

appendix containing a sample of the migration blank used by the U. S. Department of Agriculture; lists of migrants (with dates of arrival and departure) and winter birds at Washington, D. C., Portland, Conn., and St. Louis, Mo.; an 'Outline for Field Observations,' which is probably the most complete key as to the proper use to make of one's eyes in the field ever formulated; a list of the birds known to nest in Portland, Conn.; a list of books of reference; and a comprehensive index. The pages are profusely illustrated not only with half-tone plates and other figures of birds' heads, bills and feet, but also with figures of insects and plants to show the nature of the birds' food.

The book is remarkably free from errors, though I notice under Red-poll Warbler, at page 317, Illinois birds referred to the Eastern race and no notice at all taken of the Mississippi Valley race. Other criticisms resolve themselves chiefly into differences of opinion. Every book that deals with only part of the birds of a given locality and presents a key of male birds only and these in spring dress, without hint of rarer species that inconveniently pop up before even a beginner's eyes is necessarily a frail guide. It seems as if he ought to be warned of possibilities. He ought also to be warned not to take the 'law' of protective coloration (as cited at page 34, and elsewhere referred to) too seriously. There are numerous exceptions to it not as yet satisfactorily explained.

One feature of the book open to objection is the lack of arrangement of the species in any sort of order except that, as the writer confesses, 'the birds which readers are most likely to know and see are placed first, the rarer ones left until later.' This idea results in splitting up the Sparrows, the Vireos, the Woodpeckers and other groups so that some species are found in one part of the book and others, closely allied, in another, and after all we find such familiar birds as the Yellow Warbler, the Redstart, the Maryland Yellow-throat and the Oven-bird very close to the end, precedence being given to the Passenger Pigeon, the Pileated Woodpecker, the Snowy Owl and others less distinctly rare.

The press-work is excellent; the plates range

from good to bad, one of the best being that of the Long-billed Marsh Wren at page 202; and the figures serve a useful purpose. The beginner might complain that the two sizes of cuts given in many cases (there are three different sizes of the cut of the Belted Kingfisher, pp. xix, 158 and 165) tend to confuse his ideas of relative size, but he should remember the illustrated alphabet of his first primer at school where 'cat' and 'horse' cover equal areas.

It would improve the volume if the comparisons and supplemental keys were set off from the species they follow. For instance, the sketch of Bachman's Sparrow at p. 242 apparently occupies several pages that are in no wise part of its biography.

Aside from these somewhat trivial imperfections there is little to criticise, and it is only a matter of regret that the biographies are not twice as long.

J. D., JR.

SCIENTIFIC JOURNALS.

THE *American Journal of Science* for May opens with an article by Mr. T. A. Jaggar, Jr., on 'Some Conditions affecting Geyser Eruptions.' There are other papers on geological and mineralogical topics, as follows: 'Determination of Plagioclase Feldspars in Rock Sections:' by Dr. G. F. Becker. 'Some Lava Flows of the Western Slope of the Sierra Nevada, California:' by Mr. F. L. Ransome. 'Krennerite, from Cripple Creek, Colorado:' by Professor A. H. Chester. 'Some New Jurassic Vertebrates from Wyoming:' by Professor W. C. Knight. 'Estimation of Manganese Separated as the Carbonate:' by Mr. M. Austin. The number also contains two important physical papers: 'Properties of Seasoned Magnets of Self-Hardening Steel:' by Professor B. O. Peirce; and 'Curious Inversion in the Wave Mechanism of the Electromagnetic Theory of Light:' by Professor C. Barus.

Terrestrial Magnetism for March opens with an illustrated article in French, giving a description of the new magnetic observatory at Parc Saint-Maur, near Paris, by M. Moureaux, the director of the observatory. As the old observ-

atory constructed in 1882, primarily for the purpose of taking part in the international scheme of observations of that period, was not especially adapted to the modern requirements of a magnetic observatory, a new building was erected on the same grounds and the old one set aside for special observations. A complete fifteen-year series has been obtained at the old observatory, and the registrations at the new observatory began on January 1st of this year. Unfortunately, at the very outset of its new career the observatory is menaced by the possibility of disturbance from electric cars which would pass 1,600 meters south of the observatory. Professor Cleveland Abbe contributes the first installment of an interesting article on 'The Attitude of the Aurora above the Earth's Surface.' His object is to collect some of the numerous observations, calculations and opinions bearing on the nature and the attitude of the auroral light. He therefore proceeds, in the present contribution, to give a chronological summary, beginning with Halley and ending with Young. Professor Schuster follows, writing: 'On the Investigation of Hidden Periodicities with Application to a supposed 26-Day Period of Meteorological Phenomena.' He undertakes to introduce scientific precision into the treatment of problems which involve hidden periodicities, and to apply the theory of probability in such a way that it may be possible to assign a definite number for the probability that the effects found by means of the usual methods are real, and not due to accident. An extract from Professor Rücker's recent lecture on 'Recent Researches on Terrestrial Magnetism,' exhibiting the intimate relationship between the geological and the magnetic constitution of Great Britain is next given. Mr. Putnam contributes an interesting 'Note in Regard to Magnetic Disturbances on St. George Island, Bering sea.' In a 'Letter to Editor,' W. van Bemmelen gives an account of his recent researches respecting old magnetic observations.

WE have received the number of the *Journal of the Institute of Jamaica* issued on the 28th of March. It contains an account of the meetings of the Institute—which includes literature and art as well as science—and a number of papers.

