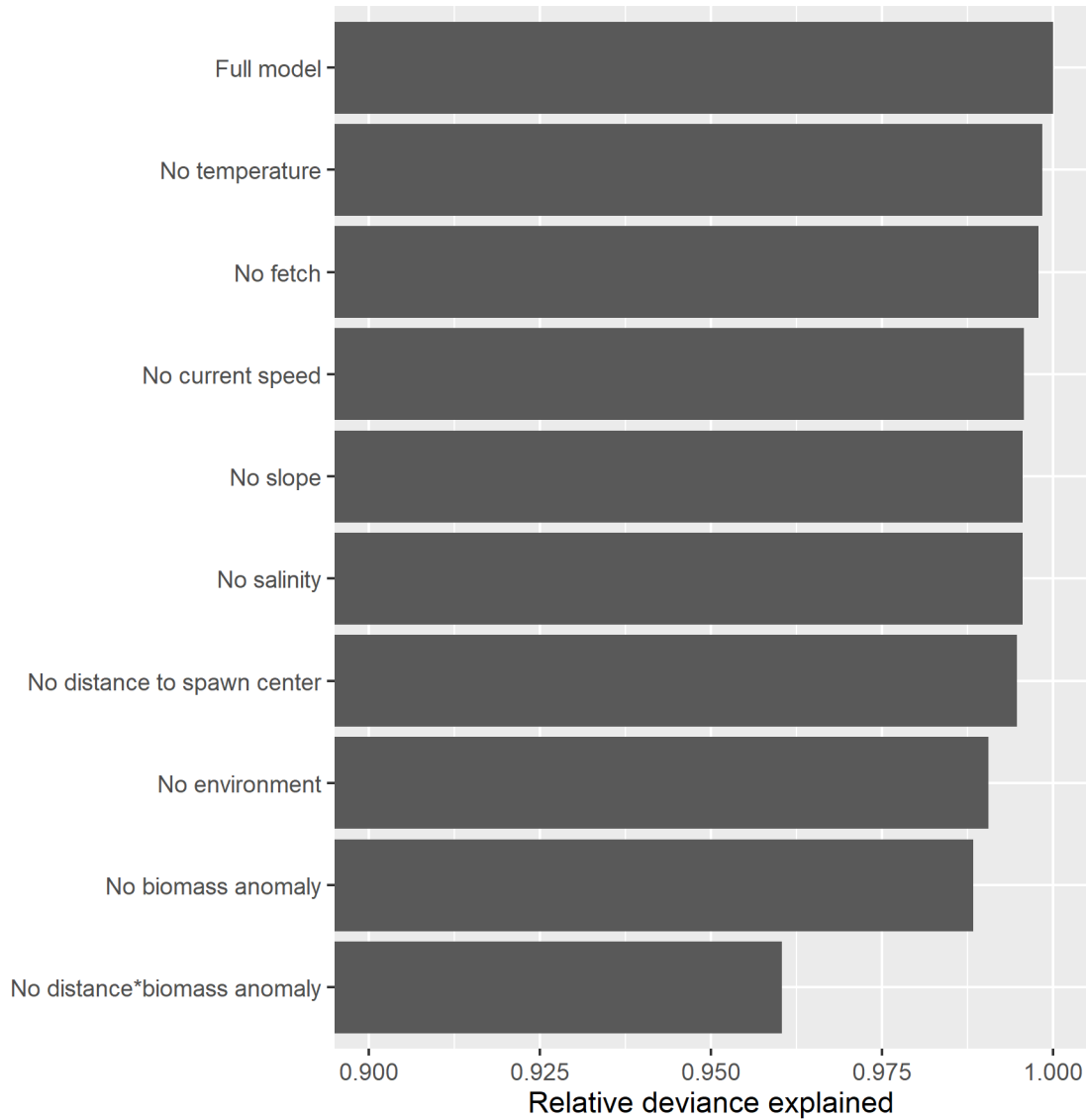


Figure S3. Relative importance of explanatory variables in generalized additive model explaining the presence or absence of spawning at transects from 1988-2018 measured by the removal of the variable from the model. For each variable, it was removed and the model refit to determine a deviance explained. The reduced model deviance explained was then rescaled to 1.0 by dividing by the full model deviance explained.

