

receive a hearty welcome from anatomists in all quarters of the globe, as a most thorough and capable contribution to the subject of vertebrate morphology.

R. W. SHUFELDT.

Takoma, D.C., May 29.

BOOK-REVIEWS.

The Defences of Norumbega. By EBEN NORTON HORSFORD. Boston and New York, Houghton, Mifflin, & Co., 1891.

IN this sumptuously published volume, with its numerous reproductions of old maps, its photographic views and engravings, Professor Horsford returns to the arena in defence of his favorite theory that in the eleventh century the Northmen established an important walled city on the site where Watertown, Mass., now stands. He believes that he has discovered its stone-built walls, its ancient stone-paved streets, and the remains of its docks and wharves. Other local antiquaries see in these remains merely the vestiges of some dams, drains, and stone fences of the early New England farmers, and it appears that Professor Horsford has not succeeded in persuading any of the resident investigators of the interpretation he has so much at heart. Furthermore, the most recent and careful study of the Sagas of the Northmen's voyages to America—that by Professor Gustav Storm—declares that the records do not admit of placing the southern limit of their explorations south of Nova Scotia. We must therefore return the Scotch verdict of “not proven,” on the evidence before us.

Civilization: an Historical Review of its Elements. By CHARLES MORRIS. Chicago, S. C. Grigg's & Co. 2 vols.

MR. MORRIS is known as a fertile writer on topics relating to evolution, and as the author of “The Aryan Race” and some other works. In the volumes before us he undertakes “to set forth the philosophy of human progress and indicate the evolutionary steps by which the world of man has passed upward from primitive savagery to modern enlightenment.”

In carrying out this plan he selects such subjects as government, war, religion, law, commerce, literature, and the arts, and portrays their growth from a primitive form to that condition in which we find them to-day. This is usually accomplished in a comprehensive and satisfactory manner; but the reader is not unfrequently at a loss, as he is repeatedly in Mr. Morris's “Aryan Race,” to distinguish between fanciful hypotheses of the writer and definite results of other investigators, for his pages offer no references as guides, and his assertions usually go unsupported. As a popular work, however, it deserves commendation.

AMONG THE PUBLISHERS.

THE first number of *Pantobiblion* has just been received from the American publishers, Messrs D. Appleton & Co., New York. This new periodical has its main office in St. Petersburg, and is edited by A. Kersha, a civil engineer. The title-page of the number received is in English, but the text is printed in fifteen different languages. The purpose of *Pantobiblion* is to help those concerned with the applied sciences generally in securing information of the current scientific literature in their specialities. To do this, the journal contains a classified list of all new books in all the principal languages, a series of reviews of the leading scientific publications, and a summary of the contents of current periodical literature. It is intended to add to these, critical notices of the principal articles in scientific periodicals, and a miscellaneous department to be devoted to short notes on current scientific literature. This first number contains 1,200 titles of new publications, 80 reviews, and the “contents” of 270 periodicals. That it may not be thought that this new venture is only for those interested in applied science, it should be mentioned that the subjects included cover a wide range in the physical sciences as well as in engineering, and that botany and geology receive some attention. There has been some delay in getting out this initial number, — a delay which is by no means surprising considering the enormous labor involved in the editing and manufacture of a periodical containing such a mass of disconnected information, — but the following numbers are promised to follow in rapid succession. Whether *Pantobiblion* is to be a financial success or not is more than we can say; but certainly every one interested should take the first

opportunity for examining a copy, to see whether it meets his needs. There is such an enormous amount of matter between the covers that the first impression on us is somewhat appalling.

