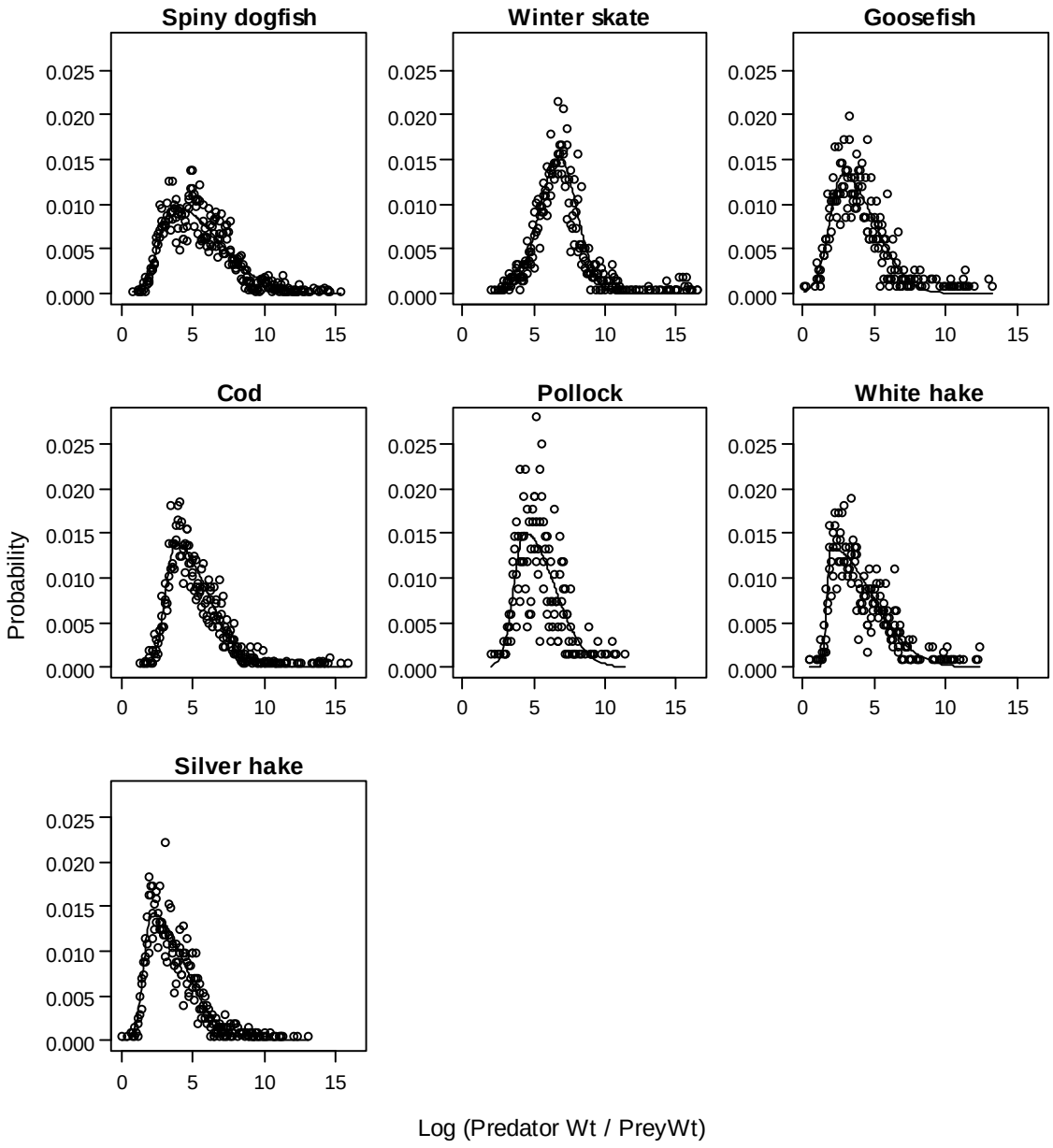

Figure 2: Observed (open circles) and predicted (lines) distribution of the logged ratio of predator-to-prey weight for each predator species.

