

NOTES ON POST-BREEDING MOVEMENTS OF THE NEW ZEALAND DABCHICK IN THE SOUTHERN NORTH ISLAND

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The post-breeding flocking of the New Zealand Dabchick (*Podiceps rufopectus*) has not been investigated, although this annual movement has been common knowledge. In the southern part of the North Island, some attention has been paid in the present decade to this flocking and to the subsequent dispersal. The recent rash of sewage ponds constructed by rural boroughs has added greatly to the winter range of the Dabchick, with better chances for its survival in winter. These ponds seem often to provide conditions which favour wintering birds, perhaps partly because the depth of water is constant in all weathers.

We wish to draw renewed attention to Dabchick flocking and to some of the points of interest which might arise from keeping wintering flocks under regular observation.

Following a minor population explosion in the Wairarapa and Manawatu districts about 1959 (Stidolph 1971), the Dabchick has become a much more familiar bird in these areas in the last three decades, having appeared on lakes, lagoons, farm ponding areas and man-made sewage ponds in districts where it had seldom or never been recorded or where it had not been seen for years.

It seems that the Dabchick has not been seen in cross-country flight, indicating that it moves at night. There is some support for this in that the similar Little Grebe (*P. ruficollis*) in the British Isles is a frequent casualty at lighthouses (Witherby *et al.* 1943). That the Dabchick is capable of sustained flight is shown by its ability to colonise waters in the midst of hilly pastoral lands such as the east coast district of the Wairarapa, many miles from previously known habitat. It is also clearly shown by its winter appearance in places where it does not breed and sometimes in numbers well beyond the known local breeding population (as at Waikanae); and by constant fluctuations in its wintering numbers at these places.

For breeding, the Dabchick requires waters with a certain amount of fringe cover such as raupo, cutty-grass (*Mariscus*) or overhanging branches of trees, as well as a depth of water suited to its habits. It is unlikely to breed on sheets of water with no cover, though in post-breeding flocking it is often seen on open water, such as on sewage ponds.

Post-breeding dispersal in the Wairarapa has come into prominence since 1970 when the construction of the Masterton Sewage Ponds highlighted it. Three ponds, each of about 9.3 ha (23 acres) were established at Homebush, about 6 km east of Masterton, adjoining the Ruamahanga River. The filling of the excavations began about November 1971 and extended over many months, the northern pond being filled by 8 February 1972, and, although the other two were only partly filled, by 8 March 3 Dabchicks had appeared. On 3 April the middle pond, only one-third full, had 8 Dabchicks. This pond, with vegetation showing above water level, had 3 birds on 3 May and the southern pond, with only small areas of water, more in the nature of deep pools, had attracted 4 Dabchicks. On 11 June only 2 birds were seen on the southern pond, still at a low level. No birds were seen on 17 July, when the middle pond had filled, but on 13 August 3 Dabchicks, one in pursuit, were on the southern pond, still low. 4 birds were recorded on this pond on 5 September when it was half-full. Although no birds were seen on 14 October, 3 were present on 21 October and 2 on 5 November, when 2 were also seen on the half-filled middle pond; all had disappeared by 8 December. The more attractive southern pond, still half-full, had one bird on 14 January 1973.

The presence of Dabchicks during the 1972 summer was probably induced by the state of the ponds which still showed considerable emergent vegetation, offering sufficient cover for possible breeding.

A protracted dry spell occurred in the Wairarapa in the beginning of 1973 when many farm dams, lagoons and other waters more or less dried up. This seemed to be reflected by an influx of Dabchicks to the southern pond, 25 being recorded on 11 March, rising to about 35 on 7 April, when several juveniles were seen in the group. This number, which reached a maximum of 40 (29 April, BDH), was more or less maintained, as shown on visits on 2 and 22 May and 15 July (30 birds). The next visits were on 8 and 28 October when there were no birds.

No close watch was kept in 1974 when the now full southern pond had 8 birds on 6 July. In 1975, 4 were on the southern and 6 on the middle pond, both now full, on 18 May, though Michael Dennison had recorded 22 on 1 April. In 1977 no Dabchicks were noted on 14 March but on 1 April 14 were seen, dropping again to 3 on 18 April and 3 May, with 2 on 17 May and none on 30 June and 18 July. This was an abnormally wet winter.

Towards the end of 1973 the former shallow ponds at the Waingawa Freezing Works effluent system in Hughes Line (some 4 km south of Masterton) were excavated into two deep 2.4 ha (six-acre) ponds, destroying the previous shallow areas so attractive to stilts and Black-fronted Dotterels. On 18 April 1976, 12 Dabchick, the first to be seen in this area, were recorded by BDH, though this

number had dropped to 5 on 18 May; 2 were there on 12 June (RHDS) but none on 9 July and 1 on 4 September (BDH). In 1977, 3 were noted on 12 and 25 March and 18 April, rising to 6 on 2 May, none on 19 May (RHDS), 7 on 21 May (BDH) but back again to 5 on 1 July and then to 9 on 18 July (RHDS) and 8 on 30 July (BDH).

The sewage ponds at Carterton which on 9 July 1976 had 9 Dabchicks (BDH) have been faithfully watched by B. D. Boeson in 1977 but the ponds are being rebuilt and Dabchicks have not appeared. He also watched Kourarau Dam and likely spots near Gladstone, without success.

