

Appendix 1

List of Seabird Species with the Current International Union for the Conservation of Nature Red List Status of Those Species Which Are Considered Threatened

Order Sphenisciformes

Family Spheniscidae: Penguins

<i>Pygoscelis papua</i>	Gentoo Penguin	
<i>P. antarctica</i>	Chinstrap Penguin	
<i>P. adeliae</i>	Adelie Penguin	
<i>Aptenodytes patagonicus</i>	King Penguin	
<i>A. forsteri</i>	Emperor Penguin	
<i>Eudyptes chrysocome</i>	Rockhopper Penguin	VU
<i>E. chrysolophus</i>	Macaroni Penguin	VU
<i>E. schlegeli</i>	Royal Penguin	VU
<i>E. pachyrhynchus</i>	Fiordland Penguin	VU
<i>E. robustus</i>	Snares Penguin	
<i>E. sclateri</i>	Erect-crested Penguin	EN
<i>Megadyptes antipodes</i>	Yellow-eyed Penguin	EN
<i>Spheniscus demersus</i>	Jackass Penguin [Black-footed, African]	VU
<i>S. humboldti</i>	Humboldt Penguin	VU
<i>S. magellanicus</i>	Magellanic Penguin	
<i>S. mendiculus</i>	Galapagos Penguin	EN
<i>Eudyptula minor</i>	Blue Penguin [Fairy]	

Order Procellariiformes

Family Diomedidae: Albatrosses

<i>Diomedea exulans</i>	Wandering Albatross	VU
<i>D. antipodensis</i>	Antipodean Albatross	VU
<i>D. amsterdamensis</i>	Amsterdam Albatross	CR
<i>D. dabbenena</i>	Tristan Albatross	EN
<i>D. sanfordi</i>	Northern Royal Albatross	EN
<i>D. epomophora</i>	Southern Royal Albatross	VU
<i>Phoebastria irrorata</i>	Waved Albatross	VU
<i>P. albatrus</i>	Short-tailed Albatross	VU
<i>P. nigripes</i> ¹	Black-footed Albatross	VU
<i>P. immutabilis</i> ¹	Laysan Albatross	
<i>Thalassarche melanophris</i>	Black-browed Albatross	
<i>T. impavida</i>	Campbell Albatross	VU
<i>T. cauta</i>	Shy Albatross	
<i>T. eremita</i>	Chatham Albatross	CR
<i>T. salvini</i>	Salvin's Albatross	VU
<i>T. chrysostoma</i>	Gray-headed Albatross	VU
<i>T. chlororhynchos</i>	Atlantic Yellow-nosed Albatross	
<i>T. carteri</i>	Indian Yellow-nosed Albatross	VU
<i>T. bulleri</i>	Buller's Albatross	VU
<i>Phoebastria fusca</i>	Sooty Albatross	VU
<i>P. palpebrata</i>	Light-mantled Sooty Albatross	

Family Procellariidae: Gadgety Petrels, Shearwaters, Fulmars, and Allies

<i>Macronectes giganteus</i>	Southern Giant Petrel	VU
<i>M. halli</i>	Northern Giant Petrel	
<i>Fulmarus glacialis</i>	Southern Fulmar	
<i>F. glacialis</i>	Northern Fulmar	
<i>Thalassoica antarctica</i>	Antarctic Petrel	
<i>Daption capense</i>	Cape Pigeon [Cape Petrel]	
<i>Pagodroma nivea</i>	Snow Petrel	
<i>Lugensa brevirostris</i>	Kerguelen Petrel	
<i>Pterodroma macroptera</i>	Great-winged Petrel	
<i>P. lessonii</i>	White-headed Petrel	
<i>P. incerta</i>	Atlantic Petrel	VU
<i>P. solandri</i>	Providence Petrel	VU
<i>P. magentae</i>	Magenta Petrel [Taiko]	CR
<i>P. ultima</i>	Murphy's Petrel	
<i>P. mollis</i>	Soft-plumaged Petrel	
<i>P. feae</i>	Cape Verde Petrel [Fea's]	
<i>P. madeira</i>	Madeira Petrel	CR
<i>P. cahow</i>	Cahow or Bermuda Petrel	EN
<i>P. hasitata</i>	Black-capped Petrel	EN
<i>P. caribbaea</i>	Jamaica Petrel	CR
<i>P. externa</i>	Juan Fernandez Petrel	VU
<i>P. cervicalis</i>	White-necked Petrel	VU
<i>P. barau</i>	Barau's Petrel	EN
<i>P. phaeopygia</i>	Galapagos Petrel	CR
<i>P. sandwichensis</i>	Hawaiian Dark-rumped Petrel [Hawaiian]	VU
<i>P. neglecta</i>	Kermadec Petrel	
<i>P. arminjoniana</i>	Trindade Petrel	VU
<i>P. heraldica</i>	Herald Petrel	
<i>P. atrata</i>	Henderson Petrel	EN
<i>P. alba</i>	Phoenix Petrel	VU
<i>P. inexpectata</i>	Mottled Petrel	
<i>P. hypoleuca</i>	Bonin Petrel	
<i>P. nigripennis</i>	Black-winged Petrel	
<i>P. axillaris</i>	Chatham Island Petrel	CR
<i>P. cookii</i>	Cook's Petrel	EN
<i>P. defilippiana</i>	Mas A Tierra Petrel [De Filippi's]	VU
<i>P. longirostris</i>	Stejneger's Petrel	VU
<i>P. pycrofti</i>	Pycroft's Petrel	VU
<i>P. leucoptera</i>	Gould's Petrel	VU
<i>P. brevipes</i>	Collared Petrel	
<i>Pseudobulweria macgillivrayi</i>	Macgillivray's Petrel [Fiji]	CR
<i>P. rostrata</i>	Tahiti Petrel	
<i>P. becki</i>	Beck's Petrel	CR
<i>P. aterrima</i>	Mascarene Petrel	
<i>Halobaena caerulea</i>	Blue Petrel	CR
<i>Pachyptila vittata</i>	Broad-billed Prion	
<i>P. salvini</i>	Salvin's Prion	
<i>P. desolata</i>	Antarctic Prion	
<i>P. belcheri</i>	Narrow-billed Prion	
<i>P. turtur</i>	Fairy Prion	
<i>P. crassirostris</i>	Fulmar Prion	
<i>Bulweria bulwerii</i>	Bulwer's Petrel	
<i>B. fallax</i>	Jouanin's Petrel	
<i>Procellaria aequinoctialis</i>	White-chinned Petrel	VU
<i>P. conspicillata</i>	Spectacled Petrel	CR

<i>P. westlandica</i>	Westland Petrel	VU
<i>P. parkinsoni</i>	Parkinson's Petrel [Black]	VU
<i>P. cinerea</i>	Grey Petrel	
<i>Calonectris diomedea</i>	Cory's Shearwater	
<i>C. leucomelas</i>	Streaked Shearwater	
<i>Puffinus pacificus</i>	Wedge-tailed Shearwater	
<i>P. bulleri</i>	Buller's Shearwater	VU
<i>P. carneipes</i>	Flesh-footed Shearwater	
<i>P. creatopus</i>	Pink-footed Shearwater	VU
<i>P. gravis</i>	Greater Shearwater	
<i>P. griseus</i>	Sooty Shearwater	
<i>P. tenuirostris</i>	Short-tailed Shearwater	
<i>P. nativitatis</i>	Christmas Shearwater	
<i>P. puffinus</i>	Manx Shearwater	
<i>P. yelkouan</i>	Levantine Shearwater	
<i>P. mauretanicus</i>	Balearic Shearwater	
<i>P. auricularis</i>	Townsend's Shearwater	CR
<i>P. newelli</i>	Newell's Shearwater	VU
<i>P. opisthomelas</i>	Black-vented Shearwater	VU
<i>P. gavia</i>	Fluttering Shearwater	
<i>P. huttoni</i>	Hutton's Shearwater	EN
<i>P. lherminieri</i>	Audubon's Shearwater	
<i>P. heinrothi</i>	Heinroth's Shearwater	VU
<i>P. assimilis</i>	Little Shearwater	

Family Pelecanoididae: Diving Petrels

<i>Pelecanoides garnotii</i>	Peruvian Diving-petrel	EN
<i>P. magellani</i>	Magellanic Diving-petrel	
<i>P. georgicus</i>	Georgian Diving-petrel	
<i>P. urinatrix</i>	Common Diving-petrel	

Family Hydrobatidae: Storm Petrels

<i>Oceanites oceanicus</i>	Wilson's Storm-petrel	
<i>O. gracilis</i>	Elliot's or White-vented Storm-petrel	DD
<i>Garrodia nereis</i>	Gray-backed Storm-petrel	
<i>Pelagodroma marina</i>	White-faced Storm-petrel	
<i>Fregetta tropica</i>	Black-bellied Storm-petrel	
<i>F. gallaria</i>	White-bellied Storm-petrel	
<i>Nesofregetta fuliginosa</i>	White-throated Storm-petrel [Polynesian]	VU
<i>Hydrobates pelagicus</i>	European or British Storm-petrel	
<i>Halocyptena microsoma</i>	Least Storm-petrel	
<i>Oceanodroma tethys</i>	Wedge-rumped Storm-petrel	
<i>O. castro</i>	Madeiran or Band-rumped Storm-petrel	
<i>O. monorhis</i>	Swinhoe's Storm-petrel	
<i>O. leucorhoa</i>	Leach's Storm-petrel	
<i>O. macrodactyla</i>	Guadalupe Storm-petrel [extinct]	CR
<i>O. markhami</i>	Markham's Storm-petrel	DD
<i>O. tristrami</i>	Tristram's Storm-petrel	
<i>O. melania</i>	Black Storm-petrel	
<i>O. matsudairae</i>	Matsudaira's Storm-petrel	DD
<i>O. homochroa</i>	Ashy Storm-petrel	
<i>O. hornbyi</i>	Hornby's or Ringed Storm-petrel	DD
<i>O. furcata</i>	Fork-tailed Storm-petrel	

Order Pelecaniformes

Sub-order Phaethontes, Family Phaethontidae: Tropicbirds

<i>Phaethon lepturus</i>	White-tailed Tropicbird
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<i>P. aethereus</i>	Red-billed Tropicbird	
<i>P. rubricauda</i>	Red-tailed Tropicbird	

Sub-order Pelecani, Family Pelecanidae: Pelicans

<i>Pelecanus onocrotalus</i>	Eurasian Pelican [Great White]	
<i>P. crispus</i>	Dalmatian Pelican	LR
<i>P. conspicillatus</i>	Australian Pelican	
<i>P. erythrorhynchos</i>	American White Pelican	
<i>P. rufescens</i>	Pink-backed Pelican	
<i>P. philippensis</i>	Spot-billed Pelican	VU
<i>P. occidentalis</i>	Brown Pelican [includes Peruvian]	

