SPECULATING ABOUT SHOVELERS NEAR AUCKLAND

By R. B. SIBSON

During the nineteenth century and the first half of the twentieth the Shoveler (*Anas rhynchotis*) seems to have been a rare bird north of the lower Waikato and the Hauraki Plains. In the Auckland War Memorial Museum there are no skins from the immediate vicinity. Buller in his second edition (1888) has this to say, "In the extreme northern portions of the North Island, so far as I am aware, it has never yet been met with. . . . It is often met with on the Waikato river"; and a little later — "Mr. Cheesman writes to me from Auckland 'rare with us. I have heard of it on the lakes near the Kaipara Heads.'"

The past scarcity of the Shoveler on the Auckland Isthmus may be attributed partly to a shortage of freshwater lakes or open pools of any size and the drainage of wetlands. Over the years I have discussed Shovelers with several local landowners and their sons. Recently Mr. T. W. McLaughlin, whose well-watered farm was on the slopes of Puhinui, laughingly recalled how I growled at him for shooting a drake Shoveler in May 1949; but confessed it was the only one he ever saw on his farm. Not far away on land which Mr. O. R. Self has farmed for many years is Crater Hill, which once held a freshwater lake with its surface 40 feet above sea level. Till the middle 1940's when it was drained, this crater-lake was rich in wildfowl, and local ornithologists visited it in search of Grey Duck, Bittern, Harrier and Pukeko. Mr. Self was familiar with the Brown Teal, which once frequented this water; but he has no recollection of ever having seen a Shoveler there. Three miles to the west were the swamps in the "great bowl of a crater nearly half-a-mile across," known as Waitomokia or Gabriel's Hill. It was here that Dr. P. C. Bull grew up, began his bird-watching and became a skilful nest-finder; but he never saw a Shoveler. Nearer the centre of Auckland, a shallow but extensive lake once filled a hollow between Mt. Wellington and Little Rangitoto. Known as St. John's Lake it was reputed to be a haunt of Brown Teal. During a very wet winter, the shallow lake is temporarily reformed and could attract Shovelers, as it may have done in the past. The only truly natural open freshwater lake in suburban Auckland now is Lake Pupuke, Takapuna. In the course of many visits made to examine its waterfowl, I have not yet found a Shoveler there.

Cheesman mentions 'the lakes near the Kaipara Heads.' These are the pools which lie in the Muriwai dunes west of Kaipara Harbour and form a chain some twenty miles long. They begin about thirty miles north-west of the isthmus proper. Although they would seem to be the most suitable natural waters for Shoveler in the district, hitherto the population has been only small. Talks with several shooters show that a Shoveler in the bag is always worthy of note. In January 1944, D. Beggs and I spent two days walking the length of the Muriwai pools; and on only two did we find Shovelers, the total of birds being 24.

Numerous visits since to pools at the southern end of the chain confirm a scarcity which seems to apply to the whole of Kaipara. The biggest count of Shovelers was made by D. A. Urquhart, B. D. Heather and myself on 6/1/49 on a big shallow pool in what was then the mid-Kaipara wilderness of Tapora. Here not only were there some scores of Shoveler, including a duck with four ducklings, but also a number of Scaup (*A. novaeseelandiae*) including two ducks each with broods of five; and three pairs of Dabchicks (*P. rufopectus*). This pool no longer exists (N.Z.B.N.3. 205), but on 1/5/59 twelve Shovelers were seen flying along the tideline off Tapora. Finally, the findings of two censuses show how scarce the Shoveler is around Kaipara. In 1956 when H. R. McKenzie and J. C. Davenport organised a waterfowl census of the lakes of the Pouto peninsula, only nine Shoveler were logged. In 1965 when a survey of shorebirds attempted to cover the internal coastline of Kaipara, the tally of Shovellers was a mere three. However, it must be conceded that the Muriwai and Pouto pools were outside the survey. (Notornis 12, 75).

The lack of waters suitable for Shovelers on the Auckland Isthmus has been remedied by the construction of artificial lakes, farm dams, reservoirs and especially the big oxidation ponds of the Auckland Metropolitan Drainage Board between Mangere and Puketutu Island (Notornis 8, 220-221). About 1932 the upper reach of Hihi Creek, Karaka, was cut off by a dam behind which a long freshwater lake was formed. Yates' Dam, as it is now called, offers plenty of shallow fuddling water such as Shovelers love. Here D. A. Urquhart reported a pair of Shovelers in October 1948 (N.Z.B.N. 3, 205). Now along with Pied Stilts and Whitefaced Herons they are one of the species normally present. Yates' Dam may serve as a handy staging post between the lower Waikato and the oxidation ponds at Mangere.

