

papers were confined to the mornings, but the section was also occupied in the afternoons. Prof. Barger gave a demonstration in the University of methods for the micro-analysis of compounds containing carbon, hydrogen, and nitrogen, whilst other afternoons were devoted to excursions. Much interest was taken by members in the inspection of the new University chemical laboratories at Liberton, which are arranged as single-story buildings with a central store,

the arrangement being convenient and economical, whilst allowing the greatest possible freedom when alterations have to be made. Other visits included the Heriot-Watt College, Messrs. Younger's brewery, the North-British Rubber Co.'s mills, Pumpherstone Oil Works, and the pharmaceutical works of Messrs. Duncan, Flockhart and Co. The rubber works and the shale oil works proved to be specially attractive to members.

### Rehtia, the Venetic Goddess of Healing.

AT a meeting of the Royal Anthropological Institute held on January 11 Mr. J. Whatmough read a paper on "Rehtia, the Venetic Goddess of Healing." The Venetic goddess Rehtia (or, as her name might have appeared in Latin, *Rectia*), for whom an apt Greek parallel in name and functions, as well as in characteristic votive offerings, has been found in the Spartan Artemis Orthia, was worshipped not far from the modern town of Este (15 miles south-west of Padua). Her cult, known perhaps to a handful of scholars all told, bears, according to Mr. Whatmough's new explanation of an important group of her offerings, a close likeness to that of the Italic Juno as the protecting goddess of women, with whom Rehtia should be compared rather than, as previously, with the Etruscan Nortia. The group of inscribed votive offerings in question—the so-called "nails" and "wedges"—now better regarded as pins with pendant axe-shaped talismans of a well-known Hallstatt type, was made all but exclusively by women, as the dedicatory inscriptions show. From the shrine of Orthia at Sparta come large numbers of bronze pins, comparable with the Venetic pins which, it is suggested, were given, originally at all events, by women as votive offerings before (or just after) childbirth.

Just as Orthia is expressly described as "The Restorer," or as a healing deity who "restored women to health after childbirth and preserved their infants" (and as such was associated at Epidaurus with Asclepius *Orthios*), so Rehtia is called *Sanatis*, "the Healer," and the word *akeo* which appears on another class of her votive offerings seems also to refer to her healing functions (compare Greek *ἀκέομαι*). Women paying their vows to Juno Lucina at Rome had to loosen all knots and fastenings about their clothing and take down their hair; it would then be appropriate for them to offer their dress- and hair-pins (or votive objects copied from these) to the goddess. The miniature talismanic axes would imply a magical purpose, the safeguarding of mother and child during gestation and after delivery. With *Sanatis* and *akeo* we can compare such epithets of Juno as *Lucina*, *Februa* (*Sanatis* especially in this connection), *Fluonia*, and *Sospes*. It would be a simple step in the development of the goddess (as of

Juno) for her to become the saving goddess of both sexes and all classes. The chief duty, however, within her purview would be to maintain or to restore physical health—the soundness, fitness, *rightness* of the body.

Livy, describing events which occurred in 302 B.C. (nearly a century before the beginning of the romanisation of Transpadane Gaul), refers to a temple in the country of the Veneti not far from Padua which he ascribes to Juno; Strabo calls it a temple of the Argive Hera. Most probably the ancient Veneti worshipped a great goddess Rehtia whose functions were similar to those of the Italic Juno and the Argive Hera, so that later observers like Livy and Strabo, familiar with both the more famous Roman and Greek cults, noted the similarities between these and the Venetic cult, and regarded them as essentially the same, if, indeed, we are not further to conclude that with the extension of Greek and Roman religions and civilisations an actual identification had taken place.

Mr. Peake, in discussing Mr. Whatmough's theory, agreed that the bronze objects were not "nails" and "wedges," but pins, though possibly cloak-pins rather than hair-pins, and "axes." The use of the long cloak-pin in the Iron age, when for practical purposes the pin had developed into the fibula, was possibly to be explained by religious conservatism. He also suggested that possibly the wedge-shaped "axe" talisman had developed from the anthropomorphic form of talisman rather than the latter from the former. A third possibility was that they were merely ornaments made to jingle, similar to those common among all horse-loving peoples such as were the invaders of Italy from the north in the Late Bronze and Early Iron ages. While Rehtia could doubtless be equated with Orthia and with Juno, question arose whether the cult was Mediterranean. The Argive Hera is markedly Mediterranean, but Orthia belongs definitely to the northern peoples, as probably did Rehtia. No doubt there had been amalgamation, but the more distinctive features were northern. In their culture some things point to the Veneti being northerners, and probably they were one of the waves of immigration, evidence of the earliest of which was found at Bologna.

### British Mycology.

THE Transactions for 1920 of the British Mycological Society published in July last are evidence of the increasing activities of the group of botanists whose work is amongst the fungi. The presidential address by Mr. Petch deals with fungi parasitic on scale-insects, and includes an historical account of the growth of knowledge since the first record of a fungus growing parasitically on a scale-insect was made by Desmazières in 1848 at Caen, in Normandy. The list is now a long one, and will doubtless be further extended; and though the majority of scale-insect fungi

are tropical, there is some work to be done on them in the British Isles. In the tropics enormous destruction of scale-insects is effected by these fungi, and, as some of the scale-insects are serious pests of economic plants, the suggestion naturally arose that the pests might be controlled by means of the entomogenous fungi. A special investigation was undertaken by the United States Bureau of Entomology in Florida, but the results agree with those of other experiments, and Mr. Petch affirms that after thirty years' trial there is no instance of the successful control of any

insect by means of tungus-parasites. Prof. A. H. R. Buller describes the mechanism by means of which the common mould-fungus, *Pilobolus*, is able to shoot its spore-case, containing many thousands of spores, a distance of several feet. Sunlight striking obliquely on the protoplasm of the cell beneath the spore-case gives rise to a stimulus resulting in a movement which places the axis of the stalk on which the spore-case is borne in the line of the light-ray. The fungus may be described as having an optical sense-organ or simple eye which it uses for laying its gun in a definite direction. *Pilobolus* lives in fields on the dung of herbivorous animals, and by directing its guns towards the source of brightest light is enabled to shoot its sporangia into open spaces on to grass and other herbage. Herbivorous animals eat grass and sporangia together, and the spores are passed unharmed in the solid excreta in which they germinate.

