

the guise of one in biology. Whether it agrees with the original meaning of the word "biology" or not, I care but little, for many other words of our language are very far to-day from their original significance, while a study of the principles shown by "matter in its living state," is certainly not very far from the significance of the words from which "biology" is derived.

H. T. FERNALD.

State College, Pa., June 9.

#### BOOK-REVIEWS.

*Fifteenth Annual Report of the State Board of Health of the State of Connecticut, for the Seven Months Ending June 30, 1892.*  
New Haven, 1893.

IN addition to the customary features, the statistics upon the health of towns and the reports of local boards of health, this volume contains three papers under the heading "Miscellaneous." The first of these is by Dr. Herbert E. Smith, upon "Connecticut River Water as a Source of Typhoid Fever at Hartford." The unusual number of cases of typhoid fever in Hartford in the winter of 1891-92 led to an investigation by Dr. Smith, under the auspices of the State Board of Health. Dr. Smith has fixed the responsibility for the outbreak upon the water of the Connecticut River, which was supplied to citizens of Hartford during a large part of the months of October, November, and December. The period when the disease specially prevailed "corresponds with the time when cases originating in the use of the river-water must have appeared." From the evidence adduced by Dr. Smith there seems every reason to believe that typhoid germs, carried to the consumer by the river-water, were the cause of some fifteen deaths that otherwise might not have occurred. Dr. Smith suggests that the germs might have come from the sewers of Springfield, twenty-five miles up stream, and this seems certainly a likely supposition, if we are to judge from the history of similar epidemics.

The paper which follows this is by Dr. Charles J. Foote, upon "The Filtration of Water." It relates some experiments upon the Pasteur-Chamberlain filter, certain of which seem to indicate that defective packing around the porcelain may lead to the appearance of germs in the filtrate. As a result, partly of his own, partly of others' investigations, Dr. Foote concludes with the following practical advice: "We may conclude then, first, that the porcelain cylinder of a Pasteur filter should be cleansed once a week at least by boiling in water for an hour. A simple washing is not sufficient, since, when the porcelain is replaced, the living bacteria still remain in its pores and come through into the filtrate as soon as the water is turned on; second, that the filter should not be put in a position where it is near a range or any other apparatus giving out much heat, but put in a cold place; third, that a properly-constructed filter should be obtained, so that there is no chance of a leak around the packing."

The third paper is entitled, "Abstracts from a paper on the Duty of Public Disinfection following Acute Infectious Diseases," and is a remarkable production, as the following pregnant sentences may suggest: "One afternoon last December I sat upon the deck of the revenue cutter, 'Lot Morrill,' with the secretary of our State Board of Health." . . . "Smallpox has been lashed to hell by the agent vaccination, and like a whimpering hound is held securely in leash." . . . "Arms, arts, literature, science, all have their rewards, but not one of them surpasses in the magnificence of its gifts those of which the god-like science, medicine, is capable."

*The Archæan Formation of the Abukuma Plateau.* By B. KOTO.  
Journal of the College of Science, Imperial University, Japan.  
Vol. V., 1893. Plates.

THIS article of nearly one hundred pages and six well-executed plates shows us that Japan is not behind the western countries in scientific studies. Except a few cabalistic signs on the cover, and a few more on one page at the end of the article and a foot-note

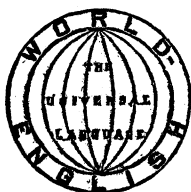
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or two, there is nothing to indicate that it might not have come from an English or American printing office. Yet the whole of it, plates and text, is the product of a Japanese office. It is also a striking example of the extended use of the English tongue when a paper of this character appears in our language instead of French or German.

The paper is the result of several years of study by the author, and shows great industry and research. The Archæan is divided into an upper and lower division. In the former are placed the Gozaisho and Takanuki series, and in the latter the Laurentian. The Gozaisho series is estimated to have a thickness of 10,000 metres. The Takanuki series was found too distorted to estimate the thickness. Many details of sections are given, and there is also an extended discussion of the origin of the various rocks, and of their lithological characters. The paper is worthy the attention of students of the Archæan formations.

JOSEPH F. JAMES.

May 5.

*The Microscopical Examination of Potable Water.* By GEO. W. RAFTER. New York, D. Van Nostrand Company. 160 p. 18°. 50 cts.

THIS little book, forming No. 103 of the Van Nostrand Science Series, fully bears out the character of preceding volumes, and, like them, will be well received by all. The plain language used puts it at once within the limits of beginners in microscopical water analysis, and, at the same time, it affords a handy *résumé* of work done for the use of the professional student. Care has evidently been taken by the author to give as completely as possible "the state of the art" to the date of issue, and in this particular the book is in advance of some of its more pretentious rivals.

It is divided into two parts, the first treating the subject qualitatively, the second quantitatively, while appended is a bibliography of water examinations, both from the chemical and biological standpoint. These two fields of research, chemical and

biological, are each given their proper place throughout the volume, and, more fairly than is usually the case, the author believes them of equal value when in conjunction with a study of environment, and equally valueless when used alone. It has become a habit among biologists, latterly, to decry chemical methods altogether, while chemists, in their turn, have been rabid in their defence, hence the stand taken by Mr. Rafter is particularly refreshing, and the more so that he is eminently a biologist, and has arrived at his conclusions through calm reasoning. C. P.

#### AMONG THE PUBLISHERS.

WE have received from D. Appleton & Co., their "Guide Book to Alaska and the Northwest Coast," prepared by Eliza R. Scidmore. It gives a quite minute description of the whole coast of North America, from the Strait of San Juan de Fuca to the Aleutian Islands, with brief notice of the more northern portions of the great Alaskan peninsula. Though written for tourists, it is by no means confined to the superficial aspects of the country, but gives attention to the geographical features, the industries and commerce, the mountains and glaciers and the native tribes, presenting a larger amount of information than might be expected in a book of one hundred and fifty pages. Such a book is necessarily a compilation from various sources; but the author has evidently studied the best authorities, and has supplemented them by her own observations. The country described has certain special attractions for tourists, especially those of scientific proclivities, since the geological formations, the flora and the native inhabitants present some remarkable peculiarities. Many scientific observers, as well as other tourists, have already visited the region, especially its southern part; yet even now it is so little known that visitors who wish to see as much as possible there will find a guide-book indispensable. To such persons, therefore, this handy volume, which is well illustrated with maps and pictures, cannot fail to be useful.

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For sale.—Wheatstone Bridge wire, made to order, new and unused. Price, \$10. W. A. Kobbe, Fortress Monroe, Va.

For sale or exchange.—One latest complete edition of Watt's Dictionary of Chemistry, in fair condition; one thirty volume edition (9th) of Allen's Encyclopædia Britannica, almost new. Will sell cheap for cash or will exchange for physical or chemical apparatus. Address Prof. W. S. Leavenworth, Ripon College, Ripon, Wis.

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The Rev. A. C. Waghorne, New Harbor, Newfoundland, wishes to sell collections of Newfoundland and Labrador plants, all named by competent botanists. He is going on a missionary journey along the Labrador coast, from the middle of July till October, and in return for much needed aid towards (Episcopal) Church purposes in that region, will be glad to be of service to any botanists who may write to him. Letters posted in the U. S. up to July 1 will reach him at the above address, and if posted later will be forwarded.

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