

tain, in Tuolumne county, California, and which has been usually described as basalt. The rocks are intermediate between the trachytes and andesites and are specially named 'latites.' Inasmuch as six other names have already been proposed for rocks of this general character, the author had a magnificent opportunity to resist the temptation to make a new one.

Bulletin 149. 'Bibliography and Index of North American Geology, Paleontology, Petrology and Mineralogy for 1896,' F. B. Weeks.

This bulletin continues the excellent series already represented by Nos. 127, 130, 135 and 146.

Bulletin 150. 'The Educational Series of Rock Specimens, collected and distributed by the U. S. Geological Survey,' J. S. Diller.

The petrography of the series is set forth by Mr. Diller and others. The work will be more fully reviewed elsewhere in SCIENCE.

Bulletin 151. 'The Lower Cretaceous *Gryphaea* of the Texas Region,' R. T. Hill and T. W. Vaughan.

This Bulletin has been reviewed in SCIENCE for January 20, 1899 (p. 110), by Professor Frederic W. Simonds.

Bulletin 152. 'Catalogue of the Cretaceous Plants of North America,' F. H. Knowlton.

Bulletin 153. 'Bibliographic Index of North American Carboniferous Invertebrates,' Stuart Weller.

Bulletin 154. 'A Gazetteer of Kansas,' Henry Gannett.

Bulletin 155. 'Earthquakes in California in 1896 and 1897,' Charles D. Perrine.

Bulletin 156. 'Bibliography and Index of North American Geology, Paleontology, Petrology and Mineralogy for 1897,' Fred. B. Weeks. The titles of Nos. 152-156 inclusive indicate the contents.

THE Macmillan Company announce the early publication of the second part of Dr. Davenport's 'Experimental Morphology, which treats of the effect of chemical and physical agents upon growth. They also announce 'A History of Physics; in its Elementary Branches Including the Evolution of Physical Labora-

tories' which has just been completed by Florian Cajori, Ph.D., professor of physics in Colorado College and author of 'A History of Mathematics.'

THE Open Court Publishing Company have now in press the 'Principles of Bacteriology,' by Professor Ferdinand Hueppe, of the University of Prague, translated by Professor E. O. Jordan, of the University of Chicago.

BOOKS RECEIVED.

Hand-book of Metallurgy. CARL SCHNABEL. Translated by HENRY LEWIS. London and New York, The Macmillan Company. 1898. Vol. I., pp. xvi + 876. Vol. II., pp. xiv + 732. \$10.00.

A Guide to the Study of the Geological Collections of the New York State Museum. FREDERICK J. H. MERRILL. Albany, University of the State of New York. 1898. Pp. 207 + 65 plates. 40 cents.

Earthenware of the New York Aborigines. WILLIAM M. BEAUCHAMP. Albany, University of the State of New York. 1898. Pp. 76 + 142. 245 illustrations. 25 cents.

The Last Link, our present Knowledge of the Descent of Man. ERNEST HAECKEL. London, Adam and Charles Black; New York, The Macmillan Company. 1898. Pp. 156. \$1.00

The Principles of Stratigraphical Geology. J. E. MARR. Cambridge, The University Press; New York, The Macmillan Co. 1898. Pp. 304. \$1.60.

Society for the Promotion of Engineering Education Sixth Annual Meeting, Vol. VI. Edited by T. C. MENDENHALL, J. B. JOHNSON and A. KINGSBURY. Published by the Society. 1898. Pp. xxvii + 324.

Traité de zoologie concrète. YVES DELAGE and EDUARD HÉROUARD. Vol. VIII., Les procordes. Paris, Schleicher Frères. 1898. Pp. vii + 379.

SCIENTIFIC JOURNALS AND ARTICLES.