Family Fregatidae: Frigatebirds

<i>Fregata aquila</i>	Ascension Frigatebird	VU
<i>F. ariel</i>	Lesser Frigatebird	
<i>F. minor</i>	Great Frigatebird	
<i>F. andrewsi</i>	Christmas Island Frigatebird	CR
<i>F. magnificens</i>	Magnificent Frigatebird	

Family Sulidae: Gannets and Boobies

<i>Morus serrator</i>	Australian Gannet	
<i>M. capensis</i>	Cape Gannet	VU
<i>M. bassanus</i>	Northern Gannet	
<i>Papasula abbotti</i>	Abbott's Booby	CR
<i>Sula variegata</i>	Peruvian Booby	
<i>S. nebulosus</i>	Blue-footed Booby	
<i>S. dactylatra</i>	Masked Booby	
<i>S. granti</i>	Nazca Booby	
<i>S. leucogaster</i>	Brown Booby	
<i>S. sula</i>	Red-footed Booby	

Family Phalacrocoracidae, Sub-family Phalacrocoracinae: Cormorants

<i>Microcarbo africanus</i>	Long-tailed Cormorant	
<i>M. coronatus</i>	Crowned Cormorant	
<i>M. pygmaeus</i>	Pygmy Cormorant	
<i>M. niger</i>	Little Cormorant	
<i>M. melanoleucos</i>	Little Pied Cormorant	
<i>Compsomalieus penicillatus</i>	Brandt's Cormorant	
<i>C. harrisi</i> ²	Flightless Cormorant [Galapagos]	EN
<i>C. neglectus</i>	Bank Cormorant	VU
<i>C. fuscescens</i>	Black-faced Cormorant	
<i>Hypoleucos brasiliensis</i> ³	Neotropic Cormorant	
<i>H. auritus</i>	Double-crested Cormorant	
<i>H. fuscicollis</i>	Indian Cormorant	
<i>H. varius</i>	Pied Cormorant	
<i>H. sulcirostris</i>	Little Black Cormorant	
<i>Phalacrocorax carbo</i>	Great Cormorant	
<i>P. capillatus</i>	Japanese Cormorant	
<i>Leucocarbo nigrogularis</i>	Socotra Cormorant	VU
<i>L. capensis</i>	Cape Cormorant	
<i>L. bougainvillii</i>	Guanay Cormorant	
<i>Notocarbo verrucosus</i>	Kerguelen Shag	
<i>N. atriceps</i>	Imperial Shag [Incl. Blue-eyed and King]	
<i>N. bransfieldensis</i>	Antarctic Shag	
<i>N. georgianus</i>	South Georgia Shag	
<i>Nesocarbo campbelli</i>	Campbell Island Shag	VU
<i>Euleucocarbo carunculatus</i>	New Zealand King Shag	VU

<i>E. chalconotus</i>	Stewart Island Shag	VU
<i>E. onslowi</i>	Chatham Island Shag	EN
<i>E. colensoi</i>	Auckland Island Shag	VU
<i>E. ranfurlyi</i>	Bounty Island Shag	VU
<i>Stictocorbo magellanicus</i>	Rock Cormorant	
<i>S. pelagicus</i>	Pelagic Cormorant	
<i>S. urile</i>	Red-faced Cormorant	
<i>S. aristotelis</i>	European Shag	
<i>S. gaimardi</i>	Red-legged Cormorant	
<i>S. punctatus</i>	Spotted Shag	
<i>S. featherstoni</i>	Pitt Island Shag	VU

Sub-family Anhinginae: Anhingas or Darters

<i>Anhinga anhinga</i>	Anhinga
<i>A. rufa</i>	African Darter
<i>A. melanogaster</i>	Indian Darter
<i>A. novaehollandiae</i>	Australian Darter

Order Charadriiformes

Sub-order Lari, Family Stercorariidae: Skuas and Jaegers

<i>Stercorarius parasiticus</i>	Parasitic Jaeger [Arctic Skua]
<i>S. longicaudus</i>	Long-tailed Jaeger [Skua]
<i>S. pomarinus</i>	Pomarine Jaeger [Skua]
<i>Catharacta skua</i>	Great Skua
<i>C. chilensis</i>	Chilean Skua
<i>C. antarctica</i>	Brown Skua [incl.Lonnberg's & Antarctic]
<i>C. macormicki</i>	South Polar Skua

Family Laridae, Sub-family Larinae: Gulls

<i>Larus scoresbii</i> ⁴	Dolphin Gull	
<i>L. pacificus</i> ⁵	Pacific Gull	
<i>L. belcheri</i>	Band-tailed Gull	
<i>L. atlanticus</i>	Orlog's Gull	VU
<i>L. crassirostris</i>	Black-tailed Gull	
<i>L. modestus</i>	Gray Gull	
<i>L. heermanni</i>	Heerman's Gull	
<i>L. leucophthalmus</i>	White-eyed Gull	
<i>L. hemprichi</i>	Sooty Gull	
<i>L. canus</i>	Common Gull [Mew]	
<i>L. audouinii</i>	Audouin's Gull	
<i>L. delawarensis</i>	Ring-billed Gull	
<i>L. californicus</i>	California Gull	
<i>L. marinus</i>	Great Black-backed Gull	
<i>L. dominicanus</i>	Kelp Gull [Southern Black-backed]	
<i>L. glaucescens</i>	Glaucous-winged Gull	
<i>L. occidentalis</i>	Western Gull	
<i>L. livens</i>	Yellow-footed Gull	
<i>L. hyperboreus</i>	Glaucous Gull	
<i>L. glaucoides</i>	Iceland Gull [Including Thayer's Gull]	
<i>L. argentatus</i>	Herring Gull	
<i>L. cachinnans</i>	Yellow-legged Gull	
<i>L. armenicus</i>	Armenian Gull	
<i>L. schistisagus</i>	Slaty-backed Gull	
<i>L. fuscus</i>	Lesser Black-backed Gull	
<i>L. ichthyaetus</i>	Great Black-headed Gull	
<i>L. brunnicephalus</i>	Brown-headed Gull	
<i>L. cirrocephalus</i>	Gray-headed Gull	

<i>L. hartlaubii</i>	Hartlaub's Gull	
<i>L. novaehollandiae</i>	Silver Gull	
<i>L. scopulinus</i>	Red-billed Gull	
<i>L. bulleri</i>	Black-billed Gull	VU
<i>L. maculipennis</i>	Brown-hooded Gull	
<i>L. ridibundus</i>	Common Black-headed Gull	
<i>L. genei</i>	Slender-billed Gull	
<i>L. philadelphia</i>	Bonaparte's Gull	
<i>L. saundersi</i>	Saunders's Gull	VU
<i>L. serranus</i>	Andean Gull	
<i>L. melanocephalus</i>	Mediterranean Gull	
<i>L. relictus</i>	Relict Gull	VU
<i>L. fuliginosus</i>	Lava Gull	VU
<i>L. atricilla</i>	Laughing Gull	
<i>L. pipixcan</i>	Franklin's Gull	
<i>L. minutus</i>	Little Gull	
<i>Creagrus furcatus</i>	Swallow-tailed Gull	
<i>Rissa tridactyla</i>	Black-legged Kittiwake	
<i>Rissa brevirostris</i>	Red-legged Kittiwake	VU
<i>Xema sabini</i>	Sabine's Gull	
<i>Pagophila eburnea</i>	Ivory Gull	
<i>Rhodostethia rosea</i>	Ross's Gull	

Sub-family Sterninae: Terns

<i>Sterna nilotica</i> ⁶	Gull-billed Tern	
<i>S. aurantia</i>	River Tern	
<i>S. caspia</i> ⁷	Caspian Tern	
<i>S. maxima</i> ⁸	Royal Tern	
<i>S. elegans</i> ⁸	Elegant Tern	
<i>S. bengalensis</i> ⁸	Lesser Crested Tern	
<i>S. bergii</i> ⁸	Crested Tern [Swift]	
<i>S. bernsteini</i> ^{8,9}	Chinese Crested Tern	CR
<i>S. sandwicensis</i> ⁸	Sandwich Tern [including Cayenne Tern]	
<i>S. dougallii</i>	Roseate Tern	
<i>S. striata</i>	White-fronted Tern	
<i>S. sumatrana</i>	Black-naped Tern	
<i>S. hirundinacea</i>	South American Tern	
<i>S. hirundo</i>	Common Tern	
<i>S. paradisaea</i>	Arctic Tern	
<i>S. vittata</i>	Antarctic Tern	
<i>S. virgata</i>	Kerguelen Tern	
<i>S. forsteri</i>	Forster's Tern	
<i>S. trudeaui</i>	Trudeau's Tern [Snowy-crowned]	
<i>S. albifrons</i>	Little Tern	
<i>S. lorata</i>	Peruvian Tern	
<i>S. saundersi</i>	Saunders' Tern	
<i>S. antillarum</i>	Least Tern	
<i>S. supercilialis</i>	Yellow-billed Tern	
<i>S. nereis</i>	Fairy Tern	
<i>S. balaenarum</i>	Damara Tern	
<i>S. repressa</i>	White-cheeked Tern	
<i>S. acuticauda</i>	Black-bellied Tern	
<i>S. aleutica</i>	Aleutian Tern	
<i>S. lunata</i>	Gray-backed Tern	
<i>S. anaethetus</i>	Bridled Tern	
<i>S. fuscata</i>	Sooty Tern	
<i>Chlidonias niger</i>	Black Tern	

<i>C. hybridus</i>	Whiskered Tern	
<i>C. leucopterus</i>	White-winged Tern	
<i>C. albobristata</i> ¹⁰	Black-fronted Tern	EN
<i>Phaetusa simplex</i>	Large-billed Tern	
<i>Larosterna inca</i>	Inca Tern	
<i>Anous stolidus</i>	Brown Noddy	
<i>A. minutus</i>	Black Noddy	
<i>A. tenuirostris</i>	Lesser Noddy	
<i>Gygis alba</i>	White Tern	
<i>G. microrhyncha</i>	Lesser White Tern	
<i>Procelsterna cerulea</i>	Blue Noddy	
<i>P. albivitta</i>	Gray Noddy	

Family Rhynchopidae: Skimmers

<i>Rhynchops niger</i>	Black Skimmer	
<i>R. flavirostris</i>	African Skimmer	
<i>R. albigollis</i>	Indian Skimmer	

Sub-order Alcae, Family Alcidae: Auks

<i>Pinguinus impennis</i>	Great Auk (extinct)	
<i>Alle alle</i>	Dovekie	
<i>Alca torda</i>	Razor-billed Auk	
<i>Uria aalge</i>	Common Murre or Guillemot	
<i>Uria lomvia</i>	Thick-billed Murre or Guillemot	
<i>Cephus grylle</i>	Black Guillemot	
<i>C. columba</i>	Pigeon Guillemot	
<i>C. carbo</i>	Spectacled Guillemot	
<i>Endomychura hypoleuca</i>	Xantus' Murrelet	VU
<i>E. craveri</i>	Craveri's Murrelet	VU
<i>Synthliboramphus antiquum</i>	Ancient Murrelet	
<i>S. wumizusume</i>	Japanese Murrelet	VU
<i>Ptychoramphus aleuticus</i>	Cassin's Auklet	
<i>Cyclorhynchus psittacula</i>	Parakeet Auklet	
<i>Aethia cristatella</i>	Crested Auklet	
<i>A. pusilla</i>	Least Auklet	
<i>A. pygmaea</i>	Whiskered Auklet	
<i>Brachyramphus perdix</i>	Long-billed Murrelet	
<i>B. marmoratus</i>	Marbled Murrelet	VU
<i>B. brevirostris</i>	Kittlitz's Murrelet	
<i>Cerorhinca monocerata</i>	Rhinoceros Auklet	
<i>Fratercula cirrhata</i> ¹¹	Tufted Puffin	
<i>F. arctica</i>	Atlantic Puffin [Common]	
<i>F. corniculata</i>	Horned Puffin	

¹ Historically placed in genus *Diomedea*.

