**Table S1.** Biological traits of cephalopods species included in this study. Body length (BL, maximum mantle length for coleoids and maximum shell diameter for nautiloids, mm), egg length (EL, mm), and potential fecundity (PF, number of mature oocytes in the ovary prior to spawning).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Species** | **Body length (mm)** | **Potential Fecundity** | **Egg length (mm)** | **Life style** | **References** |
| *Abralia veranyi* | 50 | 26584 | 1.01 | Pelagic | Jereb & Roper 2010; Salman & Laptikhovsky 2005 |
| *Adelieledone piatkowski* | 55 | 62 | 16 | Benthic | Jereb et al. 2014; Barrat et al. 2008; Schwarz et al. 2019 |
| *Adelieledone polymorpha* | 60 | 128 | 16.6 | Benthic | Jereb et al. 2014; Barrat et al. 2008 |
| *Amphioctopus aegina* | 100 | 10000 | 2.4 | Benthic | Jereb et al. 2014 |
| *Architeuthis dux* | 3000 | 10000000 | 1.4 | Pelagic | Jereb & Roper 2010 |
| *Argonauta nodosus* | 138 | 179500 | 1.7 | Pelagic | Jereb et al. 2014; Finn 2013 |
| *Bathypolypus arcticus* | 70 | 80 | 18 | Benthic | Jereb et al. 2014 |
| *Bathypolypus valdiviae* | 50 | 141 | 3.8 | Benthic | Jereb et al. 2014; Barratt et al. 2007 |
| *Bathyteuthis abyssicola* | 75 | 360 | 5 | Pelagic | Jereb & Roper 2010 |
| *Bathyteuthis berryi* | 50 | 360 | 4 | Pelagic | Jereb & Roper 2010; Bush et al. 2012 |
| *Batoteuthis skolops* | 350 | 4800 | 1.5 | Pelagic | Jereb & Roper 2010; Laptikhovsky et al. 2019 |
| *Benthoctopus eureka* | 110 | 140 | 19 | Benthic | Gleadall et al. 2010 |
| *Benthoctopus normani* | 63 | 71 | 22 | Benthic | Barrat et al. 2007 |
| *Berryteuthis magister* | 430 | 96000 | 3.6 | Pelagic | Jereb & Roper 2010; Nesis 1999 |
| *Callistoctopus ornatus* | 130 | 35000 | 4 | Benthic | Jereb et al. 2014; Norman 1993 |
| *Cirrothauma murrayi* | 220 | 200 | 14 | Pelagic | Aldred et al. 1983 |
| *Doryteuthis opalescens* | 305 | 4250 | 2.25 | Pelagic | Jereb & Roper 2010 |
| *Doryteuthis pealeii* | 303 | 53000 | 1.6 | Pelagic | Jereb & Roper 2010 |
| *Dosidicus gigas* | 1200 | 32000000 | 1.1 | Pelagic | Jereb & Roper 2010 |
| *Eledone cirrhosa* | 150 | 54000 | 7.5 | Benthic | Jereb et al. 2014 |
| *Enteroctopus dofleini* | 600 | 100000 | 8 | Benthic | Jereb et al. 2014; Sweeney et al. 1992 |
| *Eucleoteuthis luminosa* | 227 | 625000 | 1 | Pelagic | Jereb & Roper 2010 |
| *Euprymna hyllebergi* | 35 | 464 | 4.15 | Pelagic | Jereb & Roper 2005; Nabhitabhata et al. 2005 |
| *Euprymna scolopes* | 30 | 250 | 2.1 | Pelagic | Jereb & Roper 2005; Singley, 1983; Hanlon et al. 1997 |
| *Euprymna tasmanica* | 40 | 470 | 3.7 | Pelagic | Jereb & Roper 2005; Hoving et al. 2008; Nabhitabhata & Nishiguchi 2014 |
| *Gonatopsis octopedatus* | 175 | 414 | 6.5 | Pelagic | Jereb & Roper 2010 |
