

character. Principal Rendall strongly supported the orthodox classical view of Reichel and Leaf, and scoffed at the "Pelagian heresy." Dr. Munro, Sir John Evans, and Mr. Myres continued the discussion; the latter ingeniously showed how a round shield could be twisted into a figure of 8. The President also spoke, and Prof. Ridgeway replied to the criticisms; and so terminated one of the most lively and interesting debates that Section H has ever experienced. Dr. O. Montelius gave a characteristically careful and learned paper on pre-classical chronology in Greece and Italy, in which he distinguished four divisions of the Bronze Age in North and Central Italy, dating from 2100 to 1100 B.C., two Protetruscan Periods, from 1100 to 900 B.C., in Central Italy, and two Central Italian Etruscan Periods from 900 to 700 B.C. The forms of the implements, fibulae, pottery, &c., that characterised these several periods were fully illustrated by lantern slides. He stated that the copper implements were made in the same shapes as those of the old stone implements. Prof. Petrie referred to a recent discovery of his own, in Egypt, of iron tools of such a character that they must have been made by a people long acquainted with iron; they were associated with an Assyrian helmet which can be dated about 670 B.C. This is the oldest known datable iron find. The beginning of the use of copper tools in the Mediterranean area was from 3500 to 3000 B.C. The President read a paper on pillar and tree worship in Mykenæan Greece, as illustrated by signets, on a gold ring from the early Mykenæan Period (about 1500 B.C.) a dual cult of a male and female divinity in their pillar shape is engraved. Other signets show deities as pillars and trees enclosed in small shrines; the cult of the fig-tree and the early sanctity of the dove were referred to; and attention was also drawn to the fact that pillar and tree worship of Mykenæan Greece is seen largely to survive in the rustic cult of classical Greece. Mr. G. Coffey gave a lucid account, illustrated by lantern slides, of the relation of the stone-carvings of the tumuli of New Grange, Dowth and Loughcrew to Scandinavian art. He has lately discovered in Dowth the representation of a boat identical with those inscribed on Swedish rocks; this is the first undoubted example found outside Scandinavia. Other new evidence was brought forward to substantiate his view of a direct borrowing of Norse motives, many of which in their turn had come into Scandinavia from the Mediterranean up the valley of the Danube, and round Hungary. Mr. Kernode concluded a long and very interesting day's work by describing a magnificent series of rubbings and drawings of Celtic and Scandinavian crosses from the Isle of Man. In a recent number (*cf.* NATURE, October 8, p. 547) we have referred to the appreciation by numerous members of the Association of Mr. Kernode's endeavours to preserve and record these beautiful and most interesting remains.

Prof. Flinders Petrie brought forward on Wednesday his scheme of an ethnological and archaeological storehouse. Most of the speakers who followed admitted that more room was needed than most existing museums can possibly afford if large collections were to be preserved intact, and it was also recognised that long series of objects were necessary for scientific study. Certain details of his proposed museum were criticised, but Prof. Petrie thought that all these could be met.

An interesting paper on "The Duk-duk and other Customs as Forms of Expression of the Melanesian's Intellectual Life" was read by Graf von Pfeil. During his long stay in the Bismarck Archipelago he came to regard the natives' strong desire for physical and psychical seclusion as an explanation of some of their ceremonial customs. They still hate the white man, and distrust their fellow countrymen. The Duk-duk apparently serves to propitiate evil spirits and to levy blackmail on non-initiates. The Eineth and Marawot ceremonies were described for the first time; the former appears to be related to ancestor worship, and taboos are placed on various foods, actions and words. Little, however, is as yet known about this or the Marawot; the latter consists mainly of a dance on a high platform. The author urged the immediate importance of studying the habits of the Melanesians, owing to the change which is taking place. In the discussion which followed, Mr. Hartland and Prof. Haddon suggested that there was more behind these ceremonies than the author had yet discovered, but he was congratulated on approaching the subject from a psychological point of view. The Count maintained his view that the Melanesian was very largely actuated by mercenary motives.

Mr. F. T. Elworthy announced the very recent discovery of an Ancient British interment in Somersetshire, which led to a

long discussion, the net result of which appeared to be that this was a burial, in a stone cist and with a decorated earthen vessel of the Neolithic type, of a man who, by his skull, undoubtedly belonged to the Bronze Race.

This session was one of the most successful of any meeting of Section H. Most of the papers maintained a high level, and the pre-arranged discussions proved an interesting and instructive feature. Numerous distinguished foreigners had expressed their intention of being present, but, unfortunately, only Drs. O. Montelius and H. Stolpe, and Prof. W. H. Goodyear actually arrived.

FORTHCOMING BOOKS OF SCIENCE.

