

## A SOUTH ISLAND PUZZLE – WHERE HAVE ALL THE DABCHICKS GONE?

By B. D. HEATHER

Buller (1888) said of the New Zealand Dabchick (*Podiceps rufopectus*): "It is very abundant in all the freshwater lakes and lagoons of the South Island." Yet now it is apparently extinct in the South Island.

During the 1970s and 1980s, likely Dabchick habitat in the South Island has received a great deal of attention; resident birds, and even stragglers, are not likely to have been missed. The intensive coverage made during 1969-1979 for the *Atlas of Bird Distribution* (Bull *et al.* 1985) yielded no records of Dabchick, although Hoary-headed Grebes (*P. poliocephalus*) and Australian Little Grebes (*Tachybaptus novaehollandiae*) were found. That the coverage of South Island freshwater lakes and lagoons was thorough is shown by the South Island maps of, for example, Southern Crested Grebe (*P. cristatus australis*), New Zealand Scaup (*Aythya novaeseelandiae*), Grey Duck (*Anas superciliosa*) and Australasian Bittern (*Botaurus stellaris poiciloptilus*).

Since 1979, various surveys and inquiries have kept likely Dabchick habitat under scrutiny, for example, searches for Hoary-headed and Little Grebes, for Cattle Egrets (*Bubulcus ibis*) and for Chestnut-breasted Shelducks (*Tadorna tadornoides*) and investigations into the status of the Southern Crested Grebe (Sagar 1981, Sagar & O'Donnell 1982). With the annual autumn movement of Dabchicks to lakes and ponds in the southern North Island, a spill-over to the northern South Island was expected, and so the most likely places there have been watched – Lakes Grassmere and Elterwater in Marlborough, St Anne's Lagoon in North Canterbury, and the oxidation ponds in Nelson, Blenheim and Christchurch.

On 17 June 1987, W. F. Cash, H. A. Robertson, T. J. Taylor and I saw a Dabchick at Lake Elterwater, Marlborough. It was in adult plumage and trying to keep company with a rather reluctant Hoary-headed Grebe, which was probably resident. Seeing a Dabchick in the South Island was such an unusual event that it was reported to the OSNZ Rare Birds Committee. The bird was probably a straggler from the southern North Island, where many gather for the winter months on coastal lakes and on sewage oxidation ponds in Wairarapa, Manawatu and west Wellington (Stidolph & Heather 1978).

The decline of the Dabchick in the South Island has been vaguely ascribed to "the advance of settlement" (Oliver 1955: 92), whereas in the North Island the Dabchick has, since the 1940s, gained from "settlement" by the widespread construction of farm dams and ponds, where many breed, and of sewage oxidation ponds, where many winter. Was the Dabchick "very abundant" in historical times, as Buller said? What is the history of its decline? I have examined the literature available to me, together with other sources, dividing it into the periods before and after 1940, when OSNZ began to publish its members' reports.

**Before 1940**

1. Two Dabchicks, from Taieri and Waimate, were taken to Britain by the Antarctic expedition under Sir James Ross, which visited New Zealand in 1840 (Oliver 1930). The Taieri bird, at least, was collected by Percy Earl (Fleming 1982).

2. Potts (1869), speaking presumably of Canterbury, said that the Dabchick was "... far from uncommon, and is to be met with on lakes, lagoons, and deep creeks that run still and swift, unlike the noisy torrents in which the Mountain [Blue] Duck delights". I am puzzled by "far from uncommon" but, provided that Potts was speaking from personal experience, the Dabchick seems to have been well distributed in Canterbury.

3. Travers (1871): "Amongst the birds which frequent the inland lakes of the Middle [= South] Island are two species of Grebe, namely, the *Podiceps cristatus*, or Crested Grebe, and the *Podiceps minor*, or Dab-chick."

4. Hutton (1871): "Both islands".

5. Travers (1872) included the Dabchick in his list of the "principal aquatic birds" at Lake Guyon, Nelson Province. However, although he then discussed the other principal species, he did not mention the Dabchick again.

6. Hamilton (1878), in his discussion of the birds of Okarito district, merely listed the Dabchick. His comment that the Crested Grebe was "tolerably plentiful on the lagoon and smaller lakes" may imply that the Dabchick was not.

7. Smith (1888): In the Lake Brunner district "Not uncommon on the lake . . . They frequent the bays on the north-west shore more than elsewhere, and are generally met with in pairs".