THE New England Botanical Club has established a journal to encourage the study of the local flora. It has been given the name *Rhodora* and will be published monthly at 740 Exchange Building, Boston. The editor-in-chief is Mr. B. L. Robinson, with Messrs. F. S. Collins, M. L. Fernald and Hollis Webster as associate editors. The first number, which contain twenty pages and two plates, opens with an editorial announcement, followed by a number of inter-

esting articles and notes on the flora of New England.

THE initial number of the *Bulletin* of the Cooper Ornithological Club of California contains a biographical sketch, with portrait of Dr. James C. Cooper, after whom the Club is named. Among the other contributions is one on the 'Nesting of the Fulvous Tree-Duck,' showing that this species frequently deposits its eggs in the nests of other species, and also that it is either more prolific than any other duck, or that several females lay in one nest, 28 to 32 eggs being found on several occasions.

THE publication of the *Osprey* for December, 1898, brings this magazine down to date, and we are promised that there will be no delays in the future. The leading article, by E. W. Nelson, is devoted to a 'Morning with the birds on Mount Orizaba,' and there is an interesting account of the Sea-birds off the New England coast by H. K. Job. A fine plate of blue jays, by Fuertes, closes the number, but this, like the other illustrations, has suffered in the printing.

THE *Bulletin* of the U. S. Fish Commission for 1897, Vol. XVII. of the series, is mainly occupied with the papers read at the National Fisheries Congress, held at Tampa, Fla., in January, 1898. Among the other papers are accounts of the Salmon Investigation of the Columbia River Basin in 1896, and of the Salmon Fishery of Penobscot River and Bay in 1895 and 1896.

THE February number of *The Open Court* contains an article by Professor R. M. Wenley, of the University of Michigan, on the Gifford Lectureships, established with an endowment of \$400,000, by the late Lord Gifford, in the four Scottish Universities, for the purpose of encouraging research in natural theology. In his will Lord Gifford stated that he wished the lecturers to treat their subject strictly as a natural science—as astronomy or chemistry is treated. The present incumbents of the lectureships are: At St. Andrews, the Hebrew scholar, Professor Wellhausen, of Marburg; at Glasgow, the physiologist, Professor Foster, of Cambridge; at Aberdeen and Edinburgh, Professors Royce and James, respectively, professors of philosophy and psychology at Harvard University.

SOCIETIES AND ACADEMIES.

WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS.

THE 29th annual meeting of the Academy was held on December 27th and 28th last, at Milwaukee, with the President, Professor C. Dwight Marsh, of Ripon College, in the chair.

Professor E. A. Birge, Director of the State Geological and Natural History Survey, made a report on the general progress of the Survey. Dr. E. R. Buckley followed with a special report on Wisconsin building stones and Professor D. P. Nicholson on lake investigations. Professor C. R. Van Hise and others urged that the recommendation of the Academy for the continuation and extension of the Survey be presented formally to the Legislature. A committee was appointed for this purpose.

It was voted as the sense of the meeting that the library of the Academy should be put in the custody of the State Historical Society when the latter should remove its own library to the new building provided for it by the State. The library of the Academy has become important, especially in the line of transactions of foreign societies, and it is expected that suitable rooms will be available for it in the new building.

Mr. Ernest Bruncken, Secretary of the State Forestry Commission, reported on the legislation which the Commission will endeavor to gain the present winter. Three lines of effort will be recommended: (1) to establish a complete corps of fire wardens and efficient supervision thereof; (2) to study conditions of forest growth, both in the forest itself and at experiment stations; (3) to educate public opinion.

The program of the meeting contained, together with other papers, the following of a scientific nature:

'Lake temperatures.' E. A. Birge.

'Contributions from the histological laboratory of the University of Wisconsin.' W. S. Miller.

'Further facts in relation to the succession-period of generations.' C. H. Chandler.

'Lantern Projections of Three Dimensional Curves and Surfaces,' and 'Theoretical Investigation on the Motion of Ground Waters—III, Mutual Interference of two or more Artesian Wells.' C. S. Slichter.