MESSRS. LONGMANS, GREEN, & CO.'S list includes:—"Fridtjof Nansen, 1861-1893," by W. C. Brøgger and Nordahl Rolfsen, translated by William Archer, illustrated; "Memories and Ideals," by Sir Benjamin Ward Richardson, F.R.S.; "Life in Ponds and Streams," by W. Furneaux, illustrated; "Contributions to the Science of Mythology," by the Right Hon. Prof. F. Max Müller, two vols.; "Essays," by Dr. George John Romanes, F.R.S., edited by Prof. C. Lloyd Morgan. Contents:—Primitive Natural History—The Darwinian Theory of Instinct—Man and Brute—Mind in Men and Animals—Origin of Human Faculty—Mental Differences between Men and Women—What is the Object of Life?—Recreation—Hypnotism—Hydrophobia and the Muzzling Order; "History of Philosophy," by Prof. Alfred Weber, authorised translation from the fifth French edition, by Dr. Frank Thilly; "Bicycles and Tricycles: an Elementary Treatise on their Design and Construction," by Archibald Sharp, illustrated; "Post-Mortem Examinations in Medico-legal and Ordinary Cases," by J. Jackson Clarke; "Diseases of Plants due to Cryptogamic Parasites," translated from the German of Dr. Carl Freiherr von Tubeuf, of the University of Munich, by Dr. William C. Smith, illustrated; "Magnetic Fields of Force: an Exposition of the Phenomena of Magnetism, Electromagnetism, and Induction, based on the Conception of Lines of Force," by Prof. H. Ebert, translated by Dr. C. V. Burton; "Industries and Wealth of Nations," by Michael G. Mulhall; "Light," by W. T. A. Emtage, with 231 diagrams; "Diphtheria and Antitoxin," by Dr. Nestor Tirard.

The announcements of Messrs. Macmillan and Co., Ltd., include:—"The Log of a Naturalist in West Africa (Congo Française, Corisco and Cameroons)," by Miss Mary Kingsley, with illustrations and a map of the Congo Française; "The Cambridge Natural History," vol. ii., with illustrations; "Flat-worms," by F. W. Gamble; "Nemertines," by Miss L. Sheldon; "Thread-worms, &c.," by A. E. Shipley; "Rotifers," by Prof. Marcus M. Hartog; "Polychaet Worms," by Dr. W. Bloxland Benham; "Earthworms and Leeches," by F. E. Beddard, F.R.S.; "Gephyrea, &c.," by A. E. Shipley; "Polyzoa," by S. F. Harmer; "Round the Year: a Series of Short Nature Studies," by Prof. L. Miall, F.R.S., illustrated; "Sketches in Sport and Natural History," by the late Dr. George Kingsley, with a memoir by his son; "The Natural History of the Marketable Marine Fishes of the British Islands," prepared expressly for the use of those interested in the sea-fishing industries, by J. T. Cunningham, with a preface by Prof. E. Ray Lankester, F.R.S., illustrated; "Dictionary of Political Economy," edited by R. H. Inglis Palgrave, F.R.S., vol. ii., F.—M.; "Tree Worship," by Mrs. J. Henry Philpot, illustrated; "The Buddhist Praying Wheel and a Collection of Material bearing upon the Symbolism of the Wheel and Circular Movements in Custom and Religious Ritual," by William Simpson, illustrated; "A System of Gynæcology," by many writers, edited by Drs. Thomas Clifford Allbutt, F.R.S., and W. S. Playfair; "A System of Medicine," by many writers, edited by Dr. Thomas Clifford Allbutt, F.R.S., vol. ii., containing "Infections" (continued), "The Intoxications and the Parasites," also the general diseases of obscure causation, such as rheumatism, gout, diabetes, rickets, scurvy, &c.; "A History of Aryan Medicine," by H. H. the Thakore Saheb of Gondal; "Essays and Addresses by Sir J. Russell Reynolds," edited by Samuel Squire Sprigge; "A Text-Book of Botany," by Dr. E. Strasburger, Dr. Fritz Noll, Dr. H. Schenck, Dr. A. F. W. Schimper, translated from the German by Dr. H. C. Porter, revised and edited by A. C. Seward, with 594 illustrations, in part

