whilst the *Beagle* went for water. We found here a party of Spaniards, who had been sent from Charles Island to dry fish and to salt tortoise-meat. About six miles inland, and at the height of nearly 2,000 feet, a hovel had been built in which two men lived who were employed in catching tortoises, whilst the others were fishing on the coast. I paid this party two visits and slept there one night. . . . While staying in the upper region we lived entirely on tortoise-meat: the breastplate roasted (as the Gauchos do *carne con cuero*), with the flesh on it, is very good; and the young tortoises make excellent soup; but otherwise the meat to my taste is indifferent."

Societies and Academies

PARIS

Academy of Sciences, August 12 (*C.R.*, **201**, 413–436). The President announced the death of Antoine Guntz, *Correspondant* for the Section of Chemistry. HANS SCHWERDTFEGER: Functions of matrices. BORIS KAUFMANN: The infinitesimal properties of closed ensembles of arbitrary dimension. RICHARD BRAUER: The integral invariants of varieties representative of simple closed Lie groups. GEORGES BOURION: The limit functions of the partial sums of an integral series at the frontier of the circle of convergence. MARCUS BRUTZCUS: The appreciation, *a priori*, of the value of a commercial combustible for motors. RENE DUBRISAY: The action of sulphur on silver. The blackening of silver can be produced by sulphur without the intervention of a sulphur compound. The increase in the rapidity of the action caused by a high vacuum may be partly due to the increased rate of diffusion of the sulphur vapour, and partly to the removal of a layer of protective gases on the silver. JEAN CALVET, JEAN J. TRILLAT and MILOSLAV PAIČ: The recrystallisation of pure aluminium. Application of the X-ray method to the study of the velocity of crystallisation of aluminium containing 99·9986 per cent of the metal. At 0° C., slight traces of crystallisation appear after 12 hours, and this is still incomplete after 336 hours. At 100° C., recrystallisation is complete after one minute, and at higher temperatures is practically instantaneous. CHARLES DUFRAISSE and MARCEL GÉRARD: Dissociable organic oxides and the anthracene structure. The existence of a photo-oxide of anthracene: its thermal decomposition. According to the theory developed from the study of the rubenes, anthracene should absorb oxygen rapidly under the action of light, forming a compound decomposing on heating but without emitting oxygen. The results of experiments with anthracene are given, fully confirming these views. RENE SALGUES: Erythrocytes, hæmoglobin and the globular value in the course of cancerous affections in birds. LEON VELLUZ: The comparative action of the bile acids on the tetanus and diphtheria toxins: the special properties of lithocholic acid. For the same polycyclic structure, the neutralisation of the diphtheria toxin depends on the number of alcohol groups, whilst this substitution is without influence on the neutralisation of the tetanus toxin. Lithocholic acid is the most energetic agent known as regards neutralisation of the toxin of diphtheria. RAYMOND-HAMET: The non-modification of the sympathicolytic activity of yohimbine by the introduction of a double bond in the molecule of this alkaloid.

August 19 (*C.R.*, **201**, 437–460). LOUIS BLARINGHEM: The fertility of *Hemerocallis flava* and of its hybrid (*H. flava* × *H. fulva*). HARALD CRAMER: The asymptotic properties of a class of chance variables. G. POLYA: Integral series satisfying an algebraic differential equation. PIERRE LEJAY and TSAN HUNG CHI: Gravity map of the south-west of China. REZA RADMANECHE: Influence of temperature on the electrical conductivity of quartz. PHILIPPE WAGUET: Light emission of mercury arcs under high pressure. From measurements with a photoelectric cell of the light intensities of a mercury arc at varying incidences it is concluded that the colour of the mercury arc varies according to the direction from which it is observed. This complicates the problem of heterochrome photometry when the mercury arc is used as a light source. GEORGES FLUSIN and CHRISTIAN AALL: The study of the system calcium carbide, calcium oxide. G. DEDEBANT, PH. SCHERESCHEWSKY and PH. WEHRLÉ: The theory of the general circulation of the atmosphere. The law of the rotation and the field of pressure. FERNAND ARLOING, ALBERT MOREL and ANDRÉ JOSSERAND: The action on tumours, in intravenous injections, of soluble chemical products in which iron is associated with vitamin C (ascorbic acid).