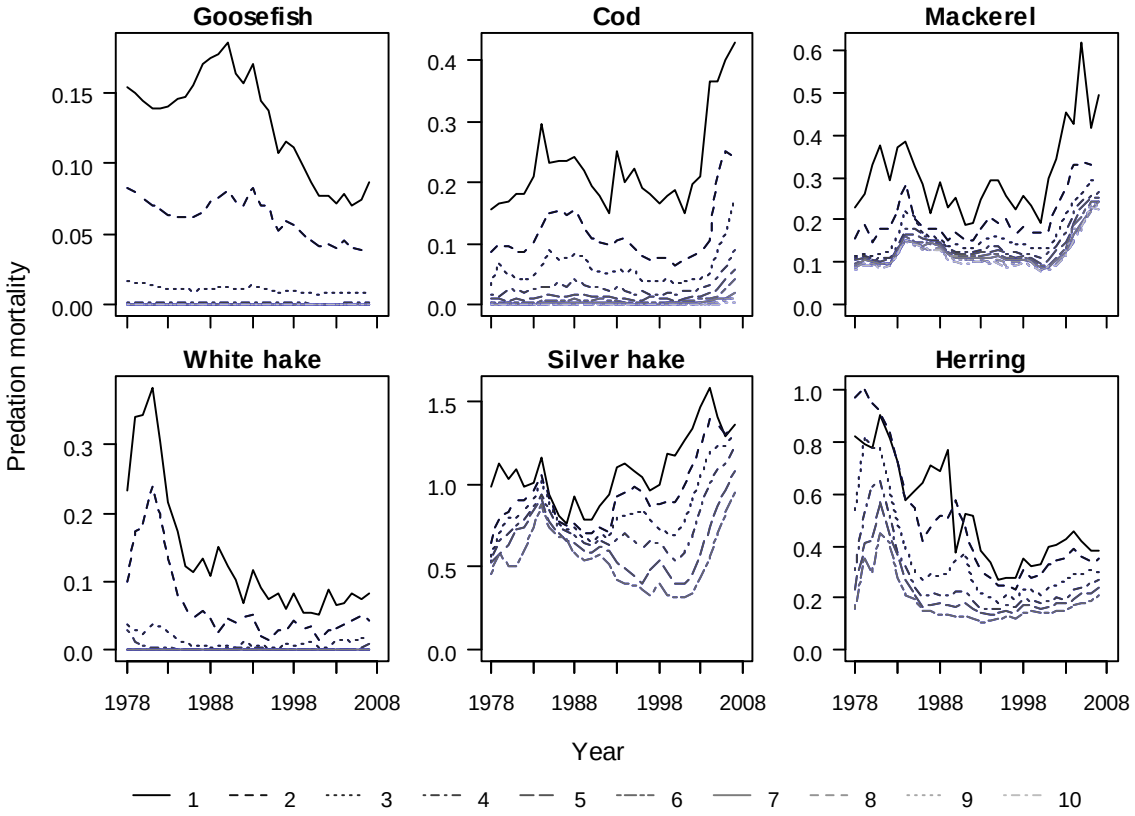

Figure 3: Age-specific predation mortality rates for each prey species. Each line represents an age class.

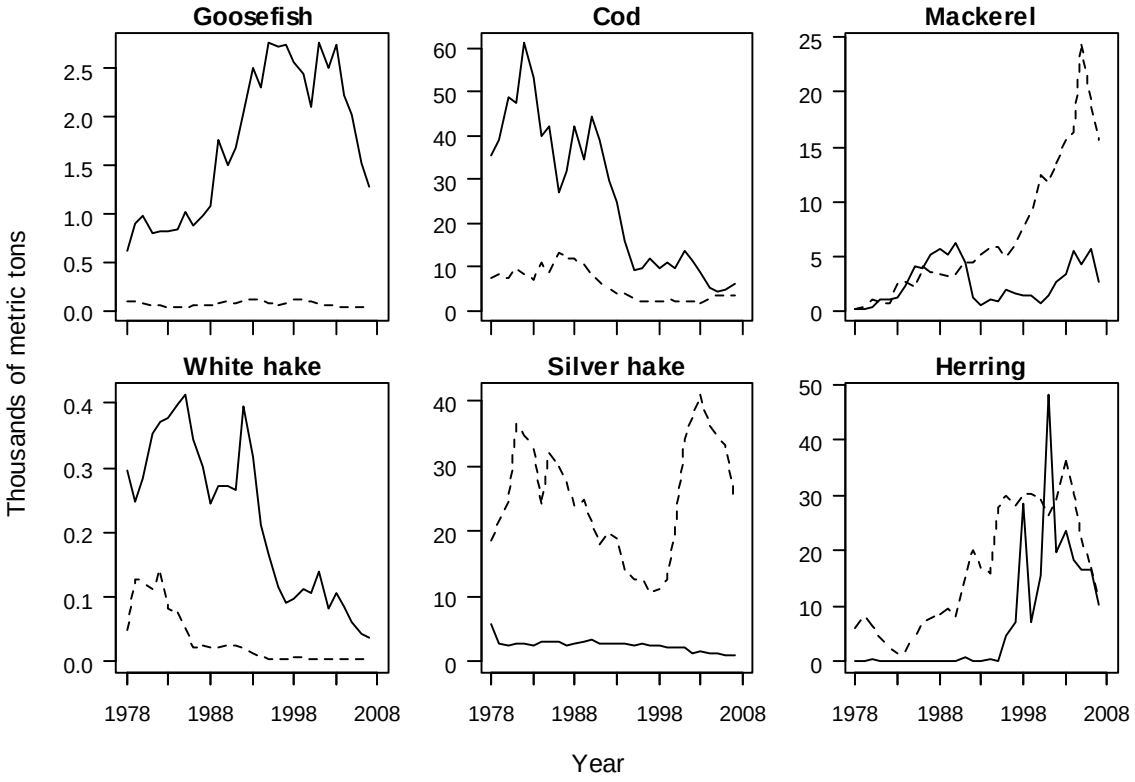

Figure 4: Total annual catch (solid line) and biomass consumed (dashed line) of each prey species.

