

THE BANDED DOTTEREL, *Charadrius bicinctus*: POHOWERA OR TUTURIWHATU? — CALL NOTES AND BEHAVIOUR

By J. M. CUNNINGHAM

ABSTRACT

The history of the Maori names of the Banded Dotterel is discussed. Some of its call notes are described with the circumstances in which they are uttered. An account is given of some nesting and other behaviour including mating and of a black mutant.

INTRODUCTION

It is a frequent fact that the more common and well-known a bird is, the less is recorded of its habits. In some respects, this is true of the Banded Dotterel, a rather friendly, quiet but colourful wader well known on New Zealand shingle riverbeds, lake shores, sandy beaches and estuaries. I have spent countless hours watching this charming bird, its nests and chicks, and have simply taken for granted its varied calls. However, hearing a completely strange call from what in early twilight appeared to be a cock Banded Dotterel (J. M. Cunningham MS) prompted me to examine the literature to see if this strange call had been recorded. It was with no sense of surprise that I found published descriptions sadly wanting.

ITS MAORI NAMES: A REVIEW OF THE LITERATURE

It is widely believed that the Maori name Tuturiwhatu, in common usage in modern ornithological works, is an onomatopoeic rendering of one of its calls. But this name was not always applied to the Banded Dotterel. According to Oliver (1930: 283) who gives no description of its call notes other than "a plaintive cry" the species first appeared in New Zealand literature in Gray's account (1844). Gray (p. 12) described it as *Hiaticula bicincta* (syn. *Charadrius bicinctus*) but did not quote its Maori name or its call. For the New Zealand Red-breasted Dotterel (*C. obscurus*) he stated (p. 11) "This is called, according to the drawing of Forster, Hapoho-era, by the natives of Dusky Bay" though Percy Earl called it Moakura. Under *C. virginianus* (syn. *xanthocheilus*), however, which was the name of the Golden Plover, *Pluvialis dominicanus*, (vide Mathews 1927: 157) he gave the Maori names as Tuturiwhata, Takihikaki or Tuturuata. I am unable to find any further reference to Takihikaki but the former spelt Tuturiwhatu is now commonly regarded as the Maori name of the Banded Dotterel and Oliver (1930) used it for both this species and the New Zealand Dotterel, reserving Tuturuatu for the Shore Plover *Thinornis novaeseelandiae*. This bird was recorded by Gray (1844: 12) as Doodooroo attoo (Forster) or Kukuruatu (Percy Earl). Hutton (1871: 24) also used Kukuruatu for the Shore Plover, giving Tuturiwata for the New Zealand Dotterel and Pohowera for

the Banded Dotterel but not naming the Golden Plover. Buller (1882: 49) followed this (with the spelling Tuturiwatu) and Hutton & Drummond (1904: 204) repeated the same names, with a further alteration to Tuturiwhatu in the third edition (1923).

The same authors by the way, give Tuturipourewa for *Himantopus leucocephalus*, the White-headed Stilt. A further source of confusion is the similarity of Pohowera with Forster's Hapoho-era for the New Zealand Dotterel.

Dictionaries are not usually regarded as being outstandingly correct in the niceties of natural history nomenclature but it is of interest to note that none of these names is given in the 2nd edition of Williams' Maori dictionary (W. Williams, 1852). The 4th edition (W. L. Williams 1915), however, includes "Pohowera. *Charadrius bicinctus*, a bird" and also "Turuatu, a bird." The 5th edition (H. W. Williams 1917) gives "Pohowera. *Ochthodromus bicinctus*, banded dotterel; a bird = tuturiwhati" while under this latter name the reader is referred to Turiwhati. This is given as the leading synonym of a long string of variant spellings including tuturiwhati and tuturuwhatu, and refers to *Ochthodromus* [*sic*] *obscurus*, dotterel." *Ochthodromus* was used by Hutton & Drummond for *Charadrius* and, as acknowledgement is made to Hutton & Drummond, it is not surprising that their nomenclature is in agreement. The 6th edition (H. W. Williams 1957) is much the same and as Oliver was consulted, and his help with the scientific names acknowledged, it is a wonder that he did not bring the edition into line with his own writing.

It appears that Oliver in 1930 was the first to depart (unjustifiably, unless he considered that early records of the Shore Plover really referred to the Banded Dotterel, which is not beyond possibility although he does not hint at it) from the long established usage of Pohowera for the Banded Dotterel and variants of Tuturiwhatu for the other plovers. These names, however, were probably used for any small plover-like birds seen in a suitable habitat and it is doubtful if there is any validity in tagging any of them to a particular species. Most recent publications, notably the New Zealand Checklist (OSNZ 1970) have followed Oliver and it is suggested that Pohowera be reverted to for the Banded Dotterel.

