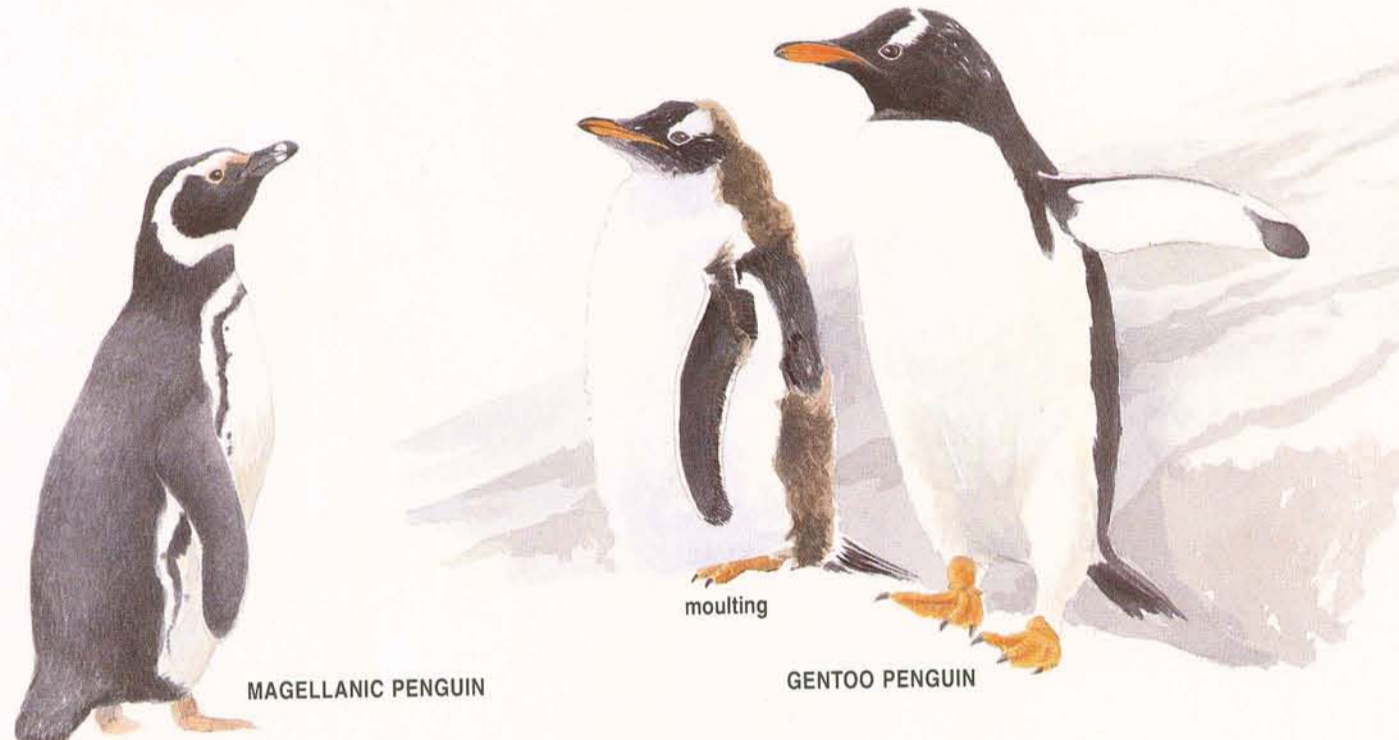
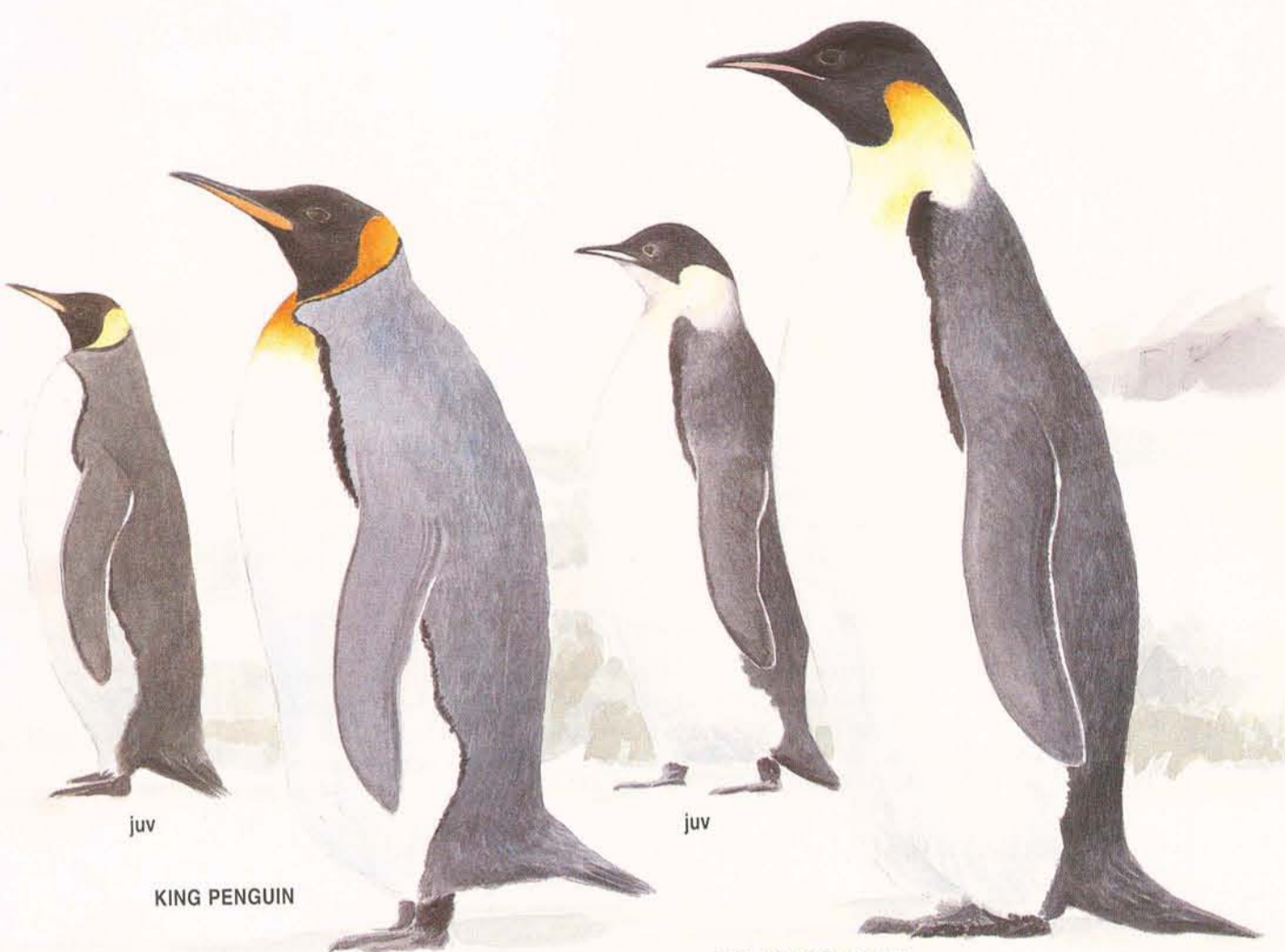


