

for example, are organising a series of invitation demonstrations to be given at Cinema House, Oxford Street, London, on Wednesdays, June 5 and 12, and Saturday, June 15, at 11 a.m., to show the educational possibilities of cinematography. The first performance is exclusively for members of the medical profession, and the films shown will be purely technical; the second will be devoted to natural science, and the third to the educational uses of the cinematograph. Short addresses will be delivered by authorities associated with the particular subject of the demonstrations. Tickets may be obtained on application to the office of *The Bioscope*, 85 Shaftesbury Avenue, W.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, May 2.—Sir Archibald Geikie, K.C.B., president, in the chair.—Dr. Marie C. Stopes: Petrifications of the earliest European angiosperms. The paper gives an account of the anatomy and the geological bearing of three new petrified angiospermic stems. These three fossils are all in the British Museum collections. Their age appears undoubtedly to be Lower Greensand (Aptian), and they are consequently the earliest angiosperms of which the internal anatomy is known. They are also of interest as coming from northern Europe at a time when angiosperms have hitherto been supposed not to have penetrated to that region. The three specimens differ so considerably in their structure that it seems justifiable to place them in three distinct, new genera.—Dr. F. Keeble and Dr. E. F. Armstrong: The distribution of oxydases in the plant and their rôle in the formation of pigment. The methods of investigation in general use do not admit of the determination in detail of the distribution of oxydases in the tissues of plants and animals. Hence the hypothesis that pigments are produced by the action of oxydases in colourless chromogens, though rendered probable by recent researches, cannot be regarded as established. Methods are now described which allow of the macroscopic and microscopic recognition of plant oxydases. By the application of these methods it is shown that in the Chinese primrose (*Primula sinensis*) the distribution of oxydases in the tissues coincides with that of the pigments of the flower and other parts of the plant. Thus, the hypothesis with respect to the rôle of oxydases in pigment-formation receives confirmation. It is proved that *P. sinensis* contains two peroxydases which differ from one another in their chemical reactions and in their localisation. It is proved definitely that dominant white flowers contain a substance which inhibits, but does not destroy, peroxydase. Experiments with recessive white flowers, the genetical behaviour of which indicates that they lack either peroxydase or chromogen, show that they contain peroxydase. Inasmuch as recessive whites contain no inhibitor of oxydase, failure to form pigment is to be attributed to lack of chromogen. The distribution of peroxydases in *P. sinensis* is to be regarded as typical of that in flowering plants generally, and the method appears to be capable of wide application in the study of the distribution of oxydases.—Dr. B. R. G. Russell: The manifestation of active resistance to the growth of implanted cancer. (1) The reaction which is evoked by the implantation of transplantable tumours of the rodent varies widely with different tumour-strains. The reaction has been determined by exercising all the growths in a series of animals on a given day, and then testing the suitability of the animals for the growth of a tumour-strain growing in 90 to 100 per cent. of normal animals. Some strains do not affect

