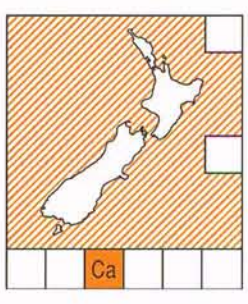
Text and images extracted from Heather, B.D. & Robertson, H.A. (2005) *The Field Guide to the Birds of New Zealand*. Penguin Books, Auckland. Pages 22, 26, 27, 175, 176, 181.

Plate 3

ALBATROSSES

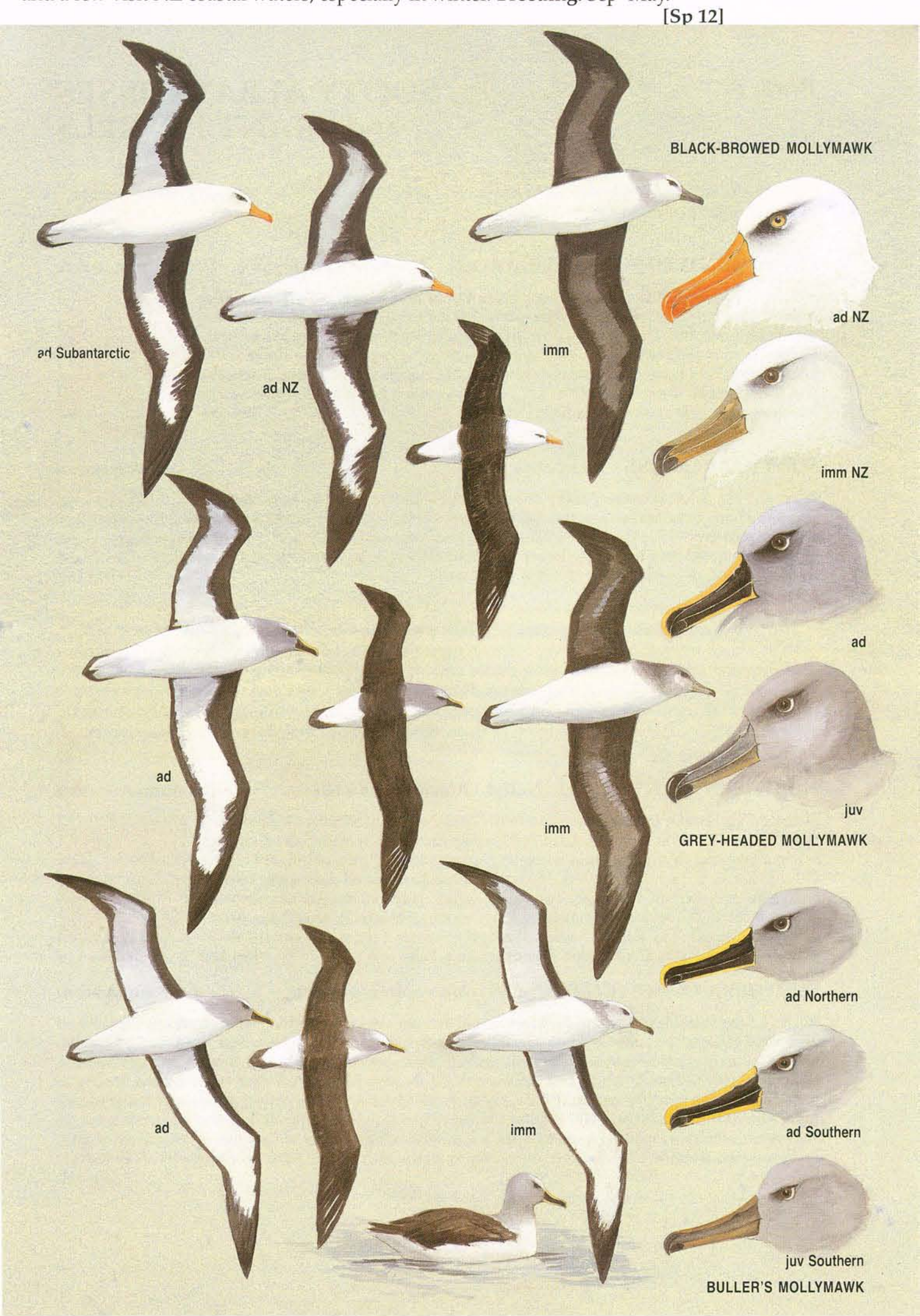
Huge ('albatrosses') or very large ('mollymawks') seabirds with long narrow wings and short tail. Long heavy hooked bill covered with horny plates, nostrils in small tubes on the sides near the base. Most are dark above and mainly white below. Pattern of upperwing, underwing, head and bill are distinctive. In flight, soar gracefully on stiffly held wings, and only rarely flap. Clumsy on ground; legs and webbed feet set well back. Generally oceanic; occasionally seen near land. Many follow ships or gather around fishing boats. Silent at sea except when fighting over food. Loud bleats, croaks, whines and cackles at breeding colonies, and elaborate displays accompanied by bill-clapping and calls. Lay 1 large white egg in shallow bowl or on top of pedestal constructed of vegetation and mud. Long incubation period and extremely long fledging period (7–11 months for full breeding cycle). Sexes alike but males larger. Juveniles generally distinctive for several years.

