Table S1. Principal component analysis on water quality data from the Northern Indian River Lagoon, 1998–2019. Sign and magnitude of principal component loadings indicate magnitude and direction of relationships in variables and principal components.

Water Quality Variable	PC1	PC2	PC3	PC4	PC5	PC6
Salinity	0.32	–0.43	0.64	–0.41	–0.10	–0.34
Temperature	–0.48	–0.29	0.10	–0.15	0.81	0.05
Min Temperature	–0.55	–0.14	–0.20	0.09	–0.29	–0.74
Max Temperature	–0.27	0.55	0.00	–0.78	–0.11	0.04
Winter Avg	–0.50	–0.37	0.22	0.00	–0.49	0.58
Dissolved Oxygen	0.22	–0.52	–0.70	–0.43	–0.05	0.09
Standard deviation	1.656	1.041	0.942	0.878	0.630	0.345
Proportion of Variance	0.457	0.181	0.148	0.128	0.066	0.020
Cumulative Proportion	0.457	0.638	0.786	0.914	0.980	1.000

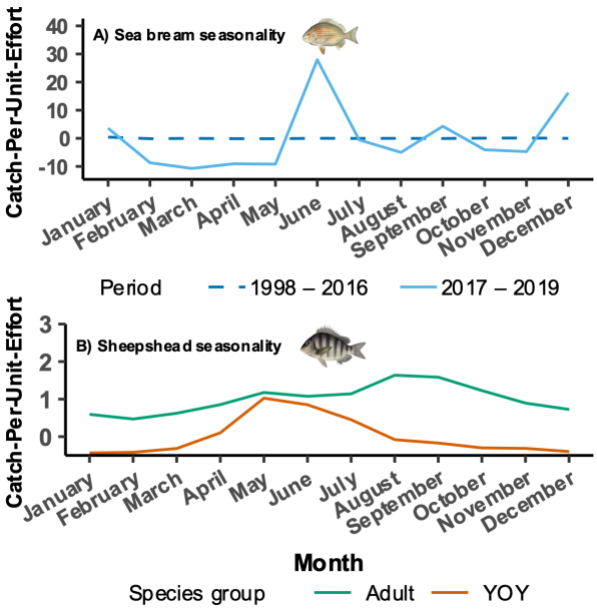

Fig. S1. Time series of seasonal catch-per-unit-effort for sea bream, sheepshead, and young-of-the-year (YOY) sheepshead in the Indian River Lagoon, Florida.

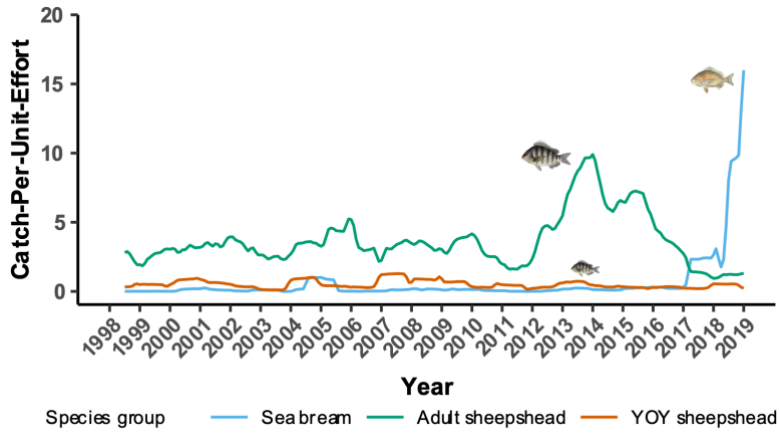

Fig. S2. Time series of catch-per-unit-effort for sea bream, sheepshead, and young-of-the-year (YOY) sheepshead in the Indian River Lagoon, Florida. The 12-month moving average used to calculate trend values at each time period results in null values for the first and last six months of the series.

