

to be of abiding interest to naturalists and sportsmen. The collection consists of 550 specimens—the greater part from South and East Africa—of splendid heads. It also includes nineteen magnificent lion-skins and a skull of the South African white rhinoceros—an extinct species—with exceptionally fine horns.

The collection of birds' eggs consists of 7010 specimens obtained in Great Britain, Europe, and Asia Minor. The great feature of the collection is that Capt. Selous personally took every egg from the nest himself. He would never accept any egg or clutch of eggs offered to him by a friend, nor would he purchase one from a dealer.

At the summons of a friend announcing the discovery of some rare bird's nest he would often travel very long distances, e.g. from one end of the British Isles to the other, in order that he might personally identify the parent birds and personally take the eggs from the nest. For this reason, no less than for the amazing neatness and methodical care with which it was arranged, to say nothing of its comprehensive range, the collection is a particularly valuable one.

### University and Educational Intelligence.

**BIRMINGHAM.**—On the advice of Sir John Cadman, whose appointment as a technical adviser to the Government on matters relating to coal and petroleum is announced, the department of mining is to be re-organised and extended. In addition to the new professor of mining there is to be an assistant-professor of petroleum technology. It is hoped that Sir John Cadman will still retain some connection with the faculty of science.

Prof. F. W. Burstall has been elected dean of the faculty of science, to succeed Sir John Cadman.

**CAMBRIDGE.**—As briefly announced last week, a scheme for endowing a school of biochemistry has been approved by the High Court of Justice, and has now been submitted to the University by Sir Jeremiah Colman, Bart., on behalf of the trustees of the late Sir William Dunn, Bart. The residuary estate of Sir William Dunn was left in trust for certain charitable purposes, including the alleviation of human suffering. The trustees propose, with that object in view, to encourage and endow with the substantial sum of 160,000*l.* the study of biochemistry, one of the fundamental sciences of medicine, the progress of which is essential to the advance of medical knowledge. Having regard to the fact that the study of biochemistry in this country had its first beginnings in Cambridge, and is at present being carried on there without endowment under Prof. Gowland Hopkins, the trustees offer the University 165,000*l.* to found the Sir William Dunn School of Biochemistry. Of this sum they allot 25,000*l.* to endow a professorship and 10,000*l.* to endow a readership in biochemistry, the balance to be used in erecting and equipping an institute of biochemistry and in providing funds for its maintenance and upkeep and an endowment for research work.

This munificent benefaction is a most pleasing tribute to the work of Prof. Hopkins and his colleagues.

Dr. T. G. Adami, Vice-Chancellor of Liverpool University, has been elected honorary fellow of Jesus College.

Mr. J. E. Littlewood, Trinity College, has been appointed Cayley lecturer in mathematics, and Mr. J. H. Grace, Peterhouse, has been re-appointed University lecturer in mathematics.

The Special Board for Mathematics has recommended the substitution of thermodynamics for

elementary optics in Schedule A of Part II. of the Mathematical Tripos.

In connection with the coming meeting of the British Medical Association at Cambridge, honorary degrees are proposed for the Master of Pembroke, Sir T. Clifford Allbutt, Jules Bordet, A. Calmette, H. Cushing, S. Flexner, Piero Giacosa, Major-Gen. Gorgas, Sir George Makins, Sir Patrick Manson, and Sir Norman Moore.

**LIVERPOOL.**—The council of the University has appointed Mr. T. R. Wilton as lecturer in dock and harbour engineering, with the title of associate-professor. Mr. Wilton is closely connected with the Liverpool Engineering Society, and has done valuable work for that body as hon. secretary—a position he has held since 1907. He has been for some years special lecturer in dock and harbour construction at the University, has carried out important investigations on the movement of sand and currents, and has also taken observations of a practical nature on the Mersey.

Mr. H. Richardson, of the Municipal College of Technology, Manchester, has been appointed principal of the Bradford Technical College in succession to Prof. W. M. Gardner.