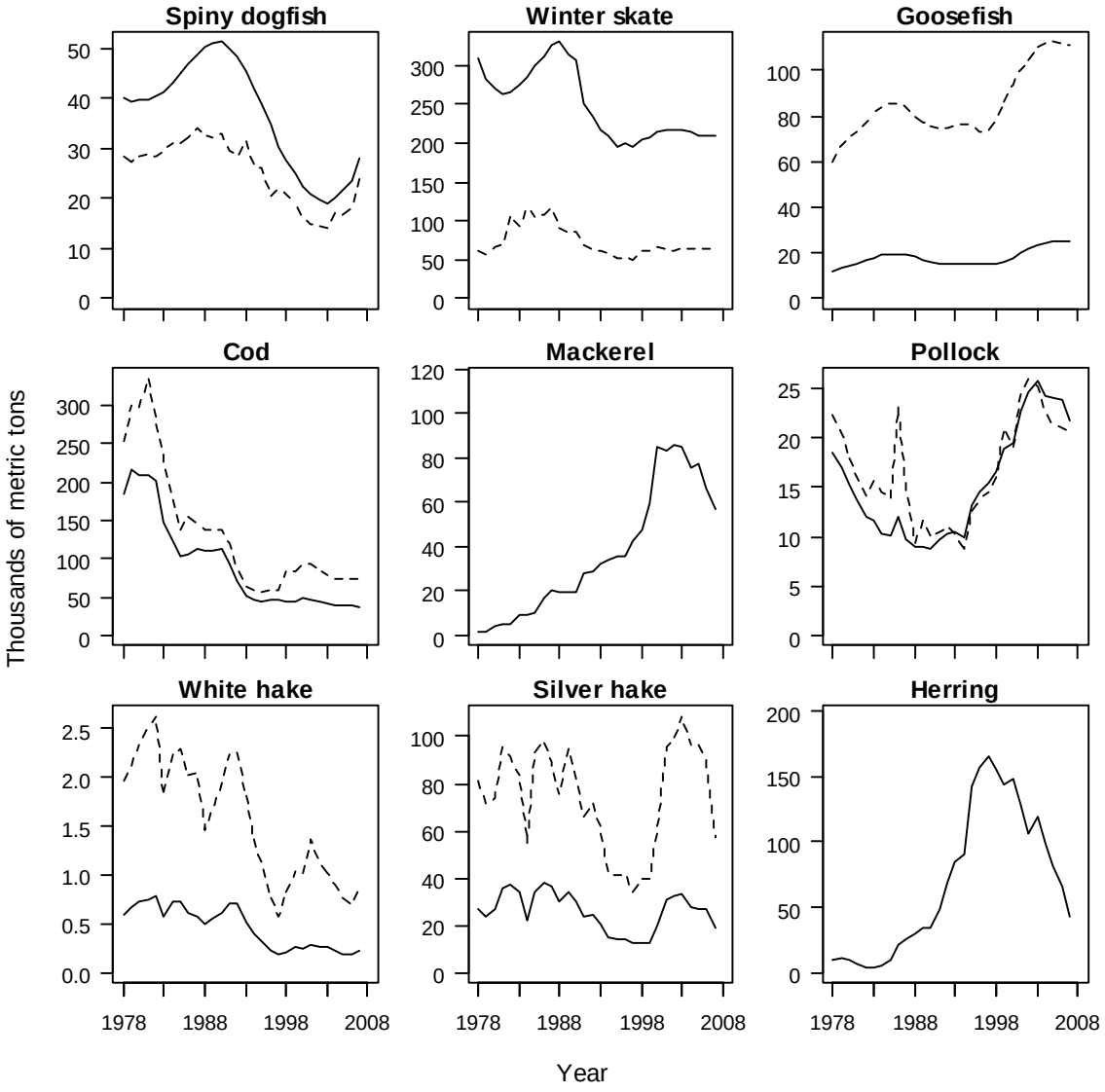

Figure 5: Total annual species-specific biomass (solid line) and consumption (dotted line) of all prey species, including other food. Consumption by herring or mackerel was not calculated.

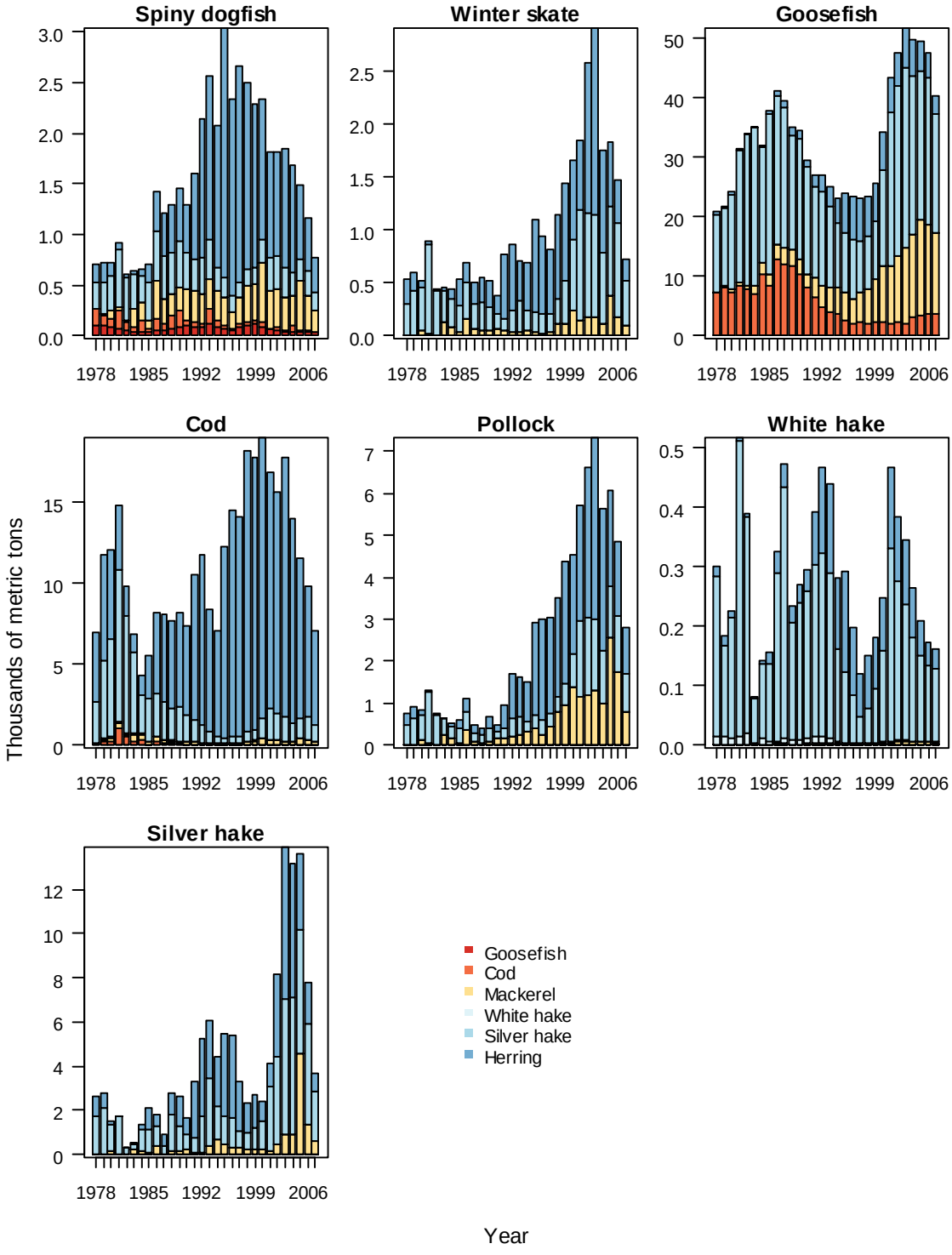

Figure 6: Total annual consumption (thousands of metric tons) of modeled prey species by each predator species.

