

Finally, the committee appointed last year to investigate the fauna and flora of the Trias of the British Isles made its first report. It was written by Mr. H. C. Beasley, and deals with cheirotheroid foot-prints. The attendance at the meetings of the section was good, and on several occasions the papers led to animated and interesting discussions.

H. W. M.

ZOOLOGY AT THE BRITISH ASSOCIATION.

THE president's address—which was postponed until Friday, September 11, in order to avoid the hours fixed for the opening addresses in the other biological sections—dealt first with the inadequacy of the public provision made for the advancement of zoology and its applications in this country, and secondly with some considerations bearing on the problems of variation and heredity, more especially as seen in the Cœlenterata. In fact, influenced no doubt by the personal work of the president, a considerable number of the communications brought before the section this year dealt with the Cœlenterata, especially with corals and coral reefs.

Thursday, September 10.—The forenoon was given up to coral papers, and the afternoon mainly to reports of committees. Dr. J. E. Duerden (from the United States) gave two papers, "Septal Sequence in the Coral *Siderastræa*" and "Morphology and Development of Recent and Fossil Corals"—these being some of the results of the author's studies of living West Indian corals while he served as curator of the museum at Jamaica. He directed attention to the general occurrence of boring filamentous Algae, and to the fact that the colours of West Indian corals are mainly due to the presence of symbiotic yellow cells (zooxanthellæ) in the endoderm. Mr. C. Crossland had a paper describing the coral formations he met with on the east coast of Africa, near Zanzibar, and Mr. Stanley Gardiner gave a general account of the coral reefs of the Indian Ocean. In connection with this, Prof. Herdman directed attention to the fact that, in the Gulf of Manaar, calcareous masses ("calcrettes") of great extent are formed *in situ* on the sea-bottom by the cementing of sand and other loose material by calcareous incrusting Polyzoa. Miss Edith Pratt had a paper on the assimilation and distribution of nutriment in *Alcyonium digitatum*. The polypes exercise choice, and feed mainly on small Crustacea. Miss Pratt regards the so-called nerve-plexus as part of a system of amoeboid endoderm cells conveying nutriment throughout the colony. Prof. Hickson described a case of polymorphism in a *Pennatula murrayi* from eastern seas. Dr. J. Cameron gave a lantern demonstration on the origin of the epiphysis in Amphibia as a bilateral structure.

The reports of committees were as follows:—(1) On bird migration in Great Britain and Ireland. This is the final report, and consists chiefly of Mr. Eagle Clarke's observations on the starling and the rook. (2) Naples Zoological Station. This includes a detailed account, by Mr. W. Wallace, of his investigations on the oocyte of Tomopteris. (3) "Index Animalium." The first volume, dealing with the period 1758–1800, has been issued, and the indexing of 1801–1900 is now being continued by Mr. Sherborn. (4) Zoology of the Sandwich Islands. This is the thirteenth report, and the work is still in progress. (5) Coral reefs of the Indian region. (6) Plymouth Marine Laboratory. (7) Millport Marine Laboratory. As on this occasion the physiological section did not meet separately, the physiological papers were taken in Section D. These included two reports:—(1) The microchemistry of cells. This dealt chiefly with the localisation of potassium in the living cell, and was drawn up by Prof. A. B. Macallum. (2) The state of solution of proteids.

Friday, September 11.—After the presidential address came a paper by Dr. Gamble and Mr. Keeble on the bionomics of *Convolvula roscoffensis*, with special reference to its green cells. This was followed by three short notes by Prof. R. J. Anderson—the skull of *Ursus ornatus*, the skull of *Grampus griseus*, and the peritoneum in *Meles taxus*. The section did not meet on Saturday.

Monday, September 14.—The morning was devoted to a joint discussion with botanists on fertilisation, in which the president, Prof. Hartog, Prof. Bretland Farmer, Mr. W. Bateson, Mr. M. D. Hill, and Mr. Jenkinson took part.

