

Valley. We now know of increase in certain average dimensions north on the coast to San Francisco Bay. East of the Sierra Nevada the size increase northward is more pronounced and more abrupt, leading to a large extreme, *artemisiae* of the Great Basin area.

If the Bay region population is the result either of single or recurrent immigrations, as the seeming absence of cowbirds prior to 1922 would indicate, the source of the new population is a matter of considerable importance. The characters of the birds now here suggest two possible modes of origin. The first is by invasion from both the San Joaquin and southern California areas, though invasions from the two areas may not have been equally great or simultaneous. The second is immigration from one or the other of these areas involving individuals which did not represent the average values of the areas of origin. Because of this they would build up a population of slightly different average nature that corresponded to their own genetic constitution. Such an original stock might have been sufficiently heterozygous to account for the individual variation in size now found.—ALDEN H. MILLER, *Museum of Vertebrate Zoology, Berkeley, California, May 14, 1935.*

NOTES AND NEWS

We regret to announce the intention of George M. Wright to leave California as a permanent resident. His duties as chief of the Wildlife Division of the National Park Service call for transfer of his head-

quarters in the West should often lure him back to our coast. If he behaves like Harold C. Bryant, earlier emigrant to the Washington offices, the return visits will be all too infrequent.—A.H.M.



Fig. 43. George M. Wright: Chief, Wildlife Division, National Park Service; Ex-President, Northern Division, Cooper Ornithological Club; Vice-President, Board of Governors, Cooper Ornithological Club.

quarters to Washington, D. C. Of course national parks are now well scattered across the full breadth of the country, but

The use of birds in teaching elementary science is fraught with difficulties; they cannot often, in practice, be collected, nor even captured alive, and only rarely do circumstances allow of leisurely observation of them on the part of a group of pupils. Yet the study of birds remains one of the most appealing among elementary science subjects; meager opportunities for seeing what birds do may be supplemented by guided interpretation and discriminating instruction. Gayle B. Pickwell, Professor of Zoology in San Jose State College, with a teacher's knowledge of children and their reactions, and with an abundant background of experience as a first-hand student of bird behavior, has just put out a highly meritorious number of the Science Guide for Elementary Schools (vol. 1, no. 9) dealing with Birds (56 pp., including 17 ills.: published by California State Department of Education, April, 1935). While this "guide" pertains primarily to California, teachers in any part of the United States will gain ideas and inspiration from it. After all, it is an understanding knowledge of animal natural history gained early in life that will bring that tempered point of view, of man toward his biotic environment, which many people now believe will operate for his own best ultimate welfare.—J.G.

"The Hawks of North America" is the title of a book just issued by the National Association of Audubon Societies as part of its very worthy educational campaign toward the preservation of this valuable group of birds. The excellent colored plates were done by Allan Brooks and the authoritative text was compiled by John B. May.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

MARCH.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held on Thursday, March 21, 1935, at 8:00 p.m., in Room 2003 Life Sciences Building, Berkeley, with President Miller in the Chair and fifty-five members and guests present. Minutes of the Northern Division for February were read and approved. Portions of the minutes of the Southern Division for February were read. February minutes of the Stanford Chapter were read by title. Mr. Paul F. Covel, 3133 Jordan Road, Oakland, Calif., was proposed for membership by J. M. Linsdale, and Mrs. Emanuel Fritz, 928 Fresno Ave., Berkeley, Calif., by Mrs. J. Grinnell.

Mrs. G. E. Kelly reported seeing fifteen White-throated Swifts in the glory-hole at Leona Heights on March 13. Howard Twining told of noting two male Rufous Hummingbirds in Strawberry Canyon, one on March 9 and one on March 17, each in the vicinity of Allen Hummingbirds. Mr. Grinnell reviewed "A Guide to Bird Songs," by Aretas A. Saunders, and expressed the wish that some equally gifted author would provide a similar study of the songs of our western birds. Mr. Alden Miller announced that a pamphlet by V. C. Wynne-Edwards of Montreal, which he had found useful when crossing the Atlantic last summer, has now been enlarged and published under the title "Birds of the North Atlantic."

The evening's program was a talk by Mr. Thomas T. McCabe on "Avifaunas of the Northwest, a Theory of Distribution." Mr. McCabe's long field experience in British Columbia and his familiarity not only with the high plateau country of the interior but also with the fringe of islands along the seacoast made him especially well qualified to analyze the

bird problems presented in that Province. It is his belief that the plateau country was held in the grip of the ice-age much longer than the coastal region, a theory apparently confirmed if the very slight degree of endemism of the resident forms is to be accepted as a criterion. The geographic races of the adjacent coast district tend to vary uniformly from those races of the same species occurring to the eastward, in the smaller size of the coastal birds and their tendency to deeper and more reddish hues. Apparently those variations which are found restricted to the northwest coast are locally evolved.

Adjourned.—HILDA W. GRINNELL, *Secretary*.

APRIL.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held on Thursday, April 25, 1935, at 8:00 p. m., in Room 2003, Life Sciences Building, Berkeley, with President Miller in the Chair and sixty members and guests present. Minutes of the Northern Division for March were read and approved. Minutes of the Southern Division for March were read. Applications for membership were: Louis A. Elmore, 511 Clay St., Ukiah, Calif., proposed by J. Grinnell; Charles H. Feltes, 216 Ruberto St., Modesto, Calif., by J. M. Linsdale; Tom Kirksey, Hamilton Field, Marin Co., Calif., by Mrs. Otis H. Smith.

Mr. Dyer reported upon the activities of his resident Road-runner, which this year started calling on January 31. A trick not noted last year is that of clapping its wings behind its back, thus making a sound audible for seventy-five yards. The bird's habit of carrying lizards led Mr. Dyer to time its activity in this regard. The longest observed period of continuously carrying an individual lizard in the bill was three hours. This year the Road-runner has secured a mate, but aside from a nest started by the pair in Mr. Dyer's house and then abandoned, no structure had been discovered up to the time of this report.

On April 20, Mr. B. C. Cain saw two Baird Sandpipers on Cypress Point, Monterey County. Mrs. Allen noted Hermit Warblers in the oak trees at her home on April 24. Miss Stedman asked whether Golden-crowned Sparrows frequenting a well-stocked feeding table would be apt to linger beyond the usual migration date.