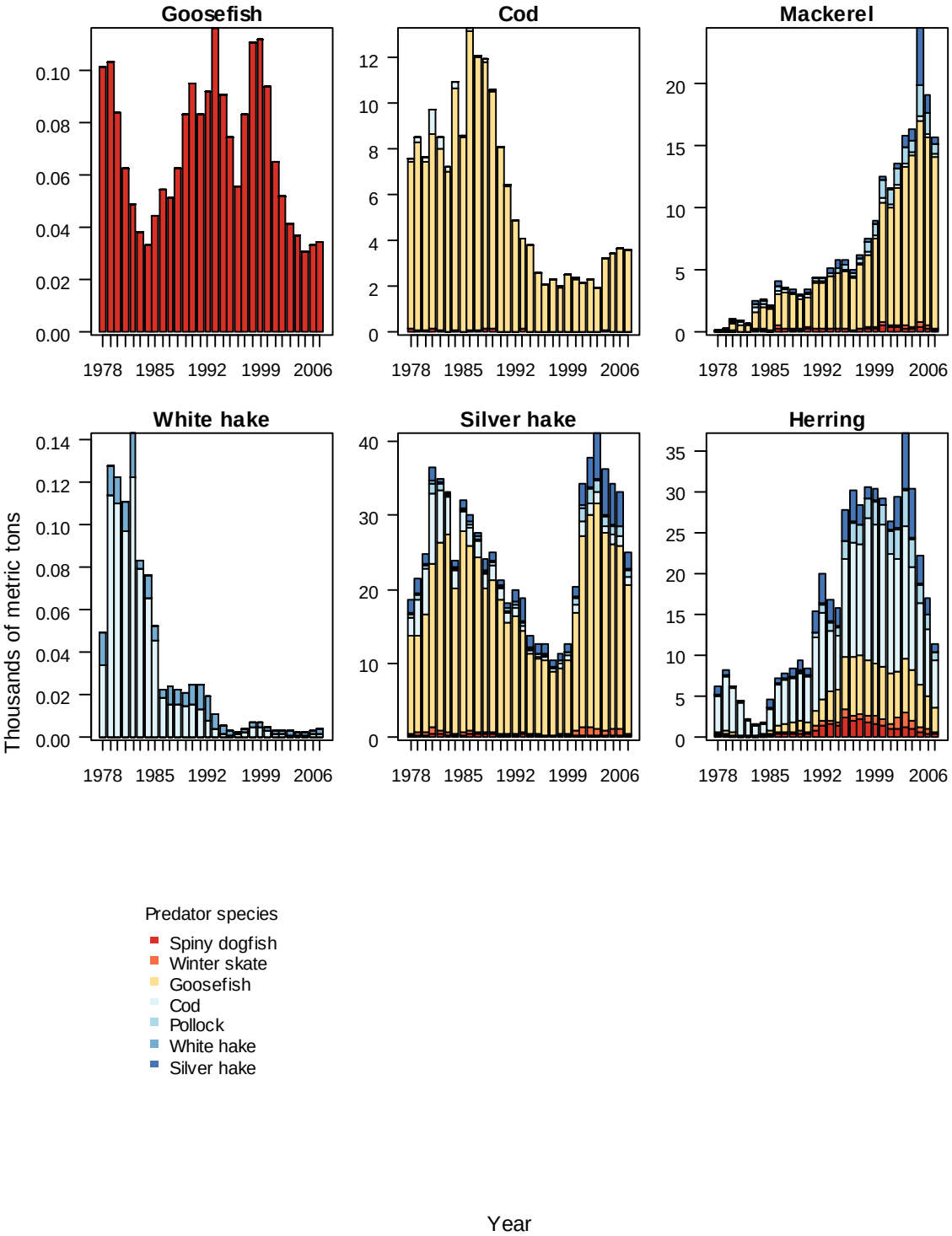

Figure 7: Annual predator-specific consumption (thousands of metric tons) of each prey species.