Mr. F. T. Brooks discusses the inheritance of disease-resistance in plants in the light of recent Mendelian work. It has been shown that susceptibility and immunity to yellow rust disease among varieties of wheat are genetic factors operating in a Mendelian way, and Mr. Brooks suggests that resistance and susceptibility of potatoes to wart disease may afford a similar case. He points out, however, that we are very much in the dark as to what is the essential factor conferring resistance, and the possibility that changed conditions of environment may break down to some extent the resistance-powers of the host as regards certain diseases. There are also short papers of local interest and on new or rare British species. Mr. Ramsbottom explains the "Californian bees," the identity of which has been puzzling folk during the past two years. The organism is the well-known ginger-beer plant which was investigated by the late Prof. Marshall Ward, and consists of two organisms, a yeast and a bacterium, living in symbiosis and causing alcoholic fermentation in a sugary solution.

### University and Educational Intelligence.

CAMBRIDGE.—A special Syndicate appointed to consider possible alterations in the regulations for the Mathematical and Natural Sciences Tripos with the object of facilitating the acquisition by candidates in one subject of a knowledge of the other has reported in favour of the addition of mathematics to the list of subjects for the Natural Sciences Tripos, Part I. Arrangements are proposed by which part of the papers set in the Mathematical Tripos, Part I., may be used as papers in the Natural Sciences Tripos, Part I. The reform will be of considerable assistance to students reading physics, physical chemistry, and chemistry.

LONDON.—The Senate has received with great satisfaction a communication from the executors of the late Sir Ratan Tata intimating their continuance for a further period of five years of his benefaction of 1400*l.* a year to the Ratan Tata Foundation. This will henceforth be administered as a distinct department by the London School of Economics.

The following doctorates have been conferred:—*D.Sc. (Economics)*: Mr. T. E. G. Gregory, an internal student, of the London School of Economics, for a thesis entitled "Tariffs: A Study in Method." *D.Sc. (Chemistry)*: Mr. S. C. Bradford, an external student, for a thesis entitled "On the Theory of Gels," and other papers; and Mr. E. B. Maxted, an external student, for a thesis entitled "The Influence of Inhibitors on the Occlusion and Activation of Hydrogen by Palladium and Platinum," and other papers.

MANCHESTER.—The executors of the late Mr. Hermann Woolley, who was for many years treasurer of the University, have given a donation of 100*l.* towards the endowment of a lectureship in pharmaceuticals.

The following appointments have been made:—Reader in geography, Mr. W. H. Barker, of University College, Southampton; assistant lecturer in physics, Mr. W. S. Vernon; and assistant lecturer in chemistry (technology), Mrs. M. B. Craven.

OXFORD.—The Romanes lecture for 1922 will be delivered at 6 p.m. on May 24 in the Sheldonian Theatre by Prof. A. S. Eddington, Plumian professor of astronomy at Cambridge and president of the Royal Astronomical Society. The subject will be "The Theory of Relativity and its Influence on Scientific Thought."

On January 31 Congregation rejected by 65 votes to 62 the preamble of a statute by which it was proposed to discontinue the Delegacy of the University Museum, and to establish in its place a Board consisting of the heads of the departments of natural science in the University. The opinion of the teachers of science was divided on the question, some, both of the professors and of the college tutors, being opposed to the change. It is, however, probable that there is an almost general conviction that the present constitution of the Delegacy is capable of amendment, though the particular scheme of reform proposed by the Council did not commend itself to the majority. The statute was introduced by the Rev. G. B. Cronshaw, fellow of Queen's, and was supported by Sir C. S. Sherrington and Prof. W. H. Perkin and by the president of Magdalen. It was opposed by Mr. H. B. Hartley, fellow of Balliol, and by Mr. N. V. Sidgwick, fellow of Lincoln.

FIELD-MARSHAL LORD HAIG has been elected Chancellor of the University of St. Andrews in succession to the late Lord Balfour of Burleigh. Lord Haig was elected Rector of the University in 1917, and the office of Chancellor, to which he has now succeeded, is held for life.

ON Wednesday, February 8, at the Sir John Cass Technical Institute, Aldgate, E.C., Prof. W. Rothenstein, principal of the Royal College of Art, will distribute the prizes and certificates gained by the students during the past session and give an address on "Education and Industry."

Two Theresa Seessel research fellowships at Yale University are being offered, the object of which is the promotion of original research in biological studies. Applications for the fellowships, which are each of the value of 300*l.*, should be made to the Dean of the Graduate School, New Haven, Conn., U.S.A., before May 1 next, accompanied by reprints of scientific publications, letters of recommendation, and a statement as to the particular problem which the candidate expects to investigate.

It is announced in the *British Medical Journal* that three Canadian universities—Toronto, Western, and Queen's—are co-operating with the Ontario Medical Association in a scheme similar to that adopted by the University of Bristol to keep medical practitioners in outlying districts in touch with recent developments in medicine by means of extension courses. The province has been divided into ten sections, and at a central point in each it has been arranged to hold various courses and give lectures covering a period of six weeks in each year. The courses have already commenced and have proved very popular, many practitioners travelling hundreds of miles to attend them.