

Supplementary material

Diversity in immature-shark communities along a tropical coastline

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Table S1. Catch composition of elasmobranchs caught by fishery-independent sampling in five bays along the tropical coast of Queensland

Data, grouped by order and sorted alphabetically, are from 142 days of sampling across seven sampling rounds. LL, longline; GN, gillnet

| Family | Species | Rockingham | | Bowling Green | | Upstart | | Edgecumbe | | Repulse | | Total |
|---------------------------|---|------------|-----|---------------|-----|---------|-----|-----------|----|---------|-----|-------|
| | | LL | GN | LL | GN | LL | GN | LL | GN | LL | GN | |
| Carcharhinidae | <i>Carcharhinus amboinensis</i> | 15 | 8 | 18 | 7 | 1 | 15 | 2 | | 20 | 13 | 99 |
| | <i>Carcharhinus brevipinna</i> | | | | | | | 5 | 1 | | | 6 |
| | <i>Carcharhinus cautus</i> | | | 2 | | 10 | 2 | 4 | | | | 18 |
| | <i>Carcharhinus coatesi</i> | 6 | 6 | 18 | 4 | 12 | 5 | 27 | 5 | 2 | 2 | 87 |
| | <i>Carcharhinus fitzroyensis</i> | | 4 | 13 | 6 | 2 | | | | 1 | 1 | 27 |
| | <i>Carcharhinus leucas</i> | 4 | | 1 | | | | 1 | | 4 | 1 | 11 |
| | <i>Carcharhinus macloti</i> | | | | | 1 | | | | | 2 | 3 |
| | <i>Carcharhinus melanopterus</i> | | | | | | | | | | 1 | 1 |
| | <i>Carcharhinus sorrah</i> | 21 | 2 | 11 | | 30 | 1 | 57 | 2 | 9 | | 133 |
| | <i>Carcharhinus tilstoni</i> – <i>C. limbatus</i> | 27 | 44 | 14 | 17 | 13 | 28 | 21 | 14 | 3 | 42 | 223 |
| | <i>Galeocerdo cuvier</i> | 4 | | 6 | | 2 | | 5 | | | | 17 |
| | <i>Rhizoprionodon acutus</i> | 10 | 9 | 8 | 5 | 21 | 8 | 18 | 4 | 6 | 1 | 90 |
| | <i>Rhizoprionodon taylori</i> | 38 | 44 | 172 | 141 | 50 | 76 | 28 | 18 | 133 | 246 | 946 |
| Unidentified whaler shark | | 1 | 1 | 1 | | | 2 | 1 | 2 | 1 | 9 | |
| Hemigaleidae | <i>Hemigaleus australiensis</i> | | 1 | 1 | | | 2 | | | | | 6 |
| | <i>Hemipristis elongata</i> | | | | | 1 | | | 1 | | | 2 |
| Sphyrnidae | <i>Eusphyrna blochii</i> | | | | | | | | | | 1 | 1 |
| | <i>Sphyrna lewini</i> | 11 | 54 | 2 | 5 | 4 | 2 | | | 4 | 11 | 93 |
| | <i>Sphyrna mokarran</i> | | 1 | 3 | 1 | 2 | 2 | 3 | 1 | 2 | 5 | 20 |
| Ginglymostomatidae | <i>Nebrius ferrugineus</i> | | | | | | | 1 | | | | 1 |
| Hemiscylliidae | <i>Chiloscyllium punctatum</i> | | | 1 | 1 | | | 1 | | 1 | | 4 |
| Stegostomatidae | <i>Stegostoma fasciatum</i> | | 2 | 3 | 2 | 1 | | 1 | | | | 9 |
| Rhinobatidae | <i>Glaucostegus typus</i> | 15 | 2 | 12 | | 23 | 2 | 29 | 2 | 18 | 1 | 104 |
| Rhynchobatidae | <i>Rhynchobatus australiae</i> | 8 | 1 | 12 | 1 | 13 | 2 | 15 | 4 | 35 | 2 | 93 |
| Rhinopteridae | <i>Rhinoptera neglecta</i> | | | | 2 | | 2 | | 1 | | 2 | 7 |
| Myliobatidae | <i>Aetobatus narinari</i> | | 1 | | 4 | | | | 2 | | | 7 |
| | <i>Aetomylaeus nichofii</i> | | 3 | | 29 | | 11 | | 12 | | | 55 |
| | <i>Aetomylaeus vespertilio</i> | | | | | | | | | | 1 | 1 |
| Dasyatidae | <i>Himantura uarnak</i> | | | | | 1 | | 2 | | 1 | | 4 |
| | Unidentified stingray | 1 | 3 | 3 | 2 | | 3 | 4 | 1 | 5 | | 22 |
| Pristidae | <i>Anoxypristis cuspidata</i> | | 3 | | 8 | | 5 | | | | 45 | 61 |
| Total | | 160 | 189 | 301 | 236 | 187 | 168 | 225 | 70 | 246 | 378 | 2160 |