LENINGRAD

Academy of Sciences (*C.R.*, **2**, No. 9, 1935). L. G. MAGNARADZE: The problem of the elastic oscillation of the semiplane. G. M. BAVLI: A generalisation of the boundary problem of Poisson. N. A. SLIOSKIN: Discontinued two-dimensional movement of an ideal gas round a curved obstacle. N. A. DOBROTIN: Distribution in angle of protons projected by neutrons. M. DIVILKOVSKIJ and M. FILIPPOV: Measurement of the intensity of magnetic fields of very high frequency. W. FREEDERICKS and V. ZVETKOV: Orientating action of an electric field on the molecules of anisotropic fluids. M. P. VOLAROVITCH and A. A. LEONTJEVA: (1) Determination of the specific volume of molten diabase at high temperatures. (2) Determinations of the specific volume of molten salts at high temperatures. P. P. PORFIROV: Determination of the capacity of a polarised mercury electrode. N. P. SMIRNOV: The stimulus to precipitation. N. N. VOROZHCOV, Jun. and A. T. TROSCHENKO: Morphine content in the latex of *Papaver somniferum*. A. E. FERSMAN: The *ek* system (see NATURE of August 31, p. 349). S. N. SIMAKOV, N. A. SCHWEMBERGER and O. S. VJALOV: Silurian naphtha in central Asia. N. A. SCHWEMBERGER: Contribution to the problem of the silurian naphtha in Central Asia. M. N. IVANTISHIN: Contribution to the problem of the geochemical zonation in the distribution of metallic elements on the territory of the Far Eastern region. A. G. EBERZIN: The Tchauda layers in the Taman peninsula. O. NIKIFOROVA: The Upper Silurian of Podolia. S. F. CEREVITINOV and L. V. METLICKIJ: Effect of an electric field of high frequency on the keeping qualities of fruit and vegetables. A. V. POPCOV: Note on secondary dormancy of *Taraxacum megalorhizon* seeds. T. S. RASS: Some regularities in the structure of eggs and larvæ of fishes in northern seas.

(*C.R.*, **3**, No. 1, 1935). I. M. VINOGRADOW: Some rational approximations. I. D. ADO: Representation of Lieschen groups by linear substitution. S. TCHUNIKHIN: A generalisation of the theorems

of G. Frobenius and of V. Turkin. A. P. DIETZMANN and A. A. KULAKOV: Some criteria of non-simplicity of finite groups. W. FEDOROV: Uniform functions. S. SHUBIN: Application of the method of the Dirac density matrix to the theory of metals. G. LIANDRAT: Utilisation of a selenium photo-element for the measurement of the ultra-violet solar radiation in the region of 3200 A. A. M. STEFANOVSKIJ, E. S. TATARSKIJ and N. V. ZELIAKOV: Dependence of the structure of ammonia catalyser upon the conditions of its reduction. V. G. FESENKOV: Photometric analysis of the luminosity of the night sky. N. S. FILIPPOVA: Isotopes of hydrogen in petroleum. P. LAZAREV: Ionic theory of the physiological action of short waves. A. N. PARSHIN: Extracts from the muscle tissue of dog and rabbit. V. P. NEKHOROSHEV: A find of Upper Palæozoic marine deposits in the Zaisan basin. M. E. NEUHAUS: Data concerning crossing-over between the *X* and *Y* chromosomes in females of *Drosophila melanogaster*. B. K. STEGMANN: Distribution and geographical variation of *Saxicola torquata*.

ROME

Royal National Academy of the Lincei, April 28. G. ROVERETO: The Montenotte series as a constituent element of the Western Alps and of the Apennines. M. RENATA FABBRI: Differentials of higher order. L. ROTH: The regularity of algebraic surfaces. E. CIANI: A sizigetic bundle of cubic surfaces (1). A. DE MIRA FERNANDES: Compound tensorial derivation in non-point spaces. TH. MOTZKIN: Some characteristic properties of convex ensembles. N. W. AKIMOFF: Considerations on propulsive efficiency. C. TOLOTTI: Typical case of dynamic universes endowed with complete symmetry about a centre. The field-equations of a universe showing complete symmetry about a point have been derived previously, the only hypothesis made being the existence of suitable co-ordinates with respect to which the propagation of light is isotropic. Further assumptions now made are that such isotropy holds with respect to substantial co-ordinates (connected with the moving matter) and that, in such co-ordinates, the velocity of light is independent of position. Under these conditions, the gravitational equations are shown to relate necessarily to a completely homogeneous universe. G. PICCARDI: The atmospheres of the planets. A hypothesis is advanced to explain the fact that the atmospheres of the planets near the sun are characterised by oxygen compounds and those of the more distant planets by carbon-hydrogen compounds. T. FRANZINI: The diffusibility of deuterium into metals. The displaceability of occluded hydrogen by an electric field is confirmed, and the absence of a similar effect with deuterium is shown. Further work is necessary to decide whether deuterium is adsorbed, but not absorbed, by palladium; or neither adsorbed nor absorbed; or absorbed, but not displaceable. R. MANZONI ANSIDEI: The Raman spectra of the isomeric nitrotoluenes. The measurements made confirm those published by Kohlrausch, Dadieu and Jele in 1931. G. PICCARDI: (1) The spectrum of neodymium oxide vapour. (2) The spectrum of samarium oxide vapour. C. ACQUA: The nature of ultra-viruses. From a review of the evidence available, the conclusion is drawn that filterable viruses have an auto-catalytic action. A. MESSERI: The organising power of wood and of the primary phlœm.

