

Zealand Bird Notes in 1946 he refused, but no one will regret his taking on this onerous and honourable duty on his own shortly after. One of his tenets was to publish on time and he never failed, even though sometimes he (and I as secretary-treasurer) had to work late on many nights to prepare the journal for posting before the deadline. The first issue he edited nearly missed: he rang me when the type was set to say he was two pages short, could I write something that night? Fortunately the answer was yes!

Apart from his own writing he edited and published two books: *Kapiti Bird Sanctuary* by A. S. and Amy Wilkinson (1952) and *Kapiti Diary* by Amy Wilkinson (1957).

Born on 4 November 1900, the youngest of the 12 children of Sidney (who came from Kent in the 1850s) and Sarah, his early days were spent in Wellington where he lived above the Gear Meat Company's shop in Lambton Quay. After attending the Terrace School and Wellington Technical College, he eventually became a journalist with the *Evening Post*. In 1926 (the family having moved to Masterton in 1919), he joined the literary staff of what became the *Wairarapa Times-Age* newspaper, retiring in 1965 as sub-editor. His knowledge and love of Kapiti Island was reinforced by his marriage on 4 January 1933 to Nora, daughter of A. S. Wilkinson, who was Custodian of the Bird Sanctuary from 1924 to 1942. He died on 12 August 1979. His wife, son and two daughters survive him. To them I offer my sympathy but gratitude for many an enjoyable hour spent with them and Stid.



SHORT NOTE

BROWN TEAL, NZ DOTTEREL, AND VARIABLE OYSTER-CATCHER — AN UNUSUAL ROCK GROUP

Slightly north of the mouth of Kaitoke Creek on the east coast of Great Barrier Island are two small clusters of rocks, the only isolated rocks exposed on the sand for the full 4 km of Kaitoke and Palmer Beaches. Both clusters are submerged at high tide but the inner cluster is exposed and free of wave splash from half-tide onwards and the outer cluster, some 10 metres further down the beach, is partly or wholly exposed at low tide, depending on the amount of sand on the beach.

These rocks, which have smooth contours, consist of irregular flat-topped blocks with vertical sides, forming many flat-topped ledges or platforms, and with irregular block summits. They vary from 1/3 to 1½ metres high. Most surfaces have dense mats of the small black mussel *Xerostrobis pulex*, which are up to 20 mm long and have reasonably fragile shells. Sometimes they are anchored among beds of *Corallina* or of tiny barnacles. Patches of a short puffy alga are sparse on the inner cluster but quite extensive on the outer.

On 14 January 1979, my wife and I were at these rocks for over an hour at low water. Both clusters were fully exposed, surrounded by sandy beach. Between them ran the territorial boundary of two pairs of New Zealand Dotterels (*Charadrius obscurus*), one breeding on Palmer Beach, the other on the southern side of Kaitoke Creek.

The northern (Palmer Beach) bird, sometimes joined by a second bird, stood and ran on the sand among and around the inner cluster, watching the southern (Kaitoke Beach) bird, which was on the outer cluster energetically feeding on the mussels, gripping and tugging them out one at a time and swallowing them whole. Confrontations on the sand were frequent, the two birds puffing out their breast and flank feathers and racing at each other like clockwork mice, head held low and forward, the whole upper surface horizontal. These horizontal runs often ended in the pursuer becoming the pursued or in abrupt upward leaps by both birds. Sometimes a bird would stand erect, puffing itself out, revealing its dull-white breast and small chestnut belly-patch, looking rather unimpressive compared with most plovers.

Although the challenging call uttered on rock or sand was the usual *prrrp* of the New Zealand Dotterel (the high-pitched sharply rising *wheet* call is characteristic of the nest area), encounters on the sand were often preceded or followed by an aggressive *che-wee-wrrrr*, in which the first syllable is short, the second heavily emphasised, and the third prolonged and pitched lower. The equivalent call that I have noted in Bay of Plenty birds is an aggressive monosyllabic *shweeerr*, which surges up and down in pitch.

Whenever the southern bird was away from its rocks or had wandered along the shore examining freshly washed-up shells, the northern bird would move to the outer rock-cluster to feed on mussels also, keeping to parts out of sight of the absent bird.

The many small droppings of the dotterels on the sand round the rocks contained mussel shells.

On 19 January 1980, we were again at these rocks. The sand levels on the beach were lower than in 1979. At low tide the waves still just reached the inner rock-cluster and the larger waves still splashed across the outer cluster, now some 10 metres below low-tide level. The mussels and algae seemed much more luxuriant than in 1979, especially on the outer cluster. When we arrived it was about half tide, and the inner cluster was occupied by two New Zealand Dotterels, which we watched for an hour. The territorial boundary ran through the centre of the cluster, the southern bird having in its share the largest and widest rocks. Disputes were few because each bird could feed out of sight of the other; indeed, an isolated boulder in the mid-line sometimes had both dotterels feeding on mussels on opposite sides, trouble arising only when one moved round to where it could be seen by the other. Disputes took place only on the sand beside the rocks, not on the rocks themselves. Again, the birds fed

only on mussels, preferring the flat top-surfaces where the mussels were smaller, pulling off and swallowing one at a time — over a randomly timed minute, one bird swallowed 13 mussels, the other 15. Mussels were taken mostly from horizontal faces but some also from vertical ones.

