

the animals were hawks, owls, gulls, crows, ravens, herons, and shrikes. Such food habits indicate not only an emergency value for these species, but with almost equal certainty prove their constant, though unrecognized worth. Thus, many of the hawks were shot by men who were trying to suppress the plague by means of poison. Just so long as the farmer destroys such valuable birds, just so long will his crops suffer through the ravages of destructive rodents and insects. Knowing the danger invited by the destruction of useful birds, the husbandman should demand their protection. A few species are in part or wholly detrimental, but it is the safer plan, where one does not know their specific value, to let the harmful live, rather than, through ignorance, to kill the beneficial."

None of the three New Zealand hawks can be ranked among the purely injurious species useful only on the rare occasions when the numbers of rats or other pests increase to the proportions of a plague.

The second category includes those species which are of mixed value, whose status must be independently determined in the different districts of their range. Thus they may be ranked justly as pure pests perhaps in a poultry or game-rearing locality, and as positive blessings in neighbouring rabbit-infested districts. The burning question—persecution or protection—is very liable to depend in these cases rather on the predominant interests than on an impartial investigation of the damage committed and the services rendered.

The third class comprises those kinds which are predominantly or entirely beneficial, and which should be strenuously protected wherever they occur. The European kestrel or windhover (*Cerchneis tinnunculus*) is an example, while the two indigenous owls of New Zealand should also be grouped here.

Coming now to the birds of New Zealand, we find the number of kinds of birds of prey rather surprisingly small. Such widespread groups as the vultures and eagles are totally unrepresented in the living avifauna, although it is true that the smaller moas often fell a victim to a gigantic, now extinct eagle—*Harpagornis*. The hawks are represented by two kinds of falcons, found nowhere else in the world, and by a harrier which occurs also in Australia. Two species of owls are indigenous and found nowhere else, while a third has been introduced to cope with the small-bird nuisance. These will all be now dealt with in turn.

THE BUSH-HAWK OR SPARROW-HAWK (*NESIERAX POTTSI* MATHEWS AND IREDALE).

This is the smaller of the two indigenous falcons, differing from the larger quail-hawk (*N. novaehollandiae* Gmelin) in very little else but size. Its upper plumage is a very dark brown, almost black, while the under-parts are reddish-brown marked with whitish. Both the bush-hawk and the quail-hawk are easily distinguished from the larger, gracefully gliding, and much more common harrier by their rapid dashing flight.

The nest may be placed in clumps of *astelia* in trees, or built on ledges of rock. The very handsome eggs are "yellowish-brown, stained and mottled with reddish-brown."