² Sometimes placed in genus *Nannopterum*.

³ Often placed in species *olivaceus*.

⁴ Often placed in the genus *Leucophaeus*.

⁵ Often placed in the genus *Gabianus*.

⁶ Often placed in the genus *Gelochelidon*.

⁷ Often placed in the genus *Hydroprogne*.

⁸ Often placed in the genus *Thalasseus*.

⁹ Usually listed with the species name *zimmermanni*.

¹⁰ Often listed in the genus *Sterna*.

¹¹ Historically placed in Genus *Lunda*.

Note: CE = critically endangered, EN = endangered; VU = vulnerable; NT = near threatened;

LP = low risk; DD = data deficient.

Appendix 2

Data on Life-History Characteristics, Breeding Range, Size, and Survival for Seabird Species

	Common Name	Scientific Name	Adult Mass (kg) Mean:female(male)	Breeding Distribution	Nest Location	Clutch Size (range)	Hatchling Type	Incubation Period (d)	Fledging Period (d)	Maximum Growth Rate (g/d)	Post-Fledging Care (d)	Age of First Breeding (yrs)	Foraging Distance	Wing Span (cm)	Maximum Age (yrs)	Annual Survival %	Index to Literature Cited	
		Order	SPHENISCIFORMES															
1	Gentoo Penguin	Pygoscelis papua	5.15 (5.58)	PSP	O	2	SA	35-36	74-100	85	5-50	2	NS		80	43, 44, 129, 219		
2	Chinstrap Penguin	Pygoscelis antarctica	3.8	PSP	O.SI	2	SA	33-37	49-59	86	none	3-5	NS+			43, 129		
3	Adelie Penguin	Pygoscelis adellae	4.7 (5)	P	O	1.9(1-2)	SA	31-38	41-60	116		3-6	NS+		89	129, 152, 174, 209, 232		
4	King Penguin	Aptenodytes patagonicus	14.3 (16)	P-Tm	None	1	SA	52-54	313-350	130	38	5 (4-5)	OS		82-93	11, 42, 129, 130, 152, 204, 226		
5	Emperor Penguin	Aptenodytes forsteri	30 (38)	P	None	1	SA	62-67	147-190	113		5 (3-9)	OS		92-95	42, 114, 120, 129		
6	Rockhopper Penguin	Eudyptes chrysocome	2.3-2.7 (2.8-3.4)	Tm.SP	O.Cr	2	SA	33-39	60-70	49	none		OS			129, 204, 232		
7	Macaroni Penguin	Eudyptes chrysotophus	5 (6)	PSP	SI.O	2	SA	35-37	62	69		6(5-8)	NS+-OS		77-86	43, 130, 232		
8	Royal Penguin	Eudyptes schlegeli	5-6	SP	O.SI	2	SA	32-37	65			5	OS		86	129, 232		
9	Fiordland Penguin	Eudyptes pachyrhynchus	3.4 (3.7)	Tm	O.Cr	2	SA	31-36	75	52	none	3-4	NS+			129, 130, 232		
10	Snares Penguin	Eudyptes robustus	2.8 (3.4)	SPT.Tm	O.CI	2	SA	31-37	75			5	OS			129, 232		
11	Erect-crested Penguin	Eudyptes sclateri	2.8-5.4 (3.4-6.3)	Tm.SP		2	SA	35	75				OS			129, 204		
12	Yellow-eyed Penguin	Megadyptes antipodes	5.2	Tm	O	1-2	SA	39-51	106	67	none	2(2-3)	NS		87	129, 176, 232		
13	Jackass Penguin	Spheniscus demersus	3.10-2.96 (3.30)	Tm	Bu	2	SA	38	70-80	35	none	3	NS		61.7	53, 130, 182, 232		
14	Humboldt Penguin	Spheniscus humboldti	4.5	Tm.STr	Cr	2	SA						NS			130		
15	Magellanic Penguin	Spheniscus magellanicus	2.7-4.1 (2.9-4.8)	Tm	Bu	2	SA	40	60-100		none	2	NS		85	129, 130, 232		
16	Galapagos Penguin	Spheniscus mendiculus	2.03:1.87 (2.18)	Tr	Bu	2	SA	38	60-80		none	4-5	NS		85	130, 232		
17	Blue Penguin	Eudyptula minor	0.79-2.1 (0.75-2.1)	Tm	Bu	1-2 D	SA	33-50	54-63	23	none	2-3	NS		74.5	175, 204, 232		
	Order	PROCELLARIIFORMES																
18	Wandering Albatross	Diomedea exulans	6-11	Tm, SP	O	1 B	SP	75-83	278	56	none	9 (7-11)	OS	311	35	96	14, 43, 129, 194, 213	
19	Antipodean Albatross	Diomedea antipodensis		Tm	O	1	SP									101		
20	Amsterdam Albatross	Diomedea amsterdamensis	4.8-8.0	Tm	O	1 B	SP	79	235				300	300	40	94-95	32, 101	
21	Tristan Albatross	Diomedea dabbenena		Tm	O	1	SP									101		
22	N. Royal Albatross	Diomedea sanfordi		TM	O	1 B	SP	79	240							101, 222		
23	S. Royal Albatross	Diomedea epomophora	8-10	Tm, SP	O.SI	1 B	SP	78-80	241	83	none	7-11	OS		58+	97	129, 213	
24	Waved Albatross	Phoebastria immutabilis	3.5	Tr	O.SI	1 B?	SP	60	167		none-11	8.3		230-240	40	95	32, 95	
25	Short-tailed Albatross	Phoebastria immutabilis	3.0 (3.4)	Tm	O.SI	1 B?	SP	49	180		none-11	8.3		213-229	32			
26	Black-footed Albatross	Phoebastria nigripes	2.85 (3.23)	STr	O	1	SP	64-65	145.6		40	4	OS		193-227	41	14, 227	
27	Laysan Albatross	Phoebastria immutabilis	3.22 (3.92)	STr	O	1	SP	65	165		weeks	8(8-9)	OS		195-202	c53	95	14, 67, 228
28	Black-browed Albatross	Thalassarche melanophris	2.90-2.70 D61(3.10)	SP	O.SI	1	SP	65-72	116-125	70		7-11	NS.OS		216-240	92	41, 43	
29	Campbell Albatross	Thalassarche impavidia		Tm		1	SP			none	10		NS		10	94.5	129, 225	
30	Shy Albatross	Thalassarche cauta	4.00:3.4-3.8 (4-4.4)	Tm	O.SI.CI	1	SP	68-75	c120	none	none		NS.OS		212-256		32, 129	
31	Chatham Albatross	Thalassarche eremita		Tm		1	SP									101		
		Thalassarche salvini		Tm		1	SP										101	
		Thalassarche salvini		Tm		1	SP											

