

"Exercises in Euclid," by William Weeks; "Utility of Quaternions in Physics," by Alexander McAulay.

In the Clarendon Press list are:—Locke's "Essay concerning Human Understanding," edited by Dr. A. C. Fraser; "Mathematical Papers of the late Prof. Henry J. S. Smith, with portrait and memoir, two volumes; "A Supplementary Volume to Prof. Clerk Maxwell's Treatise on Electricity and Magnetism," by Prof. J. J. Thomson, F.R.S.; "A Manual of Crystallography," by Prof. M. H. N. Story-Maskelyne, F.R.S.; "Analytical Geometry," by W. J. Johnston; "A Treatise on the Kinetic Theory of Gases," by Dr. H. W. Watson, new edition; "An Elementary Treatise on Pure Geometry," with numerous examples, by J. W. Russell; "Index Kewensis Nominum Omnium, Generum et Specierum, Plantarum Phanerogamarum, 1735-1885, Part I.; "Hospital Construction," by Sir Douglas Galton, F.R.S.

Messrs. Swan Sonnenschein and Co.'s list contains:— "Philosophy and Political Economy in their Historical Relations," by Dr. James Bonar; "Appearance and Reality," by F. H. Bradley; "The Principles of Psychology," by G. F. Stout; "History of Philosophy," by Dr. Johann Eduard Erdmann, translated and edited by Prof. Williston S. Hough, third edition, revised, three volumes; "A Student's Text-Book on Botany," by Prof. Sidney H. Vines, F.R.S., copiously illustrated; "Text-book of Embryology: Invertebrates," by Drs. Korschelt and Heider, translated and edited by Dr. E. L. Mark and Dr. W. M. Woodworth, fully illustrated; "The Cell: its Anatomy and Physiology," by Dr. Oscar Hertwig, translated and edited by Dr. H. J. Campbell, fully illustrated; "Text-Book of Palæontology for Zoological Students," by Theodore T. Groom, fully illustrated; "Lectures on Human and Animal Psychology," by Prof. Wilhelm Wundt, translated and edited by James Edwin Creighton and Edward Bradford Titchener; "Hand-book of Systematic Botany," by Prof. E. Warming, translated and edited by M. C. Potter, fully illustrated; "An Elementary Treatise on Practical Botany," by Prof. E. Strasburger, translated and edited by Prof. W. Hillhouse, with 140 illustrations, third edition; "The Photographer's Pocket Book," by Dr. E. Vogel, translated by E. C. Conrad, with 63 illustrations; "How Nature Cures," by Dr. Emmet Densmore; "Beauty and Hygiene for Women and Girls," by a Specialist; "A Popular History of Medicine," by Edward Berdoe, M.R.C.S.; "Introduction to the Study of the Amphioxus," by Dr. B. Hatschek and James Tuckey, illustrated; "Practical Bacteriology," by Dr. Migula, translated and edited by Dr. H. J. Campbell, illustrated; "Geology," by Dr. Edward B. Aveling, illustrated with a Geological Map and numerous woodcuts; "Zoology," by B. Lindsay, illustrated; "Fishes," by the Rev. H. A. Macpherson; "Flowering Plants," by James Britten; "Grasses," by W. Hutchinson; "Mammalia," by the Rev. H. A. Macpherson.

Messrs. George Philip and Son will publish:—"Philip's Atlas Guide to the Continent of Europe," a series of 72 plates, with descriptive letter-press, by J. Bartholomew; "Philip's Systematic Atlas for Higher Schools and General Use," a series of physical and political maps, with diagrams and illustrations of astronomy and physical geography, by E. H. Ravenstein; "Philip's Anatomical Model of the Human Body," illustrating the construction of the Human Frame and the relative positions of its various organs by means of superimposed plates printed in colours; "The Celestium, or Patent Astronomical Calendar for recording and illustrating in miniature the daily and hourly positions of the heavenly bodies as they pass through the Sign of the Zodiac."

