LETTERS TO THE EDITOR.

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The Value of Insectivorous Birds.

WHILE I cordially agree with Dr. Collinge's protest in NATURE of July 25, p. 407, against the indiscriminate destruction of small birds, I think he overrates the extent of the mischief that has been and is being done. No doubt the owners or tenants of market-gardens and orchards are not careful to distinguish between hurtful and beneficent species, but there are vast tracts of country where nobody dreams of killing song-birds, though schoolboys have been, are, and, I fear, will continue to be, incorrigible nest-harriers.

Dr. Collinge denounces the Wild Birds' Protection Act of 1880 and the amending Acts as "practically dead letters." Doubtless they share in the imperfection of all human legislation; but if they are inoperative in any district, the fault lies with the local authority. I had charge of two of the amending Acts in their passage through the House of Commons, and was strongly urged to prepare a schedule of species for universal application. I declined to do so, thinking it better to leave county councils to provide protection for such birds as local conditions rendered desirable. A schedule that might be suitable for Sussex would be grotesquely inapplicable to Caithness, and vice versa.

I will cite the goldfinch as illustrating good results from the Acts. It is not an insectivorous bird, but, whereas it subsists exclusively on the seeds of such weeds as thistle, charlock, coltsfoot, and the like, it must be reckoned among the farmer's and gardener's most diligent allies. It is more easily taken by decoy than almost any other song-bird, and is eagerly sought for by bird-catchers because of its popularity as a cage-bird. Owing to the nefarious industry of these gentry goldfinches had practically disappeared from Scotland when Lord Avebury passed his Act in 1880. About the end of last century they began to reappear. Here, in Galloway, the bird-catchers set to work with them at once, but a note to our Chief Constable put the police on the alert, and the mischief was stopped at once. Now we have plenty of these beautiful and beneficent finches, thanks entirely to the county council's powers under the Acts.

While I do not understand why Dr. Collinge describes the kingfisher and the dipper as "most beneficial," I am surprised that he does not mention the lapwing, an insatiable insect-eater. It is the only one of our wild birds of which both the carcass and the eggs are habitually offered for sale and eaten. Little harm is done by taking the early laid eggs, most of which would, if left on the ploughland, be destroyed in the process of sowing and harrowing, but to kill the birds should be constituted an offence.

Starlings have increased in numbers a hundredfold in my own recollection, and probably no single species of small bird accounts in this country for insects in the same quantity as they do. It must be owned, however, that ripening fruit crops require protection from starlings.

While I am very far from differing from Dr. Collinge on the importance of the subject of his paper, I venture to think that more good might be done by stimulating the activity of county councils in the

matter of bird protection than by finding fault with the Acts enabling them to provide it.

Monreith.

HERBERT MAXWELL.

WITH reference to Sir Herbert Maxwell's comments on my article in NATURE of July 25, I think he has overlooked one of the causes I mentioned in connection with the present scarcity of our insectivorous birds, viz. the severity of the winter of 1916-17 and, to a smaller extent, of that of 1917-18. I should like, therefore, to direct his attention to a recent and valuable report on the subject by Messrs. Jourdain and Witherby (*British Birds*, 1918, vol. xi., pp. 226-71; vol. xii., pp. 26-35), wherein they point out, as the result of a very careful and prolonged inquiry, the enormous mortality that has taken place, in some cases to the extent of 80-90 per cent. in certain counties.

The kingfisher and the dipper I regard as beneficial because both species consume a large quantity of injurious insects. In the case of the former species, an investigation upon which I am at present engaged shows that much of the food is of a neutral nature, and that any harm it does is more than counterbalanced by the good. I did not mention the starling, as I do not think that it requires any protection at present; indeed, in many parts of the country it is so numerous as to call for repressive measures.

I fully agree with Sir Herbert Maxwell's remarks on the lapwing, and would point out that under the name of peewit this bird is included in the schedule of the Act of 1880. Of the 106 local authorities out of 120 in England and Scotland that have put into force the amending Act of 1894 (57 & 58 Vict., c. 24), which prohibits the taking or destroying of wild birds' eggs, only eight Scottish authorities have placed this bird upon their list, and the ten English counties which protect the eggs of all wild birds (*cf.* Oke's "Game Laws," 1912, and Marchant and Watkins, "W.B.P. Acts," 1897). Why have the remaining eighty-eight authorities been waiting nearly a quarter of a century before doing the same? Again, only twenty-three authorities afford protection to the eggs of the skylark, 36.5 per cent. of the food of which is beneficial as against 13 per cent. injurious and 50.5 per cent. neutral. Numerous other instances might be quoted.

Whether one regards the Act of 1880 from the point of view of the ornithologist, farmer, fruit-grower, forester, or fisherman, it is unsatisfactory (i) in the number and species it affords protection to, (ii) in the penalties it imposes, (iii) in the absence of any provision for revision at stated periods, and (iv) in its lack of precision. Moreover, in entrusting the additions and general administration of the Act to the county councils it has proved largely ineffective.

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Preparing "Palates" of Mollusca.

PROLONGED cooking in a strong solution of soap is a much more satisfactory method of cleaning these interesting objects than the commonly recommended method with caustic potash. The plan which I have tried with success is to place the materials in the soap solution in a small phial, which is enclosed in a sand-bath, and then left on a hot part of the kitchen range. In a few hours all the surrounding tissues, or even the whole of the rest of the animal, is as completely disintegrated as it would be with the *liquor potassae* method, and the teeth all stand out bright and clear, but there is not the same risk of the so-called "palate" becoming disintegrated or curling up and becoming brittle.

G. H. BRYAN.