the natural suitability of the animals, others render every animal resistant to re-inoculation, and the remaining strains occupy intermediate positions. (2) The individuality of the animal inoculated may contribute to the development of the resistance, although not to so marked a degree as the tumour parenchyma. (3) Simultaneous inoculation of a tumour-strain which induces no resistance, and a strain which induces resistance, may be followed by marked inhibition of the growth of the former strain. (4) Mice bearing progressively growing tumours can be rendered resistant to re-inoculation, but the tumour first inoculated need not necessarily be affected. (5) Repeated inoculation of tissues, such as mouse embryo-skin, which renders animals resistant to subsequent inoculation, has not been shown to have a constant effect upon the growth of established tumours. (6) The conclusions drawn in (4) and (5) support the view previously expressed that immunity to cancer is directed mainly against the stroma-eliciting properties of the cancer cells.—Dr. Wm. H. Woglom: The nature of the immune reaction to transplanted cancer in the rat. The paper discusses the reactions to tumour grafts displayed by normal rats and by those rendered resistant through preliminary treatment with tumour or embryo skin. The elaboration of a stroma and the provision of blood-vessels observed in normal rats is absent in refractory animals, irrespective of the method of immunisation.—T. Graham Brown and Prof. C. S. Sherrington: The instability of a cortical point. The reflex reactions obtainable from simple spinal preparations, even when elicited from one and the same receptive "locus," are subject to a certain amount of variability. The variability is somewhat greater when preparations which are decerebrate are employed. With loci in the motor region of the cerebral cortex the variability is greater still. The experiments reported in this paper were undertaken to examine the nature and extent of the variability of response observable in the reactions from one and the same locus in the motor cerebral cortex. It is found that the inconstancy of response amounts under certain conditions to an actual reversal of the effect of the cortical point as examined in the muscles of the limb. The factors determining this reversal of cortical effect are examined, and the reversal itself is studied by graphic registration. A prominent factor in the conditions underlying the reversibility of the cortical effect appears to be the quiescence or activity of points of cortex antagonistic in their effect to the particular point under examination.—Dr. J. W. W. Stephens and Dr. H. B. Fantham: The measurement of *Trypanosoma rhodesiense*. The paper contains the results of the measurements of 1000 *Trypanosoma rhodesiense*, 400 of which were measured from different hosts, namely, man, monkey, horse, dog, rabbit, guinea-pig, mouse, while the remaining 600 trypanosomes were measured from rats only. The authors' chief conclusions are:—(1) That in the case of dimorphic trypanosomes, like *T. rhodesiense*, samples of twenty trypanosomes from a particular slide on a particular day are too small, because the average length may vary by as much as 4.7 μ . (2) The day of infection on which the sample is taken is very important, as on one day 10 per cent. of stumpy forms may be found and on another day 95 per cent. The authors therefore recommend taking samples of trypanosomes from each day of infection of the host. (3) As the host from which the sample of trypanosomes is taken is probably also important, the authors suggest using the same animal throughout, e.g. a tame rat.

Geological Society, April 17.—Dr. Aubrey Strahan, F.R.S., president, in the chair.—H. H. Thomas and Prof. O. T. Jones: The pre-Cambrian and Cambrian

rocks of Brawdy, Hayscastle, and Brimaston (Pembrokeshire). The district lies about eight or ten miles to the east of St. Davids, and consists of pre-Cambrian plutonic and volcanic rocks intimately associated with sedimentary rocks of the Cambrian system. The pre-Cambrian igneous and pyroclastic rocks are brought to the surface along an anticlinal axis which ranges in an east-north-easterly and west-south-westerly direction; they are divisible into two classes, an older volcanic series and a newer plutonic and hypabyssal series. The Cambrian has been divided into two main groups, the Welsh Hook group below and the Ford beds above. The Welsh Hook group consists of basal conglomerate, green sandstones, red shales, and purple sandstones. The position of the Ford beds, which are mostly shales, is not so certain. The basal bed of the Cambrian apparently rests upon rocks of different ages in different parts of the district, and indicates that the Cambrian reposes unconformably on a complex series of tuffs and lavas and of plutonic rocks intruded into these volcanic rocks. The structure of the district is that of a horst, faulted on all sides and surrounded by much younger beds. Much of the faulting is of pre-Carboniferous age.—Prof. O. T. Jones: The geological structure of central Wales and the adjoining region. This paper deals with the structure on a large scale of an area of about 1800 square miles, comprising the western portion of Wales, and is accompanied by a map, based partly on personal observations and partly on information gathered from various publications. There are two principal anticlinal axes, which follow in the main the valleys of the Teifi and the Towy, and are named after these rivers; between them is an important syncline (the central Wales syncline) which coincides nearly with the principal watershed of central Wales. Both the anticlines can be traced towards Pembrokeshire, but cannot be distinguished beyond the northern boundary of the area. The syncline becomes more important in a northerly direction, but is lost towards the south-west. The variation in the pitch accounts for the form of the outcrops.

Royal Anthropological Institute, April 23.—J. Reid Moir and A. Keith: Human skeleton found under a stratum of chalky boulder clay near Ipswich. The skeleton was discovered on October 6, 1911, at a depth of 4½ ft. below an undisturbed stratum of decalcified chalky boulder clay in the brickfield of Messrs. Bolton and Laughlin, about one mile north of Ipswich. The stratum of boulder clay under which the skeleton lay is part of the great sheet of chalky boulder clay found in East Anglia. The skeleton was embedded at the junction of the boulder clay and the underlying strata of mid-glacial sands, and the section of the strata showed no sign of having been disturbed, and it was therefore inferred that the skeleton must have been *in situ* before the deposition of the chalky boulder clay. In Mr. Moir's opinion, the upper part of the mid-glacial sands on which the skeleton lay represented an old land surface. In these strata and in the overlying deposits of boulder clay he had discovered flint implements which, in the opinion of M. Rutot, belonged to the pre-Strépyean type. The skeleton lay on its right side, in an ultra-contracted posture; nothing was found with the skeleton; there was no evidence of burial. The skeleton was that of a man about 1800 metres (5 ft. 10 in.) in height, and probably between thirty and forty years of age. In the characters of the skeleton and skull the remains resembled modern man, and showed none of the marked features of Neanderthal man. The skull is estimated to have had a maximum length of 192 mm., maximum width 144, auricular height 111, cephalic index 75. The only peculiar feature was found in the

