

traffic in the plumage of native birds has often been commented upon, and has resulted ere this in complaints of damage. Most problems of economic injury by birds result from overabundance. Often something should be done to correct the trouble and such a need is now apparent in the case of the Herring Gull on the Maine, if not on the entire New England, coast.

When it comes to judging how many eggs and young of other birds (of similar economic tendencies) Herring Gulls should be allowed to consume we get into the deep waters of ecological relationships wherein we are so inexpert as only to flounder about, not knowing really what course to follow. We can extend preferential treatment to species as we please (better, as we are able) but we should not pretend that such treatment is based on knowledge of what the relative numbers of those species should be under natural conditions. We simply do not know what if any numerical relationship may be normal, nor do we know what range of fluctuations the species may tolerate without threats to the continued existence of any of them.

It is good to have food habits research carried on anywhere as it is essential to the proper solution of all problems in economic ornithology, but one could wish to have it done chiefly by one central organization, as well equipped as possible, so that the work could attain the highest possible standards. This is not intended as a criticism of the author here reviewed as he undoubtedly did the best he could under the conditions surrounding the investigation.—W. L. M.

**Griscom's 'Ornithology of Panama.'**—Mr. Ludlow Griscom, who has given much attention to the birds of Panama for some years past, has prepared a list<sup>1</sup> of the species and subspecies recorded from the Republic with their general range and their distribution in Panama. He has studied most of the collections of Panama birds in America and several of those in Europe, a total of 16,637 specimens, while on several trips to the country he has had personal field experiences with some 700 forms. He is therefore well qualified to prepare such a list as is here presented.

As an introduction Mr. Griscom presents a discussion of the life zones of the Republic. He first emphasizes the fact that Panama is sharply divided by the isthmus into two areas—Western Panama, practically an extension of the Costa Rica highlands; and Eastern Panama, the northern apex of the rain forest of Colombia with a mountain fauna similar to that of the western Colombian Andes. He then considers the Temperate, Sub-tropical and Tropical zones of each and their divisions, listing the characteristic species.

The list will be of the greatest value to those engaged in the study of middle American birds and we are much indebted to Mr. Griscom for bringing together all of the recorded information on the Panama species. The avifauna of Panama is exceedingly rich, the reviewer's list of the birds of the Canal Zone included 432 forms and the present one, covering the entire Republic, totals 1038, while 400 species are recorded from the Tuyra Valley alone!—W. S.

**Pickwell's 'Bird Studies.'**—One of the best of recent publications for the teaching of ornithology in schools is Dr. Gayle Pickwell's series of 'Natural History Pictures' covering the birds. There are forty-eight excellent half-tone prints 8 x 10 ins., from actual photographs, representing nests and eggs, young and adult birds of various species. Accompanying these is a booklet of seventy-one pages, giving on single pages printed on one side of the paper, a full account of each picture with details on the birds represented. These may be cut out and mounted on the backs of the pictures or both mounted on heavier guards.

<sup>1</sup> The Ornithology of the Republic of Panama. By Ludlow Griscom. Bull. Mus. Comp. Zool., Vol. LXXVIII, No. 3, April, 1935. Pp. 261-383.