Societies and Academies.

LONDON.

Geological Society, November 4.—N. E. **Odell**: Preliminary notes on the geology of the eastern parts of central Spitsbergen; with especial reference to the problem of the Hecla Hook formation. Approximately, the area amounts to 2000 square miles, but only a relatively small portion of this could be actually examined. It consists of a mountainous tract much of which is submerged under "highland ice" and glaciers, and is therefore lacking in direct rock-evidence. But through this ice-covering break many "nunatakkr," and, on the west of the region, a high range of mountains—the Chydenius Range—of which Mount Newton (5445 feet) is claimed to be the culminating point of Spitsbergen. The rocks encountered include representatives of the metamorphic basement complex, the Hecla Hook formation (which is intimately associated with that complex), the Carboniferous system, and intrusive acid and basic igneous facies. No evidence was found of rocks earlier in age than the Hecla Hook series, and an Archæan formation must be presumed absent. The greatest acid intrusions are those of the pink and grey granites in the Mount Newton and Mount Chernishev massif, both of the pre-Carboniferous (and presumably pre-Devonian) age. They would appear to have been intruded at the time of the Caledonian folding, and though towards its close, yet prior to the earliest Devonian sedimentation. Except in the south, on the Nordenskiöld Glacier, the Devonian strata are entirely absent, having been eroded from the interfolded Hecla Hook sediments and granites before the transgression of the Upper Carboniferous sea. The Carboniferous is confined to the coast of Hinlopen Strait, from Cape Fanshawe so far south as Bismarck Strait, while Triassic deposits were not seen north of the latter.—K. S. **Sandford**: The geology of North-East Land (Spitsbergen). North-East Land is separated by a narrow strait from the main island of Spitsbergen, and is about 8000 square miles in area. A great part of the coast and the whole of the interior are completely hidden by ice, which forms a dome rising to about 2400 feet. The northern area consists of Older Palæozoic rocks, granite, and gneiss; the last two being probably younger than the ancient sedimentary rocks. A pink granite penetrates them, and has been found extensively developed in the southern part of this "northern oldland." An important discovery in 1924 was the south-eastern corner of this pink granite, in the middle of the east coast, which previously had been known only as an unbroken and precipitous ice-front over 100 miles long. The southern area of the Island is delimited from the northern by an east-and-west fjord. This is an area of undisturbed Upper Carboniferous and Permo-Carboniferous clays and cherts, to a visible thickness of more than 1000 feet: the fauna belongs to the Russian Province. The history of the Island has been one of quiescence and immunity from folding, in an area of shallow seas. It has been affected by vertical movements, also by acid intrusions (Palæozoic) and by basic intrusions (Cretaceous).

Royal Anthropological Institute, November 10.—J. P. T. **Burchell**: The "shell-mound" industry of Denmark as represented at Lower Halstow, Kent. The stratified finds made during 1924 in the coastal sections between Swalecliffe and Reculver upon the north coast of Kent consisted of a medieval midden of the fifteenth century containing roughly worked flint instruments for the purpose of opening up the shells of the oyster, cockle, whelk, and winkle; a midden of the Roman period containing pottery fragments, in addition to a series of occupation sites of the Early Iron Age in which were found several types of the pottery of that period accompanied by a few flint implements and flakes. A flint implement of Early St. Acheul times was found in the underlying Pleistocene gravels. This is the first instance of an implement being found *in situ* in these particular gravel sections. Further excavations were carried on during the current year. The site in question is on the western side of a tongue of land running out northwards into the centre of the Upchurch Marshes. Here, resting upon the surface of the London Clay, is a factory site of the Shell Mound period. This site consists of a series of circular patches 3 feet to 4 feet wide and 3 inches to 4 inches deep. They are composed of blackened earth and calcined flints. The implements occur most freely in these patches. The characteristic implements of the industry are the adze and "shell mound" axe or tranchet, whilst flakes, cores, core scrapers, core dressings, chisel-ended flakes, blades, discs, borers, points and scrapers of the end, round, side and hollow types, are well represented. A round quartzite pebble with both faces countersunk and two opposing ends much bruised was also found.