coloured; "A Study of the Sky: a Popular Astronomy," by Prof. Herbert A. Howe; "Ancient Volcanoes of Britain," by Sir Archibald Geikie, F.R.S., two volumes, illustrated; "Text-Book of Palæontology," by Prof. Karl A. von Zittel, translated and edited by Dr. Charles R. Eastman, vol. i.; "A Treatise on Ore Deposits," by J. Arthur Phillips, F.R.S., revised and rewritten by Prof. Henry Louis; "Infinitesimal Analysis," by Dr. William Benjamin Smith, vol. i., Elementary; "Introduction to the Study of Chemistry," by Prof. W. H. Perkin, jun., F.R.S., and Dr. Bevan Lean, illustrated; "Intermediate Course of Physics," by Prof. Arthur Schuster, F.R.S., and Dr. Charles H. Lees; "An Elementary Text-Book on Ordinary Differential Equations, with an Introduction to Lie's Theory of the Group of One Parameter," by Dr. James Morris Page; "The Principles of Mechanics presented in a New Form," by Prof. Heinrich Hertz, with an introduction by H. von Helmholtz, authorised English translation, by Prof. D. E. Jones and J. T. Whalley; "The Mechanics of Pumping Machinery: a Text-Book for Technical Schools and a Guide for Practical Engineers," by Dr. Julius Weisbach and Prof. Gustav Herrmann, authorised translation from the second German edition, by Karl P. Dahlstrom, illustrated; "On Laboratory Arts," by Prof. Richard Threlfall; "The Gases of the Atmosphere; the History of their Discovery," by Prof. William Ramsay, F.R.S., with portraits; "Electro-Physiology," by Prof. W. Biedermann, translated by Miss Frances A. Welby, vol. i., illustrated; "Algebra for Beginners," by I. Todhunter, F.R.S., new edition, thoroughly revised by Prof. S. L. Loney; "Social Interpretations of the Principles of Mental Development," by Prof. J. Mark Baldwin; "Course of Experimental Psychology," by Prof. J. McKen Cattell; "The Cell in Development and Inheritance," by Edmund B. Wilson; "Elementary Treatise on the Theory of Functions," by J. Harkness and F. Morley; "Alternating Currents and Alternating Current Machinery," by D. C. Jackson; "Collection of Problems and Examples in Physics," by C. R. Matthews and J. S. Shearer; "Bibliography of Philosophy," to be issued in the "Dictionary of Philology and Psychology," and also separately, by Dr. Benjamin Rand; "Mathematical Theory of Electricity and Magnetism," by A. G. Webster.

Messrs. Charles Griffin and Company, Ltd., announce:— "Mine Accounts and Mining Book-Keeping: a Manual for the Use of Students, Managers of Metalliferous Mines and Collieries, and others interested in Mining," with numerous examples taken from the actual practice of leading Mining Companies throughout the world, by Prof. James G. Lawn; "The Metallurgy of Copper," by Thos. Gibb, illustrated; "Electric Smelting and Refining: a Practical Manual of the Extraction and Treatment of Metals by Electric Methods," being the "Elektro-Metallurgie of Dr. W. Borchers, translated from the second German edition, by Walter G. M'Millan, illustrated; "Getting Gold: a Gold-Mining Handbook for Practical Men," by J. C. F. Johnson, illustrated; "Textile Printing: a Practical Manual of the Processes used in the Printing of Cotton, Woollen, and Silken Fabrics," by C. F. Seymour Rothwell, with illustrations and specimens of Printed Patterns; "Chemistry for Engineers and Manufacturers," by Bertram Blount and A. G. Bloxam, vol. ii. The Chemistry of Manufacturing Processes; "The Calculus for Engineers," by Prof. Robert Henry Smith, assisted by Robert Franklin Muirhead, with diagrams and folding-plate; "Gas and Oil Engines: an Elementary Text-Book on the Theory, Design, Construction and Testing of Internal Combustion Engines," by Prof. W. H. Watkinson, illustrated; "The British Mercantile Marine: an Historical Sketch of its Rise and Development, with chapters on the Education of Officers, Duty and Discipline, &c.," by Captain E. Blackmore; "A Manual of Elementary Seamanship," by D. Wilson-Barker, illustrated; "Navigation: Theoretical and Practical," by D. Wilson-Barker and William Allingham; "Ocean Meteorology: for Officers of the Merchant Navy," by William Allingham; "Practical Algebra and Trigonometry: for the Young Sailor, &c.," by Richard C. Buck; "The Construction and Maintenance of Vessels built of Steel, by a Practical Engineer and Shipwright"; New Editions of the "Metallurgy of Gold," by Dr. T. Kirke Rose; "Boilers, Marine and Land: their Construction and Maintenance," by T. W. Traill; "Know Your Own Ship: a Simple Explanation of the Stability, Construction, Tonnage, and Freeboard of Ships," by Thos. Walton; "Clinical Diagnosis: the Chemical, Microscopical, and Bacteriological Evidence of

Disease," by Prof. von Jaksch, of Prague, translated by Dr. James Cagney, from the fourth German edition, illustrated.

