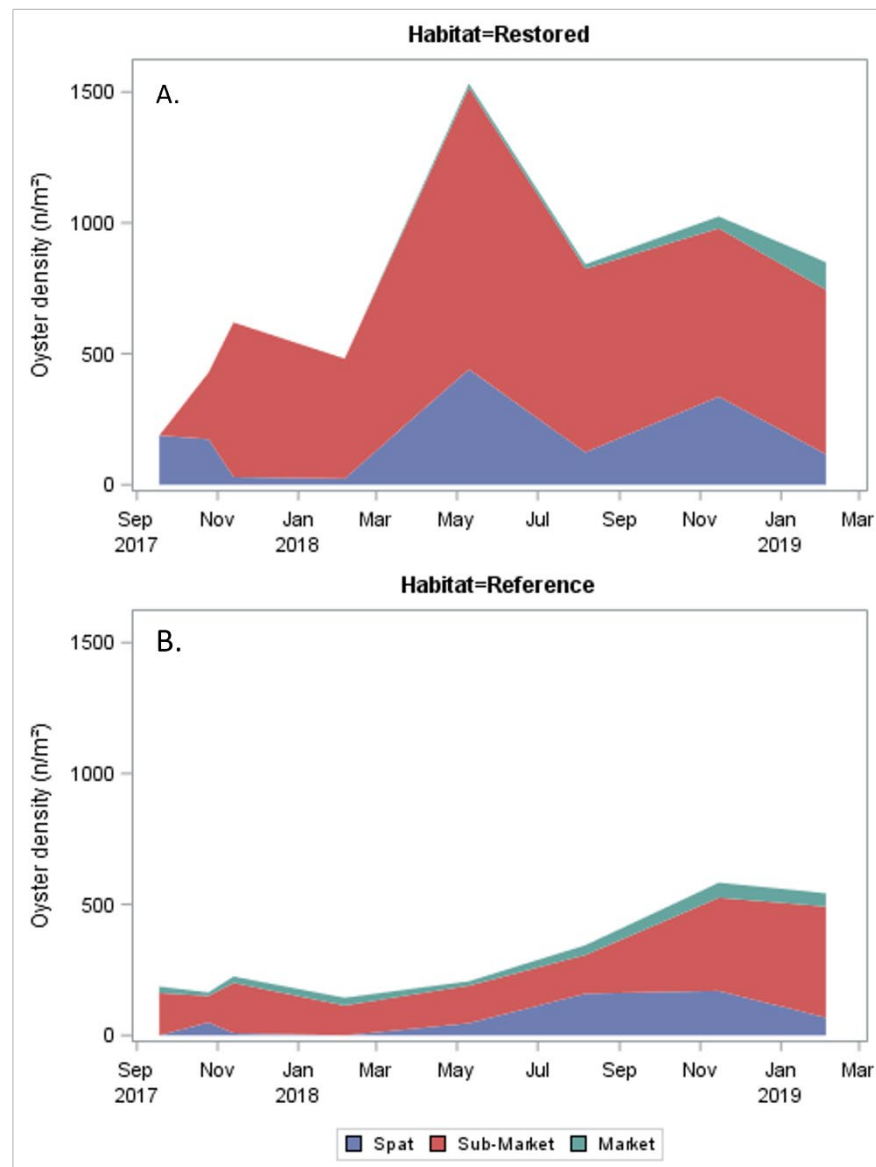


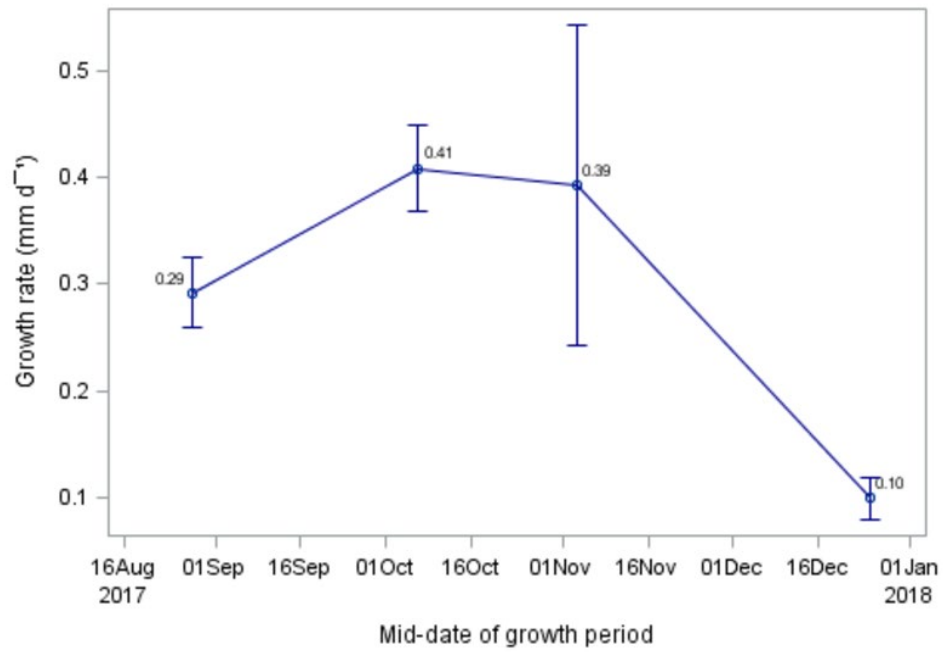
Supplementary Material

1 Supplementary Figures and Tables

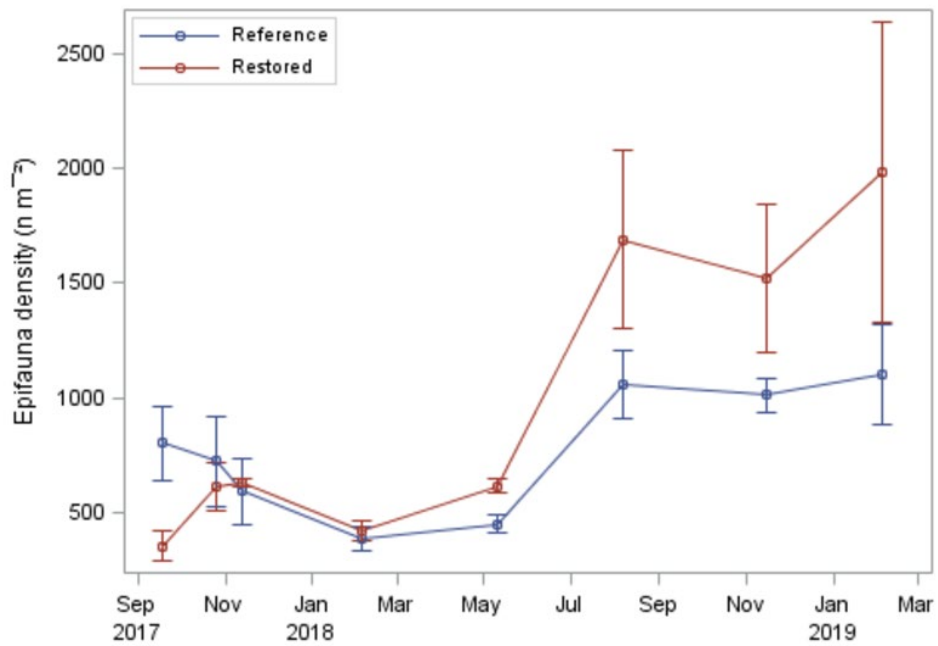
1.1 Supplementary Figures



Supplementary Figure 1. Oyster density ($n\ m^{-2}$) by size class for spat (shell height ≤ 25 mm), sub-market (shell height $\geq 26-75$ mm), market size (shell height ≥ 76 mm) on the restored reef (A) and the reference reef (B).



Supplementary Figure 2. Growth rates (mm d⁻¹) of oysters per day at the restored reef. Mid-dates are the average number of days between sampling dates.



Supplementary Figure 3. Mean density of resident epifauna from September 2017 to February 2019 at restored and reference reefs.

1.2 Supplementary Tables

Supplementary Table 1. Counts and densities (mean \pm SE) of epifauna collected at restored and reference reefs.