33	Gray-head Albatross	<i>Thalassarche chrysostoma</i>	3-3.6 (3.4-3.7)	Tm,SP	O	I B	SP	69-78	c141	63		7-13	OS	180-218	304	95	41, 43, 129
34	Atlantic Yellow-nosed Alb.	<i>Thalassarche chlororhynchos</i>	2.5:2.4-2.9	Tm,SP	O,Cl,SI	I	SP	71-78	c120	60		c9	OS	200-256	37+		129
35	Indian Yellow-nosed Alb.	<i>Thalassarche carteri</i>		Tm,SP	O,SI	I	SP	7-78	c130				OS				32
36	Bulwer's Albatross	<i>Thalassarche bulleri</i>	2.70 :2.78 (3.12)	Tm,SP	O,SI	I	SP	69-72	140-167		none	5+	NS	205-213	30+	91.3	32, 129, 182, 183
37	Sooty Albatross	<i>Phoebastria fusca</i>	2.4 (2.7)	Tm	Cl,SI	I B	SP	65-75	c160	37		5-15	OS	203			129, 222
38	Light-mantled Sooty Alb.	<i>Phoebastria palpebrata</i>	2.8-3.1	Tm-P	O,Cl,SI	I	SP	66-69	140-157	45		7	OS	218		97.3	129, 222
39	Southern Giant Petrel	<i>Macronectes giganteus</i>	3.94 (5.19)	P-Tm	O	I	SP	59-66	112-123	79	none	4-10	OS	150-210		90-96	41, 111, 129, 152
40	Northern Giant Petrel	<i>Macronectes halli</i>	3.8 (5)	P	O,SI	I	SP	57-62	106-120	66		4-11	NS	199			129, 222
41	Southern Fulmar	<i>Fulmarus glacialis</i>	0.7-1	P,SP	SI,Cl	I	SP	43-50	48-56	32		9-11	OS	106		90-95	41, 129, 139, 222
42	Northern Fulmar	<i>Fulmarus glacialis</i>	0.58 (0.65) up to 0.8	P-Tm	O,Cl	I	SP	48.4(47-49)	53(49-58)	31	none	5(5-12)	OS	102-112	c31	94-97	14, 59, 60, 102, 103, 139, 165
43	Antarctic Petrel	<i>Thalassioica antarctica</i>	0.69 (0.81)	P,SP	Cl,SI	I	SP	40-45	42-62				NS,OS	104		90	129, 222
44	Cape Pigeon, Cape Petrel	<i>Daption capense</i>	0.36-0.51 (0.38-0.55)	P,SP	Cl,O	I	SP	44-47	47-68	16	none	6	OS	87	25	94	14, 110, 129, 222
45	Snow Petrel	<i>Pagodroma nivea</i>	0.24-0.46	P	Cl,Cr	I	SP	41-49	41-55	17	none	3-7	NS,OS	83		93	19, 32, 41, 110, 129
46	Kerguelen Petrel	<i>Lugensa brevirostris</i>	0.29-0.36	Tm,SP	Bu	I	SP	46.51	59-62		none		OS	80-88			17, 32, 129, 222
47	Great-winged Petrel	<i>Pterodroma macroptera</i>	0.46-0.75	Tm	Bu,Cr,Un	I	SP	55-57	125		none	6-7	OS	97-102			129, 221, 222
48	White-headed Petrel	<i>Pterodroma lessonii</i>	0.58-0.81	Tm, SP	Bu	I	SP	60 +/-	112	13		5.5	OS	109			17, 129, 222
49	Atlantic Petrel	<i>Pterodroma incerta</i>		Tm		I	SP						OS?	100			32, 86, 222
50	Providence Petrel	<i>Pterodroma solandri</i>	0.41-0.43 (0.44-0.6)	Tm,STr	Bu	I	SP	56					OS	95-105			32, 129, 222
51	Magenta Petrel	<i>Pterodroma magentae</i>	0.42-0.51	Tm,STr	Bu,Un	I	SP	52	90?				OS	102			32, 129, 222
52	Murphy's Petrel	<i>Pterodroma ultima</i>		STr,Tr		I	SP						OS?	97			32, 86, 222
53	Soft-plumaged Petrel	<i>Pterodroma mollis</i>	0.28-0.31	STr, Tm	Bu	I	SP	50	90-115		none		OS	83-95			32, 129, 222
54	Cape Verde Petrel	<i>Pterodroma feae</i>		STr	Bu	I	SP							83-95			32, 222
55	Madeira Petrel	<i>Pterodroma madeira</i>		STr		I	SP										32, 222
56	Bermuda Petrel	<i>Pterodroma cahow</i>		STr	Bu,Cr	I	SP	52	92				OS	89			32, 222
57	Black-capped Petrel	<i>Pterodroma hastata</i>		STr		I	SP	51-54	90-100				OS	95			32, 222
58	Jamaica Petrel	<i>Pterodroma caribbaea</i>		Tr	Bu,Cr	I	SP						OS	c95		32	
59	Juan Fernandez Petrel	<i>Pterodroma externa</i>	0.41-0.54	STr,Tr	Bu	I	SP						OS	95-97			32, 129
60	White-necked Petrel	<i>Pterodroma cervicalis</i>	0.38-0.54	Tm	Bu	I	SP						OS	100			86, 129
61	Braui's Petrel	<i>Pterodroma braui</i>	0.4	STr, Tr		I	SP							96			129
62	Galapagos Petrel	<i>Pterodroma phaeopygia</i>	0.43	Tr	Bu,Cr	I	SP	55.3(54-58)	100-119	10	none	5(5-6)	OS	91		93	32, 200, 222, 223
63	Hawaiian Dark-rumped Petrel	<i>Pterodroma sandwicensis</i>	0.45 (0.33-63)	Tr	Bu,Cr	I	SP	55.3(54-58)	100-119		none	5-6	OS			93	198, 199, 200
64	Kermadec Petrel	<i>Pterodroma neglecta</i>	0.37-0.59	STr,Tr	O	I	SP	50-52	110-130				NS	92			129, 222
65	Trindade Petrel	<i>Pterodroma arminjoniana</i>	0.29-0.46	STr,Tr	Bu,SI	I	SP						OS	88-102			32, 129
66	Herald Petrel	<i>Pterodroma heraldica</i>	0.32	STr,Tr	Bu,SI	I	SP						NS	88-102			32, 129
67	Henderson Petrel	<i>Pterodroma arata</i>		STr		I	SP						OS				32
68	Phoenix Petrel	<i>Pterodroma alba</i>	0.27	STr,Tr	Un,Cr	I	SP						NS	83			32, 129
69	Mottled Petrel	<i>Pterodroma inexpectata</i>	0.24-0.44	SP,Tm	Bu,SI	I	SP	49-53	90-105				OS	78-84			32, 129, 222, 223
70	Bonin Petrel	<i>Pterodroma hypoleuca</i>	0.24 (0.152-0.308)	STr	Bu	I	SP	49	82(77-89)				OS	63-71	21		14, 85, 193, 222
71	Black-winged Petrel	<i>Pterodroma nigripennis</i>	0.17-0.2	STr,Tr	Bu	I	SP						OS	63-71			129
72	Chatham Island Petrel	<i>Pterodroma axillaris</i>	0.2	Tm	SI	I	SP	10-15						63-71			129
73	Cook's Petrel	<i>Pterodroma cookii</i>	0.19	STr	Bu	I	SP	47-51	88				OS	65			129
74	Mas A Tierra Petrel (De Filippi's)	<i>Pterodroma dellipiana</i>		STr		I	SP							66?			32
75	Stejneger's Petrel	<i>Pterodroma longirostris</i>		SP-STr		I	SP						OS	53			32, 129

Common Name	Scientific Name	Adult Mass (kg) Mcan:range or Mcan:female(male)	Breeding Distribution	Nest Location	Clutch Size (range)	Hatching Type	Incubation Period (d)	Fledging Period (d)	Maximum Growth Rate (g/d)	Post-Fledging Care (d)	Age of First Breeding (yrs)	Foraging Distance	Wing Span (cm)	Maximum Age (yrs)	Annual Survival %	Index to Literature Cited
76 Pycroft's Petrel	<i>Pterodroma pycrofti</i>	0.13–0.2	Tm	Bu	1	SP	45	80					53–66		72	32, 129
77 Gould's Petrel	<i>Pterodroma leucopetra</i>	0.17–0.22	Tm	Cr	1	SP	42–49	77–84				OS	70			129
78 Collared Petrel	<i>Pterodroma brevipes</i>		Tr	Sl, Cr, U	1	SP										32
79 Macgillivray's Petrel (Fiji)	<i>Pseudobulweria macgillivrayi</i>		STr		1	SP										32, 222
80 Tahiti Petrel	<i>Pseudobulweria rostrata</i>		Tm, STr	Bu	1	SP							84			129, 222
81 Beck's Petrel	<i>Pseudobulweria becki</i>		Tr		1	SP										101, 222
82 Mascarene Petrel	<i>Pseudobulweria aterrima</i>		STr	Bu, Cr?	1	SP						OS?				32, 222
83 Blue Petrel	<i>Halobaena caerulea</i>	0.13–0.23	SP–Tm	Bu, Sl	1	SP	45–49	48–60	7.2			NS	62–71			129, 222, 223
84 Broad-billed Prion	<i>Pachyptila vittata</i>	0.17–0.24	Tm	Bu	1	SP	56	50–53				OS	61			129, 222, 223
85 Salvin's Prion	<i>Pachyptila salvini</i>	0.12–0.21	SP, Tm	Bu, Cr	1	SP	44–55	52–63	6.9				59		84	41, 129, 222, 223
86 Antarctic Prion	<i>Pachyptila desolata</i>	0.10–0.19	PSP	Bu, Cr	1	SP	44–46	51	6.9		5(3–6)	OS	63			41, 129
87 Narrow-billed Prion	<i>Pachyptila belcheri</i>	0.12–0.18	SP, Tm	Bu	1	SP	43–47	43–54, 69	6.5		6.7	NS+	56–59			17, 129
88 Fairy Prion	<i>Pachyptila tutur</i>	0.11–0.16 (0.12–0.18)	SP–STr	Bu, Cr	1	SP	44–54	50	6.6		4–5	NS	56			129, 222, 223
89 Fulmar Prion	<i>Pachyptila crassirostris</i>	0.10–0.19	Tm	Bu, Cr	1	SP						NS	60			129
90 Bulwer's Petrel	<i>Bulweria bulwerii</i>	0.99	STr, Tr	Cr	1	SP	44.2(38–46)	62(57–67)		none	4–6	OS	65–73		94.7	5, 129, 132, 140, 222
91 Jouanin's Petrel	<i>Bulweria fallax</i>		Tr		1	SP										
92 White-chinned Petrel	<i>Procellaria aequinoctialis</i>	1.28 (1.39)	SP, Tm	Bu	1	SP	57–62	87–106	24		6.5	OS	134–147		79	17, 129, 222, 223
93 Spectacled Petrel	<i>Procellaria conspicillata</i>		Tm	Bu	1	SP						OS				32, 222, 223
94 Westland Petrel	<i>Procellaria westlandica</i>	1.1–1.2 (1.2–1.3)	Tm	Bu	1	SP	51–68	130		none	12	OS	135–140			32, 129, 222
95 Parkinson's Petrel	<i>Procellaria parkinsoni</i>	0.70–0.68 (0.72)	Tm	Bu	1	SP	56	96–122		none	6–8	OS	115		94	32, 113, 129, 140, 141
96 Grey Petrel	<i>Procellaria cinerea</i>	1.13	SP, Tm	Bu	1	SP	52–61	93, 110–120	18		7	OS	115–130			17, 129, 222, 223
97 Cory's Shearwater (Crete)	<i>Calonectris d. diomedea</i>	0.55±0.51(0.59)	STr	Bu, Cr	1	SP	53	92		none	7.4				89	32, 142, 143, 144, 145, 222, 223
98 (Corsica)	<i>Calonectris d. diomedea</i>	0.66±0.60(0.71)	Tm, STr	Bu, Cr	1	SP	51	91		none	7.7				93	142, 143, 144, 145, 211, 222, 223
99	<i>Calonectris d. borealis</i>	0.89±0.82(0.96)	Tm, STr	Bu, Cr	1	SP	54	97	14	none	9	OS			95.6	86, 88, 129
100 Streaked Shearwater	<i>Calonectris leucomelas</i>	0.44–0.55	STr, Tr		1	SP	64	66–80					122			32, 129, 222
101 Wedge-tailed Shearwater	<i>Puffinus pacificus</i>	0.30–0.57	STr, Tr	Bu	1	SP	48–56	98–115	10	none	4	OS	97–105	26		14, 69, 129, 222, 229
102 Buller's Shearwater	<i>Puffinus bulleri</i>	0.41	STr	Bu	1	SP	51	100				OS	97–99			32, 129, 222
103 Flesh-footed Shearwater	<i>Puffinus carneipes</i>	0.58–0.75	STr	Bu, Sl	1	SP	60	92				NS, OS	99–107			32, 129, 222
104 Pink-footed Shearwater	<i>Puffinus creatopus</i>		STr	Bu	1	SP							109			32, 129, 222
105 Greater Shearwater	<i>Puffinus gravis</i>	0.72–0.95	Tm, STr	Bu, Cr	1	SP	53–57	105					100–118			32, 129, 222
106 Sooty Shearwater	<i>Puffinus puffinus</i>	0.63–0.95	Tm	Bu	1	SP	52.7	97	17	none	5–7	OS	103		93	32, 129, 177
107 Short-tailed Shearwater	<i>Puffinus tenuirostris</i>	0.47–0.64 (0.51–0.73)	STr	Bu	1	SP	52–55	94	13	none	6(5–7)	OS	93		93–94	41, 89, 129, 192
108 Christmas Shearwater	<i>Puffinus nativitatis</i>	0.32–0.34	STr, Tr	Cr, Un	1	SP	50–54	96					71–81			32, 129, 222

