

done in winter time, but more definite evidence is required to make sure. Of course, the bird is much relished as food and on this account alone is well worthy of being preserved.

There is one thing that may be said in regard to the status of birds as destroyers of insects. A great many useful insects are very minute and would thus escape detection. Others have stings or look so like bees or wasps as to readily pass for them. On the other hand a great many pests are large, such as orthoptera and lepidoptera and are thus more likely to attract attention. Of course, a bird in seizing a grub may unwittingly destroy half a hundred parasites and so do harm, on the other hand it may go further and kill hyperparasites which prey upon true parasites.

There is no doubt that many bird lovers go too far in their claims of bird usefulness just as some entomologists go to the other extreme in minimizing their usefulness. As a matter of fact many of our worst pests are hardly influenced at all by birds. I may cite as an example the Hessian-fly, and other small insects. It is also generally a mistake to consider birds of first importance in the suppression of severe insect outbreaks. They doubtless help, the cases cited above being a few examples, but they are far behind predaceous and parasitic insects in such work. Their aid, however, is far greater when pests exist in normal numbers. Then, by keeping them so, by picking off the surplus, they are accomplishing much in retaining the balance of nature.

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#### NOTES ON THE QUAIL.

A reference to quail in Mr. Saunder's article in the October issue on bird preservation, noticed during an enforced confinement to the house, is responsible for these few items about the doings of a very gallant little gentleman. The remarks are only scientific in being accurate, but spending each winter on a club property of some hundred thousand acres in South Carolina, with a naturalist for a manager, a crowd of observant darky guides, and a changing group of guests, talking game and game habits every evening, *Colinus virginianus* has become a familiar friend.

Our American Quail, so called, is an Englishman in his courtesy to his woman kind, his bulldog fighting powers and his clinging to customs, that, in a new country with progressive neighbors, might well be changed. He takes his turn sitting on the eggs; if weather conditions are favorable to a second brood, fosters the first chicks until the two bevvies unite into the families of twenty odd that sometimes gladden our eyes,