

# THE CHESTNUT-BREASTED SHELDUCK IN NEW ZEALAND 1983-1986

By B. D. HEATHER

The Chestnut-breasted, or Australian, Shelduck (*Tadorna tadornoides*) is a bird mainly of south-western and south-eastern Australia. Its closest relatives are the Paradise Shelduck (*T. variegata*) of New Zealand and the Radjah, or Burdekin, Shelduck (*T. radjah*) of northern Australia, New Guinea and the Moluccas. In eastern Australia, the Chestnut-breasted Shelduck is especially common in south-eastern South Australia, western Victoria, Tasmania, and the southern Tablelands of New South Wales (Frith 1977). After breeding, the shelducks make complex and often long-distance movements to moulting sites. At Lake George near Canberra, for example, the numbers increase from November to a peak of several thousands in January. The numbers decline in late summer and autumn, and only the few resident pairs remain by May (Frith 1977).

This rough background may give perspective to some of the events in New Zealand in 1983-1986.

## NEW ZEALAND RECORDS

The first positive record was of a female at Lake Ellesmere, Canterbury, on 11-12 December 1982 (Fennell *et al.* 1983). By 3 January, a male had joined the female, and so the OSNZ regions were asked to look out for the shelducks.

The result was a scattering of reports, ranging eventually from the far north of the North Island to the subantarctic Auckland, Campbell and Snares Islands.

At first, in January 1983, the shelducks were seen in the South Island – Golden Bay-Nelson, Marlborough, Canterbury (Ellesmere, Cass River delta, Washdyke Lagoon), and Southland, but two appeared also in the Bay of Plenty, North Island. In February-March, several appeared in the central North Island (Rotorua, Waikato, north Taranaki). Most birds seemed then to wander, being seen unexpectedly in places that ornithologists had visited often, and usually not being seen there again. Reports almost ceased after April 1983, which coincided with the start of the gamebird-shooting season in May and roughly with the normal dispersal of Paradise Shelducks to their breeding territories (Williams 1979). Three are known to have been shot in 1983 (Northland, Nelson, West Coast).

With the birds being erratic in many places, I cannot give accurate numbers in New Zealand; however, I have in Table 1 grouped the records for the few periods when they give a rough idea of likely totals. The full records follow.

TABLE 1 — Australian Shelducks recorded in early months of the years 1983-1986

	1983 (Jan-Mar)	1983 (Apr-May)	1984 (Jan-Feb)	1985 (Jan)	1986 (Jan-Feb)
Far North				3	1
Northland		1			
Waikato	1				
Bay of Plenty	2				
Volcanic Plateau	2	6			
East Coast		4-8			
Taranaki/Wanganui	1				1
Manawatu		4	1		
Wairarapa		1			
Nelson	8				
West Coast	6				1
Marlborough	11	12			
Canterbury	11	1	1	4	1
Otago			6		1
Southland	11				6
Auckland Is	3*	3	3	3*	0
The Snares				1*	
Campbell I.				22	
Likely Totals	56	31-35	8	33	11

\*Presence inferred from birds seen shortly before or afterwards

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### January-March 1983

*Nelson:* Pakawau, Golden Bay, one on 17/1, one male one female on 19-24/1 (BDB, JMH, BDH, PMS, RBS *et al.*); none on 5-11/3 (JMH). Nelson sewage ponds, six (2 males, 2 females, 2 ?) on 21/2 (GQ). Lake Rotoiti, one on 17/2, reported to PMS by L. W. McCaskill.

*Marlborough:* Lake Grassmere, one female on 5/2, five birds on 13/4 (TJT). Lake Elterwater, eight birds on 29/1 (DJB, PJ). Ward, two in pea stubble on 26/1 (BDB, PJ, TJT).

*Canterbury*: Lake Ellesmere, one female on 11-12/12/82 (Fennell *et al.* 1983); one male one female on 3/1 (BA, CFJO'D). Cass River delta, one female from 7/1 to Feb (RJP). Washdyke Lagoon, Timaru, eight (1 male 7 females) on 30/1 (PMS).

