

new sub-species, under the name *Felis concolor floridana*. About twenty-five pages are devoted to an account of the Seminole Indians, and about one hundred pages to hunting and fishing in Florida. Various hunting and fishing trips are described, with numerous appropriate illustrations. This portion of the book has an important bearing on many points in natural history, and will doubtless be of special interest to the hunter and tourist. The work is beautifully printed and is altogether an elegant sample of book-making.—J. A. A.

Howe's 'Every Bird.'¹—This is another attempt to render the identification of bird easy, whether the birds be in the bush or in the hand. The scope of the volume is limited to "one hundred and seventy-three species of birds most often met with in New England, and the Appendix contains nearly all other birds known to occur within these states." The text is reduced to a minimum, the author depending largely on the outline drawings of head and foot as an aid to the student. A line or two is given to dates of arrival, distribution (in New England), haunts, and song under each species. About a page of space is allotted to each species, including the cuts. They are divided according to their haunts into 'Woodland Birds,' 'Marsh and Swamp Birds,' 'Beach Birds,' 'Ocean Birds,' etc. The book, however, lacks both a table of contents and an index.—J. A. A.

Artistic and Scientific Taxidermy.²—Any work which will aid in more clearly defining the difference between the art of taxidermy and the trade of taxidermy is to be welcomed. Of manuals containing elementary instructions in 'stuffing' we have had enough. The case of effigies over the drawing-room mantel may serve a decorative purpose, but its maker is no more worthy the name of taxidermist than the caster of plaster images is deserving of the title of sculptor.

¹ "Every Bird" | A Guide to the Identification of | the Birds of Woodland, | Beach and Ocean. | With | one hundred and twenty-four line illustrations | by the author | Reginald Heber Howe, Jr. | [Associate] Member of the American Ornithologists' Union. Member of the Nuttall | Ornithological Club. | Boston : | Bradlee Whidden, | 1896. Sm. 8vo, | pp. viii, 192. Price, \$1.00.

² Artistic and Scientific | Taxidermy and Modelling | A Manual of Instruction in the Methods of Pre- | serving and Reproducing the Correct | Form of all Natural Objects | Including a Chapter on | The Modelling of | Foliage | By | Montagu Browne, F. G. S., F. Z. S., etc. | Curator of the Leicester Corporation Museum and Art Gallery ; | Author of 'Practical Taxidermy,' The Vertebrate Animals of Leicestershire | and Rutland, etc. | With 22 Full-page Illustrations and 11 Illustrations in Text | London | Adam and Charles Black 1896. [New York, Macmillan & Co., \$6.50] 8vo. pp. viii + 463.

It is only within recent years that publishers have felt warranted in giving the taxidermist an opportunity to adequately state his case, and the present work is one of the largest and most expensive that has appeared on this subject. The author has a respect for his art born of an evident appreciation of its possibilities. Furthermore his gifts as a writer enable him to present his methods clearly and we opened this sumptuous volume with a hope that it would prove a source of both information and inspiration to the taxidermic artist. But we were grievously disappointed. Mr. Browne claims originality for his methods, and doubtless no one will care to dispute him, but the conservatism which makes him so independent has prevented him from availing himself of the latest advances in his art. As a result his work is, in many respects, several years behind the times. For instance, the aid rendered the taxidermist by photography he considers "usually a great mistake"; for, he asks, with singular narrowness, "Would any taxidermist attempt to reproduce 'Animals in rapid motion' as shown by instantaneous photography?" Nevertheless as specimens of his own work he gives plates of a group of fighting tigers, and a Kestrel in the air, presumably about to strike its prey.

Arsenic is considered "quite useless" as a preservative and as a substitute we are given three formulæ, the first of which includes chalk, soap, chloride of lime and tincture of musk; the second, which is incidentally recommended "as an efficient substitute for snuff," contains tannin, red pepper, camphor, and burnt alum; while the third consists of alum and saltpetre. Finally, and fortunately, a thorough external dressing with alcohol and bichloride of mercury is insisted upon.

The chapter on collecting mammals and birds is doubtless addressed to the sportsman for not one word do we find on the modern methods of trapping which have practically revolutionized the study of mammals, while instead of the convenient and effective auxilliary barrels now used by all our collectors, we are told to secure two rifles and two shot-guns of different calibres.

Pages 107-160 are devoted to the skinning, casting and mounting of mammals, but the methods here recommended of mounting the skin on a cast made from the dead body, the relaxed muscles of which give anything but an accurate reproduction of the animal's form in life, is one that no scientific taxidermist will endorse, while the manner of inserting the tail-wire in the mannikin is, to say the least, primitive. Chapter VI (pp. 166-211) treats of "the skinning and setting-up of birds by various methods." According to our dogmatic author there is but one way of skinning a bird and that is "from under the wing"; to make the opening on the abdomen is denounced as the "practice of some primæval butcher." No absorbent is used while skinning, but plaster, a substance which should never be put on skins designed for study, is employed as a drier after washing. Collectors who, when in the field, are accustomed to shoot and make up from twenty to thirty birds daily, will be interested in Mr. Browne's method of making 'skins.' Each 'skin' should have the skull

filled with chopped tow, and the skull should be afterwards "thinly plastered over with soft clay." "The hollow bags of the wings" should also be filled with cut tow and the leg-bones wrapped with the same material. A false body of tow and wire should now be made, and when, after a complicated process, this has been introduced into the skin, the latter should be placed in a trough, or a paper band or strip may be used, a plan which is considered superior to wrapping in cotton. Of mammal skins, by the way, Mr. Browne has apparently never heard, for we do not find them mentioned in his work.

In mounting birds from skins no mention is made of the most important part of the whole process, that of scraping and separating the shafts of the feathers from the inside whereby the plumage regains much of its former fluffiness. For the rest the author mounts his birds much as do other taxidermists.

The chapters on casting and modelling reptiles, amphibians, and fishes, and on the reproduction of certain invertebrates, contain information which has not previously appeared in works on taxidermy, though the methods given are in use in similar or improved form by our leading taxidermists and modellers.

Chapter IX, on casting and modelling from natural foliage, flowers, etc., is largely based on the methods of Mr. J. H. Mintorn and Mrs. E. S. Mogridge, whose work is so well and so favorably known in this country. As such it will be welcomed by all taxidermists who appreciate the value of a proper setting for their work.

The excellence of this chapter gives us reason to regret that Mr. Browne did not avail himself of the discoveries of his fellow workers in other branches of his art, for while his book may stand as a complete exposition of his own methods and ideas, it can by no means be considered as an adequate treatise on artistic and scientific taxidermy.— F. M. C.

Witchell's 'Evolution of Bird-Song.'¹— Says the author: "However novel or otherwise may be the theories stated in this book, I can at least claim that, so far as I am concerned, they are absolutely original, all of them having been committed to writing, though in some instances, not under their present titles, before I consulted any person, or any book, in regard to them." The subject is treated in ten chapters, under the following headings: The origin of the voice; alarm-notes; the influence of combat; the call-note; the simplest songs; noticeable incidents connected with bird-song; the influence of heredity in the perpetuation of the cries of birds; variation in bird-voices, its cause and effects; the influence of imitation in relation to bird-song. An appendix gives 'Tran-

¹ The | Evolution of Bird-Song | with | Observations on the Influence of Mimicry and Imitation | By | Charles A. Witchell | Author of the Fauna of Gloucestershire | London | Adam and Charles Black | 1896 [New York: Macmillan & Co. Price, \$1.75.] 8vo, pp. x, 253.