The Bermuda Islands. By ANGELO HEILPRIN. Philadelphia, The Author. 8°.

PROFESSOR ANGELO HEILPRIN, in the summer of 1888, made an excursion to the Bermuda Islands, in order to study certain points in the structure and physiognomy of coral reefs, for the study of which the Bermudas offer special advantages. The present volume is the result of his observations on this journey. His observations regarding the formation of the island are fully in accord with those of Darwin, but, as the author points out, do not prove the correctness of the Darwinian hypothesis. Elevations and subsidences are both shown to have marked the region in its development. The author devotes an elaborate chapter of his book to a discussion of the various theories of formation of coral reefs, and expresses himself rather in favor of the old theory of Darwin. Where the author's results regarding the theory of formation of coral reefs are mainly of a negative character, his zoögeographic i

Publications received at Editor's Office,

Nov. 18-23.

New Jersey, Annual Report of the Board of Education and the Superintendent of Public Instruction of, for the School Vear ending Aug. 31, 1888. Camden, State. 241 p. 8°.

Platt, J. Money. New York and London, Putnam. 267 p. 16°. 75 cents.

Rothschild. M. D. A Hand-Book of Precious Stones. New York and London, Putnam. 143 p. 16°8. \$1.

SHALER, N. S. Aspects of the Earth: A Popular Account of some Familiar Geological Phenomena. New York, Scribner. 344 p. 8°. \$4.

SPENCER, G. L. A Hand-Book for Sugar Manufacturers and their Chemists. New York, Wiley. 221 p. 16°. \$2.

THURSTON, R. H. The Development of the Philosophy of the Steam-Engine. New York, Wiley. 48 p. 16°. 75 cents.

TREVERT, E. Everybody's Hand-Book of Electricity. With Glossary of Electrical Terms and Tables for Incandescent Wiring. Boston, Damrell and Upham. 120 p. 12°. 25 cents.

Week's Talk, The. Vol. I. No. 1. w. New York, A. K. Steams & Co. 8 p. 4°. \$3.50 per year.

WILSON, W. The State, Elements of Historical and Practical Politics. Boston, Heath. 686 p. 12°. \$2.

Wood, De V. Thermodynamics, Heat Motors, and Refrigerating Machines. 3d ed. New York, Wiley. 452 p. 8°. \$4.

JUST PUBLISHED.

POPULAR MANUAL OF VISIBLE SPEECH AND VOCAL PHYSIOLOGY.

For use in Colleges and Normal Schools. Price 50 cents. Sent free by post by

N. D. C. HODGES, 47 Lafayette Place, New York. Published by Robt. Clarke & Co., Cincinnati.

Old and Rare Books.

Catalogue No. 29 nearly ready. Will contain many scarce works pertaining to Natural History, Americana, out of print books, as a whole, interesting.

A. S. CLARK,

34 Park Row, New York City.

BACK NUMBERS and complete sets of leading Magazines. Rates low. AM. MAG. EXCHANGE, Schoharie, N.Y.

NOW IN PRESS.

"FORT ANCIENT."

A large work of 200 pp. with 35 full-page illustrations on the greatest of all Ohio Valley Earthworks, and similar enclosures.

By Warren K. Moorehead, assisted by scientists from Washington.

It is compiled from a careful survey and is correct in all details.

The entire summer was spen? in surveying, excavating, photographing and preparing this work.

Fort Ancient consists of 18,712.2 feet of embankment, and in size, state of preservation and importance as an aboriginal fortification is unequalled in this country.

tance as an aboriginal to the control of this country.

Price of book, \$2 00.

It will be ready for sale Dec. 1st.

Illustrated prospectus mailed free to any address.

WARREN K. MOOREHEAD, Smithsonian Institution, Washington, D.C.

THE AMERICAN RAILWAY.

ITS CONSTRUCTION, DEVELOPMENT, MANAGEMENT, AND APPLIANCES.

WRITTEN BY THE MOST EMINENT AUTHORITIES IN ALL BRANCHES OF RAILWAY WORK.

With 225 Illustrations; 13 Maps; 19 Charts, many being colored; and a full index. Bound in half leather. 8vo, \$6.00 net.