In the announcements of the Cambridge University Press we observe:—"The Collected Mathematical Papers of the late Prof. Arthur Cayley, F.R.S.," vol. xi.; "The Scientific Papers of John Couch Adams, F.R.S.," edited by Dr. William Grylls Adams, F.R.S., with a memoir by Dr. J. W. L. Glaisher, F.R.S., vol. i.; "The Foundations of Geometry," by the Hon. B. Russell; "A Treatise on Abel's Theorem," by H. F. Baker; "The Theory of Groups of a Finite Order," by Prof. W. S. Burnside, F.R.S.; "A Treatise on Universal Algebra, with some applications," by A. N. Whitehead.— Vol. i. contains the general principles of algebraic symbolism, the algebra of symbolic logic, the calculus of extension (*i.e.* the algebra of Graffmann's Ausdehnungslehre), with applications to projective geometry, to non-Euclidean geometry, and to mathematical physics; "A Treatise on Octonions: a development of Clifford's Bi-Quaternions," by Prof. Alexander McAulay; "A Treatise on Spherical Astronomy," by Sir Robert S. Ball, F.R.S.; "A Treatise on Geometrical Optics," by R. A. Herman; "A Laboratory Note-book of Elementary Practical Physics," by L. R. Wilberforce and T. C. Fitzpatrick, parts ii. and iii. Cambridge Natural Science Manuals (Biological Series).—"Elementary Palæontology—Invertebrate," by H. Woods, second edition; "Fossil Plants: a Manual for Students of Botany and Geology," by A. C. Seward; "The Vertebrate Skeleton," by S. H. Reynolds; "A Manual and Dictionary of the Flowering Plants and Ferns: Morphology, Natural History and Classification, alphabetically arranged," by J. C. Willis, in two volumes; vol. i., outlines of the morphology, natural history, classification, geographical distribution and economic uses of the phanerogams and ferns; vol. ii., the classes, cohorts, orders, and chief genera of phanerogams and ferns, alphabetically arranged under their Latin names; glossarial index (to both volumes) of English names, economic products, technical terms, &c. Physical Series.—"Electricity and Magnetism," by R. T. Glazebrook, F.R.S.; "Sound," by J. W. Capstick. The Cambridge Geographical Series.—"A History of Ancient Geography," by the Rev. H. F. Tozer. "An Autobiography of George Biddell Airy, Astronomer Royal from 1836 to 1881," edited by Wilfrid Airy; "Chapters on the Aims and Practice of Teaching," edited by Dr. Frederic Spencer.

Mr. W. B. Clive's scientific announcements are:—"A Manual of Psychology," by G. F. Stout; "Questions on Welton's Logic, with Illustrative Examples," by H. Holman; "Key to Holman's Questions on Welton's Logic"; "A Primer of Logic," by J. Welton; "Advanced Algebra," by William Briggs and Dr. G. H. Bryan, F.R.S., based on the "Algebra" of Radhakrishnan; "Euclid, Books I.-IV.," by Rupert Deakin; "Deductions in Euclid," by T. W. Edmondson and J. Briggs; "Geometrical Conic Sections"; and "Co-ordinate Geometry," Part 2, by Dr. G. H. Bryan, F.R.S.; "Mechanics of Fluids, First Stage," by F. Rosenberg; "Key to the Elementary Mechanics of William Briggs and Dr. G. H. Bryan, F.R.S.;" "An Intermediate Text-Book of Statics"; and "An Intermediate Text-Book of Dynamics," by William Briggs and Dr. G. H. Bryan, F.R.S.; "A Higher Text-Book of Dynamics"; and "A Higher Text-Book of Hydrostatics," by Dr. G. H. Bryan, F.R.S.; "The Intermediate Trigonometry"; and "The Preceptors' Trigonometry," by W. Briggs and Dr. G. H. Bryan, F.R.S.; "The Properties of Matter, an Introduction to the Tutorial Physics," by E. Catchpool; "Inorganic Chemistry, First Stage," by Dr. G. H. Bailey; "Advanced Science and Art Chemistry," by the same author; "A Synopsis of Non-Metallic (Inorganic) Chemistry," by William Briggs, fourth edition, revised by W. Hurlley; "A Synopsis of Metallic Chemistry," by W. Hurlley; "The Tutorial Chemistry," by Dr. G. H. Bailey, edited by William Briggs, Part 1, "Non-Metals"; Part 2, "Metals"; "Magnetism and Electricity, First Stage," by Dr. R. H. Jude; "Advanced Science and Art, Magnetism and Electricity," by Dr. R. W. Stewart; "Sound, Light, and Heat, First Stage," by John Don; "Advanced Science and Art Heat," by Dr. R. W. Stewart; "Science and Art Physiology," by A. M. Davies; "Biology," by H. G. Wells, Part 2, second edition, revised by J. W. Lowson and A. M. Davies.

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The Clarendon Press forthcoming books include:—"A Catalogue of the Turkish, Hindustani, and Pushtu MSS. in the Bodleian Library," by H. Ethé; Part II.—"A Catalogue of the Armenian MSS. in the Bodleian Library," by S. Baronian; "A Record of the Buddhist Practices in India and the Malay Archipelago" (A.D. 671-695), by I-Tsing, translated and edited by J. Takakusu; "A Catalogue of the Fortnum Collection in the Ashmolean Museum," by C. Drury E. Fortnum; "A Handbook of Anatomy for Art Students," by Arthur Thomson, illustrated; "A Catalogue of the Antiquities in the Cyprus Museum," by J. L. Myres; "History of Agriculture and Prices," by the late J. E. Thorold Rogers, vols. vii. and viii.; "A New English Dictionary," further portions of D, edited by Dr. J. A. H. Murray, and of F, edited by H. Bradley; "Practical Work in Light," and "Practical Work in Sound," by W. G. Woolcombe; "The 'Opus Majus' of Roger Bacon," edited by J. H. Bridges, 2 vols.; "British Moralists of the Eighteenth Century," edited by L. A. Selby-Bigge, 2 vols; in the series of "Sacred Books of the East": vol. xlii., "Hymns of the Atharva-Veda," translated by M. Bloomfield; vol. xliii., "The Satapatha-Brāhmana," translated by J. Eggeling, Part III.; and vol. xlvi., "Vedic Hymns," translated by F. Max Müller and H. Oldenberg, Part II.; Part II. Firdausi's Yūsuf and Zalikhā, edited by H. Ethé; Kāvya Satapatha Brāhmana, edited by Dr. J. Eggeling; The Mantrapātha, edited by Dr. M. Winternitz, Letters of Abul'Ala El-Ma'arri, edited by D. S. Margoliouth.

