

THE IPSWICH CONFERENCE OF THE MUSEUMS ASSOCIATION.

THE twenty-seventh annual conference of the Museums Association was held in Ipswich on July 10-12, when the following institutions were represented by delegates:—(1) Five national museums—the British Museum, the British Museum (Natural History), the Victoria and Albert Museum, the National Museum of Wales, and the Museums of the Royal Botanic Gardens at Kew; (2) two London museums—the Horniman Museum and the Wellcome Historical Medical Museum; (3) the following twenty-five provincial museums and art galleries—Brighton, Bristol, Carlisle, Chelmsford, Derby, Dundee, Exeter, Halifax, Hastings, Hull, Ipswich, Leicester, Lincoln, Liverpool, Merthyr Tydfil, Newbury, Norwich, Perth, Peterborough, Plymouth, Reading, Salford, Warrington, Worcester, and Worthing; and (4) the Museum of the University of Manchester.

After a hearty welcome by the Mayor of Ipswich, the president, Mr. E. Rimbault Dibdin, curator of the Walker Art Gallery, Liverpool, addressed the delegates, taking as his subject the effect of the war upon the art museums of the country. He had sent a series of questions to eighty-two art museums in Great Britain, and from their answers was able to give some interesting details as to their experiences. Briefly summarised, his remarks indicated that whereas several London galleries have been closed by the action of the Government, and one or two others report a reduced attendance, the majority of the provincial institutions show an increased attendance, and only one has been closed. It thus appears that the protest lodged with the Prime Minister by the Museums Association against the Government Retrenchment Committee's suggestion that provincial museums and art galleries should be closed has been thoroughly justified.

Mr. F. Woolnough read a paper on "The Future of Provincial Museums," in which he said the question was chiefly one of finance, and pleaded for the removal of the restrictions which either make museums dependent upon a share of the library rate for their income or limit them to the Museums and Gymnasiums Act halfpenny.

Some remarkable specimens were shown by Mr. F. R. Rowley in illustration of his comments on the use of arsenious jelly as a preservative. This method was described by S. Delépine in the *Museums Journal* for April, 1914, p. 322. Mr. Rowley has made some slight modifications, which will form the subject of a note in the journal. Among the specimens shown were a viper, newts, crustacea, and marine algæ. The latter were beautifully preserved, both as to colour and form, and all had the advantage of being embedded in a clear, solid mass, which could be laid flat.

"The Educative Value in Public Museums of Introductory Cases to Animal Groups" was introduced by Dr. J. A. Clubb, who advocated the primary importance of comparative morphology, as against mere classification, for the inspiration and enlightenment of the ordinary visitor. How to get hold of those who come to the museum with no previous knowledge of, or particular interest in, its subjects is an urgent problem, to which Dr. Clubb and many other thinking curators are addressing themselves.

Mr. R. A. Smith, of the British Museum, announced that certain duplicates of prehistoric implements were available for distribution to provincial museums.

The claims of the British Science Guild were brought forward by Mr. E. E. Lowe, who spoke of the Guild as an association with magnificent and comprehensive aims which should claim the allegiance of

every person interested in the national utilisation and recognition of scientific work and workers.

Many communities are now organising photographic surveys of their own districts in order that accurate historical and scientific records may be handed down to posterity, and Dr. A. H. Millar's paper on the "Photographic Survey of Dundee" was particularly opportune.

Mr. F. Woolnough, the curator of the Ipswich Museum, gave demonstrations (a) upon a case for exhibiting postage stamps, and (b) upon the "Fothergill" and hot-sand methods of drying flowering plants in their natural colours. Many of the plants dried by the "Fothergill" process showed remarkably successful results. A useful demonstration was given by Mr. W. K. Spencer on the use of gelatine moulds for plaster casts. He showed that where an object was much "undercut" the flexibility of gelatine gave it many advantages over plaster.

