

**Table S1.** Supplemental data for figures 1 and 4; the top five percent of  $\max|g(t)-f(t)|$  for each comparison of species-specific cumulative distribution functions to the habitat cumulative distribution was used to determine the critical range of depth values for each species.

Species	Top 5% $\max g(t)-f(t) $	Bottom depth critical range (m)
Walleye pollock	> 0.04	66 – 78
Pacific cod	> 0.07	66 – 105
Pacific halibut	> 0.08	44 – 63
Arrowtooth flounder	> 0.47	88 – 95
Sand lance	> 0.59	53 – 65
Capelin	> 0.66	47 – 53
Herring	> 0.13	63 – 65
Eulachon	> 0.26	76 – 87
Smelt	> 0.48	57 – 62

**Table S2.** Supplemental data for figures 2 and 5; the top five percent of  $\max|g(t)-f(t)|$  for each comparison of species-specific cumulative distribution functions to the habitat cumulative distribution was used to determine the critical range of temperature values for each species.

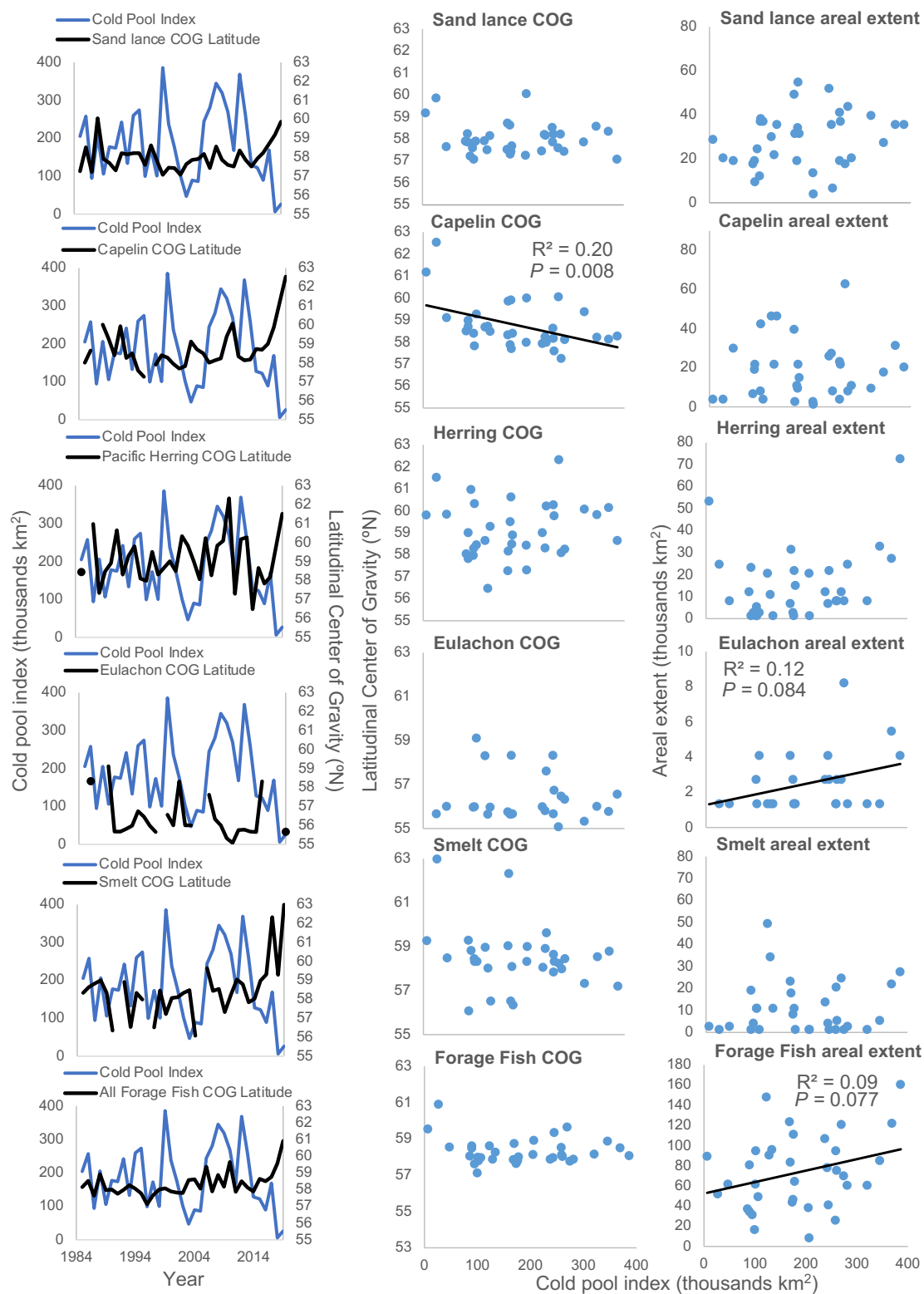
Species	Top 5% $\max g(t)-f(t) $	Bottom temp. critical range (°C)
Walleye pollock	> 0.04	4.0 – 4.3
Pacific cod	> 0.05	-0.7 – 0.7
Pacific halibut	> 0.15	1.2 – 2.9
Arrowtooth flounder	> 0.20	0.8 – 2.1
Sand lance	> 0.28	2.5 – 3.8
Capelin	> 0.14	2.7 – 3.8
Herring	> 0.15	0.5 – 2.0
Eulachon	> 0.23	2.3 – 3.3
Smelt	> 0.17	3.4 – 4.9

**Table S3.** Global index of collocation results for pairwise comparison between species distributions.

Species 1	Species 2	GIC
Sand lance	Capelin	0.780
Sand lance	Herring	0.414
Sand lance	Eulachon	0.560
Sand lance	Smelt	0.730
Herring	Capelin	0.678
Herring	Eulachon	0.550
Herring	Smelt	0.744
Capelin	Eulachon	0.731
Capelin	Smelt	0.990
Eulachon	Smelt	0.774

**Table S4.** Global index of collocation results for pairwise comparison between climate phases for each species of forage fish.

Species	Cold - Warm	Cold - Average	Warm - Average
Sand lance	0.986	0.994	0.965
Capelin	0.993	0.981	0.986
Herring	0.993	0.960	0.936
Eulachon	0.899	0.854	0.727
Smelt	0.956	0.960	0.987



**Fig. S1.** Cold pool index and the forage fish latitudinal center of gravity were graphed across the time series (column 1). Regression analyses of forage fish latitudinal center of gravity against the cold pool index (column 2). Regression analysis of forage fish areal extent against the cold pool index (column 3). Regression trendlines and statistics are shown only for relationships significant to  $P < 0.100$ .