Mr. H. K. Lewis's list is as follows:—"A Manual of Infectious

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Mr. Murray will publish shortly:—"The Japanese Alps: an Account of Climbing and Exploration in the Unfamiliar Mountain Regions of Central Japan," by the Rev. Walter Weston, with map and illustrations; "Handbook for Egypt, Alexandria, Cairo, Thebes, the Suez Canal, the Pyramids, Sinai, the Fyoom, the Course of the Nile from Dongola, &c.," a new and entirely revised edition, edited by Miss Brodrick and Prof. Sayce, with the assistance of distinguished Egyptologists and officials, with many new maps and plans; "Some Unrecognized Laws of Nature, an Inquiry into the Causes of Physical Phenomena, with Special Reference to Gravitation," by Ignatius Singer and Lewis H. Berens; "The Dawn of Modern Geography," by Raymond C. Beazley, with reproductions of the principal maps of the time; "University Extension Manuals: an Introduction to Physical Science," by Prof. John Cox; "The History of Astronomy," by Arthur Berry; "A History of Education," by Principal James Donaldson; "An Introduction to Philosophy," by Prof. Knight.

The following are to be found in Mr. David Nutt's list:—"The Voyages made by the Sieur D.B. to the Isles Dauphiné or Madagascar, and Bourbon or Mascarene in the years 1669, 1670, 1671, and 1672, together with the Manners, Religions, Forces, Governments, and Customs of the Inhabitants of the said Islands, with the Natural History of the Country," translated, for the first time, from the original French published in 1674, and edited by Captain Pasfield Oliver, illustrated; "Australian Legendary Tales," Folk-lore of the Noongah-burrahs, as told to the Picaninnies, collected and retold in English by Mrs. K. Langloh Parker, illustrations by a native artist, glossary of native words, and specimen of the native text; "Maori Legends," collected from printed sources and oral tradition, and retold by Kate McCosh Clarke, illustrated; "The Baba-Log: a Story of Child Life in British India," by the Rev. J. Middleton Macdonald, illustrated; "Fairy Tales from the Isle of Rügen," told from oral tradition by Ernst Moritz Arndt in 1837, and translated into English for the first time by Anna Dabis, with facsimile reproduction of the original illustrations, a portrait of Arndt, and a map of the island of Rügen.

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Messrs. Whittaker and Co. promise:—"Central Station Electricity Supply," by Albert Gay and C. H. Veaman; "Transformers for Single and Multiphase Currents," by Gisbert Kapp; "A Set of Electrical Engineering Design Sheets," by Gisbert Kapp; "Auto-Cars," by D. Farman, translated from the French by L. Serrailier; "Horseless Road Locomotion," by A. R. Sennett; "Alternating Currents of Electricity: being a translation of the second volume of *Loppe and Bouquet*," by F. J. Moffett; "The Alternating Current Circuit," by W. Perren Maycock; "The Metric System of Weights and Measures," by Prof. W. H. Wagstaff; "The Inspection of Railway Material," by G. R. Bodmer; "Organic Chemical Manipulation," by Prof. J. T. Hewitt; "Industrial Electro-Chemistry," by Dr. Hoepfner; "The Mechanical Engineer's Pocket Book," by Philip Bjorling.

Messrs. G. P. Putnam's Sons hope to issue:—"Camping in the Canadian Rockies: an Account of Camp Life in the Wilder Parts of the Canadian Rocky Mountains, together with a Description of the Region about Banff, Lake Louise, and Glacier, and a Sketch of the Early Explorations," by Walter D. Wilcox, illustrated; "The New Hygiene: a Drugless Remedy for the Treatment of all Diseases, the Promotion of Health and Longevity," by James W. Wilson; "Parakites: a Treatise on the Making and Flying of Tailless Kites for Scientific Purposes and Recreation," by Gilbert Totten Woglom, illustrated; "A Text-Book for Training Schools for Nurses, including Physiology and Hygiene and the Principles and Practice of Nursing," by Dr. P. M. Wise, two volumes, illustrated.