shape of the tibia. In place of the anterior border being raised into a ridge or crest, it was flat, thus differing from all known tibiae, ancient and modern. In the opinion of the speakers, the modern type of man, as represented by the Ipswich skeleton, the Galley Hill skeleton, the Bury St. Edmunds cranial fragments, and by numerous human remains found in France, was evolved long before the Neanderthal type of man became extinct in Europe.

Zoological Society, April 23.—Dr. S. F. Harmer, F.R.S., vice-president, in the chair.—C. H. O'Donoghue: The circulatory system of the common grass-snake (*Tropidonotus natrix*). Several interesting features correlated with the loss of limbs and the elongation of the body were stated to occur in the blood-vessels. The vessels, like the viscera they supplied, were asymmetrical; not only were those on the right anterior to those on the left, but they were also noticeably larger. No indication of the descent of snakes from a limb-bearing ancestry was to be found in the circulatory system, save perhaps a small pair of veins which might correspond to the pelvic veins in Lacertilia.—Julian S. Huxley: The courtship of the redshank (*Totanus calidris*). The first purpose of this paper was to direct attention to the many valuable results to be obtained by simple watching of very common British birds; and the second was to show how the facts observed in the redshank bore on the theory of sexual selection. In this species there was no rival display between several males at once: a single female was courted by a single male, as in man. But in quite 90 per cent. of observed courtships the female rejected the male, either during the pursuit or during the display, by simply flying away. Thus the consent of the hen was absolutely necessary if pairing were to take place, and this consent was usually withheld; in other words, selection by the female was a reality in the redshank. Other interesting points were as follows:—The plumage of the two sexes was identical, and was decidedly cryptic when the birds were at rest. During flight the white underside of the wings and the white tail were conspicuously revealed, and probably served as recognition marks. The significance of the red legs was unknown. During display the male directed attention to the underside of the wings by raising and vibrating them, to the tail by fanning it out, and to the red legs by his slow, high steps; besides this he uttered a note heard at no other time. Thus, since the actual colours and structures used in display were found in both sexes, the only peculiarly male possession—the only secondary sexual character of the redshank—was a special behaviour, devoted to showing off these common colours and structures in a special way. This seemed to show that secondary sexual differences in birds were originally differences of behaviour, and that only when these were established did differences of colour and structure come to be developed.—Mrs. E. W. Sexton: Brackish-water Amphipoda from Bremerhaven. Special reference was made to a new species of Gammarus, which inhabited both fresh and brackish water, and was interesting as showing in a marked manner the effects of environment on development.—C. Tate Regan: Descriptions of ten new species of South American fishes of the family Loricariidae in the British Museum collection.

Challenger Society, April 24.—Dr. E. J. Allen in the chair.—Dr. H. Muir Evans: Poison organs and venoms of poisonous fishes. After reviewing previous work, the author pointed out that the researches of Briot were incorrect, and that this observer had obtained his results by means of a filtered glycerine extract of the spines of *Trachinus* (the weever). Dr. Evans had used fresh venom for his experiments, and found that hæmolysis took place with fresh venom