8. Buller (1888): "It is very abundant in all the freshwater lakes and lagoons of the South Island".

9. Handly (1895) did not include it in his comprehensive list of Marlborough birds.

10. Douglas (c. 1899), in his monograph on the birds of South Westland, described the 'small grebe': "It always was a comparatively rare bird and it is a very curious little being, quite tame in the presence of man".

11. Henry (1903), by his discussion of whether Dabchicks can fly, implied that they were commonplace to him during 10 years living at Te Anau.

12. Fulton (1908): "Our grebe and dabchick, expert divers, remain in fair numbers on some of the lakes in Nelson and Otago".

13. Philpott (1914): "Mr. Jules Tapper reports the little grebe as not uncommon on Lake Hauroko, and it probably frequents all the lakes and lagoons between Hauroko and the west coast." This seems to be a sweeping statement based only on a single secondhand report. However, Park (1921) did not mention dabchicks, saying that "the crested grebe . . . is common on Lake Hauroko", during his extensive survey of eastern Fiordland.

14. Stead (1927): "The two grebes found in New Zealand were at one time common on the lakes of Canterbury. The . . . Dabchick . . . has, so far as I know, entirely disappeared from our district [Canterbury], though it is still to be found in other provinces."

15. Oliver (1930): "Generally distributed throughout the North and South Islands, not uncommon but easily overlooked . . . According to Stead it has disappeared from Canterbury."

16. Moncrieff (1938) merely listed it for Nelson Province.

17. Studholme (1940) said that Dabchicks were not seen in the Waimate-Ki Wainono district of Canterbury after the 1880s (R. J. Pierce, pers. comm.).

18. K. Morrison (pers. comm.) has found no mention of Dabchick in Fiordland in Richard Henry's annual reports and letters, in A. Reischek's lists of Fiordland birds, or in E. H. Wilmot's journal. Raymond Murrell, an explorer-naturalist who was born in Manapouri in 1900, told K. Morrison (pers. comm.) that "the dabchick was becoming rare on Lake Manapouri by 1920".

In seeking a clear picture of South Island distribution from this record, one is pursuing shadows. Buller's assessment seems to have been exaggerated. The Dabchick may have been widely spread in the mid-19th century but its numbers seem to have been low, even in Fiordland and on the West Coast, where records persisted longest. Buller's statement, which may have been based on Potts's comment, perhaps clouded the judgment of later writers, who *expected* the Dabchick to be "not uncommon" in their districts.

What, then, is the record of specimens in New Zealand museums from before 1940?

1. *Southland Museum and Art Gallery*: Five skins (three mounted), together with no information. An early register shows one entry, October 1915, for a Dabchick donated by Robert Gibb, a Southland collector. (L. Williams, pers. comm.)

2. *Otago Museum*: Study skin and cranium, locality Bluff, no date. Two mounted specimens, locality Maitai, no date. (J. T. Darby, pers. comm.)

3. *Canterbury Museum*: One skin marked c.1886, ? Canterbury, ex School of Fine Art, Ilam. One skin, female, 24.5.20, Lake Ellesmere, collected E. H. Greenfield, per. L. A. Shand. Subfossil material from Lake Grassmere and Pyramid Valley. Most of the collection is of North Island origin, from O'Connor, Stead and Pycroft. (R. N. Holdaway, pers. comm.)

4. *National Museum, Wellington*: No South Island material.

5. *Auckland Institute and Museum*: One skin, locality Otago, collected W. Smyth. The museum bought various bird skins from W. Smyth, Dunedin, in 1886-1888. (B. J. Gill, pers. comm.)

Thus the record in New Zealand museums adds little to the picture, giving shadowy records from Canterbury, Otago and Southland.

Storer (1987), in examining museum collections in Australia, Canada, England and the United States, found 14 more "South Island" specimens. As usual, labels are frustratingly uninformative.

1. *American Museum of Natural History (New York)*: One "Canterbury"; one "Glenmark"; one "Kakapo Creek, Ti Anau, Jan 1875"; one "Otago 1894".

2. *Museum of Comparative Zoology, Harvard University (Cambridge, MA, USA)*: Two "Christchurch, Dr J. Haast".