Optical Society, November 12.—S. A. **Emerson**: Some recent improvements in modern ophthalmic lenses. The paper discusses the limitations inherent in the usual forms of fused bifocal lenses, and the methods now being adopted for overcoming these limitations. In the newer bifocals the glass used for the reading segment has the same relative dispersion as that of the major lens. The fused lens has thus no more chromatic aberration in the reading portion than has an ordinary single lens of the power of the reading portion made from either glass. In the fused bifocals as usually made there is very limited control of the centering of the reading portion. By using suitably shaped reading portions, this difficulty has been largely overcome. For medium and high-power lenses, a reduction in weight and an improvement in appearance, together with an increase in the field of view, have been obtained.—W. **Swaine**: Relation of visual acuity and accommodation to ametropia. Artificially produced results on the author's own eye are compared with his theoretical table showing how degrees of ametropia affect visual badness (*i.e.* inverse of acuity).—H. H. **Emsley**: Irregular astigmatism of the eye—effect of correcting lenses. Experiments to test the grating acuity of the eye in different meridians reveal the presence of irregular acuity, or irregular astigmatism as it is called.—E. F. **Fincham**: Some causes of apparent astigmatism of the eye, other than cylindrical errors of refraction. Measurements of visual acuity of a hypermetropic eye were made with a grating test. These showed that although the eye was able to make the necessary adjustment of the accommodation to correct the hypermetropic error for any meridian, the acuity varied considerably in different meridians. Variations of acuity in different meridians can be explained upon the assumption of the presence of "veins" of unequal refractive index in the media, or the striated character of the crystalline lens. Owing to the hexagonal packing of the foveal cones, the separation of their outer extremities (presumably the sense organs) is different in different meridians. The separation is least in the three meridians in which lie the centres of adjacent hexagons.

DUBLIN.

Royal Dublin Society, October 27.—L. B. **Smyth**: A contribution to the geology of Great Orme's Head. Great Orme's Head in North Wales consists of at least 1230 feet of Carboniferous limestone. The uppermost 180 feet are nearly barren, cherty limestones. They rest upon 50 feet of dark limestones and shales, the Bishop's Quarry beds, with a considerable fauna, including *Productus giganteus* (Mart.) in prodigious numbers, and *Posidonomya becheri* (Bronn.). Correlation is suggested with "Upper D_2" (Lamellibranch beds) of Garwood and Goodyear in the Craven district. The next 700 feet consist of pale to white limestones, graduating below to dark brown, with a few shales at the base. The latter have a fauna containing D_1 and D_2 forms. Below these shales all the limestone is dolomitised and no identifiable fossils were obtained. The thickness of the dolomite exposed is apparently 700 feet, but, owing to faults, may be only 300 feet. The base is hidden. One new species, *Clisiophyllum delicatum*, is described. Contemporaneous erosion is indicated at five horizons by the occurrence of local unconformities, limestone conglomerate, and current-bedded limestones and sandstones. The anomalous position of a mound of cherty limestone is probably due to transport by ice.

EDINBURGH.

