

## Telemetry reveals spatial separation of co-occurring reef sharks

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### Supplement.

Post-hoc multiple comparisons (Tukey's HSD,  $\alpha = 0.05$ ) to determine differences between species where significant differences were detected in the analysis of variance (ANOVA – Table 3 in main manuscript).

#### a) Receiver number

Species	Estimate (SE)	t-value	P-value
<i>Carcharhinus amblyrhynchos</i> - <i>C. melanopterus</i>	0.08 (0.16)	0.54	0.982
<i>Galeocerdo cuvier</i> - <i>C. melanopterus</i>	1.76 (0.22)	7.87	<0.001*
<i>Hemigaleus australiensis</i> - <i>C. melanopterus</i>	-0.37 (0.28)	-1.29	0.681
<i>Triaenodon obesus</i> - <i>C. melanopterus</i>	-1.57 (0.31)	-4.99	<0.001*
<i>G. cuvier</i> – <i>C. amblyrhynchos</i>	1.68 (0.23)	7.37	<0.001*
<i>H. australiensis</i> – <i>C. amblyrhynchos</i>	-0.45 (0.29)	-1.57	0.502
<i>T. obesus</i> – <i>C. amblyrhynchos</i>	-1.65 (0.32)	-5.21	<0.001*
<i>H. australiensis</i> – <i>G. cuvier</i>	-2.13 (0.33)	-6.48	<0.001*
<i>T. obesus</i> – <i>G. cuvier</i>	-3.33 (0.35)	-9.40	<0.001*
<i>T. obesus</i> – <i>H. australiensis</i>	-1.20 (0.40)	-3.03	0.025*

Bold \* represents the significance ( $P < 0.05$ ).

#### b) Path number

Species	Estimate (SE)	t-value	P-value
<i>Carcharhinus amblyrhynchos</i> - <i>C. melanopterus</i>	-1.5 (0.61)	-2.438	0.106
<i>Galeocerdo cuvier</i> - <i>C. melanopterus</i>	6.97 (0.95)	7.348	<0.001*
<i>Hemigaleus australiensis</i> - <i>C. melanopterus</i>	-4.08 (1.27)	-3.204	0.015*
<i>Triaenodon obesus</i> - <i>C. melanopterus</i>	-5.36 (1.27)	-4.216	0.001*
<i>G. cuvier</i> – <i>C. amblyrhynchos</i>	8.46 (0.96)	8.838	<0.001*
<i>H. australiensis</i> – <i>C. amblyrhynchos</i>	-2.58 (1.28)	-2.014	0.251
<i>T. obesus</i> – <i>C. amblyrhynchos</i>	-3.86 (1.28)	-3.02	0.025*
<i>H. australiensis</i> – <i>G. cuvier</i>	-11.04 (1.47)	-7.518	<0.001*
<i>T. obesus</i> – <i>G. cuvier</i>	-12.33 (1.47)	-8.394	<0.001*
<i>T. obesus</i> – <i>H. australiensis</i>	-1.29 (1.7)	-0.759	0.936

Bold \* represents the significance ( $P < 0.05$ ).

#### c) Relative movement

Species	Estimate (SE)	t-value	P-value
<i>Carcharhinus amblyrhynchos</i> - <i>C. melanopterus</i>	13.34 (3.41)	3.918	0.002*
<i>Galeocerdo cuvier</i> - <i>C. melanopterus</i>	-1.28 (4.97)	-0.258	0.999
<i>Hemigaleus australiensis</i> - <i>C. melanopterus</i>	-17.7 (6.33)	-2.797	0.045*

<i>Triacodon obesus</i> - <i>C. melanopterus</i>	-12.92 (6.98)	-1.851	0.333
<i>G. cuvier</i> – <i>C. amblyrhynchos</i>	-14.62 (5.04)	-2.9	0.035*
<i>H. australiensis</i> – <i>C. amblyrhynchos</i>	-31.05 (6.39)	-4.859	<0.001*
<i>T. obesus</i> – <i>C. amblyrhynchos</i>	-26.26 (7.03)	-3.734	0.003*
<i>H. australiensis</i> – <i>G. cuvier</i>	-16.42 (7.34)	-2.237	0.165
<i>T. obesus</i> – <i>G. cuvier</i>	-11.64 (7.91)	-1.472	0.563
<i>T. obesus</i> – <i>H. australiensis</i>	4.78 (8.83)	0.542	0.981

Bold \* represents the significance ( $P < 0.05$ ).

