Lissodelphis peronii (Lacépède, 1804)

English: Southern right-whale dolphin
German: Südlicher Glattdelphin
Spanish: Delfín liso austral
French: Dauphin aptère austral

Family Delphinidae

1. Description

Right whale dolphins are easy to identify at sea because of their distinctive black and white colour and lack of dorsal fin. The southern right whale dolphin has a white ventral patch, which extends high on the posterior flanks. Its back is black, and the white area reaches a high point midway along the body, dipping down at the flipper insertion and covering most of the head and rostrum. Newborn calves are first brown or dark grey and attain adult coloration after the first year of life (Lipsky, 2009). Rarely, melanistic southern right-whale dolphins are observed, e.g. off Kaikoura, New Zealand (Visser et al. 2004), and there have also been observation of all white and partial white, dark or grey animals. Size reaches ca. 3 m, males growing larger than females, and body mass reaches up to 116 kg (Lipsky, 2009).

2. Distribution

http://www.iucnredlist.org/apps/redlist/details/12126/0/rangemap

Distribution of Lissodelphis peronii: deep, cold temperate waters of the southern hemisphere (Hammond et al. 2008; © IUCN).

The southern right whale dolphin is circumpolar in the Subantarctic Zone, mainly between 40°S and 55°S. It ranges north to 25°S off São Paulo in Brazil, 23°S in the Benguela Current off Walvis Bay in Namibia, the Great Australian Bight, the Tasman Sea, the Chatham Islands, and 12°30'S in the Humboldt Current off Pucusana in Peru (Rice, 1998; Clarke, 2000).

L. peronii remains almost exclusively in temperate waters, with most records from north of the Antarctic Convergence. It frequently follows the cold Humboldt Current into subtropical latitudes, as far north as the northernmost record of 12°S off Peru. The southernmost limit of the range varies with sea temperatures from year to year. The species seems to be fairly common in the Falklands Current between Patagonia and the Falkland Islands (Malvinas) and is believed to occur across the southern Indian Ocean following the West-wind Drift (Jefferson et al. 1994; Carwardine, 1995; Jefferson et al. 1993).

3. Population size

There are no estimates of abundance for the southern right whale dolphin, and virtually nothing is known of the subpopulation structure or status of the species (Hammond et al. 2008). Preliminary boat surveys and the rapid accumulation of stranding and fishery interaction records in northern Chile suggest that it may be one of the most common cetaceans in this region (Jefferson et al. 1994 and refs. therein; Van Waerebeek et al. 1991). Aguayo et

al. (1998) reported that *L. peronii* is very common between Valparaiso and 76°W, i.e. just off the Chilean coast. Observed at sea many times to the southeast of New Zealand (Ross, 2006).

4. Biology and Behaviour

Behaviour: *L. peronii* often travels very fast in a series of long, low leaps; the overall impression is of a bouncing motion rather like a fast-swimming penguin. It sometimes swims slowly, causing little disturbance of the water and exposing only a small part of its head and dark back when surfacing to breathe. Breaching (but with no twisting or turning in the air), belly-flopping, side-slapping, and lobtailing have been observed. Dives may last 6 minutes or more. Some schools will allow close approach, but others flee from boats. Small groups will bow-ride on rare occasions (Carwardine, 1995).

Habitat: Southern right whale dolphins are observed most often in cool, deep, offshore waters with temperatures of 1-20°C. *L. peronii* is seldom seen near land except in sufficiently deep water; however, it is known to occur in coastal waters off Chile and near New Zealand where water is deeper than 200 m (Jefferson et al. 1994; Carwardine, 1995; Jefferson et al. 1993).

Schooling: Large schools are characteristic. Some estimates of group size range to over 1,000 animals. Associations with other marine mammal species are common, especially dusky dolphins and pilot whales (Jefferson et al. 1993). Mean herd size is 210 individuals for southern right whale dolphins off Chile (Van Waerebeek et al. 1991).

Off Kaikoura, New Zealand, mixed-species groups included common dolphins (*Delphinus delphis*), dusky dolphins (*Lagenorhynchus obscurus*) long-finned pilot whales (*Globicephala melaena*), and bottlenose dolphins (*Tursiops truncatus*) (Markowitz, 2004).

Food: A variety of fish and squid have been reported as prey; lanternfish are especially common (Jefferson et al. 1993).

Reproduction: In Golfo Nuevo, Peninsula Valdes, Argentina, an unusual dolphin was sighted several times, always associated with dusky dolphins (*L. obscurus*). Photographic and behavioural evidence showed that the anomalous dolphin shared characteristics of the southern right whale dolphin and the dusky dolphin and may have been a hybrid (Yazdi, 2002).

5. Migration

There is some suggestion of inshore and northward summer movements by southern right whale dolphins from sighting records off South Africa; however other authors suggested that southern right whale dolphins may be year-round residents off Namibia, southern Africa (Rose and Payne, 1991). Although the sample size is still small, more fresh specimens and sighting records have been registered north of 25°S off western South America in July-September than in all other months combined, suggesting a northern migration in the austral winter and spring (Jefferson et al. 1994 and refs. therein; van Waerebeek et al. 1991).

