Oikos

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Appendix 1

Table A1. (a) Number of samples and mean (±SD) $\delta^{13}C$, $\delta^{15}N$, and $\delta^{34}S$ values for sources of primary production. (b) Number of samples and mean (±SD) $\delta^{13}C$, $\delta^{15}N$, and $\delta^{34}S$ values for *Orthopristis chrysoptera* and *Lagodon rhomboides* used in the construction of n-dimensional trophic niche hypervolumes. Each sample is 5 pooled individuals from each site.

(a)

Source	N	Mean $\delta^{13}C$ (±SD)	Mean $\delta^{15}N$ (±SD)	Mean $\delta^{34}S$ (±SD)
Algae	20	-20.3 ± 0.9	7.3 ± 1.9	18.5 ± 1
Epiphytes	4	-17.9 ± 1.2	1.4 ± 0.9	14.7 ± 2
Seagrass	20	-11.9 ± 1.6	0.6 ± 1.4	12.7 ± 3.1
Microphytobenthos (MPB) *(M. quinquiesperforata as proxy)*	10	-17.5 ± 1.4	3.4 ± 0.6	-2.9 ± 7.4

(b)

Species	Seagrass productivity	N	Mean $\delta^{13}C$ (±SD)	Mean $\delta^{15}N$ (±SD)	Mean $\delta^{34}S$ (±SD)
Orthopristis chrysoptera	Low	30	-17.8 ± 1.9	8.2 ± 0.7	10.2 ± 4
	Mid	43	-17.6 ± 2.6	8.2 ± 1.2	10.4 ± 2.3
	High	15	-17 ± 1.6	8.2 ± 0.8	9.8 ± 1.4
Lagodon rhomboides	Low	77	-17.4 ± 1.5	6.7 ± 0.3	9.9 ± 2.1
	Mid	82	-18 ± 1.9	6.7 ± 0.8	10.3 ± 1.8
	High	27	-16.4 ± 1.3	6.7 ± 0.7	11.3 ± 1.4

Table A2. Diagnostics of mixing models used in this study. (a) Gelman-Rubin diagnostic (value should be <1.05). (b) Geweke diagnostic (value is # outside of +/- 1.96, ideally around 5% of total)

(a)

			Point Est.	*Upper C.I.*
O. chrysoptera *Out of 713 variables:*	4 > 1.01			
		Sample #59, Chain 3	1.01847	1.021904
		Sample #2, Chain 3	1.01626	1.018832
		Sample #84, Chain 3	1.012143	1.015222
		Sample #23, Chain 3	1.011245	1.015595
	0 > 1.05			
	0 > 1.1			
L. rhomboides *Out of 1497 variables:*	0 > 1.01			
	0 > 1.05			
	0 > 1.1			

(b)

	Chain #	*Geweke*	*% of Total*
O. chrysoptera Out of 713 variables:	1	30	4.21
	2	42	5.89
	3	93	13.04
L. rhomboides Out of 1497 variables:	1	66	4.41
	2	88	5.88
	3	77	5.14

