

briefly in the paper, and were enlarged upon by several speakers in the discussion which followed the reading of the paper.

#### Deep-Sea Observations with the Bathysphere

FOUR years ago, Dr. William Beebe and Mr. Otis Barton descended in their 'bathysphere'—a steel ball fitted with quartz windows—to a depth of a quarter of a mile below the surface of the ocean off Bermuda. During the season of 1934 they successfully established a new depth record of 3,028 ft. In the *National Geographic Magazine* of December 1934 and the *Bulletin of the New York Zoological Society* of November–December 1934, interesting articles deal with the fitting-out, operation and scientific observations made, during these latest dives. Excellent photographs in the text provide a word picture of the undertaking, and a series of coloured plates give vivid impressions of the strange and bizarre forms of life as seen by Dr. Beebe through the windows of the ball and described over the telephone line between the bathysphere below and the parent ship at the surface. Three deep-sea fish, new to science, are described, including the five-lined constellation fish, *Bathysidus pentagrammus*, which Dr. Beebe speaks of as one of the most gorgeous deep-sea inhabitants he has ever seen. Five rows of photophores emitting yellow and purple light produced a beautiful pattern of illumination through the darkness. From this and other records, there can be little doubt as to the success and scientific value of this daring method of observa

#### Optical Research

AT the meetings of the Institut d'Optique, held periodically at the Sorbonne and generally under the chairmanship of Prof. Charles Fabry, director of the Institut, the communications considered relate as a rule to one particular branch of the subject, and the *Revue d'Optique Theorique et Instrumentale* issues a separate copy of the proceedings which may run to as much as 50 pages. Last year, the January meeting dealt with the employment of liquid prisms in spectrographs, that of March with interference methods of studying movements of the air, the April meeting with ultra-violet polarimetry and with the densities of photographic images, and the June meeting with the light of the night sky. In several cases the subject is introduced by a short sketch of past work on it and its present aims and problems, given by the president, and descriptions of current methods and instruments by specialists in the subject follow. These pamphlets seem capable of affording great assistance to those requiring brief résumés of the present positions of the various branches of optical research.

#### Systematics of the Diptera

MR. P. H. GRIMSHAW has recently published a useful article entitled "Introduction to the Study of Diptera, with a Key for the Identification of Families" (*Proc. Roy. Phys. Soc., Edin.*, 22, Pt. 4, July 1934). The paper gives a clear account, accompanied by

illustrations, of the various structural features of importance in classification. A list of the chief general works on the order is provided and a diagnostic key to all the existing families. The key is translated and adapted from Lindner's "Fliegen der palaeartischen Region" and should prove especially valuable to those entomologists who are not specialists in the insect order concerned.

#### Review of Seismology

THE National Research Council of the National Academy of Sciences at Washington is issuing a series of bulletins on the physics of the earth, to give scientific workers who are not specialists in the subjects treated an idea of the position and problems of various branches of geophysics. Among the bulletins in this series which have already been issued are those on volcanology, the figure of the earth, meteorology, the age of the earth and oceanography. Recently, Bulletin No. 90 on seismology has appeared. It has been prepared by a Committee of which Prof. J. B. Macelwane is chairman. Within 219 pages it includes twenty chapters, and gives a very valuable and interesting general view of the subject. Chapters by the chairman include—the definition and classification of earthquakes, tectonic earthquakes, plutonic earthquakes, rock fall earthquakes, body waves, reflection and refraction of seismic waves, surface waves and paths and velocities of seismic waves within the earth; H. O. Woods contributes articles on volcanic earthquakes, field investigation and surface geology in relation to the 'apparent' intensity; articles by H. F. Reid deal with magnetic effects, earthquake mechanics and with the focus. The principle of the seismograph is described by J. A. Anderson, and P. Byerly contributes five articles on analysis of seismograms in earthquakes, records at intermediate and great distances, time distance curves, reduction of trace amplitude, and seismic geography. The Bulletin has numerous bibliographies and is priced at 2 dollar

#### Books on Anthropology and Archæology

CATALOGUE No. 574 (Anthropology and Folklore—Archæology and Ethnography) issued by Messrs. Francis Edwards, Ltd., 83 High Street, Marylebone, London, W.1, including both new and second-hand books, though, naturally, the latter predominate, contains just under a thousand items. On looking through the list, two points occur, one being the high average in the quality of the books from the point of view of the anthropologist, and secondly the fact that, with certain exceptions, the prices do not rule high. With regard to the first point, the subjects covered by the catalogue, it is almost needless to say, have been a happy hunting ground for the wilder theorist and speculation has been rife in their literature. It is evident that here on the whole a wide discretion has been exercised in selection. The question of price is no less interesting. It is not intended to convey that this catalogue is an exceptional opportunity for bargain hunters—although it would be possible to form from its pages an excellent nucleus of a reference

library in anthropology at a very moderate price—but rather that the rarities, and even some of the older standard books which command a high price, are becoming increasingly rare. Among the items to be noted are some complete runs of scientific publications, such as the Folklore Society's publications and those of the Royal Anthropological Institute, some lengthy runs of *Archæologia* and a virtually complete set of the *Journal of the African Society*, of which certain numbers are now impossible to obtain, except by fortunate accident. A noteworthy item is Edge-Partington's ethnographic album of the Pacific, of which, it is thought, not more than half a dozen copies are now in existence in private hands.

