

NOTES ON THE BROWN CREEPER (*Finschia novaeseelandiae*)

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ABSTRACT

Observations are given on vegetable foods of Brown Creepers and on aspects of breeding. We examined 21 nests in the field and recorded some details of nesting, eggs (colour, clutch-size, proportion of time spent incubating) and nestlings (description of the hatchling, weights and tarsal lengths).

INTRODUCTION

The Brown Creeper or Pipipi is widespread in the South Island and Stewart Island (Bull *et al.* 1978), in subalpine shrublands, scrub, and intact and second-growth forest. It also occurs in pine plantations (Soper 1976). Very little is known about the life of Brown Creepers; the only paper to deal with them exclusively (Henderson 1977) covers the behaviour of flocks in autumn and winter.

During our work with other birds at Kowhai Bush, Kaikoura, we found 21 Brown Creeper nests from which we collected limited information on breeding. We present these fragmentary data to help fill the gap in knowledge. Brown Creepers are one of the commonest birds at Kowhai Bush in all seasons, achieving densities there apparently far in excess of those in some climax forests (Gill, pers. obs.). Kowhai Bush is described in detail by Hunt & Gill (1979).

VEGETABLE FOODS

Although Brown Creepers are primarily insectivores, Henderson (1977) reported that they eat the fruits of *Coprosma propinqua*, *C. rotundifolia* and possibly lancewood (*Pseudopanax crassifolius*). At Kowhai Bush we saw them eating berries of karamu (*C. robusta*) and possibly the fruits of tutu (*Coriaria arborea*) and kohuhu (*Pittosporum tenuifolium*).

NESTS

At Kowhai Bush we first saw Brown Creepers building in early September. They nested in the canopy and upper and lower understoreys of the forest, in low scrub and in a small six-years-old pine-plot. Species of trees nested in were kanuka (*Leptospermum ericoides*), which dominates much of the forest, 11 nests; and akiraho (*Olearia paniculata*), 3 nests. We also found one nest in each of akeake

(*Dodonaea viscosa*), kohuhu, tutu, gorse (*Ulex europaeus*) and Douglas fir (*Pseudotsuga menziesii*).

The average height of nests was 4.2 m ($n = 19$, range 1.2-8.0 m), but this figure is biased because we more readily found low nests. At Kowhai Bush the canopy is 5-15 m high.

Nests were built in forks of bare twigs or in clumps of dense foliage. The nest in tutu was on a horizontal branch densely overgrown with the vine pohuehue (*Muehlenbeckia australis*). Nests were thick, deep, tightly-woven cups sparsely lined with feathers. Materials used in construction were cobwebs, strips of kanuka bark, and dried moss and grass. It seemed that only one bird of the pair built. Six nests weighed 9-14 g after drying indoors (adult Brown Creepers weigh 13 g). Nests were elliptical in outline from above, with outside diameters of 9-10 x 8-9 cm and inside diameters of 5 x 4-5 cm. Inside depth was about 4 cm and outside depth 6-7 cm.

EGGS

Brown Creeper eggs were variable in colour, as noted by Falla *et al.* (1970) and Oliver (1955). There were three colour-types:

1. Chalky white with dark brown blotches and speckles concentrated at the larger end.
2. Pale brown with large blotches and streaks of dark brown, often so dense, particularly at the larger end, that the background colour was difficult to determine.
3. Pale reddish brown with darker reddish-brown blotches and speckles concentrated at the larger end.

Two colour-types were present in one clutch.

TABLE 1 — Incubation attentiveness at two Brown Creeper nests in 1978. Percentage attentiveness was $A/A+B$ where A = sum of attentive periods, and B = sum of an equal number of inattentive periods.

