

books, some basing their claims to recognition on one feature some on another. Mr. Furbush's work has the exceptionable merit of scoring success on two counts—accuracy and breadth of text, and accuracy and beauty of illustration. Furthermore it has fortunately had the financial backing of the state and is "issued by authority of the legislature" so that it is relieved of the burdens and limitations which often beset a privately printed work. The paper is excellent and the printing beautifully done, features not usually present in a "state" publication, while the avoidance of coated paper for the text and the moderate size of the pages make a volume that is easily handled.

Volume I, as completed, is certainly a production of which the author, the artist, the printers and the Commonwealth of Massachusetts may well be proud.—W. S.

Phillips' 'Natural History of the Ducks.'—Like certain other good things, Dr. Phillips' great work on the Ducks¹ seems to improve with age, or rather, each volume seems to be an improvement on its predecessor. One can hardly say that the text improves because it reached such a standard of perfection in the first part that improvement was well nigh impossible, but that standard has been well maintained throughout, and one marvels at the extent of the author's researches through the literature of the world, which have brought together such a mass of information, all thoroughly sifted and systematically arranged. It is perhaps the plates which give the impression of constant improvement. In the volume now before us there are twenty-six, all but five colored and these latter with one exception represent black and white species. Four are by Fuertes, one by Benson and twenty-one by Brooks. The figures are not too crowded and the grouping good, so that the work of the artists is seen at its best. The charts showing the range of the species are on the same plan as in the earlier volumes and the whole arrangement of the text follows the same scheme as heretofore.

This volume completes the Anatinae and covers most of the Fuligulinae. The account of the Wood Duck, which the author for some reason prefers to call the Carolina Duck, is particularly interesting. Besides a very fully compiled sketch of the bird in a wild state, from his own experiences and those of others, the author gives accounts of its breeding habits based on observations of the free-flying birds in the Berlin Zoological Gardens, and also describes his own experience in rearing these Ducks in captivity and raising the young under hens and Mallards. He describes Heinroth's observations in the Berlin Zoo of the young birds climbing to

¹ A Natural History of | the Ducks | By John C. Phillips | Associate Curator of Birds in the Museum | of Comparative Zoology at Harvard College | with Plates in Color and in Black and White | from Drawings by | Frank W. Benson, Allan Brooks and Louis Agassiz Fuertes | Volume III | Anatinae (concluded) and Fuligulinae (in part) | [vignette] | Boston and New York | Houghton Mifflin Company | The Riverside Press, Cambridge | 1925 pp. 1-xii + 1-383; pll. 45-70 maps 66-95. [Size 12¼ × 9½ ins.] Price \$50.00 per volume.

the edge of the nest hole and boldly launching forth to alight safely below, and Dixon's similar observations in the case of wild birds in California, the dense down and extremely light weight of the little birds making the method an entirely safe one. Dr. Phillips has read carefully the testimony of many who claim that the old bird was seen to carry the young to the ground, and while he does not say that this is never done, he is "still not entirely convinced." At any rate we have the exit of the young without assistance established as the usual way of leaving the nest, and the other way as yet not proven.

In his account of the allied Chinese Mandarin Duck the extent of Dr. Phillips' research is shown by his examination of the Chinese Encyclopedia, published over two centuries ago, in order to follow back the traditions about this bird as the symbol of fidelity. He found numerous statements as to the close conjugal affection and fidelity of the pair, which are said to twine their necks together when they sleep, but, contrary to some statements, this is not the bird carried in wedding processions as it is the Wild Goose, symbolizing chastity, that is used on such occasions.

In discussing the famous Steamer Duck of the Straits of Magellan and its perplexing forms, Dr. Phillips changes the views formerly advanced by him (Ibis, 1917, p. 116) and is convinced "that we cannot explain all the observed facts in field or museum on the basis of a single stable species." There are two quite distinct forms of this bird, a large flightless white-headed one, which produces flightless young, and a smaller reddish bird with wings actually longer than those of the large form, and there are statements that these latter birds can fly. That the smaller form is not merely the young is indicated by the fact that males and females mate and produce young, furthermore there is evidence that individuals of the two forms have mated together. So the matter rests. Recent observers of the birds seem all to favor the idea of two species, although Mr. W. S. Brooks inclined to the idea of a single very variable species still in process of retrogression to flightlessness.

So under almost every species we find matter of the greatest interest to sportsmen, naturalists and to the general reader.

The courtship activities are well described and are further illustrated in a number of species by Mr. Allan Brooks' admirable drawings.

While very properly admitting separate genera for the various isolated species of New Zealand, Auckland Island etc. Dr. Phillips conservatively unites all the Pochards, Scaup, Redheads etc., in the genus *Nyroca* instead of following some of the extremists in establishing a separate genus for each of our American species.

We congratulate Dr. Phillips upon the splendid progress that he has made in this publication and the high standard that he has maintained, both in his treatment of the subject and in the character of the typography and illustration. We shall look forward to the appearance of the concluding volume with interest.—W. S.