| *Gonatus antarcticus* | 350 | 30000 | 3.25 | Pelagic | Jereb & Roper 2010; Laptikhovsky et al. 2007 |
| *Gonatus fabricii* | 400 | 10000 | 4.5 | Pelagic | Jereb & Roper 2010; Kristensen, 1981 |
| *Graneledone boreopacifica* | 145 | 51 | 40 | Benthic | Jereb et al. 2014; Barrat et al. 2008 |
| *Graneledone verrucosa* | 110 | 80 | 17 | Benthic | Jereb et al. 2014; Barrat et al. 2008 |
| *Hapalochlaena maculosa* | 57 | 80 | 9 | Benthic | Jereb et al. 2014; Morse et al. 2018 |
| *Heterololigo bleekeri* | 301 | 2000 | 3.1 | Pelagic | Jereb & Roper 2010 |
| *Histioteuthis bonellii* | 330 | 275000 | 2.3 | Pelagic | Jereb & Roper 2010; Kristensen, 1980; Laptikhovsky 2001 |
| *Histioteuthis miranda* | 270 | 148000 | 1.5 | Pelagic | Jereb & Roper 2010; Hoving & Lipinski 2009 |
| *Histioteuthis reversa* | 200 | 64000 | 1.65 | Pelagic | Jereb & Roper 2010; Laptikhovsky 2001 |
| *Idiosepius pygmaeus* | 20 | 640 | 0.9 | Pelagic | Jereb & Roper 2005; Natsukari 1970; Lewis & Choat 1993 |
| *Illex coindetii* | 379 | 200000 | 0.9 | Pelagic | Jereb & Roper 2010 |
| *Japetella diaphana* | 85 | 2000 | 3 | Pelagic | Jereb et al. 2014; Sweeney et al. 1992; Schwarz et al. 2019 |
| *Loligo forbesii* | 462 | 23000 | 6 | Pelagic | Jereb & Roper 2010 |
| *Loligo vulgaris* | 485 | 74200 | 2.2 | Pelagic | Jereb & Roper 2010 |
| *Lycoteuthis lorigera* | 190 | 50000 | 1.9 | Pelagic | Jereb & Roper 2010; Hoving et al. 2014 |
| *Mastigoteuthis agassizii* | 100 | 16000 | 2 | Pelagic | Jereb & Roper 2010; Laptikhovsky et al. 2019 |
| *Megaleledone setebos* | 280 | 340 | 42 | Benthic | Jereb et al. 2014; Allcock et al. 2003; Schwarz et al. 2019 |
| *Mesonychoteuthis hamiltoni* | 3000 | 4200000 | 3 | Pelagic | Jereb & Roper 2010 |
| *Nautilus macromphalus* | 160 | 20 | 45 | Pelagic | Jereb & Roper 2005 |
| *Nautilus pompilius* | 180 | 20 | 25 | Pelagic | Jereb & Roper 2005 |
| *Octopoteuthis sicula* | 200 | 216000 | 1.5 | Pelagic | Jereb & Roper 2010; Hoving et al. 2008 |
| *Octopus bimaculoides* | 70 | 750 | 14.5 | Benthic | Jereb et al. 2014 |
| *Octopus cyanea* | 160 | 100000 | 3 | Benthic | Jereb et al. 2014; Norman 1991 |
| *Octopus ocellatus* | 80 | 1000 | 13 | Benthic | Jereb et al. 2014 |
| *Octopus rubescens* | 100 | 50000 | 4 | Benthic | Jereb et al. 2014 |
| *Octopus vulgaris* | 250 | 500000 | 2 | Benthic | Jereb et al. 2014 |
| *Ommastrephes bartramii* | 900 | 360000 | 1 | Pelagic | Jereb & Roper 2010 |
| *Onychoteuthis banksii* | 300 | 200000 | 0.5 | Pelagic | Jereb & Roper 2010 |
| *Onykia robusta* | 2300 | 240000 | 1 | Pelagic | Jereb & Roper 2010; Несис, 1971; Kurita 2018 |
| *Opisthoteuthis massyae* | 75 | 2763 | 10 | Pelagic | Villanueva et al. 2002 |
| *Ornithoteuthis antillarum* | 300 | 220000 | 1 | Pelagic | Jereb & Roper 2010 |