109	Manx Shearwater	<i>Puffinus puffinus</i>	0.35–0.58 (0.30–0.45)	SP:Tm	Bu	1	SP	51.3(47–66)	69(62–76)	12	none	6	OS	79	5	93	14, 18, 86, 93, 94, 125, 129
110	Levantine Shearwater	<i>Puffinus yelkouan</i>	0.34–0.42	Tm	Cr,Un	1	SP	52	72				NS	76–93			32, 222
111	Balearic Shearwater	<i>Puffinus mauretanicus</i>		Tm	Cr,Un	1	SP	c50	c72								32
112	Townsend's Shearwater	<i>Puffinus auricularis</i>	0.34 (0.32–0.36)	Tr	Bu,Cr	1	SP	62(47–66)	92.4(88–100)		none	4–7	OS			90	4, 115
113	Newell's Shearwater	<i>Puffinus newelli</i>	0.39 (0.34–0.43)	Tr	Bu,Cr	1	SP	47–66			none	4–7	OS				4, 122
114	Black-vented Shearwater	<i>Puffinus opisthomelas</i>	0.41	STr	Bu	1	SP	50	69				NS	76–89			32, 222
115	Fluttering Shearwater	<i>Puffinus gavia</i>	0.23–0.42	Tm,STr	Bu	1	SP						NS,OS	76			32, 129
116	Hutton's Shearwater	<i>Puffinus huttoni</i>	0.37	STr	Sl	1	SP	50–60	80			4–6	NS,OS	72–78			129
117	Audubon's Shearwater	<i>Puffinus herminieri</i>	0.15–0.23	STr,Tr		1	SP	49–51	62–75			8	NS+	64–74			32, 129
118	Heinroth's Shearwater	<i>Puffinus heinrothi</i>		Tr		1	SP										32, 222
119	Little Shearwater	<i>Puffinus assimilis</i>	0.18–0.26	Tm,STr	Bu,Sl	1	SP	52–58	70–75				OS	55–67			32, 129
120	Peruvian Diving-petrel	<i>Pelecanoides garnotii</i>		Tm,STr	Bu	1	SP						NS				32, 222
121	Magellanic Diving-petrel	<i>Pelecanoides magellani</i>		Tm	Bu	1	SP	44–52	42–60	4.8			NS	30–38			32
122	Georgian Diving-petrel	<i>Pelecanoides georgicus</i>	0.09–0.15	Tm	Bu	1	SP	53.5	49–55	4.3	none	2	NS	43			32, 17, 129, 222, 223
123	Common Diving-petrel	<i>Pelecanoides urinatrix</i>	0.11–0.15	Tm	Bu,Sl	1	SP	53.5	49–55	4.3	none	2–3	NS	43			75–87 41, 129, 222, 223
124	Wilson's Storm-petrel	<i>Oceanites oceanicus</i>	0.03–0.04	P,SP	Bu,Cr	1	SP	33–53	51–97	2.8	none	4(4–5)	OS	39			91 41, 129, 222, 223
125	Elliot's (White-vented) S-p.	<i>Oceanites gracilis</i>		STr,Tr		1	SP										32
126	Grey-backed Storm-petrel	<i>Garrodia nereis</i>	0.03–0.04	Tm	Un	1	SP	40–45	75				OS	39			129, 222, 223
127	White-faced Storm-petrel	<i>Pelagodroma marina</i>	0.04–0.07	STr	Bu	1	SP	45–59	52–67, 80	2.2	none		OS	43			129, 222, 223
128	Black-bellied Storm-petrel	<i>Fregatta tropica</i>	0.05–0.06	SP:Tm	Cr	1	SP	35–44	55, 65–71		none		OS	46			129, 222, 223
129	White-bellied Storm-petrel	<i>Fregatta gallaria</i>	0.04–0.06	STr	Cr,Bu	1	SP	40	68				OS	45			129, 222, 223
130	White-throated Storm-petrel	<i>Nesofregata fuliginosa</i>	0.055–0.115	STr,Tr	Un,Cr	1	SP						OS				32, 185
131	European (British) Storm-petrel	<i>Hydrobatas pelagicus</i>	0.03	Tm, STr	Cr	1	SP	41	66	0.8	none		OS				222, 223
132	Least Storm-petrel	<i>Halocptena microsoma</i>	0.02	STr	Cr	1	SP							32			32, 88
133	Wedge-rumped Storm-petrel	<i>Oceanodroma tethys</i>		Tr	Cr,Un	1	SP		76				OS				32
134	Madeiran Storm-petrel	<i>Oceanodroma castro</i>		Tm–Tr	Cr,Bu	1	SP	42	64–78					44–46			32, 222
135	Swinhoe's Storm-petrel	<i>Oceanodroma nonohis</i>	0.038–0.040	Tm–Tr	Bu	1	SP							44–46			32
136	Leach's Storm-petrel	<i>Oceanodroma leucothoa</i>	0.04–0.05	Tm,STr	Bu,Cr	1	SP	43.3(37–50)	56–79	1.6	none	3–6	OS	45–48	36	79–93	3, 14, 39, 112, 129, 178, 222, 223
137	Markham's Storm-petrel	<i>Oceanodroma markhami</i>		Tr		1	SP						OS				32, 222
138	Tristan's Storm-petrel	<i>Oceanodroma tristrami</i>		STr	Bu,Cr	1	SP						OS	56			32, 222
139	Black Storm-petrel	<i>Oceanodroma melania</i>		STr	Bu, Cr	1	SP							46–51			32, 222
140	Matsudaira's Storm-petrel	<i>Oceanodroma matsudairae</i>		STr	Bu	1	SP							56			32, 129
141	Ashy Storm-petrel	<i>Oceanodroma homochroa</i>	0.039	STr	Cr	1	SP	44.8(42–59)	84.4(72–119)		none		NS,OS		8		1, 2, 14, 222, 223
142	Hornby's Storm-petrel	<i>Oceanodroma hornbyi</i>		STr		1	SP						OS				32
143	Forked-tailed Storm-petrel	<i>Oceanodroma furcata</i>	0.06	Tm	Bu,Cr	1	SP	40	58	1.5			OS		17		14, 222, 223
Order																	
PELECANIFORMES																	
144	White-tailed Tropicbird	<i>Phaethon lepturus</i>	0.32 (0.22–0.36)	STr,Tr	Un,Cr	1	SA	42(40–43)	70–85		none	4(est.)	OS	90–95			126, 129, 203
145	Red-billed Tropicbird	<i>Phaethon aethurus</i>	0.70	STr,Tr	Un,Cr	1	SA	42–44	80–90		none		OS	99–106			159, 203
146	Red-tailed Tropicbird	<i>Phaethon rubricauda</i>	0.50–0.85	STr,Tr	Un,Cr	1	SA	45(39–51)		15	none	2–5	OS	113	29	90	14, 68, 129, 187
147	White Pelican	<i>Pelecanus oncorhynchus</i>	6–9 (9–15)	Tm–Tr	O	2–4	A	29–31	65–70				NS,NS+				32, 106, 116, 172
148	Dalmatian Pelican	<i>Pelecanus crispus</i>	7.25–10 (9.5–12)	Tm,STr	O	1–3	A	31–34	85		15–20		NS				40, 116
149	Australian Pelican	<i>Pelecanus conspicillatus</i>	4–6.8	Tm,STr	O	2(1–4)	A	32–35	90			4–6	NS,OS	230–260			116, 129

