

Mr. Grant Richards announces:—"The Philosophy of Greece, considered in relation to the Character and History of the People," by Alfred W. Benn.

Messrs. Routledge and Sons' list contains:—New editions of Stonehenge's "The Horse," revised by Harold Leeney; and of "The Microscope: its History, Construction, and Application," by Dr. Jabez Hogg.

Messrs. Schleicher Frères (Paris) call attention to:—"La Fatigue intellectuelle," by A. Binet and V. Henri, illustrated; "Contribution à l'Étude de la Méthode dans les Sciences expérimentales," by Louis Favre; and "Traité complet des Variations du Système Musculaire de l'Homme et de leur signification au point de vue de l'Anthropologie Zoologique," by Prof. le Double.

Mr. Gustav Schmidt (Berlin) will issue:—"Die Alpenpflanzen in der Gartenkultur der Tiefländer," by Erich Wocke, illustrated.

The list of the Scientific Press, Ltd., is as follows:—"An Atlas of Bacteriology," by Charles Slater and Edmund J. Spiita; "Hospital Expenditure: the Commissariat," reprinted from the *Hospital*; "Some Medical Aspects of Education," by Dr. Percy G. Lewis. The "Burdett Series"—"The Rational Use of Antiseptics in Midwifery Practice," by Dr. James Morrison; "Nursing of Sick Children," by Dr. J. D. E. Mortimer; "Mental Nursing," by Dr. William Harding.

Messrs. Walter Scott, Ltd., promise:—"The Natural History of Digestion," by Dr. A. Lockhart Gillespie, illustrated; "Degeneracy: its Causes, Signs, and Results," by Prof. Eugene S. Talbot, illustrated (the Contemporary Science Series).

The S. P. C. K.'s list contains:—"British Birds," by Dr. R. Bowdler Sharpe, illustrated in colours; "Matter, Ether, and Motion, the Factors and Relations of Physical Science," by Prof. A. E. Dolbear, with diagrams.

Messrs. Swan Sonnenschein and Co., Ltd., give notice of:—"Aristotle's Psychology, including the Parva Naturalia," translated and edited, with Commentary and Introduction, by Prof. William A. Hammond; "Ethics," by Prof. W. Wundt, translated from the second German edition, vol. iii. "The Principles of Morality and the Sphere of their Validity," translated by Prof. E. B. Titchener; "Physiological Psychology," by Prof. W. Wundt, translated by Prof. E. B. Titchener, 2 vols. illustrated; "History of Contemporary Philosophy," by Prof. Friedrich Ueberweg, edited by Prof. Max Heinze, translated by Prof. W. A. Hammond; "Text-Book of Palæontology for Zoological Students," by Theodore T. Groom, illustrated; "Text-Book of Embryology: Invertebrates," by Profs. Korschelt and Heider, vol. ii. "Crustacea and Arachnoids," translated by Matilda Bernard, and edited by Martin T. Woodward, illustrated; "Elementary Text-Book of Botany," by Prof. Sydney H. Vines, illustrated; "Eclipses of the Moon from A.D. 300 to 1900," by Robert Sewell; "Common Salt, its Use and Necessity for the Maintenance of Health and the Prevention of Disease," by C. Godfrey Gümpel; "Fishes," by the Rev. H. A. Macpherson (Young Collector Series); "Grasses, Handbook of," by W. Hutchinson, illustrated (Young Collector Series); "Mammalia," by the Rev. H. A. Macpherson (Young Collector Series); "Birds' Eggs and Nests," by W. C. J. Ruskin Butterfield (Young Collector Series); and new editions of "Text-Book of Embryology: Man and Mammals," by Prof. Oscar Hertwig, translated by Prof. E. L. Mark, illustrated; "Handbook of Practical Botany, for the Botanical Laboratory and Private Student," by Prof. E. Strasburger, edited by Prof. W. Hillhouse, illustrated; "Ants, Bees, Wasps, and Dragon-flies," by W. H. Bath; and "Fungi, Lichens, &c.," by Peter Gray, in the Young Collector Series.