Among these may be mentioned a life history of some Jamaica Hesperidæ, by Mr. E. Stuart Panton, which was awarded the Institute's prize for the most valuable research on the natural history of Jamaica. There is also a paper on the Actinaria of Jamaica, by Mr. J. E. Duerden, the curator of the museum of the Institute, who also contributes several science notes.

THE *May Century* contains several articles of scientific interest. It appears in a special cover, printed in gold and colors, after a design by Fernand Lungren, representing the great mesa of Katzimo. This is apropos of an article in the number by Mr. F. W. Hodge, of the Ethnological Bureau, describing his recent 'Ascent of the Enchanted Mesa.' Mr. Hodge gives the evidence he has discovered, already reported in this JOURNAL, for the truth of the old Ancoma tradition that the mesa was once the site of a Pueblo settlement. The article is illustrated from photographs and with pictures by Mr. Lungren, who also contributes a supplement article, 'Notes on Old Mesa Life.' Professor Trowbridge contributes an important article, illustrated from photographs, on the X-rays. Professor Louis Boutan, of the Sorbonne, gives an account of his successful experiments in 'Submarine Photography,' and there are reproductions of several photographs taken under the sea at various depths, including one made by artificial light. An article by Mr. Oscar Chrisman on 'The Secret Language of Childhood' is based on contributions made by him to SCIENCE. Partly scientific in character are also the articles by Professor B. I. Wheeler on 'The Great Pyramids of Egypt,' and by Mr. F. B. Locke on 'Railway Crossings in Europe and America.'

THE *Annales d'électrobiologie d'électrothérapie et d'électrodiagnostic* is a new bi-monthly journal published since the beginning of the present year by M. Alcan, Paris, with Dr. E. Dourner, as editor-in-chief and an editorial committee including MM. d'Arsonwal, Tripier, Apostoli and Oudin. The two issues that have appeared extend the first volume to 286 pages, and contain numerous articles and full bibliographies. The subscription price for America is 28 fr.

THE issue of the New York *Independent* for

the present week is an African number. It contains a political-physical map of Africa printed in colors and numerous contributions by well-known writers, including Mr. Henry M. Stanley, Dr. Scott Keltie and others.

THE May *Educational Review*, concluding the fifteenth volume, contains the following papers prepared for the Harvard Teachers' Association: The election of studies in secondary schools, five articles, as follows: 1. 'Its Effect upon the Colleges:' by Nathaniel S. Shaler. 2. 'Its Effect upon the Community:' by Samuel Thurber. 3. 'A Negative View:' by John Tetlow. 4 and 5. 'Affirmative Views:' by Charles W. Eliot and George H. Martin. 'The School Grade a Fiction:' by Wilbur S. Jackman; and 'Knowledge Through Association:' by T. L. Bolton and Ellen M. Haskell.

SOCIETIES AND ACADEMIES.

BIOLOGICAL SOCIETY OF WASHINGTON—291ST. MEETING, SATURDAY, APRIL 9.

MR. VERNON BAILEY described the manner in which beavers fell trees, saying that they did not gnaw squarely across, but made two cuts a short distance apart vertically and pried out a chip between them. The result was a V-shaped cut very similar in appearance to that made by a wood cutter.

Professor O. P. Hay made some 'Observations on the genus of Cretaceous Fishes, called by Professor Cope *Portheus*,' discussing the osteology of the genus at some length and particularly the skull, shoulder girdle and vertebral column. He said that in many respects it resembled the Tarpon of our Southern coasts, although possessing widely different teeth, and undoubtedly belonged to the Isospondyli. The conclusion was reached that Cope's *Portheus* is identical with the earlier described genus *Xiphactinas* of Leidy. (Since the paper was read the author has learned that Professor Williston has reached the same conclusion.)

Mr. W. H. Osgood gave some 'Notes on the Natural History of the Farallon Islands,' dwelling particularly on the birds and illustrating his remarks with lantern slides. Mr. William Palmer presented a paper on 'A Phase of

Feather Re-pigmentation,' briefly reviewing the discussion regarding this mooted question, stating that much of the discrepancy between the statements of the advocates and opponents of the subject was probably due to the geographical conditions under which their birds had been obtained. The theory was advanced that migration arrested the moult of birds, the drain upon their strength made by protracted flight preventing the growth of the new feathers and the shedding of the old.

F. A. LUCAS,
Secretary.

THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON.

THE 276th regular meeting of the Society was held on Tuesday evening, April 5, 1898. Professor Otis T. Mason read a paper on 'Egypt in America.' He called attention to the early and insidious intrusion of the Iron Age into America everywhere, through the blonde Teuton, the dark-eyed Kelt and the melanchroic Spaniards and Portuguese. This time he confined the argument to the way in which much of the primitive life of Arabia, Palestine, Egypt and Northern Africa found its way to Latin America. Dr. Brinton, he said, had just emphasized the vast importance of North Africa and the Hamite (Khamite) in early civilization. Keane also had dwelt on this same subject in his late work, and Ripley was quoted as saying, "Beyond the Pyrenees begins Africa." The first settlers of Spain were Hamites, and they formed the folk of the peninsula during Keltic and Roman occupation. Phœnicia strengthened the bond with the mother race. Carthage went to Spain to claim her own, and for seven hundred years and more (711-1492) all the Semite-Hamite elements of the Moorish occupation were added to the old. It was this that furnished the folk life that came to middle America and easily and early affiliated itself with the natives. This folk life insidiously grows over the old, genuine, aboriginal culture and attracts the eye of the traveler who may have sojourned also in North Africa, Egypt or Palestine. By the trained eye it is easily detected and eliminated. For three thousand years the Khamites accultured Spain. In the