Taxa	Reference		Restored	
	Total Collected	Density (m ⁻²)	Total # Collected	Density (m ⁻²)
<u>Fish</u>				
<i>Gobiosoma bosc</i>	104	24.1 \pm 4.1	261	60.4 \pm 6.2
<i>Gobiesox strumosus</i>	6	1.4 \pm 0.6	35	8.1 \pm 2.2
<i>Opsanus beta</i>	16	3.7 \pm 1.2	6	1.4 \pm 0.6
<i>Chasmodes longimaxilla</i>	11	2.5 \pm 0.8	3	0.7 \pm 0.4
<i>Hypleurochilus bermudensis</i>	3	0.7 \pm 0.4	2	0.5 \pm 0.3
<i>Archosargus probatocephalus</i>	3	0.7 \pm 0.4	0	0
<i>Hypleurochilus ionthas</i>	1	0.2 \pm 0.2	0	0
<i>Hypsoblennius hentz</i>	0	0	1	0.2 \pm 0.2
<i>Hypsoblennius multifilis</i>	1	0.2 \pm 0.2	0	0
<i>Sygnathus scovelli</i>	0	0	1	0.2 \pm 0.2
<u>Crustacea</u>				
<i>Petrolisthes sp.</i>	1158	268.1 \pm 46.2	746	172.7 \pm 43.7
<i>Panopeus herbstii</i>	945	218.8 \pm 23.1	791	183.1 \pm 17.0
<i>Eurypanopeus depressus</i>	529	122.5 \pm 12.7	960	222.2 \pm 22.6
Panopeidae	55	12.7 \pm 5.7	152	35.2 \pm 12.0
<i>Palaemonetes vulgaris</i>	98	22.7 \pm 6.2	69	16.0 \pm 5.1
<i>Alpheus heterochaelis</i>	28	6.5 \pm 2.3	45	10.4 \pm 2.0
<i>Menippe adina</i>	39	9.0 \pm 2.4	5	1.2 \pm 0.5
<i>Dyspanopeus texanus</i>	15	3.5 \pm 1.6	13	3.0 \pm 1.1
<i>Stylochus spp.</i>	2	0.5 \pm 0.5	3	0.7 \pm 0.4
<i>Argulus sp.</i>	0	0	1	0.2 \pm 0.2
<u>Bivalvia</u>				
<i>Ischadium recurvum</i>	206	47.7 \pm 12.6	649	150.2 \pm 57.0
<u>Gastropoda</u>				
<i>Boonea impressa</i>	96	22.2 \pm 8.2	492	113.9 \pm 48.0
<i>Costoanachis semiplicata</i>	2	0.5 \pm 0.3	0	0
<i>Nassarius acutus</i>	0	0	1	0.2 \pm 0.2

Supplementary Table 2. Counts and densities (mean \pm SE) of soft-sediment macrobenthic infauna collected adjacent to (<5 m), and distant from (30 m), the restored reefs.