THE CALLS

Aggressive: The call in question may be heard on the Bigwoods' record (1959). I have for many years been recording this as "che-ree-a-ree" repeated quickly several times. The timbre of the call is very scratchy, reminiscent of a fantail's. This is what Stidolph (1971: 72) describes as flight calls, "quickly repeated notes "chair-kik-kiker, chair-kik-kiker." It is curious that although he has probably studied Banded Dotterel more than anyone else in New Zealand he does not mention that this is a territorial call which in my experience, is used only when one bird is chasing another from its territory. My notes record it between August and November, and, though it can probably be heard later than that, I certainly have never heard it outside the

breeding season. I suspect both sexes use it but Soper (1963: 53) said "when a male Dotterel chases another Dotterel out of its territory the chase is often accompanied by a call note for which the Maori name of the Dotterel 'Tuturiwhatu' is an onomatopoeic description, the accent being on the second syllable, the final 'u' silent, and the call rapidly repeated four or five times." Modern research, however, shows that the final "u" on such Maori names (c.f. Paraparaumu) used not to be silent. Why should it be?: Europeans first spelt Maori names as they heard them. Forster wrote "Doodooroo attoo" and this has apparently now evolved through various spellings into "Tuturi-whatu" which should therefore not have the final "u" silent. Thus, this name cannot justifiably be said to represent the call of the Banded Dotterel.

Unless this is what Moon (1960: 102) described as "a rippling liquid note sounding like 'qreep'," I am unable to find any other description of this call although, of course, every observer of Banded Dotterels will know it. Moon also stated: "a high pitched whistling 'twrip' is also sometimes used" but I cannot identify this call.

Warning: There are ample references to the commonest call, variously described as "pwit pwit," "twit-twit," "twink-twink" and so on. Stead (1932: 81) gave the best description: "Their call at all seasons is a staccato, high-pitched "Pit," sometimes repeated twice quickly, but often uttered as a single syllable at intervals up to thirty seconds, though much more rapidly when in flight than when on the ground. If a bird is standing still, it gives its head and body a little upward jerk every time it calls, the effect being exactly as though it had an attack of hiccoughs." This note is clearly a warning call and may be heard at any time of the year when an intruder, man or dotterel, appears. When uttered other birds often look up and become more alert to possible danger. However, on occasions, particularly outside the breeding season, when birds, often in small flocks, are sitting still and are almost invisible in the surrounding stony or grassy ground, it is a single "pwit" which gives them away and makes their presence known. If their nest is approached however, the pair will wheel round and round, sometimes settling at a distance but soon taking off again. Their calls become much more rapid and change their character so they may then be described as "peet peet." Again, my notes record this only in the breeding season and it is an almost invariable indication of the presence of eggs near hatching or young chicks, and I have found many a nest or chick by recognising this call which becomes more agitated the nearer the nest or chick is approached. Both sexes call "pwit" in the same pitch, and although both call "peet" the cock's is usually a deeper clanging cry usually followed by the thinner higher pitched "peet" of the hen. This answering call is a sure indication of the presence of young chicks.

Distress: When eggs are near hatching or have just hatched, either or both birds of a pair may indulge in distraction displays when "pitiful-sounding distress noises" (Soper 1963: 53) may be uttered while the bird fans its tail and quivers its opened wings, perhaps

lopsidedly, the so-called "broken wing trick." Quite frequently, however, this may be a silent display, and occasionally "tiny little squeaks" or "peet peet" calls are given. Very rarely the hen has been heard to make what can only be described as a "moaning" noise, not at all like a bird call and I believe this is the most extreme stage of her anguish for the chicks' safety. It was noticeable that one hen would display fully only when she was behind me, about a yard away, as I was kneeling beside her nest. She immediately ceased when I swung round and she caught my eye, and ran behind me again to recommence her flutterings. It was ludicrous to try to photograph her by holding the camera over my shoulder and putting my eye to the view-finder at the last moment.

Communication: There remains but one call which for want of a better name, I have labelled a "communication" call. It may be heard when a small group of birds takes off and I have not heard it in the breeding season. It is likely however that small groups of non-breeding birds would utter the call at any time. Each bird probably gives but one note repeatedly, and as the birds fly there is heard a continual quiet but melodious "twittering." It is hard to imagine any purpose for the calls other than to keep the birds of the flock together.