Messrs. Crosby Lockwood and Son will issue:—"Submarine Telegraph Cables: their History, Construction and Working," by Charles Bright, illustrated; "Colliery Working and Management," by H. F. Bulman and R. A. S. Redmayne, illustrated; "Water and Water Purification," a hand-book for local authorities and others, by Dr. Samuel Rideal, illustrated; "Modern Cycles: their Construction and Repair," by A. J. Wallis Taylor, illustrated; new editions of Haeder's "Hand-book on the Steam Engine," translated by H. H. P. Powles, illustrated; Eissler's "Hand-book of Modern Explosives"; Hasluck's "Screw Threads, and Methods of Producing Them"; Standage's "Artist's Manual of Pigments."

The S. P. C. K. will publish:—"The Struggle of the Nations—Egypt, Syria, and Assyria," by Prof. Maspero, translated by M. L. McClure, and edited by Prof. Sayce, illustrated; his is a companion volume to "The Dawn of Civilisation," and contains the history of the ancient peoples of the East from the Fourteenth Egyptian Dynasty to the end of the Ramesside period; "The Zoo: the Animal Kingdom," by the late Rev. J. G. Wood and the Rev. Theodore Wood, series i. to iv. in 1 vol.

Messrs. Chapman and Hall, Ltd., announce:—"The Naturalist in Australia," by W. Saville-Kent, illustrated; "Experimental Science," by Arthur Hubble; "Plane and Solid Geometry," by W. W. F. Pullen and T. J. Evans, illustrated; "First Principles of Mechanical and Engineering Drawing," by H. H. Butterfield, illustrated; "Cheese and Cheese-Making; Butter and Milk, with special reference to Continental Fancy Cheeses," by James Long and John Benson; "The Horse," by Cecil Brown.

The Scientific Press, Ltd., have in preparation:—"The Menopause and its Disorders," by Dr. A. D. Leith Napier, illustrated; a series of popular text-books on Nursing, under the title of "The Nightingale Series": (1) "Practical Hints on District Nursing," by Amy Hughes; (2) "The Matron's Course: an Introduction to Hospital and Private Nursing," by

Miss S. E. Orme; (3) "Physiology for Nurses," by Dr. C. F. Marshall; (4) "Fever Nursing"; (5) "Monthly Nursing."

Messrs. Rivington, Percival, and Co. announce:—"An Elementary Chemistry: consisting of a complete school course of Inorganic Chemistry, containing the matter necessary for the Examinations in Chemistry at the Junior Cambridge, South Kensington, and London Matriculation," by S. R. Trotman; a cheaper edition of "Machine Drawing and Design for Engineering Students: being a complete Course of Instruction in Mechanical Drawing, with Exercises on the application of principles to Engine and Machine Design," by Prof. William Ripper, illustrated.

Messrs. Walter Scott, Ltd., have in preparation:—"The New Psychology," by Dr. E. W. Scripture, illustrated; "The Psychology of the Emotions," by Prof. Th. Ribot, translated; "Hallucinations and Illusions, a Study of the Fallacies of Perception," by Edmund Parish; "Man and Woman, a Study of Human Secondary Sexual Characters," by Havelock Ellis, second edition, illustrated; "Hypnotism," by Dr. Albert Moll, fourth edition.

Messrs. Osgood, McIlvaine, and Co.'s announcements include:—"Gorillas and Chimpanzees," by Prof. R. L. Garner, illustrated; "The Chronicles of a Virgin Fortress," being some unrecorded Chapters of Turkish and Bulgarian History, by William V. Herbert, with coloured maps; "On Snow-Shoes to the Barren Grounds: Twenty-eight Hundred Miles after Musk-Oxen and Wood-Bison," by Caspar Whitney, illustrated; "With the Jungle Folk: a Sketch of Burmese Village Life," by E. W. Cuning, illustrated by a native artist.

In Messrs. Hutchinson's announcements are to be found:—"The Concise Knowledge Library: Natural History," by R. Lydekker, F.R.S., Dr. R. Bowdler Sharpe, W. F. Kirby, R. I. Pocock, W. Garstang, F. A. Bather, H. M. Bernard, B. B. Woodward, and R. Kirkpatrick, illustrated; and "Astronomy," by Miss Agnes M. Clerke, J. Ellard Gore, and A. Fowler; "Hardy Coniferous Trees," by A. D. Webster, illustrated.

In Messrs. G. Bell and Son's announcements are to be found:—"Men and Women of the Century," by Rudolf Lehmann, edited by H. C. Marillier, illustrated; in the "Royal Navy Hand-books" Series—"Naval Ordnance and Small Arms," by Capt. H. Garbett, and "The British Fleet," by Commander C. N. Robinson, cheap edition; in the "Technological Hand-books" Series—"Coach-building," by John Philipson.

The autumn announcements of Messrs. W. and R. Chambers include:—"The Romance of Industry and Invention, comprising chapters on Iron and Steel, Big Guns, Evolution of the Cycle, Telegraph, &c.," edited by R. Cochrane; Dr. M'Kendrick's "Elementary Human Physiology"; Dr. Findlater's "Elementary Physiology," new edition, edited by D. Forsyth; three volumes of their "Elementary Science Readers."