6. Threats

Direct catch: Southern right whale dolphins are reportedly infrequently caught off the coasts of Peru and Chile, where they are used for human consumption or crab bait (Jefferson et al. 1994 and refs. therein).

Incidental catch: The only incidental catch of any magnitude that is known is in the swordfish gillnet fishery off Chile (Hammond et al. 2008), an ongoing problem. Peddemors (1999) reported that *L. peronii* appears to be extremely localised in distribution within southern Africa, and any future planned expansion of commercial driftnet fisheries off Namibia should be carefully monitored for incidental catches which may impact this population.

7. Remarks

Range states (Hammond et al. 2008):
Argentina; Australia; Bouvet Island; Brazil; Chile; Falkland Islands (Malvinas); French Southern Territories (the); Mozambique; Namibia; New Zealand; Peru; Saint Helena (Ascension, Tristan da Cunha); South Africa; South Georgia and the South Sandwich Islands; Uruguay

L. peronii is listed as "Data Deficient" by the IUCN (Hammond et al. 2008). It is not listed by CMS. The species is listed on Appendix II of CITES.

Migrations along the coast of South America and Southern Africa suggest that national boundaries might be crossed. Therefore, inclusion in CMS Appendix II is recommended.

This is a poorly known species which seems to be threatened mainly by driftnet fisheries in Chilean and South African waters. Because no population estimates are available, mortality rates and their effect on the population are unknown. More research is clearly needed.

For South American stocks, see further recommendations in Hucke-Gaete (2000).

8. Sources

- Aguayo A, Bernal R, Olavarria C, Vallejos V, Hucke R (1998) Cetacean observations carried out between Valparaiso and Easter Island, Chile, in the winters of 1993, 1994 and 1995. Rev Biol Mar Ocean 33: 101-123.
- Carwardine M (1995) Whales, dolphins and porpoises. Dorling Kindersley, London, UK, 257 pp.
- Clarke, RH (2000) First record of the southern right whale dolphin, *Lissodelphis peronii*
- (Lacepede, 1804) (Odonoceti: Delphinidae), from waters off South Australia. Trans R Soc
- S Aust 124: 177-178.
- Hammond PS, Bearzi G, Bjørge A, Forney K, Karczmarski L, Kasuya T, Perrin WF, Scott MD, Wang JY, Wells RS, Wilson B (2008) *Lissodelphis peronii*. In: IUCN 2009. IUCN Red List of Threatened Species. Version 2009.2. <www.iucnredlist.org>.
- Hucke-Gaete R (ed.) (2000) Review on the conservation status of small cetaceans in southern South America. UNEP/CMS Secretariat, Bonn, Germany, 24 pp.
- Jefferson TA, Leatherwood S, Webber MA (1993) FAO Species identification guide. Marine mammals of the world. UNEP/FAO, Rome, 320 pp.
- Jefferson TA, Newcomer MW, Leatherwood S, van Waerebeek K (1994) Right wale dolphins – *Lissodelphis borealis* (Peale, 1848) and *Lissodelphis peronii* (Lacépède, 1804). In: Handbook of Marine

Mammals (Ridgway SH, Harrison SR, eds.) Vol. 5: The first book of dolphins. Academic Press, London, pp. 335-362.

- Lipsky JD (2009) Right whale dolphins – *Lissodelphis borealis* and *L.peronii*. In: Encyclopedia of marine mammals, 2nd Ed. (Perrin WF, Würsig B, Thewissen JGM, eds.) Academic Press, Amsterdam, pp. 958-962.
- Markowitz TM (2004) Social organization of the New Zealand dusky dolphin. Diss Abst Int Pt B Sci & Eng 65: 2200
- Peddemors VM (1999) Delphinids of southern Africa: A review of their distribution, status and life history. J Cetacean Res Manag 1: 157-165.
- Rice DW (1998) Marine mammals of the world: systematics and distribution. Society for Marine Mammalogy, Spec Publ 4, Lawrence, KS. USA.
- Rose B, Payne AIL (1991) Occurrence and behavior of the southern right whale dolphin *Lissodelphis peronii* off Namibia. Mar Mamm Sci 7: 25-34.
- Ross GJB (2006) Review of the conservation status of Australia's smaller whales and dolphins. Australian Government. 124 pp.
- Van Waerebeek K, Canto J, Gonzalez J, Oporto J, Brito JL (1991) Southern right whale dolphins, *Lissodelphis peronii* off the Pacific coast of South America. Z Säugetier 56: 284-295
- Visser IN, Fertl D, Pusser LT (2004) Melanistic southern right-whale dolphins (*Lissodelphis peronii*) off Kaikoura, New Zealand, with records of other anomalously all-black cetaceans. N Z J Mar Freshwat Res 38: 833-836
- Yazdi, P (2002) A possible hybrid between the dusky dolphin (*Lagenorhynchus obscurus*) and the southern right whale dolphin (*Lissodelphis peronii*). Aquat Mamm 28: 211-217