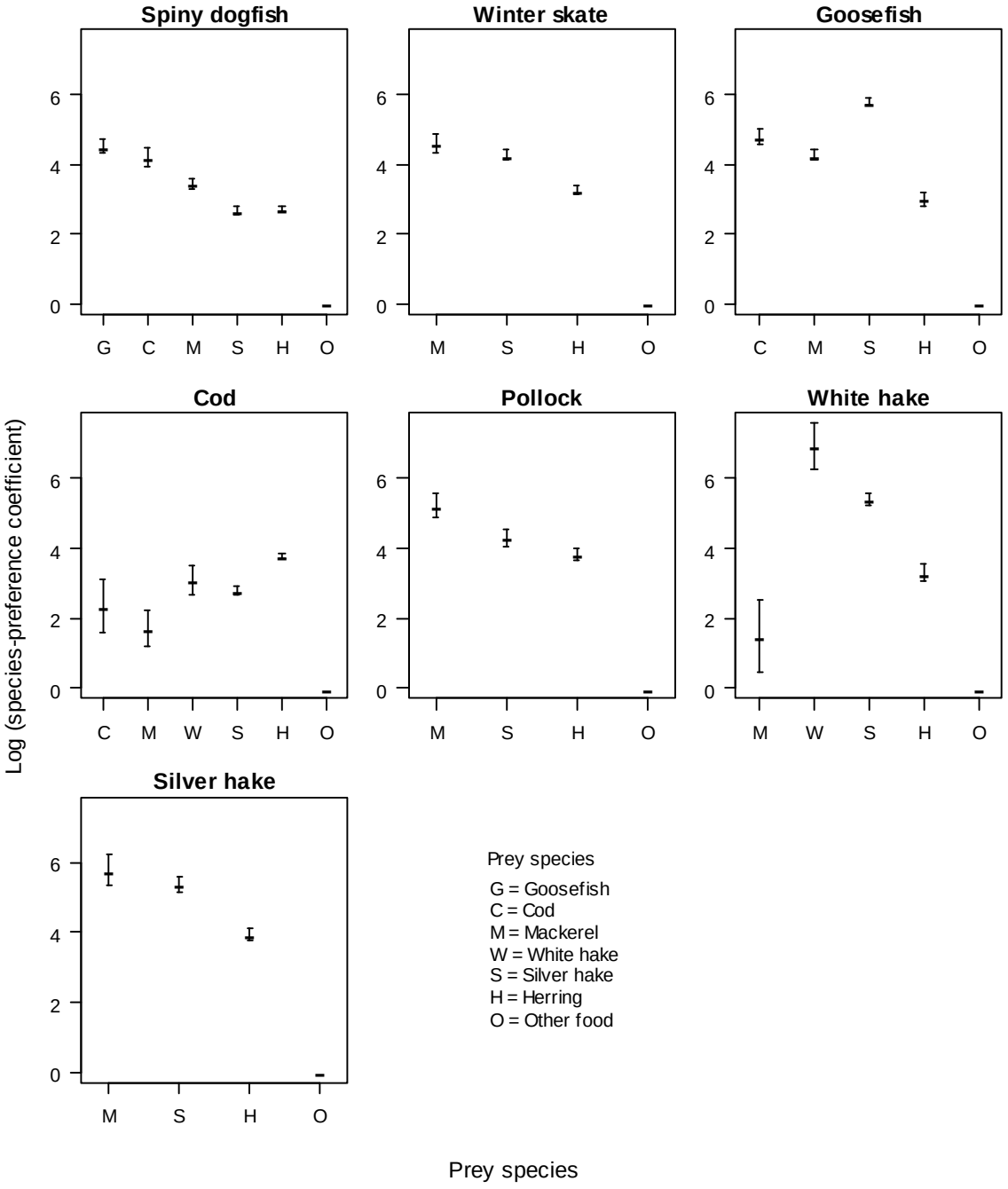

Figure 8: Prey species-preference coefficients for each species interaction.

