NOTES ON THE SONGS OF CERTAIN BIRDS IN DUNEDIN.

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The Town Belt, in Dunedin, is a belt of scrub inhabited by Bellbirds (Anthornis melanura), Greywarblers (Pseudogerygone igata) and Fantails (Rhipidura flabellifera). It was decided to record their songs as heard from a house adjacent to this area, none heard elsewhere being included. A card ruled with squares for each bird and each day was hung, together with a pencil, in a convenient place, and a cross made in the appropriate square to show the days on which each song was heard. No attempt was made to indicate intensity of song. This method is very easily carried out over long periods without interfering in any way with one's normal life and the habit of hearing and remembering a song is soon acquired. The records discussed here cover more than five years. The diagram shows part of the records, from 1941-1944, and the height of the black columns indicates the number of days per week on which the song was heard. Interruptions in the base line show weeks in which records were not taken.

The song of the Grey Warbler, being long and rambling, cannot be satisfactorily noted down, but it appears to be always more or less the same in Dunedin, though somewhat different elsewhere. It was to be heard at all times of the year, though there was a marked diminution in the winter months, when there were usually a few weeks when it was not recorded. The main peak of singing activity comes in September or October, and it falls to a low level in December, reaching another peak in February or March. According to Oliver, there are two broods, in September and October or November.

The song of the Fantail showed a marked seasonal periodicity at the point of observation. About March or April it was usually heard almost every day, but from August to December few if any songs were noted. This periodicity might be due to seasonal movements of the birds away from the area, and this is made more likely by the exceptional results in 1942, when there was a spring as well as an autumn peak of song activity. Possibly there was a nest in the vicinity that season. Seasonal song observations at different points in the same district might give information about the movements of a bird such as this.

The Bellbird is especially interesting, as it has much more varied songs than the other two, and the songs are often easy to recognise, as they consist of only a few distinct notes. It soon became clear that in Dunedin there were three different and easily recognisable songs, which for convenience were called Nos. 1, 2 and 3. Some others were also noted, and will be mentioned below. No. 1, a distinct phrase of seven notes, seems to be the ordinary call note and is heard at all times of the year. There is, however, as will be seen from the chart, a seasonal periodicity of song activity. This is very well shown in 1943, when there was a peak in May and a period of minimum song in October, but is also apparent in the other years. 1941 seems to have been a late year, with the peak about August. Song No. 2 when sung

in full, seemed to consist of two notes, followed by a sound best written as "zizz," followed by the two notes again. Then came a phrase of six notes, the third being a high one heavily accented. At times groups of male Bellbirds were noted sitting a few feet apart, all singing this song with great energy. The periodicity of this song is similar to that of No. 1, with the peak of activity in June or July, but during four or five spring and summer months it was not heard at all. It should be repeated that all these records were purposely restricted to one point only. At the end of October, 1943, in an area of bush about two miles away, Bellbirds were heard singing No. 2, a date on which it was never heard at the point of observation. Song No. 3 consisted of a series of descending notes, usually four but sometimes three or five, in which case the last note was slurred and accented. The chart shows clearly that the seasonal occurrence of No. 3 is almost identical with that of No. 2. No special efforts were made to observe the behaviour of the birds, but nothing comparable with the group singing of No. 2 was noticed in connection with No. 3.

In May, 1941, another song, No. 5, was first recorded. It was less well marked than the others and had possibly been overlooked earlier as it has been recorded ever since. It is not shown on the chart, but its incidence resembles those of Nos. 2 and 3, being absent during the last four months of the year. Its peak, however, falls somewhat earlier than those of the other two. Four other songs were noted, very well marked and easy to recognise, but only heard for short periods. One was heard for five days in August, 1938; one for one day in August, 1941; one for three days in August, 1942; and one for one day in March, 1944. These unusual songs might be due to strange birds passing through the area.

One interesting thing became apparent as soon as the habit of hearing and recording songs had been acquired, and that was their difference in different localities. No systematic attempt to study this has so far been made. At Taieri Mouth, some 20 miles south of Dunedin, the usual song, apparently corresponding to No. 1, is not the same as in Dunedin, and another is very reminiscent of No. 2 but differs from it in detail. Even in bush areas only a mile or two away, unfamiliar songs or variants of familiar ones have been noted, and the matter seems worthy of further attention.