Common Name	Scientific Name	Adult Mass (kg) Mean:range or Mean:female(male)	Breeding Distribution	Nest Location	Clutch Size (range)	Hatching Type	Incubation Period (d)	Fledging Period (d)	Maximum Growth Rate (g/d)	Post-Fledging Care (d)	Age of First Breeding (yrs)	Foraging Distance	Wing Span (cm)	Maximum Age (yrs)	Annual Survival %	Index to Literature Cited
150 American White Pelican	Pelecanus erythrorhynchos	4.0–5.9 (5.0–7.1)	Tm	O	2(1–4)	30?	60	20+		3				26		64, 116
151 Pink-backed Pelican	Pelecanus rufescens	3.9–6.2 (4.5–7)	STr,Tr	O,T	1–3	A	30–35	70–75		10–21						20, 50, 116
152 Spot-billed Pelican	Pelecanus philippensis	4.65 (5.1–5.7)	STr,Tr	T	3	A	29–31	120?								116, 146
153 Brown Pelican	Pelecanus occidentalis	3.2 (3.7)	Tm,STr	O,T	2,6(2–3)	A	30	79.5(71–88)	115	30–84	3(2–4)	NS,OS	210	28	e80	116, 163, 190
154 Ascension Frigatebird	Fregata aquila	1.25	STr	O	1 B	A	43–51	180?		90–120		OS	196–201			159, 205
155 Lesser Frigatebird	Fregata ariel	0.78–1.11	Tr	T	1 B	A	50 +/-	145–179		140–180		OS	175–195	28		14, 48, 129, 185
156 Great Frigatebird	Fregata minor	1.10–1.89 (0.90–1.35)	Tr	T	1 B	A	56(51–60)	160–169		158–428	3–7	OS	198	35		14, 48, 129
157 Christmas Island Frigatebird	Fregata andrewsi	1.55 (1.4)	Tr	T	1 B	A	46–54	177		120–200		NS,OS	205–230			129, 159
158 Magnificent Frigatebird	Fregata magnificens	1.67 (1.28)	Tr	T	1 B	A	59(58–60)	165	15	150	5–7	OS	229			34, 49, 163
159 Australian Gannet	Morus serrator	2.3	Tm	O,Cl	1	A	43,6(37–50)	102(95–109)		none	3–7	OS		30+		88, 148
160 Cape Gannet	Morus capensis	2.7	Tm,STr	O	1	A	44	97.2		none	3–4	OS	171–185	30+		129, 148
161 Northern Gannet	Morus bassanus	3.07 (2.93)	Tm	Cl,O	1	A	43.6	91	80	none	4(3–6)	OS	185	30	94	97, 137, 148
162 Abbott's Booby	Sula abbotti	1.46	Tr	T	1 B	A	56–57	151–168		180–230		OS		30+		129, 148
163 Peruvian Booby	Sula variegata	1.3	Tm-STr	Cl,O	1,5(1–2)	A	42	78		62	2–3	NS,OS		20+		148
164 Blue-footed Booby	Sula nebouxi	1.80 (1.28)	Tr	Cl,O	2(1–3)	A	41	102		56	2–6	NS,OS	156	20+		148
165 Masked Booby	Sula dactylatra	2.10 (1.88)	STr,Tr	Cl,O	2(1–2)	A	43(38–49)	130(109–151)	35	50–150	2–4	OS	156	30+	92.5	6, 24, 51, 129, 148, 235
166 Nazca Booby	Sula granti	1.75:1.88 (1.63)	Tr	O	1,6	A	43	120		30–62		NS,OS			83.2	97, 148
167 Brown Booby	Sula leucogaster	0.9–1.8	Tr	O,Cl	2(1–3)	A	42.8	95(85–105)	27	118–259	2–4	NS,OS	148	27	92–96	14, 51, 129, 148, 185
168 Red-footed Booby	Sula sula	0.8–1.5	Tr	T	1	A	44,5(43–49)	101,5(91–139)	20	190	2–4	OS	151	30+	90	129, 148, 189
169 Long-tailed cormorant	Microcarbo africanus	0.43–0.60 (0.50–0.88)	STr,Tr	O,T	2,3, 3,8	A	23–25	35				NS+	80–90			116, 159
170 Crowned Cormorant	Microcarbo coronatus	0.67–0.78 (0.48–0.88)	Tm	O,T	1–5	A	23	30–35				NS				116, 159
171 Pygmy Cormorant	Microcarbo pygmaeus	0.56–0.64 (0.65–0.87)	Tm,STr	T	4–6	A	27–30	70				NS	80–90			116, 159
172 Little Cormorant	Microcarbo niger	0.36–0.53	Tr	T	3–5	A						NS				116, 159
173 Little Pied Cormorant	Microcarbo melanoleucos	0.4–0.9 (0.7–0.9)	Tm,STr	Ti,O	3–5	A						NS	85–91			129, 159
174 Brandt's Cormorant	Compsahaleus penicillatus	1.4–2.3 (2.4–2.7)	Tm,STr	O	2,6(2–5)	A	29,2(28–32)			yes	3(2–9)	NS+	108	18	74	14, 15, 16, 62, 116, 220
175 Flightless Cormorant	Compsahaleus harrisi	2.5–2.9 (3.8–4.1)	Tr	O	2–4	A	35	60		30–90		NS			87.6	96, 116, 159
176 Bank Cormorant	Compsahaleus neglectus	1.80	Tm,STr	O,Cl	2(1–3)	A	29–30					NS	132			159
177 Black-faced Cormorant	Compsahaleus fuscescens		Tm	O,Cl	2–3	A						NS	93–102			129, 159
178 Neotropic Cormorant	Hypoleucos brisiliensis	1.07 (1.26)	STr,Tr	Ti,O	3–4(2–6)	A	24,6(23–26)	63		yes	1(1–3)	NS		13		160, 210
179 Double-crested Cormorant	Hypoleucos auritus	1.8–2.6 (2.0–3.0)	Tm,STr	O,Cl,T	4(1–7)	A	25–28	42–56		28	2,7(1–4)	NS		18		35, 56, 62,104, 197
180 Indian Cormorant	Hypoleucos tuscicollis	0.60–0.79	STr,Tr	T	3–6	A										159
181 Pied Cormorant	Hypoleucos varius	1.1–1.9 (1.5–2.9)	Tm	O	2–4	A	25–33	47–60				OS	110–130			129
182 Little Black Cormorant	Hypoleucos sulcirostris	0.5–1.2	Tm,STr	T	4–6	A							95–105			129, 159
183 Great Cormorant	Phalacrocorax carbo	2–2.5	Tm,STr	O,T,CL	3–6	A	30 (28–31)	53(49–56)		50	3(2–3)	NS,OS	130–150		88	35, 70, 116, 129

184	Japanese Cormorant	Phalacrocorax capillatus	3.1	STr	Cl	3	A	34	40					NS				116
185	Sooty Cormorant	Leucocorbo nigrogularis		STr		2-4								NS				116, 159
186	Cape Cormorant	Leucocorbo capensis	1.16-1.31	STr	Cl,O,Tr	2-4	A	22-28	49				3	NS				116, 159
187	Guanay Cormorant	Leucocorbo bougainvilli		STr	Sl,O	3(2-3)	A							NS,OS				159
188	Kerguelen Shag	Notocorbo verrucosus	1.7-2.0	PSP	Cl	2-4	A									110		129
189	Imperial Shag	Notocorbo atriceps	1.5-2.4 (1.7-3.5)	SP	O,Cl	2.7(1-3)	A	28.8	77.5(75-80)				2-4	NS		110-125		116, 129
190	Antarctic Shag	Notocorbo transfiendensis	2.5-3.0	PSP	O,Sl,Cl	2.5(2-3)	A	40-45		yes			4+	NS				129, 159
191	South Georgia Shag	Notocorbo georgianus	2.47 (2.88)	SP	O,Sl,Cl	2.3, 2.8	A	28-31	65				3+	NS			85-91	129, 159
192	Campbell Island Shag	Nesocorbo campbelli	2.0 (1.6-1.9)	Tm	O,Cl,Cr		A							NS,OS	105			129, 159
193	New Zealand King Shag	Euleucorbo carunculatus	2.5	Tm	O,Sl	1-3	A							NS				159
194	Stewart Island Shag	Euleucorbo chalconotus	1.79-3.88	Tm	O,Sl	2-3	A							NS				
195	Chatham Island Shag	Euleucorbo onslowi	1.79 (2.4)	Tm	O,Sl,Cl	3	A							NS				129, 159
196	Auckland Island Shag	Euleucorbo colensoi		Tm	O,Cl	3	A	26-32						NS,OS	105			129, 159
197	Bounty Island Shag	Euleucorbo ranfurlyi	2.3-2.9	Tm	Cl	2-3	A							NS,OS				129, 159
198	Rock Cormorant	Strictocorbo magellanicus		Tm	Cl	3(2-4)	A							NS	92			159
199	Pelagic Cormorant	Strictocorbo pelagicus	1.53-1.70 (1.75-2.03)	Tm	O,Cr	3(1-6)	A	30 (29-31)	45(40-50)	weeks			2	NS,OS	95	18		14, 35, 109
200	Red-faced Cormorant	Strictocorbo urile	1.55-2.05 (1.9-2.27)	Tm	Cl,Sl	2-4	A	33(32-34)	59(54-64)				3	NS,OS	122			35, 116, 159
201	European Shag	Strictocorbo aristotelis	1.60 (1.94)	Tm	Cl,O	3(1-6)	A	34(33-35)	53(48-58)	52			2-3	NS,OS			80-88	35, 116, 171
202	Red-legged Cormorant	Strictocorbo gaimardi	1.3	STr,Tr	Cl	3(3-4)	A								91			116, 159
203	Spotted Shag	Strictocorbo punctatus	0.7-1.6 (0.9-1.7)	Tm	Cl,Sl	2.7(2-4)	A	32(28-35)	62(57-71)				2	NS,OS	91-99			116, 129, 159
204	Pitt Island Shag	Strictocorbo featherstoni	0.645-1.33	Tm	Cl	3?	A							NS,OS				159
Order																		
CHARADRIIFORMES																		
205	Parasitic Jaeger	Stercorarius parasiticus	0.4-0.3-0.6(0.5: 0.3-0.6)	P-Tm	O	2 (1-2)	SP	26(24-29)	31(26-38)	14-28			4(3-7)	NS	104	18	89	71, 72, 157, 158, 230
206	Long-tailed Jaeger	Stercorarius longicaudus	0.28-0.44 (0.21-0.35)	PSP	O	2	SP	24.2	25(24-28)	24			3	NS	96	8		14, 158
207	Pomarine Jaeger	Catharacta pomarinus	0.68-1.0 (0.52-0.85)	PSP	O	2(1-3)	SP	25(23-27)		14+				NS+				71, 158, 231
208	Great Skua	Catharacta skua	1.418:1.48 (1.356)	Tm	O	2	SP	29 (26-32)	46 (40-51)	40			6.8	NS	150		93	71, 87, 158
209	Chilean Skua	Catharacta chilensis	1.1-1.7	Tm	O	2	SP	28-32						NS	130-138			27, 158
210	Brown Skua	Catharacta antarctica	1.2-2.1	P-Tm	O	2	SP	28-32	45-50				6+	NS	126-160		90-96	27, 158
211	South Polar Skua	Catharacta macromicki	0.9-1.6	P	O	2	SP	28-31	36-53	6+			6+	NS+	130-140		90-95	27, 158
212	Dolphin Gull	Larus scoresbii	0.52	Tm	O	2(2-3)	SP	24-27						NS	c89			236
213	Pacific Gull	Larus pacificus	0.9-1.18	Tm,STr	O	3	SP	23-26							137-157			27
214	Band-tailed Gull	Larus belcheri		STr,Tr	O	3	SP								120			27
215	Orlog's Gull	Larus atlanticus	0.9-0.96		O	2-3	SP			yes					130-140			27
216	Black-tailed Gull	Larus crassirostris	0.43-0.64	Tm,STr	O	2-3	SP	24-25	35-40						126-128			27
217	Gray Gull	Larus modestus	0.36-0.40	STr	O	1-3	SP	29-31	40									27
218	Heerman's Gull	Laus heermanni	0.37-0.64	STr	O	1-2	SP		45				4		117-124			27
219	White-eyed Gull	Larus leucophthalmus	0.27-0.41	Tr	O	2-3	SP								110-115			27
220	Sooty Gull	Larus hemprichi	0.40-0.51	Tr	O	1-3	SP	25										27
221	Common (Mew) Gull	Larus canus	0.29-0.55	SP,Tm	O	3(1-3)	SP	24-26	30-35	Brief			3(2)		394-586	24		27
222	Audouin's Gull	Larus audouini	0.58-0.77	STr,Tr	O	3(1-4)	SP	26-33	35-40	75								27
223	Ring-billed Gull	Larus delawarensis	0.471 (0.566)	Tm	O	3(2-4)	SP	25(23-29)	35-40	24			no?	3(3-4)	NS	121-127	32	27, 63, 181, 217
224	California Gull	Larus californicus	0.556 (0.657)	Tm	O	2(2-4)	SP	25(23-27)	48(42-60)	yes			3-4	NS	121-140	25	79-92	14, 27, 233, 234
225	Great Black-backed Gull	Larus marinus	1.488 (1.829)	SP,Tm	O	2.8(2-3)	SP	26-32	45-55	20-40			4-5	NS,OS	169	27		14, 27, 39, 84