	Nest 1	Nest 2
Dates	18-28 October	1-5 December
Mean monthly temperature (°C)	11.1	15.1
Total hours observation	12.1	6.7
Attentive period (minutes; mean, range, n)	21.9, 9.7-35.4, 18	13.8, 6.5-24.1, 16
Inattentive period (minutes; mean, range, n)	8.1, 4.5-13.0, 23	7.7, 5.1-12.3, 18
Attentiveness (%)	72.9	63.9

Egg-laying was noted in October, November and early December. Three eggs within three days of laying weighed 1.8 g, 1.9 g and 1.9 g. Three other eggs a day or so before hatching weighed 1.5 g, 1.6 g and 1.7 g. On three occasions the interval between the laying of consecutive eggs in a clutch was one day. Clutch sizes were two (one clutch), three (10 clutches) and four (four clutches), with a mean of 3.2. This confirms Oliver's statement (1955) that Creepers lay 2-4 eggs. At two nests Brown Creepers incubated one egg, but other eggs were lost from at least one of these clutches.

At one nest 19 days elapsed from laying to hatching of the first egg (day of laying = day 1). Incubation of another clutch lasted at least 17 days. Incubation attentiveness at two nests was 64% and 73% (Table 1). We determined that proportions of time spent incubating at Kowhai Bush were: 68% in Grey Warblers (*Gerygone igata*), in which the female incubates alone without food from the male; 81% in Robins (*Petroica australis*), in which the female incubates alone but is fed by the male; and 97% in Fantails (*Rhipidura fuliginosa*), in which both sexes incubate. These data suggest by analogy that only female Brown Creepers incubate, as stated by Soper (1976). Usually incubating Creepers left the nest in response to a call nearby, or they quitted the nest, called a short distance away, and were answered. We never saw one bird relieving another at incubation, but often two birds approached the nest before incubation resumed.

NESTLINGS

We saw nestlings from late October to December. One brood that hatched in late December would have fledged in January.

A Brown Creeper at hatching weighed 1.4 g. Newly hatched nestlings had orange skin, grey-brown natal down, yellow rectal flanges and buccal lining, white claws and a white egg-tooth. In nestlings up to 2 days old (day of hatching = day 0), the tip of the lower mandible sometimes protruded beyond that of the upper, but thereafter the tips met at the same point. Eyes often began to open as early as the 5th day. The egg-tooth was lost on or after day 8. Feathers of the

TABLE 2 — Weights and tarsal lengths of nestling Brown Creepers; day 0 = day of hatching.

		Day									
		0	1	2	3	4	5	6	7	8	9
Weight (g)	\bar{x}	1.7	2.2	2.9	3.6	4.5	5.8	6.6	7.3	8.8	9.6
Tarsal length (mm)	\bar{x}	7.8	8.3	9.8	11.1	12.7	14.8	16.1	17.4	20.1	21.4
	n	5	6	6	7	5	3	4	4	3	2

sterno-abdominal tracts erupted from their sheaths on about the 7th day, soon followed by feathers of the spinal, humeral, alar and pectoral tracts. Nestlings gripped the nest's lining from 9 days old.

Table 2 gives average weights and tarsal lengths of nestlings 0-9 days old. All older nestlings under observation were preyed upon, probably by introduced rodents and mustelids. Tarsal length was taken with vernier calipers laterally from the ankle joint to the articulation of the folded toes.

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SHORT NOTES

GODWITS SHOW CURIOSITY

At Mataitai, Clevedon, on 14 October 1978, I found a New Zealand Dotterel (*Charadrius obscurus*) with two day-old chicks. Its broken-wing display attracted a nearby flock of 50+ Bar-tailed Godwits (*Limosa lapponica*), which marched towards it with great curiosity and chattering. When they were some 75 cm away, the dotterel ran and then flew, followed by the godwits. The godwits lost interest only when the dotterel ceased displaying.

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GREY TERNLET

At 1330hrs on 14 March 1980, two Grey Ternlets (*Procelsterna cerulea*) were seen at 34°19'S 172°08'E, which is just south of the Three Kings Islands.

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