Flightless stocky seabirds with dark upperparts and white underparts. Wings modified into flippers. Robust bill. Short stout legs with webbed feet. Dense short and flattened feathers in adults; thick down in chicks. Swim low in the water, with head and upper back (occasionally tail) visible; some porpoise when swimming fast. Feed at sea by diving. On land, walk upright with waddling gait or short hops with flippers used to maintain balance. Toboggan on ice and mud. Visit land to breed and to moult. During the 2–6-week moult, birds look ragged while all feathers are replaced rapidly; birds fast and are unable to swim. Breed solitarily in burrows or under vegetation, or in large dense colonies on the surface. Lay 1–2 white eggs.

**GENTOO PENGUIN** *Pygoscelis papua*

Rare subantarctic vagrant

75 cm, 5.5 kg. Upperparts, chin and throat dark slate grey; *white triangle above each eye, connected by thin white line over top of head*; scattered white spots on head and neck; underparts white. Bill black with sides orange (male) or pinkish orange (female). Juvenile similar, but throat pale and patches over eye do not connect over crown. **Habitat:** Breeds circumpolar subantarctic and Antarctica; nearest colony to NZ at Macquarie I. Vagrants reach NZ subantarctic islands and occasionally NZ mainland. [Sp 75]



**PENGUINS**

16 species confined to the Southern Hemisphere: 13 in the New Zealand region, including 4 endemic and 5 other breeding species.