CONTENTS: THE FREIGHT CAR SERVICE.

By Theodore Voorhees.

THE PREVENTION OF RAILWAY STRIKES.

Introduction by Judge Thomas M. Cooley, Introduction by Judge I Indems M. Cooley,
Chairman of Interstate Commerce CommissionTHE BUILDING OF A RAILWAY.
By Thomas Curtis Clarke.
FEATS OF RAILWAY ENGINEBRING.
By John Bogart.
AM ERICAN LOCOMOTIVES AND CARS.
By M. N. Forney.

RAILWAY MANAGEMENT

By Thomas Curtis Clarke.

FEATS OF RAILWAY ENGINEERING.

By John Bogart.

AMERICAN LOCOMOTIVES AND CARS.

By M. N. Forney.

RAILWAY MANAGEMENT.

By Gen. E. P. Alexander.

SAFETY IN RAILROAD TRAVEL.

RAILWAY PASSENGER TRAVEL.

By H. G. Prout.

By Gen. Horace Porter.

"This is, beyond all compare, the greatest American work on railways. It is difficult to devise a question on railway construction or management for which the answer may not be found in this book. It is a great book, and remarkably handsome beside."—N. Y. Heraid.

"One of the most interesting and valuable gift books of the season. The nearness of the theme, the authority of the writers, and the scope of the exposition make this a work for almost every class of adult readers."—N. Y. Evening Post.

THE VIKING AGE. The Early History, Manners, and Customs of the Ancestors of the English-speaking Nations.

Ancestors of the English-speaking Nations, Illustrated from the antiquities discovered in Mounds, Cairns, and Bogs, as well as from the ancient Sagas and Eddas. By PAUL B. DU CHAILLU. With 1,400 Illustrations. 2 vols., 8vo, \$7.50.
"These luxuriously printed and profusely illustrated volumes embody the fullest account of our Norse ancestors extant. Mr. Du Chaillu has gone very fully and very carefully over the whole of his ground. This extensive and important work must be of high interest to all English-speaking people."

—N. Y. Tribune.

ASPECTS OF THE EARTH. A Popular Account of Some Familiar Geological Phenomena, By N. S.

SHALER, Professor of Geology at Harvard. With 100 Illustrations. 8vo, \$4.00.

The general reader will find here an interesting and graphic account of those phenomena of the earth's surface—earthquakes, cyclones, volcanoes, rivers, forests, caverns, etc.—which most directly affect human life. The illustrations are many and artistic.

"The curiously close inter-relation between natural science and the progress and development of man is impressively shown in this great work,"—Boston Traveller.

 $spla_st^st$ For sale by all Booksellers, or sent, postpaid, on receipt of price, by the publishers,

CHARLES SCRIBNER'S SONS, 743-745 BROADWAY, NEW YORK.

ELECTRIC LIGHTING.

In the December Number of the

Mr. George Westinghouse, Jr., replies to Mr. T. A. Edison's article on the "Dangers of Electric Lighting," which appeared in the November number of the REVIEW.

This number contains, also, articles by the Rt. Hon. W. E. Gladstone, Justice J. P. Bradley, of the U. S. Supreme Court, Senator J. N. Dolph, Walter Damrosch, Roger Q. Mills, Marion Harland, Karl Blind, the Governors of Massachusetts and Connecticut, Charles T. Saxton, Andrew Carnegie, Lord Wolseley, Gen. J. B. Fry, Col. R. G. Ingersoll, and other eminent writers.

50 CTS. A COPY. \$5.00 A YEAR. For sale by all newsdealers.

THE NORTH AMERICAN REVIEW.

34 East Fourteenth St., New York.

NEW BOOK.

LOUISA M. ALCOTT:

Her Life, Letters, and Journals.

Edited by Ednah D. Cheney, with portrait and view of the Alcott Home in Concord. One vol., 16mo. Uniform with "Little Women." Price, \$1 50.

Nobody can read of the struggles of the Alcott family, and of the tender yet resolute heroism with which Miss Alcott met and relieved them, without being touched to tears by the pathos and reality of the picture. Louisa Alcott was not a member of any Church, but her belief in God, her loyalty to conscience, her fidelity to duty, her rescue of the Alcott family from its paculiar perils, place her among the women-saints of the century, and it will be hard to find any one of her sex who has more faithfully responded to the duties of the position in which God had placed her.—Boston Herald.

