

Niche metrics suggest euryhaline and coastal elasmobranchs provide trophic connections among marine and freshwater biomes in northern Australia

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Table S1. Mean values for all fatty acids (FA) (% mean of the relative abundance of FA > 0.5%), and their standard deviation in muscle tissue from six elasmobranchs collected from the South Alligator River, Kakadu National Park, Australia.

FA	C.					
	<i>amboinensis</i>	<i>C. leucas</i>	<i>G. garricki</i>	<i>G. glyphis</i>	<i>U. dalyensis</i>	<i>R. taylori</i>
16:0	8.6	10.6±4.8	8.0±5.6	8.0±5.5	13.7±3.5	13.5±5.1
17:0	0.6	0.4±0.3	0.6±0.2	0.68±0.4	1.1±0.0	0.9±0.2
18:0	32.5	19.8±6.9	19.5±5.2	17.1±4.5	13.8±5.8	28.3±7.4
22:0	0.3	0.6±0.4	1.7±2.9	0.8±0.6	0.8±0.4	0.5±0.6
24:0	0.5	0.4±0.3	0.5±0.4	1.0±0.9	0.7±0.7	0.4±0.3
15:1	0.2	1.3±1.3	1.5±1.5	0.8±0.8	1.1±0.3	0.7±0.4
16:1ω7	0.5	1.9±1.4	0.7±0.6	0.7±0.5	1.6±0.2	0.7±0.5
17:1	1.3	1.3±0.9	1.0±0.3	2.0±1.7	3.8±0.7	0.5±0.2
18:1ω9	14.1	16.2±6.3	11.2±4.9	8.2±3.6	13.8±0.5	9.5±2.7
18:1ω7	6.2	4.9±2.5	5.2±1.8	4.3±2.0	4.0±1.3	7.2±2.0
17:1ω6	0.5	0.5±0.2	0.5±0.3	0.6±0.5	0.8±0.4	0.6±0.3
20:1ω9	0.8	1.0±0.4	1.0±0.5	0.8±0.7	0.3±0.3	0.7±0.3
22:1ω11	0.1	1.7±5.0	0.2±0.2	0.1±0.0	0.1±0.1	0.5±2.1
24:1ω9	0.9	0.8±0.4	0.9±0.7	1.2±0.9	0.6±0.9	0.4±0.1
18:2b ^v	0.6	0.6±0.4	0.2±0.2	0.5±0.2	0.4±0.3	0.1±0.1
18:2c ^v	0.1	0.9±0.8	0.1±0.3	0.1±0.1	0.1±0.1	0.13±0.0
18:2ω6	0.6	0.8±0.9	1.8±1.1	1.8±1.1	3.8±3.7	0.9±1.0
20:20	0.2	2.8±2.2	0.5±0.8	0.3±0.2	0.2±0.1	0.1±0.1
20:2ω6	0.4	0.5±0.8	0.9±0.4	0.8±0.2	0.3±0.0	0.6±0.2
20:3ω9 [#]	0.8	7.6±6.2	1.4±3.4	0.3±0.3	0.3±0.1	0.1±0.1
20:3ω6	0.2	0.4±0.3	0.8±0.4	0.6±0.3	0.3±0.1	0.4±0.2
22:3	1.7	1.01±0.7	1.7±1.8	2.6±2.4	2.9±3.0	1.1±1.2
20:4ω6	9.6	5.3±5.5	11.3±4.7	14.1±4.4	14.4±2.4	8.1±2.1
22:4ω6	3.5	2.1±2.1	6.4±4.2	8.0±6.5	0.2±0.2	3.0±1.4
20:5ω3	0.9	0.5±0.2	0.9±0.8	1.1±0.6	5.2±6.8	1.6±0.8
22:5ω3	0.9	1.9±1.2	1.5±2.0	1.6±1.8	1.1±1.6	1.1±1.7
22:5ω6	1.8	1.2±0.7	2.3±1.1	2.3±1.1	1.2±0.8	2.2±0.8
22:6ω3	4.8	4.8±2.3	8.3±4.6	9.8±8.8	4.3±0.2	11.4±5.6
Σ<5% FAs	0.1	5.5±0.9	5.6±0.9	6.1±1.0	5.1±0.8	3.03±0.5
i17:0	0.6	0.8±0.5	1.0±2.8	0.6±0.4	0.7±0.6	0.3±0.1
16:0FALD	0.6	0.8±0.7	1.1±1.0	1.1±1.3	0.9±0.6	0.76±0.6
18:0FALD	1.6	0.9±0.6	1.3±1.1	1.7±1.3	2.2±1.4	0.5±0.2