—The University Extension movement takes so prominent a place among the educational influences of the age, says *Nature*, that a good account of the system has for some time been needed. This is supplied in “Eighteen Years of University Extension,” by R. D. Roberts (Cambridge, University Press). Mr. Roberts, first as lecturer, then since 1881 as assistant and organizing secretary to the Cambridge Syndicate, and since 1886 as secretary to the London Society, has had the best possible opportunities of studying the new method, and of forming a judgment as to its fitness for the uses to which it is applied. He begins with an account of the origin and growth of the movement, then describes the character of the audiences, the reception of the idea by artisans, and the signs of earnestness displayed by various classes of students. Mr. Roberts also discusses the conditions of success, has a chapter on the consolidation of the work, and presents a summary of results. No essential fact has been omitted, and the general impression which will be left on the minds of most readers probably is that those connected with the movement have done much to foster and to satisfy the desire of a very large number of persons for intellectual training. There are certain rules—some of them rather difficult—with which the system must be brought into accord if it is to be capable of further development; and these are stated with much force and precision in the useful little volume.

—With the June number the *Educational Review* begins its second volume. At this season, when many young men are considering where they will study in Europe, the article on “The Present Condition of the German Universities,” by Professor Mattoon M. Curtis, has a timely interest. Other contributions to the number are: “Applications of Psychology in Education,” by Dr. Mary Putnam Jacobi, illustrated with twenty-one diagrams; “The American High School,” by Ray Greene Huling, president of the American Institute of Instruction; and “The Education of the Will,” by Professor J. Clark Murray; a discussion between Mr. Albert L. Arey and Professor Fernando Sanford on “The Use of Text-books in Teaching Elementary Science,” and one by Superintendent W. H. Maxwell on “Teachers' Salaries.” The reviews are by Professors Jastrow of the University of Wisconsin, Waggener of the University of Texas, Venable of the University of Virginia, Genung of Amherst, Chapin of Wellesley, Myers of the University of Cincinnati, etc. The department of “Education in Foreign Periodicals” includes “Some Characteristics of a Sound Mind,” “The School of the Future,” and “The School for Oriental Languages at Berlin.”

—The “Annual Report” of the Director of the Royal Alfred Observatory, Mauritius, for the year 1889, as quoted in a recent number of *Nature*, shows that the island has again enjoyed immunity from storms. The greatest hourly velocity of the wind was 31 miles. The almost total absence of tropical cyclones in the south Indian Ocean during the year is considered by Dr. Meldrum as another confirmation of the law that these cyclones are fewest in number and least intense in the years of least solar activity. The mean temperature was 0.7° below the average for the last fifteen years, and below the average in every month except July and October. The maximum shade temperature was 93.1° on March 27, and the minimum 52.4° on June 18. The rainfall was 8.56 inches above the average; the greatest fall in one day was 3.88 inches on March 11, although this amount was much exceeded in other parts of the island. On Jan. 1, a waterspout burst on the Pouce Mountain; Port Louis was flooded, and some persons were drowned. The collection of observations made at sea is actively carried on; 324 log-books were received, and the observations duly tabulated. The report also contains observations made at the Seychelles and Rodriguez.

—Silver, Burdett, & Co., Boston, announce “An Elementary Handbook of Potable Water,” by Floyd Davis, professor of chemistry in Drake University. Chapter I. of the volume treats of pure water, and defines the terms pure and impure, wholesome and unwholesome, from the sanitary standpoint. Chapter II. is devoted to inorganic constituents; Chapter III., to vegetable con-

stituents; and Chapter IV., to animal constituents. Chapter V. presents a treatise on micro-organisms, Chapters VI., VII., VIII., discuss water-supplies, natural purification, and artificial purification, and Chapter IX. describes eight different systems for central filtration. An appendix, divided into two sections, closes the book. Section A treats of the origin and home of cholera. Section B presents four simple qualitative tests for impurities in drinking-water.

— *Babyhood* for June considers the seasonable question of what to do with children in the city and country, and how to provide for their welfare generally, during the heated term; and a medical paper by Dr. Walter Mendelson, on "Practical Directions for Sterilizing Milk," offers an account of this important subject.

— Several new leaflets are to be added to the general series of "Old South Leaflets," published by D. C. Heath & Co., Boston. All of them are connected with the English Puritan period, and are of value in the study of the development of our own political liberty and of our political system. They include the "Petition of Right," presented by Parliament to King Charles in 1628; the "Grand Remonstrance;" the "Solemn League and Covenant," which gave the name of "Covenanters" to the Scottish Protestants; the "Agreement of the People;" the "Instrument of Government," under which Cromwell began his government; and "Cromwell's First Speech to his Parliament." These leaflets furnish these original documents, heretofore almost inaccessible to

the mass of the people, for the few cents covering their cost. There are now nearly thirty in the series.