WASHINGTON, D.C.

National Academy of Sciences (*Proc.*, **21**, 507–516, August). E. C. MACDOWELL, M. J. TAYLOR and J. S. POTTER: The dependence of protection against a transplantable mouse leukæmia upon the genetic constitution of the immunising tissue. Two strains of mice were used. Embryonic tissue from one strain induced resistance in all cases; that from the other failed to induce resistance in its own strain; embryonic tissue of hybrids of the two strains are as successful as the first. J. W. ALEXANDER: (1) On the chains of a complex and their duals. (2) On the ring of a compact metric space. ALFRED J. MARIA and ROBERT S. MARTIN: On the representation of positive harmonic functions. M. H. ELLIOTT and W. C. TREAT: Hunger-contractions and rate of conditioning. Hunger-contractions, visible in rats with stomachs transplanted to a position just below the skin, were found to coincide with periods of activity. Rats with such hunger-contractions were able to learn to respond to a conditioned stimulus (an electric light) more quickly than animals which had received food.

Forthcoming Events

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

Sunday, October 6

BRITISH MUSEUM (NATURAL HISTORY), at 3 and 4.30.—Miss M. R. J. Edwards: "Animals and Man".*

Monday, October 7

BRITISH MUSEUM (NATURAL HISTORY), at 11.30.—J. Ramsbottom: "Fungi and their Mode of Life".*

Official Publications Received

Great Britain and Ireland

Department of Scientific and Industrial Research: Food Investigation. Leaflet No. 6: The Refrigerated Gas-Storage of Apples. By Dr. Franklin Kidd and Dr. Cyril West. Pp. 12. (London: H.M. Stationery Office.)

Sixteenth Annual Report of the Ministry of Health, 1934–35. (Cmd. 4978.) Pp. xii+350. (London: H.M. Stationery Office.) 5*s*. 6*d*. net.

Transactions of the Royal Society of Edinburgh. Vol. 58, Part 2, No. 17: The Endodermis in Light-grown and Etiolated Shoots of the Leguminosæ—A Contribution to the Causal Study of Differentiation in the Plant. By Dr. G. Bond. Pp. 409–425+1 plate. 2*s*. 6*d*. Vol. 58, Part 2, No. 18: Rare and New Ostracoderm Fishes from the Downtonian of Shropshire. By Prof. Leonard J. Wills. Pp. 427–447+7 plates. 5*s*. (Edinburgh: Robert Grant and Son; London: Williams and Norgate, Ltd.)

Other Countries

Veröffentlichungen des Geophysikalischen Instituts der Universität Leipzig. Serie 2: Spezialarbeiten aus dem Geophysikalischen Institut und Observatorium. Band 6, Heft 3: Temperaturverhältnisse und Windsystem eines geschlossenen Waldgebietes. Von Horst Günther Koch. Pp. 121–175+2 plates. Band 6, Heft 4: Die physikalische Arbeitsweise des Gallenkamp-Verdunstungsmessers und seine Anwendung auf mikroklimatische Fragen. Von Katharina Dörffel. Pp. 177–222. Band 6, Heft 5: Instabile Schichtungen der Atmosphäre und ihre Bedeutung für die Wetterentwicklung im Köningsberger Gebiet. Von Gerhard Seifert. Pp. 223–379+34 plates. (Leipzig: Geophysikalisches Institut der Universität.)

Zaklad Astronomji Praktycznej Politechniki Warszawskiej (Institut d'Astronomie pratique de l'Ecole polytechnique de Varsovie). Publication No. 13: Pomiary mikrofotometryczne gwiazdy zmiennej SU Draconis w latach 1931–1934 (Mikrophotometrische Messungen des veränderlichen SU Draconis in den Jahren 1931–1934). Napsali F. Kępiński i M. Kowalczewski. Pp. 18. (Warszawa: Politechniki Warszawskiej.)

Annales de l'Institut de Physique du Globe de l'Universite de Paris et du Bureau central de Magnétisme terrestre. Publiees par les soins de Prof. Ch. Maurain. Tome 13. Pp. iii+144. (Paris: Les Presses universitaires de France.)

Report on the Zoological Survey of India for the Years 1932 to 1935. Pp. iii+lx. (Delhi: Manager of Publications.) 1.2 rupees; 2*s*.