*West Coast*: Cook River-Fox flats, six on 12/3 (*per* RWHS). Other reports not confirmed.

*Southland*: Waimatuku River mouth, two on 24/1 and 7/2. Jacobs River estuary, Riverton, one male one female on 21/1 and 24/1 (RRS). Lake George, seven on 2/2 (IM).

*Bay of Plenty*: Kaituna Cut-Maketu, one male one female from 15/1 to 27/1; none on 16 or 27/2 (PCML, GAT), but one female at nearby Little Waihi on 16/2 (none on 27/2) (GAT).

*Volcanic Plateau*: Sulphur Bay, Rotorua, one female on 13/2, one male one female 21/2 to 29/3 (JGI, GAT). Lake Rotoehu, one female on 1/3 (GAT).

*Waikato*: Lake Whakamaru, one male on 26-27/3 (JGI, BHS, GAT, *et al.*).

*Taranaki*: Barrett's Lagoon, New Plymouth, one female on 5/3 (DGM, RWW).

#### April-May 1983

South Island records fell off, and a widely scattered few appeared in the North Island. The first subantarctic island birds were seen.

*Nelson*: Takaka district, one subadult female shot 30/4; skin in National Museum, Wellington.

*Marlborough*: Blenheim sewage ponds, seven (2 males 5 females) on 2/4 (RNH, CMM).

*Canterbury*: St Anne's Lagoon, Cheviot, one female on 2/4 and 16/4 (SL, PMS).

*Northland*: Dargaville, one female near Lake Kahuparere, Pouto, on 1/5; presumably the same bird shot on 2/5 at Lake Rototuna, c.15 km north of first sighting (WAC). None in February survey of Pouto lakes.

*Volcanic Plateau*: Lake Aniwhenua, one pair on 11/4 (WMH). Sulphur Bay, Lake Rotorua, four (1 male 3 females) from mid to late April, last seen 23/4 (GAT).

*Taranaki*: Mimi River, two reported on 12/5 (JM).

*Wairoa*: Whakaki Lagoon, none in Jan (A. Blackburn), four males on 24/4 (GAF); eight or nine birds on 25/4 (BRK).

*Manawatu*: Manawatu River estuary, one female on 30/4 (JLM, MM). Lake Papaitonga, Levin, one male one female on 17/4 (BDH, RHH).

*Wairarapa*: Lake Wairarapa, eastern shore, one female on 1/4 (PJM).

*Auckland Islands*: Derry Castle Reef, Enderby I, one pair and a single female in April (none seen in previous years); still there in Dec 1984; none in 1986 (MWC).

#### Rest of 1983

Very few records. Birds may have accompanied pairs of Paradise Shelduck in their dispersal to farmland breeding territories; more than the three known may have been shot; others may have returned to Australia.

*Volcanic Plateau*: Lake Rotomahana, one female in reserve area on 19/6 (JGI, RWJ, GP, GAT).

*Taranaki*: Barrett's Lagoon, one female on 11/6 (TB, RO).

*Marlborough*: Lake Grassmere, one female on 10/7 (WFC).

*West Coast*: Whataroa River Flats, eight (one shot accidentally) on 6/7; unconfirmed reports of two at Totara Lagoon and about six at Kowhitirangi/Kokatahi in May-June (RWHS).

### 1984

Records were few and, at the time, seemed to indicate that most shelducks had gone or died.

*Manawatu*: Lake Horowhenua, one female on 6/2 (WRJ, MO). Lake Wairongomai, one female on 31/3 (JC, HAR). No others in full survey of lakes on 31/3 and 1/4 (LJD).

*Marlborough*: Lake Grassmere, one female on 1/7 (WFC, PJ).

*Canterbury*: Washdyke Lagoon, Timaru, one female on 13/1 (P. Langlands, P. & M. Child, *et al.*).

*Otago*: Maniatoto, six males on 24/1 (M. Wright, Acclimatisation Society staff).

*Auckland Islands*: Same three still present in Dec (MWC).

*The Snares*: One female 27/11 to 22/12 (CMM). See Figure 1. This may have coincided with the influx to Campbell I (see below).