SUPPLEMENTAL MATERIAL

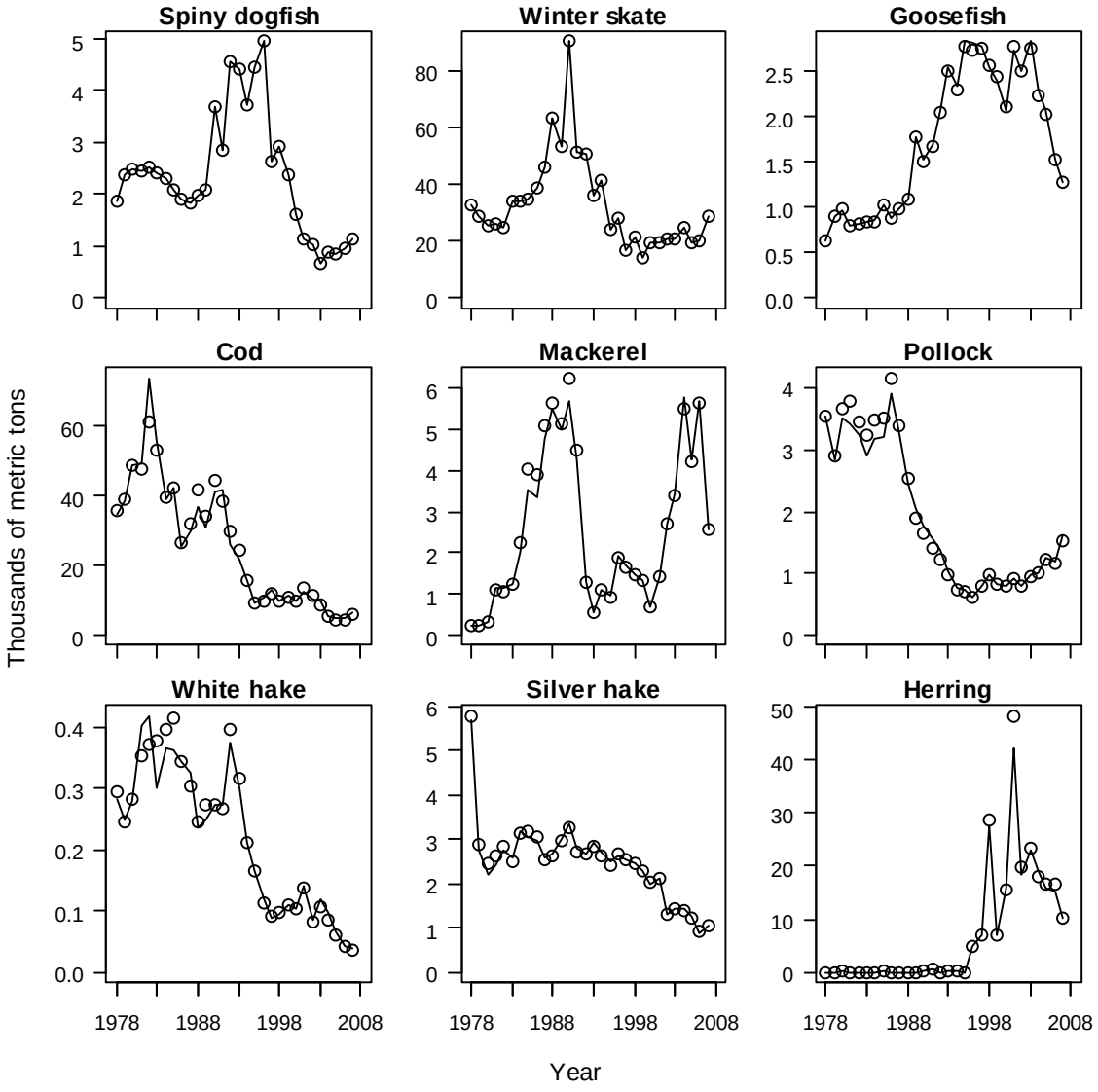

Figure S1: Total annual fisheries catch (thousands of metric tons) for each modeled species. In the multispecies formulation, spiny dogfish and winter skate catches do not exhibit any deviations because their dynamics were assumed to be known inputs.

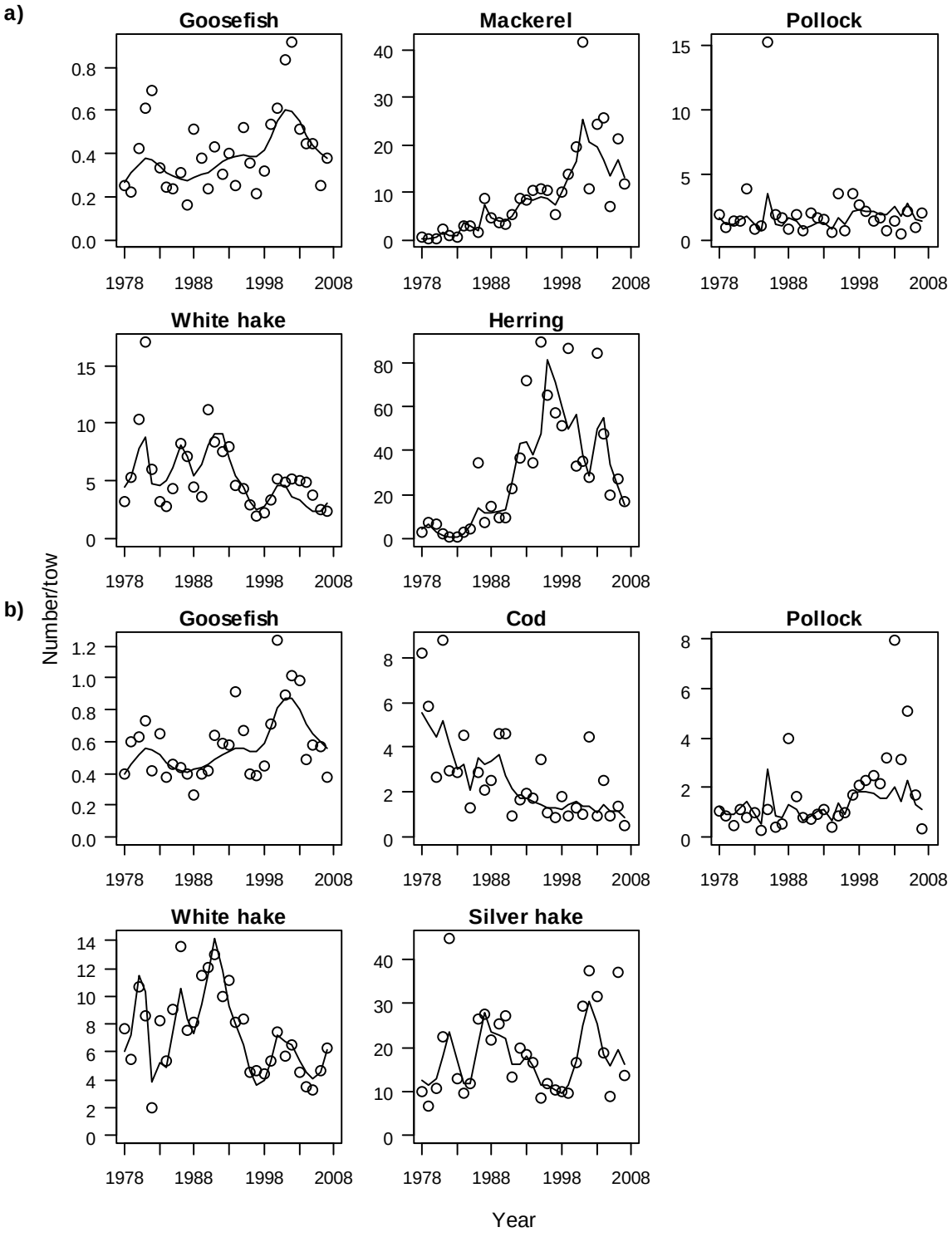

Figure S2: Total fishery-independent survey catch from the spring (a) and fall (b) NEFSC bottom trawl surveys. For the spring survey, silver hake and cod survey catches were not included in the objective function; herring and mackerel catches were not included for the fall survey.