The list of Messrs. Thacker and Co. contains:—"The Medical Monograph" Series, edited by Dr. David Walsh. A new series of medical monographs, dealing with subjects of everyday practice, and embodying all recent scientific advances.

The announcements of the University Correspondence College Press include:—First Stage "Physiology," "Botany," "Hygiene," "Inorganic Chemistry (Practical)," by Dr. F. Beddow; "Agriculture," "Advanced Magnetism and Electricity," by Dr. R. W. Stewart; "Advanced Inorganic Chemistry (Theoretical)," "Tutorial Algebra," Part ii. "Advanced Course," Part i. "Elementary," by Wm. Briggs, and Prof. G. H. Bryan, F.R.S.; "Manual of Psychology," by G. F. Stout, vol. i.; "Text-Book of Botany," by J. M. Lowson; and "Introduction to Carbon Compounds," by Dr. F. Beddow.

In Mr. Fisher Unwin's list we find:—"Through New Guinea

and the Cannibal Countries," by Captain H. Cayley-Webster; "The Psychology of Peoples," by G. Le Bon, translated by M. Derechef; and "Life of Man on the High Alps: Studies made on Monte Rosa," by Prof. A. Mosso, translated by Mr. and Mrs. Kiesow.

Messrs. Ward, Lock, and Co., Ltd., announce:—"With Nansen in the North," by Lieut. Hjalmar Johansen, illustrated; and "Fishing and Fishers," by J. Paul Taylor.

Messrs. Whittaker and Co. will issue:—"The Inspection of Railway Material," by G. R. Bodmer; "Electro-Mechanical Series," adapted from the French of Henry de Graffigny by A. G. Elliot, vol. iii. "Electro-Chemistry," vol. iv. "Electric Distribution"; "Central Station Electricity Supply," by Albert Gay and C. H. Yeaman; "Elementary Mathematics: Arithmetic, Geometry and Algebra," by J. L. S. Hutton and G. Bool; "Lathes: English and American," by J. Horner; "Electric Wiring, Fittings, Switches and Lamps," by W. Perren Maycock; "Outlines of Physical Chemistry," by Prof. A. Reychler, translated by Dr. J. McCrae; "Electric Traction," by J. H. Rider (Specialist's Series); "Horseless Road Locomotion: its History and Modern Development," by A. R. Sennett, 2 vols. illustrated.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

THE distribution of medals, prizes, &c., to students of the Royal College of Science, South Kensington, will take place on Thursday, October 6, at 2.30 p.m., in the Lecture Theatre of the Museum of Science and Art. Sir Norman Lockyer, K.C.B., F.R.S., will deliver an address upon this occasion.

DR. GEORG KLEBS, professor of botany at Basle, has been called to Halle, and is succeeded at Basle by Dr. Wilhelm Schimper, assistant professor at Bonn.

DR. JAMES LEICESTER, late chief lecturer on chemistry and metallurgy at the Merchant Venturers' Technical College, Bristol, has been appointed as head of the chemical department at the Municipal Technical College at Derby.

THE anniversary of the birth of Michael Faraday was commemorated on Thursday last at the "Michael Faraday" Board School, Walworth, by a gathering of the boys and girls of the upper standards in one of the large rooms to hear a commemorative address from Dr. Gladstone, F.R.S. A bust of Faraday which had been presented to the school by the Royal Institution was prettily decorated with plants brought by the children, and round the walls were cards giving some of the chief facts relating to Faraday's career. Every encouragement should be given to the adoption of such means as these for keeping in mind the work and high character of men like Faraday, and so inspiring a spirit of emulation.

THE following items from the *London Technical Education Gazette*, concerning the new session just commenced in the eleven polytechnics of London, are worthy of mention:—At Battersea Polytechnic special attention is being devoted to the organisation of preliminary courses in technical arithmetics mensuration and elementary physics, chemistry and mechanics adapted to the requirements of trade students. It is of great importance that young students before commencing the regular technical and trade classes should be provided with a sound elementary training in the above subjects. The syllabus recently issued by the Technical Education Board has called attention to the need for such instruction, and at many of the polytechnics and technical institutes students can now find opportunities for acquiring it.—Among the principal developments at the Borough Polytechnic is a new bakery, which has been built and equipped in the most complete manner, and provides exceptions accommodation and facilities for the teaching of baking. A new physical laboratory has also been erected.—At the Woolwich Polytechnic great additions have also been made last session by the erection of a new wing containing chemical and physics laboratories and increased accommodation for art teaching. special laboratory has also been erected for the teaching mechanical engineering, a subject which is naturally much in demand among the employees of the Arsenal.—In the day engineering department at the South-Western Polytechnic a civil engineering section has been added to the sections for mechanic and electrical engineering.—At the Regent Street Polytechnic

