

Table S1. Post hoc test results of the catch per unit effort (CPUE) zero altered gamma generalized linear mixed model (GLMM). Reported ratios and confidence intervals from the Bernoulli and gamma GLMMs were back-transformed from the logit and log scales, respectively. 2012: pre-Sandy, 2013: 1 yr post-Sandy, 2014: 2 yr post-Sandy

Bernoulli GLMM		95% Confidence interval		
Comparison	Odds ratio	Lower limit	Upper limit	p
2012 / 2013	1.881	0.946	3.740	0.079
2012 / 2014	0.643	0.296	1.396	0.376
2013 / 2014	0.342	0.164	0.714	0.002
April / June	0.167	0.072	0.387	< 0.001
April / August	0.052	0.016	0.171	< 0.001
April / October	0.152	0.065	0.359	< 0.001
June / August	0.310	0.087	1.105	0.083
June / October	0.912	0.347	2.402	0.995
August / October	2.946	0.819	10.597	0.132
Gamma GLMM		95% Confidence interval		
Comparison	CPUE Ratio	Lower limit	Upper limit	p
April				
2012 / 2013	3.526	1.507	8.250	0.002
2012 / 2014	2.837	1.340	6.008	0.003
2013 / 2014	0.805	0.361	1.793	0.800
June				
2012 / 2013	3.250	1.725	6.121	< 0.001
2012 / 2014	0.864	0.446	1.675	0.864
2013 / 2014	0.266	0.145	0.487	< 0.001
August				

	2012 / 2013	1.227	0.670	2.249	0.708
	2012 / 2014	0.616	0.335	1.133	0.150
	2013 / 2014	0.502	0.271	0.931	0.024
October					
	2012 / 2013	1.572	0.804	3.073	0.253
	2012 / 2014	0.302	0.160	0.570	< 0.001
	2013 / 2014	0.192	0.099	0.372	< 0.001

Table S2. Post hoc test results for seasonal comparisons of the species-specific Bernoulli generalized linear mixed models. Reported ratios and confidence intervals were back-transformed from the logit scale. Silver perch *Bairdiella chrysoura* were not collected in June; therefore, those comparisons were omitted. See Table 4 for species characterizations

	April / June		April / August		April / October		June / August		June / October		August / October	
	Odds ratio	p	Odds ratio	p	Odds ratio	p	Odds ratio	p	Odds ratio	p	Odds ratio	p
<i>Anchoa mitchilli</i>	0.100 0.039 – 0.252	< 0.001	0.018 0.007 – 0.051	< 0.001	0.031 0.012 – 0.083	< 0.001	0.182 0.086 – 0.386	< 0.001	0.311 0.154 – 0.631	< 0.001	1.714 0.812 – 3.616	0.249
<i>Apeltes quadracus</i>	0.356 0.103 – 1.230	0.141	1.211 0.312 – 4.697	0.984	2.355 0.531 – 10.441	0.451	3.400 0.960 – 12.048	0.062	6.612 1.584 – 27.601	0.004	1.945 0.435 – 8.698	0.664
<i>Bairdiella chrysoura</i>			0.006 0.000 – 0.098	< 0.001	0.006 0.000 – 0.099	< 0.001					1.007 0.444 – 2.285	1.000
<i>Brevoortia tyrannus</i>	0.361 0.100 – 1.306	0.175	0.533 0.141 – 2.016	0.618	0.484 0.130 – 1.804	0.488	1.478 0.476 – 4.588	0.812	1.341 0.441 – 4.083	0.906	0.907 0.282 – 2.923	0.997
<i>Gobiosoma bosc</i>	1.776 0.450 – 7.013	0.706	0.202 0.065 – 0.624	0.002	0.375 0.120 – 1.178	0.123	0.114 0.032 – 0.407	< 0.001	0.211 0.059 – 0.761	0.010	1.859 0.720 – 4.797	0.335
<i>Leiostomus xanthurus</i>	0.143 0.040 – 0.512	0.001	0.185 0.052 – 0.662	0.004	0.634 0.162 – 2.486	0.827	1.297 0.502 – 3.350	0.896	4.442 1.430 – 13.800	0.004	3.425 1.104 – 10.625	0.027
<i>Menidia menidia</i>	0.184 0.056 – 0.602	0.001	0.253 0.076 – 0.839	0.017	0.153 0.047 – 0.495	< 0.001	1.374 0.562 – 3.361	0.798	0.830 0.357 – 1.932	0.942	0.604 0.251 – 1.452	0.452
<i>Micropogonias undulatus</i>	0.395 0.061 – 2.548	0.576	1.049 0.119 – 9.242	1.000	0.051 0.009 – 0.279	< 0.001	2.655 0.412 – 17.107	0.533	0.129 0.037 – 0.447	< 0.001	0.049 0.009 – 0.266	< 0.001
<i>Opsanus tau</i>	0.097 0.016 – 0.583	0.005	0.031 0.005 – 0.184	< 0.001	0.131 0.021 – 0.800	0.020	0.318 0.117 – 0.863	0.017	1.354 0.445 – 4.120	0.898	4.259 1.493 – 12.146	0.002
<i>Paralichthys dentatus</i>	0.121 0.041 – 0.355	< 0.001	0.154 0.052 – 0.455	< 0.001	0.271 0.089 – 0.824	0.014	1.274 0.625 – 2.596	0.819	2.241 1.040 – 4.833	0.035	1.759 0.807 – 3.835	0.244

