

### Economic Section.

**Objects of the Economic Section.**—I would propose that the objects of this section should be—(a) To put forward in a practical way knowledge of the economic value of birds; (b) to contain notes on feeding habits; (c) to show how to maintain, preserve, and increase the useful birds of any district; (d) to note the enemies of birds, and the best way of checking same; (e) to keep check, in a general way, of the numbers of our birds in various districts, in order to see if any serious increase or decrease is taking place, and if possible to get at the cause; (f) to ensure that the results of this work be sent to the various Departments of Agriculture in each State, for distribution through the *Agricultural Gazettes* and other channels to the farmers and pastoralists.

The duty of the members of the Union is to lead in the matter of economic ornithology, as among them are to be found the most experienced and observant ornithologists.

The immense value of the bird life to the country is now fairly well recognized, but so far we are only trying on very broad lines to preserve them, by means of Acts of Parliament in the first place, and by creating a "bird sentiment" through the admirable Gould Leagues. These efforts do not get at the root of the matter, and something more practical is required to enable our bird fauna in the settled districts to thrive in the changing conditions that occupation of the land brings about. On our farms and stations, in the vast majority of cases, even when the economic value of the birds is recognized, they are not given any special consideration, and are left to battle against adverse circumstances as best they can; but, considering the assistance that they are in keeping in check destructive insect life, to say nothing of the life and interest that they add to the landscape, it is time well spent, and money saved, to help them in any way to maintain themselves in safety.

Nominally the bird population of any district should be up to the limit of the food supply available, but actually this factor is disturbed by several side issues, some of which are under our control, notably that of providing them with cover, nesting sites, and safe watering-places, and by protecting them from, or eliminating as far as possible, their enemies. The work of clearing the average property is usually done much too thoroughly, and even if a few trees are left provision is seldom made for the young growth to take their place when they die off, and large areas are left devoid of timber and shelter for stock or birds and at the mercy of insect pests. A great deal can be done for our bird life by elimination of their enemies. The penny wise and pound foolish policy of surface poisoning of rabbits is now being superseded by the much more effective process of digging out; but to allow the properties to be overrun with cats and foxes is to destroy much invaluable bird life. Our bird fauna

deserves careful and intelligent watching and treatment as one of the invaluable assets of the country, for it will be exceedingly difficult to replace what is now in many cases being allowed to be destroyed.—A. S. LE SOUËF, R.A.O.U., State Secretary for N.S.W. Taronga Park, Sydney.

#### A PLEA FOR CROWS AND EAGLES.

By F. C. MORSE, R.A.O.U., "Coocalla," Garah, Northern N.S.W.

IN entering on this contentious subject, I wish it to be understood that I am not generalizing without sufficient data. Certain things have come under my notice that have led me to make certain conclusions; this need not necessarily apply to other parts of Australia.

The Wedge-tailed Eagle and the Crow (Raven) are condemned by the sheep-breeder, and war, in the shape of poison and guns, has been waged against them for many years. I have been among the agents of destruction, and claim to have killed as many of each as anyone else, and also claim to have hated the Crow with that somewhat venomous hatred that I hear expressed on all sides for the black devil. In making these remarks, I wish to show you that I am not simply a bird-lover, who can see nothing but *good* in everything that flies.

Before the advent of the rabbit the Eagle lived largely on marsupials, varying his diet occasionally with lamb (though there is no direct evidence of anyone having seen an eagle take a live lamb); however, circumstantial evidence is against him. But my contention is that where there are rabbits Eagles will do little or no harm to the lambs. When the rabbits spread over the Castlereagh country, I was doing colonial experience on a station in that district, and was in charge of a flock of 12,000 breeding ewes; rabbits were numerous, and so were lambs, but the preference seemed to be almost entirely for rabbits. Under one cyrie I counted the remains of fifty rabbits, *but not a single lamb*.

During 1915 I watched an Eagle's nest very carefully, and two young birds were reared; but during the whole period till the young flew away I could only find the remains of five lambs thrown from the nest—possibly these were dead when taken. This also was in a lambing paddock. Rabbits are very scarce, in spite of which the bird carried several to the nest, besides kangaroo-rats and birds.

Since the blow-fly has become such a pest to the pastoral industry, sheep-owners are at their wits' end to find some means of combating the pest. Entomologists have proved that the larvæ of the blow-fly can only live on animal food; destroy that and there is nothing much left for the fly.

As a scavenger the Crow is second to none. No dead meat is too advanced in putrefaction for him; and whether fresh

or otherwise a flock of Crows will clear up the carcass of any animal in a very short time; if not too tough in the skin they get to work at once—a tough-skinned animal has to be left till softened by decomposition—but the result is always the same, nothing left but bare bones.

