

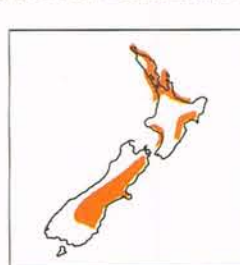
A large diverse group of birds of estuaries, coasts, riverbeds and farmland. Most are long-legged and feed in or near shallow water. Bill shape is varied; short and stubby in those (e.g. dotterels) that peck from the surface, but longer in those that feed in shallow water (e.g. stilts), or probe deeply (e.g. godwits). Flight strong and direct. Often form flocks while roosting or flying, but disperse to feed. Many species seen in NZ breed in the Arctic and arrive in September, with remnants of breeding plumage, and depart in March, often in breeding plumage. Most subadults and a few adults spend the southern winter here.

WRYBILL *Anarhynchus frontalis*

Locally common endemic

20 cm, 60 g. Very pale grey stocky confiding wader with short thick neck and black bill with tip curved to the right. Legs grey-green. Breeding adult has white forehead edged above with thin black frontal band in male; crown, nape and upperparts plain ashy grey. Underparts white except black band across upper breast, narrower in female. Non-breeding lacks frontal band, and breast band is indistinct or absent. Juvenile has back feathers edged white, and breast band always absent. In flight, small white wingbar and white sides to grey rump. Form dense flocks at roosts, usually apart from most other waders. **Habitat:** Breeds shingle riverbeds of Canterbury and Otago. Migrates to estuaries of North I, especially Firth of Thames, Manukau and Kaipara. Feeds on wet mudflats. **Breeding:** Aug–Jan.

[Sp 185]



PLOVERS, DOTTERELS and LAPWINGS

Charadriidae

About 65 species, most of which are migratory. There are about 29 plovers and dotterels, of which 5 (formerly 6) breed in New Zealand and 8 visit as migrants from the Northern Hemisphere; 26 lapwings, 1 of which breeds in New Zealand. Some authorities place the Red-kneed Dotterel with the lapwings rather than the plovers.

In New Zealand, the terms plover and dotterel mean the same thing; there is no clear distinction. All are plumpish with a thick, short neck, short tail, small, rounded head

with a high forehead and bill shorter than the head, pointed and slightly swollen at the tip. The plumage is a blend of black, white, brown and grey, sometimes more colourful in breeding plumage. They often have a bold pattern in flight. They have a characteristic 'walk and stop' way of feeding.

Lapwings tend to be inland on pasture and around coastal wetlands. They have wattles on the face and spurs on the bend of the wing, and are noisy on the ground and in flight, by night as well as by day.

185. WRYBILL *Anarhynchus frontalis*

Plate 45

Other names: Ngutuparore, Wrybilled Plover
Size: 20 cm, 55 g

Distribution: New Zealand only. Wrybills breed in Canterbury and parts of inland Otago on the braided rivers that flow east from the Southern Alps or their foothills, from the Waiau and Hurunui Rivers in the north to the Makarora and Matukituki Rivers in the south. The main breeding rivers are the Rakaia, Rangitata, Waimakariri and the upper Waitaki.

After breeding, most birds fly north to the large tidal harbours of Northland, Auckland and South Auckland, i.e. Kaipara, Manukau and, above all, the Firth of Thames. Flocks of 100+ birds reach Parengarenga, Houhora, Whangarei and Waitemata Harbours. Smaller flocks regularly winter at other Northland estuaries, Tauranga Harbour, Muriwai Lagoon, Porangahau Estuary and Manawatu Estuary. A few Wrybills remain in the South Island in winter, mainly on the Waimea Estuary and at Farewell Spit. A vagrant has reached the Chathams.

Fledglings and failed breeders start leaving in late November, often staging at Lake Ellesmere. The main northward movement of birds is in the last couple of weeks of December and early January. The last adults and late fledglings leave in early February. Their return from northern mudflats starts in early August, the peak being in mid-August, often staging in flocks at Lakes Ellesmere and Wainono. Some 5–10% of winter visitors stay in the north through the summer.

Population: 4100–4200 birds in 2001.

Conservation: Protected rare endemic. The

breeding of Wrybills has apparently been confined to eastern South Island rivers in historic times. In the late 1800s and early 1900s, many were collected for museum specimens, especially because of their unique sideways-bent bill. They were legally protected in 1940. Numbers have declined over recent decades, in some cases probably as a result of predation, hydroelectric developments and water extraction for irrigation, and because of the invasion of shingle riverbeds by exotic weeds such as willows, gorse and lupins.

Breeding: Eggs are laid from late August to January; many adults lay two clutches. The usual nesting sites are on islands of bare shingle, with the stones slightly larger than the eggs, or a shingle bank near water at a high point without vegetation. The blue-grey adults, eggs and chicks blend well with the blue-grey of the greywacke shingle. A few nest on the shores of adjacent lakes, e.g. Lake Tekapo. Males scrape a hollow in the shingle by bulldozing with their breast.

They lay 2 pale grey eggs (35 x 26 mm, 11 g), tinged blue or green, and covered with minute dark-brown spots and lines. Both sexes incubate for c. 30 days. Hatching is synchronous, and the chicks are led away to a riffle, backwater or other suitable feeding place. The fledging period is 36–37 days. About 50% of first year birds return to the breeding grounds, but few breed until they are 2 years old. The oldest bird recorded lived over 16 years.

Behaviour: Gregarious when not breeding; they roost quietly together, almost all on one leg, which they keep to, preferring to hop rather than lower the second leg when

disturbed. They swirl as one in the air, especially before southward migration, when a flock has been likened to smoke or to a flung scarf. Their usual call is not prominent, on the ground or in flight.

Feeding: The last third of the long bill turns to the upper's right at an angle of 15–22°, and the upper mandible is slightly broader than the lower and overlaps it on the outside of the curve; inside the curve the two halves do not meet, and so the lower mandible collects invertebrates from under stones. Feeding is by pecking directly or by tilting the head to the left followed by clockwise movements of the bill under stones in shallow riffles. Diet is mainly aquatic or near-aquatic

mayflies, caddisflies, bugs, beetles, flies and stoneflies. When rivers are in flood, they are forced on to stream banks and the water's edge, where their diet is more general: beetles, flies, mayflies and spiders.

On tidal mudflats in the north, they prefer silty mud with a surface film of water. They catch small crustaceans by scything the wet mud, the bill dabbing slightly from left to right.

Reading: Davies, S. 1997. *Notornis* 44: 1–14. Hughey, K.E.D. 1985. *Notornis* 32: 42–50. Hughey, K.D. 1997. *Notornis* 44: 185–193. Pierce, R.J. 1979. *Notornis* 26: 1–21. Rawlings, M. 1993. *Forest & Bird* 24: 10–15. Stead, E.F. 1932. *The Life Histories of New Zealand Birds*. London: Search.