The pages from her journals are full of the shrewd observations, the kindly good sense, the overflowing humor, that, recognized at last, won her her fame, and the reading world will rejoice in their possession. The book is sure of permanent success, and of the widest and most affectionate of welcomes.—Commonwealth,

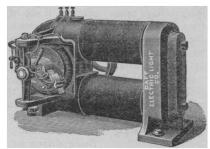
Sold everywhere. Sent, postpaid, on receipt of price by the Publishers,

ROBERTS BROS.. BOSTON, MASS.

DAFT ELECTRIC LIGHT COMPANY.

Power Stations.

Stationary Motors 1 2 to 100 H.P.



Electric Railways.

Car Motors 15 to 250 H.P.

Executive Office, 115 Broadway, N.Y. FACTORY, JERSEY CITY, N. J. Please Mention "Science."

Exchanges.

[Free of charge to all, if of satisfactory character. Address N. D. C. Hodges, 47 Lafayette Place, New York.]

Address N. D. C. Hodges, 47 Lafayette Place, New York.]

Morris's "British Butterflies," Morris's "Nests and Eggs of British Birds," Bree's "Birds of Europe" (all colored plates), and other natural history, in exchange for Shakesperiana; either books, pamphlets, engravings, or cuttings.— J. D. Barnett, Box 735, Stratford, Canada. I have Anadonta opatina (Weatherby), and many other species of shells from the noted Koshkonong Lake and vicinity, also from Western New York, and fossils from the Marcellus shale of New York, which I would be glad to exchange for specimens of scientific value of any kind. I would also like to correspond with persons interested in the collection, sale, or exchange of Indian relics.—D. E. Willard, Albion Academy, Albion, Wis.

Will exchange "Princeton Review" for 1883, Hugh Miller's works on geology and other scientific works, for toack numbers of "The Auk," "American Naturalist." or other scientific periodicals or books. Write.—J. M. Keck, Chardon, Ohio.

"I wish to exchange Lepidoptera with parties in the eastern and southern states. I will send western species for those found in other localities."—P. C. Truman, Volga, Brookings Co., Dakota.

Shells and curiosities for marine shells, curiosities or minerale address W. E. Lernh. No. 208 East Equity St.

Shells and curiosities for marine shells, curiosities or minerals address W. F. Lerch, No. 308 East Fourth St., Davenport, Iowa.

Davenport, 10wa.

A collection of fifty unclassified shells for the best offer in bird skins; also skins of California birds for those of birds of other localities. Address Th. E. Slevin, 2413 Sacramento St., San Francisco, Cal.

I have forty varieties of birds' eggs, side blown, first class, in sets, with full data, which I will exchange for books, scientific journals, shells, and curios. Write me, stating what you have to offer.—Dr. W. S. STRODE, Bernadotte, Fulton County, Ill.

I want to correspond and exchange with a collector of beetles in Texas or Florida.—Wm. D. Richardson, P.O. Box 223, Fredericksburg, Virginia.

100 botanical specimens and analyses for exchange. Send list of those desired and those which can be furnished, and receive a similar list in return. Also cabinet specimens and curiosities for the same. Scientific correspondence solicited.—E. E. Bogue, Orwell, Ashta. County, O.

I will sell to chapters or individual members of the Agassiz Association, 25 fine specimens of fossil plants from the Dakota group (cretaceous), correctly named, for \$2.50. Send post-office order to Charles H. Sternberg (author "Young Fossil-Hunters"), 1033 Kentucky Street, Lawrence, Kan.

Street, Lawrence, Kan.

Any one who has a botanical box in good condition wil please write. I will offer about 30 specimens in exchange. —C. B. Haskell, Box 826, Kennebunk, Me.

Lead, zinc, mundic, and calcite. — Lulu Hay, secretary Chapter 350, Carthage, Mo.

Drawings from nature — animals, birds, insects, and plants — to exchange for insects for cabinet; or I will send them in sets of ten each for ten cents in stamps. My drawings in botany are in detail, showing plant, leaves, flowers, seed, stamens, pistils, etc. —Alda M. Sharp, Gladbrook, Io.