GREY-HEADED MOLLYMAWK *Diomedea chrysostoma* **Locally common native**



80 cm, 3.25 kg. Adult has *light grey head, throat, neck and mantle*, paler on forehead; dark grey patch around and ahead of eye, small but prominent white mark just behind eye; sharp margin on chest to white underparts, white rump, grey tail. Upperwings and back dark grey; underwings *white with broad black leading edge and narrow black trailing edge. Bill (113 mm) black with rich yellow along ridge and along bottom edge*, shading to rosy pink at tip; legs and feet greyish white. Immature similar, but initial darker grey on head wears to very pale on forehead and cheeks in some birds; underwings black or with narrow greyish or white central stripe. Bill dark grey, darker tip changing to dull yellow with age. **Habitat:** Breeds circumpolar subantarctic; in NZ region, only at Campbell I. Ranges widely through southern oceans, and a few visit NZ coastal waters, especially in winter. **Breeding:** Sep–May.

[Sp 12]



ALBATROSSES

Diomedeidae

14 species, 11 with breeding restricted to the Southern Hemisphere and 3 in the North Pacific.* In the New Zealand region, 10 species have been recorded including 2 endemic species and 5 other breeding species.

Albatrosses and mollymawks (the common name in New Zealand for smaller albatrosses) are a clearly defined group of very large seabirds belonging to the tube-nosed petrel order (Procellariiformes). Although they are among the largest of all flying birds, albatrosses are noted for their perfection of soaring flight behind boats and among the tempestuous seas of the southern oceans. In strong winds, they wheel effortlessly on very long, narrow and stiffly held wings for hours, but in almost calm conditions they have a flapping flight and more usually rest on the surface until the wind picks up. Their webbed feet are used for swimming and as rudders in flight, especially when coming in to land.

Albatrosses have long bills with a strongly hooked tip and small, raised tubular nostrils on either side near the base. The shape and colour of the bill plates can be useful in identifying beach-wrecked specimens, but at sea the head colour and pattern of black on the wings is also important to note.

They nest in loose colonies, mainly on uninhabited and often inaccessible islands of the southern oceans. At their breeding grounds they have an elaborate series of displays accompanied by neighs, groans, baahs, wails, croaks, cackles, and bill-snapping and clappering. All species lay **1** white egg, usually in a shallow depression on top of a pedestal ('chimney pot') made of vegetation and mud. Incubation takes 66–83 days. Nestlings are downy and take many months to reach flying age. With this long breeding cycle, some species can nest only every second year if they have bred successfully.

