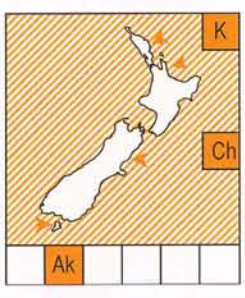
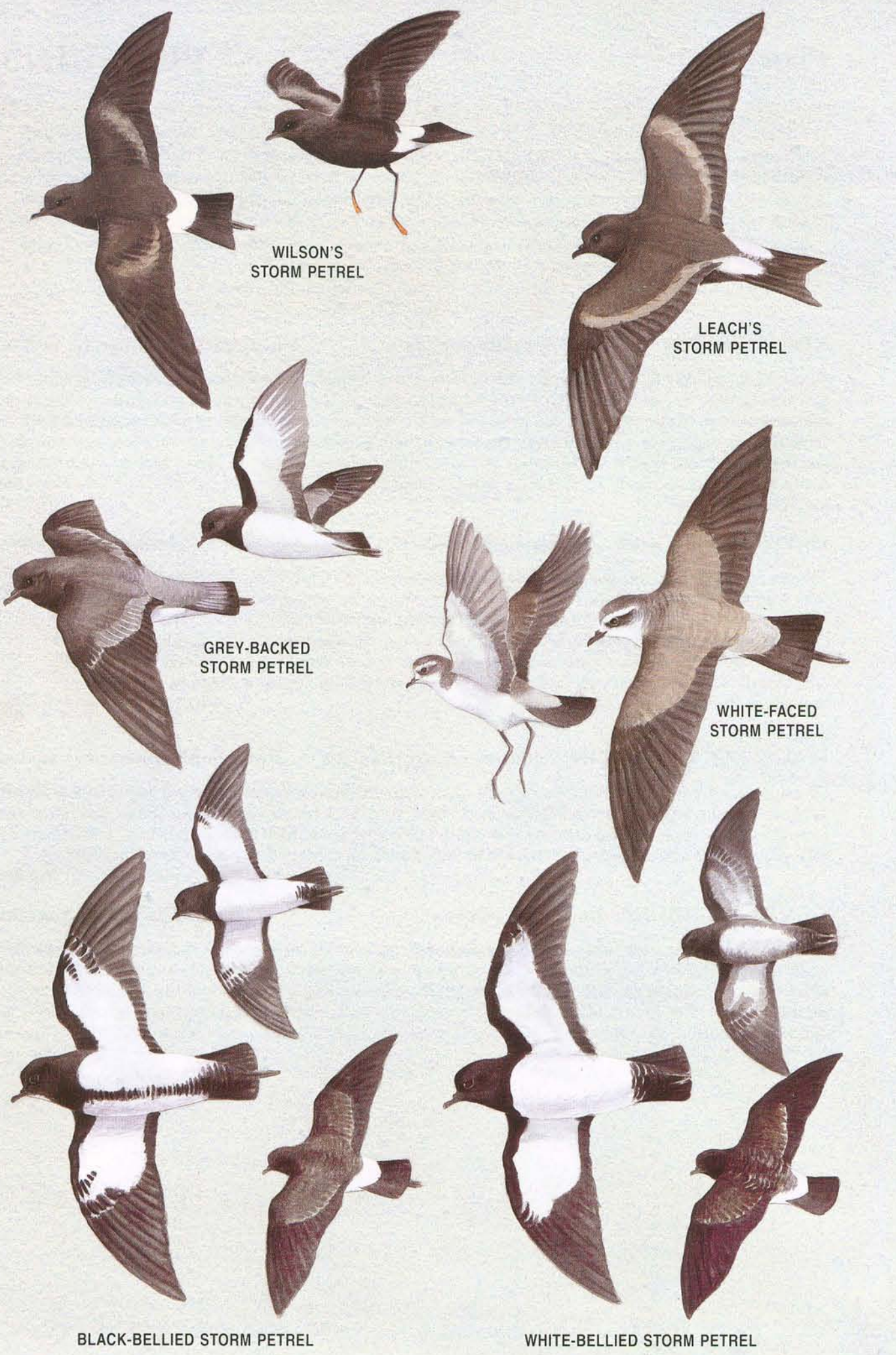
Text and images extracted from Heather, B.D. & Robertson, H.A. (2005) *The Field Guide to the Birds of New Zealand*. Penguin Books, Auckland. Pages 50, 51, 220, 221, 223.

Very small dainty seabirds with broad rounded wings, short bill with a prominent nostril with a single opening, and very long legs. Mostly black or grey upperparts except for rump. Sexes and ages alike. Fly close to the surface, erratically with short glides or hops. Pick up food while hovering or pattering on the water. Oceanic; rarely follow boats. Most silent at night over colonies, but give coos, churrs or whistles from burrows or the ground.

WHITE-FACED STORM PETREL (Takahikare-moana) *Pelagodroma marina*
Common native

20 cm, 45 g. *Forehead, eyebrow and underparts white*; crown, nape and patch through eye dark grey brown; back and upperwing brownish grey, contrasting with pale grey (NZ subspecies) or white (Kermadec subspecies) rump; slightly forked black tail. **Habitat:** Breeds temperate and subtropical Atlantic and around Australia and NZ; main NZ colonies in Hauraki Gulf, Bay of Plenty, Motunau I, around Stewart and Auckland Is and Chathams. Disperses widely after breeding and rarely seen in NZ coastal waters. **Breeding:** Oct–Mar. **[Sp 69]**





STORM PETRELS

Oceanitidae

The Oceanitidae are very small seabirds, ranging from Antarctic waters to the tropics. There are 21 species, of which 5 breed in the New Zealand region, and 1 is a vagrant.