3. *Cambridge Museum (Cambridge University, England)*: One "Otago, Nov 1902".
4. *Merseyside County Museums, Liverpool*: One "Canterbury 1873", one "Port Cooper, F. Strange".
5. *British Museum (Nat. Hist.), Tring*: One "Christchurch, mouth Waimakariri River, Aug 1878"; one "? Otago (Otago University Mus.) 1896"; one "Waimate, Antarctic Expedition"; one "Port Cooper"; one "Port Cooper, Capt. Stokes RN".

Thus we have 10 from Canterbury, 3 from Otago, and one from Te Anau. Port Cooper was the former name of Lyttelton Harbour, more likely to have been a collector's point of despatch than a collecting site. The *Acheron*, under Captain Stokes, was surveying the New Zealand coast in 1847-1851 (Oliver 1955: 20).

In the 1870s, Haast was sending overseas collections of all sorts, including many moa skeletons from the Glenmark swamp in North Canterbury, on exchange to build up the collections in the new Canterbury Museum. These included many exchanges with Agassiz at the Museum of Comparative Zoology at Cambridge, USA (e.g. pages 604, 626, 678 in H.F. von Haast, 1948). Most of the "Canterbury" specimens from the 1870s were probably from Haast, not necessarily collected in Canterbury, although Potts did some collecting for Haast in Canterbury and on the West Coast in this period.

Thus the overseas record is no less shadowy than the rest but seems to confirm the impression of a small presence of Dabchicks in Canterbury, Otago and Fiordland.

#### After 1940

The record consists of 14-15 sightings reported in *Notornis* and several unconfirmed records from Fiordland in 1947 and 1949. Two 1956 skins from the West Coast are in museums.

1. K. R. Sutherland, in Department of Lands & Survey file 13/1/10/1, Invercargill, "Report on shooting trip to the Hankinson-Lake Sutherland area, June 2nd to July 1st", reported: "One little grebe was seen on Lake Sutherland; also large numbers of Black Teal, Brown Duck and a few Black Swan" (K. Morrison, pers. comm.). This was in 1947, not 1948 as stated in Poole (1951).
2. Poole (1951): In the Caswell/George Sounds to Lake Te Anau area, members of the New Zealand-America Fiordland Expedition reported several Dabchicks in 1949 - two with a young, probably at Three Duck Lake, one at the head of George Sound, one at Lake Alice, and one at Lake Thomson.
3. In addition for Fiordland, K. Morrison (pers. comm.) says that the wapiti hunting reports for 1947-1982 contain no reference to Dabchicks, other than Sutherland's above, that P. Dorizac, Fiordland National Park ranger 1954-1964, did not mention them in his notes on many extensive tramps, and that he himself has not seen them during 1972-1987.
4. Coker & Imboden (1980) did not record Dabchicks in the 1977-78 surveys of South Westland and listed Dabchick as a species that has always been uncommon there.

The following are the reports published in *Notornis*.

1. Lake Kanieri, January 1940. One pair with two young; three other birds, perhaps full-grown young (R. B. Sibson). Otago Harbour, 8/6/40, one picked up dead, covered with oil (F. G. G. Peake, Otago Museum) (*Reports & Bulletins* 1953: 6).
2. Lake Fergus, Eglinton Valley, 12/1/41. A pair with a small riding youngster (R. B. Sibson - *Reports & Bulletins* 1953: 37).
3. Lake Brunner, reported rare. Kanieri, one pair seen. Lake Wahapo, two pairs. Lake Mapourika and Lake Wombat, reported. Nov. 1941 (C. A. Fleming - *Reports & Bulletins* 1953: 81).
4. Lake Kanieri, 6/2/50, one pair (L. W. McCaskill). Lake Wombat, 9/10/49, two (R. H. D. Stidolph). Titri, Otago, 13/8/49, one (K. J. Wyness-Mitchell). (*Notornis* 1951, 4: 39)
5. Tomahawk Lagoon, Dunedin, 19/8/51, one, also seen three previous days by others (L. E. Walker). (*Notornis* 1952, 4: 176)
6. Eglinton Valley, 18/1/52, two (Dunedin Naturalist's Field Club). John O'Groats Valley, Fiordland, Feb. 1953, two seen (J. A. Mackintosh). (*Notornis* 1954, 5: 213)
7. Queenstown district: "Rare. Perhaps seen on Lake Dispute two years ago." (Soper & Jardine 1957). However, Soper (1972: 84) stated that he had yet to see a Dabchick in the South Island.
8. Hurunui, 8/12/62, three in old channel, under road bridge (J. R. Jackson). Lake McGregor, Oct 1962, one (B. D. Bell). Lake Mapourika, Sep 1956, L. Angas found two men poaching dabchick (J. R. Jackson). Lake Gunn, March 1964, one (M. McIntyre). (*Notornis* 1972, 19 Supp.: 9)
9. Lambert (1970) reported a possible sighting of one on Lake Thomson in November 1966.

