

coast ornithology has increased in rate of growth markedly with the development of this Museum, and we may reasonably expect the institution to continue to serve in this field usefully throughout the future. A special condition of the endowment is that the first attention of the staff must be devoted to the proper care of the collections of birds, mammals, etc., so as to preserve them safely against the numerous dangers which continually beset museum materials. Another condition is that the Museum's collections be made easily available for study by responsible investigators, not only in Berkeley, but anywhere else.

Mr. Harry H. Sheldon, for some years connected with the United States Biological Survey, is now back in California, having taken up ranching at Carpinteria.

Mr. Leon L. Gardner, of Claremont, California, carried on some interesting experiments last summer under the direction of the United States Biological Survey, in Klickitat County, Washington, in an effort to control the plague of crows which was menacing the almond crop of that section. Green almonds poisoned with strychnine were found to be a satisfactory bait.

PUBLICATIONS REVIEWED

LIFE HISTORIES OF NORTH AMERICAN DIVING BIRDS—ORDER PYGOPODES. By ARTHUR CLEVELAND BENT. United States National Museum, Bulletin 107, pp. xiii+245, pls. 1-55 (12 colored); 1919 (our copy received September 2).

Ever since formal announcement was made in 1910 that Mr. A. C. Bent was to take up the work left unfinished by Major Bendire on the "Life Histories of North American Birds" the ornithological public has been waiting the results with keen anticipation. The appearance of the first volume, giving the life histories of the Pygopodes, fully justifies the long wait which has intervened.

The present contribution differs from the volumes issued under the pen of Major Bendire in several respects. In place of the unwieldy quarto we have the standard government octavo which lends itself to more convenient use, and the data pertaining to each species are segregated under subject heads, while quoted material is rendered in smaller type than the body of the text.

The account of each species is prefaced by a paragraph which introduces the reader by way of some striking incident or habitat description to the subject of the chapter. Then follow, in more formal style, para-

graphs relating to "habits", involving discussions of spring behavior, courtship, nesting, eggs, young, plumages, food, and behavior (excluding courting antics but including voice). Where pertinent, notes on fall and winter behavior are given. Under the general heading "distribution", which follows the account of habits, are given breeding range, winter range, spring migration, fall migration, casual records and egg dates.

In endeavoring to make each chapter as complete as possible the author has made free use of the published writings of other observers and in some instances material covering one specific point is quoted from several sources. But Bent's own travels and field studies have been extensive enough to enable him to contribute directly and importantly to almost every species chapter. Two chapters, those on the [Atlantic] Puffin and Great Auk, are entirely from the pen of Dr. Charles W. Townsend.

The sequence in which the species are treated and the nomenclature are both of the A. O. U. 1910 Check-list. The artificiality of the mixed assemblage here dealt with ("Order" Pygopodes) is brought out with striking clearness in this work where *life* characters are described in detail. But this is no criticism of the author's work; his is but another contribution to the already large mass of evidence accumulating which will eventually force a change in the arrangement of certain major groups in our American check-list.

It is impossible in the space available here to pass judgment upon the merits of the individual species chapters and it would be presumptuous for any one to attempt such an assessment of value without having himself been over much of the ground which the author has covered. We restrict ourselves therefore to comments upon some of the more general features of the work.

The use of "titles" in connection with authors' names in the text appeals to us as misleading, in that it tends in some cases to give greater authority to the items quoted. In many instances the authors involved received these "titles" long after the accounts in question were written. The surname alone, with initials only where necessary to distinguish between two individuals with the same surname, is much to be preferred. The term "references to bibliography" on page 225 is misleading; "literature cited" would be more applicable. And the titles are too brief; references to articles in periodical literature ought to give inclusive page

numbers; and citations of separate works ought to include place and name of publisher, edition, and pagination. This is especially necessary in a work like the present one which will be an important volume of reference for years to come. We would prefer to see vernacular names of species in text set off with capital initials, and the running page heads would be much more useful with vernacular names of species in place of the title of the work. The egg records seem to be too condensed. A brief analysis of the season, or a graphic representation of the data, especially where such a wealth of material has been examined, would have been highly worth while. But all of these are minor points.