#### Announcements

THE following have recently been elected foreign members of the Royal Academy of Sciences, Stockholm: Prof. Robert Robinson, professor of chemistry in the University of Oxford; Prof. F. D. Adams, emeritus Logan professor of geology in the McGill University, Montreal; Prof. Ejnar Hertzsprung, professor of astrophysics in the University of Leyden, Holland; and Prof. A. V. Hill, Foulerton research professor of the Royal Society, formerly Jodrell professor of physiology in University College, London.

At the annual general meeting of the Royal Astronomical Society held on February 8, the following officers were elected: *President*: Mr. J. H. Reynolds; *Vice-Presidents*: Prof. S. Chapman, Dr. H. Spencer Jones, Dr. H. Knox-Shaw, Prof. F. J. M. Stratton; *Treasurer*: Sir Frank W. Dyson; *Secretaries*: Mr. W. M. H. Greaves and Dr. W. M. Smart; *Foreign Secretary*: Prof. Alfred Fowler.

Mr. B. H. WILSDON has been appointed to the post of director of research to the Wool Industries Research Association at Torridon, Headingly, Leeds. Since 1929, Mr. Wilsdon has been assistant director and superintendent of the Building Research Station of the Department of Scientific and Industrial Research. He was educated at Lincoln College, Oxford, and after a period of research there, went to India as a professor of chemistry, afterwards gaining varied experience in applied research in agriculture and organising the Irrigation Research Institute of the Punjab. Besides publishing work on chemical and physical subjects, Mr. Wilsdon has done pioneer work on the application of statistical methods to industrial problems of specification and standardisation.

In NATURE of February 9 (p. 212), it was stated, following the Report for 1933-34 of the Department of Scientific and Industrial Research, that the new process of the Wool Industries Research Association for the production of unshrinkable fabrics is being exploited under mill conditions and that materials should be available to the public early this year. We are informed by the Association that work still remains to be done on the problems which occur in transferring the operation of such a process from the laboratory to a commercial scale, and that "it is certain that underwear or other knitted materials,

finished by application of the W.I.R.A.'s new unshrinkable process, will not be available to the Trade before 1936".

THE Secretary of State for the Colonies has made the following appointments: Mr. R. M. Gambles, to be veterinary officer, Cyprus; Mr. J. D. Tallantire, to be superintendent of agriculture, Nigeria; Mr. J. M. S. Usher-Wilson, to be superintendent of agriculture, Nigeria; Mr. R. L. Brooks (deputy conservator of forests), to be conservator of forests, Trinidad; Mr. P. E. Carcenac (assistant conservator of forests, Mauritius), to be assistant conservator of forests, Malaya; Mr. J. de Meza (veterinary bacteriologist), to be chief veterinary officer, Nyasaland; Mr. J. C. Muir (superintendent of agriculture, Gold Coast), to be senior agricultural officer, Zanzibar; Mr. F. B. L. Butler (grader and inspector, Agricultural Department, Kenya), to be chief grader and inspector of produce, Agricultural Department, Cyprus.

THE twenty-fifth Dutch Congress of Natural Science and Medicine will be held in Leyden on April 23-25 under the presidency of Prof. J. van der Hoeve with Prof. L. G. M. Baas Beching as president of the biological section and Prof. E. Gorter as president of the medical section. Further information can be obtained from the general secretaries, Dr. D. Coelingh, Regenteslaan 2, and D. N. R. Pekelharing, Jr., Meentweg 48, Bussum.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—Probationer mapping assistants to H.M. Land Registry—The Secretary, Civil Service Commission, Burlington Gardens, London, W.1 (Feb. 21). A head of the Engineering Department of the Willesden Technical College—The Secretary, H. M. Walton (T.), 10 Great George Street, Westminster, S.W.1 (Feb. 22). A lecturer in electrical engineering at Norwich Technical College—The Principal (Feb. 25). A lecturer in electrical engineering at Chesterfield Technical College—The Director of Education, County Education Office, St. Mary's Gate, Derby (Feb. 25). A computer (Class II, male or female) for the Ordnance Committee, Royal Arsenal, Woolwich, S.E.18—The Secretary (Feb. 25). A principal of the South-East Essex Technical College—The Director of Education, County Offices, Chelmsford (Feb. 28). A lecturer in pathology in the University of Bristol—The Registrar (March 1). A lecturer in bacteriology in the University of Manchester and assistant bacteriologist in the Public Health Laboratory—The Secretary, University, Birmingham 3 (March 1). Junior scientific officers at the National Physical Laboratory to work in the Aerodynamics and Radio Departments—The Director (March 4). Probationary assistant engineers in the Post Office Engineering Department—The Secretary, Civil Service Commission, Burlington Gardens, London, W.1 (March 7). A lecturer in anatomy and deputy-director of the Department at St. Thomas's Hospital Medical School, Lambeth Palace Road, London, S.E.1 (March 16). Laboratory assistants (male) at the Experimental Station, Porton, near Salisbury—The Commandant.