Most of these sightings were by experienced field ornithologists and cannot be discounted; secondhand reports are less convincing. H. R. McKenzie, in his travels of the South Island, did not see Dabchick and so did not mention them in his guide to birdwatching places (McKenzie 1972), except to suggest that "little Lake Wombat can at times show what is thought to be the only party of Dabchick on the West Coast." Presumably in view of the reports of the 1940s and 1950s, Oliver (1955) changed his South Island distribution to "... mainly on the western side as far south as Lake Hauroko, near Foveaux Strait. Least common in Canterbury and East Otago, from where it has no doubt almost disappeared from all localities."

The two 1956 museum specimens are as follows:

1. Canterbury Museum, a "subadult", 10/5/56, Hunt's Beach, Jacobs River, South Westland, collected F. Wilson.
2. National Museum, Wellington, a male, West Coast, South Island, NZ Wildlife Service, June 1956. The plumage of its chin and chest suggests a first-year bird (pers. obs.).

It is conceivable that these two birds were stragglers from the normal autumn dispersal in the southern North Island, but they could have been from Fiordland.

An egg in the Otago Museum with "Dabchick Te Anau" pencilled on it is not a Dabchick egg, its measurements (39.5 x 28.4 mm) falling squarely into the range for Hoary-headed Grebe. It is accompanied by an Australian Little Grebe egg, and both were received with the Green collection in 1950, the origin being almost certainly an Australian dealer.

### CONCLUSIONS

1. As a picture of events, the published and museum record is singularly vague and inconclusive.
2. In the mid-19th century, the Dabchick was apparently widespread in the South Island, though nowhere common. Most South Island museum skins were collected in the North Island, and the general accounts are vague, even evasive, as to distribution and numbers. We have little evidence of their presence in Nelson north of Lake Guyon, which in effect is in northern Canterbury, and none for Marlborough.
3. In the second half of the 19th century a sharp decline apparently occurred, especially in Canterbury.
4. In the first half of the 20th century, small numbers persisted in Fiordland and on several West Coast lakes. None were left by the mid-1960s.
5. With the prominent autumn movement of Dabchicks in the southern North Island each year, one would expect birds to reach the northern South Island regularly, and yet the one bird of June 1987 is the first recorded. Suitable breeding and wintering places exist; perhaps the Dabchick, now quite numerous in the central and southern North Island, will reoccupy the South Island, or perhaps the closely related Hoary-headed Grebe will occupy the Dabchick habitat instead.

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## SHORT NOTES

### Breeding of Great Spotted Kiwis in captivity

Before 1985, Great Spotted Kiwis (*Apteryx haastii*) had laid in captivity at the National Wildlife Centre, Mount Bruce, Wairarapa, and at the Otorohanga Zoological Society's aviary, but none of the eggs had hatched successfully. When I arrived in December 1984, the National Wildlife Centre had one pair of Great Spotted Kiwis. Both birds were from the Greymouth area, being of unknown age and victims of gin-trap injuries. The female arrived at the Centre in June 1974 suffering from an injured toe, which healed. The male arrived in 1983. He had two toes missing from his left foot, although this did not appear to handicap his movements.

These two birds were put together in June 1983 in a pen of about 200 m<sup>2</sup> of forest consisting of tawa (*Beilschmiedia tawa*), kamahi (*Weinmannia racemosa*) and tree-fern (*Cyathea dealbata* and *Dicksonia squarrosa*). The pen was on flat ground and included three artificial burrows. The kiwis were given a diet of 200 g per bird per night of a mixture of water-soaked rolled oats, wheatgerm, multivitamin/mineral supplements, and minced ox heart. In addition, they often ate natural food they found in the enclosure.

During each of the two subsequent breeding seasons they produced an egg but broke it. Their first egg was laid in November 1983, and the two birds were seen together during the day in the nest burrow before the