We strongly commend the segregation of material under subject heads in the species chapters, this being an arrangement which greatly facilitates reference work. The rather complete accounts of molts and plumages bring together for the first time as regards our American Pygopodes discussion of this important subject. In the discussion of distribution the relegation of "casuals" to a separate category is highly satisfactory. Finally, the illustrative material calls for special comment, that from the camera even more than the colored plates of eggs, as we realize from personal experience the effort involved in obtaining satisfactory photographs of living birds. In this connection it would seem as though the plate captions could easily have been placed on the plates and thereby obviated the need of having to refer to the list of captions in the back of the book. The interpolation of the plates in the text, adjacent to the accounts to which they pertain, is a very handy arrangement.

We congratulate Mr. Bent upon the success which he has attained in his initial volume and trust that further contributions of like or greater merit may be forthcoming in the not distant future.—TRACY I. STORER.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

AUGUST.—A special meeting of the Northern Division was held on August 13, 1919, at eight p. m., to meet Dr. Witmer Stone of Philadelphia. The meeting was called to order by the President, Dr. Evermann. Since no objection was offered by members present, the regular meeting for the month of August was declared omitted. Members present were Mesdames Allen, Griffin, Grinnell, Kelly, Pringle and Roe; Messrs. Bell, Carriger, Coggins, Evermann, Grinnell, Labarthe, Mailliard, Martin, Storer, and White. Visitors were Mrs. Coggins, Mrs. and Miss Evermann, Miss Potter, Dr. and Mrs. Stone, Mrs. Swarth, and Mrs. Wilcox.

Mr. Arthur Brown, 359 Monadnock Building, San Francisco, and Miss Josephine Gesselhart, Concord, California, were elected to membership in the Club. Elections by the Southern Division in April and May were ratified. Mr. W. Otto Emerson, Palm Cottage, Hayward, and Mrs. Mary Ames Van Dyke, 1545 LeRoy Ave., Berkeley, were proposed for membership, the former, by Mr. Carriger, the latter by Mr. Storer. Dr. Evermann reported that a letter from the manager of the Union Oil Company promised prompt installment of machinery to prevent its discharge of oil on the waters of the Pacific. The Secretary of the Club was instructed to request the committee on the licensing of cats to present a report at the next meeting.

Mr. Joseph Mailliard read a series of letters from Dr. F. M. Chapman relating to memorials for Col. Roosevelt or Mr. William Brewster. The following committee was appointed, Joseph Mailliard, Joseph Grinnell and H. W. Carriger.

Business disposed of, the Club was privileged to listen to a most interesting account of Dr. Stone's experiences in the Chiricahua Mountains, in southeastern Arizona. Of the seventy-five or more species mentioned by Dr. Stone fully a third were unfamiliar to the average California ornithologist. Meeting adjourned.—AMELIA S. ALLEN, *Secretary*.

SEPTEMBER.—The September meeting of the Northern Division was held at the Museum of Vertebrate Zoology on the evening of the 18th, at eight o'clock. In the absence of Dr. Evermann, Mr. Labarthe, the Vice-president, presided. The members present were: Mesdames Allen, Blake, Bridges, Davidson, Griffin, Grinnell, Gunn, Kibbe, Pringle, Roe, Thompson, and Wythe, Messrs. Bassett, Bell, Bryant, Carriger, Dixon, Grinnell, Hunt, Kibbe, Labarthe, Lastreto, Mofitt, Morley, McLean, Noack, Palmer, Storer, Swarth, White, and Wright. Visitors present were: Mesdames Ames, Bassett, Bryant, Mann, Raphael, Rose, Storer, Swarth, Thompson, and Wilcox, and Mr. Blake.

The minutes of the August meeting of the Northern Division were read and approved, and the June, July and August records of the Southern Division were read. Mr. W.