THREAT DISPLAY AND DISPLACEMENT ACTIVITIES

When a cock Banded Dotterel enters the territory of a nesting pair, there will often be a lot of excited chasing and calling of "che-ree-a-ree." Before rising, all three birds may stand up high displaying their breasts at each other. In this display the bands are displayed to best advantage, and are widened, particularly the black upper one, because of the upward stretching. They must surely look intimidating to each other at ground level and at close quarters. Sometimes however the intruder may stand his ground and the other cock may perhaps be torn between the desire to drive the other bird away, return to the nest, or "order" the hen to, as described by Stead (1932: 88). He may then indulge in a displacement activity of picking up and playing with small stones or pieces of grass. On one occasion it was a 2" square of crumpled paper, the wrapping from a sweet, which was carried past the hen and put down three or four yards away. Stidolph (1971: 73) described this as "false feeding." In the episode he referred to, which I was also fortunate to witness, the behaviour was apparently also brought on by a conflict of possible actions for the cock, to drive the intruding cock away or to protect the nest (in the absence of the hen) from the nearby observers.

MATING

One morning I was watching a pair beside their nest when the cock quietly mounted the hen. The third and final egg of this clutch was in the nest next morning. Mating, however, may occur at any time of day, perhaps more usually in the late afternoon, with apparently no preliminary display, and the act itself is completely

silent. The cock remains mounted, absolutely motionless, for a long time. One pair was watched for 10 seconds, another for a half minute and a third for 40 seconds. The cock then slips down, both birds usually shuffle their wings for a few seconds, and he may peck at her. They then stand quietly beside each other or a yard apart for a little while. This may be half a minute or longer without movement, and in one case, 5 minutes 10 seconds. The hen is usually the first to move and may eventually feed nearby, lead both birds in flight, form a scrape, or sit briefly on a nest with an incomplete clutch. Mating probably usually occurs close by the nest, and I have never observed it outside the birds' territory, although, of course, they often feed away from it, perhaps on a small lagoon or backwater in amicable company with other birds from neighbouring territories.

A MELANISTIC DOTTEREL

In January 1969 I had under observation what appeared to be a melanistic Banded Dotterel. It was first seen at the Seaview Reclamation, Wellington Harbour, on 4 January and very complete notes were taken on the spot. These were read to Dr R. A. Falla who later studied the bird and agreed it was exactly as he visualised it from the description. It was observed at close quarters on several occasions over the next 15 days and subsequent notes agreed with those taken on the first sighting.

When first seen it was with a cock and a full-grown Banded Dotterel in a sparsely grassed area of the reclamation. This alone would have served to distinguish the bird as unusual because birds from the various territories on the reclamation, which were under close observation at the time, always avoided this area. Its subsequent movements, however, showed that it ranged fairly widely.

It was a very dark bird, not unlike a starling in colour in a quick glance. Its head was ashy grey with the back darker. As the coverts had brownish tips it had a slightly speckled appearance which led me to believe it was a young bird. Young Banded Dotterels have this speckled appearance and can be thus distinguished for several weeks after first flying. Another characteristic of young birds is that they have buffy head markings and this bird had indeterminate buff eyestripes, one above and behind the eye and another larger one below the eye extending to the nape. Its neck, breast, belly and sides were quite dark although with the slightest russet tinge. However, where the lower red band should have been the breast was much darker, almost black but still with a russet suffusion. The black was lopsided, higher on the left than on the right. The tail above and below was dark but the under-tail coverts, seen clearly when the bird dipped its head to feed, back to the observer and covering an area of about 2" long and 1½" wide were of a light fawn. This area is white in a normal bird. In flight the entire upper surface appeared uniformly dark but the underwings, coverts and axillaries, were lighter. The bill was black, perhaps a fraction larger than normal, and gave the impression of the slightest upturn at the tip.

Legs were dark with a greenish toning. At all times it appeared slightly larger than the other Banded Dotterels with which it associated, and its legs certainly were longer. In addition, it lifted its feet higher at each step, thus having a springy stride so much so that twice I recorded it as "bouncing" and "bounding" along. This action alone, colour apart, would have drawn attention to it but in other respects, it sunned itself lazily, fed actively and flew just as normal birds. Its flight call was, however, a very feeble "peet peet," the characteristic of a hen. Because of this and the fact that it was never seen without a cock in attendance I would have inclined to believe it was a hen, but its facial markings and speckled back suggested a young bird. There were usually also two full-grown young with it and sometimes a hen, but whether this indicated a family party or just curiosity is not certain. The possibility cannot be ruled out that it was bred in one of the territories in which the nest was never discovered.

Curiosity there certainly was. On one occasion it was found bathing vigorously in a small rain soak. It dipped its head and splashed and then bounced its rear parts up and down in the water in an extraordinary manner, all its underparts being soaked. When Banded Dotterels bathe, others often join in but this bird was watched (one is tempted to say with amazement at the remarkable performance) by a hen two feet away, a cock and two full-grown young also nearby. It kept this up for ten minutes and after it had finished it stayed behind after I had flushed the others and again allowed me to examine it at leisure.