| *Pareledone aequipapillae* | 63 | 40 | 20 | Benthic | Barrat et al. 2008; Schwarz et al. 2019 |
| *Pareledone charcoti* | 43 | 94 | 13 | Benthic | Barrat et al. 2008; Schwarz et al. 2019 |
| *Pareledone felix* | 60 | 54 | 22 | Benthic | Barrat et al. 2008 |
| *Pareledone turqueti* | 100 | 135 | 20 | Benthic | Jereb et al. 2014 |
| *Rondeletiola minor* | 23 | 315 | 1.5 | Pelagic | Jereb & Roper 2005; Neaf 1928; Önsoy et al. 2013 |
| *Rossia macrosoma* | 85 | 837 | 8 | Pelagic | Jereb & Roper 2005 |
| *Rossia pacifica* | 90 | 1246 | 10 | Pelagic | Jereb & Roper 2005; Laptikhovsky et al. 2008 |
| *Rossia palpebrosa* | 45 | 270 | 10 | Pelagic | Jereb & Roper 2005; Golikov et al. 2017 |
| *Sepia elegans* | 89 | 250 | 5 | Pelagic | Jereb & Roper 2005 |
| *Sepia officinalis* | 490 | 4000 | 8 | Pelagic | Jereb & Roper 2005 |
| *Sepia pharaonis* | 420 | 1525 | 15 | Pelagic | Jereb & Roper 2005 |
| *Sepiella inermis* | 125 | 500 | 3.7 | Pelagic | Jereb & Roper 2005 |
| *Sepiella japonica* | 180 | 480 | 4 | Pelagic | Jereb & Roper 2005 |
| *Sepiola affinis* | 25 | 117 | 1.8 | Pelagic | Jereb & Roper 2005 |
| *Sepiola atlantica* | 21 | 304 | 3.8 | Pelagic | Jereb & Roper 2005 |
| *Sepiola intermedia* | 28 | 407 | 2.9 | Pelagic | Jereb & Roper 2005; Hoving et al. 2008 |
| *Sepiola robusta* | 28 | 245 | 2.3 | Pelagic | Jereb & Roper 2005; Boletzky 1983; Hoving et al. 2008 |
| *Sepioteuthis australis* | 394 | 300 | 70 | Pelagic | Jereb & Roper 2010 |
| *Sepioteuthis lessoniana* | 382 | 635 | 6 | Pelagic | Jereb & Roper 2010; Choe, 1966 |
| *Spirula spirula* | 45 | 100 | 1.7 | Pelagic | Jereb & Roper 2005 |
| *Stauroteuthis gilchristi* | 70 | 746 | 9.5 | Pelagic | Collins & Henriques, 2000 |
| *Stauroteuthis syrtensis* | 114 | 900 | 11 | Pelagic | Collins & Henriques, 2000 |
| *Sthenoteuthis oualaniensis* | 650 | 22000000 | 0.8 | Pelagic | Jereb & Roper 2010 |
| *Taningia danae* | 1700 | 5000000 | 1 | Pelagic | Jereb & Roper 2010; González et al. 2003 |
| *Thaumeledone rotunda* | 51 | 20 | 16 | Benthic | Barrat et al. 2008 |
| *Thysanoteuthis rhombus* | 1000 | 140000 | 1.8 | Pelagic | Jereb & Roper 2010 |
| *Todarodes pacificus* | 500 | 470000 | 0.95 | Pelagic | Jereb & Roper 2010 |
| *Todaropsis eblanae* | 290 | 250000 | 2.5 | Pelagic | Jereb & Roper 2010 |
| *Tremoctopus violaceus* | 250 | 300000 | 2 | Pelagic | Jereb et al. 2014; Laptikhovsky & Salman 2003 |
| *Uroteuthis chinensis* | 310 | 11000 | 2 | Pelagic | Jereb & Roper 2010 |
| *Vampyroteuthis infernalis* | 100 | 20711 | 4 | Pelagic | Jereb et al. 2014; Hoving et al. 2015 |
| *Velodona togata* | 150 | 122 | 30 | Benthic | Jereb et al. 2014; Silva et al. 2014 |
| *Watasenia scintillans* | 70 | 20000 | 1.5 | Pelagic | Jereb & Roper 2010 |

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