The following papers were then read:—M. D. Hill, on nuclear changes in the egg of *Alcyonium*; Prof. Hartog, on the function of chromatin in cell division, and on the tentacles of Suctoria; Prof. Hickson, on conjugation in *Dendrocometes* (demonstrated with slides); J. W. Jenkinson, on some experiments on the development of the frog; Dr. Leighton, on British reptiles; N. Annandale, on the coloration of Malayan reptiles; H. C. Robinson, on the walking fish of the Malay Peninsula, and also an exhibition of convergent series of Malayan butterflies.

Tuesday, September 15.—Prof. Herdman gave a short account of a remarkable phosphorescence phenomenon observed in the Indian Ocean, which led to descriptions of other similar occurrences by the president, Mr. Stanley Gardiner, Mr. Bateson, and others. Prof. Herdman then read a joint note by Mr. James Hornell and himself on pearl-formation in the Ceylon pearl oyster, giving a biological classification of pearls into (1) ampullary, (2) muscle pearls, and (3) cyst pearls. The remaining papers were mainly physiological in their bearing, viz. Captain Barrett-Hamilton, on a physiological theory of the winter whitening of animals; Prof. B. Moore, on a new form of osmometer for direct determinations of osmotic pressure of colloids, and also experiments on the permeability of lipid membranes; Prof. Sherrington and Dr. Grünbaum, on the cerebrum of apes; Mr. J. Barcroft, on the origin of water in saliva; Dr. Greaves, demonstration of visual combination of complementary colours; Mr. C. V. Hughes, note on two rare birds; Dr. Rennie, on epithelial islets in the pancreas of Teleosteans; Mr. D. C. McIntosh, on variation in *Ophiocoma nigra*; and Prof. W. C. M'Intosh, on the eggs of the shanny. Dr. Rennie suggests that his epithelial islets are blood-glands which have entered into a secondary relation to the pancreas, and that they maintain their primitive function of producing an internal secretion.

The section did not meet on Wednesday, but on Thursday, September 17, there was a dredging expedition, in which the president and a number of the members of Section D took part. The expedition was in the Lancashire Sea-Fisheries steamer, *John Fell*, kindly lent for the purpose by the committee, and was under the leadership of Mr. Dawson (Superintendent of Fisheries), Mr. Isaac Thompson (of the Liverpool Marine Biology Committee), and Prof. Herdman. The first hauls of the fish and shrimp trawls were taken in the shallow waters off Southport and the estuary of the Mersey, in order to show the fauna of the characteristic Lancashire small-fish "nurseries"; a visit was paid to the local shrimping fleet, a fishing boat was overhauled and boarded and its nets examined, and the other routine operations of the fisheries steamer in policing and inspecting the district were fully explained to the party. The processes of taking the physical observations, and of examining, counting, and recording a haul of the trawl were also gone through. Later in the day dredging and tow-netting took place further out to sea on harder ground with a more varied fauna. Although not strictly part of the work of the section, this dredging expedition made an interesting and appropriate finish to a very successful zoological meeting.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

DR. SYDNEY YOUNG, F.R.S., professor of chemistry in University College, Bristol, has been appointed to the chair of chemistry in Trinity College, Dublin, vacant by the resignation of Prof. Emerson Reynolds.

ONE of the two open entrance scholarships which were recently founded at the Victoria University of Manchester, each of the value of 100l., has been awarded to Mr. W. C. Denniston.

DR. JOHN WHITE, of the University of Nebraska, has been appointed head of the department of chemistry at the Rose Polytechnic Institute, succeeding Prof. W. A. Noyes, who was recently appointed chief chemist of the American National Bureau of Standards.

THE course of Saturday morning lectures on the teaching of mathematics, which the London Technical Education

Board announced would be commenced by Prof. Hudson at King's College, Strand, on October 17, has been postponed until next term, and will begin on January 23, 1964.