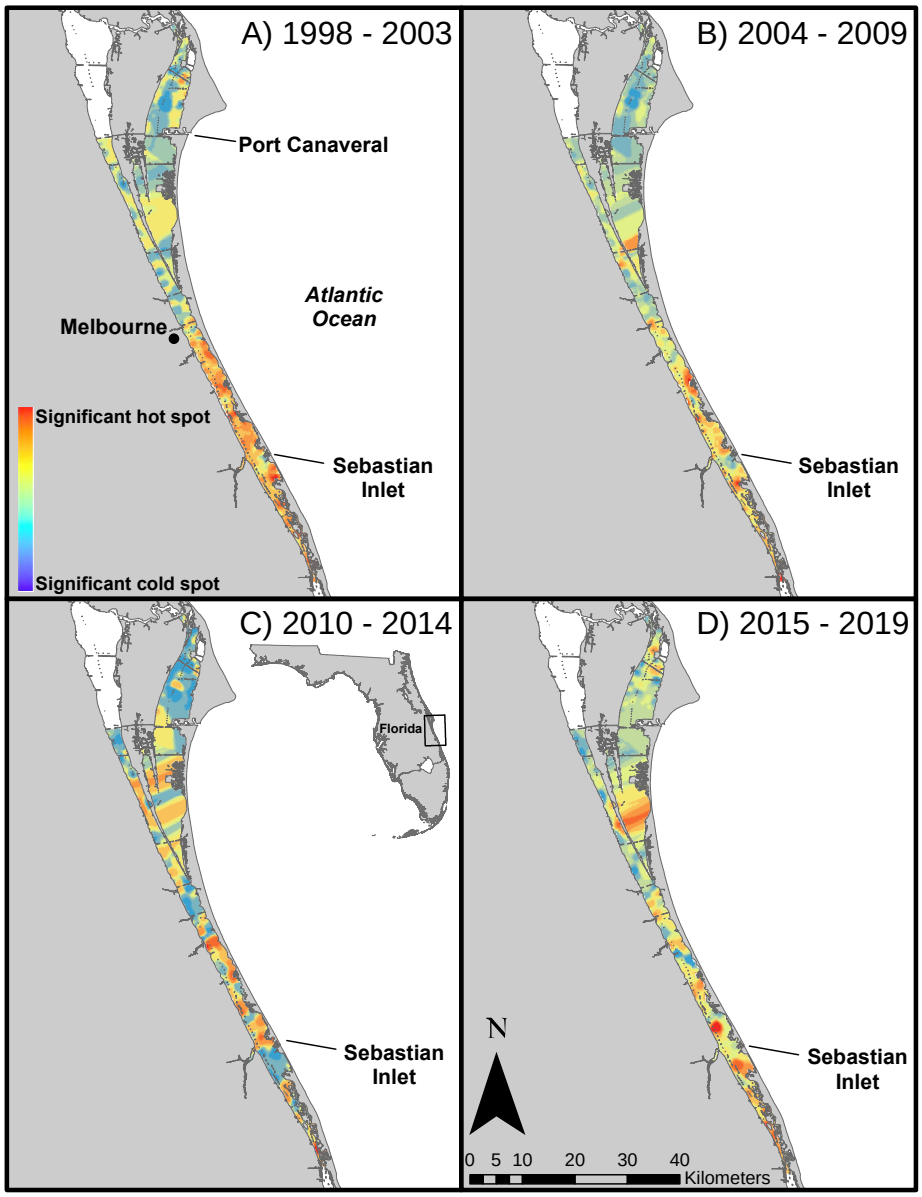

Fig. S3. Hot spot analysis interpolation of young-of-the-year sheepshead catch-per-unit-effort over time. Red cells indicate significantly large sheepshead catches; blue cells indicate significantly small sheepshead catches. Hot and cold spots are based on spatial interpolation of samples of significantly high and low catch, as determined by z-score.

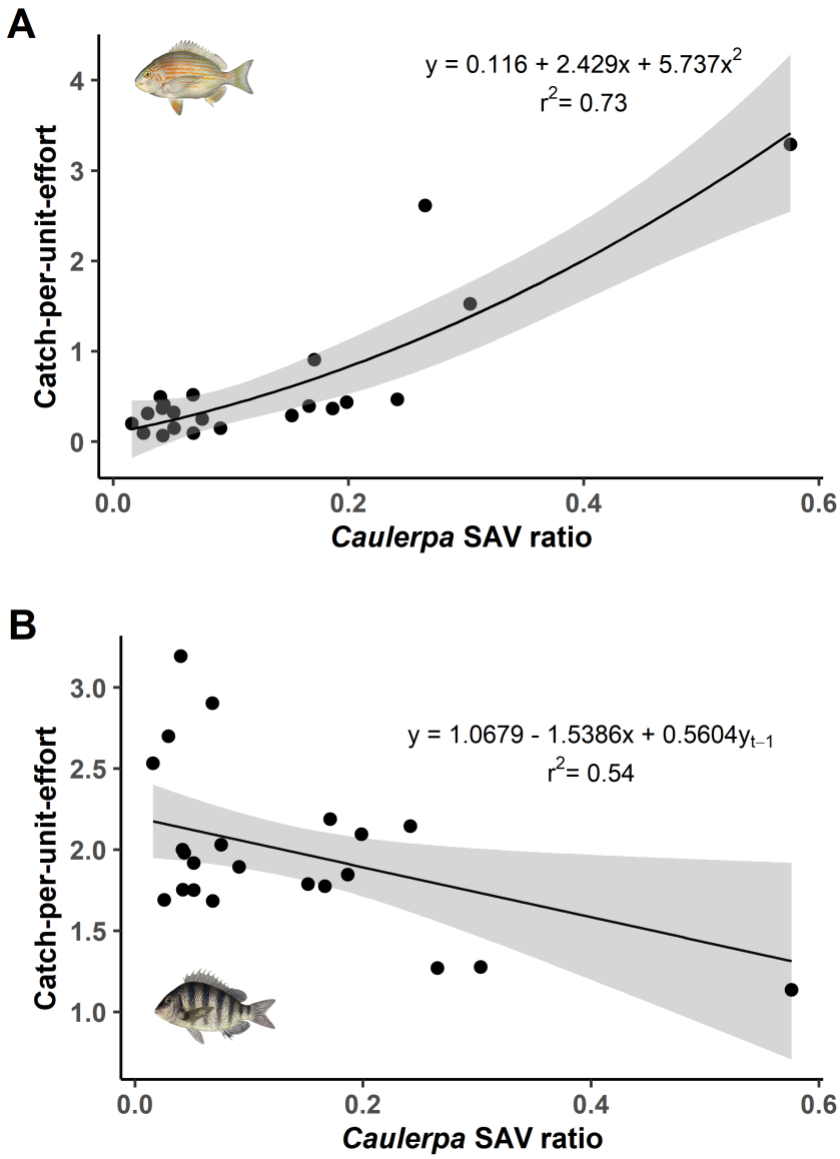

Fig. S4. Relationship between the mean relative dominance of *Caulerpa* spp. at sampling sites (expressed as the ratio of coverage by *Caulerpa* to that of seagrasses) and the catch-per-unit-effort for (A) sea bream and (B) sheepshead in the northern Indian River Lagoon, Florida, 1998–2019. Gray band represents the 95% confidence interval.