Royal Society, November 9.—J. W. **Gregory**: (1) Scottish drumlins. Kames and drumlins are two of the most familiar features in Scottish scenery due to glacial deposits. Drumlins are elongated mounds of boulder clay which generally occur in parallel series and each has a steep broad bluff at one end, and tapers gently at the other. This form has been often attributed to the direct action of the ice by the deposition of the clay around a core of closely packed boulders. It is generally stated that drumlins are parallel to the direction of the ice movement. The Scottish drumlins have no such boulder core, and they are generally oblique to the ice movement, and are often at right angles to it. They are parallel to the prevalent wind direction as shown by the bending of the trees upon their crests. They are regarded as the characteristic form developed by boulder clay under the combined action of wind and rain. Some drumlins rest upon a core of rock which then determines their alignment; in these cases the effect of wind erosion is often shown by the development of secondary drumlins on the sides of the major drumlins. (2) Scottish kames. Kames are ridges of sand and gravel deposited during the melting of the ice sheets of the glacial period. They have been often identified with the Swedish osar and attributed to deposition in rivers flowing under or through glaciers. The distribution of the Scottish kames—excluding formations so-called which are moraines, drumlins, or banks left by the denudation of sheets of gravel—gives no support to this view, but shows that, like the ordinary Irish eskers, the American kames and similar formations in Finland, they were deposited as banks of gravel on the margin of an ice sheet melting in water. The chief Scottish kames occur at intervals along a line through eastern Scotland from Caithness to Berwickshire. They are all earlier than the 100-ft. raised beach except one at Dornoch. They are absent from the Highland Plateau, on which they would be expected to occur if due to sub-glacial rivers.—J. M. **Wordie**: Notes on the geology of Jan Mayen: The bulk of the island consists of lavas of basaltic composition, for the most part trachy-basalts; but among the early eruptions trachytes and condesite are found. In places there are great thicknesses of tuff, and sills of basic constitution are everywhere prominent. Beerenberg (8090 ft.) has never been active in historic times.—G. W. **Tyrrell**: The petrography of Jan Mayen. The Jan Mayen lavas consist of a mildly-alkalic series ranging from ankaramite (ultrabasic olivine-basalt), through trachy-basalts of various types, trachyandesites, to trachytes, of which seven new chemical analyses have been made. The suggested sequence of eruption is trachyte, trachy-basalt, and ankaramite, due to the downward freezing of a gravity-stratified magma.—Martin A. **Peacock**: The geology of Videy, S.W. Iceland; a record of igneous action in glacial times. The basement-rocks of Videy are a disturbed, downward succession of palagonite-tuff and breccia with included glacial blocks, "globular basalt" (akin to pillow-lava), and fine-grained, shattered basalt. Their structural and petrographic peculiarities may be explained by assuming that they were formed by "sub-glacial extrusion."

PARIS.

Academy of Sciences, October 19.—J. **Costantin**: An unsuspected case of plant pathology.— — **d'Arsonval, F. Bordas** and F. **Touplain**: The determination of the régime of mineral springs. A description of automatic instruments used for recording the temperature and output of the spring, and for taking a sample when a determined temperature is attained.— — **Riquier**: Some problems relating to the partial differential equation $\left(\frac{\partial^2}{\partial x^2}+\frac{\partial^2}{\partial y^2}\right)^n u=0$.—A. **Calmette, J. Valtis, L. Nègre** and A. **Boquet**: Experimental infection through the placenta by the filtrable elements of the tubercular virus. Under certain experimental conditions the filtrable virulent elements arising from tuberculous products or from cultures of Koch bacilli, inoculated under the skin of guinea-pigs, can pass through the placenta, infect the fœtus and determine tuberculous lesions.—Paul **Mentré**: The simultaneous projective deformations of a congruence and of its two focal surfaces.—André **Roussel**: The method of adjunction of the calculus of variations.—Const. **Parvulesco**: The distribution of the stars in the globular clusters M.9, M.10, M.12, and the kinetic theory of gases.—Georges **Fournier**: The period of decay of radium E. The values found by the author, 4·86 days and 4·84 days, confirm the earlier results of Thaller (4·85 days), and are not in agreement with the recent figure of 4·98 days found by Bastings.—Jean Jacques **Trillat**: A method, using X-rays, by means of which the course of certain chemical reactions (the oxidation of unsaturated fatty acids) can be followed. A thin layer of the unsaturated acid was placed on a sheet of lead, and X-ray spectrographs taken at intervals. By this method the steps in the oxidation of oleic, linoleic and linolenic acids can be studied. The oxidation is brought about by successive additions of the same quantity of oxygen; and is accompanied by a molecular elongation of the order of 6 or 7 Å.U. This elongation renders the system unstable and is followed by polymerisation.—Fred **Vlès** and Mlle. Madeleine **Gex**: The behaviour of benzene in the presence of aqueous solutions: the ultra-violet absorption as a function of the *p*H. The experimental results are given as a curve, showing the ratio of the absorptions [λ260]/[λ254] as a function of the *p*H. The benzene molecule is not inert towards the hydrogen ions of the solution.—H. **Forestier** and G. **Chaudron**: The points of magnetic transformation in the system ferric oxide-magnesia. The study of the relation between temperature and