alone, that is, without the addition of heated serum. But if fresh venom were mixed with glycerine and filtered through filter-paper, the results were similar to those of Briot; they were, however, different if a Berkefeld filter were used instead of filter-paper, just as the action of liver extract is affected according as it is filtered through cloth or through filter-paper. Dr. Evans then described the conclusions of Porta, from examination of sections of the spine of the sting ray (*Trygon pastinacea*), conclusions which had been disputed by Pawlowsky, who stated that Porta had confused glandular tissue with deformed blood-corpules, and denied that poison glands with groups of small cells existed in the spine of Trygon. By photomicrographs Dr. Evans then showed not only that Porta's triangular glands existed, but that they were only part of a large system present throughout the whole spine. The latter was described as consisting of (1) an intracaudal portion, of bony mesh-work, containing round-celled glandular tissue and masses of secretion surrounded by flattened cells; (2) an intermediate portion with the ventral ridge still embedded in the tail, with gland follicles either radiating towards the convex surface or running longitudinally in the ventral prominence; formed secretion can be seen leading into the lateral grooves; (3) the free portion with the triangular glandular masses of Porta, and cavities occupied by small-celled tissues and formed secretion; towards the tip of the spine these become three, one in each lateral portion and one in the ventral ridge. The hæmolytic properties of these venoms were described, and in the ensuing discussion the painful toxic effects of the sting were described by one speaker from personal experience.

MANCHESTER.

Literary and Philosophical Society, April 2.—Prof. F. E. Weiss, president, in the chair.—**J. Mangan**: The presence of Maxillulæ in larvæ of Dytiscidæ. It was shown that in this family of water-beetles the mouth of the larval form is armed with a pair of strong processes, at the base of the mandibles, which appear to be homologous with the maxillulæ or superlinguæ of certain primitive insects.—Prof. W. H. Lang: The interpretation of the vascular anatomy of the Ophioglossaceæ. The author described the anatomy of the stem and leaf-trace of rhizomes of Helminthostachys of various ages; and the progression of the stele towards the mesarch condition was followed. The occasional development of accessory or secondary xylem was recorded. The distribution of the tissues in the stele was compared with that in the stele of Zygopteris, the centripetal xylem in Helminthostachys being regarded as corresponding to the inner xylem of Zygopteris. The departure of the leaf-trace also exhibits points of resemblance. The occasional development of centripetal tracheids forming a mixed pith was described for *Botrychium lunaria* and *Ophioglossum*, sp. The pith of the Ophioglossaceæ appears to be of intrastelar origin and not due to intrusion of cortex. Ophioglossaceæ and Cœnopterideæ appear to throw mutual light on one another as regards morphological and anatomical structure. The anatomical evidence supports the view that there is a real, though it may be a collateral, relationship between the two groups.

DUBLIN.

Royal Irish Academy, April 22.—Rev. Dr. Mahaffy, president, in the chair.—The following papers were read:—**M. J. Conran**: The Riemann integral and measurable sets. In this paper a method is given of extending the notion of integration to measurable sets without making use of any theory of generalised integration. Following the analogy of Young's

treatment of the theory of content, the integral is first defined for a single interval, then for a set of open intervals, then for a closed set, &c. In applying the method to double integrals, it has been found necessary to examine the conditions under which the double and repeated Riemann integrals are equal when the region of integration has a frontier of positive content. This has been done, and some results of a fairly general character obtained.—**W. West**: Fresh-water algæ (in connection with Clare Island Survey). About 1100 species, varieties, and forms are enumerated, some with many localities, others being local. The research has proved that the district, lying on the older Palæozoic rocks, is a very rich one for this class of plants, and has resulted in the addition of a number of species, varieties, and forms new to science, as well as adding many others to the already known rich Irish algological flora. This is one of the most comprehensive reports of the investigation.—**G. P. Farran**: Decapoda (Clare Island Survey). The Decapoda of the Clare Island district include most of those recorded from the west coast of Ireland, with the exception of the burrowing forms. The majority of the species represented range from the Mediterranean to Norway, those having a distinctly northern distribution being very few.—**W. M. Tattersall**: Schizopoda and Cumacea (Clare Island Survey). Thirty-five species belonging to these groups of crustacea are enumerated from the Clare Island marine area. None are new to science, but one Mysid is new to the fauna of Ireland and eight Mysidæ to the area under consideration.—**N. H. Foster**: Land and fresh-water Isopoda (Clare Island). The terrestrial isopod fauna of Clare Island is similar to that of the adjoining mainland. Nine species were observed on the island, and of these eight have likewise been taken on the West Mayo mainland. Detailed notes are given respecting these species, and it is noted that many specimens of *Oniscus asellus* and *Porcellio scaber* are of larger size and brighter coloration than usually obtains in Ireland. *Asellus aquaticus* was the only fresh-water species found on the island.—**R. Southern**: Platyhelmsia (Clare Island Survey). This paper dealt chiefly with the free-living Turbellaria of the district. Fifty species were found, five of which live in fresh water and forty-five in the littoral and shallow waters of Clew Bay and Blacksod Bay. Five of these had not previously been recorded from the British Isles, and twenty-nine were additions to the Irish fauna.

