

scientific name except in a reference to the origin of the domestic pigeon. The A. O. U. numbers are given in parentheses and the A. O. U. vernacular names are used with the addition of others when necessary. Thus is a matter that seems to trouble many bird students, easily disposed of! If the use of scientific names were limited to scientific publications there would be far less criticism of the changes in them. Miss Miller's little book is an excellent model for a present day local list for the use of the amateur bird student who wishes a reliable and helpful hand book.—W. S.

Recent Papers by Bangs.—In 'The Auk' 1918, p. 441, Mr. Arthur T. Wayne states that on two occasions he saw Black-throated Green Warblers, in the maritime region of South Carolina, building a nest and carrying nesting materials during April. Mr. Bangs¹ now describes one of these April birds as a new subspecies and states that Mr. Wayne sent him a series of seven specimens all of which differed from northern birds in the same way — *i. e.*, in duller coloration and smaller bill. The new form is named *D. virens waynei* (p. 94). In another paper² he discusses the species of the genus *Paecilonitta* as it is now to be spelled, following the original publication. He recognizes *P. bahamensis bahamensis* (Linn.), Florida to Brazil; *P. b. rubrirostris* (Vieill.), from southern South America; *P. galapagensis* Ridgw., Galapagos Isls.; *P. spinicauda* (Vieill.) southern South America; and *P. erythrorhyncha* (Gmel.), Madagascar and Africa.

Peles (p. 92) is proposed³ by Mr. Bangs as a new genus for *Caprimulgus binotatus* Bp.—A review of the South American Short-eared Owls⁴ leads him to recognize three neotropical races. These are *Asio f. breviauris* (Schlegel) from southern South America; *A. f. bogotensis* Chapman, from the Bogota Savanna, and *A. f. sanfordi* (p. 97) subsp. nov., from the Falkland Islands.

Another paper⁵ deals with the races of *Dendroica vitellina* Cory, and a new form is described from Swan Island which Mr. Bangs names *D. v. nelsoni* (p. 494). It is somewhat intermediate between the other forms — the typical race of Grand Cayman and *D. v. crawfordi* Nicoll, from Little Cayman and Cayman Brac.—W. S.

Economic Ornithology in Recent Entomological Publications.—Items pertaining to this subject continue to accumulate slowly. Those on hand pertain to the following insects:

¹ A New Race of the Black-throated Wood Warbler. By Outram Bangs. Proc. N. E. Zool. Club., Vol. VI, pp. 93-94. October 31, 1918.

² Notes on the Species and Subspecies of *Paecilonitta* Eyton. By Outram Bangs. *Ibid.*, pp. 87-89. October 31, 1918.

³ A New Genus of Caprimulgidae. By Outram Bangs. *Ibid.*, pp. 91-92. October 31, 1918.

⁴ Notes on South American Short-eared Owls. By Outram Bangs. *Ibid.*, pp. 95-98. February 8, 1919.

⁵ The Races of *Dendroica vitellina* Cory. By Outram Bangs. Bull. Mus. Compar. Zool. Vol. LXII, No. 11, pp. 493-495. January, 1919.

Larch bark-beetles and borers.— In a general account of insects affecting the larch in Erie County, N. Y., is the following interesting information, relating to the work of woodpeckers.¹

“The work of woodpeckers is much in evidence and seems to be an efficient agency in reducing to some extent the numbers of the brood of several of the more numerous bark-boring insects. The birds seem to work in two ways — first by making small conical holes through the bark into the sapwood to obtain the larvæ of the larger species of beetles which have gone there to hibernate or to pupate, and secondly by removing practically all of the bark on large areas of the trunk to uncover the brood (larvæ, pupæ and young adults) of the bark beetles.

“In some cases this work reached an unusual degree of efficiency. For instance one particular tree forty or fifty feet high and about 14 inches in diameter, had had nearly all of the bark removed from the ground to the very tip. This tree had been heavily infested with *Dendroctonus simplex*, *Polygraphus rufipennis* and other borers, but only a small per cent of the original infestation had survived the woodpeckers' thorough search for food. Of course all of the infested trees had not been so thoroughly gone over by the birds and a number of such trees had apparently not been found by them at all. However, it is safe to say that the woodpeckers were an efficient force, working toward the return of the normal balance of nature which had been upset by the breeding of certain species of insects above the danger level, due to the girdling, season after season, of a number of the larches by farmers. It is not believed that the woodpeckers will be able unaided to reduce the numbers below the danger level, as long as more trees are girdled each year, but should this practice cease it is possible that they would be able eventually to obtain the upper hand and that conditions would return to normal.”

Lepidopterous root-borers.— The grape root-borer (*Memythrus polistiformis*) for which no parasites are known was seen to be eaten in the adult stage by the Crested Flycatcher (*Myiarchus crinitus*).² Two other Flycatchers, the Kingbird and Phoebe, are recorded as enemies of both the greater and lesser peach-tree borers (*Sannenoidea exitiosa* and *Synanthedon pictipes*).³ All of these insects are not only seriously destructive, but from their secluded habits in the larval stage, have few parasite enemies and are difficult to control by man. They belong to a family of moths all of which in the adult condition more or less closely mimic wasps and other hymenoptera and which have been supposed, probably mistakenly, to derive some advantage from this resemblance, in the way of immunity from predatory enemies.

