

OBSERVATIONS ON WRYBILLED PLOVER AT KARAKA.

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Although the tidal flats of Manukau Harbour have been known since 1878 as a winter haunt of the wrybilled plover (*Anarhynchus frontalis*) the records till 1946 had all come from a comparatively small area, namely, the flats between Mangere and Puketutu Island. However, on 20/1/46 D.A.U. found a small party feeding on the soft mud at the mouth of Whangamaire Creek, near Karaka, in the south-eastern corner of Manukau and some ten miles distant from the one known wintering ground of wrybills in that large harbour. The question which at once posed itself was whether they were birds on passage or whether they were the first arrivals of an unknown wintering flock. It is worth mentioning that in 1946, 41 wrybills were already back near Puketutu on January 16th.

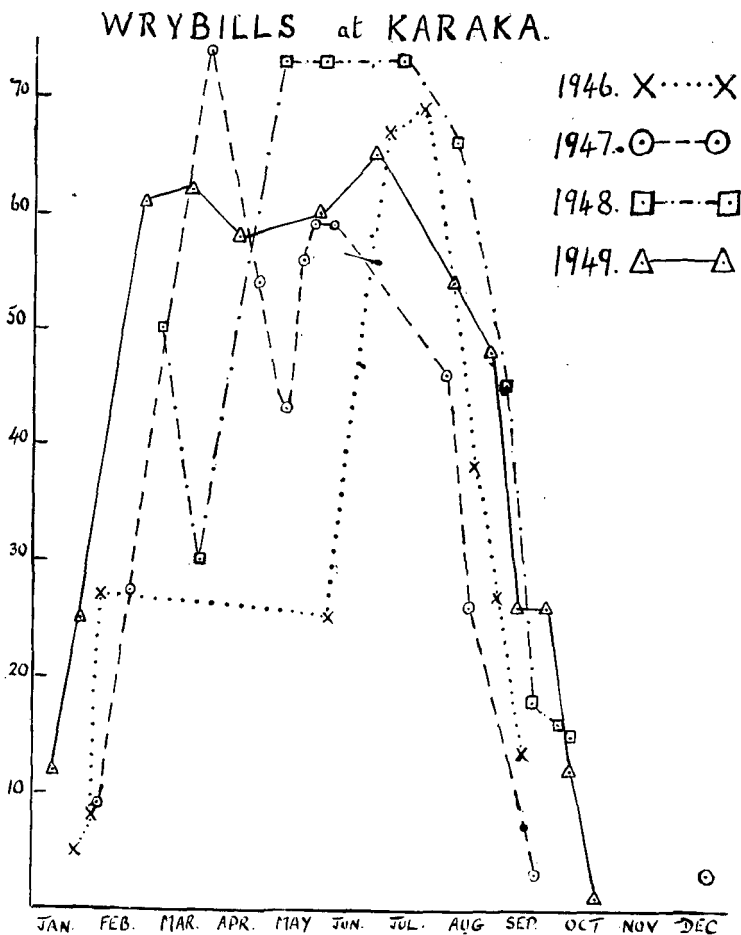
Subsequent observations, made mainly by D.A.U. between 1946 and 1951 have shown that as long as the population of wrybills remains numerically as strong as it is at present some may be found in any year on the Karaka coast between January and September and occasionally in October, November and December. In the vicinity of Puketutu there are so far no records of wrybills for November, but at Karaka, in 1950, a flock of 12 was present throughout that month and the next. Till then the wrybill had not been known to summer as a non-breeder in Manukau, although summering has been proved not infrequently in the Firth of Thames. At Karaka it is unlikely since observations began that in any November wrybills have been overlooked. There has been no relaxation of watching, as waders from the Arctic are still coming in, and in particular the local flocks of turnstones (*Arenaria interpres*) and Pacific golden plover (*C. dominicus fulvus*) are being augmented at this time.

The accompanying graph is more or less self-explanatory, but a few remarks are necessary. There were two long intervals when owing to the absence of U., no counts were made, the first in the late summer and autumn of 1946, the second in January and February, 1948; but U. had already recorded the return of the first migrant wrybills for that season on 25/12/47. The strange shape of the 1946 graph is also in part to be attributed to the fact that the movements of wrybills in this locality were at that time imperfectly understood. It is likely that the twenty-five seen on June 3rd represent less than half the total number actually present on the Karaka coast.

A study of the graph reveals that a slight peak may occur in March or April followed by a decline and a rise as the population settles down about May for the winter months. This peak was most noticeable in 1947. Similar peaks have been noted elsewhere, e.g., at Puketutu and in the Firth of Thames, not only for wrybills but also for migrant South Island pied oystercatchers (*H. ostralegus finschi*). A reasonable explanation may be that some birds halt for a few days before passing on to wintering grounds further north, e.g., Kaipara.

