

Table S1. Outputs from generalized least squares models on catch (n net⁻¹) from fishery-independent gill net surveys that were conducted during the course of this study.

Model/Variable	Numerator df	F-value	p-value
Spotted seatrout (Denominator df = 160)			
Intercept	1	83.97	<0.0001
Season	1	16.57	0.0001
Treatment	1	8.68	0.0037
Red drum (Denominator df = 159)			
Intercept	1	44.44	<0.0001
Season	1	6.11	0.0145
Treatment	1	0.97	0.3261
Season x treatment	1	12.33	0.0006
Black drum (Denominator df = 160)			
Intercept	1	87.11	<0.0001
Season	1	0.56	0.4563
Treatment	1	61.49	<0.0001
Hardhead catfish (Denominator df = 160)			
Intercept	1	45.2	<0.0001
Season	1	13.17	0.0004
Treatment	1	47.82	<0.0001
Gafftopsail catfish (Denominator df = 160)			
Intercept	1	58.14	<0.0001
Season	1	23.14	<0.0001
Treatment	1	22.58	<0.0001
Sharks (Denominator df = 160)			
Intercept	1	11.08	0.0011
Season	1	0.009	0.9241
Treatment	1	6.97	0.0091
Blue crab (Denominator df = 160)			
Intercept	1	3.39	0.067
Season	1	0.4	0.527
Treatment	1	28.84	<0.0001
Gulf stone crab (Denominator df = 160)			
Intercept	1	3.08	0.0811
Season	1	0.63	0.4303
Treatment	1	20.61	<0.0001

Table S2. Outputs from generalized least squares models on length (total length for all finfish and carapace width for all crabs; mm) from fishery-independent gill net surveys that were conducted during the course of this study.

Model/Variable	Numerator df	F-value	p-value
Spotted seatrout (Denominator df = 2351)			
Intercept	1	10538.8	<0.0001
Season	1	3.12	0.0775
Location	1	0.03	0.8578
Season x location	1	17.09	<0.0001
Red drum (Denominator df = 2839)			
Intercept	1	19433.1	<0.0001
Season	1	39.53	<0.0001
Location	1	75.53	<0.0001
Black drum (Denominator df = 2041)			
Intercept	1	26508.39	<0.0001
Season	1	50.69	<0.0001
Location	1	29.15	<0.0001
Season x location	1	5.99	0.0144
Hardhead catfish (Denominator df = 2082)			
Intercept	1	17659.76	<0.0001
Season	1	1.44	0.2307
Location	1	19.09	<0.0001
Gafftopsail catfish (Denominator df = 1472)			
Intercept	1	16817.98	<0.0001
Season	1	5.46	0.0195
Location	1	100.08	<0.0001
Blue crab (Denominator df = 291)			
Intercept	1	25.42	<0.0001
Season	1	4.49	0.0348
Location	1	2.82	0.094
Gulf stone crab (Denominator df = 45)			
Intercept	1	120.43	<0.0001
Season	1	32.8	<0.0001
Location	1	1.05	0.312
Season x location	1	26.68	<0.0001

Table S3. Post hoc testing for generalized least squares models on both catch (n net⁻¹) and length (mm) models. Post hoc testing was conducted to assess differences between reef and shoreline (i.e., location) within season when a significant interaction (season x treatment) was detected.

Model/Test	Estimate (SE)	z-value	p-value
Red drum, CPUE			
Spring: shoreline-reef	17.27 (2.48)	6.96	<0.0001
Fall: shoreline-reef	2.88 (3.29)	0.88	0.381
Spotted seatrout, Length			
Spring: shoreline-reef	32.58 (4.73)	6.89	<0.0001
Fall: shoreline-reef	1.08 (5.88)	0.18	0.854
Black drum, Length			
Spring: shoreline-reef	-17.97 (5.75)	-3.13	0.0018
Fall: shoreline-reef	-43.95 (6.54)	-6.72	<0.0001
Gulf stone crab, Length			
Spring: shoreline-reef	68.61 (9.70)	7.07	<0.0001
Fall: shoreline-reef	-11.06 (11.58)	-0.954	0.354