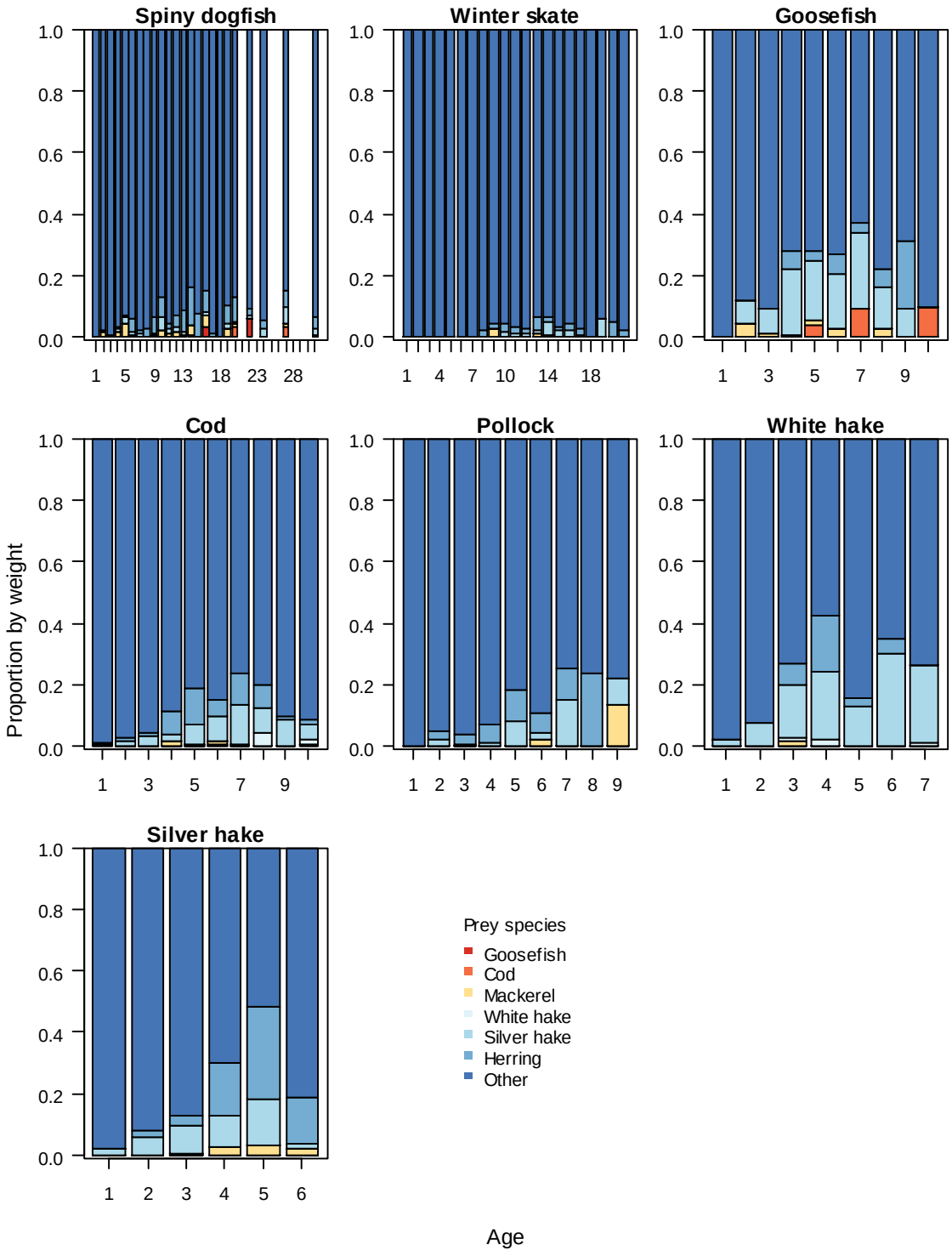

Figure S3: Observed average predator diet composition by age, represented as the proportion by weight of a particular prey item to the total stomach-content weight.