— Macmillan & Co. will shortly publish "Studies of the Gods in Greece at Certain Sanctuaries Recently Excavated," by Mr. Louis Dyer, formerly assistant professor in Harvard University. The book represents a course of lectures delivered by Mr. Dyer at the Lowell Institute, Boston; but the material has undergone very thorough revision, and notes and appendixes have been added on special points. The same firm are also going to publish "Browning as a Philosophical and Religious Teacher," by Professor Jones of University College. This work deals with Browning, not simply as a poet, but as the exponent of a system of ideas on moral and religious subjects, which may fairly be called a philosophy.

— In the June number of *The Political Science Quarterly* Professor Burgess of Columbia College discusses the international and constitutional questions raised by the recent controversy with Italy. He holds that a foreign government whose subjects have been wronged is entitled to demand that the United States Government should initiate proceedings against wrong-doers in the United States courts. He finds that the Constitution vests in the Federal Government the power to do this, but that Congress has not passed the necessary statutes to make this power effective. Horace White writes on bimetalism in France, showing that all attempts to keep the two metals in equipoise have proved unsuccessful. F. M. Drew gives an account of the organization and

Publications received at Editor's Office,
May 27-June 2.

- FRAZER, Persifor. Tables for the Determination of Minerals by Physical Properties. 3d ed. Philadelphia, Lippincott. 115 p. 8°. \$2.
GEORGE, Henry. Protection or Free Trade? New York, Henry George & Co. 216 p. 12°. 25 cents.
GLEN Echo Chautauqua. Vol. I. No. 1. Washington, Glen Echo Chautauqua Assoc. 20 p. 4°. 50 cents per year.
NOVA Scotia, Annual Report of the Secretary of Agriculture, for the year 1890. Halifax, Government. 310 p. 8°. \$1.
PANTOBIBLION: International Bibliographical Review of the World's Scientific Literature. Vol. I. No. 1. m. A. KERSHA, ed. (St. Petersburg, Paris, Leipzig, Bologna, London), New York, Appleton. 287 p. 8°. \$1.
SLOANE, T. O'C. The Arithmetic of Electricity. New York, Henly & Co. 138 p. 12°. \$1.

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aims of the Farmers' Alliance and kindred bodies. E. J. Renick of the Treasury Department explains and criticises the method of accounting employed by the United States Government. Gaillard Hunt of the Department of State contributes a chapter to the history of the nullification movement in South Carolina, and Professor Osgood of Columbia concludes his study of the political ideas of the Puritans. The number contains also the usual reviews of current political literature, and the semi-annual instalment of Professor Dunning's record of political events.

— Messrs. Houghton, Mifflin, & Co. have published "Noto: an Unexplored Corner of Japan," by Perceval Lowell. It is an account of a journey from Tokyo to a comparatively unknown province on the western coast, a journey, however, which proved rather unsuccessful, owing to the impassability of certain parts of the country. The book is written in an affected style, which is not to our taste, while it gives comparatively little information about the country visited. The author's personality is thrust con-

tinually into the foreground — a fault that books of travel are altogether too apt to have. Readers do not care a straw for the author's personal doings and adventures: what they want is a description of the country visited and of the people who inhabit it, and it is strange that travellers do not realize this. Mr. Lowell's book, however, does give some such information, if one has the patience to pick it out from the mass of irrelevant matter in which it is embedded.

— Photographers have long felt the need of a practical text-book on photographic optics, than which no subject connected with their work is more important for them thoroughly to understand. To meet the growing demand for such a text-book the Scovill & Adams Company, of this city, have just published "Photographic Optics," by W. K. Burton. The book is intended for the use of both professional and amateur, has good illustrations, sufficient in number for the purpose in view, and should add to the completeness of every photographer's equipment.

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