At a special convocation of the University of Toronto on October 2, the following honorary degrees were conferred in connection with the opening ceremonies of the new physiological and medical laboratories:—LL.D. (*honoris causa*), Prof. W. W. Keen, Jefferson Medical College, Philadelphia; Prof. W. H. Welch, Johns Hopkins University; Prof. William Osler, F.R.S., Johns Hopkins University; Prof. R. H. Chittenden, Yale University; Prof. Charles S. Sherrington, F.R.S., University of Liverpool. *In absentia*, Prof. H. P. Bowditch, Harvard University. The inaugural address at the opening of the laboratories was delivered by Prof. Sherrington.

THE new buildings of the Essex County Technical Laboratories, Chelmsford, will be opened by the Earl of Onslow, President of the Board of Agriculture, on Friday afternoon, October 30. The buildings, which have just been completed at a cost of nearly 12,000l., comprise chemical, physical and biological laboratories and classrooms, together with agricultural and horticultural museums and libraries, and provide facilities for systematic instruction in agriculture and horticulture, as well as in pure science. The laboratories are intended to be a centre for agricultural and horticultural information for the whole county, and they include rooms for the analysis of soils, manures, foods, seeds, &c., and for other scientific work carried on in the interest of these industries.

IN reply to a memorial to the Board of Agriculture, asking that Ordnance maps might be sold at reduced prices for teaching purposes, the Geographical Association has been informed that the Board is prepared to authorise the Ordnance Survey Department to produce and supply to educational authorities a special edition of the outline 1-inch maps, printed on cheap but reasonably strong paper, at the following prices:—200 copies, 1l. 5s.; 500 copies, 2l.; 1000 copies, 3l.; 5000 copies, 12l. For larger numbers the estimated price would be 2l. per 1000 copies. The Board has stipulated that any maps thus supplied should not be sold, and a heading is to be printed on the maps to this effect. Referring to the educational advantages of the Board's decision, Dr. Herbertson, secretary of the Geographical Association, remarks:—"It is universally agreed that all sound geographical teaching must begin in a study of the home region, and it is therefore to be hoped that most teachers will avail themselves of the facilities so generously granted, either individually or by making application through the local education authority."

MUCH of the success of the Glasgow and West of Scotland Technical College could probably be traced to the widespread interest in its work shown by the Corporation of Glasgow, by Scottish manufacturers and merchants, and by the associations both of professional men and of artisans. The most recent annual report of the governors of the college provides many indications of the belief in the value of higher technical education by the inhabitants of Glasgow and its neighbourhood. The Corporation of Glasgow has made a grant of 5000l., of which 4500l. was towards working expenses and 500l. towards the building fund; many manufacturers and others have given facilities for visits to their works by parties of students, and many merchants have made additions to the college equipment or have supplied laboratory material. It is of interest to note that the total expenditure involved by the erection of the new buildings, the foundation stone of which was laid last May by the King, exclusive of equipment, will be not less than 210,000l. Of this sum the governors are able to announce promises of donations and grants amounting to 182,382l.

SOCIETIES AND ACADEMIES.

LONDON.

Entomological Society, October 7.—Prof. E. B. Poulton, F.R.S., president, in the chair.—Mr. G. C. **Champion** exhibited on behalf of Prof. Hudson **Beare** some specimens of a *Ptinus* new to the British list, captured in a granary at Strood on May 11, 1961.—Mr. C. O. **Waterhouse** exhibited on behalf of Mr. Charles **Pool** specimens of a beetle of the genus *Niphus*, closely resembling *N. crenatus*, but