#### d) Average path length

Species	Estimate (SE)	t-value	P-value
<i>Carcharhinus amblyrhynchos</i> - <i>C. melanopterus</i>	0.99 (0.15)	6.6	<0.001*
<i>Galeocerdo cuvier</i> - <i>C. melanopterus</i>	-0.06 (0.21)	-0.304	0.998
<i>Hemigaleus australiensis</i> - <i>C. melanopterus</i>	0.77 (0.28)	2.74	0.052
<i>Triacodon obesus</i> - <i>C. melanopterus</i>	-0.41 (0.31)	-1.315	0.664
<i>G. cuvier</i> – <i>C. amblyrhynchos</i>	-1.05 (0.21)	-4.971	<0.001*
<i>H. australiensis</i> – <i>C. amblyrhynchos</i>	-0.22 (0.28)	-0.788	0.928
<i>T. obesus</i> – <i>C. amblyrhynchos</i>	-1.39 (0.31)	-4.517	<0.001*
<i>H. australiensis</i> – <i>G. cuvier</i>	0.83 (0.32)	2.619	0.070
<i>T. obesus</i> – <i>G. cuvier</i>	-0.34 (0.34)	-0.996	0.845
<i>T. obesus</i> – <i>H. australiensis</i>	-1.17 (0.39)	-3.017	0.025*

Bold \* represents the significance ( $P < 0.05$ ).

#### e) Clustering coefficient

Species	Estimate (SE)	t-value	P-value
<i>Carcharhinus amblyrhynchos</i> - <i>C. melanopterus</i>	-0.07 (0.02)	-2.774	0.048*
<i>Galeocerdo cuvier</i> - <i>C. melanopterus</i>	-0.01 (0.03)	-0.231	0.999
<i>Hemigaleus australiensis</i> - <i>C. melanopterus</i>	-0.19 (0.04)	-4.465	<0.001*
<i>Triacodon obesus</i> - <i>C. melanopterus</i>	-0.08 (0.06)	-1.196	0.734
<i>G. cuvier</i> – <i>C. amblyrhynchos</i>	0.06 (0.03)	1.721	0.402
<i>H. australiensis</i> – <i>C. amblyrhynchos</i>	-0.12 (0.04)	-2.867	0.038*
<i>T. obesus</i> – <i>C. amblyrhynchos</i>	-0.01 (0.07)	-0.16	1.000
<i>H. australiensis</i> – <i>G. cuvier</i>	-0.18 (0.05)	-3.718	0.003*
<i>T. obesus</i> – <i>G. cuvier</i>	-0.07 (0.07)	-1.006	0.838
<i>T. obesus</i> – <i>H. australiensis</i>	0.11 (0.07)	1.539	0.515

Bold \* represents the significance ( $P < 0.05$ ).

#### f) Degree

Species	Estimate (SE)	t-value	P-value
<i>Carcharhinus amblyrhynchos</i> - <i>C. melanopterus</i>	-0.42 (0.09)	-4.516	<0.001*
<i>Galeocerdo cuvier</i> - <i>C. melanopterus</i>	0.86 (0.15)	5.909	<0.001*
<i>Hemigaleus australiensis</i> - <i>C. melanopterus</i>	-0.6 (0.18)	-3.394	0.009*
<i>Triacodon obesus</i> - <i>C. melanopterus</i>	-0.88 (0.2)	-4.513	<0.001*
<i>G. cuvier</i> – <i>C. amblyrhynchos</i>	1.28 (0.15)	8.754	<0.001*
<i>H. australiensis</i> – <i>C. amblyrhynchos</i>	-0.18 (0.18)	-1.003	0.841
<i>T. obesus</i> – <i>C. amblyrhynchos</i>	-0.46 (0.2)	-2.34	0.132
<i>H. australiensis</i> – <i>G. cuvier</i>	-1.46 (0.21)	-6.961	<0.001*
<i>T. obesus</i> – <i>G. cuvier</i>	-1.74 (0.23)	-7.723	<0.001*
<i>T. obesus</i> – <i>H. australiensis</i>	-0.28 (0.25)	-1.135	0.772

Bold \* represents the significance ( $P < 0.05$ ).

**g) Diameter**

<b>Species</b>	<b>Estimate (SE)</b>	<b>t-value</b>	<b>P-value</b>
<i>Carcharhinus amblyrhynchus</i> - <i>C. melanopterus</i>	26.81 (9.54)	2.81	0.043*
<i>Galeocerdo cuvier</i> - <i>C. melanopterus</i>	4.01 (13.31)	0.301	0.998
<i>Hemigaleus australiensis</i> - <i>C. melanopterus</i>	37.14 (22.13)	1.679	0.426
<i>Triaenodon obesus</i> - <i>C. melanopterus</i>	-57.86 (22.13)	-2.615	0.069
<i>G. cuvier</i> – <i>C. amblyrhynchus</i>	-22.8 (13.48)	-1.691	0.419
<i>H. australiensis</i> – <i>C. amblyrhynchus</i>	10.33 (22.23)	0.465	0.989
<i>T. obesus</i> – <i>C. amblyrhynchus</i>	-84.67 (22.23)	-3.809	0.002*
<i>H. australiensis</i> – <i>G. cuvier</i>	33.13 (24.09)	1.375	0.620
<i>T. obesus</i> – <i>G. cuvier</i>	-61.87 (24.09)	-2.568	0.078
<i>T. obesus</i> – <i>H. australiensis</i>	26.81 (9.54)	-3.18	0.016*

Bold \* represents the significance ( $P < 0.05$ ).