

thither. The experiences of egg collectors seem to be the same the world over, as we read of the authors' search for nests of the Black Vulture and their discovery, after successfully reaching one, that it had been plundered by some Polish oölogists a few days before.—W. S.

**Brooks' and Swarth's 'Distributional List of the Birds of British Columbia.'**—This excellent publication,<sup>1</sup> No. 17 of the Cooper Club's 'Pacific Coast Avifauna' series, follows the plan of the previously issued "Distributional Lists" of the birds of California and Arizona and gives us for the first time a carefully compiled and exact statement of the distribution of the birds of British Columbia. The extent of this western Canadian province is much greater than is generally recognized, being twice that of California, and equal to the combined area of the sixteen eastern states from Maine to North Carolina and west to Ohio, while its extreme diversity of topography greatly complicates the task of working out the ranges of its birds or mammals. With these facts clearly in mind, we are able to appreciate the enormous task that the authors have faced, and the admirable way in which they have handled it. They wonder why no realization of the complicated nature of the distribution of British Columbian birds seems to have entered the heads of the compilers of the A. O. U. 'Check List' and criticise rather severely the handling of British Columbia in that work.

While making no apology for the shortcomings of the 'Check List,' a word or two of unwritten history may not be out of place in this connection.

As the time approached for putting the last edition through the press, it was at first decided to reprint the distributions as they were in the second edition but as these were so obviously out of date the writer of the present review offered to compile new distributions from Ridgway's 'Birds of North and Middle America,' so far as then published, and the latest state lists, including several manuscript lists for some of the southern states. Lack of time at his disposal forbade going any farther, but his work was revised by Prof. W. W. Cooke of the Biological Survey and some records in his possession added and some statements altered. The two errors cited by Messrs. Brooks and Swarth, as examples of the shortcomings of the 'Check-List,' did not, as a matter of fact, originate there, but will be found in Ridgway's work above cited, so that the compiler can at least be credited with accurate compilation even though he lacked knowledge of the zoogeography of British Columbia!

An interesting feature of the list before us is the frequent interpolation of maps showing graphically the distribution of the various races of the more plastic species which it is often very difficult to define in words.

<sup>1</sup> A Distributional List of the Birds of British Columbia. By Allan Brooks and Harry S. Swarth. Contribution No. 423 from the Museum of Vetrebrate Zoology of the University of California. Pacific Coast Avifauna Number 17, Cooper Ornithological Club, Berkeley, California. Published by the Club September 15, 1925, pp. 1-158, figs. 1-38, ppl. I-II. Price \$5.00.

Besides the main list there is a hypothetical list, a list of species ascribed to British Columbia on unsatisfactory grounds and a bibliography, while preliminary sections include a review of previous ornithological work in British Columbia and a sketch of the life zones and faunal areas, both illustrated with photographs of characteristic scenery. There are also a faunal map and a color plate of the Queen Charlotte Saw-whet Owl.

The only criticism that might be made to the plan of this excellent work would be that the association of real synonyms with erroneous names, under which a species has been recorded in British Columbia, without any distinguishing mark, may prove misleading to the uninitiated. They might naturally wonder whether *Pipilo maculatus montanus* and *P. m. megalonyx* are really identical with *P. m. curtatus* or not.

Both the authors and the Cooper Club are to be congratulated upon the completion and publication of this important list, and ornithologists at large will find it an indispensable work of reference.—W. S.

**Jourdain on Parasitism in the Cuckoos.**—This extremely interesting paper<sup>1</sup> gives us an admirable review of observations on the life history of the Cuckoo from earlier times to the present and the author's interpretation of the facts that have been brought out. Mr. Jourdain considers that the first step toward parasitism was the habit of certain birds to build their nests inside nests of other species of which we have many instances; then came the depositing of eggs in the nest of another bird without the addition of nesting material, and from this we pass to the Cowbirds of South America, some of which appropriate nests of other species or build their own but always incubate their eggs, while others have become entirely parasitic like our northern Cowbird and the European Cuckoo.

The latter goes still farther in breaking up into distinct strains not separable in color or appearance, each of which is parasitic on a single species, the eggs of which its own eggs often come to resemble very closely. There are other cases, however, where the Cuckoo's eggs are quite in contrast to those of its "forsterer." Mr. Jourdain thinks that the development of similar eggs is due to selection on the part of the host. Where its powers of perception are highly developed and it recognizes the differently colored Cuckoo's egg as a foreign object in its nest, it throws it out, and only those eggs which happen to resemble its own eggs are undetected and are hatched. This naturally tends to develop a type of egg like that of the host so long as this strain of Cuckoo remains parasitic on this species. Where the hosts do not recognize the Cuckoo's egg as an intrusion they hatch it, and in such species no resemblance between the eggs develops because it is not necessary. Similar cases of both kinds occur in other parasitic Cuckoos. Some in Africa lay pure white eggs in nests of species which do not distinguish them from their own quite different looking eggs, while others in India, through selection on the part of

<sup>1</sup> A Study on Parasitism in the Cuckoos. By the Rev. F. C. R. Jourdain, Proc. Zool. Soc. London, 1925, pp. 639-667. Published July 21, 1925.