To the north of Manukau Harbour there are several rather inaccessible reservoirs in the Waitakere Ranges. The only one which I have visited with any frequency is Lower Nihotupu, Parau. Occupying a fairly wide valley at the head of Big Muddy Creek, it looks ideal for Shovelers. Mallard are numerous; and pure Grey Duck may still be seen but, as far as I know, no-one has yet been able to find Shovelers there.

It is on the wide expense of open non-saline water, provided by the four oxidation ponds of the A.M.D.B. that Shovelers and other surface-feeding ducks have found conditions to their liking. In windy weather the many miles of embankment provide shelter and the ducks can always find calm water. Not only is there a regular post-nuptial influx, probably from the lakes of the lower Waikato, where as the water level falls and the many families of Black Swans grow up, competition for food and open water increases; but also some pairs of Shovelers stay to breed.

The first Shovelers to be seen here were two pairs on 2/11/58. They were in the explosion crater at the south-west foot of Mangere Mountain, once known as "Mangere Lagoon" when the tide crept into it through a breach in the tuff rim, and described by Professor E. J. Searle as 'this little jewel of a volcano.' In November 1957, I had noted that as the result of a newly completed stop-bank no tidal water was entering the lagoon; the floor was drying out and there

were shallow pools covered with a bright green alga. In February 1958, there were torrential rains and the explosion crater became a shallow lake and remained so all winter. In spring it was often crowded with non-breeding Pied Stilts; and it was among them that these first Shovelers were discovered. Since then it has usually been possible to see some Shovelers on one or other of the ponds. There have been temporary setbacks following explosive outbreaks of midges, and aerial spraying of generous doses of insecticides. The treatment of sewage began in September 1959. But since the scheme came into full operation, Shovelers appear to have become a permanent part of the establishment.

Whether the first two pairs bred locally or not is unknown; but on 2/2/59, c.20 Shovelers were present together with three Grey Teal (*A. gibberifrons*) the first of this species to be recorded near Auckland; and on 12/2/59 H. R. McKenzie, J. C. Davenport and I counted about 60 Shovelers. Probably as a result of the use of insecticide sprays the latter half of 1960 and most of 1961 were comparatively lean years, though some scores of Shoveler had returned by 29/12/61.

It is often difficult now to count the Shovelers when the duck population on the four ponds of the A.M.D.B. is at its peak in autumn. The area of the ponds is considerably more than two square miles and on the water there may be over a thousand Mallard, probably some hundreds of Grey Duck and perhaps up to two hundred Grey Teal. If the water is calm and the Shovelers are in discrete groups, as they sometimes are, fairly accurate counts are possible; but if the weather is windy or the ducks are all mixed up far out near the centre of the ponds, estimates are hardly to be trusted. Normally the influx begins in December but the biggest counts are made between February and May and there is a distinct drop in numbers before mid-winter, by which time the drakes are in full plumage; many pairs have been formed; and in the lake district of the lower Waikato water levels are rising. Autumn estimates for the last five years are: 1962, Scores; 1963, c.120; 1964, scores (? c.100); 1965, 120+; 1966, 150+.

Ever since two pairs of Shovelers were found on the explosion crater in November 1958, it has been hoped that a breeding population would become established. Accordingly any spring occurrences have been carefully noted. Successful breeding was not proved till 1964. In the intervening years the following suggestive sightings had been made:

1959 1 pr. on Sept. 30.
2 drakes and one duck on October 11.
3 drakes on October 26.

1962 10+ on November 20.

1963 2 prs. on November 9.

1964 Several pairs and 2 ducks with broods of 5 and c.6 on December 28.
Duck with 11 nearing flapper stage on December 28.

1965 10 drakes and 4 ducks in flock on July 19.
3 drakes and 1 duck on August 29.
8 drakes and 1 pr. on September 20.
3 prs. and 5 drakes on October 18.
8+ on November 30.
30+ and 1 duck with 7 small ducklings on December 31.

1966 2 prs. and 6 drakes on September 22.
6 prs. and 3 drakes on October 20.
6 prs. and 6 drakes on November 5.
1 duck with 10 half-grown ducklings and drake in attendance.
Other solitary drakes (waiting hopefully?) on November 23.
Another duck with 8 week-old ducklings and drake in attendance; also another with 3 downies, on November 25.

Something has been learnt to fill in the not inconsiderable gaps in our knowledge of the behaviour and breeding of the Shoveler. At Mangere in the spring of 1965 and 1966 there was a marked preponderance of males over females, e.g. one pair and eight drakes on 20/9/65; two pairs and six drakes on 22/9/66. Unpaired drakes at this season are conspicuous because they tend to stay in small flocks. Later in November and December some drakes, whose ducks are sitting, are solitary and apart. They appear rather jumpy and may be seen loitering where apparently they are expecting the ducks to lead the ducklings down to the water. Some drakes at least show a sense of parental responsibility and join the ducks in escorting the families.