To the business meeting the hon. secretary (Mr. E. E. Lowe) reported as to his efforts to get rectangular glass exhibition jars made in England. Many manufacturers had been interviewed, but none were able to tackle the work in the midst of present labour and other difficulties. There is little doubt, however, that the manufacture will be embarked upon within the next year or so, thus rendering museums, hospitals, and medical schools independent of the German supply. The secretary can offer an immediate order for 250l. worth to anyone who will undertake to produce rectangular jars of a good quality at a reasonable price, and he has evidence of a large annual demand.

RECENT ZOOLOGICAL RESEARCH IN SOUTH AFRICA.¹

THE "Annals of the Natal Museum," although only yet in its third volume of publication, has justly earned repute for the quality of the researches published therein. The journal is well printed and admirably illustrated with lithographic and other plates. In its current issue we have a bulky record of original investigations covering a wide field in the rich fauna of South Africa. Mr. Hugh Watson contributes an important and very fully illustrated memoir on the carnivorous slugs, with particular reference to the genus *Apera*. This genus appears to be confined to the maritime provinces of South Africa, one species occurring on the slopes of Table Mountain, and the remainder in Natal and the eastern part of the Cape Provinces. In addition to a systematic revision of its species, the author gives a valuable account of the anatomy of the genus and a full discussion of its phylogeny. He concludes that the species of *Apera* have not been directly evolved from any herbivorous form, and in their anatomy and geographical distribution are more closely related to the Rhytidæ than to any other group. The only other carnivorous slug found in South Africa is the English *Testacella maugei*, Fér, which has a very wide distribution, and has probably been introduced into South Africa through the agency of man.

Mr. Claude Fuller, of the Division of Entomology, Pretoria, writes on South African Termites, and in a paper of more than 170 pages records a good deal that is new and interesting concerning the biology of these insects. Termites appear to be irregularly distributed in the Union, being rare in the South-West Cape, while in Natal and the Transvaal the soil is riddled from end to end of the country with their

¹ "Annals of the Natal Museum." Edited by Dr. Ernest Warren, director. Vol. iii., part ii., October, 1915. Pp. 107-504 and plates vii-xxxv. Price 15s. net.

tunnellings. Mr. Fuller describes his observations upon the behaviour of the winged sexual forms belonging to six different species. He shows that the belief that the aerial migration has for its object the prevention of interbreeding is not necessarily true, since the flights frequently comprise individuals of both sexes which readily pair. This same feature has also been observed by the reviewer in the case of a Himalayan Termite. Intercrossing occurs at times among individuals of different nests, but Mr. Fuller concludes that the real object of the production of sexual forms in such vast numbers is in order to perpetuate the species, which suffers immense mortality during the annual exodus. Some sixty-four pages are devoted to observations on the nest-building habits and general economy of thirteen species of Termites, and details of the various types of nests are well illustrated on the accompanying plates. The remainder of the paper comprises a systematic account of species, chiefly belonging to the genera *Hodotermes*, *Termes*, and *Eutermes*. The characters of the soldiers and workers are well described, but unfortunately no accounts of the winged forms are included, and it is to be hoped that the author will make these the subject of a further memoir.

Mr. J. Hewitt contributes a paper on South African Arachnida, mostly based on specimens in the Albany Museum. Altogether three genera, eleven species, and one variety are recorded as new, and the most interesting feature brought to light is the discovery of two new genera of marine spiders taken near Cape Town. The remainder of the journal is occupied by two short papers by Dr. Warren, one dealing with the tendency of the Saturniid moth, *Melanocera menippe*, Westw., to exhibit parthenogenesis, and the other with an extension of his previous observations upon hybrid cockatoos.

A. D. IMMS.

THE CROYDON NATURAL HISTORY SOCIETY.