After April, when the winter flocks have settled down to a fairly consistent pattern of behaviour, it is not as a rule difficult to make an accurate count. The main winter high-tide roost at Karaka is not near Whangamaire Creek, where the first birds to return were found in January, 1946 and again in February, 1947, but on the sand of the open beach or at the very big tides on a shell bank. In 1949 an interesting change of behaviour was noted. Some acres of what was once salt-marsh had been reclaimed by the building of a stop-bank, roughly drained and ploughed. In the turned-up soil were many white shells. As the ground dried out in the hot January sun banded dotterels (*C. bicinctus*), turnstones and golden plovers took to spending many hours there, where they were remarkably invisible among the ridges. On January 23, twenty-five wrybills had joined them, and during the following three months about

sixty were habitually present at full tide. They were last seen there on April 16, after which they re-transferred their affections to the open beach. Further ploughing of reclaimed saltings was done late in 1949. On 5/1/50 the first wrybills to return to Karaka were found on this newly-turned land, again in company with banded dotterels, turnstones and golden plovers.



The Karaka graphs which cover four seasons corroborate observations made at Puketutu, for which figures (not published) are now available for twelve successive seasons. The winter flocks are built up gradually, reaching a maximum in late March or April, after which there is a slight decrease. Then for about three months the flocks remain stable. Towards the end of July they begin to break up. The numbers decline sharply in August and by the end of September very few birds are left. So far there are no records of wrybill flocks of any considerable size south of Manukau Harbour and the Firth of Thames.

There is no evidence that the number of wrybills wintering at Karaka has increased to the detriment of the Puketutu flock. In the *Emu* (Vol. 43, p. 50), S. showed that over the period of the three years 1940-41-42 there was an increase of wrybills wintering on the Puketutu flats. This increase has continued, most remarkably now, over twelve

seasons, with the result that whereas in 1940 eighteen was the greatest number recorded, in 1945 at least ninety and in 1949 more than two hundred were present during May, June and July. This figure was surpassed in 1950, and during March and April, 1951, while c. 300 (max. 310) were being recorded on Puketutu Fats, U. at Karaka was recording over 200 (max. c. 250).

It is interesting to compare the size of the two wintering flocks over five years, autumn peaks being disregarded:—

	1946	1947	1948	1949	1950
Puketutu	135-142	c. 192	196-210	200-225	c. 240
Karaka	c. 67	54-59	73	60-65	c. 190

Thus, while at Puketutu the increase in 1950 was comparatively slight, at Karaka the number of wintering wrybills trebled. The two flocks appear to keep quite distinct and so far there is no evidence of intermingling. At very high tides the Puketutu wrybills have been seen to mount very high and disappear in a north-easterly direction. Where they go has not yet been discovered, but it certainly is not Karaka.

In the Emu (Vol. 43, p. 50) it is stated by S. that the first migrant wrybills reached Manukau in early February. In the light of later experience this statement must be revised; for since the numbers visiting Puketutu have increased, many birds have been reaching their winter quarters in early January, and both at Karaka and at Puketutu the earliest arrivals have occasionally been recorded even in December, viz., Puketutu, one on Dec 27, four on Dec. 30, 1947, two on Dec. 23, 1948; Karaka, three on Dec. 25, 1947. These U. described as appearing to be "two adults fussing around a juvenile."

Observations of wrybills in their winter haunts on the great tidal flats of the Auckland province indicate that this unique endemic species is flourishing. On its breeding rivers in Canterbury it may have benefited from erosion and the cleansing effects of great floods. Introduced vermin do not appear to be a serious menace and not improbably it is as numerous as it ever was. In Manukau alone, on 31/3/51, the two known flocks contained at least 530 birds; for while U., at Karaka, was counting almost exactly 250, S., near Puketutu, was showing more than 280 to two visitors from England, one of whom was busy taking a film of them.

VISIT TO THREE KINGS.—I have recently returned from my seventh visit in my yacht "Rosemary" to the Three Kings. I saw very few gannets until I approached the Kings, when about 100 were observed diving into a shoal of fish. Large numbers of Buller's shearwater were seen around the Kings, often in flocks of 50 to 100. This year it was more numerous than during my previous visits. Thousands of fluttering shearwater were seen near and one egg was obtained on the West King. The white-faced storm petrel and the diving petrel were fairly common and on each of the three days I was at the Kings I estimated that I saw at least 100 of each. The red-billed gull was thicker than ever and is steadily increasing each year since the extermination of the goats. The gannet appears to be slowly increasing, but the weather prevented me making a check of all its nesting places. At the Kings I estimate that there must be close on 6,000 gannets, and yet I saw only one flock diving in the vicinity of the Kings. All the gannets when on the wing were either going to or coming from the north-east. As to bird life on the West King I saw very little. The weather was wet and very foggy and I saw only six bellbirds, parakeets, and an odd blackbird during the short time I was on the island. During my seven visits to the Kings I have observed that there is a strip of sea extending up to 12 miles off the north-east coast in which very few sea birds appear, but outside of this strip I have seen sea birds by the thousands, principally Buller's and the fluttering shearwaters. This area of sea also is devoid of whales and shoal fish.—Magnus E. Johnson, Auckland, 23/1/51.