with distinct shoulders, and more parallel elytra which are less strongly striated. They were found in large numbers in a corn chandler's at Edmonton.—Mr. H. St. J. **Donisthorpe** exhibited specimens of *Aphanisticus emarginatus* from the Isle of Wight, a beetle new to the British list, and a *Scymnus*, new to science, from the same locality.—Mr. M. **Burr** exhibited a living adult male earwig, *Labidura riparia*, Pall., captured near Boscombe at the end of August. He said that the very noticeable pale coloration becomes darker after death, sometimes nearly black, which might account for some of the numerous "colour-varieties."—Dr. Norman **Joy** exhibited a specimen of *Argynnis selene*, taken last year in Berkshire, showing a remarkable tendency to melanism, and rare Coleoptera taken in the same county during 1963.—Sir George **Hampson** exhibited a collection of Norwegian butterflies made by him on the Dorsefjeld, on the Alten fiord, at Bossekop, and other localities this year, including series of *Colias hecla*, Lef., *Chrysophanus hippothoe*, and var. *stieberi*, Gerh., *Aeneis norna*, Thnb., *Melitaea*, var. *Norvegica*, Auriv., the Norwegian form of *M. aurelia*, *Argynnis freiga*, and *A. frigga*, a Labrador, Arctic, and North American species, now found further south, at Kongsvold, for the first time.—Mr. A. H. **Jones** exhibited examples of *Erebia christi*, taken this summer in the Laquinthal, and of the species of *Erebia*, to which it is allied; a local form of *Satyrus actaea*, var. *cordula*, from Sierre; and a short series of *Chrysophanus dorisii* (type) and *C. var. subalpina* from the Laquinthal, with *P. hippothoe*, var. *eurybia*, showing the strong resemblance on the upper surface which the ♀ of this latter species bears to the ♀ *subalpina*.—Mr. A. J. **Chitty** exhibited specimens of *Procto trupid*, which he said approached *Ponera constricta* in appearance, but might be an *Isobranchium*. If so, it was new to the British list.—Mr. H. Willoughby **Ellis** exhibited *Criocephalus polonicus*, Motsch, a longicorn beetle new to Great Britain, from the New Forest, and also specimens of all stages, from the egg to the imago, to illustrate the life-history of the species. He also exhibited specimens of *Asemum striatum*, L., with larva and pupa, accounted heretofore rare in the New Forest, but this year occurring in abundance.—Mr. Ambrose **Quail** exhibited cases showing the life-history of some Australian Hepialidae.—Dr. D. **Sharp**, F.R.S., exhibited specimens illustrative of the egg-cases and life-histories of eight species of South African Cassididae, as described in a paper by Mr. F. Muir and himself.—Mr. W. L. **Distant** also showed the pupa cases of some African species of Aspidomorpha, with the cast heads of the larvae.—Mr. Roland **Trimen**, F.R.S., exhibited some cases of mimicry between butterflies inhabiting the Kavirondo-Nandi district of the Uganda British Protectorate, particularly that in which *Planema poggei*, Dewitz, is imitated by an apparent variety of *Pseudacraea künowii*, Dewitz, and also by a hitherto undescribed form of the polymorphic ♀ *Papilio merope*, Cram. He mentioned that both *Planema poggei* and *Pseudacraea künowii* were described and figured by Dewitz in 1879 from single specimens taken by Dr. Pogge in Angola, and added the interesting fact that the only other example of the undescribed mimicking form of the ♀ *Papilio merope* known to him—in the Hope Department of the Oxford University Museum—is ticketed "Angola; Rogers, 1873." The president referred to the special interest attaching to an interpretation of this remarkable form of the female *merope*; at the same time he pointed out that the interpretation so convincingly illustrated that evening had been made out last spring by Mr. S. A. Neave, who exhibited this form of the female *merope*, together with *Planema poggei* as its model, at both *soirées* of the Royal Society in May and June, a time when Mr. Trimen's absence from England unfortunately prevented him from seeing them.—Dr. T. A. **Chapman** exhibited *Coenonympha oedipus*, *Satyrus dryas*, and *Heteropterus morpheus*, taken last summer near Biarritz, and *Erebia crias* and *E. stygne*, from the Logroño Sierra, Spain. These he suggested were probably examples of homöochromatism. Little attention has been directed to homöochromatism in European butterflies, and these were certainly not examples of the detailed mimetism we are now familiar with in Müllerian groups from the African