THE Transactions of the Croydon Natural History and Scientific Society for 1915, a copy of which has just reached us, contain a particularly good paper by Mr. G. M. Davies on the rocks and minerals of the Croydon regional survey area. The paper runs to 44 pages, and includes a careful series of analyses of rock-specimens from the Weald Clay and all the more recent formations. Reference is made to the discovery of the Marsupites-zone of the chalk at Russell Hill, Purley, and to the decomposition of marcasite, which gives rise to the soft masses of hydrated iron oxide ("red ochre") so frequent in the chalk. A few sarsens are noted as occurring in the neighbourhood. Granules and grains of zinc-blende and galena are noted as occurring in fuller's-earth at Redhill and Nutfield. The number of minerals found in residues is somewhat surprising, and a complete list is given. The regional survey, under the direction of Mr. C. C. Fagg, shows satisfactory progress, and in connection with it Baldwin Latham has prepared a map showing the site of the five Bournes which flow in the area.

Mr. William Whitaker describes an extraordinary outlier of Blackheath pebble-beds at Tandridge Hill. With the pebbles are patches of fairly large unworn flints, resembling in shape flints as found in chalk-pits. Flints in any intermediate stage of weathering are not found, and the two cannot have been produced by the same agency. It is thought that, during or after the deposition of the rounded Blackheath beds, the unworn flints have been quietly removed from the chalk during the dissolution of the latter, and left near to their original position.

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The extension of the outlier so far south is of interest, but especially is it so in that though the uppermost outlier is nearly 800 ft. O.D., the lowest extension is 200 ft. lower, on the face of the escarpment of the chalk. Hence we here find Eocene beds resting on lower chalk, an occurrence unknown elsewhere. The conclusion comes to is that long-continued solution of pebble-covered chalk took place on a large scale, and the pebble-beds were very gradually let down. There was no evidence of faulting. It is fairly certain they could not have been originally deposited on the middle and lower chalk as now found.

The usual valuable meteorological statistics for 1915, compiled by Mr. F. Campbell-Bayard, with rainfall day by day from 104 stations, is of value to water-economists. In a paper summarising the fossil records of *Ginkgo biloba* and its ancestors, Mr. E. A. Martin remarks that there has been of late a considerable increase of small specimens of this tree in this country. Hitherto this "living fossil," as Seward calls it, has been represented chiefly by male trees, and it is hoped a balance may be restored now that it is included in florists' catalogues.

THE LAKE VILLAGERS OF GLASTONBURY.¹

THE Lake Village of Glastonbury consisted of between eighty and ninety round huts surrounded by a stockade, and planted for security at the edge of the sheet of water, that is now represented by the peat in the marshes, extending from Glastonbury westward to the sea. The inhabitants smelted iron and made various edged tools and weapons—axes, adzes, gouges, saws, sickles, bill-hooks, daggers, swords, spears, etc. They also smelted lead ore from the Mendip Hills, and made net-sinkers and spindle-whorls. They probably carried on the manufacture of glass beads and rings and other personal ornaments. They were also workers in tin and bronze. It is likely that the beautiful Glastonbury bowl was made in the settlement, since unused rivets of the same type as those of the bowl have been commonly met with. They were expert spinners and weavers, carpenters and potters, using the lathe in both industries. The discovery of a wooden wheel, with beautifully turned spokes, proves that they possessed wheeled vehicles, while the snaffle-bits of iron imply the use of the horse. Their commerce was carried on partly by land, and the possession of canoes gave them the use of the waterways. They were linked with other settlements by the road running due east from Glastonbury, that formed a part of the network of roads traversing the country in the prehistoric Iron age, more especially with the lead mines and the fortified oppida, or camps, of Mendip and of the rest of the county. They were also linked with the Bristol Channel by a waterway along the line of the river Brue, and along this was free communication with the oppidum of Worlebury, then inhabited by men of their race.

The lake villagers were undoubtedly in touch with their neighbours by sea and by land. Their jet probably came from Yorkshire; their Kimmeridge shale from Dorset; the amber from the eastern counties, or from the amber coast south of the Baltic. The cocks for fighting were probably obtained from Gaul, and the oblong dice are identical with those used in Italy in Roman times. Some of the designs on their pottery are from the south, and the bronze mirrors are probably of Italo-Greek origin. The technique of the

¹ Abridged from a paper read before the Literary and Philosophical Society of Manchester on April 18 by Hon. Prof. W. Boyd Dawkins, F.R.S.