

Supplementary material

Shark longline fishery of Papua New Guinea: size and species composition and spatial variation of the catches

William T. White^{A,E}, Leontine Baje^{B,C}, Sharon A. Appleyard^A, Andrew Chin^C, Jonathan J. Smart^D and Colin A. Simpfendorfer^C

^ACSIRO Marine Laboratories, Australian National Fish Collection, Castray Esplanade, Hobart, Tas. 7001, Australia.

^BNational Fisheries Authority, The Tower, Douglas Street, PO Box 2016, Port Moresby, National Capital District, Papua New Guinea.

^CCentre for Sustainable Tropical Fisheries and Aquaculture and College of Science and Engineering, James Cook University, 1 James Cook Drive, Townsville, Qld 4811, Australia.

^DSARDI Aquatic Sciences, 2 Hamra Avenue, West Beach, SA 5024, Australia.

^ECorresponding author. Email: william.white@csiro.au

Table S1. Length (cm) to weight (kg) conversions with the source of the parameters used for each of the species recorded in the target longline fishery

Species	a	b	Source
<i>Alopias pelagicus</i>	0.0461	2.49	Liu <i>et al.</i> (1999)
<i>Isurus oxyrinchus</i>	0.0052	3.14	Kohler <i>et al.</i> (1987)
<i>Carcharhinus albimarginatus</i>	0.00201	3.23	Branstetter (1987, for <i>C. falciformis</i>)
<i>Carcharhinus amblyrhynchos</i>	0.00746	2.98	Stevens & McLoughlin (1991)
<i>Carcharhinus brevipinna</i>	0.00317	3.1	Motta <i>et al.</i> (2014)
<i>Carcharhinus falciformis</i>	0.00201	3.23	Branstetter (1987)
<i>Carcharhinus leucas</i>	0.0111	2.923	www.fishbase.org (for Mexico)
<i>Carcharhinus limbatus</i>	0.00251	3.125	Castro (1996)
<i>Carcharhinus longimanus</i>	0.0254	2.691	Kohler <i>et al.</i> (1987)
<i>Carcharhinus plumbeus</i>	0.00142	3.31	Stevens & McLoughlin (1991)
<i>Carcharhinus obscurus</i>	0.0324	2.786	Kohler <i>et al.</i> (1987)
<i>Loxodon macrorhinus</i>	0.00002	4.043	W. White, unpubl. data
<i>Prionace glauca</i>	0.00318	3.13	Kohler <i>et al.</i> (1987)
<i>Galeocerdo cuvier</i>	0.00141	3.24	Randall (1992)
<i>Sphyrna lewini</i>	0.00399	3.03	Stevens & Lyle (1989)

References

- Branstetter, S. (1987). Age, growth and reproductive biology of the silky shark, *Carcharhinus falciformis*, and the scalloped hammerhead, *Sphryna lewini*, from the northwestern Gulf of Mexico. *Environmental Biology of Fishes* **19**, 161–173. [doi:10.1007/BF00005346](https://doi.org/10.1007/BF00005346)
- Castro, J. I. (1996). Biology of the blacktip shark, *Carcharhinus limbatus*, off the southeastern United States. *Bulletin of Marine Science* **59**, 508–522.
- Kohler, N., Castro, J. G., and Turner, P. A. (1987). Length-weight relationships for 13 species of sharks from the western North Atlantic. *Fishery Bulletin* **93**, 412–418.

- Liu, K. M., Chen, C. T., Liao, T. H., and Joung, S. J. (1999). Age, growth, and reproduction of the pelagic thresher shark, *Alopias pelagicus*, in the northwestern Pacific. *Copeia* **1999**, 68–74. [doi:10.2307/1447386](https://doi.org/10.2307/1447386)
- Motta, F. S., Caltabellotta, F. P., Namora, R. C., and Gadig, O. B. F. (2014). Length-weight relationships of sharks caught by artisanal fisheries from southeastern Brazil. *Journal of Applied Ichthyology* **30**, 239–240. [doi:10.1111/jai.12234](https://doi.org/10.1111/jai.12234)
- Randall, J. E. (1992). Review of the biology of the tiger shark (*Galeocerdo cuvier*). *Marine and Freshwater Research* **43**, 21–31. [doi:10.1071/MF9920021](https://doi.org/10.1071/MF9920021)
- Stevens, J. D., and Lyle, J. M. (1989). Biology of three hammerhead sharks (*Eusphyra blochii*, *Sphyra mokarran* and *S. lewini*) from northern Australia. *Marine and Freshwater Research* **40**, 129–146. [doi:10.1071/MF9890129](https://doi.org/10.1071/MF9890129)
- Stevens, J. D., and McLoughlin, K. J. (1991). Distribution, size and sex composition, reproductive biology and diet of sharks from northern Australia. *Marine and Freshwater Research* **42**, 151–199. [doi:10.1071/MF9910151](https://doi.org/10.1071/MF9910151)