

numerous ichthyolites had been found, and of the geological structure of the adjacent district. A slab of the sandstone, presented to the Society by Mr. Greer, the proprietor of the quarry, was laid upon the table, and exhibited on a surface not exceeding two feet square impressions of above 250 fishes.

M. Agassiz afterwards gave a succinct account of his researches on English fossil fishes. The number of species which he had noticed amounts to about 400, of which 300 were new, and he stated that the specimens, too imperfect to be described at present, announce the existence of a still greater number of species.

King of Denmark's Medal for Astronomers

In the *Athenæum* of November 7, 1835, was a statement regarding the founding by the King of Denmark of a gold medal, of the value of twenty ducats, to be given to the first discoverer of a telescopic comet. The discoverer who desired to be considered for the award, if in any part of Europe except Great Britain, had to send immediate notice of his discovery to Prof. Schumacher, of Altona, and if in Great Britain, or any other quarter of the globe except the Continent of Europe, to Francis Baily, of Tavistock Place, London. The medal was to be adjudged twelve months after the discovery of the comet, and no claim could be admitted after that period had elapsed. Prof. Schumacher and Mr. Baily were to determine whether a discovery was to be considered established or not, but if they differed in opinion, Dr. Olbers, of Bremen, was to decide between them.

tetrachloride, cyclohexane and ether) the existence of the compound ($C_6H_5NH_2, 2C_6H_5OH$) is deduced, and this has been isolated in the form of colourless crystals melting at $29.2^\circ C$. ANDRÉ LÉAUTÉ: The capillary separation of tars. When studying the ascent in capillary tubes of tars and bitumens, it has been noticed that two liquids appear in the tube, the upper a clear yellow fluid, the lower black tar. This explains the appearance of yellow exudations on the surface of tarred roads. ANDRÉ CHRÉTIEN and GEORGES VARGA: Two new compounds of titanium tetrachloride and hydrochloric acid. The cryoscopic study gives indications of the existence of the compounds $TiCl_4, 6HCl$, and $TiCl_4, 2HCl$. The first of these is a new type. JOSEPH HOCH: A new general method of preparation of the *N*-carboxethylketimines, $RR'C=N.CO.O C_2H_5$. The diethylacetals of the ketones are condensed with ethylurethane in the presence of a trace of aniline hydrochloride. JACQUES FROMAGET: The upper Trias of the western border of the Tran Ninh (Haut Laos). CHARLES FRAIPONT: A skull of *Homo neanderthalensis* from the grotto of Engis (Liège). A detailed examination of the small skull found along with the celebrated Engis skull in 1828. ANGEL H. ROFFO: The action of solar rays (ultra-violet) on the skin, and the accumulation of cholesterol. The effect of the sun's rays, especially the ultra-violet rays, produces a local accumulation of cholesterol under the skin. W. KOPACZEWSKI and S. MARCZEWSKI: Anaphylaxy from the point of view of altitude. A study of the effects of reduction of atmospheric pressure, corresponding to an altitude of 10,000 metres, on animals sensitised by an injection of protein. RAYMOND-HAMET: The physiological inversion of the hypotensor effects of adrenaline.

Societies and Academies

PARIS

Academy of Sciences, September 30 (*C.R.*, 201, 533-572). CHARLES CAMICHEL, LÉOPOLD ESCANDE, ETIENNE CRAUSSE and JEAN BAUBIAC: Linear hydraulic elements and the resistance of immersed bodies in permanent or transient regime. RAYMOND MINDLIN: Contribution to the problem of equilibrium of elasticity of an indefinite solid limited by a plane. BERNARD LAFFAILLE and FLORIN VASILESCO: The *flambage* of thin cylindrical plates. JOHN ELLSWORTH: The asymmetry of the light curves of variables with eclipses attributable to a tide lag. F. DUSCHINSKY: The bands in the neighbourhood of spectral lines in the ultra-violet. GASTON DUPOUY and PIERRE JACQUINOT: The proportionality of the deviations in the field in the Zeeman effect of three mercury levels. HORIA HULUBEI: New "*hors diagrammes*" emissions in the $K\alpha$ spectra of elements included between Cu(29) and Rh(45) inclusively. M. LLE. O. HUN: The cryoscopic study of the total hydration of the ions of sodium bromide. M. LLE. MARGUERITE QUINTIN: The heat of dilution of cadmium chloride. M. LLE. SUZANNE VEIL: The electromotive forces due to bringing together metals in gelatine, and the importance of the Volta effect in batteries. JEAN CHÉDIN: The Raman spectrum of nitric anhydride. The Raman spectra of nitric anhydride in organic solutions (chloroform, carbon tetrachloride) differ from those given by the same substance in nitric acid or in sulphuric acid. PIERRE LAURENT: A new compound of phenol and aniline. From measurements of the dielectric capacity of mixtures of phenol and aniline in various solvents (benzene, carbon