the magnetic properties of mixtures of ferric oxide and magnesia prove the existence of magnesium ferrite, $MgO.Fe_2O_3$. Ferrites of nickel, lime and cadmium, which are attracted by a magnet, have also been prepared.—A. **Boutaric** and Mlle. G. **Perreau**: The influence of some stable colloids on the flocculation of sols and of suspensions.—J. L. **Costa**: The mass spectra of some light elements. The values found are for hydrogen 1·0074 (positive ion) or 1·0079 (neutral atom); lithium 6·009 and 7·012.—Francis **Perrin**: The Brownian movement of rotation.—**Picon**: The action of a vacuum and of heat on the neutral and basic nitrates of bismuth. The estimation of the water of constitution and of nitric acid in these salts.—Const. A. **Ktenas**: The eruption of the volcano of Santorin. The morphological characters.—René **Souèges**: The embryogeny of the Crassulaceæ. Development of the embryo in *Sedum acre*.—Marc **Bridel**: The presence of two new ferments, primeverosidase and primeverase, in the emulsin of almonds.—G. **Rivière** and G. **Pichard**: The posterity of *Amygdalopersica Formonti*.—René **Hazard** and L. J. **Mercier**: The action of tropanol on the heart.—Armand **Dehorne**: Indications on the linome of some cellular categories.—M. and Mme. Georges **Teissier**: The embryonic growth of *Chrysaora hysocella*.— — **Samec**: The enzymatic hydrolysis of natural and synthetic amylophosphates.—Agasse **Lafont** and Roger **Douris**: The subcutaneous injection of gaseous substances such as oxygen.

SYDNEY.

Royal Society of New South Wales, September 2.—A. R. **Penfold**: The essential oil of *Eriostemon myoporoides*. This Rutaceous plant occurs along the coast to tableland districts of New South Wales, Victoria and Queensland, being very abundant at Emu Plains in the former State. The leaves and terminal branchlets yielded 0·75 per cent. of a very mobile yellow oil. Its principal constituents proved to be d-a-pinene (75-85 per cent.), ocimene, Ledum camphor, m.pt. 104° C., a sesquiterpene resembling aromandendrene, methyl anthranilate, a paraffin of m.pt. 64°-65° C., with traces of a phenolic body.—Sir George **Knibbs**: The human sex-ratio and the reduction of masculinity through large families. The live births in all western countries show an excess of males, and still births an even greater excess. Multiple births show greater femininity than ordinary. In Australia the proportion of females increases with the size of the family; thus in families of 1 to 3 there are 391 more boys than girls in 10,000 children; in families of 4 and 5 only 317 more; in families of 6, 7, 8, and 9 only about 246 more; in families of 10, 11, and 12 only 235 more. Taking the size of family given in "Who's Who," and using about half of the entries, the proportion is almost exactly what could have been predicted solely from the methods of probability, assuming equal chances for males and females. For example, in families of seven, the numbers for 7 boys, 6 boys and 1 girl, 5 boys and 2 girls, 4 boys and 3 girls, etc., were actually as on the top line

1	5	15	26	23	21	6	1
1	5	16	27	27	16	5	1.

The bottom line shows what might have been expected from probability. The masculinity, however, while it falls on the whole, is somewhat variable. There is a difference in the relative number of males in the living and deceased issue of families of from 1 to 9. The Australian results are based on 81,375 families and 454,372 children.—G. J. **Burrows** and A. E. **James**: Molecular solution volumes and association. A comparison of the solution volumes of several solutes in benzene, toluene methyl alcohol and acetone suggests that the molecular solution volume is always greater in non-associated liquids such as benzene than in associated liquids such as methyl alcohol. When the solute is not associated the difference is small, but in the case of an associated solute there is a marked difference between its volume in benzene or toluene and that in alcohols or acetone. The molecular solution volume of a non-associated solute in any of these liquids does not differ very much from the molecular volume of the solute in the liquid condition, whereas an appreciable difference is observed in the case of an associated solute dissolved in an associated solvent.

WASHINGTON, D.C.

