

Moreover, when we remember what unexplainable cases of inheritance occur, such as special movements during sleep, we must admit that even the tendency in a snake to incubate its eggs may also be transmitted, the more so as we have an indisputable inheritance of the same nature daily shown us in the case of birds, for the tendency of the parents to incubate their young is in all cases inherited by the offspring.

CLEMENT FEZANDIE.

686 Lexington Avenue, New York.

#### Another Ancient Argillite Quarry Near Trenton,

ON the left bank of Neshaming "Creek," Bucks County, Pennsylvania, about three-fourths of a mile above the mouth of Labaska or Mill Creek, I discovered at the base of the cliffs of metamorphosed slate that there overhang the stream, on June 23, another ancient work-shop where blocks of argillite, lying *in situ*, have been chipped into "turtle-backs."

A layer of chips, hammer-stones, and the now familiar rude leaf-shaped forms is laid bare for several hundred yards where the stream has worn away the margin. The blocks of workable stone in various instances show peckings upon their sides, as do similar specimens at Point Pleasant, inferably made by the ancient workmen to split them with the grain.

No search has yet been made for diggings and refuse-heaps higher up the slope, nor has excavation been made into the exposed layers; but thus far the story of the workings on Gaddis' Run, near Point Pleasant (Bucks County, Pennsylvania), discovered on May 22, seems to be repeated, though on a smaller scale. There we were twenty-five miles from Trenton; here we are but fifteen.

H. C. MERCER.

#### Do Nestlings Drink.

This question suggested itself to my mind very lately, when I observed the following, and to me, entirely new fact:

A piazza-roof, on which my windows open, is provided with a

shallow gutter, in which there is a considerable accumulation of the winged seeds from a neighboring tree. These were standing in shallow water, left there by the recent rains.

I observed a robin alight on the roof, and noticed that she picked from the gutter a bunch of those seeds, which she held in her bill while she seemed to be preparing to fly away.

Presently, apparently dissatisfied with what she had picked up, she dropped the seeds, and moving to a place where they were lying in a thicker bed, she gathered a much larger mass of them, about as many as her bill would hold together. After gathering them and satisfying herself that she had enough, she deliberately dipped the mass into the water and flew away with it to a distant tree. Perhaps some of your readers may suggest a truer explanation; but to me she seemed to be carrying a supply of water to her brood in what was no inadequate substitute for a sponge.

FRANCIS PHILIP NASH.

Geneva, N. Y., June 28.

#### BOOK-REVIEWS.

*Logarithmic Tables.* By PROFESSOR G. W. JONES. Ames, Iowa, the Author.

THE title of this book does not exactly describe its contents. The strictly logarithmic tables are only about one-half of those given. The arrangement of the tables, of which there are eighteen, has been made to meet the wants of those who desire to have, in a handy form, tables to be used in computations covering a wide range. Table I. is a four-place, of numbers from 1 to 1,000, followed by one of the same accuracy giving the six principal trigonometric functions, and of the lengths of arcs in radians. The first five degrees of the quadrant are given to each five minutes, the following to each ten minutes, with differences for single minutes. A table giving the squares, cubes, square-roots, cube-roots, and reciprocals of the numbers 1, 2, 3, 99 is also given. Table III. is a six-place table of numbers, the side numbering being carried to only three figures instead of four, as is usual in

#### CALENDAR OF SOCIETIES.

Agassiz Scientific Society, Corvallis, Ore.

June 14.—Dr. Pernot, Aphasia.

#### Reading Matter Notices.

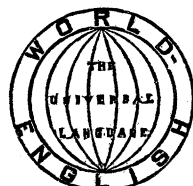
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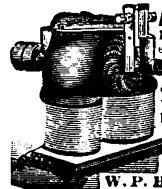
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such tables. In Table IV. will be found all of the useful constants used in mathematics, chemistry, engineering, physics, and weights and measures. This table is a very complete one, containing, as it does, reference to almost every standard and constant used in the arts and science. Table V. is a reprint of the Gaussian six-place addition-subtraction logarithms. For determining trigonometric functions, there are two tables, the four-place already mentioned, and also a six-place table. The latter is a departure from the usual method. Generally, in a six-place table, the functions are given for each ten seconds. Professor Jones has made up the table for each minute of the quadrant, the proportional part being given for each second. The tables that follow those just explained consist of prime and composite numbers, squares, cubes, square-roots, cube-roots, reciprocals, and quarter-squares. Finally, we have Bissel's table of coefficients for interpolation, and a table containing the integral for finding the mean or probable error of a result in least squares. We judge from our examination that Professor Jones has prepared the tables with great care. He seems exceedingly anxious to free them of all errors, and to induce that condition of things he offers a reward for an error found in the tables. We have not critically examined the tables, but we note a slight error in the text. On the first page the reference to the pages containing Table IX. should read 118-133 instead of 114-133. We would commend these tables to the computer as being a help to have on one's desk.

G. A. H.

*Pioneers of Science.* BY OLIVER LODGE, F. R. S., Professor of Physics in Victoria University College, Liverpool, with Portraits and Illustrations. London, Macmillan & Co. 404 p. 8p. \$2.50.

In this work, Dr. Lodge has given the general public and the student a very interesting and readable book. As he states in his preface the book had its origin in a course of lectures on the history and progress of astronomy, delivered by the author in 1887. As is often the case with books based on a course of lect-

ures, it is somewhat disjointed. It is full, however, of interesting matter, and is lavishly illustrated, an unusual feature in works of this class. Its title is unfortunately misleading as the author does not attempt to cover the whole growth of scientific knowledge, but confines himself to astronomy. The book, however, is unique in the endeavor by means of plain, unaffected writing and a wealth of illustration to bring the pioneers of celestial knowledge into almost personal acquaintanceship with the reader, tracing the history of their discoveries and the dependence of one discovery upon another. It is to be commended to students of the history of science as a most useful reference book, and to the general reader as a book at once entertaining and instructive.

J. E. I.

#### AMONG THE PUBLISHERS.

THE career of the late Sir Richard Burton, the distinguished traveller, was most adventurous and romantic. He was an encyclopædic scholar, and much more than a scholar. He knew and had seen more of dark Africa than most men, and more of Mohammedan lands than any man. His biography, by Lady Burton, will be published shortly by D. Appleton & Co. The book will be decorated with illustrations and maps, as well as portraits. The first part of the story, it is said, will in the main be told in Sir Richard's own words.

—The weekly paper known for the last twenty-five years as *The Christian Union* with its first issue for July changes its title to *The Outlook*. It will remain unchanged in other respects, except in the line of improvement and enlargement. It will be, as before, a family paper, non-denominational in religious matters, and giving large space to the current history of our times; to literature, economics and progressive movements of all sorts, and to home life. The Rev. Dr. Lyman Abbott will remain as its editor-in-chief, with Mr. Hamilton W. Mabie as his associate, and an editorial staff of several members.

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I wish to exchange a collection of 7,000 shells, 1001 species and varieties, American and foreign, land, fluviatile and marine, for a good microscope and accessories. Address, with particulars, Dr. Lorenzo G. Yates, Santa Barbara, California.

For exchange.—I wish to exchange Lepidoptera of South Dakota and other sections, for Lepidoptera of the world. Will purchase species of North America. Correspondence solicited, particularly with collectors in the Rocky Mountains, Pacific coast and Hudson's Bay regions. P. C. Truman, Volga, Brookings county, South Dakota.

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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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#### Wants.

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