The Ministry of Agriculture and Fisheries is open to receive until July 15 nominations for a limited number of research scholarships in agricultural science, each tenable for two years, and of the annual value of 200*l.* Candidates must be graduates with honours in science of British universities, with evidence of high proficiency in subjects having a direct bearing on agriculture, and be nominated by a professor or lecturer of a university or college. Nomination forms are obtainable from the General Secretary of the Ministry, 72 Victoria Street, S.W.1.

The *Library Association Record* for May contains a paper on "Technical Libraries and Intelligence" by Major W. E. Simnet, and also an article on "The Technical Library" by Mr. R. Borlase Matthews. Mr. Matthews lays stress on the necessity for making the most recent publications immediately available for reference, and discusses the various ways in which a technical library can be made accessible to readers. Major Simnet, taking the subject of engineering as an example, points out that there are at present in London several libraries containing books and periodicals relating to engineering, and that this involves much overlapping which might be avoided by amalgamation. He also refers to the Transport Library to be formed by the Ministry of Transport. Such a library would be devoted to all aspects and methods of transportation. The importance of an index of technical literature, possibly on the lines of the International Catalogue of Scientific Literature, is carefully explained by Major Simnet, who recommends a combination of indexing and abstracting. At the same time he finds that papers on technical subjects become out of date much sooner than papers on purely scientific topics, so that it is less necessary to preserve all titles of technical papers in a permanent index. Major Simnet gives an account of the *Technical Review*, established since the armistice to continue the work of the *Technical Supplement*, published in 1918 under the auspices of the War Office. As a further contribution to the indexing of technology, the *Library Association Record* for May, 1920, contains a subject-index to papers published in 1917-19 on fuel, including gas and petroleum. The list is prepared by the editors of the "Subject Index of Periodicals," and is an example of the thoroughness which their work always exhibits.

ONE of the problems at present confronting the Ministry of Agriculture is the provision of advice and supervision for the smallholder. This problem has become more acute now that so many of the men settling on the land are lacking, either partly or altogether, in knowledge of the theory and practice of horticulture. When the question arose of appointing organisers to instruct these men and to look after their interests, it was found that the number of candidates qualified to fill such posts was extremely limited. A man who is to organise the horticultural instruction of a county should have a knowledge of the scientific side of the subject as well as of its practical side. Quite apart from this question of supplying instruction for smallholders, it is obviously desirable, in view of the rapidly increasing importance of horticulture in this country, that the prospective fruit-farmer or market-gardener should be able to obtain instruction in his subject as scientific and comprehensive as that which can be so readily obtained nowadays by the prospective agriculturist. In order that such instruction may be available, the Ministry of Agriculture has made it possible for the University of Cambridge to establish a degree in horticulture and a post-graduate diploma. The course for the degree will extend over three years, and will consist of instruction in the theory and practice of commercial fruit- and vegetable-growing, the practical side of the subject being treated no less fully than its theoretical aspect. It is hoped that the course for the diploma will provide men qualified for research work in horticulture. Hitherto there has been a dearth of such men owing to difficulty in obtaining suitable training, and research work in connection with an important industry has therefore been greatly hampered. The courses will commence in October next, and information concerning them can be obtained from the Secretary, School of Agriculture, Cambridge.

## Societies and Academies.

### LONDON.

**Zoological Society**, June 1.—Sir Sidney F. Harmer, vice-president, in the chair.—Dr. G. M. Vevers: Report on the Entozoa collected from animals which had died in the society's menagerie during the past nine months.—Dr. W. T. Calman: Notes on marine wood-boring animals. I.: The shipworms (Teredinidæ).

### CAMBRIDGE.

**Philosophical Society**, May 17.—Mr. C. T. R. Wilson, president, in the chair.—Dr. F. W. Aston: The atomic nature of matter in the light of modern physics.