new departure has been made by the establishment of a school for carriage builders.—The opening of the new session at the Northampton Institute is marked by several important developments. Rooms have been specially fitted up for the teaching of electro-chemistry in special relation to the trades of the district, and valuable courses in electrolysis, electro-plating and electro-typing have been arranged. A metallurgical department has also been established, and a special laboratory has been fitted up in connection with it. Special classes for opticians have been arranged in conjunction with the Spectacle-makers' Company, a laboratory has been equipped for the practical teaching of optics, and a graded series of examinations has been drawn up.

THE work of the two London polytechnics which are independent of the Board's Technical Education aid, the East London Technical College and the Goldsmiths' Institute, continues to show increased activity. In the chemical department at the Goldsmiths' Institute a special course has been organised for brewers and sugar refiners; while the art department continues to take a leading position among the art schools of the country. At the East London Technical College (People's Palace) last year's work has been marked by conspicuous success, the college having secured an open science scholarship at Merton College, Oxford, two Whitworth exhibitions of 50*l.*, and two National scholarships, besides numerous other distinctions.

A SERIES of articles upon Dr. John Radcliffe, the generous benefactor of Oxford University, has recently appeared in the *Pharmaceutical Journal*. Dr. Radcliffe was born in 1650, the year after the execution of Charles I. He went to London in 1684, and rapidly became a most successful, though eccentric, physician. He died in the year 1714, leaving the great bulk of his large fortune, consisting of money and of lands and houses in Yorkshire, Northamptonshire, Bucks, and Surrey to Oxford University. He bequeathed 40,000*l.* to build a library in Oxford, with 150*l.* a year for the salary of the librarian, and another yearly 100*l.* for the purchase of books. The Radcliffe Library, one of the finest buildings in Oxford, was opened in 1749, and furnished mainly with medical and scientific books. The building has since been annexed to the Bodleian as a reading room, when the contents of the library, greatly increased in the course of years, were transferred to a building specially affected to them in the new University Museum. It is now a magnificent collection of books on medical, physical, natural, biological and general science, kept up to date, easily accessible, and has given a considerable impulse to scientific study at Oxford. In order to make provision for select Oxford alumni studying medicine, to learn what was doing in medical science abroad, Radcliffe made over for ever to his own first and favourite Oxford College—University—his Yorkshire estates, for the foundation of two travelling fellowships of 300*l.* a year each and tenable for ten years, to be given to carefully selected alumni studying medicine at Oxford. At present there are three such Radcliffe travelling fellowships, with an annual income of 200*l.* each and tenable for only three years instead of the original ten. Besides this he left 5000*l.* to enlarge the buildings of University College. Any surplus accruing from the Yorkshire estates after the foregoing objects were effected was to be applied to the purchase of advowsons to be given to members of University College. Finally, mention of minor benefactions to Oxford and to individuals being omitted, he left, after payment of his specified bequests, all his estates in the various counties already enumerated to trustees to be applied to such useful purposes as they in their discretion should think best. And well have the Radcliffe trustees fulfilled their duty, remembering the claims both of philanthropy and science. With the funds at their disposal was built the Oxford Public Infirmary, opened for the reception of patients in 1779, and the Radcliffe Observatory at Oxford, supplied with all the instruments and appliances of modern astronomy, and a dwelling house for the Observer.

SCIENTIFIC SERIALS.

