

Science Masters' Association

Annual Meeting

THE thirty-ninth annual meeting of the Science Masters' Association was held in Cambridge on January 3-6, under the presidency of Prof. James Gray.

The presidential address—"The Role of Science in Education"—was delivered to about five hundred members. Prof. Gray recalled that at the last meeting Sir Richard Gregory gave a challenge to all those engaged in the teaching of science. In his address Sir Richard said, "Undergraduates are led to believe that their studies in any particular branch of science unfit them for any occupation other than those of teacher, research worker, or technologist in that branch." Prof. Gray maintained this was a challenge which neither the schools nor the universities could ignore. Early in life a boy had to choose the course of his future studies, whether he would follow a literary, a linguistic or a scientific road. Sir Richard Gregory had pointed out that a very small proportion of our administrators are recruited from those travelling along the scientific road because it is alleged that such a path provides an unsatisfactory medium of general education, while administrative ability and an aptitude for science are mutually exclusive. Prof. Gray said that many claims have been made for a scientific education, but they fail to stand up to critical examination. Although the door of the Civil Service is open equally to those trained in any subject, men with a scientific training rarely enter because they are found inadequate as men of the world.

Men of science have long claimed that a scientific education is necessary for life in the modern world, but further investigation has shown that this cold detached attitude is not that required by those having intercourse with the ordinary man. Further, when we claim excellence in observational faculties, investigations suggested that our observation is too limited and specialized, whereas our literary, legal and classical colleagues are better able to detect the solution of human problems: the main difference between the two types of education lies in the attitude towards moral values. The scientist bases his training on a moral code far simpler than that which is deemed adequate for other walks of life. As Sir Richard Gregory said, "Science as such is not concerned with moral values which in the long run determine the policy of the statesman; science is concerned with truth." Men of science may feel glad that this is so, but it may tend to widen rather than bridge the gap between us and our literary friends.

The amazing growth of the Association indicates that, could it but speak with one voice, it could achieve much. If science teachers are to give the best preparation for life to their students, they must give them width of vision and depth of insight, which link together into a natural unity the fields at present separated by unscalable walls. Is it not therefore desirable to bring about a much closer correlation between our scientific training and the matter dealt with on the literary, linguistic and historical sides of school and university? Could not science be less specialized and held together with other studies by

an intellectual cement? One of the greatest barriers to the widened curriculum is the present examination system. But surely, if the Science Masters' Association would state unequivocally what it considers should be the content of examination and other syllabuses faithfully reflecting the teaching which in its opinion is most appropriate, the labour would be well spent.

An interesting lecture, "Terrestrial Magnetism and the Sunspot Cycle" was delivered by Prof. E. V. Appleton. He dealt with the results of observations on the variations of the magnetic elements and their relation to the sunspot cycle. He showed how the explanation of this interrelation, first suggested by Dr. Balfour Stewart, is supported by recent observation.

In a talk on "Arctic and Antarctic Seals and Sealing", Mr. G. C. L. Bertram explained the different species of seals and how the exploitation of two species is scientifically controlled. Other species are virtually extinct due to irrational exploitation and are woeful examples of man's lack of foresight.

Prof. R. G. W. Norrish, lecturing on "Experiments in Photo-Chemistry", delighted a very large audience by the display of a number of spectacular and convincing experiments.

In his lecture, "X-Ray Optics", Prof. W. L. Bragg explained some recent advances in the technique of determining crystal structures. He dealt with the modern method of synthesizing an image, from the experimental measurements of scattering, of the atoms in a crystal, the final pattern having a magnification of 10^9 .

A lecture, "Some Aspects of Geology", by Prof. O. T. Jones aroused interest in a subject which is being more generally recognized to-day in the schools than it has been hitherto. The importance of the subject, particularly on the applied side, was stressed.

Many delightful slides in a lecture of general interest delivered by Dr. H. B. Cott interested a mixed group. This dealt with "Camouflage in Nature and in War". Dr. Cott explained various methods of camouflage adopted by animals for concealment and showed how every scheme of applied camouflage must be based upon the effects employed by animals.

At an open meeting, Mr. N. E. Odell, who has just returned from the 1938 Everest Expedition, gave a graphic description of the events of this last attempt on Everest. He showed how the exceptionally bad weather conditions, in spite of all efforts, prevented the summit being reached.

Mr. H. E. Dance and Mr. J. W. Cottingham opened a film discussion on "Films in the Science Classroom". The opening talks were followed by lively discussion.

The headquarters of the meeting were in the new building of the Department of Zoology. Here were housed exhibitions of books by various publishers and of scientific apparatus by instrument makers. The programme included visits to laboratories and works in the district. Demonstrations were arranged by the science departments of the University.

Lord Horder was elected president for 1939.