FAs <0.5% include 14:0 15:0, a15:0, 15:0, 14:1, 16:1ω13, 16:1ω9, 16:1ω7, 16:1ω5, 17:1ω8+a17:0, 18:1ω7, 18:1ω5, 18:1, 19:1, 20:1ω7, 20:1ω11, 20:1ω5, 22:1ω9, 22:1ω7, 24:1ω11, 24:1ω7, 16:4+16:3, 18:2a^v, 18:4ω3, 18:3ω6, 18:3ω3, 20:4ω3/20:2, 21:5ω3, 21:3, 22:2a^v, 22:2b^v, i16:0, 18:1FALD

20:3ω9 identified based on comparison with other *C. leucas* fatty acid literature; a standard was not available at the time of analyses. ^v = unable to identify bonds as standard was not available at the time of analyses. FA - Fatty acids, SAT- saturated fatty acids, MUFA - monounsaturated fatty acids, PUFA - polyunsaturated fatty acids. FALD - fatty aldehyde analyzed as dimethyl acetal.

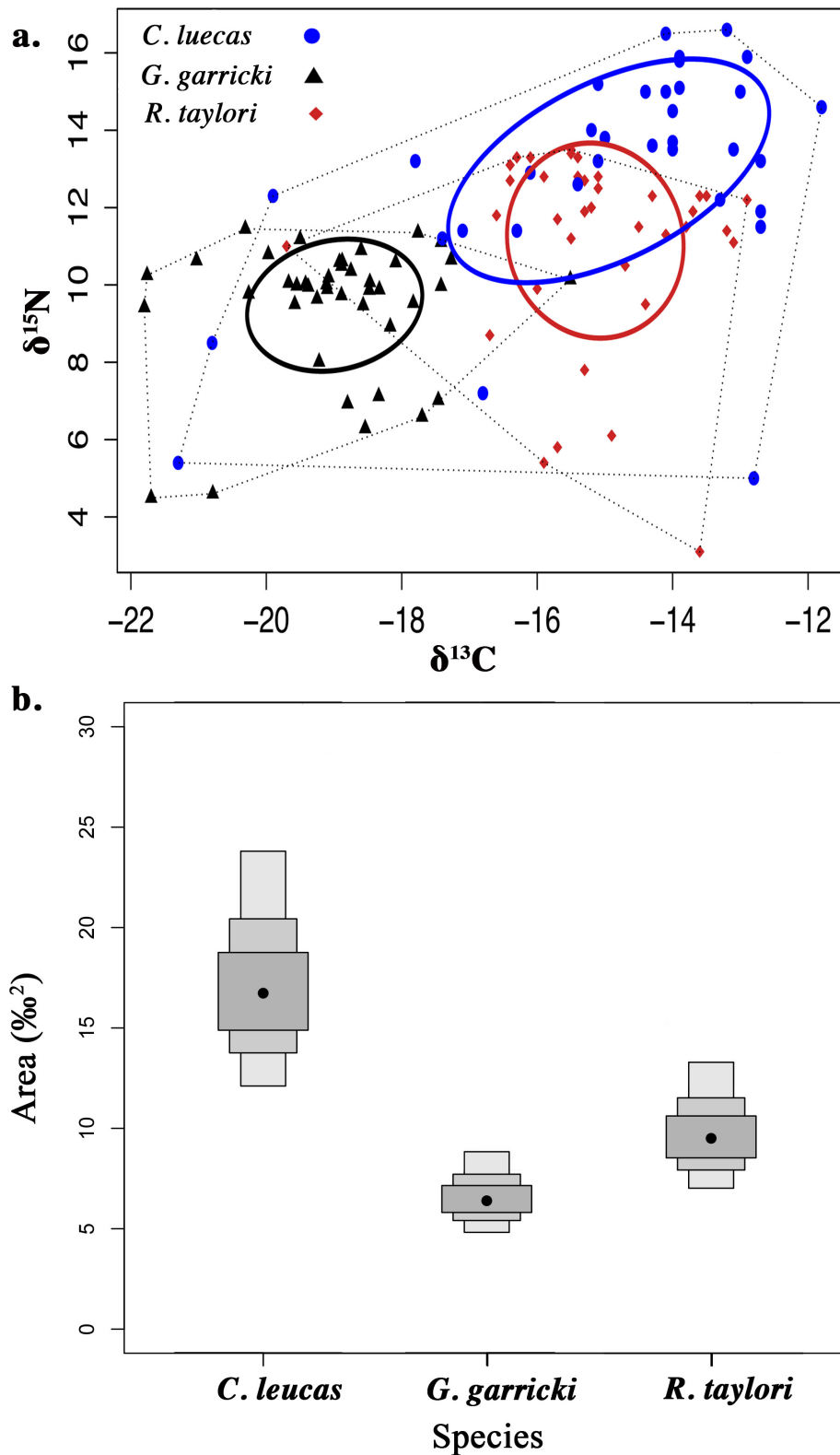