Penguins are a clearly defined group of flightless, stocky seabirds standing up to a metre high. They are a primitive group dating back to the late Eocene, about 45 million years ago; fossils of three species have been found in the South Island from this era.

Penguins are covered with a waterproof coat of dense, short and flattened feathers; the wings are modified into flippers, and the tail is short and stiff. They have a large head and a powerful, short, stout bill. Their legs are short and stout, with webs linking the three forward-pointing toes. On land, they walk upright with an ungainly waddling gait, and hop over obstacles, using their flippers to maintain balance. On ice, they sometimes toboggan. In the water, they can swim rapidly, being propelled by their flippers only. Some species porpoise when travelling fast.

Penguins dive to catch food. The extreme example is the Emperor Penguin, which has been recorded diving to 450 m and staying submerged for 11 minutes. They feed on fish, crustaceans (especially krill), squid and a wide range of other marine invertebrates.

Penguins visit land to breed and moult, and some inshore species return to land on

**Spheniscidae**

most nights to roost. They have ritualised displays, and most give a variety of brays, trumpets and growls. Colonial breeders often engage in fights with neighbouring birds.

They usually lay a clutch of 1–2 whitish eggs each year; a few failed pairs attempt to re-lay. Nests vary from burrows for Little Blue Penguins and some Fiordland Crested Penguins to simple scrapes for most species. The King and Emperor Penguins build no nest and incubate the egg between the top of their feet and their body.

Penguins vary from solitary to colonial, some colonies being of millions of pairs. Eggs are small in relation to their body size, and have a long incubation period of 33–65 days depending on the species. Usually both sexes incubate, except that in the Emperor Penguin only the male incubates. Chicks hatch covered in thick down and are fed irregularly by both parents. In colonial species, chicks group together in crèches from about three weeks old until they have their natal moult into full feathers and leave the colony at 2–6 months old.

During the moult of 2–5 weeks in summer or autumn, birds look ragged and 'sick', as almost all the feathers are replaced simultaneously. During this time, the bird fasts and is unable to swim without getting waterlogged. If you find birds moulting, leave them alone, and do not return them to sea; contact

the Department of Conservation if a moulting penguin is in danger from dogs or other predators. Many records of unusual species visiting the New Zealand region are of wandering birds forced to come ashore in autumn to moult.

**Reading:** Davis, L.S. & Darby, J.T. (eds). 1990. *Penguin Biology*. San Diego: Academic Press.

Harrison, P. 1987. *Seabirds of the World: a photographic guide*. London: Christopher Helm. Harrison, P. 1988. *Seabirds: an identification guide*. London: Christopher Helm. Murphy, R.C. 1936. *Oceanic Birds of South America*. New York: MacMillan. Serventy, D.L. et al. 1971. *The Handbook of Australian Sea-birds*. Sydney: Reed. Stonehouse, B. (ed.). 1975. *The Biology of Penguins*. London: MacMillan.

**75. GENTOO PENGUIN** *Pygoscelis papua*

Plate 18

**Size:** 75 cm, 5.5 kg  
**Geographical variation:** Two subspecies: the larger *papua* breeds mainly on the subantarctic islands, and the smaller *ellsworthii* breeds in the South Atlantic Ocean and on the Antarctic Peninsula. All that have reached New Zealand shores are presumed to have been *papua*.  
**Distribution:** Circumpolar, breeding on the Antarctic Peninsula and many islands in the subantarctic zone, including 4700 breeding pairs on Macquarie Island. They feed inshore, and so remain close to their breeding ground. A few vagrants, usually immatures, have been recorded ashore on beaches in the New Zealand region: Campbell Island (several records), Dunedin (September 1970), Bluff (November 1970), Catlins (October 1974),

Banks Peninsula (February 1976, December 1993), Antipodes Island (November 1978 and 1995) and The Snares (December 1985 and 2002).  
**Feeding:** Diet at Macquarie Island in June–November is mainly oceanic fish (up to 18 cm long) and squid. Elsewhere, Gentoos have been recorded eating mostly krill. They usually feed close to the surface but have been recorded diving to over 160 m.  
**Reading:** Croxall, J. P. & Prince, P.A. 1980. *Ibis* 122: 245–253. Darby, J.T. & Wright, A.W. 1973. *Notornis* 20: 28–30. Hindell, M.A. 1989. *Emu* 89: 71–78. Reilly, P.N. & Kerle, J.A. 1981. *Notornis* 28: 189–201. Robertson, G. 1986. *Aust Wildl Res* 13: 583–587.