PARIS.

Academy of Sciences, April 29.—**M. Lippmann** in the chair.—**M. Bassot**: The compensation of the new meridian of Quito. Remarks on the memoirs of the geodesy expedition to the equator, dealing with the observations obtained in the measurement of the arc of the meridian of Quito and the reduction of these observations.—**Maurice Hamy**: The temperature regulator in use with the stellar spectrograph of the Paris Observatory. The expansion of creosote, contained in a long serpentine tube, actuates through a mercury column an electrical relay. The instrument is capable of controlling the temperature to about 0.01° C.—**A. Chauveau**: The rôle of the preponderating retinal impression in stereoscopic inversions.—**MM. Carimey, Raveau, and Stablo**: Observation of a shadow on the sky after the central phase of the eclipse of April 17.—**A. de La Baume-Pluvinet**: The observation of the solar eclipse of April 17. A cinematograph was arranged to photograph the sun and a chronometer simultaneously, with a velocity of thirteen to fourteen images per second. The times were checked by wireless signals from the Eiffel Tower.—**R. Jouast**

and P. de la Gorce: Photometric measurements made during the eclipse of April 17. The curve expressing the results is unsymmetrical with respect to the time of the maximum phase.—Fred Vlès and Jacques Carvallo: The kinematographic registration of the solar eclipse of April 17 on the Spanish portion of its trajectory.—M. Tzitzéica: Isothermal networks.—E. Delassus: Lagrange systems with principal parameter.—Émile Borel: Arithmetical and analytical models of apparent irreversibility.—G. Ribaud: The appearance of new lines in a Geissler tube containing bromine placed in a magnetic field. The change of colour is a secondary effect due to a modification in the nature of the discharge. In a Geissler tube, the magnetic field transforms the continuous discharge into a more or less condensed discontinuous discharge.—R. Fortrat: The structure of some spectral bands. An analysis of the green carbon band, the bands of hydrocarbons and of water.—Jean Meunier: Gaseous combustion in vortices and its analogy with the appearance of nebulae and comets.—Paul Bary: The approximate value of the molecular weight of india-rubber. On the assumption that vulcanised rubber is $(C_{10}H_{16})_nS_2$, experiments on the least amount of sulphur required to vulcanise a fixed amount of rubber gave a value for n of 184.—N. L. Müller: Remark on the communications of M. Pierre Achalme on the rôle of the interatomic electrons in catalysis and electrolysis. A claim for priority.—P. Achalme: Concerning the communication of M. N. L. Müller. A reply to the preceding paper.—Albert Granger: The methods of manufacture of earthenware obtained from the excavations at Suziane.—Camille Matignon: The function of the valency in the stability of binary metallic compounds.—Maurice Nicloux: The preparation of iodic acid for the estimation of carbon monoxide. The Stas method of preparing iodic acid by the reaction of fuming nitric acid and iodine is capable of giving much higher yields than those indicated by Stas, more than 90 per cent. of the iodine being converted into iodic acid if suitable precautions are adopted.—J. B. Senderens: The catalysis of the cyclanols in the wet way by means of sulphuric acid. The preparation of the cyclenes. The cyclanols lose water readily under the influence of diluted sulphuric acid, giving cyclenes. The reaction must be referred to a specific catalytic action of the sulphuric acid rather than to a direct dehydration.—Marcel Delépine: New classes of oxyluminescent substances.—E. Carrière: The acyclic acid aldehydes. The acid aldehyde of succinic acid. Formyl-succinic ethyl ester, $(C_2H_5.CO_2).CH_2.CH(CHO)(CO_2C_2H_5)$, is readily hydrolysed by aqueous oxalic acid, the acid aldehyde, $OCH.CH_2.CH_2.CO_2H$, being formed.—Georges Dupont: The aci-nitro-derivative of tetramethylketofurane.—Henry Hubert: The gold-bearing strata in western Africa.—Ph. Nogier: Therapeutic methods based on increasing and decreasing the activity of the endocrinal glands by physical methods. The glandular secretions can be stimulated by using the electric current or reduced by using filtered X-rays or the γ radium rays.—A. Conte: *Encyrtus sericophilus* and its use in sericulture.—A. Pézard: The determination of the secondary sexual characters in the Gallinacæ.—Mieczyslaw Oxner: New experiments on the nature of the memory in *Coris julis*.—R. Fosse: The direct production of urea at the expense of albuminoids either by oxidation or hydrolysis. An account of the method of isolating the urea formed from albumin by the action of an aqueous solution of potassium permanganate.—H. Labbé and G. Vitry: Contribution to the study of non-dialysable substances in urine.—Louis Gentil: The origin of the folds of the Saharan Atlas.—Fernand Meunier: The Protoblatinæ and Mylacrinæ of the Commeny coal measures.