Colour photographs of it beside a cock Banded Dotterel taken with a 400mm "monocular" lens are unsuitable for reproduction but clearly show its dark colour and slightly larger size.

LITERATURE CITED

- BULLER, W. L. 1882. Manual of the birds of New Zealand. Pp. xii + 1-107, frontis., pls I-XXXVII. Colonial Museum and Geological Survey Department [Natural history publ. no. 16]. Wellington: Government Printer.
- BIGWOOD, K.; BIGWOOD, J. 1959. A treasury of New Zealand bird song. An album of three records of the songs of New Zealand birds recorded in the forests, mountains and countryside by Kenneth and Jean Bigwood. Three "Kiwi Records" EC 14-EC 16, 45 r.p.m. extended play. Wellington: A. H. & A. W. Reed.
- GRAY, G. R. 1844. Birds I. Birds of New Zealand. Pp. 1-20 in RICHARDSON, J. & GRAY, J. E. (eds). The zoology of the voyage of HMS *Erebus & Terror*, under the command of Capt Sir J. C. Ross . . . during . . . 1839-43 Vol. I. Mammalia, Birds. London: Janson.
- HUTTON, F. W. 1871. Catalogue of the birds of New Zealand, with diagnoses of the species. Pp. x + 1-85. Wellington: Geological Survey of New Zealand [Publ. No. 17].

- HUTTON, F. W.; DRUMMOND, J. 1904. The animals of New Zealand. An account of the colony's air-breathing vertebrates. Pp. xiv + 15-381, frontis., 147 figs. Christchurch: Whitcombe & Tombs Limited.
- 1923. The animals of New Zealand. An account of the colony's air-breathing vertebrates. Fourth edition: revised and enlarged. Pp. 1-434, frontis., 155 figs. Auckland, Christchurch, &c.: Whitcombe & Tombs Limited.
- MATHEWS, G. M. 1927. Systema avium Australasianarum. A systematic list of the birds of the Australasian Region. Prepared in conjunction with special committee of the British and in conjunction with special committees of the British and American Ornithologists' Unions. Part I. Pp. x + 1-426 + xviii.
- MOON, G. J. H. 1960. Focus on New Zealand birds. Enlarged and revised edition. Pp. 1-126, frontis., 6 col. pls, 86 black and white pls. Wellington: A. H. & A. W. Reed.
- OLIVER, W. R. B. 1930. New Zealand birds. Pp. viii + 1-541, text illus., col. pls I-VI. Wellington: Fine Arts (N.Z.) Ltd.
- OSNZ, 1970. Annotated checklist of the birds of New Zealand. The checklist committee (F. C. Kinsky, convener), Ornithological Society of New Zealand, Inc. 96 pp. Wellington: A. H. & A. W. Reed.
- SOPER, M. F. 1963. New Zealand bird portraits. Pp. 1-104, frontis., pls 1-76. Christchurch: Whitcombe & Tombs.
- STEAD, E. F. 1932. The life histories of New Zealand birds. Pp. xvi + 1-162, frontis., pls I-XCII. London, The Search Publishing Co., Ltd.
- STIDOLPH, R. H. D. 1971. The birds around us. From a diary of birds observed in New Zealand over a period of 50 years 1921-1971. Pp. 1-140, figs 1-8, 7 line drawings as chapter heads, pls 1-4. Masterton: Hedley's Bookshop Ltd.
- WILLIAMS, H. W. 1917. A dictionary of the Maori language. Fifth edition. Edited under the auspices of the Polynesian Society and based upon the dictionaries of W. Williams and W. L. Williams. Pp. xxiv + 1-590. Wellington: Government Printer.
- WILLIAMS, H. W. 1957. A dictionary of the Maori language. Sixth edition, revised and augmented under the auspices of the Polynesian Society. Pp. xxvi + 1-504. Wellington: Government Printer.
- WILLIAMS, W. 1852. A dictionary of the New Zealand language, and a concise grammar; to which is added a selection of colloquial sentences. Second edition. Pp. xl + 1-323. London: Williams and Norgate.
- WILLIAMS, W. L. 1915. A dictionary of the New Zealand language. Fourth edition with numerous additions and corrections and an introduction. Pp. xvi + 1-226. Wellington, &c.: Whitcombe & Tombs Limited. ["A reprint of the Maori-English portion [of the 4th ed., Auckland, 1892] . . . in which the addenda have been incorporated and necessary corrections made . . .].

*Mr J. M. Cunningham,
"Illawarra,"
5 Kotari Road,
Day's Bay, Eastbourne*