

Miss Merriam's 'Birds of Village and Field,'¹—Miss Merriam's handsome volume is well designated 'A Bird Book for Beginners.' It treats of 145 of the more common species of the birds of eastern North America, which are grouped in various categories on the basis of coloration, in conformity with a 'Field Color Key.' This plan is of course no longer novel, it having been previously introduced in other similar bird books, and its efficiency well tested as an aid in identifying birds in the field. In addition to the distinctive color markings, reference is also made in the key to characteristic traits of habit and habitat, and cuts are given illustrative of form, structural details, and special markings, with a cross-reference in the key to the place in the book where the bird is described. The 'Introduction' contains, besides the key, directions for its use, under 'How to find a Bird's Name,' and tells 'Where to find Birds,' 'How to watch Birds,' 'How Birds affect Village Trees, Gardens and Farms,' and 'How to keep Birds about our Homes.' The 'Appendix' gives instruction about keeping migration records, and 'Migration Lists' are given of the land birds occurring in spring at (1) St. Louis, Mo. (based on Mr. Otto Widmann's observations), (2) Washington, D. C. (made by Mr. William Palmer), and (3) Portland, Conn. (by Mr. John H. Sage). There is also a similar set of lists for the winter birds, based on the contributions of the same observers. This is followed by 'Outline for Field Observation,' giving hints to assist beginners in field identification, relating not only to size, color and markings, but to movements and flight; to which is added a list of 'Points to note to add to knowledge of life histories.' The Appendix concludes with a classified list of books of reference.

The main text (pp. 1-363) gives a very attractively written account of the habits of each bird treated, preceded by a brief statement of its diagnostic features, and geographic distribution, with generally a full length figure of the species, and frequently other appropriate illustrations, as of bill, wing, head, tail or feet, or of insects of which the bird is a special enemy.

A special feature of Miss Merriam's book is the particular emphasis with which she urges the utility of birds to agriculture, and hence the extreme importance of their preservation, aside from any motive of humanity or sentiment. For the most part her biographies are written with much feeling and evidently from the heart; there are lapses here and there into the perfunctory style of the book maker, but they are rare, for the author knows her birds and loves them.

In this age of popular bird books, it must be becoming hard to introduce any novelties of treatment, or originality of expression, but Miss

¹Birds of Village and Field | A Bird Book for Beginners | By | Florence A. Merriam | Illustrated | [Vignette] | Boston and New York | Houghton, Mifflin and Company | The Riverside Press, Cambridge | 1898—12mo. pp. i-xlix, 1-406, 18 half-tone plates and 220 text cuts. (Price, \$2.00.)

Merriam shows that there are still possibilities in both lines, and that her book is not without *raison d'être*. It is admirably adapted as 'A Bird Book for Beginners,' and we trust it will achieve the success it so well merits.—J. A. A.

Hair and Feathers.¹—Professor Kingsley here reviews recent investigations regarding the development and structure of hair and feathers, notably those published in Germany, of which he presents a brief summary. He makes special acknowledgment to the recent able review of the subject by Professor Keibel, in Merkel and Bonnet's 'Ergebnisse der Anatomie und Entwicklungsgeschichte,' 1896. As is now well known, hair and feathers are not only unlike in structure and appearance, but in method of origin and growth. "According to Davies all contour feathers are preceded by down-feathers," or, in other words, "the germ of the definitive feather is a direct derivative of the germ of the down-feather." The process of formation is described at some length, concluding as follows: "With the withdrawal of the pulp from the feather there is no longer any nerve or blood supply to the parts of the feather. The cells of which it is composed are dead and dry so that it seems impossible that any change can take place in it. The whole question of change in color of the fully formed feather was recently reopened by Mr. J. A. Allen who maintained that, once formed, the feathers do not change in their markings. The whole history of development seems to afford him full support. Yet this year [1897] the attempt has been made to show that feathers do change in their markings. In this, as the matter now stands, the burden of proof is upon those who support the possibility of change."

Regarding the origin of hair and feathers, reference is made to the old view that they were of homologous origin, and that both were derived from the reptilian scale. "It may be said, however," says Kingsley, "that Davies, to whom we owe the most accurate account of the development of the feather declines to regard pin-feathers [filoplumes?] as the simplest type of the avian tegumentary covering but rather as a retrograde condition; and farther, that he regards the scales upon the tarsal and digital regions of birds as secondary formations, agreeing in this with Jeffries." Again, "Maurer maintains that hair and feathers are not homologous structures. The feather, according to his view has been derived from the Reptilian scale while hair has arisen from the dermal sense organs of the Ichthyopsida as a result of a change in habits and conditions of life." A brief statement is given of Maurer's investigations and conclusions, and the reader is further advised to refer to Keibel's summary, "with its bibliography of over one hundred titles."—J. A. A.

Baur on the Birds of the Galapagos Archipelago.—Dr. Baur reiterates

¹Hair and Feathers. By J. S. Kingsley. Amer. Naturalist, Vol. XXXI, Sept. 1897, pp. 767-777, figs. 1-14.