By November the plumage of the drakes has a worn look and between December and February they are rather drab. According to my notes there were no brightly coloured males on 20/2/65; but by April 17 the drakes were in fine plumage. Again on 7/4/66 drakes were in splendid colour. The breeding dress of these local Shovelers is something of a puzzle. Others besides myself have examined them closely; and there is a marked lack of white on the breast, commonly just a faint suggestion. In May 1956, when I examined the Shovelers on Waikanae Lagoon, Wellington, I was struck at once by the extent of very obvious white on the breasts of the drakes, one of which was so white-breasted that it recalled a European Shoveller (*A. clypeata*). Is there an albinistic strain in the Waikanae Shovelers or are they typical of the variable New Zealand race, *variegatus?* Dr. C. A. Fleming tells me that these highly decorative Shovelers may still be seen on the Waikanae Lagoon.

This leads to the thought that the increase of Shovelers in northern New Zealand may be the result of an irruption of Australian Shovelers. According to Delacour and Scott, Shovelers of the Australian race are duller; "the head markings are more or less blurred with black dots; there is little or no white on the breast, mantle and scapulars; and the white patches on the sides of the rump are streaked with black; the flanks and vent are more heavily spotted." The New Zealand Shoveler is "altogether a prettier bird" and "definitely better coloured than its Australian relative." In 1965 and 1966 Mr. H. R. McKenzie and I paid several visits to the lakes of the lower Waikato, particularly Waikare, Hakanoa, Wahi and Whangape. The commonest duck on these lakes after the Mallard is now in our opinion, the Shoveler. Yet amongst the hundreds of drakes that we have seen in breeding dress, few have shown more than a trace of white on the breast. It is reasonable to suppose that the Mangere ponds have been colonised from the lower Waikato.

In 1957 under what were evidently favourable conditions, many Australian birds, especially ibises, egrets and herons, and probably others,

are known to have crossed the Tasman Sea to New Zealand. The most significant record is that of a Grey Teal ringed at Lara, Victoria, on 12/5/57 and shot on L. Whangape on 7/5/59. If Grey Teal flew the Tasman, why not Shovelers, too? The two species commonly associate both in the lower Waikato and on the Mangere ponds, where the first Shovelers were seen in 1958 and the first Grey Teal in 1959. If this hypothesis is valid, there are two races of Shoveler in New Zealand, *Anas rhynchotis variegatus* and *Anas rhynchotis rhynchotis*. And it may be that in the north, stimulated by an infusion of new trans-Tasman blood, the Shovelers are predominantly of the duller Australian race.

For naturalists and conservationists the important thing is that a fine species, formerly rather scarce but now apparently expanding, has quickly adopted a man-made suburban refuge, where it is now both a resident breeder and an abundant autumn visitor; and it appears to be thriving in what may seem to some people an unsavoury habitat provided by a system which dilutes and purifies the waste of a great city.

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RECORDS OF COOK'S PETRELS AND BLACK PETRELS FROM GREAT BARRIER ISLAND

By J. A. BARTLE

Over many years records of small unidentified *Pterodromas* were obtained from Great Barrier Island. Bell and Brathwaite (1964) summarized these in *Notornis* 10, pp. 363-383. Observations made by D. V. Merton (*Notornis* 10, p. 382), P. D. G. Skegg (pers. comm.), and M. J. Hogg (pers. comm.) indicated that these birds might nest in the Mt. Hobson area. I spent two nights investigating these birds at the summit of Mt. Hobson (2038 ft.) in November-December, 1966.

Examination of six small *Pterodromas* caught at the top of Mt. Hobson, and measurements of another two cat-killed birds from the lower slopes, showed that these petrels were typical Cook's Petrels (*Pterodroma c. cooki*). An upper mandible measurement of 36.8 mm from one of these specimens compared well with an average of 34.6 mm (range 33.5 - 36.2) for the equivalent measurement taken from six Little Barrier Is. specimens in the Auckland Museum. Eighteen Cook's Petrel skins from various localities were examined in the Auckland Museum. The wing length of the second Great Barrier Is. specimen (A.V. 148.27) was 244 mm, the tarsus was 30.9 mm, and the toe, 38.8 mm. These measurements agree fairly well with an average length for the wing of 235.8 mm (range 228 - 246 mm), for the tarsus of 31.2 mm (range 30.4 - 32.8 mm), and for the toe of 38 mm (range 37.0 - 39.6 mm) for the eighteen Auckland Museum skins.