Cankerworms.— An investigation of the relation of birds to canker-

¹ Blackman, M. W. and Stage, Harry H. Tech. Publ. No. 10, N. Y. State College of Forestry, May, 1918, pp. 16-17.

² Brooks, L. E. Bull. 730, U. S. Dept. Agr., Dec. 24, 1918, p. 27.

³ Gossard, H. A. and King, J. L., Bull. 329, Ohio Agr. Exp. Sta. Sept., 1918, p. 70.

worms near Lawrence, Kansas, has had the same result as those made by several previous students, among whom were Riley, Forbes and Forbush. The following summary of the matter is quoted and abstracted from a report¹ by Mr. Walter H. Wellhouse.

"Next to unfavorable weather, the birds are the most important natural enemies of the cankerworms. Probably no insect is a favorite food of more species of birds than the cankerworm larva. It lives exposed on the outside of twigs and leaves where the birds can easily secure it, and is without distasteful hairs or spines on its integument. The English Sparrow, which is said to have been imported into America to check the ravages of this insect, is no doubt our most efficient cankerworm eater in the cities. We have watched these much-despised birds picking larvæ from the elms at all hours of the day from early morning to twilight, and even during rains. The Robin is also an efficient destroyer of cankerworms, especially of the moths which are found at the base of the tree. The writer has seen flocks of Bronzed Grackles alight in the tall elms in Lawrence, and, moving from branch to branch, noisily devour great numbers of larvæ. Having exhausted the supply on one tree they moved in concert to another tree to continue the feast.

"Many of the more timid birds which are not found in the cities so commonly as the English Sparrow and Robin are just as efficient enemies in the country.

"Mr. C. D. Bunker, curator of mammals in the Dyche Museum, secured a hundred birds from a grove four miles from Lawrence and carefully estimated the percentage of cankerworm larvæ found in their stomachs. They were taken near the edge of the timber where they could easily have returned from the surrounding fields with other food, and the grove is composed of several species of trees, only a small per cent being elms infested with cankerworms."

The hundred bird stomachs reported upon represent 39 species of birds, all but three of which had eaten cankerworms. Eighteen of the species had at least one individual which had eaten 100% cankerworms. Including birds previously mentioned in the literature as enemies of cankerworms the list now totals 75 species.

White Grubs.—Mr. Norman Criddle has an extremely interesting note on the bird enemies of white grubs (larvæ of *Phyllophaga spp.*) in a recent article² on these pests in Manitoba. He notes that

"Robins are eager seekers after White Grubs, and have been known to frequent infested fields for weeks. Crows, apart from their habit of following the plough, are also very useful as grub searchers; the same may be said of Flickers."

The following extract contains a specific recommendation that farm

¹ Bull. Univ. Kans. Vol. 18, No. 1, Oct., 1917, pp. 301-302, Wellhouse, Walter H.

² Agr. Gaz. Can. Vol. 5, No. 5, May, 1918, pp. 449-454.

practice be planned chiefly with a view of best utilizing the services of birds in destroying white grubs; a remarkable tribute to the effectiveness of practical economic ornithology:

"Birds are most persistent followers of the plough during their breeding season or while migrating; gulls and terns from May 16th to June 22d, and for a short time late in July; crows and blackbirds, including grackles, from the time grubs appear in May until July 1st.

"From the foregoing we reach the conclusion that to attain the best possible results under conditions existing in Manitoba, ploughing should be done between May 14th and July 1st, and at an average depth of five inches. The idea is, of course, to turn up as many grubs, eggs, or pupæ as possible, a majority of which will, in all probability, be picked up by birds. Many eggs will be destroyed by the plough alone, but it is advisable to harrow as soon as possible after ploughing, as by this means numerous egg cells will be broken, causing a large percentage of deaths among the eggs and newly-hatched young, besides exposing them to attack by birds. Exposed pupæ will also be destroyed by this method.

"So far as the interests of farming is concerned, it will be observed that the above recommendations do not in any way clash with the best cultural methods. There is good reason for believing, too, that they will prove of value in the destruction of wireworms.

"With reference to the large part birds are expected to play in this work, it may be claimed that birds are not always present in sufficient numbers, and that their capacity is, after all, limited. Granting this to be true in certain districts, we must remember that white grubs are only found within comparatively close range of trees, and that their principal habitats coincide with the haunts of Crows, the most persistent of all plough followers. Thus, if there are no Crows present the farmer and sportsman are probably largely to blame, and the question then resolves itself into the economic one as to which does most harm, the Crows or the white grubs. We do not think there can be much doubt on this point in grub-infested localities. The writer has personally seen fully ninety per cent of white grubs exposed picked up by Crows when he was himself the ploughman.

"Blackbirds are more dependent upon water than Crows, hence are not so evenly distributed, but when present prove very efficient grub destroyers. Cowbirds (*Molothrus ater*) are also extremely useful in this respect, and probably largely compensate for their parasitic habits by this means." —
W. L. M.

The Ornithological Journals.

Bird-Lore. XXI, No. 1. January–February, 1919.

When the North Wind Blows. By A. A. Allen.—Excellent photographs of winter birds and account of the actions of the White-breasted Nuthatch.