

of formation of a collection of stars in an indefinite homogeneous nebula.—L. and E. Bloch: The spark spectra of some elements in the extreme ultra-violet. Details of the spark spectra of antimony, arsenic, bismuth, and tin between the limits 1850 and 1400 Ångström units.—G. Bruhat: The specific heat of saturated vapours at low temperatures. Reply to some criticisms of M. Ariès.—P. Vaillant: The existence of intermediate states in the phosphorescence of calcium sulphide deduced from its conductivity.—P. Théodoridès: The thermal variation of the coefficient of magnetisation in anhydrous sulphates, and the theory of the magneton. The results of magnetic measurements on the sulphates of manganese, cobalt, and iron at varying temperatures are given. These are in general agreement with the magneton theory.—A. Dauvillier: A new theory of photographic phenomena. In a recent communication the author developed a new theory of the chemical action of cathode,  $\beta$ , X,  $\gamma$ , and ultra-violet rays. The production of photographic images is considered from the same point of view.—L. Dubreuil: Determination of the number of independent constituents of a system of bodies.—R. Fosse: The micro-chemical qualitative analysis of cyanic acid. The method is based on the crystallisation of silver cyanate from hot water. After examining the forms of the crystals, they may be used for several colour reactions.—P. W. Stuart-Menteth: The tectonic of the Pyrenees.—G. F. Dollfus: The geological probabilities of discovering petroleum in France. A summary of the trial borings made in various parts of France for coal, potash, and oil. The outlook is generally unfavourable except in the valley of the Saône.—P. Négris: Considerations on the Glacial period. In an earlier communication the author was led to attribute the invasion by ice and its retreat to epirogenic movements. Further direct evidence of these movements is now given.—A. Lepape: The radio-active analysis of the thermal springs of Bagnères-de-Luchon. Some of the springs are rich in radium emanations, figures of 26.5, 31.6, and 41.5 millimicrocuries of emanation per litre of water being recorded.—H. Ricôme: The orientation of branches of plants in space.—L. Emberger: Cytological studies of the sexual organs of ferns.—M. and Mme. G. Villedieu: The non-toxicity of copper for moulds in general and for mildew in particular. Copper in the form of copper-ammonio-citrate does not interfere with the growth of the spores of *Penicillium* or mildew.—M. Nicolle and E. Césari: The effects and constitution of the antigens.—A. Lumière and J. Chevrotier: A simple and inoffensive method of avoiding anaphylactic shock. Starting with the hypothesis that anaphylactic shock is due to the formation of a solid precipitate in the blood plasma, experiments have been made *in vitro* on mixtures of sera capable of giving flocculent precipitates. Various reagents were added to these tubes with the view of discovering a substance capable of preventing the flocculation. Of the large number of reagents tested very few were found to possess the required property, and of these sodium hyposulphite was the most suitable. Experiments on animals showed that this substance was capable of preventing anaphylactic shock, and it was further proved that sodium hyposulphite did not appear to destroy, or even to attenuate, antitoxic sera.—G. Bertrand and R. Vladesco: The distribution of zinc in the horse. Twenty-three organs of the horse have been examined for zinc, the quantities found varying from 12.2 to 98 milligrams per 100 grams of dried material. Zinc was found in every organ examined, and the proportion varied not only from one organ to another, but also in the same organ or tissue

in different individuals.—A. Němec and V. Kás: The favourable influence of selenium on some moulds arising from the cheese industry.—J. L. Dantan: The development of the Antipathella.—M. Delphy: The reproduction of *Enchytraeoides enchytraeoides* and *Clitellio arenarius*.—V. Galippe: Researches on the presence of living organisms in cretaceous, ferruginous, pyritic, and siliceous fossils.—A. Paillot: Immunity in insects.

### Books Received.

Proceedings of the Aristotelian Society. New Series. Vol. xx. Containing the Papers read before the Society during the Forty-first Session, 1919-20. Pp. iv+314. (London: Williams and Norgate.) 25s. net.