During the spring of last year I came across a very good illustration of their usefulness. Riding out one morning, I found a dead fox—it had just reached that stage when the whole thing was a moving mass. I was coming back the same way in an hour or so, so decided to burn it on my return; however, Crows found it in the meantime, and left absolutely nothing but a few scattered bones. I searched the ground carefully to see if any maggots had escaped, but could find none. Another illustration: I wanted to find a suitable spot to liberate some chalcid wasps, and, thinking of some sheep that had been bogged in a tank recently and the carcasses thrown out on the bank, I took my little boxful of wasps thither. The chalcid attacks the pupal cases of the fly, so it is necessary to find the host in the proper condition, and, knowing the time it takes for the fly to pupate, these sheep remains should have been in the proper condition; however, again the Crows got there first, and, hunt as I would, under the carcass or under the surface of the ground, I could not find one. There were the marks where the Crows had picked up the ground, to five or six yards away from the carcasses, and had apparently found every pupal case.

It is stated on all sides that Crows kill sheep and lambs. They do, beyond any doubt; but it is the already dying sheep, and generally the weakling among the lambs. In good seasons, when everything is favourable to the sheep, the lambing percentage is also good, in spite of Crows.

During the past three or four months we have passed through one of the worst droughts known. Many sheep and lambs died of poverty; many a one I found down, with one eye or two eyes out, but I cannot attribute the death of a single sheep or lamb to the Crows. They undoubtedly hastened the end; but when sheep reach the stage of emaciation that they have to be lifted up, death is inevitable, and the attacks of the Crows (and they never overlook a fallen sheep), cruel though it appears, in all probability simply saves the poor animals more prolonged suffering.

In conclusion, I would ask those interested in sheep not to condemn the birds without a fair trial. Weigh the good and bad, and I honestly believe the balance will be found in favour of protection as against destruction.

N.B.—I have used the word Crow all through, but the more common bird here is the Raven.

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**Birds and Grasshoppers.**—The value of birds in keeping down insect pests is aptly illustrated in this note from Mr. H. F. Jones:—

"In the Gulf, at times, countless swarms of grasshoppers pass over the country. They generally hatch out when the first rain comes, and nearly every bird has a go at them. Ibis, Hawks, Crows, Plain Turkeys (Bustards), Native Companions, Cranes, Plovers, Magpies, and Peewits all hasten to the feast and live on the insects. Even Ducks and Water-Hens change their menu and have a gorge of grasshoppers. Plain Turkeys and Ibis are specially keen after them, and I have often thought it a shame to shoot the former when they have been so busy after the pests. When anyone comes on a swarm of grasshoppers on the plains of the Gulf country, it is always a good indication of Plain Turkeys—the birds are never far away. I have often seen 30 or 40 Turkeys so busy after the grasshoppers that they hardly took notice until three or four shots rang out, and a couple of their number fell. The Turkeys fatten very quickly on grasshoppers."—(From the Nature Notes column of the Brisbane *Daily Mail*.)

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**Birds-of-Paradise and their Plumage.**—By proclamation, Sir Ronald Crawford Munro Ferguson, the Governor-General, acting with the advice of the Federal Executive Council, has prohibited the exportation of Birds-of-Paradise and their plumage, unless the consent in writing of the Minister of State for Trade and Customs has first been obtained.

### State Secretaries' Reports.

#### WESTERN AUSTRALIA.

I LATELY visited the country near the Margaret River, south of Perth, and obtained a Wedge-tailed Eagle. It was the most beautiful specimen I have ever seen. The ruffle and all the lighter parts were bright gold colour, and in the centre of each wing, about the median wing coverts, it had a bright blue feather. I also got a White-tailed Black Cockatoo (*C. baudini*) given to me, which was taken from the nest. Two flew away when the man climbed up, and he got the third one. Two of my friends came to a patch of granite in the clearing in the forest. Their dog barked at something in the granite. On investigating, they found a large Brown Snake coiled up in a cleft in the granite, and by her sixteen fresh eggs. They killed the Snake, and one of the boys thoughtlessly broke the eggs and fed them to the dogs, as they were quite fresh, and I thus missed a very interesting exhibit.

Bird life is not much in evidence, as they keep to the lower damp gullies. The Emus seem to have deserted the place for a time. They evidently migrate, and at present are away. I expect they will come back when the Zamia Palm (*Cycad*) seeds are ripe. The "Twenty-eight Parrots" are very destructive to the almonds and apples. When I was near Mingenew, north of