

physical measurements for small boys, following Board School methods; but that in the latter institutions mathematical and science teaching were continuous, the same master teaching both to the same boys. In public schools the two subjects are kept separate. Much of what is now taught in the laboratory could more usefully be acquired in mathematical class-rooms with all the necessary apparatus. Mathematics would gain enormously, and much valuable science time be saved. Here Mr. Eggar submitted that he was only urging the adoption of practical mathematics which Prof. Perry had long advocated, and without opposition, but also without any visible effect upon the universities, which still, among other things, demanded a modicum of unapplied and undigested algebra. Sir Henry Roscoe bore out what Mr. Eggar had said, and proposed that a meeting of mathematical masters should be held, at which Prof. Perry might possibly convince them. Speaking as a mathematical master, Mr. Hurst, of Eton, cordially agreed with the views of Prof. Perry and Mr. Eggar; he stated, however, that limited time and the requirements of the universities utterly forbade their adoption in his own case. Another point emphasised by Mr. Eggar was that trigonometry mechanics should be introduced at an earlier stage into the teaching of mathematics, and his resolution that "some knowledge of physics should be required of all candidates for a university degree," was carried unanimously.

The universities came in also for a good deal of criticism, among other examining bodies, from Mr. C. Falkner, of Weymouth. Their entrance science scholarships cause boys to specialise while too young, and before they have got a sound foundation upon which to base their education. No college seems to require the same scope of science, and this necessitates what amounts to the private coaching of every boy in the scholarship class of a public school. Mr. Falkner had some very good suggestions to make for the improvement of these and army examinations, and repeated the plea that is now finding much favour, that teachers and examiners should meet and work together.

The paper by Mr. W. H. Lewis, of Exeter, was not discussed, owing to the author's absence. It dealt with the desirability of longer hours and smaller classes, and larger staffs. The difficulty which a "literary" head-master has of realising the peculiarly laborious nature of science teaching where complicated apparatus has to be fitted up was also alluded to.

An interesting survey of the work of school natural history societies was to be found in the address by Mr. A. Vassall, of Harrow, and the discussion upon it. Many advantages were claimed for the subjects involved, from the education of future landowners and travellers as well as for the boys at school. The sectional system, which divides workers up into groups according to their study, was advocated. Compulsory games very often spoiled matters, and individualism, Mr. Vassall very rightly pronounced, was thereby extinguished. Public opinion among the boys and the standing aloof of those with influence, as well as the apathy of many masters, were also cited as obstacles in the way of field work at schools. Nevertheless, quite a number of successful societies at present exist.

Many suggestive methods of actually dividing up the time for teaching were given by various members of the conference; but, one takes it, the most useful purpose it will serve is to bring before head-masters, governors of schools, and examining bodies the results of the experience and the serious recommendations of a body of picked scientific men whose hearts are in their work.

WILFRED MARK WEBB.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

THE annual meeting of the Association of Technical Institutions will be held on Tuesday, January 29, in the Fishmongers' Hall, London. An address will be given by Sir W. Hart Dyke, Bart., M.P.

We learn from *Science* that Dr. D. K. Pearsons has given Colorado College 50,000 dollars, promised some time since, and it is reported that he has given Northwestern University 30,000 dollars for the erection of a woman's dormitory, and 200,000 dollars to an educational institution, the name of which is not to be made public during his life time. It is believed that Dr. Pearsons' gifts to educational institutions amount to three million dollars.

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SCIENTIFIC SERIAL.

THE *Journal of Botany* for January contains a useful paper by Mr. Arthur Lister on the cultivation of the Mycetozoa from spores. Mr. George Murray and Mr. C. Bucknall contribute a discussion on the question whether the box, *Buxus sempervirens*, is a native of Britain. They conclude that this is unquestionably the case with the locality near Wootton-under-Edge, an adjacent farm having been known as "Boxwell" for at least seven centuries. This increases the probability of the shrub being indigenous also in other localities, including Boxhill, near Dorking. Mr. W. Carruthers and Miss A. Lorrain Smith have a paper on a disease in turnips caused by bacteria. Prof. Potter has named the bacterium *Pseudomonas destructans*.

SOCIETIES AND ACADEMIES.

LONDON.

Geological Society, January 9.—J. J. H. Teall, F.R.S., President, in the chair.—The geology of South-Central Ceylon, by John Parkinson. In this communication the author endeavours to give some account of the relations between the various granulitic rocks of Ceylon. A series of more or less isolated sections were studied, the rocks in each considered under separate heads, and conclusions put forward relative to the whole.—Note on the occurrence of corundum as a contact-mineral at Pont-Paul, near Morlaix (Finistère), by A. K. Coomara-Swamy. The intrusive granite of Pont-Paul, near Morlaix, contains highly altered fragments of sedimentary rock. The minerals found in them are biotite, muscovite, corundum (first recorded by Prof. Barrois in 1887), plagioclase, andalusite, pyrite, magnetite, sillimanite, green spinel, and zircon.

Mathematical Society, January 10.—Dr. Hobson, F.R.S., President, in the chair.—Prof. Love, F.R.S., made a communication on streaming motions past cylindrical boundaries. Mr. Basset, F.R.S., also spoke on the subject.—Mr. Campbell read a paper entitled "A Proof of the Third Fundamental Theorem in Lié's Theory of Continuous Groups."—The President communicated a paper by Mr. E. W. Barnes on the zeroes of Bessel's functions, and a paper on some cases of the solution of $2^{n-1} \equiv 1, \text{ mod. } p$, by Prof. F. S. Carey.

Zoological Society, January 15.—Prof. G. B. Howes, F.R.S., Vice-President, in the chair.—Mr. W. E. de Winton exhibited and made remarks on a skin of the large grey Cynictis (*Cynictis selousi*), obtained by Mr. P. C. Reid on the west bank of the Linyanti River, South Africa. The species had been described from a skull only, from Bulawayo, and the skin of the animal had previously been unknown to naturalists.—Mr. O. Thomas exhibited, on behalf of Mr. R. Lydekker, a specimen of the skull of a common fox (*Canis vulpes*) with two upper canines on each side of the jaw.—In describing the collection of fishes brought home from Lakes Tanganyika and Kivu by the Tanganyika Exploring Expedition, under the leadership of Mr. J. E. S. Moore, Mr. G. A. Boulenger pointed out that the study of this important collection did not modify the conclusions embodied in his first report published in 1898. The exploration of Lake Kivu had thrown no light on the origin of the Tanganyikan fauna; the smaller lake proved to be very thinly populated with fishes, which all belonged to widely distributed genera, the species showing a mixture of Nile and Tanganyika elements, with two that might prove to be endemic. The list of the fishes from the two lakes comprised 91 species, 74 of which had been named by the author. The collection now described consisted of examples of 50 species, 26 of which were new to science, 2 being made the types of additional genera of the family *Cichlidae*.—Mr. G. A. Boulenger read a paper on a collection of freshwater fishes made by Dr. W. J. Ansorge in the Niger Delta. The collection was described as one of exceptional interest. One of the two new genera, for which the name *Phractolaemus ansorgii* was proposed, constituted the type of a new family (*Phractolaemidae*), intermediate between the *Osteoglossidae* and the *Clupeidae*. The second new genus, *Polycentropsis*, belonged to the *Nandidae*, a family new to Africa; its position was regarded as near the South American *Polycentrus*. A new *Gnathonemus* and three new *Pelmatochromis* were also described.—A communication was read from