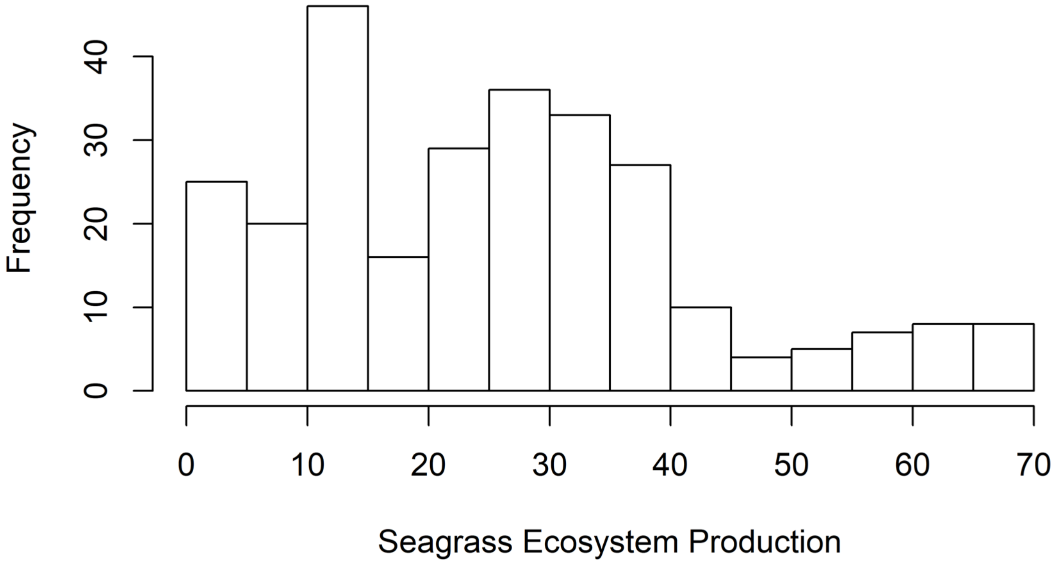
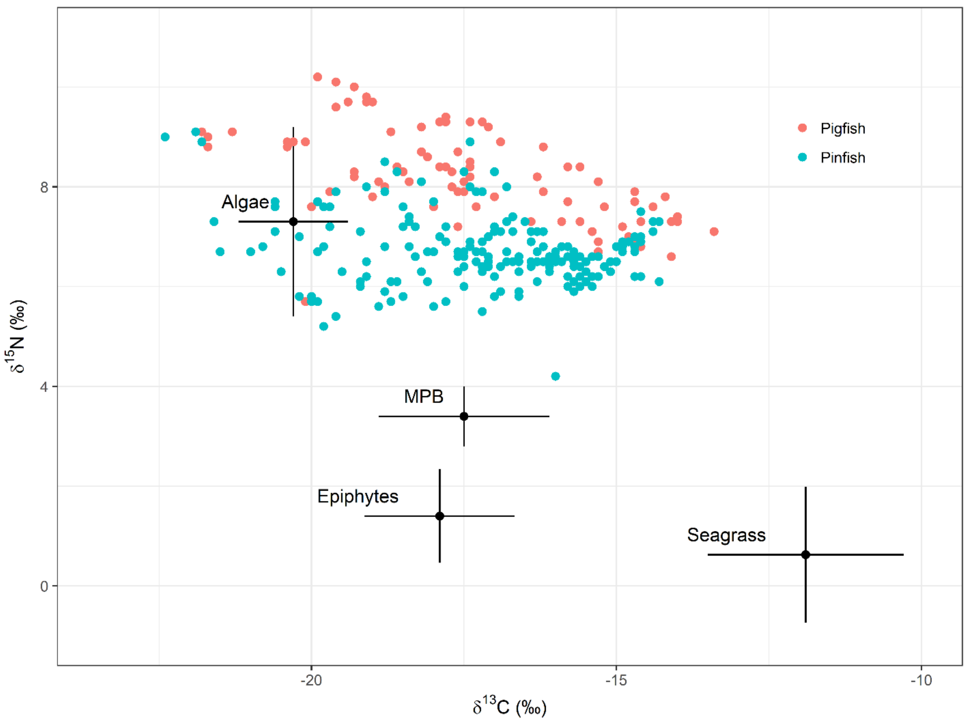