These fluctuations have been given in some detail to indicate the considerable movement by Dabchicks in the non-breeding period. It is a bird likely to turn up on any stretch of water at this period and could remain to breed if conditions suit it.

It is worth noting that Kourarau Dam in the hills east of Masterton, the first water in the northern Wairarapa to be reported colonised by Dabchick (in 1950/51, when young were reared), remained tenanted, despite occasional lowering for cleaning purposes, until the latter part of 1969 when 3 were reported present. A visit on 10 August 1971 revealed no Dabchicks, nor have any been seen on subsequent checks. It may be significant that a row of willows along the eastern shore, which provided good cover for breeding, has been killed. It is worth noting, too, that during the 20 years of occupancy, no build-up of numbers was seen in the post-breeding period.

In west Wellington and Manawatu, somewhat fragmentary reports (in *Notornis*, Classified Summarised Notes) from various places have indicated that flocking and considerable movement occur there also. A build-up to flocks may begin from early February: Lake Koputara (north of Foxton), about 30 on 1 February 1975 (J. L. & M. Moore); Lake Papaitonga (south of Levin), 20+ on 16 March 1975 (L. & P. Griffin); Marton Sewage Ponds, 19 on 7 April 1973 (H. A. Robertson & I. G. Andrew) and 28 on 11 July 1977 (BDH). A flock of about 50 is recorded for Lake Horowhenua (Levin) on 9 May 1970 (E. B. Jones).

In 1977 E. B. Jones began in late May to make regular counts at the north end of Lake Horowhenua, the part most favoured by Dabchick (although he did see 6 at the southern end on 26 March). Figures rose from a late-May maximum of 21, sustained in June, to a late July maximum of 33, down again to 21 on 30 July, maintained until at least 22 and 21 August, an unusually late flock. On 4 September, there were still over 20, together with a Hoary-headed Grebe (EBJ, BDH, W. F. Cash).

At Lake Wairongomai, near the coast between Otaki and Manakau, were 9 Dabchick on 24 April 1976 (BDH) and 12 on 8 May

(P. C. Bull) where a single pair is usually present in summer. Unfortunately a regular watch could not be kept here, nor at Lake Papaitonga.

At Waikanae, Sir Charles Fleming has kept 1977 counts at the new Waikanae Sewage Ponds and nearby Waimeha Lagoon where a pair bred in the 1976/77 season. Waikanae is close to few likely breeding places for Dabchick. From 17 or 18 on 20 March when counting began, and 14 on 17 April (no May counts), the number rose to 28 on 12 June, then dropped to 14 on 9 July, 5 on 23 July, 16 on 7 August, 0 on 14 and 20 August. Throughout this period, the Waimeha pair, a mere 2 km away, remained on their home lagoon, until end of January with their fully grown chick, then alone apart from an occasional absence of one or both in late July/early August.

It seems that there were more Dabchicks in winter in the Waikanae-Levin district than could breed in the district, particularly as Manawatu members continued during the winter to encounter Dabchicks on Manawatu dune wetlands.

As a sample of the type of seasonal changes that may occur at a typical dune lake of moderate size, we have taken from Wildlife Service files the maximum counts recorded by W. J. Pengelly during his almost daily wildfowl counts at Lake Pukepuke through 1973 and part of 1974. From a maximum of 16 (9 adults and 7 chicks) in the first half of January 1973, the numbers sharply declined to the first week of February when, from 8 February, none was seen until 4 May when there was a single bird. The highest count in May was 3, rising to 11 in June, a number more or less maintained during July and August, then dropping slightly to 8 in September and 7 in October. The first chick was seen on one of the adjacent ponds on 26 October, by which date 10 adults were present, rising to a maximum of 12 in November and December. Chicks were evident in every count until 27 January 1974, when records were temporarily suspended, up to nine chicks being recorded in January. No counts were made in February but March, April and May showed no Dabchicks, the first 2 birds appearing on 10 June, up to 9 by 1 July and 16 by 17 August.

The desertion of Pukepuke from February to April/May may be accounted for by the drop in water level which occurs in dune lakes, as well as in some farm ponds, at this period. However the pattern of movement at Pukepuke does not correspond clearly with flocking numbers elsewhere in other years, so that no conclusions can yet be drawn.

There is some evidence that pairing of birds in winter flocks may occur before flocks break up. For example, all 28 birds at Marton sewage ponds on 11 July 1977 appeared to be in pairs, their plumage was richly coloured compared with the drabness of early winter and all were continuously showing the white face-like pattern

at the rear which Storer (1971) states is a posture used by birds on territory only. This point needs closer study.

The recent appearance in New Zealand of two species of grebe from Australia, the Little Grebe (*P. novaehollandiae*) and the Hoary-headed Grebe (*P. poliocephalus*) makes it imperative that all groups of small grebes following the breeding season be critically examined. This is not always an easy task, since both juvenile and non-breeding adult plumages of New Zealand Dabchick have not been clearly described; nor have those of the Hoary-headed Grebe. A critical watch of all known post-breeding flocking localities should provide a reasonable means of assessing the national abundance of Dabchick, of learning more of seasonal movements and their causes, of studying feeding behaviour and even, it seems, of studying mating behaviour.

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