



Black-faced Wood-Swallow at nest.

Photo. by L. G. Chandler.

are twenty-two records, all of them except one being in the night. The one exception was on October 18, 1936, when the call so often heard at night, very much like the peevish cry of the Pukeko (*Porphyrio melanotus*), was heard at 8.30 a.m. My wife and I immediately rushed outside but unfortunately we could not see the bird. Of the twenty-one night records, sixteen have been in three months—six in October, and five each in November and December. The others are two in September and one each in February, May and August. The time of these records ranges from 9.15 p.m. to 3.30 a.m., most of them being after midnight, although for a period in October my wife has heard the same cry almost nightly at about 9 o'clock (her records are additional to my total). The bird is heard under all weather conditions. Is it the Pukeko or is it some species of Petrel? There is no doubt that the Pukeko does fly at night. One was recorded not long ago as fluttering against a building in Napier in the night and another flew into the engine of a night train between Cross Creek and Featherston, on the Wairarapa line, some years ago.

Incidentally, although hardly coming within the scope of this article, I have on several occasions heard the introduced Hedge-Sparrow (*Prunella modularis*) singing at night. On December 13, 1932, on a fine, clear, moonlight night, I heard one singing merrily from its perch in a hedge, and it repeated the performance the next night. This was about 2 a.m. On November 9, 1934, I heard one give a snatch of song at 2.5 a.m., and again six nights later I heard one sing at greater length at 2.30 a.m.

The Flocking of Birds

By L. G. CHANDLER, Red Cliffs, Victoria

In the last issue of *The Emu* (vol. xxxvi, pp. 254-261), Mr. K. A. Hindwood has enhanced his reputation as a writer of exceedingly interesting and valuable articles. The different behaviour of birds at the various seasons of the year is a subject of which very few observers are able to make an exhaustive study. It requires more time than can be spared by the average person, and, above all, infinite patience and keen observation. The flocking of a number of species of small birds is by no means uncommon during the autumn and winter—one may often witness it. Even during the nesting season I have observed temporary flocking of a small number of individuals. It occurred to me that at that season the motive is more for play and pleasure in each other's company.

Birds certainly play more than we realize. Last nesting season I saw on several occasions a remarkable game played

by small flocks of Shell-Parrots (*Melopsittacus undulatus*) and individual Black-faced Wood-Swallows (*Artamus melanops*). The Wood-Swallows had nests, but the Parrots had not begun nesting operations. There were thousands of the latter feeding on the ground and flying backwards and forwards, varying from a few birds to perhaps a thousand or more. It was a calm day of glorious sunlight and the whole bird-life of the neighbourhood seemed to be infected with happiness and the joy of living. It was a day that will live in my memory, for at no time in my experience of the Mallee had I seen so many birds congregated within a small area under such ideal climatic conditions. Birds and nests were everywhere. First in number of individuals were the Budgerygahs, and in a lesser degree were Crimson Chats (*Epthianura tricolor*), White-fronted Chats (*E. albigrons*), Black-backed Wrens (*Malurus melanotus*), Tree-Martins (*Hylochelidon nigricans*), Brown Flycatchers (*Micræca fascians*), Black-and-white Fantails (*Rhipidura leucophrys*), Trillers (*Lalage tricolor*), Black-faced, Dusky, Masked and White-browed Wood-Swallows (*Artamus melanops*, *A. cyanopterus*, *A. personata* and *A. superciliosus*), White-browed Tree-creepers (*Climacteris affinis*), Red-tipped Pardalotes (*Pardalotus ornatus*), Red-capped Robins (*Petroica goodenovii*), Weebills (*Smicrornis brevirostris*), Chestnut-tailed Thornbills (*Acanthiza uropygialis*), Black-capped Sittellas (*Neositta pileata*), Choughs (*Corcorax melanorhamphus*), Black-winged Currawongs (*Strepera melanoptera*), Mallee and Mulga-Parrots (*Barnardius barnardi* and *Psephotus varius*), and a variety of Honey-eaters, etc.

One Black-faced Wood-Swallow used a dead mallee gum as a vantage point, whence it flew forth to capture insects. Later in the afternoon I heard this bird utter a few notes and then it flew and circled at a sharp angle to a height of fifty to one hundred feet. Almost immediately a flock of Shell-Parrots, numbering perhaps 150, rose from the ground and followed it. As the Wood-Swallow wheeled and circled the Parrots kept in formation a few yards behind it. Flying slowly, they adopted a half-floating flight, quite different from their usual wing-beat. After a few minutes in the air the Wood-Swallow returned to its tree and the Parrots followed. In a few seconds the dead limbs of the tree were illumined with a wonderful colour, as the noisy little birds drifted like autumn leaves into position. Presently the Wood-Swallow called again, then flew, and away went the Parrots in pursuit.

This performance was repeated on numerous occasions during the afternoon with the same bird and with another. A few days later I saw it carried out again. Once the Wood-Swallow called with sharp, warning notes and went

aloft. Instantly the air was thick with thousands of Parrots. Birds on the ground arose and dashed low down through the trees. Those in the air came down with a rush and panic reigned. Flocks of Parrots crossed and recrossed each other close to the ground, and collisions seemed certain, but never transpired. Sometimes flocks mingled and odd birds from one flock would join another.

After a time quietness reigned. Except for the movement of an odd Parrot, and of the Wood-Swallows floating above and still calling, all birds had hidden themselves in the mallee gum leaves. I suspected that a Hawk was in the neighbourhood, and presently a Sparrow-Hawk settled in a tree near me. It soon detected my presence, and in a flash departed.

The Wood-Swallows returned to their trees, and in a few minutes one called again and flew, and the same or another flock of Parrots took up the game. As though at a given signal the landscape was soon alive with moving birds.

I visited this locality a week or more later, and the spot was almost deserted of bird-life. The Parrots and the Wood-Swallows, with the exception of a few of the Dusky species and a pair of the Black-faced birds, had gone. Most of the Chats had also disappeared, and empty and broken nests were everywhere. It was a hot, windy day, and desolation reigned on a drought-stricken scene.

To return now briefly to the subject of the flocking of birds of varied species at times other than the nesting season, we can safely assume that the primary object is one of food. The second consideration is mutual protection and the third a certain degree of play or pleasure in mixed company. Hindwood writes: "When we analyze the feeding habits of the various species of birds in the flocks, it is seen that there was scarcely any overlapping. Most, if not all, of the birds could benefit by the association." I think that would be the verdict of most observers who have witnessed this flocking of birds. I need add nothing further except to state that in southern Victoria, I have seen flocking, with the exception of the Red-capped Robin, similar species to those mentioned by Mr. Hindwood. In addition I would add the Yellow Robin (*Eopsaltria australis*), Scarlet Robin (*Petroica multicolor*), Yellow-tailed Thornbill (*Acanthiza chrysorrhoa*), Brown Thornbill (*A. pusilla*), and Rufous Whistler (*Pachycephala rufiventris*). In the mallee scrubs the Black-capped Sittella replaces the Orange-winged bird, the Red-tipped Pardalote the Striated, the Red-capped Robin the Yellow Robin, and so on through the various allied species.

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