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GÖTTINGEN.

Royal Society of Sciences.—The *Nachrichten* (physico-mathematical section), parts i. and ii., for 1912, contain the following memoirs communicated to the society:—

July 1, 1911.—K. Försterling: Theoretical considerations on the propagation of light in absorbing active uniaxial crystals.

October 28, 1911.—C. Runge: The astronomical determination of position in ocean ships and aircraft.

December 9, 1911.—F. Körber: The two limiting volumes of a liquid at the absolute zero of temperature and under indefinitely high pressure.

December 23, 1911.—B. Dürken: Unilateral extirpation of the eye in young tadpoles.

December 23, 1911.—L. Bieberbach: Minkowski's reduction of the positive quadratic forms and the finite groups of linear integral substitutions.

January 13, 1912.—R. Fricke: Contributions to the transformation-theory of the automorphic functions (ii.).—G. Révész: Demonstration that in so-called musical pitch two independent properties of sound are distinguishable.

February 3, 1912.—E. Riecke: The molecular theory of the piezoelectricity of tourmalin.

BOOKS RECEIVED.

Das Tierreich. Edited by F. E. Schulze. 28 Lief. Hymenoptera. Apidæ I.—Megachilinae. By Dr. H. Friese. Pp. xxvi+440. (Berlin: R. Friedländer & Sohn.) 32 marks.

Das Tierreich. Edited by F. E. Schulze. 30 Lief. Hymenoptera. Ichneumonidea—Evaniiidæ. By Prof. J. J. Kieffer. Pp. xix+431. (Berlin: R. Friedländer & Sohn.) 31 marks.

Icones Plantarum Formosanarum. Fasc. i. By B. Hayata. Pp. iv+265+xl plates. (Taihoku: Bureau of Productive Industry, Government of Formosa.)

Tables Annuelles de Constantes et Données numériques de Chimie, de Physique et de Technologie. Vol. i., 1910. Pp. xxxix+727. (Paris: Gauthier-Villars; London: J. and A. Churchill.) Cloth, 24s. net; paper, 21s. 6d. net.

The Statesman's Year Book, 1912. Edited by Dr. J. Scott Keltie. Pp. lxxxiii+9 plates+pp. 1428. (London: Macmillan and Co., Ltd.) 10s. 6d. net.

The Teaching of Physics for Purposes of General Education. By Prof. C. R. Mann. Pp. xxv+304. (London: Macmillan and Co., Ltd.) 5s. 6d. net.

The Nervous System. By Dr. J. D. Lickley. Pp. xii+130. (London: Longmans and Co.) 6s. net.

Koninklijk Nederlandsch Meteorologisch Instituut. No. 104. Tabellen. Pp. vi+200; Kaarten. Plates 1-25. (Utrecht: Kemink & Zoon; Amsterdam: Seyffardt's Boekhandel.) 6.50 florins.

Observations made at the Royal Magnetical and Meteorological Observatory at Batavia. Vol. xxxi., 1908. Pp. xlviii+173+4 plates. (Batavia: Government Printing Office.)

Practical Geometry for Schools. By S. A. Switzer. Pp. viii+161. (London: Methuen and Co., Ltd.) 2s.

Qualitative Organic Analysis. By F. B. Thole. Pp. xi+68. (London: Methuen and Co., Ltd.) 1s. 6d.

An Introduction to Quantitative Analysis. By Dr. S. J. M. Auld. Pp. xi+215. (London: Methuen and Co., Ltd.) 5s.

The Flight of Birds. By F. W. Headley. Pp. x+163+xvi plates in text. (London: Witherby and Co.) 5s. net.

Physiologisches Praktikum für Mediziner. By Prof. Max Verworn. Zweite Auflage. Pp. xii+262. (Jena: G. Fischer.) 6 marks.