

are just dawning there, but when the foothills and plains below are becoming dry and barren under the July heat, no longer productive of the food-supply which they were in a condition to offer earlier in the season. I believe these relative conditions prevail throughout southern California. Without the mountains to accommodate the excess of bird population, which could not be supported in late summer on the withered lowlands, we would have fewer birds in the spring. The 'resident' species return to the lowlands when the cold begins to reduce the food supply in the mountains; and, what is also noteworthy, so do the 'summer visitants,' which thus become transients for a few days in the fall as they pass back through the lowlands on their way south, or rather southeastward. These latter, therefore, undertake three distinct migratory journeys during the year: from their winter habitat northwestward to their spring breeding-place, from the latter up, and often northwards, to their summer feeding-grounds, and then back down and then southeastward to their winter habitat."

These well-attested facts have an interesting and important bearing upon the general subject of bird migration, and especially upon the origin of migration. As said later by Grinnell: "The geometric ratio of reproduction makes the population of a species an elastic quantity, expanding into any favorable food area presenting itself. And the masses of different species press against one another, like soap-bubbles, crowding and jostling as one species acquires, through modification of food-getting powers and perfected adaptability to other conditions, some advantage over another." In this connection is discussed the mortality of birds and its causes, from the standpoint of the author's observations in southern California.

The report on the birds (pp. 50-54), like those on the mammals and reptiles, consist of extensively annotated lists, relating to the habits and local distribution of the species. The illustrations include a colored map (plate i) of the life zones of the region, and a transverse profile, also in color (plate ii), indicates both their vertical and horizontal extent. Most of the remaining twenty-two plates are from photographs, and represent types of vegetation and landscapes.— J. A. A.

Grinnell on Birds of Southeastern Alaska.—"In the spring of 1907 a party was organized and outfitted by Miss Annie M. Alexander, for the purpose of exploiting the fauna of certain islands. The party consisted of Mr. and Mrs. Frank Stephens, Mr. Joseph Dixon, Mr. Charles Littlejohn, and Miss Alexander herself, who headed the expedition." The report on the work accomplished¹ consists of nearly one hundred pages, illustrated with two plates and a few text figures. The introduction and the report on the birds are by Dr. Joseph Grinnell; the 'descriptions of localities' are by Frank Stephens and Joseph Dixon; the report on the

¹ Birds and Mammals of the 1907 Alexander Expedition to Southeastern Alaska. University of California Publications in Zoology, Vol. V, No. 2, pp. 171-264, pll. xxv, xxvi, and text figs. 1-4. February 18, 1909.

mammals is by Edmund Heller. From April 17 till August 9 the entire party was occupied in collecting and exploring at various points on Admiralty, Baranof, and Chichagof Islands, and at Glacier Bay, at which latter date most of the members returned home. Mr. Stephens, however, remained and continued to work in the same region till August 29, and later stopped at Thomas and Helen Bays, between Juneau and Dixon Entrance. The collections included 532 birds, 22 sets of eggs and nests, and 476 mammals, and has been presented by Miss Alexander to the University of California Museum of Vertebrate Zoölogy. A map shows the region traversed, and there are several half-tone scenic illustrations.

The report on the birds, by Dr. Grinnell, records 99 species, of which 81 were represented by specimens, with very full notes based on the field books of the collectors. Two species and four subspecies are described as new, namely: *Lagopus alexandrae*, from Baranof Island; *Lagopus dixonii*, from Chichagof Island; *Buteo borealis alascensis*, from Glacier Bay and Chichagof Island; *Picoides americanus fumipectus*, based on a single specimen from Chichagof Island; *Loxia curvirostris sitkensis*, from Admiralty Island; *Planesticus migratorius caurinus*, also from Admiralty Island. The author "still believes that there are two races of the Varied Thrush," in opposition to the recently expressed opinion of Mr. Ridgway. In this belief he is supported by the A. O. U. Committee, which at its last meeting declined to accept its proposed elimination, this decision being based on then recently acquired material (cf. Auk, XXV, July, 1908, p. 398).

The field notes here incorporated contain much interesting information respecting the breeding habits of a number of the species met with, and Dr. Grinnell adds important comment on variations of plumage, based in some instances on large series of specimens (38 skins of the rare Kitilitz Murrelet were obtained). The report is thus an important contribution to Alaskan ornithology.—J. A. A.

Grinnell on Birds observed at Salton Sea.¹—This paper gives observations on about half-a-dozen of the water birds seen, but a future paper on the land birds is promised. The expedition was made in April, 1908, in the interest of the Museum of Vertebrate Zoölogy, at the University of California, of which Dr. Grinnell is curator. On Echo Island, in Salton Sea, was found a large breeding colony of the American White Pelican (*Pelecanus erythrorhynchos*), "the southernmost nesting-colony" of this species. A census of the colony gave a total of "980 occupied nests, besides others in process of construction. At the very minimum there were 2000 pelicans here assembled." A very full account is given of the character of the nests, with photographic illustrations. On the nearby Pelican Island was a breeding colony of Farallone Cormorants, of which 147 nests were

¹ Birds of a Voyage on Salton Sea. By J. Grinnell, Condor, Vol. X, No. 5, Sept.-Oct., 1908, pp. 185-191.