ROME

Royal National Academy of the Lincei, May 19. V. NOBILE: The possibility of new trends in the theory of astronomical refraction and of incidental contributions to the physics of the atmosphere (2). F. SBRANA: Monodrome parallelism on a surface. U. CASSINA: The construction of the plane osculatory to a quartic of the first species. A very simple linear construction of finite character is given. N. SPAMPINATO: (1) Functions totally derivable in a real or complex algebra endowed with modulus (2). (2) A characteristic property of totally derivable functions. B. SEGRE: The bi-relations on the non-developable surfaces of space and the geometric conditions for projective equivalence between them (2). G. BOZZA: The deposition of crystalline suspensions. (1) General theory. The general relationships between the various factors involved in the deposition and separation of crystalline granules from suspensions are deduced for the case when the granules are of such dimensions that the surface influences between granules and liquid are negligible. C. SCHAEFFER and L. BERGMANN: A new optical method for the determination of the elastic constants of crystals. Diffraction centres may be formed in a quartz cube by exciting this to rapid elastic oscillations by means of a field which oscillates 10^7 to 10^8 times a second. If monochromatic light is passed through the vibrating crystal, a diffraction figure is formed which depends on the elastic properties of the crystal and on the direction of the rays, but is independent of the form of the crystal and of the type of the excitation. Various examples are described. G. WATAGHIN: The theory of protons and neutrons. By a slight modification of

Dirac's equations, these may be made capable of indicating some of the known properties of protons and neutrons. G. C. WICK: The oscillation and rotation spectrum of the molecule HD. M. SAVIANO: Water metabolism. (9) Variation of the diuresis and urinary pH in animals on acidogenic and alkalogenic diets. The more abundant the diuresis, the more nearly does the reaction of the urine approach that of the blood. With animals on an alkalogenic diet, the urine may even become less alkaline than the blood. V. FAMIANI: The development of Jensen's sarcoma in certain particular conditions of nutrition.

Thursday, November 7

ROYAL SOCIETY, at 4.30.—F. W. G. White and L. W. Brown: "Some Measurements of the Reflection Coefficient of the Ionosphere for Wireless Waves".

J. P. Gott: "On the Electric Charge collected by Water-Drops falling through a Cloud of Electrically Charged Particles in a Vertical Electric Field".

HALLEY STEWART TRUST LECTURE, at 6.—(in the Memorial Hall, Farringdon Street, E.C.)—Prof. Julian Huxley.*

Friday, November 8

BEDSON CLUB, ARMSTRONG COLLEGE, NEWCASTLE-UPON-TYNE, at 6.30.—Prof. J. W. Cook: "The Synthesis and Biological Effects of Carcinogenic Hydrocarbons" (Bedson Lecture).

ROYAL INSTITUTION, at 9.—S. R. K. Glanville: "Weights and Balances in Ancient Egypt".

Forthcoming Events

[Meetings marked with an asterisk are open to the public.]

Monday, November 4

SOCIETY OF CHEMICAL INDUSTRY (LONDON SECTION), at 8.—Prof. I. M. Heilbron: "Chemical Elixirs of Life—the Recent Developments in the Chemistry of Sterols, Lipochromes and Related Compounds" (Jubilee Memorial Lecture).

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Prof. Kenneth Mason: "The Himalaya as a Barrier to Modern Communications".

Tuesday, November 5

ROYAL HORTICULTURAL SOCIETY, at 3.30.—(in the Society's New Hall, Greycoat Street, Westminster, S.W.1).—Sir William Wright Smith: "Problems connected with the Classification of Plants". (Masters Memorial Lectures. Succeeding lecture on November 26.)

BEDFORD COLLEGE FOR WOMEN, at 5.15.—Prof. W. Neilson Jones: "Notes on a Biologist's Visit to Southern California".*

HALLEY STEWART TRUST LECTURE, at 6.—(in the Memorial Hall, Farringdon Street, E.C.)—Prof. J. B. S. Haldane.*

INSTITUTION OF CIVIL ENGINEERS, at 6.—J. D. Watson: Presidential Address.

Wednesday, November 6

UNIVERSITY OF LONDON, at 5.—(at the London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, W.C.1).—Sir Daniel Hall: "The Improvement of Native Agriculture in Relation to Population and Public Health" (Heath Clark Lectures. Succeeding lectures on November 11, 13, 18 and 20).*

ROYAL SOCIETY OF MEDICINE (HISTORY OF MEDICINE SECTION), at 5.—Dr. E. J. Holmyard: "The Pharmacology of Medieval Islam".

WARBURG INSTITUTE, at 5.30.—H. Mattingly: "The First Age of Roman Coinage" (succeeding lectures on November 13 and 20).*

UNIVERSITY COLLEGE, LONDON, at 5.30.—I. C. Gröndahl: "Norwegian Life in Town and Country".*

INSTITUTION OF ELECTRICAL ENGINEERS (WIRELESS SECTION), at 6.—R. A. Watson Watt: Inaugural Address.