<i>Pseudopleuronectes americanus</i>	0.062		1.130		1.299		18.134		20.848		1.150	
	0.021 – 0.181	< 0.001	0.329 – 3.881	0.994	0.367 – 4.593	0.952	6.065 – 54.221	< 0.001	6.714 – 64.731	< 0.001	0.318 – 4.161	0.993
<i>Syngnathus fuscus</i>	0.756		0.380		0.509		0.503		0.673		1.338	
	0.300 – 1.904	0.865	0.153 – 0.945	0.032	0.205 – 1.265	0.226	0.208 – 1.217	0.188	0.278 – 1.632	0.660	0.569 – 3.148	0.818

Table S3. Post hoc test results of the diversity zero altered gamma generalized linear mixed model (GLMM). Reported ratios and confidence intervals from the Bernoulli and gamma GLMMs were back-transformed from the logit and log scales, respectively. 2012: pre-Sandy, 2013: 1 yr post-Sandy, 2014: 2 yr post-Sandy

Bernoulli GLMM		95% Confidence interval			
Comparison	Odds ratio	Lower limit	Upper limit	p	
April					
2012 / 2013	1.114	0.249	4.978	0.985	
2012 / 2014	0.420	0.099	1.783	0.337	
2013 / 2014	0.377	0.077	1.847	0.321	
June					
2012 / 2013	1.640	0.447	6.022	0.646	
2012 / 2014	0.482	0.098	2.374	0.531	
2013 / 2014	0.294	0.065	1.324	0.137	
August					
2012 / 2013	10.317	1.596	66.719	0.010	
2012 / 2014	1.956	0.241	15.876	0.733	
2013 / 2014	0.190	0.044	0.819	0.021	
October					
2012 / 2013	5.099	1.489	17.468	0.006	
2012 / 2014	0.086	0.007	1.097	0.062	
2013 / 2014	0.017	0.001	0.207	< 0.001	
Gamma GLMM		95% Confidence interval			
Comparison	Diversity ratio	Lower limit	Upper limit	p	
April					
2012 / 2013	0.685	0.412	1.141	0.192	

	2012 / 2014	0.750	0.495	1.137	0.237
	2013 / 2014	1.094	0.679	1.764	0.898
June					
	2012 / 2013	0.897	0.637	1.265	0.740
	2012 / 2014	0.901	0.647	1.254	0.741
	2013 / 2014	1.004	0.721	1.399	1.000
August					
	2012 / 2013	1.489	1.073	2.066	0.012
	2012 / 2014	0.909	0.676	1.223	0.730
	2013 / 2014	0.610	0.440	0.847	0.001
October					
	2012 / 2013	1.050	0.699	1.577	0.957
	2012 / 2014	0.930	0.682	1.270	0.850
	2013 / 2014	0.886	0.601	1.306	0.745

Table S4. Post hoc test results of the richness zero altered gamma generalized linear mixed model (GLMM). Reported ratios and confidence intervals from the Bernoulli and gamma GLMMs were back-transformed from the logit and log scales, respectively. 2012: pre-Sandy, 2013: 1 yr post-Sandy, 2014: 2 yr post-Sandy

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June / August	0.310	0.087	1.105	0.083
June / October	0.912	0.347	2.402	0.995
August / October	2.946	0.819	10.597	0.132
Gamma GLMM		95% Confidence interval		
Comparison	Richness ratio	Lower limit	Upper limit	p
April				
2012 / 2013	1.014	0.704	1.462	0.995
2012 / 2014	0.899	0.655	1.233	0.709
2013 / 2014	0.886	0.621	1.265	0.706
June				
2012 / 2013	1.020	0.779	1.335	0.984
2012 / 2014	0.753	0.573	0.988	0.039
2013 / 2014	0.738	0.565	0.964	0.021
August				

	2012 / 2013	1.686	1.301	2.185	< 0.001
	2012 / 2014	0.833	0.645	1.075	0.213
	2013 / 2014	0.494	0.383	0.638	< 0.001
October					
	2012 / 2013	1.387	1.052	1.827	0.015
	2012 / 2014	0.516	0.398	0.668	< 0.001
	2013 / 2014	0.372	0.284	0.487	< 0.001