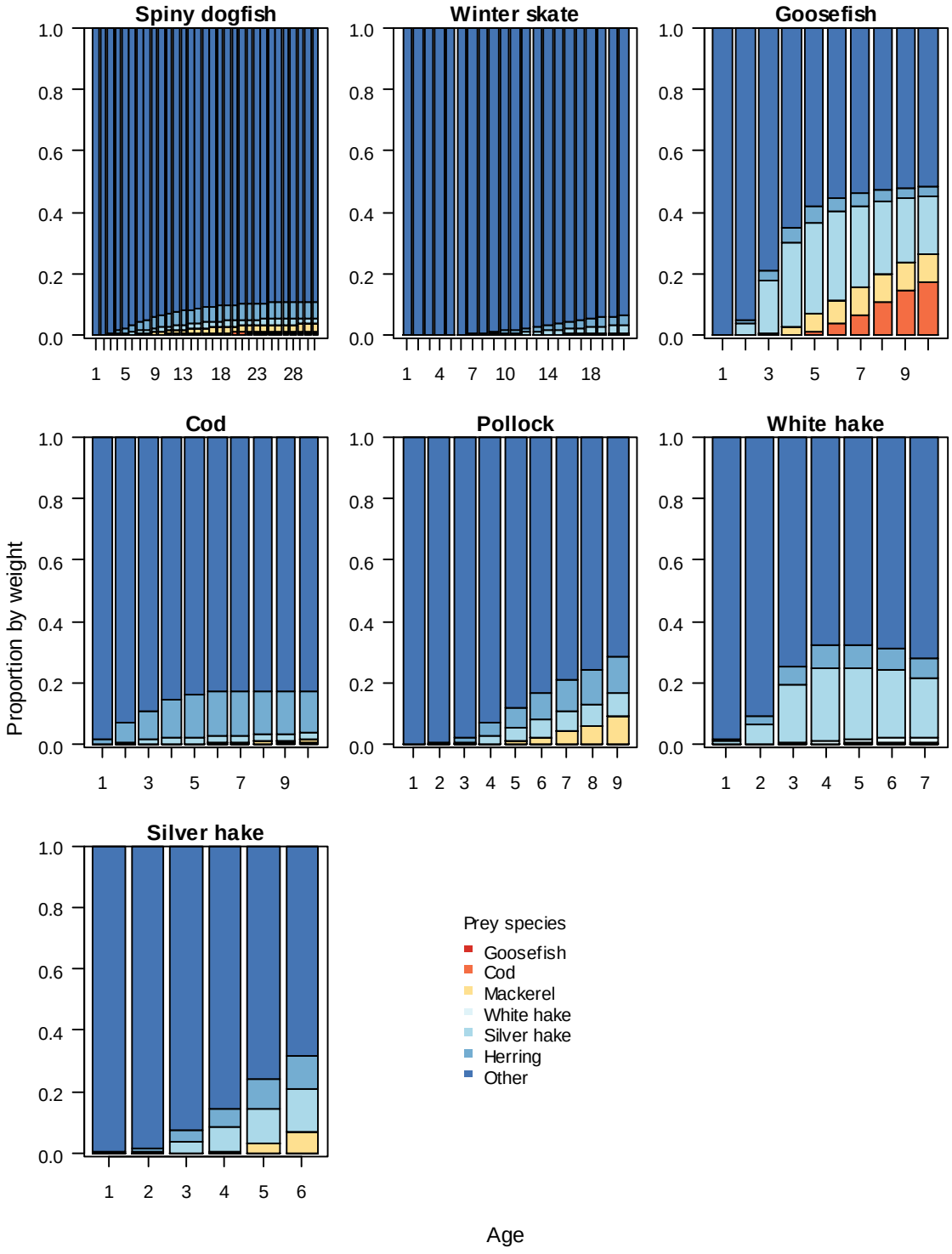

Figure S4: Predicted average predator diet composition by age, represented as the proportion by weight of a particular prey item to the total stomach-content weight

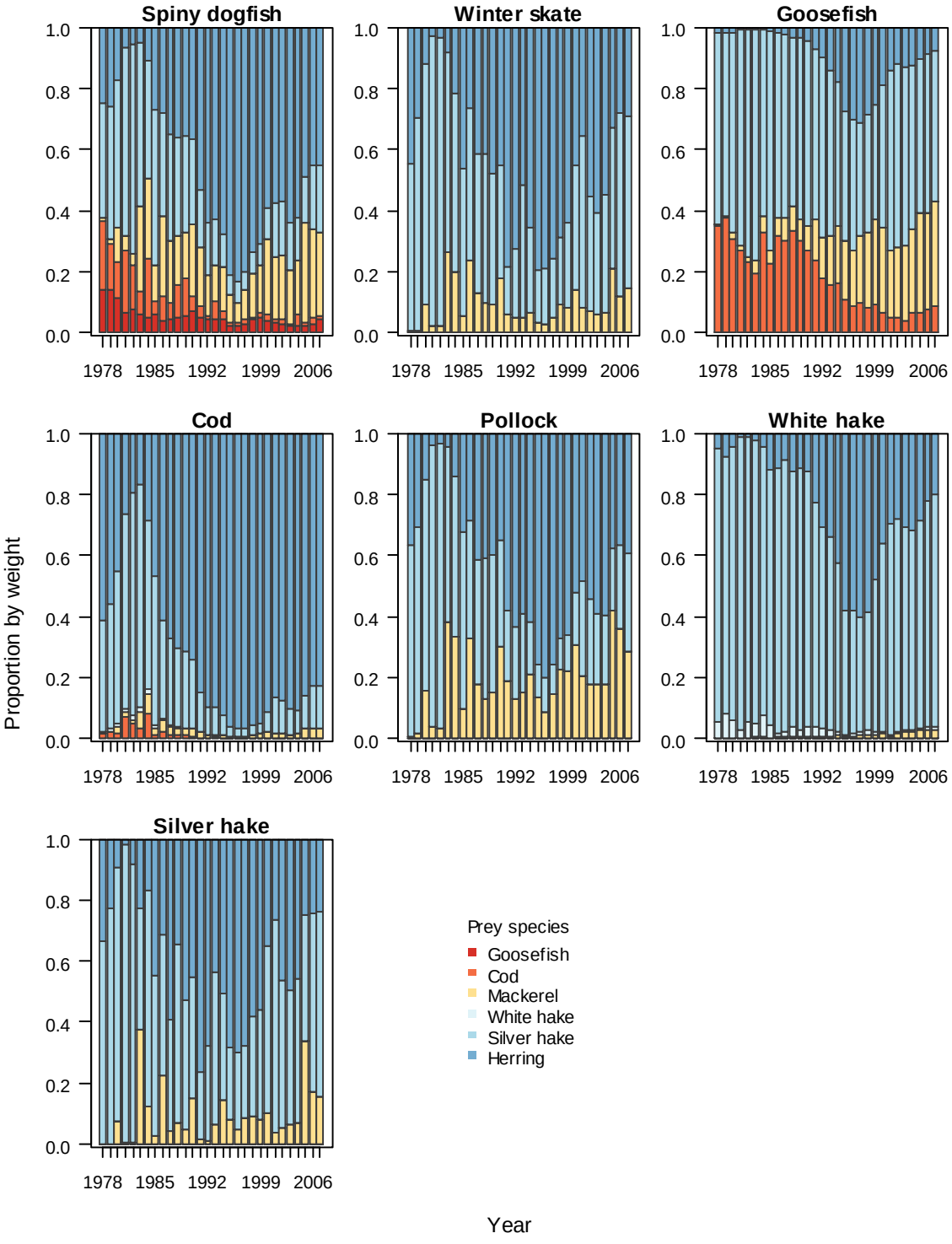

Figure S5: Predicted average predator diet composition of modeled fish species in each year, represented as the proportion by weight of a particular prey item to the total weight of modeled fish prey consumed.