

Brooding of a Banded Dotterel Fledgling

In Banded Dotterels (*Charadrius bicinctus*) brooding of the young normally ceases soon after they have their contour feathers, and family members part company within 2 weeks of the young fledging (R. Pierce, pers. comm.). The following account describes unusually late brooding behaviour at the New Zealand Aluminium smelter plant at Tiwai point, near Invercargill, during a cold snap. Dotterels breed in the Tiwai Point area and post-breeding flocks are regular on the extensive mown grass lawns adjacent to the smelter complex.

At 0800 on 25 January 1987, I drove to a sealed car-park west of the administration block. There were no Banded Dotterels on the wide lawns, but on a narrow grass strip between the car-park and the plant's perimeter fence I saw an oddly shaped bundle of feathers. I drove to within 20 m of what proved to be an adult male brooding a full-grown juvenile. The juvenile was tucked under the adult and almost at right-angles to it. It nudged in, in small jerks, bouncing the adult up so that his legs were stiff and straight as he tried to keep balance and in contact with the ground. The morning was cold with a south-westerly wind, into which the adult was facing. There were buildings to the south and east, and the birds were 3 m away from a 3 m high netting fence. I watched from 20 m for 15 minutes.

Both birds wore colour bands, the combinations of which indicated they had been locally banded. The adult was in moult of the head and breast, the back and wing coverts had pale abraded edges, and the tips of some primaries were worn and notched. When I opened the car door the adult moved off the juvenile, which shook itself, ran off, and began to feed. The adult chipped, strutted and made one partial "broken wing" movement. As I walked closer the adult flew low, away from the juvenile, for a metre or two but was obstructed by the fence and building. It veered round and flew towards the juvenile, which then also took to the air. Both landed about 100 m away and fed on the lawn for a minute or two. The juvenile then flew a further 300 m to feed on another part of lawn. The adult flew high over trees to the west, towards the Awarua Bay coast about 500 m away.

Meteorological records published in the *Southland Times* on 26/1/87 and 4/2/87 show that the mean temperature for January 1987 was 15.5°, 1.9° warmer than average, and was the third highest on record. The extreme minimum of 6.1° recorded on January 24 equalled the record low set in 1940. Official readings for the 24 hours up to 9 a.m. on 24/1/87 were: max. temp. 16 C, min. temp. 6 C, grass min. temp. 5 C, rainfall 2.3 mm. For the 24 hours up to 9 a.m. on 25/1/87 readings were: max. temp. 13 C, min temp. 9 C, grass min. temp. 9 C, rainfall 16.0 mm.

This unusual brooding behaviour therefore occurred after a cold night (24th/25th), and the previous night (23rd/24th) had been exceptionally cold. This cold snap occurred in a unusually warm month. December's mean maximum temperature was 18.2 °C and mean minimum 9.3 °C (*Southland Times* 5/1/87). The juvenile would have had little experience of, and perhaps low tolerance to, the low temperatures. Both birds appeared healthy. After

they had started feeding for the day the adult did not remain to "supervise" the juvenile.

I am grateful to Ray Pierce for his comments on a draft of this note.

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Bird Counts on the Chatham Islands

While working on the Chatham Islands in November-December 1983, I undertook some bird counts on South East Island and in an area of forest on Chatham Island which was soon to be gazetted as a Nature Reserve and partly fenced. This tract of rolling bush-covered hills and gullies totalling 1028.7 ha was donated to the Crown as a Nature Reserve by the late Manuel Tuanui and Evelyn Tuanui of Awatotara, Chatham Islands, in early 1983. It is located in Blocks IX, X, XIII and XIV of Orepuke (Oropuke) Survey District on the southwest coast of the main island and known as the Tuku Nature Reserve. I also made general observations of species occurrences while working in other parts of the islands. These Tuku counts and those from the smaller South East Island, which has been a reserve for about 30 years, will provide information for future comparisons.

The forest types in both locations have been described by Dennison *et al.* (1984). The introduced mammals on Chatham Island are rats (*Rattus rattus* and *R. norvegicus*), mice, cats, possums, cattle, sheep and pigs. Eastern Buff Wekas were introduced from mainland New Zealand in about 1905 to the large islands, but South East Island has no introduced mammals or wekas.

Methods: For the counts, I used the method suggested by Dawson & Bull (1975) and on Chatham Island I set up seven stations in the proposed reserve about 200 m apart along a track between the Taiko study base camp and a high bush-covered knoll known as Taiko Hill. I counted at each station 14 or 15 times over 10 days in December 1983. On South East Island I set up five stations 200 m apart in the Woolshed Bush and counted at them 10 times each in November-December 1983.

All counts were done in dry weather with little or no wind, differing amounts of sunshine and temperatures of 10-20 °C. Counts were recorded between 0930 and 1600, except for seven Tuku counts between 1600 and 1745 on a clear, windless day of 20 °C when sunset was at 2145. Starting times were varied so that most times of the day were covered.

As the vegetation in both areas is fairly uniform, I assumed the sampling stations to be similar. Totals of 100 counts in the Tuku and 50 on South East Island were combined for each species and a mean calculated for each count.