Messrs. Baillière, Tindall, and Cox have almost ready:—"Applied Bacteriology," containing the latest methods of Research, by Messrs. Pearmain and Moor, illustrated; "Chemical Notes and Equations (Inorganic and Organic) for Students," by G. H. Gemmill; "Atlas of Practical Histology," by Prof. Arnold Brass, assisted by German Professors; authorised English translation by R. A. Young, illustrated.

Mr. J. C. Nimmo gives notice of:—"A History of British Birds," to which is added the author's Notes on their Classification and Geographical Distribution, by Henry Seebohm, in four volumes, illustrated (cheaper edition); "The Geographical Distribution of the Charadriidae; or, the Plovers, Sandpipers, Snipes, and their Allies," by Henry Seebohm, in one volume, illustrated.

In Messrs. A. and C. Black's announcements we notice:—"A Dictionary of Birds," by Prof. Alfred Newton, F.R.S., part 4, or four parts in one volume; "Introduction to Structural Botany," by Dr. D. H. Scott, F.R.S., Part 2 (Flowerless Plants), illustrated; "Plea for a Simpler Life," by Dr. S. Keith, new edition.

Mr. Fisher Unwin calls attention to:—"Climbing Reminiscences of the Dolomites," by Leone Sinigaglia, translated by Miss Mary Alice Vials, illustrated; "Rambles in Galloway," by Malcolm McL. Harper, illustrated; "On the Nile with a Camera," by Anthony Wilkin, illustrated.

Messrs. Seeley and Co., Ltd., will publish:—"The Life and Work of Charles Pritchard, D.D., F.R.S., late Savilian Professor of Astronomy in the University of Oxford," by his daughter, Ada Pritchard. A notice of his theological work by

the Right Reverend the Lord Bishop of Worcester, and an account of his astronomical work by his successor, Prof. H. H. Turner. With a portrait.

Mr. Heinemann's announcements include:—"Genius and Degeneration: a Study in Psychology," by Dr. William Hirsch, translated from the second edition of the German work, "The New Africa: a Journey up the Chobé and down the Okovango Rivers," by Dr. Aurel Schulz and Augustus Hammar; "Timbuctoo the Mysterious," by Felix Dubois, illustrated.

Mr. W. F. Clay, Edinburgh, announces:—"Select Methods in Quantitative Analysis," by the late Prof. W. B. Cheever, third and enlarged edition, by F. C. Smith; "Researches on Molecular Dissymmetry of Natural Organic Products," by Louis Pasteur, 1860; "Early Papers on Chlorine," by Scheele, Berthollet, Gay-Lussac, Thénard, &c. (Alembic Club Reprints); "Handbook of the Diseases of the Eye," by Douglas Watson.

Messrs. Lawrence and Bullen, Ltd., give notice of:—"The Kafirs of the Hindu-Kush," by Sir George Robertson, K.C.S.I., illustrated; "Turkish Fairy Tales and Folk-Tales," collected by Dr. Ignacz Kunos, translated from the Hungarian version by R. Nisbet Bain, illustrated; "The Encyclopædia of Sport," edited by the Earl of Suffolk and Berkshire, Hedley Peek, and F. G. Aflalo, illustrated, in twenty parts.

The following works will be issued by Messrs. Smith, Elder, and Co.:—"Prehistoric Man and Beast," by Rev. H. N. Hutchinson, illustrated; "A Course of Practical Histology," by Prof. E. A. Schäfer, F.R.S., new edition, illustrated; "A Practical Treatise on Traumatic Separation of the Epiphyses," by J. Poland.

Messrs. Gurney and Jackson have in the press: "Parasitic Diseases of Poultry," by Mr. F. V. Theobald, which, besides giving descriptions and illustrations of the various external and internal parasites affecting fowls, &c., will contain suggestions as to the best means for their destruction and for the cure of the diseases caused by them.

Messrs. Grevel and Co. announce:—"The Elements of Electro Chemistry treated experimentally," by Dr. R. Lipke, translated by M. M. Pattison Muir, illustrated; "The Religion of the Ancient Egyptians," by Dr. A. Wiedemann, illustrated; "The Care of Children in Sickness and Health," by Father Kneipp.

Mr. Charles Carrington, Paris, announces "Untrodden Fields of Anthropology," observations on the esoteric manners and customs of semi-civilised peoples, being a record by a French army surgeon of thirty years' experience in Asia, Africa, and America, in two vols.

In the list of Messrs. Kegan Paul and Co., Ltd., we notice:—"The Polar Aurora," by Alfred Angot, translated (International Scientific Series); "In the Land of the Bora; or, Camp Life and Sport in Dalmatia and the Herzegovina," by "Snaffle," illustrated.

Messrs. W. Blackwood and Sons announce:—"From Batum to Baghdad, *vis à* Tiflis, Tabriz, and Persian Kurdistan," by Walter B. Harris, with illustrations and two maps; "The Story of Mr. H——, the Herbalist," by Hugh Miller.

Messrs. Hodder and Stoughton promise:—"Beginnings of Life in the Dawn of Geological Time," by Sir J. W. Dawson, F.R.S.; "The Land of the Monuments: Notes of Egyptian Travel," by J. Pollard.

