SHORT NOTES

Feeding behaviour of Bellbirds *(Anthornis melanura)* in a native and an introduced forest

From 17 August to 7 October 1986, I studied how the foraging habits of Bellbirds *(Anthornis melanura)* differed between native and pine forests in Hanmer Park (42°30′, 172°49′), North Canterbury. The native forests consisted of a mountain beech/red beech canopy with a mixed understorey of manuka, kanuka, and other endemic plants. The vertical and horizontal structure of these native forests differed greatly from that of the radiata and Corsican pine forests, which had denser canopies and less plant diversity. I recorded only those Bellbirds foraging activities which occurred in pine forest planted over 25 years ago. These pine forests were frequently dense enough to prevent undergrowth, although manuka did grow in some areas where sunlight penetrated the canopy.

During this study, I made 97 observations of Bellbirds foraging for insects or honeydew. Each observation included a record of area of activity (floor, trunk, branch, foliage), and pecking site (upper surface, lower surface, trunk, floor). With each observation, I included the method of feeding (a combination of hop, peck, fly, flutter), feeding height, and canopy height. I used the last two measurements to calculate relative feeding height: [feeding height/canopy height] ×100 = relative feeding height. No more than three observations were taken on any one bird; if taking a second or third observations, I left a 5min equilibrium time between observations.

From 53 observations of Bellbirds foraging in native forests and 44 observations of Bellbirds foraging in pine stands (three of which were on manuka bark), I found that the birds varied in relative feeding height as well as pecking site according to forest type (Fig. 1). In pines, Bellbirds fed on the ground and in the lower 60% of the forest more often than Bellbirds in native forests. The subcanopy (50%-70% relative height) was the favoured foraging area in native forest; over 37% of the birds I observed in native forests fed at this height range.

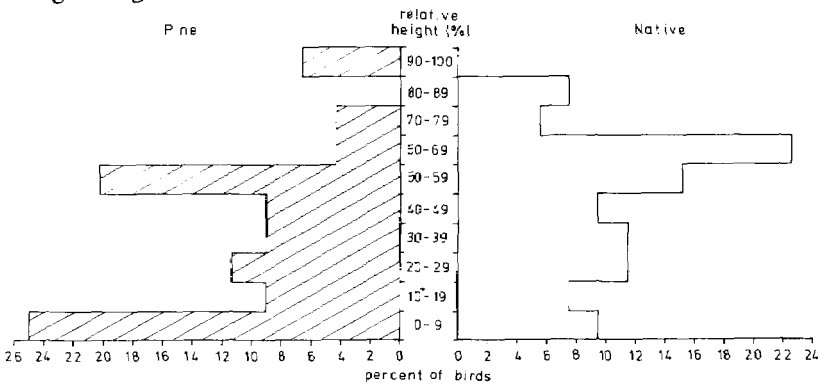

FIGURE 1. — Relative feeding height of Bellbirds in pine and native forests

Although the primary method of feeding was similar in both the pine and native forests, Bellbirds in the pines appeared more nervous and alert when feeding near the ground than did Bellbirds in native forest. In pine stands, Bellbirds probed the inner bark of manuka scrub (three observations), but more frequently they searched pine needles and pecked at branches.

The surfaces on which Bellbirds fed differed between forest types (Fig. 2). The birds fed on the ground twice as often in the pines (18%) as in the native forest (9%). In native forest 26% of the birds fed on insects and honeydew on the underside of branches and foliage, whereas in pines only 11% fed on the underside of branches and foliage. Bellbirds feeding on the upper surfaces of branches and foliage accounted for 19% of the observations in native forests and 50% in the exotic forests. In the native forests, 45% of the pecks occurred on tree trunks, whereas only 23% occurred on trunks in exotic forests.

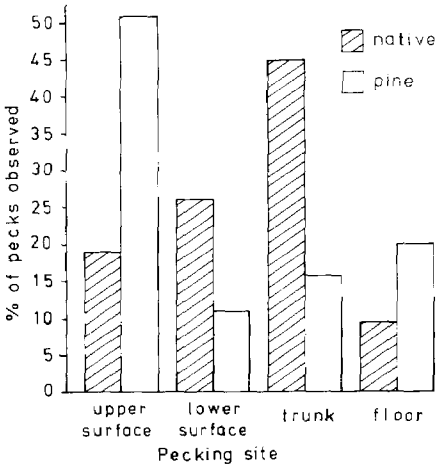

FIGURE 2. — Pecking sites of Bellbirds in native and pine forests

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Nesting of White-Faced Herons at the Chatham Islands

White-faced Herons (*Ardea novaehollandiae*) usually nest in the tops of trees. In the Chatham Islands, however, where they have been known for over 100 years, they have been recorded nesting in rather different situations. Thus, Gordon (1979) reported a nest containing eggs and a chick in a cleft in a rocky bluff on the south-west coast of Chatham Island, over a kilometre from the nearest tree.