National Academy of Sciences (Proc. Vol. 11, No. 10, October).—Francis G. **Benedict** and Elizabeth E. **Crofts**: The fixity of basal metabolism. For a normal subject, half an hour's repose is sufficient to establish a condition giving trustworthy measurements of basal metabolism on any individual day. Even when exposure has reduced the skin temperature considerably, oxygen consumption measurements indicate that heat production is unchanged and thus independent of heat loss.—Tracy Yerkes **Thomas**: (1) Announcement of a projective theory of affinely connected manifolds. (2) On the equi-projective geometry of paths. Most of the theorems have their counterpart in the affine geometry of paths.—H. P. **Robertson**: Transformations of Einstein spaces.—Otto **Oldenberg**: On fluorescence radiation of nitrogen. A condensed spark arrangement is included inside a bulb containing the gas at very low pressure, and a ray from the spark excites faint fluorescence along its path. The fluorescence has a pure band spectrum containing bands due to the fluorescing ion and the fluorescing molecule.—A. H. **Compton** and R. L. **Doan**: X-ray spectra from a ruled diffraction grating. The grating was ruled on speculum with comparatively large grating spaces ($D = 2{\cdot}000 \times 10^{-3}$ cm.), and light ruling and very small glancing angles were used. Wave-lengths measured thus agree well with those obtained by reflection from a crystal.—Ralph D. **Bennett**: An attempt to test the quantum theory of X-ray scattering. Simultaneous registration of a recoil electron and a scattered X-ray quantum, at the angles predicted by Compton's theory, would be favourable evidence. Using Geiger point discharge counters and a solid, or hydrogen or air as a scattering target, co-incident effects were obtained, but they occurred in groups.—P. W. **Bridgman**: (1) The viscosity of liquids under pressure. For water, at low temperatures viscosity decreases with rising pressure to a minimum and then increases. This minimum disappears above about 25° C. All other liquids examined show uniform increase of viscosity with pressure, at first linearly but above 1000 kgm./sq. cm., the rate of increase grows rapidly, and generally the logarithmic curve becomes nearly straight. The temperature coefficient of viscosity also increases with pressure. (2) Thermal conductivity and thermo-electromotive force of single metal crystals. Thermal conductivity and thermo-electromotive force for bismuth, zinc, cadmium, and tin crystals for the range room-temperature to 100° C. were measured as a function of direction in the crystal. The results lead to the conclusion that there is a reversible absorption of heat within the crystal on changing the direction of the current (internal Peltier heat effect).—H. B. **Wahlin**: The aging effect in the mobility of positive ions.—J. H. **Van Vleck**: On the quantum theory of the polarisation of resonance radiation in magnetic fields.—H. C. **Urey**: The structure of the hydrogen molecule ion.

