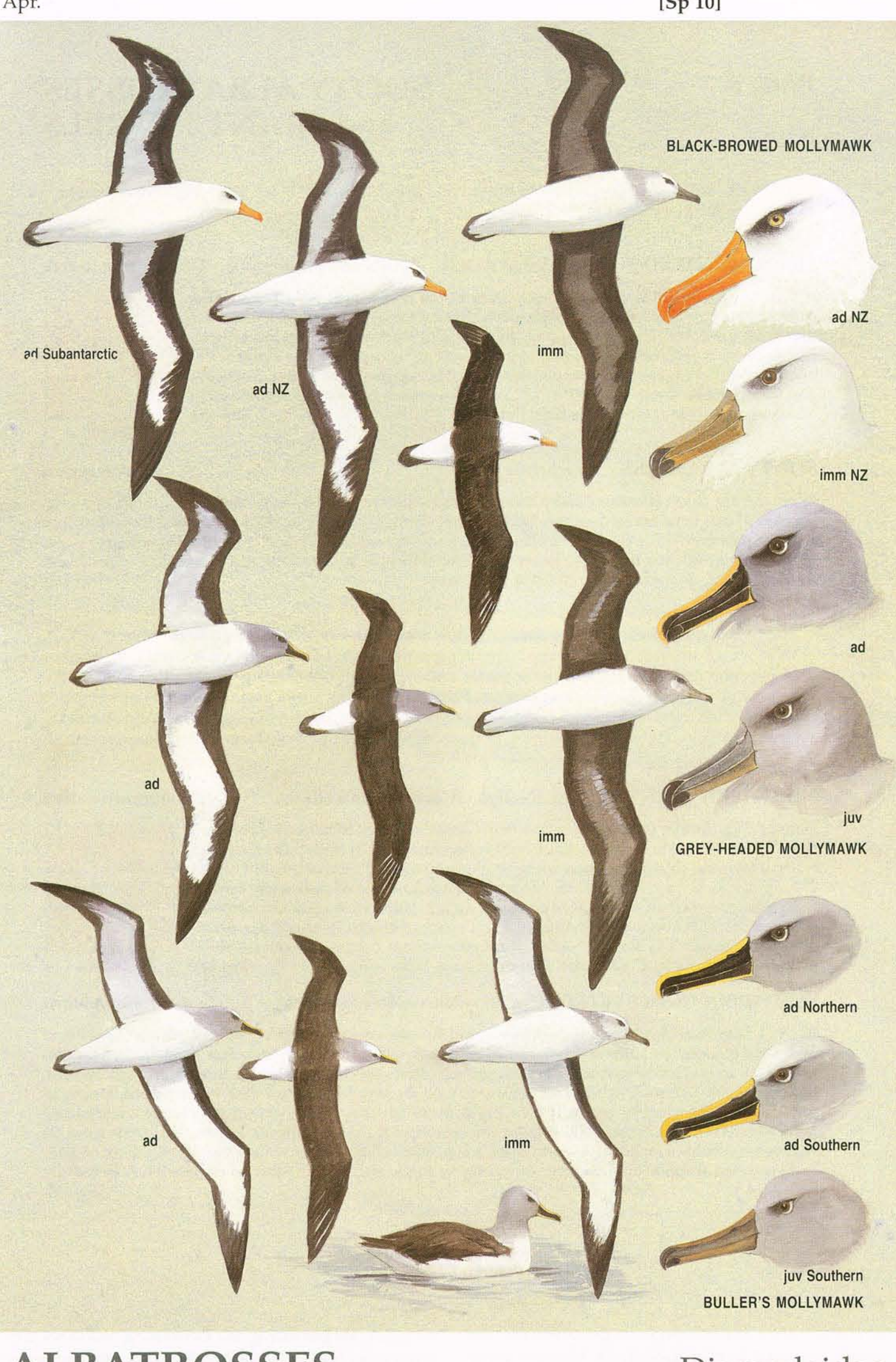
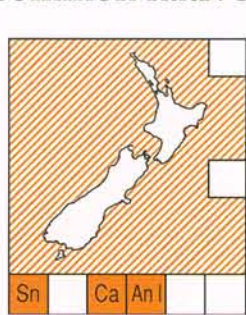


Huge ('albatrosses') or very large ('mollymawks') seabirds with long narrow wings and short tail. Long heavy hooked bill covered with horny plates, nostrils in small tubes on the sides near the base. Most are dark above and mainly white below. Pattern of upperwing, underwing, head and bill are distinctive. 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.

