

ornithology in Australia, and discusses the whole nomenclature problem as well as the zoogeography of the region.

The volume as a whole contains an enormous amount of information and ornithologists both in Australia and elsewhere should feel grateful to Mr. Mathews for his painstaking researches and for presenting the results in such an available form.— W. S.

**Witherby on the Moulting of the Rook.**<sup>1</sup>— The well known Rook of England and Europe and an eastern subspecies ranging to Japan differ from the Crows in having the face and upper throat bare of feathers in the adult, though they are normally feathered in juvenal birds. The method by which the feathers are lost has been a frequent subject for speculation and most writers seem to have preferred to speculate rather than to experiment, as frequently happens in similar cases. Mr. H. F. Witherby, however, by securing a good series of birds of all ages in the flesh, and studying them intelligently, has cleared up the whole matter. He finds that at the post-juvenal moult a new set of feathers is acquired and the bird has a fully feathered face which it retains until January or later. The feathers are then moulted simultaneously with the wearing of the body plumage as the breeding season approaches. As the feathers drop out the papillae become active, but instead of producing feathers there arise only short 'pins' a millimeter or so in length, rarely terminating with short degenerate feather structures. The down feathers which are scattered here and there over the throat and face do not moult, and with the pins they suffer gradual abrasion until the next autumnal moult. At this and each succeeding post-nuptial moult the throat develops a covering of gray down which with a few degenerate feathers that appear with it soon wears away until the area is bare. The papillae of the face do not seem ever to become active again after the post-juvenal moult.]

Mr. Witherby has done an excellent piece of work in demonstrating exactly how and when this peculiar loss of feathers occurs. Why the feather papillae should regularly become inactive he leaves to some one more conversant with feather development, and generously offers them his material.

While conducting this investigation on the moult of the head Mr. Witherby naturally took note of the sequence of plumage elsewhere, which he describes in detail and which is essentially the same as in our American Crow.— W. S.

**Trevor-Battye's 'Camping in Crete.'**<sup>2</sup>— This handsome volume forms a book of old world travel more than usually interesting to the

<sup>1</sup> The Sequence of Plumages of the Rook. With Special Reference to the Moulting of the "Face." By H. F. Witherby. *British Birds*, Vol. VII, No. 5, October 1, 1913, pp. 126-139.

<sup>2</sup> *Camping in Crete* | with Notes upon the Animal | and Plant Life of the Island | By | Aubyn Trevor-Battye | M. A., F. L. S., F. Z. S., F. R. G. S., etc. | Including a Description of certain Caves and their Ancient Deposits | By Dorothea M. A. Bate, M. B. O. U. | with thirty-two Plates and a Map. | Witherby & Co. | 326 High Holborn, London | 1913. 8vo. pp. 1-xi + 1-308. Price 10s 6d.

ornithologist inasmuch as the author's interests "lay away in the mountains and the plains" and he "only spent short intervals in the cities, leaving again as soon as he could possibly do so." His object he states "is a very simple one; it is to picture the scenery and natural features of the island, and to lead the reader to go to Crete." The pages are naturally full of allusions to birds, and flowers and the general aspects of nature. The beautiful song of the Blue Rock Thrush is described, the habits of the Kestrels and the trapping of Partridges in the caves of the mountains.

Among the appendices are chapters on the plants, mammals, and birds of the island. The last includes only such as were observed or obtained between March and the end of June but contains mention of species recorded by other observers and not seen by the author, while the annotations are often full.

The naturalist has much the same experience with the Cretans as with rural natives of other countries. "On the whole," says our author, "they regard one, perhaps, as rather soft-headed — as harmless, but just a little touched in the head: else why should a man be eternally digging and picking and smelling plants, or taking endless trouble to follow some tiny bird over the heated rocks and peer at it through glasses; and then, if he shoots it, not even to eat it, but only take with patient trouble its feathers and its skin! It is ridiculous." We are glad to learn, though, that "the Cretans, unlike the people of France or Italy, do not slaughter the small birds."

The half-tone illustrations and the map are excellent and the book is as attractive in appearance as it is interesting to read.— W. S.

**Hartert's 'Die Vögel der paläarktischen Fauna.'**<sup>1</sup>— In the present installment of this important work the consideration of the *Strigidae* is completed and the *Falconidae* treated in full, with a few pages on the *Aquilidae* (= *Buteonidae*). We note the following new forms, *Bubo bubo swinhoei*, Kinkiang, China; *Athene noctua lilith*, Der-ez-Zor, and *Falco tinnunculus dacotiae*, Eastern Canaries (Lanzarote).

*Tyto* Billberg is used for the Barn Owls and *Strix* for the Barred Owls and the nomenclature follows the International Code in all respects. Two cases are left undecided, i. e., *Aegolius* vs. *Cryptoglaux* and *Athene* vs. *Carine* which depend upon the 'one letter rule,' the question being whether *Aegolia* and *Athene* of earlier date render invalid the two above names. The trinomial system as in previous parts of the work is carried to the extreme, in the reduction of many widely separated forms to subspecies. The Merlin for instance becomes a subspecies of our Pigeon Hawk or to be more exact they are both grouped as subspecies under the binomial term *Falco columbarius*. So also our Barn Owl becomes *Tyto alba pratincola*, all the Barn Owls of the world being considered as subspecies of *T. alba*.

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<sup>1</sup> Die Vögel der paläarktischen Fauna. Systematische Übersicht der in Europa, Nord-Asien und der Mittelmeerregion vorkommenden Vögel. Von Dr. Ernst Hartert. Heft VIII (Bd II., 2). Berlin, August 1913.