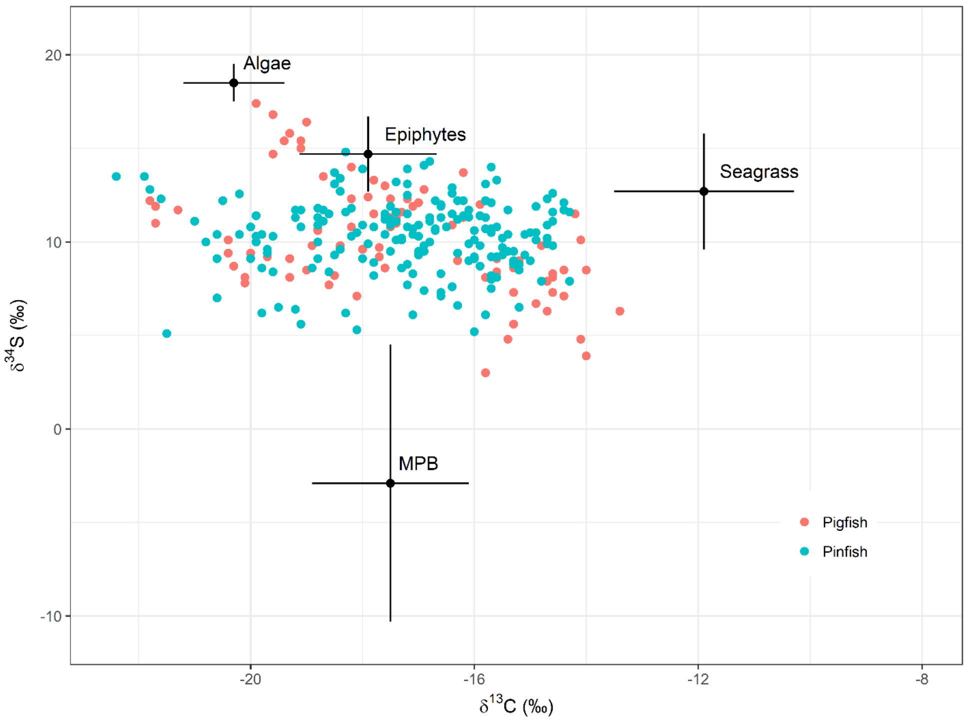
Figure A1. Histogram of total calculated seagrass ecosystem production.

Figure A2A–C

(A)



(B)



(C)

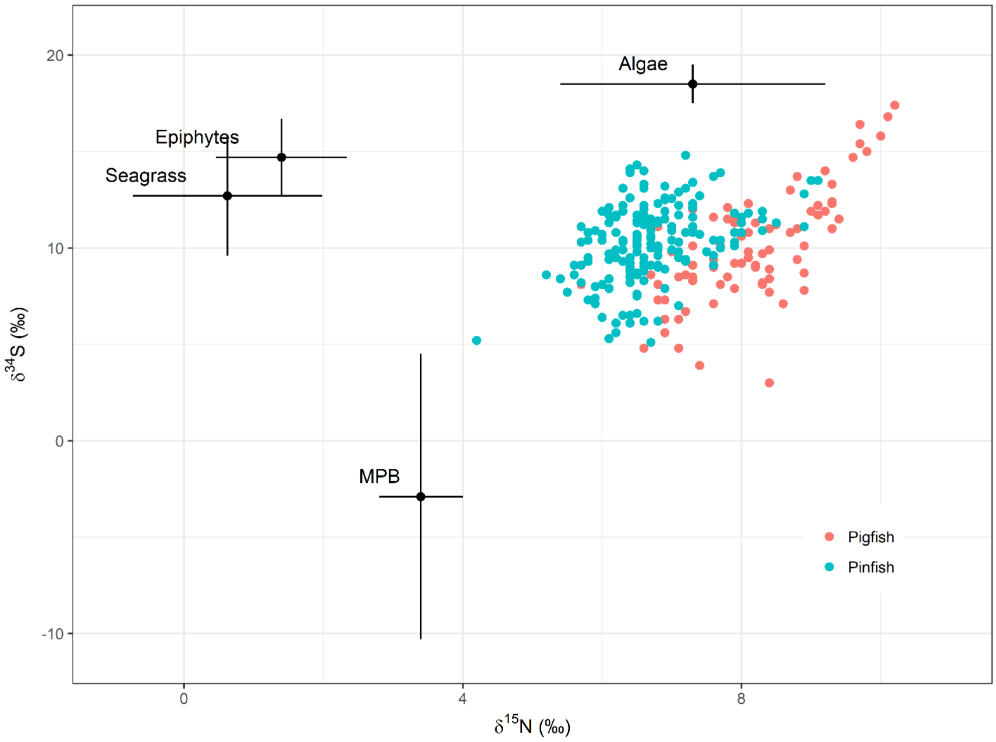


Figure A2. Biplots of δ13C and δ15N values (A), δ13C and δ 34S values (B), and δ15N and δ 34S values (C) for *O. chrysoptera* and *L. rhomboides*, as well as sources of primary production. Each blue (*L. rhomboides*) and red (*O. chrysoptera*) point is an individual, trophically-corrected consumer sample, while source points represent mean values ± SD.