A pair of Variable Oystercatchers (*Haematopus unicolor*) had two well-grown downy chicks, one black and one pied, feeding on the wet sand flat 50 m away on Palmer Beach. Sometimes one or both adults visited the rocks and fed there for a while, apparently taking the larger mussels and probing down into crevices, perhaps for the limpets that were also there. Their visits were brief, however, and they preferred to probe randomly into the wet sand and runnels around the base of the rocks, occasionally coming up with what appeared to be small univalves. They would gradually move away to the general tideline, fly back to the chicks, or fly to pipe at one of the next oystercatchers along the beach. The rocks seemed to provide the oystercatchers with only a casual change of diet.

When we returned an hour later, it was almost low water and the dotterels were still feeding on the inner rock-cluster. After a while, the southern dotterel flew south towards its 3-egg nest on the south side of Kaitoke Creek. A few minutes later, a different bird, evidently just off the nest, flew in from the south and shook and settled its plumage. After challenging the northern bird spiritedly, it flew to the largest rock and began feeding avidly, taking 20 mussels in a timed minute.

Soon after our return, round the headland from Kaitoke Creek, low to the sand, flew three Brown Teal (*Anas aucklandica chlorotis*). They headed straight for the inner rock-cluster but pitched several metres short in the shallow edge of the tide and, riding the breaking waves nonchalantly, swam and then paddled to the rocks, flew and clambered on to various parts of them, and began also to feed on mussels. Twenty minutes later, another five Brown Teal arrived in similar fashion.

For the next 1½ hours, as the tide rose steadily, teal and dotterels continued to feed. When we had to leave, we had to disturb them before we could examine where they had been browsing. At that stage, the waves were breaking over many of the rocks, and only one teal had broken off and returned to Kaitoke Creek.

The teal kept loosely together, gradually working from one rock to another, each bird concentrating on its own selected patch. Sometimes one bird would push aside another and take over its patch, without a noticeable threat posture. Sometimes, the teal shifted to sieve the sand in the swirling wavelets at the base of the rocks, but they would soon return to the rocks themselves. They seemed to prefer to stand on wide ledges or the tops of rocks from where they could reach mussel mats on vertical faces, but several teal worked at mats at their feet. The mats of larger mussels were preferred. Each teal worked on one spot thoroughly, forming a circular bare patch in the mat, the mandibles vibrating rapidly to work at and

loosen groups of mussels at the edge of the patch, which thus was gradually widened. Whenever a sizeable billful had been removed, the mandibles were vibrated rapidly and at length, presumably to macerate the shells, and the whole was swallowed. Sometimes, a teal would seem to feed on *Corallina* turf or on algae, but on at least some of these occasions it could be seen that isolated mussels were being picked out from among them.

One bird chose to swim to the outer cluster of rocks and feed there for several periods. It selected a spot on top and, as usual, worked at it with great concentration, ignoring the repeated spray that broke over it from the low-tide waves striking the rocks. As the tide rose, however, this teal became increasingly deluged, until the larger waves were repeatedly sweeping it from the rocks. It persisted in clambering back to the same spot until one particularly violent surge tumbled it over and over in the water, and it swam back to join the others, which by now were also being splashed and knocked about if feeding on the lower parts of their rocks.

The dotterels continued to use the rocks while the teal were there but not the same parts. The teal made no audible calls; a casual passer-by would not have noticed them. Their whole behaviour was assured — they knew exactly where and when to come and what to do there. The mussel mats were seen to have many round bare patches like those made by the teal that day. Unless this mussel has rapid regenerative powers, the rocks would not seem to be able to support too many teal feeding too often in this way.

It would be interesting to know whether this mussel-feeding habit occurs only on fairly calm days, as this was, whether it occurs year-round, and whether elsewhere on Great Barrier outside the breeding season. Certainly, the Brown Teal on Great Barrier is not, outside the breeding season, the secretive nocturnal feeder that reports of mainland birds have us believe. Wherever creeks emerge on the shore, its daytime feeding activities closely follow the tides, at least in January and especially on the western harbours and bays. Most of the creeks open on to sandy or muddy bays at low tide or have tidal lower reaches where small groups of Brown Teal quietly sieve along the margins, paddling or swimming. Few of these places have free-standing rocks with beds of mussels. However, on 21 January 1980, at the south end of Okupu on the west coast, we disturbed a party of five Brown Teal from among the many mussel and oyster covered boulders that strew the low-tide sand there.

In January 1980, the mouth of Kaitoke Creek was largely blocked by a sand bar and so the tidal margins of the lower reaches of the creek would have been a less profitable feeding place than usual. Had this caused some of the teal to adopt a mussel diet or is it a regular habit? Moreover, do the dotterels feed on these rocks all year, and in what numbers when not breeding?

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