

Multiple niche-based analyses reveal the dual life of an intertidal reef predator

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Table S1. Mean and range (minimal and maximum) values of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ signatures of prey sources. Sample size (number of individuals) for each prey group is showed in parentheses. Amphipod individuals were pooled to acquire enough material.

Sources	Mean		Range	
	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$
Corophiidae amphipods (6)	-14.4	10.5	-15.0 – -13.8	9.3 – 11.3
<i>Palaemon northropi</i> (3)	-11.3	13.1	-12.1 – -9.9	12.5 – 13.4
<i>Pachygrapsus transversus</i> (3)	-12.0	9.7	-12.8 – -11.3	8.5 – 11.4
<i>Cataleptodius floridanus</i> (4)	-12.5	11.6	-14.0 – -11.1	11.0 – 12.1
<i>Gobiosoma alfei</i> (10)	-12.5	11.5	-13.1 – -11.7	10.8 – 12.4

Table S2. Correlations coefficients between the functional traits of two ontogenetic phases of *L. nuchipinnis* and the two axes from principal component analysis output. Values in bold denote significant *p*-values in the Pearson correlations for values > 0.70.

Functional traits	PC 1	PC 2
Biomass	-0.86	0.25
Body transversal shape	-0.40	0.72
Body transversal surface	0.64	0.46
Caudal peduncle throttling	-0.27	0.15
Eye position	-0.06	0.18
Eye size	0.92	0.18
Oral gape shape	0.86	-0.12
Oral gape surface	0.65	-0.09
Pectoral fin position	0.49	0.71
Pectoral fin shape	0.73	-0.12

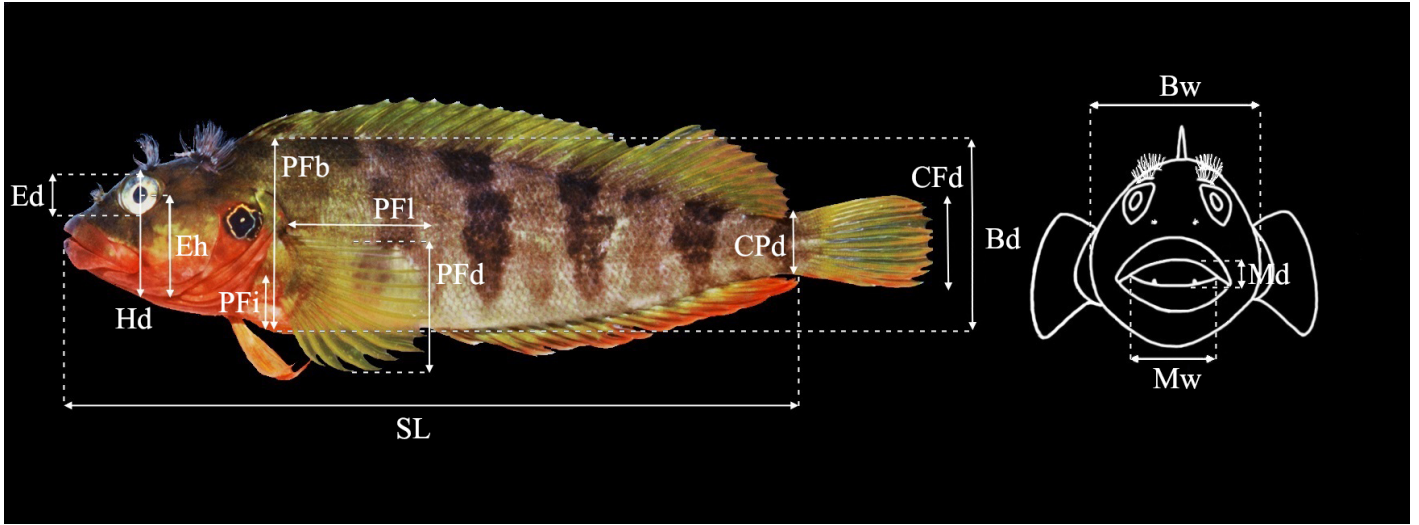


Fig. S1. Morphological measurements obtained from *Labrisomus nuchipinnis* (Quoy & Gaimard 1824) individuals for calculation of functional traits. Lateral view: SL - standard length; Bd - body depth; Hd - head depth along the vertical axis of eye; Ed - eye diameter; Eh - distance between the center of the eye to the base of the head; PFi - distance between the insertion of the pectoral fin to the base of the body; PFb - body depth at the level of pectoral fin insertion; PFl - pectoral fin length; PFd - pectoral fin depth; CPd - caudal peduncle minimal depth; CFd - caudal fin depth. Frontal view: Bw - body width; Md - mouth depth; Mw - mouth width.

