

'Hypothetical List' is shown by his inclusion of this bird on the basis of an individual "seen on several occasions," by himself near Mt. Carmel. Subtracting these, reduces the total to the neighborhood of 350, a number which, curiously enough, seems to represent the avifauna of those States whose birds have been most thoroughly studied, without regard to their inland or seaboard position.

Ornithologists are to be congratulated on the completion of this work. When Part II (in which we have no doubt Professor Forbes will treat the subject economically as thoroughly as Mr. Ridgway has systematically) appears the inhabitants of Illinois may justly claim to be more enlightened ornithologically than the residents of any other State in the Union.—F. M. C.

The Food Habits of Woodpeckers.—Bulletin No. 7¹ of the Division of Ornithology and Mammalogy, U. S. Department of Agriculture, is devoted to the food habits of North American Woodpeckers. It consists of two papers, the first and principal one being by Prof. F. E. L. Beal, on the 'Food of Woodpeckers' (pp. 7-33), and the other (pp. 35-39 and pll. i-iii) by Mr. F. A. Lucas on the 'Tongues of Woodpeckers,' in their relation to the character of the food.

"The present paper," says Mr. Beal, "is merely a preliminary report, based on the examination of 679 stomachs of Woodpeckers, and representing only 7 species—all from the eastern United States. These species are the Downy Woodpecker (*Dryobates pubescens*), the Hairy Woodpecker (*D. villosus*), the Flicker or Golden-winged Woodpecker (*Colaptes auratus*), the Red-headed Woodpecker (*Melanerpes erythrocephalus*), the Red-bellied Woodpecker (*Melanerpes carolinus*), the Yellow-bellied Woodpecker (*Sphyrapicus varius*), and the Great Pileated Woodpecker (*Ceophlwus pileatus*). Examination of their stomachs shows that the percentage of animal food (consisting almost entirely of insects) is greatest in the Downy, and grades down through the Hairy, Flicker, Pileated, Redhead, and Yellow-bellied to the Red-bellied, which takes the smallest quantity of insects."

The Downy Woodpecker is considered to be the most beneficial, and the Hairy Woodpecker and the Flicker the next so, these three species being considered as among the least harmful of our common birds. The Yellow-bellied Woodpecker is the only species of the seven possessing really harmful qualities, which may, in certain localities, render it detrimental to fruit trees, through its fondness for sap and the inner

¹ Preliminary Report on the Food of Woodpeckers. By F. E. L. Beal, Assistant Ornithologist.—The Tongues of Woodpeckers. By F. A. Lucas, Curator, Department Comparative Anatomy, U. S. National Museum. = Bulletin No. 7, U. S. Department of Agriculture, Division of Ornithology and Mammalogy. Washington: Government Printing Office, 1895. 8vo, pp. 1-44, pll. i-iii, Frontispiece, and 4 cuts in the text.

bark of trees. Tabulated statements are given of the percentages of different kinds of food found in the stomachs of the species examined, and excellent uncolored illustrations are given of five of the seven species treated.

Mr. Lucas describes and figures the tongue as found in 11 species, representing all the genera of North American Woodpeckers, and reaches the conclusion that the evidence thus gathered "favors the view that modifications of the tongue are directly related to the character of the food and are not of value for classification." Granting that the facts are as stated, we are reluctant to agree with Mr. Lucas's conclusion, for on the same grounds we should have to rule out of the list of taxonomic characters any structural feature adaptatively modified to special modes of life; and these involve, in a more or less marked degree, every part of the organism. It would be very surprising if the form of the tongue should not vary markedly in accordance with the nature of the food and the manner of obtaining it. Mr. Lucas's descriptions and figures of Woodpeckers' tongues is a welcome and valuable contribution to the subject treated, which is, furthermore, one of great interest.—
J. A. A.

Barrows and Schwarz on the Food of the Common Crow.¹—This extended report on the food of the Crow (*Corvus americanus*), based on the examination of about 1,000 stomachs, from Crows killed throughout the year and over a very wide extent of country, shows with some degree of accuracy and detail the real nature of the food of this much maligned and commonly outlawed bird. Everybody has long known that Crows pull the farmer's sprouting corn, and will pilfer a little fruit, and destroy the eggs and young of poultry and wild birds. The good they do has not been so evident, although they have been generally credited with feeding to some extent on cutworms, grasshoppers, field-mice and reptiles. The present Bulletin shows statistically and in detail the proportionate amount of the animal and vegetable food consumed by the Crow and the principal elements of which it consists. The verdict on the whole is decidedly favorable to the Crow, his worst trait being his decided predilection for the eggs and young of our native birds. Of 616 Crows killed during April, May, June, and July, 50 had in their stomachs when killed the remains of wild birds or of their eggs. As many of these 50 Crows were nestlings, Professor Barrows concludes "that not more than 1 Crow in 20 ever becomes addicted to this sort of stealing"—a generalization for which we fail to see adequate basis in the data presented. We should rather say that not more than 1 Crow in 20 habitually partakes of the

¹ Bulletin No. 6 | U. S. Department of Agriculture | Division of Ornithology and Mammalogy | The Common Crow | of the | United States | — | By Walter B. Barrows and E. A. Schwarz | [Seal] | Washington | Government Printing Office | 1895. 8vo., pp. 96.