

mens and field notes. The importance of care and thoroughness in relation to gathering, preserving and labelling is at all times dwelt upon with emphasis. Too truly, as Mr. Hornaday observes, "The lives of hundreds of thousands of wild birds have been sacrificed to no purpose by persons claiming to be ornithological collectors, and yet who had not the knowledge, skill, or industry to make up good bird skins. . . . The ability to make up fine, clean, shapely, well-preserved skins, and make them rapidly also, is a prime requisite in any one who aspires to be sent off to interesting 'foreign parts' to shoot, collect, and see the world—at the expense of some one else." We are glad to see that in the matter of bird skins the best modern methods of 'making up' are described and fully illustrated with cuts; and that proper directions are given for insuring the highest scientific value of all kinds of bird specimens. We wish we could extend this statement to include all the author says about mammals as well, but sad experience leads us to make use of the present opportunity to put in an earnest protest against the "salt-and-alum baths," so unreservedly recommended for the preservation of mammal skins for mounting. "In only two or three instances," says Mr. Hornaday, "have I ever known it to change the color of the hair in the least." Our experience, on the contrary, has been widely different, even when the bath was compounded in accordance with Mr. Hornaday's own recipe. The skins of many small mammals, such as red squirrels, ground squirrels, spermophiles, kangaroo rats and mice, and deer mice, quickly change in color from immersion in it, to such an extent as to be wholly unrecognizable by their coloration, and hence worthless for any scientific purpose, yellowish, rufous, and pale browns becoming dull red. On the other hand, some colors appear to be not in the least affected. But in many foreign mammals it would be impossible to tell whether or not there had been a change of color. Should the change be not detected, as may readily happen, the 'salt-and-alum bath' may yet prove a prolific species maker, as it has already narrowly escaped being in several instances well known to the present writer. Ordinary alcohol, as commonly used, is not always to be trusted where the question of color is at stake, while the so-called 'wood alcohol,' or methyllic spirits, is absolutely ruinous, being worse even than the salt-and-alum bath. Fortunately birds are not often preserved in antiseptic solutions, except for strictly anatomical purposes; besides, their colors are, as a rule, less liable to change from such treatment than those of mammals.

Beyond question, Mr. Hornaday's book marks the beginning of a new era in the history of both natural history field work and taxidermy, and naturalists cannot be too grateful for his admirable manual of 'Taxidermy and Zoological Collecting.'—J. A. A.

Butler's Birds of Indiana *—This excellent catalogue of the Birds of

*The Birds of Indiana, with Illustrations of Many of the Species. Prepared for the Indiana Horticultural Society, and Originally Published in its Transactions for 1890. By Amos W. Butler, of Brookville. 8vo, pp. 135.

Indiana gives 305 species as the number thus far actually known to occur in the State, and a 'Hypothetical List' of 79 species, "which have been taken in neighboring States, or whose known range seems to include Indiana." Both lists have evidently been prepared with great care, and are very satisfactorily annotated, the previously published records of the capture of the rarer species within the State being duly cited. The annotations throw much new light on the distribution of many of the species within the State. The introduction gives the origin of the present Catalogue, a brief account of the leading topographical features of the State, a transcript of 'An Act for the Protection of Birds, their Nests and Eggs' (closely modelled after the New York law), passed in March last by the State Legislature, and due acknowledgments for aid in the preparation of the work. This is followed by a 'Bibliography' of Indiana ornithology (pp. 10-14), and a list is also given (pp. 117-119) of persons contributing notes used in the preparation of the Catalogue. The author also states that through the coöperation of Dr. C. Hart Merriam, Chief of the Division of Economic Ornithology and Mammalogy of the United States Department of Agriculture, he was "enabled to examine the migration reports, covering the State of Indiana for a series of years." The illustrations consist of a large number of cuts from Coues's 'Key to North American Birds,' secured through the courtesy of the publishers of that well-known work. A very full index (pp. 121-135) very fittingly closes this admirable and exceedingly welcome exposition of Indiana ornithology.—J. A. A.

Colburn and Morris's 'Birds of the Connecticut Valley in Massachusetts.'*—This briefly annotated list of 212 species forms a convenient résumé of the bird life of the region considered. The list "contains the names of the birds of the Connecticut Valley in Massachusetts, so far as they are known to the authors, either by personal observation or from consulting the works of the ornithologists who have described the birds of New England"; but as these works are not cited in the annotations, it is not always evident whether the statements made rest on the authority of the authors of the present paper or on previously published records. Hence it is sometimes difficult to distinguish whether or not a record or statement is here for the first time recorded. As the authors state that the list was prepared "for their own use, and not for general publication," perhaps we should be lenient in our criticism, yet we can hardly refrain from calling attention to one or two points, in the interest of sound work. We regret to see that some species are admittedly included that may, on "further observation," require "elimination." These are presumably given on the authority of others, and probably on previously published records, but unless so stated in the list the responsibility rests on its authors. Some of the omissions from the list are hard to explain,

*The Birds of the Connecticut Valley in Massachusetts. By Wm. W. Colburn and Robert O. Morris. 16 mo. pp. 24. Springfield, Mass., 1891. (Privately printed.)