American Journal of Science, September.—Transition temperature of sodic sulphate, a new fixed point in thermometry, by T. W. Richards. Sodium sulphate, $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$, "melts" at almost exactly 32.48° according to the mean mercury thermometer, and this temperature is so easily obtained by means of that salt and so constant as to be of great use

in the future for thermometric and thermostatic purposes.—Distribution and quantitative occurrence of vanadium and molybdenum in rocks of the United States, by W. F. Hillebrand. Vanadium occurs in quite appreciable amounts in the more basic, igneous and metamorphic rocks, up to 0.08 per cent. or more of V_2O_5 , but seems to be absent, or nearly so, from the highly siliceous ones. The heavy ferric aluminous silicates like biotite and amphibole are indicated as sources. Molybdenum is probably confined to the more siliceous rocks, where it occurs in very minute quantities.—Electrosynthesis, by W. G. Mixer (second paper). Gaseous mixtures are subjected to a glow discharge in a eudiometer. Concentration of the discharge does not affect the total amount of compound formed. Thus, a mixture of hydrogen and oxygen will give the same amount of water vapour whatever the form of the glow discharge. The combination increases with the pressure, but not in proportion to it. A mixture of oxygen and ammonia forms ammonium nitrite, which is deposited as a white coating.—Notes on species of *Ichthyodectes*, including the new species *I. cruentus*, and on the related and herein established genus *Gillicus*, by O. P. Hay. The supposed new species is primarily founded on a somewhat imperfect left maxilla from Butte Creek Canyon in Western Kansas. It differs from Cope's *I. anaides* in having larger teeth. For Cope's *I. arcuatus* and Crook's *I. polymicrodus* the author proposes the new generic name *Gillicus*, being a saurocephalid with maxilla falciform, relatively short. Gape of mouth smaller than in *Ichthyodectes*.—Origin and significance of spines, by C. E. Beecher (continued). Natural selection could not originate a spine, but after a spine had appeared this agency would tend to preserve and allow the spine to develop along certain lines. The simple antlers of the Tertiary deer may have reached the highest degree of efficiency as weapons by ordinary natural selection. The subsequent increasing complexity of the antlers cannot have improved their usefulness, and probably arose according to the law of multiplication of effects, aided by a process of sexual selection.

Synon's Monthly Meteorological Magazine, September.—British local meteorological publications. Some important additions have been made to the list given in the last number of this journal, among which we may mention (1) an annual report of about thirty pages, by Mr. Chandler, Borough Meteorologist of Torquay, and a separate report on the climate of Devon; (2) a valuable summary of all Manx meteorological observations, by Mr. A. W. Moore; and (3) some remarks on the climate of Oban, with averages for the ten years 1887–96, by the Medical Officer of Health.—Evaporation and temperature, by Prof. Carpenter. This is an abridgment of a paper in the *U.S. Monthly Weather Review* of May 1898, showing the difficulty of determining from ordinary observations of the vaporimeter the quantity of water added to the atmosphere daily by evaporation from the oceans, lakes and continents. The principal elements of uncertainty in determining the quantity of evaporation from a surface of water are the temperature of the water and the velocity of the wind at the surface.—Rockall. The August number of the *Scottish Geographical Magazine* contains an excellent account of this rocky islet, by Mr. M. Christy. The possibility of building a lighthouse and observatory, and connection by a telegraphic cable, is discussed. The value of the latter would be very great for the purpose of weather telegraphy, but at present the difficulty of expense is insurmountable.—Results of meteorological observations at Camden Square, London, in August, for forty years, 1858–97. The mean of all the highest maxima was 84° 0', and the mean rainfall 2.39 inches; in this year the maximum temperature reading was 87° 9', and the rainfall 1.18 inches.

THE nineteenth volume of the *Memoirs* of the Caucasian branch of the Russian Geographical Society is perhaps even better than its remarkably good predecessor. Its chief feature is a map, on the scale of 13 miles to an inch, of Transcaucasia, upon which all the divisions into provinces, districts, cantons and villages are given, and the religions of the inhabitants of each village are shown in different colours. The map is accompanied by full ethnographical-statistical lists of the whole population. The next map of great interest is one of Kurdistan, upon which the distribution of the Kurd population (the Sunnites, the Kizilbashes, and the Yezids separately) is shown, together with the Armenian and Nestorian population and the percentage of Christians in each separate district. This map accompanies a paper, by Colonel Kartseff, on the Kurds,