### 1985

As Table 1 shows, either the apparent drop-off of numbers in 1984 was not real or a fresh influx of shelducks occurred. Notable were the number (for New Zealand) at Campbell Island and the record of breeding in inland Canterbury. The 22 on Campbell Island in January were definitely new there. GAT was there from April 1984 to April 1985 and saw none until Jan 1985. The first report by meteorological staff was in late Dec 1984.

*Northland*: Lake Half, Aupouri Peninsula, one female on 27/1 (PM, KM). Karikari Peninsula, one female on 14/1 and 28/1; Tokerau Beach swamp, one male on 13-28/1 (PA, LH, AVH, *et al.*).

*South Auckland*: Karaka, one female on 2/5 (KJF).

*Marlborough*: Lake Grassmere, two on 16/11 (PJ); one female on 28/12 (BDH, PCML).

*Canterbury*: Glenmore tarns, near Lake Tekapo, 16/1, a pair with two young two-thirds grown; the female was with the young, the male keeping apart, sometimes on the margin of a flock of c.50 Paradise Shelduck (RJP). Lake Wainono, one female on 14/2 (RM, RJP). Washdyke Lagoon, one female on 30/12 (RM). Temple Stream, one male on 11/10 (RJP).

*Otago*: Patearoa, Maniatoto Plain, one female on 9/7 (M. Wright); none found on full survey of the Plain over rest of year (PS). Pleasant River, near Palmerston, two males one female on 29/4 (MN). Waikouaiti, one male one female on 26/4; same behind Cherry Farm, Karitane, on 25/5 (PS). Diamond Lake, Lake Wakatipu, four seen on 4/5; one shot, skin in National Museum.

*Southland*: Te Anau, one on a farm pond, mid-Oct (AW). Waiarau River mouth, one Aug-Oct (MS). Waituna Lagoon, 14 on 14/12 (M. Rodway, A. Russell, Acclimatisation Society staff).

*Auckland Islands*: Three still present, Dec (MWC).

*Campbell Island*: Camp Cove, 4/1, meteorological staff reported 18 in morning, 22 by evening; several had been seen a week before; 11/1, flock





FIGURE 1 — The female Chestnut-breasted Shelduck in Station Cove, The Snares, 7 December 1984

Photo: C. M. Miskelly



of 12 (2 males 10 females); 18/1-20/1, 13 reported; last seen five on 28/1 and 15/2, two on 16/2; none in March-April (GAT).

### 1986

In the summer and autumn of 1985-86, few were seen, the only small concentration being in the Te Anau district. In the Te Anau Basin and lower Eglinton Valley, moreover, Paradise Shelducks have increased to c.8000 (CB, KM), and so Chestnut-breasted are easily missed.

*Northland*: Lake Half, one male on 26/1 (BB, AJG, VH). None seen on Karikari Peninsula in Jan (LH).

*Taranaki*: Lake Waikato, Nukumarū, south Taranaki, one female on 6/2 (PB).

*Canterbury*: Lake Wainono, one male one female on 26/1; none on Glenmore tarns (RJP).

*West Coast*: Lake Hochstetter, Ahaura district, one female on 29/1 (A. Tweed, Acclimatisation Society staff).

*Otago*: Toko River mouth, one on 2/5 (PS). Lake Kirkpatrick, near Moke Lake, Queenstown, late Jan, a female reported by G. A. Tunnicliffe, associating with a female Paradise Shelduck with three half-grown young. Confirmed on 26/1 by Margaret and the late Peter Child, who described the bird as presumably subadult female, the white eye-ring being unusually broad and the chestnut band barely noticeable, being suffused heavily with blackish feathers.

*Southland*: Te Anau district. Lake Thomas (a Paradise Shelduck moult site), four males on 19/1; six birds on 20/1; four males one female on 24/1, two on 1/2; one male on 22/3; Dawson dam, one male on 1/2; none seen anywhere on 6/4 (KM, AW, R. Barker, J. V. Morrison, C. Wright). Te Anau Downs, two on 6/5; Te Anau rodeo grounds, one on 6/5 (AW). Two near Upukerora River estuary one day in April (CB). None seen since or elsewhere in Southland.

