

Page 428. A perfect albino, apparently of *C. holbaelli*, was received from the Alaskan coast by Mr. Gruber of San Francisco, about 1874.

Page 448, line 13, for 'file' read pile (that is, arrow).

Page 486. I published the occurrence of the *U. lomvia (arra)* in San Francisco Bay, in the Proc. Cal. Acad. Sc. V, 414, 1875.

Page 502. Although the authors quote me in regard to color of bill, they have omitted my notes on finding *B. hypoleucus* breeding on Santa Barbara Island in 1863, where its habits, as far as observed, were similar to those of *P. aleuticus*, quoted on p. 519.

Page 519, line 20 from bottom, for 'dying' read rising.—J. G. COOPER.

Stejneger's Ornithological Explorations in Kamtschatka.—Among the more important ornithological works of the year 1885, Dr. Stejneger's 'Explorations in Kamtschatka'* easily takes a very high rank, and, as regards North American publications on this subject, marks an altogether 'new departure,' it being the first work in which the classification and nomenclature of the (still unpublished) A. O. U. 'Check-List' is systematically recognized. On this point the author says: "The systematical nomenclature will be found to deviate not inconsiderably from the one usually adopted in the publications treating of the region in question. The reason is a two-fold one, for in *identifying* the birds I have been anxious not to lump together nearly-related forms, representative species, subspecies, local races, migrating-route races, or whichever they are termed, giving the separation the benefit of the doubt whenever there be a doubt, it being my scientific creed that this is the least harmful course. In *naming* the forms thus identified I have strictly adhered to the rules laid down by the 'American Ornithologists' Union.' For changes in nomenclature of that origin I am, therefore, only partly responsible, and eventual critics should not charge against me 'the pleasure of bringing forward' these changes, which are the necessary results of the consistent application of the only sound principle upon which a scientific nomenclature can be based. The systematical arrangement is that which I proposed in 'Science Record,' 1884, p. 155, with a few modifications" (p. 7).

From this avowal of principles and methods the reader is prepared for innovations, both in respect to nomenclature and the status of species and subspecies. Since many ornithologists are disposed to avow the antithesis of Dr. Stejneger's 'creed' in respect to the separation of closely allied forms, and to let the doubt weigh in favor of non-separation—both sides are obviously susceptible of argument—probably the ground here taken is too radical to meet with general approval. The work before us displays, however, a thoroughness of research, a critical sifting of records and diagnoses, and detailed exactness of statement that stamps it as in

* Results of Ornithological Explorations in the Commander Islands and Kamtschatka. By Leonhard Stejneger. With nine plates. Washington: Government Printing Office, 1885. = Bulletin No. 29 of the United States National Museum. Published under the direction of the Smithsonian Institution. 8vo., pp. 382, pll. 8 and map, and 7 cuts in text.

many ways as a model monograph of its kind, and cannot fail to receive much hearty commendation, as well as, doubtless, some adverse criticism. Independence and originality, as well as thoroughness, are its marked features.

The work is divided into three parts. Part I is devoted to a review of the species of birds collected or observed by the author on the Commander Islands and at Petropaulski, Kamtschatka. Part II is a Synopsis of the birds hitherto reported to inhabit Kamtschatka. Part III is entitled 'Conclusions.' "The first and third parts," says the author, "are eminently the 'results of my explorations,' while the second part is more the 'result of my investigations,'" and is the first attempt at a "complete list of the birds known to have been observed in Kamtschatka."

In Part I, occupying pages 11-310, 140 species are treated. Of each is given an extended table of bibliographical references, in the main relating especially to the region in question; full field notes follow, with tables giving lists of the specimens obtained, their measurements, and notes on the color of the bill, feet, iris, and soft parts taken from the freshly killed bird, contents of stomach, etc. Many questions of synonymy are discussed in detail, with frequently contrasted diagnoses of closely allied forms. The careful notes on the changes of plumage with age and season, and the shedding and renewal of the moulted parts of the bill in the various species of the Alcidae, are especially important, notably supplementing and correcting previous observations on this subject, to which most of the illustrations in the text and five of the plates (all finely executed, and four of them beautifully colored) are devoted. Careful descriptions and colored figures from life are also given of the heads of several of the Petrels, Gulls, Geese, and Cormorants. Several pages are also devoted to the changes of plumage in the Ptarmigans.

As already said, the classification is practically the same as that adopted for the A. O. U. Check-List, but it differs from it in some particulars, as in the adoption of 'superfamilies' in place of suborders, and the consequent employment of different names for practically identical groups. Thus the order of Loons and Grebes is termed Cercomorphæ instead of Pygopodes.

A new genus, *Charitonetta*, is established for the Buffle-head Duck; *Cuculus peninsulae* is a new Cuckoo from the Commander Islands; the American form of *Aythya affinis* is separated from the Old World form, the latter being designated *A. affinis maritoides* (Vieil.); and *A. marila* is similarly divided, the American form receiving the name *A. marila nearctica* Stejn. The American and Old World Goosanders are separated specifically. The American Bank Swallow is distinguished from the Old World form under the name *Clivicola riparia cinerea* (Vieill.). The American Barn Swallow is compared at length with its Old World allies, with the result of maintaining its specific distinctness. The Kamtschatkan and Alaskan *Budytes* is separated from *B. flavus*, under the varietal name *leucostrigatus* of Homeyer. It is also suggested that the examination of further material will show the propriety of recognizing a