Common Name	Scientific Name	Adult Mass (kg) Mean:Female(male)	Breeding Distribution	Nest Location	Clutch Size (range)	Hatching Type	Incubation Period (d)	Fledging Period (d)	Maximum Growth Rate (g/d)	Post-Fledging Care (d)	Age of First Breeding (yrs)	Foraging Distance	Wing Span (cm)	Maximum Age (yrs)	Annual Survival %	Index to Literature Cited
226 Kelp Gull	Larus dominicanus	1.0:0.83 (1.05)	P-Tm	O	2-4	SP	28	61		41-54	4	NS	152-169	81	27, 108, 133, 134, 135	
227 Glaucous-winged Gull	Larus glaucescens	0.946 (1.180)	SP:Tm	O	2(1-4)	SP	25-28	40-53	21		5.4(4-7)	NS	132-146	24	83-87	14, 27, 215, 216
228 Western Gull	Larus occidentalis	1.01:0.8-1.2	Tm:STr	O,SI	3(1-3)	SP	30-32	47.5(45-50)	30-90		4-6	NS	132-144	28	90	12, 14, 27, 33, 170
229 Yellow-footed Gull	Larus livens	1.32:1.1-1.4	STr	O	2.7(1-4)	SP	28(24-30)	37(30-45)	30-90		4-5	NS	142-155			27, 33, 162
230 Glaucous Gull	Larus hyperboreus	1.07-1.82		O	2-3	SP	26-30	49	26+				142-152	27		
231 Iceland Gull	Larus glaucoides	0.56-0.86	SP:Tm	Cl,O	2-3	SP							125-130		27	
232 Thayer's gull	Larus glaucoides thayeri	0.85-1.15		Cl	2-3?	SP							130-140		27	
233 Herring Gull	Larus argentatus	1.044 (1.226)	SP:Tm	Cl,O	3(1-3)	SP	30-32	47.5(45-50)	33	45+	4-5	NS	135-149	32	91	14, 27, 57, 121, 167, 168, 169
234 Yellow-legged Gull	Larus cachinnans	0.8-1.5			2.7(1-3)	SP	26-29	42-49					140-155		27	
235 Armenian Gull	Larus armenicus	0.95-1.05			3	SP							140		27	
236 Slaty-backed Gull	Larus schistisagus	1.05-1.69	Tm		3(1-4)	SP	28-30	40-45					132-148		27	
237 Lesser Black-headed Gull	Larus fuscus	0.83:0.55-1.2	SP:Tm	O,Cl	2.7(1-3)	SP	24-28	30-40	yes				124-127	26	27, 92	
238 Great Black-headed Gull	Larus ichthyetus	0.9-2.0	Tm		2.9(1-3)	SP	25		40		4-5		155-170		27, 92	
239 Brown-headed Gull	Larus brunicephalus	0.45-0.71	Tm		3(1-4)	SP	e24						100-105		27	
240 Gray-headed Gull	Larus cirrocephalus	0.25-0.33	STr:Tr	O,F	2-3	SP			8		3		89-92		27	
241 Hartlaub's Gull	Larus hartlaubii	0.23-0.34	STr		1-3	SP	e25	e40				NS	91-96		27, 101, 153	
242 Silver Gull	Larus novaehollandiae	0.26-0.35	Tm:STr		D	SP					3.7				85.6	108, 134, 135
243 Red-billed Gull	Larus scopulinus	0.28:0.259 (0.299)	Tm	O	1.87	SP	24	35-42							27	
244 Black-billed Gull	Larus bulleri	0.19-0.27	Tm			SP									27	
245 Brown-hooded Gull	Larus maculipennis	0.29-0.36	SP:Tm			SP									27	
246 Common Black-headed Gull	Larus ridibundus	0.19-0.32	SP:Tm	O,F	2.6(1-3)	SP	22-26	35			2-3	NS	94-110	32	27	
247 Slender-billed Gull	Larus genei	0.22-0.35	Tm:Tr	O	2-3	SP	22	30-37			2-3		102-110		27	
248 Bonaparte's Gull	Larus philadelphia	0.17-0.23	SP:Tm	T	2	SP	22-25				2-3		78-84		27	
249 Saunders's Gull	Larus saundersi			O	3	SP									27	
250 Andean Gull	Larus serranus	0.48	STr:Tr	O	2-3	SP									27	
251 Mediterranean Gull	Larus melanocephalus	0.21-0.39	Tm:STr	O	2-3	SP	23-26	35-40					98-105	15+	27	
252 Relict Gull	Larus relictus	0.42-0.66	Tm	O	2.6(2-3)	SP	24-26				3				27	
253 Lava Gull	Larus fuliginosus		Tr	O	2	SP	33	60		28					27	
254 Laughing Gull	Larus atricilla	0.289 (0.327)	Tm:Tr	O,F	2.8(2-3)	SP	24.5(22-25)	42.5(35-50)	14-30		3-4	NS	102-107	19	25, 186, 188	
255 Franklin's Gull	Larus pipixcan	0.26-0.28	Tm	F	3(2-4)	SP	24.5(23-26)	35-40		7+	2-3	NS	85-106	10	14, 22, 23, 26	
256 Little Gull	Larus minutus	0.10-0.156	SP:Tm	O,F	2.7(1-3)	SP	21-22	28?	14+		2-3	NS			66, 214	
257 Swallow-tailed Gull	Creagrus furcatus	0.55-0.74 (0.63-0.78)	Tr	O,Cl	1	SP	32(29-38)	60-70	46	30+	5(2-6)	OS			97	27
258 Black-legged Kittiwake	Rissa tridactyla	0.4:0.3-0.5(0.4:0.3-0.5)	SP:Tm	Cl	2(1-3)	SP	26.2(25-28)	41.5(34-58)	20	Yes	3-5	NS	104	18	88-93	10, 14, 37, 38, 105
259 Red-legged Kittiwake	Rissa brevirostris	0.38 (0.40)	SP:Tm	Cl	1(1-2)	SP	25-32 est	37-45 est	Yes	Yes		OS	90	19	14, 27, 31, 105	

260	Sabine's Gull	<i>Xema sabini</i>	0.13-0.22			2(1-3)		23-25	58-65		Yes				81-87		27
261	Ivory Gull	<i>Pagophila eburnea</i>	0.448-0.687	PSP	O,Cl	1(1-2)	SP	24-26	30-35		Yes	2-3	NS	108-120	19	39, 90	
262	Ross's Gull	<i>Rhodostethia rosea</i>	0.12-0.25		O	3(1-3)	SP	19-21	21					82-92		27	
263	Gull-billed Tern	<i>Sterna nilotica</i>	0.15-0.29	Tm-Tr	O	3(1-5)	P	22.5(22-23)	31.5(28-35)		60	5	NS	85-103	15.8	13, 14, 161, 191	
264	River Tern	<i>Sterna aurantia</i>				3(3-4)	SP				21	2		80-85		27	
265	Caspian Tern	<i>Sterna caspia</i>	0.662- (0.649)	Tm,STr	O	2(1-3)	SP	27(25-28)	40(35-45)		90+	3(2-4)	NS	127-146	30	87-91, 14, 46, 81, 173	
266	Royal Tern	<i>Sterna maxima</i>	0.32-0.50	Tm,STr		1	SP	25-31	30		200+	3-4	NS	100-135	24	14, 81	
267	Elegant Tern	<i>Sterna elegans</i>	0.26:0.20-0.33	STr	O	1	SP	26(23-33)	35		120	3	NS,OS	76-81		29, 184	
268	Lesser Crested Tern	<i>Sterna bengalensis</i>	0.18-0.24	STr,Tr		1	SP	21-26	30-35		90+			88-105		81	
269	Crested Tern	<i>Sterna bergii</i>	0.32-0.40	STr,Tr		1-2	SP	25-30	35-41		80+		NS	100-130		81, 124	
270	Chinese Crested Tern	<i>Sterna bernsteini</i>					SP									81	
271	Sandwich Tern	<i>S. sandwicensis acutiflavia</i>	0.14-0.300	STr,Tm	O	1(1-2)	SP	24(23-29)	28(27-29)	9.8	30-120	4(3-4)	NS	86-105	23.5	75, 14, 123, 196	
272	Cayenne Tern	<i>S. s. eurygnatha</i>	0.176-0.30	STr	O	1(1-2)	SP	29	28		7+		NS		24	196	
273	Roseate Tern	<i>Sterna dougalli</i>	0.11:0.088-0.139	Tm-Tr	O	2(1-4)	SP	23.3(21-24)	26(22-30)	7	7-14	3(2-4)	NS	72-80	25	74-91, 14, 82, 155, 202	
274	White-fronted Tern	<i>Sterna striata</i>		STr	O	1-2	SP		29-35		90-180	2			20	81	
275	Black-naped Tern	<i>Sterna sumatrana</i>	0.098-0.11	Tr	O	1.8(1-3)	SP	21-23	24				NS			81, 124	
276	South American Tern	<i>Sterna hirundinacea</i>	0.17-0.19	Tm-Tr	O	2-3	SP	21-23	27					84-86		81	
277	Common Tern	<i>Sterna hirundo</i>	0.13:0.097-0.146	SP-Tm	O	2.4(1-4)	SP	24(22-28)	26	8	21+	3.2(2-4)	NS	72-83	25	81-89, 8, 14, 83, 154	
278	Arctic Tern	<i>Sterna paradisaea</i>	0.11:0.08-0.127	PSP	O	1.8(1-2)	SP	23(22-27)	20-24	7	7+	3+	NS	76-85	34	90, 14, 45, 124, 179	
279	Antarctic Tern	<i>Sterna vittata</i>	0.15	STr,P	O	1(1-2)	SP	23-25	27-32					74-79		81, 108	
280	Kerguelen Tern	<i>Sterna virgata</i>	0.13	Tm	O	1(1-2)	SP	24	35(31-39)		up to 20			c71		81, 108	
281	Forster's Tern	<i>Sterna forsteri</i>	0.13-0.19	Tm,STr	O,F	2.8(2-3)	SP	23-26						73-82		81	
282	Trudeau's Tern	<i>Sterna trudeaui</i>	0.15-0.16	Tm,STr	F	3(2-4)	SP							76-70		81	
283	Little Tern	<i>Sterna albigrons</i>	0.05-0.06	Tm-Tr	O	2-3	SP	21-24	20-24			3(2)		47-55	21	81	
284	Peruvian Tern	<i>Sterna lorata</i>		Tr	O	1-2	SP	22-23								81	
285	Saunders's Tern	<i>Sterna saundersi</i>	0.04-0.05			2	SP							50-55		81	
286	Least Tern	<i>Sterna antillarum</i>	0.036-0.057	Tm-Tr	O	2(2-3)	SP	22(19-25)	20(17-21)		26-56	3(2)	NS	51	24	80-93, 14, 36, 107, 131, 212	
287	Yellow-billed Tern	<i>Sterna supercilarius</i>	0.04-0.057	STr,Tr	O	1.9(1-3)	SP									81	
288	Fairy Tern	<i>Sterna nersis</i>	0.057	STr,Tr		1.7(1-2)	SP	20-25						45-51		81	
289	Dunara Tern	<i>Sterna balaenarum</i>	0.046	STr,Tr	O	1	SP	18-22	20		75			51		81	
290	White-checked Tern	<i>Sterna repressa</i>	0.113-0.142	Tr	O	2-3	SP				Yes			73-83		81	
291	Black-bellied Tern	<i>Sterna acuticauda</i>		STr,Tr	O	3(2-3)	SP									81	
292	Aleutian Tern	<i>Sterna aleutica</i>	0.12:0.08-0.14	SP	O	2(1-3)	SP	22.5(20-27)	28(25-31)		14+	3+	NS+	75-80		9, 156	
293	Gray-backed Tern	<i>Sterna lunata</i>	0.09-0.14 (0.099-0.165)	STr,Tr	O	1	SP	30(29-32)	38-49		Yes	4-5	NS+	73-76	26	5, 138	
294	Bridled Tern	<i>Sterna anaethetus</i>	0.131:0.093-0.167	STr,Tr	Cr,Un,(O)	1	SP	29(26-33)	60(55-65)		20-40	4(2-5)	NS,OS	76-81	18	78-83, 54, 55, 91, 108	
295	Sooty Tern	<i>Sterna fuscata</i>	0.18:0.14-0.24	Tr	O	1	SP	29(26-33)	c60		17+	3(3-7)	OS	84(82-94)	36	14, 81	
296	Black Tern	<i>Chlidonias niger</i>	0.065:0.063(0.064)	Tm	F	2.6(1-4)	SP	20.5(19-23)	22(20-25)		40	2(2-3)	NS	57-65	17	14, 58, 81, 195	
297	Whiskered Tern	<i>Chlidonias hybridus</i>	0.06-0.101	Tm-Tr	F	2-3	SP	18-20	23		Yes			64-70		81	
298	White-winged Tern	<i>Chlidonias leucopterus</i>	0.066:0.042-0.079	Tm		2.8(2-3)	SP	18-22	20-25			2		58-67		81	
299	Black-fronted Tern	<i>Chlidonias albobristata</i>		Tm	O	.088-.096	SP	21-23								81	
300	Large-billed Tern	<i>Phaethon simplex</i>	0.208-0.247	STr,Tr	O	2.3(2-3)	SP				Yes					81	
301	Inca Tern	<i>Larosterna inca</i>	0.189:0.18-0.21	Tr	Cl,Cr	2	SP		c28		28+					81	
302	Brown Noddy	<i>Anous stolidus</i>	0.167 (0.178)	Tr	To	1 D	SP	34.5(33-36)	45(40-56)	6	30-100	3(3-7)	NS+	75-86	27	14, 21	