A few first-class mounted birds, for first-class birds'

A few first-class mounted birds, for first-class birds' eggs of any kind in sets.—J. P. Babbitt, secretary Chapter 755, 10 Hodges Avenue, Taunton, Mass.

California onyx. for minerals and coins not in my col-ction. — W. C. Thompson, 612 East 141st Street, New

One mounted single achromatic photographic lens for making 4 × 5 pictures, in excellent condition; also one "new model" double dry-plate holder (4" × 5"), for fine geological or mineralogical specimens, properly classified.—Charles E. Frick, 1019 West Lehigh Avenue, Philadelphia, Penn.

The undersigned wishes to make arrangements for the exchange of *Lepidoptera* of eastern Pennsylvania for those from other localities. All my specimens are named and in good condition, — Charles S. Westcott, 613 North 17th Street, Philadelphia, Penn.

CALENDAR OF SOCIETIES.

Anthropological Society, Washington. Nov. 19. - J. Owen Dorsey, Some Omaha Religious Practices; W. H. Holmes, Ancient Chipped Stone Workshops on Piney Branch,

Connecticut Academy of Arts and Sciences, New Haven.

Nov. 20.—Professor Brewer, The Progress of the Topographical Survey of Connecticut; Professor Verrill, A Remarkable Illusion Apropos of Haunted Houses.

Bermuda Bottled.

"You must go to Bermuda. If you do not I will not be responsible for the consequences." "But, doctor, I can afford neither the time nor the money." "Well, if that is impossible, try

ÓF PURE NORWEGIAN COD LIVER OIL.

I sometimes call it Bermuda Bot-tled, and many cases of

CONSUMPTION.

CONSUMPTION,
Bronchitis, Cough

or Severe Cold

I have CURED with it; and the
advantage is that the most sensitive stomach can take it. Another
thing which commends it is the
stimulating properties of the Hypophosphites which it contains.
You will find it for sale at your
Druggist's but see you get the
original SCOTT'S EMULSION."

ANY OF Prof. A. MELVILLE BELL'S WORKS

Elocution — Visible Speech -Principles of Speech—Faults of Speech—Phonetics—Line Writing — World - English,

SUPPLIED BY

N. D. C. HODGES 47 Lafayette Place, N.Y.



CHANCE FOR ALL

GREATAMERICAN
TO Enjoy a Cup of Perfect
Tea. A TRIAL ORDER of 3½
pounds of Fine Tea, either Oolong, Japan, Imperial, Gunpowder, Young Hyson, Mixed. English Breakfast or Sun
Sun Chop, sent by mail on receipt of
\$2.00. Be particular and state what kind
of Tea you want. Greatest inducement
brated Teas, Coffees and Baking Powder. For full particullars address THE GREAT AMERICAN TEA CO.
P. O. Box 289.
SI and 33 Vesey St., New York.

IMPROVED OIL LIGHT MAGIC LANTERNS.

Also Lime and Electric Light Apparatus, and mechanical, plain, and fine colored views. J. B. COLT & CO., Manufacturers, No. 16 BEEKMAN STREET, NEW YORK.



E. & H. T. ANTHONY & CO. 591 Broadway, N.Y. Manufacturers and Importers of PHOTOGRAPHIC INSTRUMENTS.

Amateur Outhts in great variety, from 59,00 upward. Send for Catalogue or call and examine. Send for Catalogue or call and examine. Send for More than 40 years established in this line of business.

A TEMPORARY BINDER

for Science is now ready, and will be mailed postpaid on receipt of price.

Half Morocco - 75 cents.



This binder is strong, durable and elegant, has gilt side-title, and allows the opening of the pages perfectly flat. Any number can be taken out or replaced without disturbing the others, and the papers are not mutilated for subsequent permanent bind ing. Filed in this binder, Science is always convenient for reference.

N. D. C. HODGES,

47 Lafayette Place, N. Y.

YOUNG MAN can have lucrative engagement, not only a fixed salary, but according to his work accomplished in travelling for SCIENCE. A personal interview invited.

N. D. C. HODGES,

47 Lafayette Place, New York.