The energy is calculated of the steady state of lowest energy of the hydrogen molecule ion, when the electron vibrates in a straight line perpendicular to, and through the mid point of, the line joining the nuclei.—Albert L. **Raymond**: The mechanism of carbohydrate utilisation. The steps in alcoholic fermentation are, briefly, hexose monophosphate ester, cleavage into two triose groups, one containing all the phosphorus, the latter becoming hexose diphosphate and the former yielding alcohol and carbon dioxide; and the hydrolysis of the diphosphate back to hexose. Carbohydrate metabolism in the animal is believed to be similar.—William D. **Harkins**: The separation of chlorine into isotopes (isotopic elements) and the whole-number rule for atomic weights. By diffusion through the walls of clay pipe-stems, hydrogen chloride was obtained containing chlorine of atomic weight $35{\cdot}417_7$ as compared with $35{\cdot}457_4$ for ordinary chlorine. It is hoped to investigate with this light fraction the spectral shift due to isotopes as found for ordinary lead and the lead produced by disintegration of uranium.—William D. **Harkins** and W. G. **Guy**: The radio-activity of potassium, rubidium, and other elements. The natural leak of a large ionisation chamber is balanced against that of a small chamber containing uranium oxide covered with aluminium foil to exclude α-radiation. The salts examined were placed in the large chamber, and the activities of rubidium and potassium found are as 1·39 : 1·00. It is concluded that the disintegration of an isotope is the source of the radiation from potassium.—William D. **Harkins** and Norvil **Beeman**: The oriented wedge theory of emulsions. If the oil-like or non-polar end of the soap molecule is smaller than the polar end, the emulsion will be one of oil in water; if the reverse be the case, the droplets will be of water. The size of the greatest number of drops is so much greater than the size of the sodium oleate molecule that it cannot be expected that the molecule should determine the size of the drop. Emulsifying agents, the molecules of which have larger non-polar or polar ends, are required to test the theory.—Williams D. **Harkins** and J. W. **Morgan**: Polymolecular and monomolecular films. Young's modulus for steel being about 12,000, that of a monomolecular film such as stearic acid on water is 39; a polymolecular film is generally much weaker. Films of mixed substances each giving a monomolecular film are also monomolecular.—William D. **Harkins** and S. B. **Stone**: The isotopic composition of the element chlorine in the meteorites: the atomic weight of meteoric and terrestrial chlorine (see NATURE, September 19, p. 426).—George L. **Clark**, P. C. **McGrath**, and M. C. **Johnson**: The effect of X-rays on the platinum catalyst in the contact sulphuric acid reaction. X-rays do not improve the yield if dry air is used. With moist air, an enormously greater conversion is obtained which is further increased, but only temporarily, by radiation of the catalyst.—Wm. H. **Gates**: The Japanese waltzing mouse, its origin and genetics. Both the waltzing and non-waltzing form of the Japanese mouse are derivatives of *Mus wagneri*, a native of Central Asia, and not of the common house mouse. In a cross with the latter, the characters of the waltzer tended to remain together in the F_2 generation.—A. J. H. **Russell**: A statistical approach to the epidemiology of cholera in Madras Presidency. The monthly mortality figures for the period 1902–21 are used, and the population dealt with numbers 43 millions. There is an annual and a six-yearly periodicity and a varying relationship in different areas with rainfall.—Harold **Hotelling**: The distribution of correlation ratios calculated from random data.—E. W. **Stearn**, B. F. **Sturdivant**, and A. E. **Stearn**: The life-history of a micro-parasite isolated from carcinomatous growths. Cultures or extracts of carcinomatous tissue give an organism the life-history of which seems to include rods, thread-like forms with tapering ends, cocci of various sizes, and large sporing bodies. The optimum temperature is 37°-41° C. In fluid from the tissue it is almost invisible and passes filters, but can be detected as a loosely coiled spirillum. In cultured colonies, under certain conditions, orthorhombic crystals appeared.

Official Publications Received.

Sinsai Yobô Tyôsakwai Hôkoku. (Reports of the Imperial Earthquake Investigation Committee.) No. 100, A. Pp. vi+354+60 plates+3 maps. No. 100, B. Pp. iv+126+44 plates+3 maps. No. 100, E. Pp. vii+297+31 plates+13 maps. (Tokyo.)

Department of Commerce: Bureau of Standards. Miscellaneous Publications, Bureau of Standards, No. 64: History of the Standard Weights and Measures of the United States. By Louis A. Fischer. Pp. v+34. (Washington: Government Printing Office.) 15 cents.

United States Department of Agriculture: Department Bulletin No. 1349: The Brood-Rearing Cycle of the Honeybee. By W. J. Nolan. Pp. 56. (Washington: Government Printing Office.) 10 cents.

Report of the Aeronautical Research Institute, Tôkyô Imperial University. Vol. 1, No. 12: The Standard Atmosphere and the Corrections to be Applied to a Reading of an Altimeter. By Takurô Tamaru. Pp. 321-346. (Tokyo: Maruzen Kabushiki-Kaisha.) 50 yen.

Congrès International des Américanistes. Compte rendu de la XXIe session, Deuxième partie, tenue à Göteborg en 1924. Pp. xxxix+706. (Göteborg: Museum.)

United States Department of Agriculture. Department Bulletin No. 1359: Food of American Phalaropes, Avocets and Stilts. By Alexander Wetmore. Pp. 20+3 plates. (Washington: Government Printing Office.)

The Development of India's Forest Resources. Compiled by the Economic Branch of the Forest Research Institute, Dehra Dun. Pp. v+39+22 plates. (Calcutta: Government of India Central Publication Branch.) 2.12 rupees; 5*s*.

The National Institute of Agricultural Botany. Sixth Report and Accounts, 1924-25. Pp. 19. (Cambridge.)

Department of the Interior: Bureau of Education. Bulletin, 1925, No. 11: Accredited Secondary Schools in the United States. Pp. v+119. (Washington: Government Printing Office.) 15 cents.