The Fringe of Immortality. By Mary E. Monteith. Pp. xv+204. (London: J. Murray.) 6s. net.

An Introduction to String Figures. By W. W. Rouse Ball. Pp. 38. (Cambridge: W. Heffer and Sons, Ltd.) 2s.

Où en Est la Météorologie. By Prof. A. Berget. Pp. vi+303. (Paris: Gauthier-Villars et Cie.)

The Volatile Oils. By E. Gildemeister and Fr. Hoffmann. Second edition. Authorised translation by E. Kremers. Vol. ii. Pp. xx+686. (London: Longmans, Green and Co.) 32s. net.

A Course of Modern Analysis. By Prof. E. T. Whittaker and Prof. G. N. Watson. Third edition. Pp. vii+608. (Cambridge: At the University Press.) 40s. net.

Electricity and Magnetism: Theoretical and Practical. By Dr. C. E. Ashford. Third edition. Pp. xii+303. (London: E. Arnold.) 4s. 6d.

A Treatise on Airscrews. By W. E. Park. Pp. xii+308. (London: Chapman and Hall, Ltd.) 21s. net.

First Lessons in Geography. By E. Marsden and T. A. Smith. Pp. 185. (London: Macmillan and Co., Ltd.) 3s. 6d.

### Diary of Societies.

THURSDAY, NOVEMBER 11.

ROYAL SOCIETY, at 4.30.—Dr. W. G. Ridewood: The Calcification of the Vertebral Centra in Sharks and Rays.—Dr. A. Compton: Studies in the Mechanism of Enzyme Action. I. Role of the Reaction of the Medium in fixing the Optimum Temperature of a Ferment.—C. H. Kellaway: The Effect of certain Dietary Deficiencies on the Suprarenal Glands.—E. J. Collins: The Genetics of Sex in *Funaria hygrometrica*.

LONDON MATHEMATICAL SOCIETY (at Royal Astronomical Society), at 5 (Annual General Meeting).—J. E. Campbell: Einstein's Theory of Gravitation as an Hypothesis in Differential Geometry (Presidential Address).—H. Bateman: The Conformal Transformations of a Space of Four Dimensions.—F. Bowman: (1) The Differentiation of the Complete Third Elliptic Integral with Respect to the Modulus; (2) Note on the Intersection of a Plane Curve and its Hessian at a Multiple Point.—T. S. Broderick: Dirichlet Multiplication of Infinite Series.—L. E. Dickson: Arithmetic of Quaternions.—P. J. Heawood: The Classification of Rational Approximations.—E. L. Ince: Integral Solutions of Ordinary Linear Differential Equations.—C. Jordan: The Series of Polynomials, every Partial Sum of which approximates  $n$  Values according to the Method of Least Squares.—H. J. Priestley: Some Solutions of the Wave Equation.—H. Steinhaus: An Example of a Thoroughly Divergent Orthogonal Development.—N. Wiener: The Group of the Linear Continuum.—G. S. Young: The Partial Derivates of a Function of Many Variables.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, at 5.—Dr. E. G. Browne: Arabian Medicine after Avicenna (FitzPatrick Lecture).

ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Sir D'Arcy Power: The Education of a Surgeon under Thomas Vicary (Thomas Vicary Lecture).

ROYAL SOCIETY OF MEDICINE, at 6.30.—Sir Almroth Wright: Medical Research, and the conditions that are indispensable to the achievement of new knowledge.

OPTICAL SOCIETY, at 7.30.—Major E. O. Henrieci: The Use of Internal Focussing Telescopes for Stadia Surveying.—Dr. R. J. E. Hanson: Visual Fatigue and Eye Strain in the Use of Telescopes.

ROYAL SOCIETY OF MEDICINE (Neurology Section), at 8.30.—Dr. H. Head, Dr. J. Collier, and Others: Discussion on Aphasia.