ROYAL ANTHROPOLOGICAL INSTITUTE, at 8.30.—(at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1).—M. J. Leahy: "Stone Age People of the Hagen Area, Mandated Territory of New Guinea" (Film).

INSTITUTE OF CHEMISTRY (LEEDS AREA SECTION).—Dr. C. H. Desch: "Metals in the Chemical Industry" (Jubilee Memorial Lecture).

Official Publications Received

Great Britain and Ireland

Department of Scientific and Industrial Research. Forest Products Research Records, No. 3 (Wood Preservation Series, No. 1): Experiments on the Preservation of Mine Timber—Progress Report No. 1. By J. Bryan and N. A. Richardson. Pp. ii+10+3 plates. (London: H.M. Stationery Office.) 6d. net.

Dam the Thames: a Matter of Sanitation, Comfort and Economy: a Plan for a Tideless River in London. Second edition. Pp. 16. (London: Thames Barrage Association.) 6d.

Air Ministry: Aeronautical Research Committee: Reports and Memoranda. No. 1633 (S. 210): Static Stability Tests of Six Full Scale Twin Float Seaplanes. By R. K. Cushing, A. S. Crouch and R. W. Angell. Pp. 20+10 plates. 1s. 6d. net. No. 1657 (S. 215): Water Performance of Seaplanes: Tank Data to determine Effect of Wind, Variation of Loading or a Change of Air Structure. By W. G. A. Perring. Pp. 4+3 plates. 6d. net. No. 1692 (T. 3612): Turbulence Tests of the R.A.E. Wind Tunnels. By Dr. R. G. Harris and A. Graham. Pp. 6+3 plates. 6d. net. (London: H.M. Stationery Office.) Sale of Food and Drugs: Extracts from the Annual Report of the Ministry of Health for 1934-35 and Abstract of Reports of Public Analysts for the Year 1934. Pp. 15. (London: H.M. Stationery Office.) 3d. net.

Other Countries

Smithsonian Miscellaneous Collections. Vol. 94, No. 6: The Abdominal Mechanisms of a Grasshopper. By R. E. Snodgrass. (Publication 3335.) Pp. ii+89. Vol. 94, No. 7: A New and Important Copepod Habitat. By Charles Branch Wilson. (Publication 3336.) Pp. ii+13. Vol. 94, No. 9: Review of the Genus *Chlaenobia* Blanchard (Coleoptera: Scarabaeidae). By Edward A. Chapin. (Publication 3338.) Pp. 20. (Washington, D.C.: Smithsonian Institution.)

Bulletin of the Bingham Oceanographic Collection: Peabody Museum of Natural History, Yale University. Vol. 5, Art. 1: Report on Hydrographic Observations in the Gulf of Mexico and the Adjacent Straits made during the Yale Oceanographic Expedition on the *Mabel Taylor* in 1932. By Albert Elide Parr. Pp. 93. (New Haven, Conn.: Yale University.)

Pennsylvania State College: School of Agriculture and Experiment Station. Bulletin 319: The Mineral Requirements of Milk Production; The Annual Cycle of Mineral and Nitrogen Metabolism of the Milch Cow, as affected by Alfalfa Hay, Timothy Hay, Bone Flour and Ground Limestone. By Ernest B. Forbes, with the collaboration of Alex Black, Winfred W. Braman, Donald E. H. Frear, Orme J. Kahlenberg, Frank J. McClure, Raymond E. Swift and LeRoy Voris. Pp. 152. (State College, Pa.: Pennsylvania State College.)

Illinois Biological Monographs. Vol. 13, No. 3: Evolution of Foliar Types, Dwarf Shoots and Cone Scales of Pinus; with Remarks concerning similar Structures in Related Forms. By Clifton Childress Doak. Pp. 106. (Urbana, Ill.: University of Illinois.) 1.50 dollars. Proceedings of the United States National Museum. Vol. 83, No. 2979: New West Indian Cerambycid Beetles. By W. S. Fisher. Pp. 189-210. (Washington, D.C.: Government Printing Office.)

Proceedings of the Academy of Natural Sciences of Philadelphia, Vol. 87. The Fauna of Burnet Cave, Guadalupe Mountains, New Mexico. By C. Bertrand Schultz and Edgar B. Howard. Pp. 273-298. (Philadelphia: Academy of Natural Sciences.)

Research at the Indian Institute of Science, Bangalore, 1934-1935. Pp. 70+14 plates. (Bangalore: Indian Institute of Science.)

Canada: Department of Mines. Wood Fuel Burning Tests. By E. S. Malloch and C. E. Baltzer. (No. 761.) Pp. 6. (Ottawa: King's Printer.) 10 cents. [1810]

Catalogues

pH Values: What they are and How to determine Them. Fourth edition, revised and enlarged. Pp. 24. (London: The British Drug Houses, Ltd.)

Sodium Mandelate—Boots in the treatment of Urinary Infections. Pp. 4. Hepastab in the treatment of Pernicious Anaemia. Pp. 26. (Nottingham: Boots Pure Drug Co., Ltd.)