

Supporting Information (SI)

SI Table 1: Body length and testes mass data for 43 elasmobranch species. Data was collected from published sources and unpublished data. When mean testes mass and body length data were not presented in published sources we extracted this information from figures using the program GraphClick (www.arizona-software.ch/graphclick). * indicates species where raw data were provided by the authors.

| Latin name | Body Length (cm) | Testes Mass (g) | Reference |
|---|------------------|-----------------|---|
| <i>Apristurus brunneus</i> | 60.9 | 32.2 | Flammang et al. 2008 |
| <i>Carcharhinus acronotus</i> | 110 | 41.9 | Sulikowski et al. 2007; Fischer et al. 2009 |
| <i>Carcharhinus amblyrhynchos</i> | 142.8 | 170.0 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus amblyrhyncooides</i> | 114.9 | 129.7 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus amboinensis</i> | 215.7 | 486.5 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus brevipinna</i> | 210.9 | 342.9 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus cautus</i> | 85.0 | 53.2 | Fitzpatrick J.L., Kempster R., Collin S.P., Evans J.P. unpublished data |
| <i>Carcharhinus dussumieri</i> | 76.7 | 14.6 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus falciformis</i> | 219.8 | 120.5 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus macloti</i> | 78.6 | 19.2 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus plumbeus</i> (Atlantic population) | 160.8 | 364.8 | Baremore and Hale personal communication* |
| <i>Carcharhinus plumbeus</i> (Australian population) | 165.5 | 223.8 | Stevens and McLoughlin 1991 |
| <i>Carcharhinus tilstoni</i> | 74.0 | 35.5 | Fitzpatrick J.L., Kempster R., Collin S.P., Evans J.P. unpublished data |
| <i>Carcharias taurus</i> | 218.1 | 125 | Lucifora et al. 2002 |
| <i>Carcharodon carcharias</i> | 385.2 | 6844.1 | Tanaka et al. 2011 |
| <i>Cephaloscyllium umbratile</i> | 102.4 | 290.2 | Taniuchi 1988 |
| <i>Chlamydoselachus anguineus</i> | 134.4 | 28.7 | Tanaka et al. 1990 |
| <i>Cirrhigaleus asper</i> | 95.3 | 16.2 | Fischer et al. 2006* |
| <i>Dalatias licha</i> | 89.3 | 10.5 | Bottaro et al. 2008 |
| <i>Etmopterus pusillus</i> | 39.8 | 3.7 | Coelho and Erzini 2007 |
| <i>Galeus eastmani</i> | 35.3 | 1 | Horie and Tanaka 2000 |
| <i>Galeus nipponensis</i> | 59.5 | 8.1 | Horie and Tanaka 2000 |
| <i>Gollum attenuatus</i> | 86.6 | 31 | Yano 1993 |
| <i>Hemigaleus microstoma</i> | 86.2 | 16.8 | Stevens and McLoughlin 1991 |
| <i>Hemipristis elongatus</i> | 128.5 | 22.4 | Stevens and McLoughlin 1991 |
| <i>Hexanchus nakamurai</i> | 84.0 | 21.9 | Fitzpatrick J.L., Kempster R., Collin S.P., Evans J.P. unpublished data |
| <i>Isurus oxyrinchus</i> | 228.3 | 200 | Joung and Hsu 2005 |
| <i>Loxodon macrorhinus</i> | 72.7 | 21.9 | Stevens and McLoughlin 1991 |
| <i>Mustelus antarcticus</i> | 86.0 | 14.8 | Fitzpatrick J.L., Kempster R., Collin S.P., Evans J.P. unpublished data |
| <i>Mustelus canis</i> | 96.5 | 23 | Zagaglia et al. 2011 |
| <i>Mustelus sp.</i> (Manazo) | 69.6 | 17.6 | Stevens and McLoughlin 1991 |
| <i>Parmaturus xaniurus</i> | 45.8 | 19.5 | Flammang et al. 2008 |
| <i>Prionace glauca</i> | 243 | 490.5 | McClusky 2011 |
| <i>Rhizoprionodon acutus</i> | 81.1 | 10.6 | Stevens and McLoughlin 1991 |
| <i>Rhizoprionodon lalandii</i> | 64.9 | 9.4 | Motta et al. 2007 |
| <i>Rhizoprionodon taylori</i> | 47.0 | 6.2 | Stevens and McLoughlin 1991 |
| <i>Rhizoprionodon terraenovae</i> | 88.4 | 11.1 | Parsons personal communication* |

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|--|-------|------|--|
| Scyliorhinus canicula | 40.98 | 9.1 | Kousteni et al. 2010 |
| Sphyrna lewini | 234.5 | 55.3 | Hazin et al. 2001 |
| Sphyrna tiburo | 82.2 | 8.1 | Parsons personal communication* |
| Squalus acanthias (British Columbia population) | 81.5 | 32.4 | Fitzpatrick J.L. unpublished data |
| Squalus acanthias (Crete population) | 54.9 | 8.1 | Chatzisprou and Megalofonou 2005 |
| Squalus acanthias (French population) | 72.5 | 26.5 | Capape and Reynaud 2011 |
| Squalus cf. mitsukurii | 65.9 | 6.4 | Fischer et al. 2006* |
| Squalus japonicus | 57.5 | 7.7 | Chen et al. 1981 |
| Squalus montalbani | 52.3 | 4.9 | Fitzpatrick J.L., Kempster R., Collin S.P., Evans J.P. unpublished data |

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