Common Name	Scientific Name	Adult Mass (kg) Mean±female(male)	Breeding Distribution	Nest Location	Clutch Size (range)	Hatching Type	Incubation Period (d)	Fledging Period (d)	Maximum Growth Rate (g/d)	Post-Fledging Care (d)	Age of First Breeding (yrs)	Foraging Distance	Wing Span (cm)	Maximum Age (yrs)	Annual Survival %	Index to Literature Cited
303 Black Noddy	Anous minutus	0.098–0.144	Str:Tr	O,Cr,T	1 D	SP	34(31–39)	48–60		30–60 est	3(2–4)	NS+	66–72	25	75	80, 208
304 Lesser Noddy	A. m. tenuirostris	0.097–0.12	Str:Tr	T	1	SP	c35	c55					58–63			81
306 White Tern	Gygis alba	0.08–0.16	Str:Tr	T	1 D	SP	35.6(33–41)	48.6(31–67)		35–60	5, 3+	NS,OS	73	37		14, 147, 185
305 Lesser White Tern	Gygis microhyncha				1	SP	c35									81, 108
307 Blue Noddy	Procelsterna cerulea	0.045±0.041–0.069		Cl,S,Cr	1	SP					1?		46–60			81
308 Gray Noddy	Procelsterna albivitta		Str:Tr		1	SP		32–45					46–60			81
309 Black Skimmer	Rynchops niger	0.25±0.23–0.29 (0.35±0.3–0.37)	Tr	O	4(1–6)	SP	22.9(21–26)	29(28–30)		14+	3	NS	107–127	20		14, 81, 173
310 African Skimmer	Rynchops flavirostris	0.111–0.204	Str:Tr		2.6(2–3)	SP	c21	c28					c106			81
311 Indian Skimmer	Rynchops albicollis		Tr		3(2–4)		c21						102–114			81
312 Great Auk	Pinguinus impennis		Tm	O	1	SP					7					136
313 Dovekie	Alle alle	0.16	P	Cl,Cr	1	SP	29	27.5(26–29)	6.5	none	5	NS,OS				76
314 Razor-billed Auk	Alca torda	0.72	Tm	Cr,Cl	1	SP	35	22.5(15–30)	12.3		4(4–5)	NS	66		88–90	76, 98
315 Common Murre	Uria aalge	1.1±0.87–1.3 (1.0±0.83–1.3)	Tm	Cl	1	SP	33	21.5(18–25)	11.4	yes	4–5	NS,OS	73	26	87–95	14, 99, 100, 201
316 Thick-billed Murre	Uria lomvia	1.0±0.76–1.2 (0.99±0.84–1.2)	P-Tm	Cl,Cr	1	SP	33(31–36)	22.5(15–30)	11.5	30–60	4(4–5)	NS,OS		29	89–90	14, 74, 77, 79
317 Black Guillemot	Cepphus grylle	0.43±0.30–0.53 (0.43±0.37–0.50)	P-Tm	Bu,O	2	SP	29	36.5(34–39)	13.8	none	3(3–4)	NS		13	87	14, 164
318 Pigeon Guillemot	Cepphus columba	0.45–0.55	SP:Tm	Cr,Bu	2(1–2)	SP	29(26–32)	40(35–54)	10–20	none	3	NS	58	14	80	14, 65, 218
319 Spectacled Guillemot	Cepphus carbo		Tm		1–2	SP	30									101, 151
320 Xantus's Murrelet	Endomychura hypoleuca	0.17	Str	Cr	2(1–2)	P	34(27–44)	2(1–4)		yes	3(2–3)	OS	42	15		14, 52, 101
321 Craveri's Murrelet	Endomychura craveri	0.15	Str	Cr	2	P		2		yes			41			151
322 Ancient Murrelet	Synthliboramphus antiquum	0.206 (0.206)	Tm	Bu	2(1–2)	P	32.7(29–37)	2(1–4)	30	30	3(2–4)	NS,OS	45	77	73, 78	
323 Japanese Murrelet	S. wumizusume	0.183	Tm	Cr,Bu	2(1–2)	P	32–33	2		c30		NS+				101, 151
324 Cassin's Auklet	Ptychoramphus aleuticus	0.19	SP:Tm	Bu,Cr	1 D	SP	39(37–57)	46(41–50)		none	3(1–4)	NS,OS	44	16	75	14, 127, 128, 207
325 Parakeet Auklet	Cyclorhynchus psittacula	0.26	Tm	O	1	SP	35	35	10.6	none			50			151
326 Crested Auklet	Aethia cristatella	0.26	SP:Tm	Cr	1	SP	33.8(29–40)	33.2(27–36)	11–13	none	3(est.)	NS,OS	48	89	76, 118, 166	
327 Least Auklet	Aethia pusilla	0.084	SP:Tm	Cr	1	SP	30.1(25–39)	28.6	6	none	3	NS,OS	33		80.8	117, 119, 180
328 Whiskered Auklet	Aethia pygmaea	0.12	Tm	Cr	1	SP	35.5	40.5(39–42)		none	3(est.)	NS				31, 151
329 Long-billed Murrelet	Brachyramphus perdix		Tm	T	1	SP		27–40		none						151
330 Marbled Murrelet	Brachyramphus marmoratus	0.22	Tm	T	1	SP	29	33.5(27–40)			3	NS,OS	44			149, 150
331 Kittitz's Murrelet	Brachyramphus brevirostris	0.224–0.243	Tm	O	1	SP	30?	24?		?						47, 151
332 Rhinoceros Auklet	Cerorhinca monocerata	0.456 (0.510)	SP–Str	Bu	1	SP	44.9(39–52)	50–60	10	none	3(est.)	NS,OS	62	10		14, 75, 76, 224

333	Tufted Puffin	<i>Fratercula cirrhata</i>	0.78	Tm	Bu	1			47-55	16.1		OS	66		101, 151
334	Atlantic Puffin	<i>Fratercula arctica</i>	0.51;0.31-0.57 (0.48;0.31-0.57)	Tm	Bu	1	SP	42	39	11.2	none	NS,OS	55	32	7, 14, 151
335	Horned Puffin	<i>Fratercula corniculata</i>	0.62	Tm	Bu	1	SP		38	11.1	none	OS	61		151

Notes: Numbers in the Index to Literature Cited can be found below. Blank cells are due to a lack of information. The first editor welcomes updates of information and appropriate references for future revisions at SchreiberE@aol.com. Taxonomy follows that used in Appendix 1 (see Chapter 3).

Mass is given in kilograms (kg), as a mean. If not available by sex, a mean, or mean and range, are given. If available by sex, females are listed first and males in parentheses (mean:range). Values are for birds during the breeding season. Dunning (1993) was used for body mass for many species.

Breeding distribution: Polar (P) — for Antarctica, Antarctic continent; for the Arctic, pole to 80°N. Subpolar (SP) — south, just off edge of Antarctic continent to about 50°S; north, 80°N to Arctic Circle. Temperate (Tm) — south, about 50°S to 30°S; north, below Arctic circle to 25-30°N (to freeze line in Florida for instance). Subtropical (STr) — south, about 30°S-15°S; north = about 25-30°N to 15°N. Tropical (Tr) — between 15°N and 15°S.

Nest Location: Bu, burrow; Cl, cliff or cliff ledge; Cr, crevice or natural hole (these may be on flat ground [some shearwaters], slopes [most puffins] or on cliff faces); F, floating in marsh; O, open ground; T, on a tree or bush; Sl, steep slope (not as steep as a cliff and generally not stone); Un, under tree or bush.

Clutch Size is given as a mean, a range, or both. B, biennial breeder; D, known to raise two clutches in a year.

Hatching Type: P, precocial; SP, semiprecocial; A, altricial; SA, semialtricial (see Chapter 13, Table 13.1 for explanation).

Incubation Period is given in days (d), begins with the laying of the first egg.

Fledging Period applies to the time (in days) it takes for chicks to first have sustained flight (or for penguins and Flightless Cormorants, when they go to sea). For seven species of alcidids that leave the nest before they can fly and go to sea with a parent, it applies to the time in the nest before going to sea.

Maximum growth rate (in grams per day [g/d]) is the maximum amount gained by a chick in a day.

Postfledging Care: The actual length of post-fledging care is often difficult to determine. Most research is carried out in colonies and feeding of young may still occur after birds leave the colony.

Foraging Distance during the breeding season: OS, offshore; NS, nearshore; NS+, between about 0.5 km offshore and offshore (intermediate between the two).

Wing Span indicated may encompass both sexes.

Maximum Age is the maximum age recorded for the species. This figure is higher than adult life expectancy.

Annual Survival data are for adults.

c = *circa* or about.

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