## OTHER FEATURES

**Field characters:** Seen from front or side on, the Chestnut-breasted Shelduck is easy to pick from Paradise by the chestnut breast (paler, cinnamon in males), by the narrow white ring round the base of the neck, and in females by the white ring round the eye and at the base of the bill. Adults in eclipse plumage after the post-nuptial moult, and immatures, may not be so easy, the chest being paler, browner and duller and the white neck-ring often indistinct. Immatures may have white flecking on the head (Frith 1977, Simpson & Day 1984).

A useful feature pointed out by G. A. Taylor is, when shelducks are on water upending to feed, to look for the undertail – glossy black in Chestnut-breasted and bright chestnut or rusty red in Paradise. Compare the top plate on p.92 of Moon (1979) and the top right plate on p.38 of Moon & Lockley (1982) with the paintings on p.59 of Simpson & Day (1984).

R. J. Pierce has noted that, when swimming, the Chestnut-breasted has a flat-backed profile, whereas the Paradise has a more humped-back profile. He noted the same profile in the two chicks at the Cass delta.

Their voice may help at times. The flight calls of Chestnut-breasted are not unlike those of male and female Paradise, but noticeably different to the experienced observer. However, the Chestnut-breasted in New Zealand have usually been silent.

**Moult:** The only direct evidence was an apparently flightless male seen by G. A. Taylor at Rotorua on 21 February 1983. When chased by a Black Shag (*Phalacrocorax carbo*), it flapped awkwardly across the water, showing no primaries.

**Habitat:** Most records (December-May) were of birds with flocks of Paradise Shelducks at lakes, lagoons, ponds, and estuaries, and on pastures adjacent to these places. They fed by upending in shallow water, wading in shallow margins, and grazing on pasture. Among hundreds, sometimes thousands, of Paradise feeding on pasture or swimming about on a lake or pond, they could be hard to count and identify to sex. Often, however, they tended to keep apart, attached to, not mingling with, the Paradise. Aggression between the species was not reported.

At The Snares, the bird of 1984 was seen just beyond the forest margin, above the splash zone, in Station Cove and Hotto Bay. It was feeding on the *Callitriche antarctica* sward (CMM). At Campbell Island, the birds of 1985 were in sheltered coves at the head of Perseverance Harbour. Shoreline habitats available were tidal mudflats, seaweed beds, and low-cropped pasture grasses with scrub behind these margins. The birds were seen on the mudflats and the grass margins (GAT). The Auckland Island (Enderby) birds were seen on the grass sward and other habitats but probably spent much of their time elsewhere on Enderby Island (MWC).

**Breeding:** The only report of breeding was the pair with half-grown young at the Cass River delta on 16 January 1985. The outcome of this breeding attempt is not known.

I have discounted the several reports of "hybrid" Chestnut-breasted x Paradise Shelduck offspring as being improbable because immature or adult eclipse plumage in Chestnut-breasted Shelducks may have a "hybrid" appearance. In addition, Paradise Shelducks have permanent pair-bonds and no shortage of partners and so hybridising is unlikely.

#### LITERATURE CITED

- FENNELL, J.; FENNELL, J.; SAGAR, P.; HARRISON, K. 1983. First sighting of Chestnut-breasted Shelduck in New Zealand. *Notornis* 30: 85-86.
- FRITH, H. J. 1977. Waterfowl in Australia. A. H. & A. W. Reed. 328 pp.
- MOON, G. J. H. 1979. The Birds Around Us. Auckland: Heinemann. 207 pp.
- MOON, G. J. H.; LOCKLEY, R. 1982. New Zealand's Birds. Auckland: Heinemann. 179 pp.
- SIMPSON, K. (ed.); DAY, N. 1984. The Birds of Australia. A Book of Identification. South Yarra: O'Neil. 352 pp.
- WILLIAMS, M. 1979. The social structure, breeding and population dynamics of Paradise Shelduck in the Gisborne-East Coast district. *Notornis* 26: 213-272.
- WILLIAMS, M. 1985. Paradise Shelduck. Page 142 in Complete Book of New Zealand Birds. Sydney: Reader's Digest.

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