

RECENT LITERATURE

Nelson's 'Lower California and its Natural Resources.'¹—Most American naturalists are aware of the extensive exploration of the Lower California peninsula carried on in the years 1905-1906 by Dr. E. W. Nelson and E. A. Goldman, as part of the general survey of Mexico under the auspices of the Biological Survey, but hitherto no report of their operations has appeared. The present account is based primarily upon this exploration with such additional matter, from other sources, as seemed worthy of incorporation. The itinerary covers about thirty pages and is a most interesting narrative, illustrated by numerous excellent views of the varied country through which the expedition passed. Then follows an account of the physical characteristics; recent geological history; coastal and other mountains, comprising descriptions of the various mountain chains of the peninsula; the plains, valleys and streams and the coastal islands. The climate is then considered, and finally the plant and animal life, and its distribution. There are 166 mammals, 286 land birds, 144 water birds and 102 reptiles known from Lower California and its adjacent islands.

Dr. Nelson considers that there are five natural faunal areas in the peninsula; the San Pedro Martir District, comprising the summits of the Sierra Juarez and San Pedro Martir Mountains, forming the back bone of the northern part; the San Diegan District lying immediately west of this; the Colorado Desert District to the east; the Vizcaino Desert District reaching from coast to coast and occupying the middle section of the peninsula and the Cape District occupying the southernmost third.

In terms of the life zones, the mountains of the San Pedro Martir District are Transition with a slight area of Canadian; the San Diegan District is Upper Sonoran, while all of the Vizcaino and Colorado Desert Districts and a narrow strip running through the Cape District, with isolated areas at the Cape itself, are Lower Sonoran, the rest of this district being Arid Tropical, except for an area of Upper Sonoran on some of the highest mountains. The Arid Tropical and Lower Sonoran of the Cape District are, however, so inextricably interwoven that it is difficult to separate them.

Most of the species peculiar to this region occur on the mountains south of La Paz, (Upper Sonoran) and doubtless originated when this area was cut off from the rest of the peninsula by the sea. Lists of the characteristic animals and plants for each district and zone are given. The final pages of the report comprise sections on natural resources and agriculture and an excellent bibliography with historic comments on the early explorers and their routes.

Dr. Nelson has furnished us with an account of this interesting peninsula

¹ Lower California and its Natural Resources. By Edward W. Nelson, Chief, Bureau of Biological Survey, United States Department of Agriculture. Memoirs Nat. Acad. Sci. Vol. XVI. First Memoir. 4^o, pp. 1-194, pll. 1-35. 1921.

which will constitute the standard work of reference for a long time to come, and thanks to his researches we, for the first time, gain a clear knowledge of the distribution of life in this region. The admirable map which accompanies the report is a valuable feature.—W. S.

Chance's the Cuckoo's Secret.¹—We have from time to time noticed in the pages of 'The Auk' the publications in the British ornithological magazines dealing with the life history of the Cuckoo and commented upon the remarkable results that our friends across the water have attained through their painstaking studies. In the fore-front of this investigation stands Mr. Edgar Chance, who has now embodied all of his observations on the egg-laying habits of this interesting bird in the little volume before us.

He has recorded four seasons' detailed observations on what he considers to be the same female Cuckoo, and other chapters on more general problems in the life-history of the species. One must read the book to appreciate the painstaking work of the author and the importance of his investigations and only a brief summary of them can be given in this connection.

In the first place British ornithologists seem to be unanimous in the belief that individual Cuckoos lay eggs that are characteristic, and distinguishable from the eggs of other Cuckoos in the same vicinity, and also that under normal conditions an individual Cuckoo is parasitic on only one species of bird—the victim being known as the "fosterer" in the language of Cuckoo investigation. It would also seem that in the case of the Cuckoo it is the female that selects the breeding area and not the male, this being in contrast to the custom prevalent in most birds as described in Howard's 'Territory in Bird Life' and in Mr. H. Mousley's recent paper (Auk, July 1921).

The unique method of nidification in the Cuckoo is ample explanation for this reversal, while the fact that the same type of egg is found in the same area year after year, indicating the presence of the same individual cuckoo, confirms this theory.

All of these points are supported in a convincing way by Mr. Chance's observations. The most interesting features of his researches are however that he was able in 1920 to locate probably every egg laid by this special Cuckoo which he had under observation, and in most cases to record the day and hour at which each was laid. There were 21 eggs laid, all but one in Meadow Pipits' nests, and at intervals of two days (except in two instances). So accurately did Mr. Chance forecast the day and nest in which the Cuckoo would probably lay that he was able to place a motion

¹ The Cuckoo's Secret. By Edgar Chance, M. B. O. U. London: Sidgwick and Jackson, Ltd. 3, Adam Street, W. C. 2, 1922. pp. 1-239. Numerous illustrations. Price 7s, 6d. net.