Table S2. Comparison of length at capture details of sharks captured using two sampling methods

Where only a single length measurement is available it is given as the maximum length with other fields left blank. Kolmogorov–Smirnov (KS) tests compare length-frequency distributions of sharks between sampling methods. Bold text indicates significance ($P < 0.05$). Dashes indicate insufficient sample size for comparison of length-frequency distributions

| Family | Name | Stretch total length (mm) | | | | | | KS-test <i>P</i> |
|--------------------|---|---------------------------|------------------|------|------|-----------------|-------|---------------------|
| | | Min. | Longline Max. | Mean | Min. | Gillnet Max. | Mean | |
| Carcharhinidae | <i>Carcharhinus amboinensis</i> | 660 | 2150 | 1004 | 600 | 1500 | 839 | 0.08 |
| | <i>Carcharhinus brevipinna</i> | 726 | 1300 | 967 | | 795 | | – |
| | <i>Carcharhinus cautus</i> | 710 | 1310 | 1034 | 925 | 1170 | 1048 | – |
| | <i>Carcharhinus coatesi</i> | 465 | 970 | 808 | 550 | 887 | 794 | 0.47 |
| | <i>Carcharhinus fitzroyensis</i> | 665 | 1290 | 993 | 415 | 1195 | 732 | 0.01 |
| | <i>Carcharhinus leucas</i> | 663 | 1890 | 1244 | | 701 | | – |
| | <i>Carcharhinus macroti</i> | | 785 | | 765 | 818 | 792 | – |
| | <i>Carcharhinus melanopterus</i> | | | | | 1370 | | – |
| | <i>Carcharhinus sorrah</i> | 495 | 1300 | 910 | 529 | 1050 | 833.8 | 0.50 |
| | <i>Carcharhinus tilstoni</i> – <i>C. limbatus</i> | 575 | 1620 | 1023 | 560 | 1500 | 805 | <0.001 |
| | <i>Galeocerdo cuvier</i> | 1200 | 3700 | 2676 | | | | – |
| | <i>Rhizoprionodon acutus</i> | 490 | 899 | 772 | 450 | 923 | 726 | 0.18 |
| | <i>Rhizoprionodon taylori</i> | 325 | 865 | 680 | 395 | 786 | 651 | <0.001 |
| Hemigaleidae | <i>Hemigaleus australiensis</i> | | 805 | | 550 | 924 | 813 | – |
| | <i>Hemipristis elongata</i> | | 1270 | | | 1440 | | – |
| Sphyrnidae | <i>Eusphyrna blochii</i> | | | | | 905 | | – |
| | <i>Sphyrna lewini</i> | 495 | 1880 | 1019 | 445 | 1990 | 678 | 0.03 |
| | <i>Sphyrna mokarran</i> | 953 | 2650 | 1899 | 730 | 2550 | 1431 | 0.23 |
| Ginglymostomatidae | <i>Nebrius ferrugineus</i> | | 2500 | | | | | – |
| Hemiscylliidae | <i>Chiloscyllium punctatum</i> | 880 | 1050 | 947 | | 769 | | – |
| Stegostomatidae | <i>Stegostoma fasciatum</i> | 1290 | 2170 | 1612 | 670 | 1430 | 896 | – |
| | All shark species pooled | 325 | 3700 | 848 | 395 | 2550 | 708 | <0.001 |