Phyllopsenstes borealis kennicotti, the two cases of *Budytes flava* and *P. borealis* being, in our author's opinion, "absolutely parallel." In considering these species Dr. Stejneger emphatically reiterates his creed, and says, under the head of *Budytes* (p. 183), "We have here before us a plain case demonstrating the necessity of recognizing [in nomenclature] the finest differences between related forms if the aim of collecting specimens and studying them is to find out the laws ruling the living nature. If the ornithological system and the ornithological science has for object only the convenience of the museum director in determining the names to be put on the label, then it may be proper and convenient to ignore the finer characters, and throw different forms into the same pot, because it is difficult to trace a sharp line between them, or because there are individuals which the perplexed director does not know how to enter upon the register. But it is time that such an ornithology should be done away with. The birds are not there for the sake of the museums, but the museums for the birds." When it becomes unsafe "to refer a specimen to one or the other form without having a series of both forms at hand, or without knowing the locality," there may be still "enough difference to warrant their subspecific separation"; but the utility of so doing seems open to question. We recognize, as strongly as any one, the importance of tracing out and noting these finer differences, but when the distinctions are so fine, though readily appreciable when the proper amount and kind of material is before one, that descriptions however minute and detailed fail to afford the means of recognizing such forms, and actual comparison of a specimen with a series representing the forms that may be in question, and a knowledge of the exact locality is also requisite to render the determination satisfactory, we submit that a degree of hair-splitting is reached which renders the recognition of such forms in systematic nomenclature a matter of highly doubtful propriety. The recognition of such forms becomes dependent not merely upon expert knowledge and tact in discrimination, but upon the possession of material few museums are able to acquire, and, generally speaking, quite beyond the resources of the private cabinet, and the efficiency of the most detailed technical descriptions. While such discriminations are of the highest importance in any consideration of the relations of animals to their environment, and the action of environment upon the evolution or modification of the forms of life, and should be most minutely noted, the recognition of such distinctions in nomenclature may readily be carried beyond the point of practical utility, since only the exceptionally favored few having access to the necessary material will be able to recognize such finely drawn lines, which serve only to mystify and embarrass the average student.

Part II of Dr. Stejneger's work (pp. 313-325) gives a list of 186 species of birds which are considered as authentically reported to inhabit Kamtschatka, while a number of others are referred to as having been attributed to Kamtschatka, but whose occurrence there requires confirmation. An Appendix to Part II (pp. 329-331) is mainly a critical commentary on recent papers on this subject by Dybowski and Taczanowski.

Part III, 'Conclusions' (pp. 333-358), relates mainly to a discussion of the component elements of the ornithology of Kamtschatka and, incidentally, of the Commander Islands, and consists of a series of 'Tables' (numbered I to XX), showing the faunal relations of the various Kamtschatkan species, genera, etc., with explanatory and analytical text. The bird fauna of the Commander Islands is essentially Kamtschatkan, only eleven species occurring there which are either American or peculiar to the Islands. Of the Kamtschatkan species 22.3 per cent are 'Circumpolar,' 21.1 per cent are 'Palæarctic,' 16 per cent are 'Pacific,' 4.6 per cent are 'American,' 5.1 per cent 'Siberian,' and 30.9 per cent 'East Asiatic or peculiar.' The peculiarities of distribution displayed by certain species is the subject of much interesting comment.

The work closes with a sketch map of the region under consideration, a list of illustrations, and a very carefully prepared index.—J. A. A.

Torrey's 'Birds in the Bush.'*—Under this characteristic title. Mr. Torrey has presented the public with a collection of his field studies in bird life, most of them previously published in the 'Atlantic' or other literary magazines. The author is thoroughly in sympathy with the feathered denizens of field and wood,—a bird-lover of the ardent sort. His pages show that he is even more than this—a keen, discriminating field naturalist, able to correctly identify his birds—to a fair degree an ornithologist, with much book-knowledge of birds, as well as more than a speaking acquaintance with the birds themselves. He not only sees well, and listens well, but is able to tell felicitously what he has seen and heard. While the ornithologist will find in these pages much that is not new to him he will be interested and entertained by the manner of the telling, not a little that has never been so well told before, and not unfrequently features of bird-life delineated that have not before found their way into print. In short, the book is a delightful series of field studies, intermixed with a little moralizing from the bird point of view, seldom monotonous, and never wearisome,—a book which not only bird-lovers, but most ornithologists will find entertaining and instructive. An indication of the character of the contents may be derived from the following list of the titles of the Chapters: 'On Boston Common'; 'Bird-Songs'; 'Character in Feathers'; 'In the White Mountains'; 'Phillida and Coridon'; 'Scraping Acquaintance'; 'Minor Songsters'; 'Winter Birds about Boston'; 'A Bird-Lover's April'; 'An Owl's Head Holiday'; 'A Month's Music.'—J. A. A.

Holder's Catalogue of the Birds of Lynn, Mass.—Dr. Holder's original Catalogue† was published in December, 1846, as 'Number I' of the 'Publications of the Lynn Natural History Society,' and is therefore one of the earliest of the 'local lists.' It has been long out of print, and practically

* Birds in the Bush. By Bradford Torrey. Boston: Houghton, Mifflin and Company, 1885. 12 mo., pp. 300.

† Catalogue of the Birds noticed in the vicinity of Lynn, Mass., during the years 1844-'5-'6. By J. B. Holder. 8vo., pp. 8. No date. [Nov., 1885.]