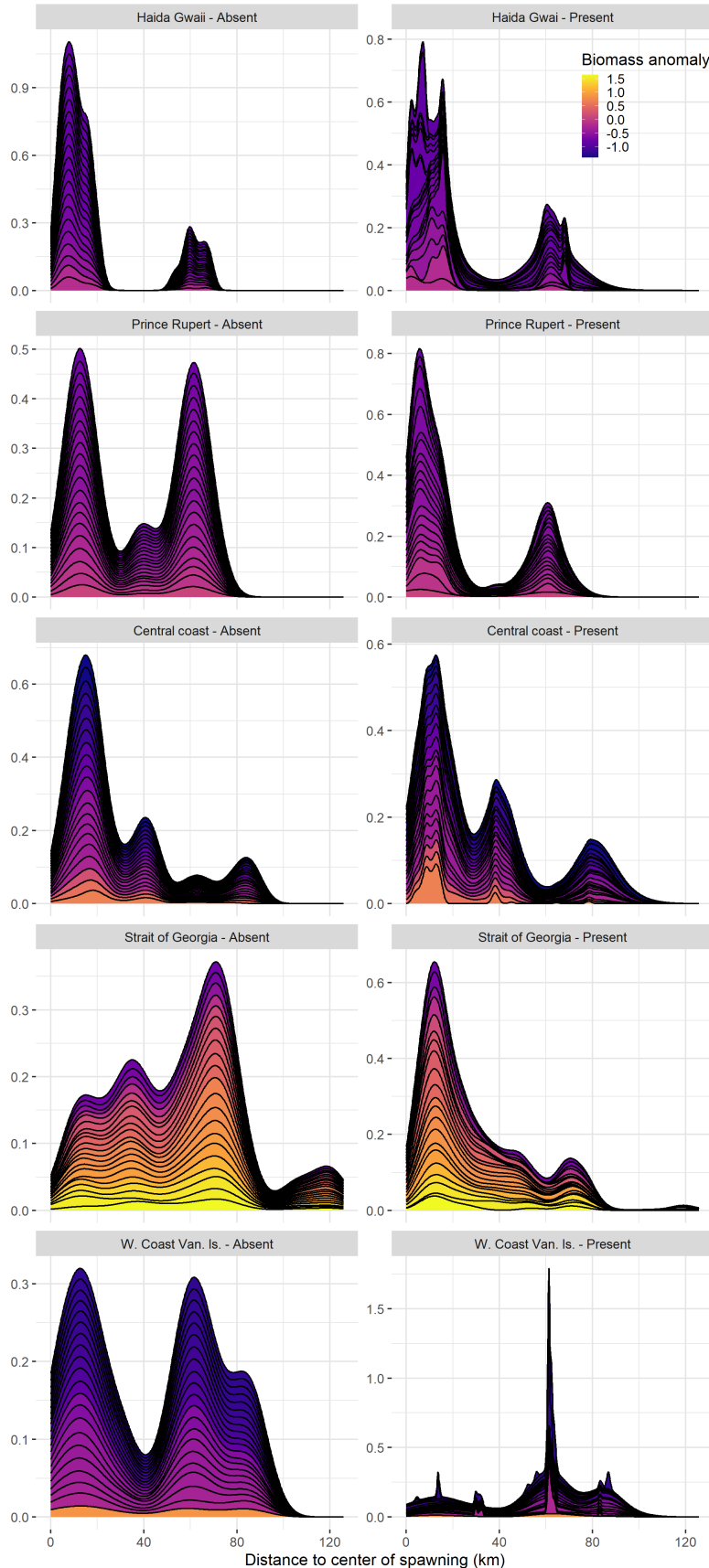


Figure S4. Kernel density of the distance to the center of spawning for each stock at different biomass levels. The kernel density was calculated for transects where spawn was present (right column of panels) and where spawn was absent (left column of panels).