Studies from the Connaught Laboratories, University of Toronto. Vol. 2, 1922-1925. Pp. 273. (Toronto: University of Toronto Press.)

The Linnean Society of New South Wales. Historical Notes of its First Fifty Years (Jubilee Publication). Compiled by Dr. A. B. Walkom. Pp. 46. (Sydney, N.S.W.)

Seale-Hayne Agricultural College, Newton Abbot, Devon. Pamphlet 17: The Cost of Food in Milk Production (Third Report). By D. R. Edwardes-Ker and T. J. Shaw. Pp. 21. (Newton Abbot, Devon.)

British Photographic Research Association. Report for the Year 1924-25. Pp. 10. (London.)

Aeronautical Research Committee. Reports and Memoranda, No. 967 (Ae. 183): An Experimental Study of the Vibrations in the Blades and Shaft of an Airscrew. By A. Fage. (A.3.d. Airscrews, 73—T. 1947.) Pp. 16+1 plate. (London: H.M. Stationery Office.) 9*d*. net.

British Cast Iron Research Association. Fourth Annual Report for the Year ending June 30th, 1925. Pp. 20. (Birmingham.)

Ministry of Agriculture and Fisheries. Miscellaneous Publications, No. 49: Report on the Occurrence of Insect Pests on Crops in England and Wales for the Years 1922, 1923 and 1924. Pp. 36. (London: Ministry of Agriculture and Fisheries.) 1*s*. 6*d*. net.

Ministry of Public Works, Egypt: Physical Department. Helwan Observatory, Bulletin No. 32: Corrections to Observed Times of Wireless Signals, 1922 November to 1924 June. By H. Knox-Shaw and P. A. Curry. Pp. 131-141. (Cairo: Government Publications Office.)

Spisy vydávané Přírodovědeckou Fakultou Masarykovy University (Publications de la Faculté des Sciences de l'Université Masaryk). Rédigées par Bohuslav Hostinský. Čis. 52: Iter Turcico-Persicum. Pars 2: Plantarum collectarum enumeratio (Compositæ). Scripsit Dr. Fr. Nábělek. Pp. 57+12 tab. Čis. 55: Nástin zeměpisného rozšíření lišejníků na Moravě vzhledem k poměrům evropským: srovnávací studie fytogeografická. (A Sketch of the Distribution of Lichens in Moravia with regard to the Conditions in Europe: a Phytogeographical Comparative Study.) Napsal Jindřich Suza. Pp. 152. Čis. 56: Onobrychis generis revisio critica. Pars prima. Scripsit G. Širjaev. Pp. 197+17 tab. Čis. 57: Studie o larvách Corixid I. (Études sur les larves des Corixides I.) Napsal V. Teyrovský. Pp. 13. Čis. 58: Parasitismus a metamorfosa druhu Gordius tolesanus Duj. (Parasitism and Metamorphosis of the species Gordius tolosanus Duj.) Napsal Jan Švábenik. Pp. 48+2 tab. Čis. 59: O růstových útvarech vznikajících reakcemi na rozhraní mezi roztoky elektrolytů ve vodě a v gelu. (On the Growth of Structures formed by Reactions on the Boundary between Solutions of Electrolytes in Water and those in Gel.) Napsal Vladimír Morávek. Pp. 42+5 tab. Čis. 60: Příspěvek ke kvantitativnímu stanovení kyseliny mléčné: mikromethoda ke stanovení v krvi. (Recherches sur le dosage de l'acide lactique: le microdosage dans le sang.) Napsali J. Frejka a K. Všetečka. Pp. 27. Čis. 61: Nový zjev elektrokinetický: Příspěvek ke studiu elektrokapilarity roztaveného kysličníku telluričitého. (Un nouveau phénomène électrocinétique; étude de l'électrocapillarité de l'oxide tellureux fondu.) Napsali A. Šimek a H. Kadlcová. Pp. 21+2 tab. Čis. 62: Rhamphorhynchus Gemmingi, H. v. Meyer. Napsal Fr. Řikovský. Pp. 14. Čis. 63: O absorpci plynného chlorovodíku v kyselině sírové. (The Absorption of Gaseous Hydrogen Chloride by Sulphuric Acid.) Napsal Václav Čupr. Pp. 18. (Brno.)