### MANCHESTER.

**Literary and Philosophical Society**, May 18.—Mr. R. L. Taylor, vice-president, in the chair.—W. Thomson and H. S. Newman: Further notes on the filamentous growths from aluminium amalgams. Experiments to determine the ratio of the mercury to 100 parts of alumina were detailed, and descriptions of erratic growths given. The action of mercury on zinc was compared with its action on aluminium.—Prof. Sydney Chapman: The effects of lunar tides on the earth's atmosphere. The barometric pressure shows a very minute tidal variation with the period of half a lunar day. This variation can be determined only by a difficult process of averaging out other regular and irregular variations from long series of hourly barometric observations, so that data from very few stations are available. The author described and discussed their theoretical significance. Many questions

suggested by the data have as yet received no satisfactory answer, but their elucidation, as further data accumulate, should add to our knowledge of the atmosphere in some important respects.—Dr. R. S. Willows: Transverse section of cotton fibre illustrating Balls's daily growth rings.

### PARIS.

**Academy of Sciences**, May 31.—M. Henri Deslandres in the chair.—G. A. Boulenger: Remarks on the note of M. Ad. Davy de Virville concerning the species *Primula elatior*, *acaulis*, and *officinalis*.—Ch. Gautier: A sundial giving legal time throughout the year with a sufficient approximation for ordinary purposes, as well as the approximate date. The dial described and illustrated gives the legal time within about one minute. At the equinoxes it gives the exact date, but at the solstices only an approximation to the date.—Alex. Véronnet: The equilibrium figures of a liquid in rotation. Order of succession of the critical figures of bifurcation.—M. T. Huber: The generalisation of a theorem of M. Mesnager concerning the sense of the displacements of a rectangular plate.—J. Fallou: The expansion caused by Joule's effect at the contact of two solids. Two metals in contact when heated electrically expand proportionally to the square of the current or to the heat developed by the Joule effect.—A. Guillet: An auto-ballistic astronomical pendulum. An attempt to realise the conditions laid down by G. Lippmann and B. Baillaud, the impulses being supplied by induced currents.—M. Girousse: The calculation of currents causing electrolysis in metallic masses near an electric traction line.—F. Vlès: Contribution to the study of absorption based on the properties of the nitrophenols. By the application of formulæ given in a previous communication it is shown how the absorption spectrum of a compound can be calculated from its composition.—F. Bourion: Kinetic study of the chlorination of benzene. The effects of rate of supply of chlorine, concentration of the benzene in chlorobenzene, and of temperature upon the reaction velocity were examined separately.—L. Vignon: The resistance of tissues to light and ultra-violet rays. Linen and silk tissues were exposed to sunlight and to ultra-violet rays (Heraeus quartz lamp) under dry and moist conditions, and the changes in the strength, as measured by the breaking load, determined. The silk fabric showed greater resistance than the linen to the effects of exposure.—E. E. Blaise: The action of hydrazine on the 1:4 acyclic diketones. Details are given of the products of the reactions between hydrazine and acetylacetone and hydrazine and dipropionylethane.—A. Gascard: Ceryl alcohol and cerotic acid from China wax. The wax, after a preliminary purification, was saponified by potash in alcohol-benzene solution, the cerotic acid precipitated as calcium salt, and the ceryl alcohol recovered from the filtrate. Brodie's formula for the alcohol was confirmed by preparation and analysis of ceryl iodide,  $C_{26}H_{52}I$ , and for cerotic acid by oxidation of the alcohol and by its acidity figure.—A. Guillaumond: Observations on the living chondriome of one of the Saprolegniaceæ.—L. Daniel: A new race of *Asphodelus* obtained by the action of a marine climate. A description of the changes in type produced in *Asphodelus luteus* by twenty years' cultivation on the sea-coast. The modified plant can not only be reproduced by subdivision of the roots, but also by growing from seed.—P. Ammann: The great richness in nitrogenous matter of certain manioc from Cambodia.—A. Chevallier: Researches on pear-trees, walnuts, and chestnuts of the cooler parts of Indo-China and the south of China.—E. Foëx: Necrosis of the stem of the potato attacked by the