Messrs. Percival and Co. give notice of:—"The School Euclid," an edition of Euclid, Books III. to VI., with notes and exercises, by Daniel Brent; The Beginner's Text Books of Science: "Chemistry," by G. Stallard; "Geology," by C. L. Barnes; "Electricity and Magnetism," by L. Cumming; "Heat," by G. Stallard; "Light," by H. P. Highton; "Mechanics" (treated experimentally), by L. Cumming; "Physical Geography," by C. L. Barnes; "Practical Physics," an introductory handbook for the physical laboratory, in three parts, by Prof. W. F. Barrett; Part II. Heat, Sound, and Light. Part III. Electricity and Magnetism, Electrical Measurements; "Practical Lessons and Exercises in Heat for use in schools and Junior University classes, by A. D. Hall.

In Messrs. A. and C. Black's announcements we notice:—"Illustrated Text-Book of Invertebrate Zoology," by A. E. Shipley; "History of Astronomy during the

Nineteenth Century," by Agnes M. Clerke, third edition, revised and enlarged; "Algebra, an Elementary Text-Book for the Higher Classes of Secondary Schools and Colleges," by Prof. George Chrystal, Part I., third edition.

Messrs. Crosby Lockwood and Son have in hand:—A new and enlarged edition (the third) of Prof. R. Wallace's "Farm Live Stock of Great Britain," containing additional phototype engravings of notable specimens of live stock; and a new volume by Prof. Sheldon on "British Dairying."

Mr. Walter Scott will issue in the "Contemporary Science Series":—"Modern Meteorology," by Dr. Frank Waldo, with 112 illustrations.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

OXFORD.—Two Radcliffe Travelling Fellowships, each of the value of £200 per annum, and tenable for three years, have been awarded this week. One, which has been gained by Mr. E. A. Minchin, of Keble College, was thrown open last year to candidates in all branches of science, and the usual declaration that the Fellow intends to graduate in medicine and to travel abroad with a view to his improvement in that study has been dispensed with. Mr. Minchin was placed in the first class in the Honour School of Natural Science (Morphology) in 1890. The other Fellow, Mr. W. Ramsden, of Keble College, is subject to the usual conditions attached to these Fellowships. Mr. Ramsden obtained a first class in Natural Science (Physiology) in 1892.

The new laboratories for the department of human anatomy are rapidly approaching completion, and will, when finished, add very much to the convenience and advantages of medical students. The buildings have been designed after the plans of Mr. Arthur Thompson, and include a large dissecting room and several additional laboratories and private rooms, a lecture theatre, and a large basement.

CAMBRIDGE.—The Council of the Senate report that the Royal Geographical Society have renewed their generous offer to provide £150 a year as part of the stipend of a geographical lecturer for the ensuing five years, and to award biennially exhibitions or prizes for the encouragement of geographical research in the University. The Council recommend that the proposals of the society be accepted, and that a lecturer be appointed, under the supervision of a joint committee of management, before the end of the Easter Term, 1893.

The Sedgwick Memorial Syndicate report that they have made certain alterations in the plans for the proposed Geological Museum in Downing Street, with a view to meeting objections that were raised and to reducing somewhat the cost of the building. The Syndicate ask to be authorised to obtain tenders for the immediate construction of the museum.

SCIENTIFIC SERIALS.

American Meteorological Journal, February.—Hot winds in Texas, May 29 and 30, 1892, by I. M. Cline. Hot winds occur to some extent every year, but rarely with sufficient intensity to injure vegetation. It was estimated that in the present case 10,000 acres of cotton were destroyed, and corn suffered severely. The temperatures reported ranged generally from 90° to 100°, and in some parts from 105° to 109°. These winds appear to have resulted from the same causes which produce the Föhn in Switzerland, the descent of dry air which has deposited its vapour during its ascent.—The electrification of the lower air during auroral displays, by A. McAdie. The author gives an account of some experiments made at Blue Hill observatory, for obtaining, by means of a kite flown during thunderstorms, a better record of the potential of the air than could be given by a collector near the ground, by which plan some remarkable results were obtained, and he suggests similar experiments for showing the electrification of the lower air during displays of aurora. He also proposes a new classification of the various auroral phenomena, distinguishing between the highly coloured displays, and those of less intensity, which probably occur in the lower atmosphere.—Practical koniology, by Prof. Cleveland Abbe. He applies this term to the study of atmospheric dust and floating germs, and shows how their injurious effects on