

# 18. Cetaceans

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## 1 BIOLOGY

Forty-three of the 80 known species of cetaceans live around the Australian continent. These include 35 species in the Suborder Odontoceti (toothed whales) and eight species in the Suborder Mysticeti (baleen whales) (Bryden et al. 1998; Rogers 2000; Menkhorst 2001). The baleen whales include the rorquals in the Family Balaenopteridae which have longitudinal grooves in the throat and a small pointed dorsal fin.

Although most cetacean species strand, a few species regularly strand in large numbers. These include sperm (Family Physeteridae), pygmy killer (*Feresa attenuata*), melon-headed (*Peponocephala electra*), false killer (*Pseudorca crassidens*), short- and long-finned pilot (*Globicephala* spp.) and common killer whales (*Orcinus orca*) (Rogers 2000). The role of the veterinarian at a marine mammal stranding is presented in Chapter 3.

Three species of cetaceans are held in captivity in oceanariums in Australia: the Indo-Pacific bottle-nosed dolphin (*Tursiops aduncus*), the common bottle-nosed dolphin (*Tursiops truncatus*) and the Indo-Pacific hump-backed dolphin or Sousa (*Sousa chinensis*). This chapter primarily deals with these species. They will be referred to here on as 'dolphins'.

Dolphins are social animals that can live up to 50 yr. The common bottle-nosed dolphin is large, robust and uniformly mid-grey to brown without obvious stripes or colour patches. It is found throughout tropical and temperate oceans, in-shore and off-shore, in a wide variety of habitats including bays, estuaries and

harbours. In Australia it is most common around the southern coast from southern Queensland to Albany in Western Australia. It is gregarious in groups of up to 20 individuals. The Indo-Pacific bottle-nosed dolphin is smaller and paler and has dark flecks on the ventral surface. It is found mainly in warm shallow in-shore waters. It is most common around the northern coast of Australia. The genetics of Australian dolphins are being investigated to determine the relationships between the many different morphometric types of bottle-nosed dolphins in Australian waters (K Charlton *pers. comm.*) The Indo-Pacific hump-backed dolphin is robust, uniformly pale, light grey above and whitish pink below. It is primarily found in coastal tropical and warm temperate waters, mostly less than 20 m deep in estuaries, tidal rivers and channels through mangroves. On open coasts it is often seen in the surf zone. It is gregarious in small groups of up to 25 individuals (Menkhorst 2001).

## 2 ANATOMY AND PHYSIOLOGY

Cetaceans share the general mammalian anatomical and physiological characteristics, with significant differences associated with adapting to a marine environment.

### 2.1 Digestive system

Odontocete teeth are closely spaced and uniform in shape and size and have growth rings in cross-section that can be used for ageing (Perrin & Myrick 1980).