Albatrosses feed mainly on various squids, fish and offal, on or close to the surface. Some species are readily attracted to boats and follow them for hours, occasionally alighting to pick up scraps cast overboard or food disturbed in the wake. Some are especially attracted to fishing boats, and in recent years several species have suffered high mortality from being drowned in trawl nets or after taking baited fish-hooks on tuna long-lines. Research is under way to develop new methods to reduce seabird by-catch problems.

Reading: 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. Warham, J. 1990. *The Petrels: their ecology and breeding systems*. London: Academic Press.

12. GREY-HEADED MOLLYMAWK *Diomedea chrysostoma* Plate 5

Size: 80 cm, 3.25 kg

Distribution: Circumpolar, breeding on subantarctic islands between 46 and 56°S, with the biggest colonies being on Diego Ramirez Islands near Cape Horn, and on South Georgia. In New Zealand, Grey-headed Mollymawks breed only at Campbell Island, although about 50 pairs nest nearby on Macquarie Island. At sea, they range widely in the southern oceans, generally over deep oceanic waters between 40°S and the Antarctic coast. They are occasionally seen in New Zealand coastal waters and are one of most frequent mollymawk species to be beach-wrecked, especially in July–October when juveniles are moving north into the Tasman Sea.

Population: The annual number of breeding pairs in the world is estimated at c. 92,000 pairs of which c. 7500 pairs nest each year on Campbell Island. The actual breeding population is higher because breeding is biennial for successful pairs.

Conservation: Protected native. Numbers on most subantarctic islands are stable or declining; indications are that Campbell Island birds have declined by about 80% since the 1940s and is currently declining by about 3% per annum due to low recruitment and poor breeding success. Although few Grey-headed Mollymawks are accidentally caught in New Zealand waters because the species feeds in deep water, many are killed on tuna long-lines in Australian waters and elsewhere in the Southern Ocean. The decline on Campbell Island at the same time as New Zealand Black-browed Mollymawks could be associated with changes in food supplies as a result of oceanic warming, which has apparently caused the dramatic decline of Rockhopper Penguins there.

Breeding: Grey-headed Mollymawks, like the large albatrosses, are biennial breeders; if they raise a chick successfully, they will not attempt to breed the following year; but if they fail (especially in the early part of the nesting cycle), they will breed the following year. On Campbell Island, birds return in late August and most eggs are laid over a short period between 26 September and 9 October. They lay **1** white egg (107 x 67 mm), with brownish-red speckling at the broader end, in a shallow cup on top of a small pedestal of soil and vegetation. The adults share incubation for c. 72 days and then share duties guarding the downy chick until it is 15–**27**–39 days old. The chick fledges at 143–**152**–157 days old in early to mid-May. Chicks are independent once they fledge. Young return to land at 5 years old, but do not start breeding until 10–**13**–17 years old. Adult survival is about 95.3%, with the oldest banded bird being over 28 years old.

Behaviour: Nest in large colonies, intermingling with New Zealand Black-browed Mollymawks on Campbell Island. At sea, Grey-headed Mollymawks feed alone but may form flocks with other seabirds. They seldom follow ships and, except near the Falkland Islands, tend not to congregate around fishing boats as most other mollymawks do. Generally much quieter and more docile than other albatrosses.

Feeding: Diet has not been studied in New Zealand, but elsewhere in the southern oceans it is mainly squid and fish (rarely scavenged from fishing boats) and sometimes krill and carrion such as small seabirds. Prey is mainly seized on the surface, but occasionally birds plunge or dive for food.

In the hand: Males are slightly larger than females in all measurements, but there is considerable overlap.

Reading: Bailey A.M. & Sorensen, J.H. 1950. *Subantarctic Campbell Island*. Denver: Denver Mus Nat Hist. Moore, P.J. & Moffat, R.D. 1990. *DoC Sci & Res Int Rep* No. 59. Waugh, S. *et al*. 1999. *Ibis* 141: 216–225. Weimerskirch, H. *et al*. 1986. *Ibis* 128: 195–213.