BLACK-BROWED MOLLYMAWK *Diomedea melanophrys*

Common native

90 cm, 3 kg. Two subspecies in NZ region, separated by size, plumage and eye colour. Adult NZ Black-browed Mollymawk (*impavida*) has whole body white except for heavy black triangle around eye giving frowning appearance, blackish-grey back connecting black upperwings, and dark grey tail; underwings white with broad black edges, wider on the leading edge especially on the inner part of the wing; some have extensive dark streaking in armpits, almost connecting front to back; bill (110 mm) yellow with orange tip; eye honey-coloured; legs and feet pale bluish white. Subantarctic Black-browed Mollymawk (*melanophrys*) similar, but eyebrow smaller; underwings have less extensive, although still broad, black edges; bill (118 mm) heavier; eye dark brown. Immature NZ Black-browed Mollymawk like adult except eyebrow smaller; greyish wash on crown and hindneck; underwings almost completely black; bill greyish green with dark tip, turning yellow with a dark tip in older birds; eye white. Immature Subantarctic Black-browed Mollymawk similar, but eyebrow smaller; grey wash extends as a collar onto chest; eye dark brown. **Habitat:** NZ Black-browed Mollymawk breeds only at Campbell I; Subantarctic Black-browed Mollymawk breeds circumpolar subantarctic, including Bollons I (Antipodes), Western Chain (The Snares) and Campbell I. Ranges widely through southern oceans and into subtropical waters. Often seen off NZ coast or behind boats, especially in winter. **Breeding:** Sep–Apr. [Sp 10]



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.

identifying beach-wrecked specimens, but at sea the head colour and pattern of black on the wings is also important to note.

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.

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 clapping. 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 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

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.

10. BLACK-BROWED MOLLYMAWK *Diomedea melanophrys* Plate 5

Size: 90 cm, 3 kg
Geographical variation: Recent taxonomic research suggests that the two subspecies should be reclassified as full species: the widespread Subantarctic Black-browed Mollymawk *melanophrys*, and the slightly

smaller endemic New Zealand Black-browed Mollymawk *impavida* which breeds only on the Campbell Islands.

Subantarctic Black-browed Mollymawks breed on islands in the South Atlantic and South Indian Oceans, on Macquarie Island and, in the New Zealand region, at Bollons Islands (Antipodes), the Western Chain (The Snares) and at Campbell Island. Non-breeders, juveniles and young birds of this subspecies wander extensively through the southern oceans between about 30°S and the Antarctic coast, and further north off the western coasts of South America and Africa; a few stragglers even cross the equator.

Distribution: Circumpolar, breeding on subantarctic islands between 46 and 56°S. in August and most eggs are laid over a short period between mid-September and early October. Pairs are stable from year to year and return to the same nest site each year. They lay 1 white egg (102 x 66 mm, 230 g), with pinkish 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. 70 days, and then share duties guarding the downy chick until it is 15–23–34 days old. The chick fledges at 122–130–141 days old in mid-April.

New Zealand Black-browed Mollymawks breed on the northern coast of Campbell Island and on Jeanette Marie, and range widely in New Zealand waters and through the Tasman Sea to eastern Australia. Many immatures move northwards to the Coral Sea and the South Pacific Ocean to about New Caledonia and Fiji, and stragglers have been recorded further east in the subtropical Pacific near Tonga, Samoa, the Cook Islands and in French Polynesia.

Chicks are independent once they fledge and apparently disperse quickly from the colony: one was found dead on Foxton Beach 7 days after it had been banded on Campbell Island. Young return to land from 5 years old, but do not start breeding until 6–10–13 years old. Adult survival is about 94.5%, with the oldest banded bird being over 26 years old. **Behaviour:** Nest in large close-knit colonies, sometimes intermingling with Grey-headed Mollymawks. At sea, they form large flocks to feed on offal from fishing boats and elsewhere are often found in large mixed flocks of seabirds. At their breeding ground, they have an elaborate series of displays accompanied by baahs, wails, croaks, cackles, groans and bill-snapping.

Population: The most plentiful of all albatrosses, with a world population of c. 700,000 breeding pairs, mainly breeding on islands off southern Chile and at the Falkland region, *melanophrys*: Bollons Island (Antipodes) 120 pairs, Western Chain (The Snares) a few pairs, Campbell Island c. 20 pairs; *impavida*: Campbell Island 23,000 pairs. **Conservation:** Protected native. The New Zealand Black-browed Mollymawk is a threatened endemic subspecies; on Campbell Island the population increased until about 1970, declined rapidly until the early 1980s, but has since increased slowly.

Feeding: Diet has not been studied in New Zealand, but elsewhere in the southern oceans it is mainly fish (often scavenged from fishing boats), squid, krill and carrion. Prey is mainly seized on the surface, and only rarely do birds plunge or dive for food. Their affinity for feeding on scraps from fishing boats has made Black-browed Mollymawks vulnerable to accidental capture.

Most of the decline in the 1970s was attributed to changes in food supplies as sea temperatures changed and to birds being killed accidentally in fishing operations. Black-browed Mollymawks are attracted to feed on offal behind fishing boats and may be caught on baited hooks of tuna long-lines (the commonest species accidentally caught), or drowned in trawl nets. Males and females appear equally likely to be caught accidentally on long-lines, but juveniles seem especially vulnerable.

In the hand: The pale honey-coloured eye of adult birds of the New Zealand subspecies is distinctive in live or freshly dead birds, but they also have a more extensive black eyebrow and are on average smaller than the Subantarctic subspecies (bill 106–112–118 mm cf. 114–117–122 mm; wing 490–520–540 mm cf. 510–535–560 mm). Males are slightly larger than females in all measurements.

Breeding: On Campbell Island, birds return

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. Warham, J. & Fitzsimons, C.H. 1987. *NZ J Zool* 14: 65–79. Weimerskirch, H. et al. 1986. *Ibis* 128: 195–213.