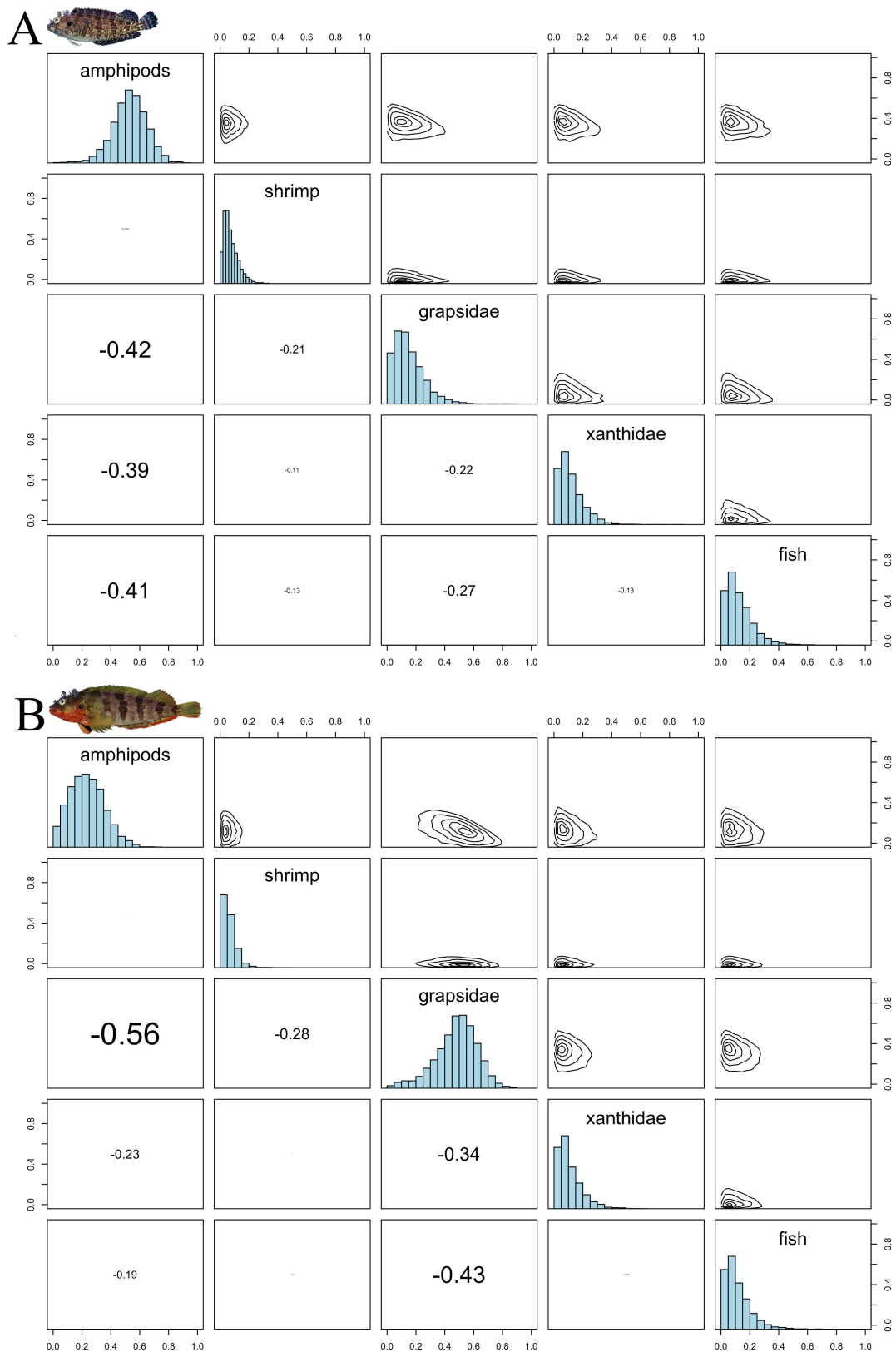


Figure S2. Matrix plot of the posterior dietary proportions modeled from juvenile (A) and adult (B) of *Labrisomus nuchipinnis* and potential prey isotope signatures. On the diagonal the plot shows the source histograms, on the upper diagonal contour plots of the relationship between the sources, and on the lower diagonal the correlation between the sources. Although moderate, negative correlations between amphipods and grapsids crabs denote that the model cannot discern ideally between these food sources (e.g., -0.56 for adult).