Fig. S1. (a) Bivariate plot of isotopic space depicting niche areas within standard ellipse ($SEAc$) of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ of *Carcharhinus leucas* (blue) *Glyphis garricki* (black), and *Rhizoprionodon taylori* (red) from Kakadu National Park, Australia (b) Bayesian confidence intervals of isotopic niche area.

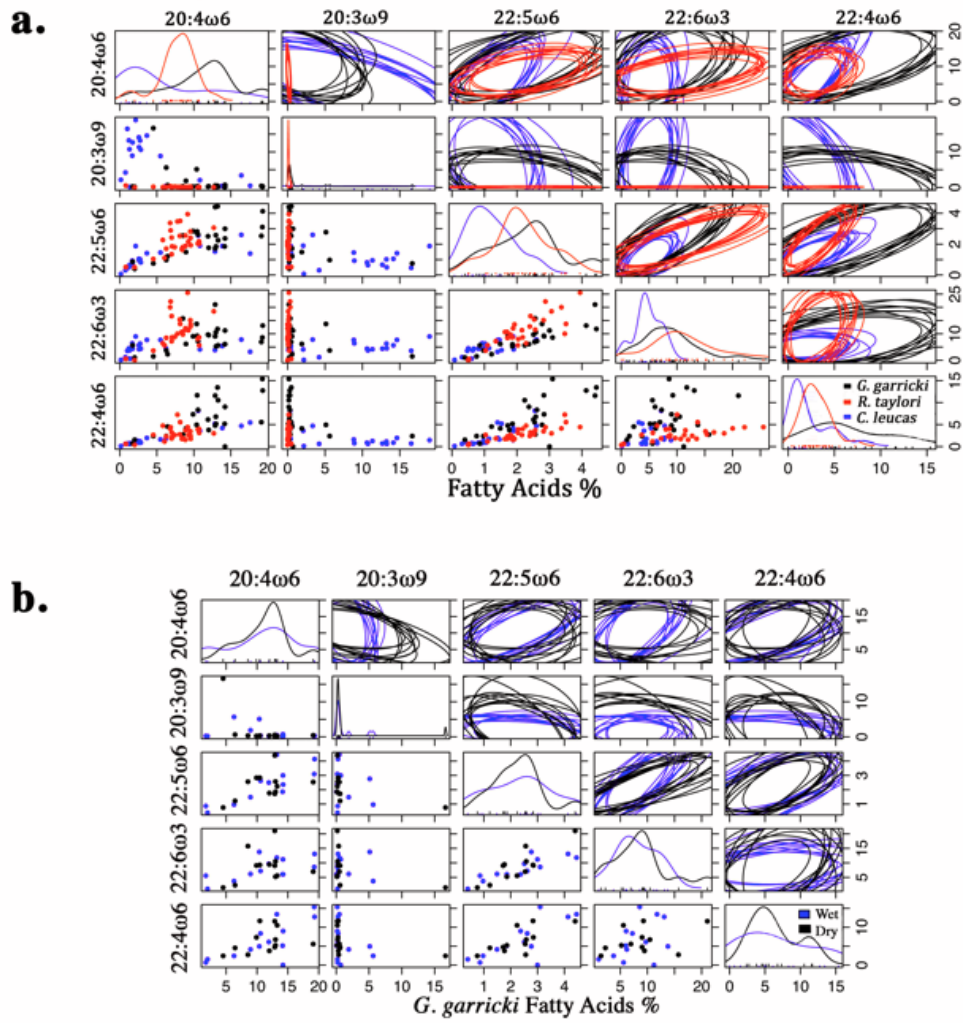


Fig. S2. (a) Ten random elliptical projections of trophic niche region for each elasmobranch and pair of major essential fatty acids (FA) and (b) *G. garricki* wet vs dry season major (elliptical plots). Also displayed are one-dimensional density plots (lines) and two-dimensional scatterplots to demonstrate normality.