

## Economic Section

### BIRDS AND THE CATERPILLAR PEST

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How to combat, or insure against, future raids of caterpillars is a problem exercising the minds of farmers all over Victoria at the present time. To the scientist the answer is a simple one, for he would tell us that the most economical and obvious means of protection is through the agency of the caterpillars' natural enemies—the birds. But the man on the land wants to know where the birds are to come from in sufficient numbers to be of any use in checking the devastation such as they have recently suffered. In addition to the Starlings, whose numbers seem woefully inadequate at a time such as this, birds preying upon the caterpillars include Stubble Quail, Horsfield's Bush Lark, Ground Lark, Silver-eye, Magpie, Magpie-lark, Black-faced Cuckoo Shrike, Pallid Cuckoo, and the Fantailed Cuckoo, and even the much despised Sparrow has been doing its bit.

In the Mornington Peninsula I have noted all these birds at work upon the grubs, each performing wonders in proportion to its size, but without stemming the voracious horde in the least.

The caterpillars are hatched from eggs laid in the early spring by a medium-sized dark-brown moth, well known as the Bogong Moth. Like the female blowfly, the moth uses much discrimination as to where the eggs are laid. They are placed where Nature tells her the young caterpillars stand the best chance, not only of hatching, but also of reaching maturity. Therefore she chooses the damp spots in a field of luxuriant growth, such as a crop of oats. Like the poor, the moths are always with us—a fact not known to most farmers—but we are not pestered with them annually, for in normal seasons 90 per cent. of the eggs laid fail to hatch because climatic conditions are not favourable to their incubation. Warm showery days extending well through November seem to be the ideal conditions needed for their propagation, and when it comes to weather conditions, the average farmer is a fatalist. After all their presence is but one more instance of "Polarity." The rain and the temperature favour a suberabundance of food, and also caterpillars to devour it. Action and reaction is Nature's law, and will remain so to the end of time. Man creates artificial conditions in his well-tilled fields of cereals, and needs must use artificial means for their protection. It is a popular fallacy that caterpillars are able to cover great distances in search of fresh fields. Experiments upon travelling caterpillars marked with flour dusted upon them lead one to doubt if they are capable of averaging a chain in 24 hours, and since their life is very brief (from 10 to 14 days), they must quickly perish unless suitable food is soon forthcoming on the way. I have also noted their objection to hot sunlight, which stimulates them to unwonted activity. Almost invariably

they place the stem or leaf of the food plant upon which they are feeding between themselves and the rays of the sun, so that whilst walking casually through a paddock with one's back to the sun their presence will remain unnoticed. Turn, however, and face towards the sun, and the ground seems black with them.

Aided by a succession of south-west winds, the moth has been distributed almost universally over the State, and any solution of the problem involves its destruction also. Experiments should be conducted to determine the best means of trapping or gassing them. In the meantime every possible encouragement should be given to the fostering of all the night-feeding birds—Frogmouths, Owls and Nightjars—and a rigid protection be extended to the ground-feeding Quail, Plover, Curlew, Ibis, and others. In America, acting under the advice of the U.S.A. Bureau of Ornithology at Washington, many of the States have been restocked with the "Bob White"—a Quail somewhat similar to our Stubble Quail, with remarkable results, and the time is not far distant when similar action will have to be taken here.

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## Notes

### CENTRAL QUEENSLAND NATIVE BIRDS' ASSOCIATION.

The Hon. Secretary of the Central Queensland Native Birds' Protection Association, Mr. P. V. Maloney, is in receipt of the following letter, dated the 3rd instant, from the Under-Secretary for Agriculture and Stock, Mr. E. G. E. Scriven:—"I desire to inform you that His Excellency the Governor, with the advice of the Executive Council, has, in pursuance of the provisions of the Native Birds' Protection Acts, 1877 to 1884, been pleased to declare Great Keppel Island to be a reserve under and for the purpose of the above-mentioned Acts. Notifications of the same will appear in the *Government Gazette* of to-day's date, a copy of which will be forwarded to you in due course." Mr. Maloney writes as follows:—"In order to preserve the bird life on these islands, I moved in April last, through the association, to have North and South Keppel islands made sanctuaries for their protection, and the lessees fell in with my views and agreed to the move. From personal observations and periodical trips to the Keppel Islands I found that hundreds of birds from the mainland have made their way there. A few years ago there were only sea birds to be found on the islands. I attribute the increase to the onward march of closer settlement along our coastline from Yeppoon. Many birds have been driven out in consequence, and have now made the islands their breeding haunts. Unfortunately at Easter time and Christmas time there seems to be a wide-spread passion among camping parties for the indiscriminate killing of these birds, and it was lamentable