In the list of Messrs. Cassell and Co., Ltd., we find:—"Charles Darwin and the Theory of Natural Selection," by Prof. E. B. Poulton, F.R.S.; "Social England," edited by Dr. H. D. Traill (sixth and concluding volume).

Messrs. F. Warne and Co. will issue:—"The Royal Natural History," edited by R. Lydekker, F.R.S., vol. vi., illustrated; "Favourite Flowers of Garden and Greenhouse," edited by E. Step, vol. i., illustrated.

Messrs. Ward, Lock, and Co., Limited, will publish:—"Coil and Current, and the Triumphs of Electricity," by Henry Frith and Stepney Rawson.

Messrs. Gay and Bird's books include:—"Building Construction and Superintendence," by Dr. A. E. Kidder, part i., Masons' Work, illustrated.

Messrs. Archibald Constable and Co. give notice of "The Popular Religion and Folk-Lore of Northern India," by Wm. Crooke, 2 vols., illustrated.

Messrs. W. H. Allen and Co., Ltd., will add to their "Naturalists' Library":—"Game Birds," vol. ii.; "Butterflies," vol. iii.; "British Birds," vol. iv.

Mr. L. Upcott Gill announces a work on "Fruit Culture," a

section of which will deal with the life-histories of the insect and other pests which affect fruit-growers.

The list of Mr. David Douglas, Edinburgh, includes:—"Among British Birds in their Nesting Haunts," by Oswin A. J. Lee, illustrated, part i.

Messrs. Methuen announce:—Vol. ii. of Prof. Petrie's "History of Egypt, from the Earliest Times to the Present Day."

Messrs. Blackie and Son, Ltd., will publish:—"Fuel and Refractory Materials," by Prof. A. Humboldt Sexton.

Messrs. G. Philip and Son promise:—"Geographical Manual of Africa," and "Certificate Atlas of Africa."

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

OXFORD.—Mr. Ernest Henry Stapleton, of the Grammar School, Bradford, has been elected to the Bristol Scholarship (thrown open *pro hac vice*) in chemistry and physics at St. John's College.

CAMBRIDGE.—Dr. W. H. Gaskell, F.R.S., has been appointed a member of the General Board of Studies. Mr. J. E. Gray, Scholar of King's, has been nominated to occupy the University's table at the Naples Zoological Station. Mr. James Henry Widdicombe, First Class Parts I. and II. Natural Sciences Tripos, 1891-92, has been elected to a Fellowship at Downing College.

Memorials signed by 2237 members of the Senate deprecating the admission of women to the membership or degrees of the University have been presented to the Vice-Chancellor. Of these 1369 would, however, approve the granting of some non-gremial title to women who pass a Tripos examination.

At the congregation on October 15, Mr. A. C. Dixon, of Trinity College, was admitted to the degree of Doctor in Science.

At the Massachusetts Institute of Technology, four associate professors have been promoted to full professorships: Mr. Dwight Porter, in hydraulic engineering; Mr. Alfred E. Burton, in topographical engineering; Mr. C. F. Allen, in railroad engineering; and Mr. Peter Schwamb, in mechanism. New assistant professors are: Mr. George H. Barton, in geology; Mr. George G. Robbins, in civil engineering; and Mr. Joseph J. Skinner, in mathematics.

At the recent opening of the collegiate year at Columbia University, 2100 students were enrolled, being the largest in the history of the College. Several gifts were announced, the most important being that of Mr. Charles C. Worthington, who, as a memorial to his father, the late Henry R. Worthington, will equip, with all necessary apparatus, a laboratory for the experimental study of the sciences of hydraulics and engineering as applied to hydraulics.

The following appointments have recently been announced: Dr. E. Wernicke to be professor of hygiene at Berlin; Dr. H. Stuhr has been appointed assistant in the Anatomical Institute at Breslau, in succession to Dr. Endres; Dr. Andreas Obrzut, of Prague, to the chair of Anatomy at Lemberg; Dr. Chermak to be professor of comparative anatomy and embryology at Dorpat; Dr. Winkler, Professor of Chemistry, to be director of the School of Mines at Freiberg i. S.; Dr. Godschmidt to be assistant professor of chemistry in the University of Heidelberg.

APPLICATIONS are invited for the Fellowship founded in 1894 by the Worshipful Company of Salters for the purpose of encouraging chemical research in the elucidation of pharmacological problems. The Fellowship is of the annual value of £100, and may be held for three consecutive years in the Pharmaceutical Society's laboratories. The regulations relating to the award may be obtained from the Clerk to the Company at Salters' Hall, but applications for the Fellowship must be sent to the Registrar of the Pharmaceutical Society before Saturday next, October 24.

AMONG the many evidences of the activity of the various Committees entrusted with the technical education of the country, one of the most pronounced is that afforded by the periodical reports which are issued by the different county authorities. In Essex the form assumed is that of *The Journal of the Essex Technical Laboratories*. In the twenty-second number, which