Taxa	Adjacent		Distant	
	Total Collected	Density (m ⁻²)	Total Collected	Density (m ⁻²)
<u>Polychaeta</u>				
<i>Mediomastus spp.</i>	771	7289.5 \pm 1062.7	560	5294.6 \pm 512.9
<i>Streblospio benedicti</i>	507	4793.5 \pm 1037.4	349	3299.7 \pm 752.0
<i>Parandalia fauveli</i>	49	463.3 \pm 86.5	62	586.2 \pm 116.9
<i>Capitella capitata</i>	54	510.6 \pm 206.0	42	397.1 \pm 95.8
<i>Laeonereis culveri</i>	16	151.3 \pm 72.9	10	94.5 \pm 45.8
<i>Scolelepis squamata</i>	13	122.9 \pm 64.8	11	104.0 \pm 44.0
<i>Haploscoloplos foliosus</i>	18	170.2 \pm 77.6	5	47.3 \pm 23.9
<i>Polydora cornuta</i>	6	56.7 \pm 31.6	6	56.7 \pm 28.5
Nereididae	6	56.7 \pm 34.4	3	28.4 \pm 15.8
<i>Nereis spp.</i>	1	9.5 \pm 9.5	8	75.6 \pm 33.1
<i>Hypereteone heteropoda</i>	0	47.3 \pm 23.9	3	28.4 \pm 15.8
Capitellidae	5	47.3 \pm 27.5	2	18.9 \pm 13.1
Goniadidae	4	37.8 \pm 17.9	3	28.4 \pm 15.8
<i>Americonuphis magna</i>	0	0	4	37.8 \pm 29.6
<i>Podarke obscura</i>	0	0	4	37.8 \pm 26.3
Syllidae	2	18.9 \pm 13.1	2	18.9 \pm 13.1
Hesionidae	1	9.5 \pm 9.5	3	28.4 \pm 20.8
Maldanidae	2	18.9 \pm 18.9	1	9.5 \pm 9.5
<i>Hypereteone lactea</i>	1	9.5 \pm 9.5	2	18.9 \pm 13.1
<i>Polydora spp.</i>	2	18.9 \pm 18.9	0	0
<i>Magelona pettiboneae</i>	1	9.5 \pm 9.5	1	9.5 \pm 9.5
<i>Onuphis eremita oculata</i>	1	9.5 \pm 9.5	1	9.5 \pm 9.5
<i>Marphysa aransensis</i>	1	9.5 \pm 9.5	0	0
<i>Pectinaria gouldii</i>	1	9.5 \pm 9.5	0	0
<i>Armandia agilis</i>	0	0	1	9.5 \pm 9.5
<i>Lysidice ninetta</i>	1	9.5 \pm 9.5	0	0
<i>Polydora websteri</i>	0	0	1	9.5 \pm 9.5
<u>Oligochaeta</u>				
Oligochaeta	10	94.5 \pm 58.2	10	94.5 \pm 31.4
<u>Nemertea</u>				
Nemertea	40	378.2 \pm 79.7	28	264.7 \pm 52.6
<u>Crustacea</u>				
<i>Leptochelia rapax</i>	634	5994.3 \pm 1134.4	644	6088.8 \pm 1220.8
Ampeliscidae	150	1418.2 \pm 440.3	173	1635.7 \pm 479.8
Aoridae	65	614.6 \pm 167.7	68	642.9 \pm 159.7
Corophiidae	10	94.5 \pm 36.8	111	1049.5 \pm 848.7
Cumacea	30	283.6 \pm 99.0	27	255.3 \pm 61.3
Mysidae	22	208.0 \pm 82.6	7	66.2 \pm 26.1

Taxa	Adjacent		Distant	
	Total Collected	Density (m ⁻²)	Total Collected	Density (m ⁻²)
Ostracoda	15	141.8 ± 60.4	7	66.2 ± 40.1
Amphipoda	0	0	12	113.5 ± 113.5
Isopoda	5	47.3 ± 23.9	5	47.3 ± 30.7
Caprellidae	0	0	2	18.9 ± 18.9
Panopeidae	1	9.5 ± 9.5	0	0
Megalop crab larvae	1	9.5 ± 9.5	0	0
<u>Gastropoda</u>				
<i>Fargoa gibbosa</i>	12	113.5 ± 76.4	12	113.5 ± 71.4
<i>Acteocina canaliculata</i>	4	37.8 ± 22.5	0	0
Vitrinellidae	4	37.8 ± 22.5	0	0
<i>Eulimastoma harbisonae</i>	1	9.5 ± 9.5	2	18.9 ± 18.9
<i>Evalea emeryi</i>	2	18.9 ± 18.9	0	0
<i>Acteon candens</i>	1	9.5 ± 9.5	0	0
Cerithiidae	0	0	1	9.5 ± 9.5
<u>Bivalvia</u>				
<i>Mactra fragilis</i>	9	85.1 ± 43.3	3	28.4 ± 20.8
<i>Mulinia lateralis</i>	4	37.8 ± 17.9	7	66.2 ± 26.1
<i>Tagelus plebeius</i>	1	9.5 ± 9.5	4	37.8 ± 17.9
<i>Ischadium recurvum</i>	1	9.5 ± 9.5	0	0
<i>Mercenaria campechiensis</i>	1	9.5 ± 9.5	0	0
Bivalvia	1	9.5 ± 9.5	0	0
<i>Ensis minor</i>	0	0	2	18.9 ± 13.1
<u>Cnidaria</u>				
Cnidaria	2	18.9 ± 18.9	1	9.5 ± 9.5
<u>Fish</u>				
Larval mugiliidae	1	9.5 ± 9.5	0	0
<u>Arthropoda</u>				
Arthropoda	1	9.5 ± 9.5	0	0