ing to Dr. Gadou, the greater part of the distinctively Hawaiian birds belong to the single family Drepanididæ, almost beyond doubt of American origin, and find their nearest relationship in the American family Cœrebidæ. They were probably the first birds to obtain a foothold in the islands, and later received a few additions from Australia.

Hawaiian birds apparently do not take kindly to innovations, and prefer the virgin forests to the proximity of man. "Unlike many European and American birds, which flourish in the garden and orchard and find comfort and safety in man's protection, none of the island species seem to desire to be on neighborly terms with man, or to be capable of adapting themselves to the changes which follow in his wake. For a time they are content to fly over his clearings and to feed in the forest hard by; but to nest by his door and profit by his bounty seem to be foreign to their wild natures and presently, unable to reconcile themselves to his unwarranted intrusion into their ancient fastnesses, they retreat to the unvexed and virgin forest." The destruction of the forests, that has followed the invasion of civilized man, is hemming them into constantly diminishing areas, "and in a few years the opportunity to study the habits of some of the unique bird forms which have been developed upon these islands will be lost forever." Even slight changes in environmental conditions have a marked influence and species "even become extinct when the causes seem wholly inadequate." Mr. Henshaw believes that among the causes of the decline of certain species is "the necessity of continuous inbreeding," and gives his reasons at considerable length for this belief, citing examples in illustration. They are also obviously affected by prolonged storms and slight changes of temperature, and are also subject to diseases, especially by the growth of tumours on the feet, and sometimes about the mouth. These tumours have been found to be of bacillic origin, and are most prevalent on "the windward side of Hawaii, where the annual rainfall is from 130 to 180 inches." Apparently fully one tenth of the species of Hawaiian birds are either extinct or rapidly approaching extinction, or about one sixth of the distinctively Hawaiian forms.

In referring to the work of Mr. R. C. L. Perkins, who began collecting in 1892, Mr. Henshaw notes that as his large collections contained but one new species, we may consider that the list of Hawaiian birds is practically complete, but the still more important study "of their life histories, of their relations to each other and to the avifauna of other lands," remains as a still more important study. To this end the author's 'Birds of the Hawaiian Islands' is an important contribution, as well as an incentive and an aid to future observers. — J. A. A.

Snodgrass and Heller on the Birds of Clipperton and Cocos Islands.[1]—

[1] Papers from the Hopkins Stanford Galapagos Expedition, 1898–1899. XI. The Birds of Clipperton and Cocos Islands. By Robert Evans Snodgrass and Edmund Heller. Proc. Washington Acad. of Sciences, Vol. IV, pp. 501–520. Sept. 30, 1902.

Clipperton Island lies in latitude 10° 17′ north and 109° 13′ west, and about 600 miles distant from the mainland, the nearest point of which is the west coast of Mexico, near Acapulco. It is little more than a coral reef, practically without vegetation, and its land fauna consists of a few species of sea birds, which resort to it in immense numbers for a breeding station, a single species of lizard, a dragonfly, a beetle, and a few diptera. Cocos Island, situated about five degrees further south and some twenty-two degrees further east, off the west coast of Costa Rica, and about 250 miles from the mainland, is mountainous and covered with trees and a dense undergrowth. The plant species are few, however, and the land fauna consists of a few indigenous birds, a lizard, and a few species of insects. Though visited by several kinds of water birds, it is not, like Clipperton Island, a great breeding resort for sea fowl. Both islands are described in much detail, and most of the birds obtained at each are described at length. The birds recorded from both islands number only 15 species, of which only five — all boobies and terns — are recorded from Clipperton Island and 10 from Cocos Island, while two are common to both localities. Two of the species, a tern and a booby, were first described by the authors of the present paper from specimens taken by them at these islands. Of the four indigenous land birds found at Cocos, three are peculiar to the island, two of them having been first made known by Mr. A. W. Anthony in 1895. — J. A. A.

Knight's 'The Birds of Wyoming.'[1] — This is a fully annotated and well illustrated list, based in part on "published reports pertaining to the birds of the State," partly on unpublished observations of ornithologists or collectors of Wyoming birds, and partly on collections made especially for the museum of the University of Wyoming by Mr. Chas. W. Gillmore, now of the Carnegie Museum. Mr. Knight, being a geologist, makes no claim to being an ornithologist, and appears to have prepared the work in response to constant inquiries "for some literature on the birds of the State," which, as curator of the museum, he felt called upon to furnish. He is entitled to congratulations on having prepared what seems to be an excellent list of the birds of Wyoming, which, with the other pertinent matter included, forms a 'Bulletin' that must be of great assistance to students of Wyoming birds. The introductory matter includes a résumé of the literature pertaining to the subject, 'A Note on Studying Birds,' and a reprint of Prof. Laurence Bruner's 'Birds in their Relation to Agriculture,' this preliminary matter occupying pp. 1–23, while a supple-

[1] The Birds of Wyoming. By Wilbur C. Knight. Bulletin No. 55. Wyoming Experiment Station, University of Wyoming, Agricultural College Department, Laramie, Wyoming. September, 1902. 8vo, pp. 174, with 48 full-page half-tone plates and numerous text illustrations. Sent free upon request, by the Director of the Experiment Station.