The storm petrels are small, delicate birds with a weak black bill. They have prominent nostrils encased in a single, often upturned tube at the base of the bill. They have 11 primaries, but the 11th (outermost) is minute. The 10th primary is shorter than the 9th, giving the wing a rounded tip. The legs and webbed toes are long and are used to skip or patter along the sea surface as the birds look for zooplankton.

The biology of storm petrels and the threats to them are like those of the Procellariidae (see page **184**). The main differences are that females are larger than males, they lay the heaviest egg relative to female weight of any birds (typically in the range of 25–29% of female weight for the smaller species), and the egg is regularly unattended for one or more days at a time during incubation, which makes the total incubation period highly variable.

Reading: Harrison, P. 1987. *Seabirds of the World: a photographic guide*. London: Christopher Helm. Harrison, P. 1988. *Seabirds: an identification guide*. London: Christopher Helm. Lockley, R.M. 1983. *Flight of the Storm Petrel*. Newton Abbot: David & Charles. Murphy, R.C. 1936. *Oceanic Birds of South America*. New York: MacMillan. Serventy, D.L. *et al*. 1971. *The Handbook of Australian Seabirds*. Sydney: Reed. Warham, J. 1990. *The Petrels: their ecology and breeding systems*. London: Academic Press.

69. WHITE-FACED STORM PETREL *Pelagodroma marina* Plate 17

Other names: Takahikare-moana, Frigate Petrel
Size: 20 cm, 45 g
Geographical variation: Six subspecies, of which three have been recorded in New Zealand: *dulciae*, breeding around southern Australia; *maoriana*, breeding around the mainland of New Zealand and at the Chathams and Auckland Islands; and *albiclunis*, breeding in the Kermadecs.
Distribution: There are widespread colonies of White-faced Storm Petrels in subantarctic to subtropical parts of the Atlantic, Indian and southwestern Pacific Oceans. In New Zealand, *maoriana* breed on many islands of northern New Zealand from the Three Kings Islands to Motumahunga (off New Plymouth) in the west and to Motunau (Bay of Plenty) in the east. They also breed on Sentinel Rock (Cook Strait), Motunau (Canterbury), several islands around Stewart Island, and at the Chatham (especially South East Island) and Auckland Islands. The breeding ground of the rare *albiclunis* has not yet been discovered but may be on or near Macauley Island, southern Kermadecs, where a bird was caught in 1988; there have been about 30 records of this subspecies at sea near the Kermadecs.

After breeding, most New Zealand birds migrate to warmer tropical waters of the eastern Pacific in May–August: a bird banded on South East Island in February was recovered 1000 km west of Peru three months later. About 30 White-faced Storm Petrels are beach-wrecked each year, mostly on Northland and Bay of Plenty beaches in spring and summer. One of the few beach-wrecked in winter has been identified as the Australian subspecies *dulciae*, and part of the population of this subspecies may migrate to the seas north of New Zealand in winter.
Population: The New Zealand subspecies *maoriana* is common and breeding on many islands. The largest colony is on South East Island with c. 850,000 breeding pairs. The Kermadec Storm Petrel *albiclunis* is very rare (<100 pairs).
Conservation: Protected native. Despite declines caused by the introduction of cats, rats and Weka to many islands, the populations are secure on islands without mammalian predators.
Breeding: Adults return to their colonies in September to early October, and eggs are laid from late October to mid-December. They lay **1** white egg (36 x 26 mm) in a burrow up to 1 m long. Incubation spells are of 1–**4**–9 days, but the egg is often left unattended between shifts and can hatch even after being left for 92 hours. The incubation period is c. 50 days, but the period depends on the nest attentiveness of the adults. The chick is continously guarded for 2–3 days and fed nightly during the 52–**57**–67-day fledging period. Chicks fledge from mid-February to mid-March. A few remain to mid-April.
Behaviour: Breed in dense colonies. At sea, they feed alone or in large flocks. They are silent in the air but give a mournful twitter and a cackling call from burrows and on the surface.
Feeding: Studies at the Chathams have found that White-faced Storm Petrels feed on a wide variety of krill, amphipods and other planktonic crustaceans, and small fish. They take most prey from the surface while flying or pattering along, occasionally while resting on the surface.

In the hand: White-faced Storm Petrels are a distinctive large storm petrel (wing 145–**157**–175 mm). Females are slightly larger than males, but measurements overlap greatly. The outermost primary is rounded in adults but pointed in juveniles. Subspecies *maoriana* has a deeply forked tail (5–**10.5**–15 mm), whereas both *dulciae* (2–**5.0**–8.5 mm) and *albiclunis* (1.5–**3.6**–6 mm) have only a slightly forked tail. Subspecies *albiclunis* has a white rump, compared with a pale grey rump in both *dulciae* and *maoriana*.

Reading: Imber, M.J. 1981. In *Proc Symp Birds Sea Shore*. Cape Town: African Seabird Group. Imber, M.J. 1984. *Emu* 84: 32–35. Richdale, L.E. 1943. *Trans Proc Roy Soc NZ* 73: 97–115, 217–232, 335–350. West, J.A. & Nilsson, R.J. 1994. *Notornis* 41(S): 27–37.