

The South Africa Meeting of the British Association.

ARRANGEMENTS are now actively in hand for the meeting of the British Association in South Africa, in Cape Town and Johannesburg, next July and August, under the presidency of Sir Thomas Holland, rector of the Imperial College of Science and Technology. The following sectional presidents have been appointed: Section A (Mathematical and Physical Sciences), Right Hon. Lord Rayleigh; Section B (Chemistry), Prof. G. Barger; Section C (Geology), Sir Albert Kitson; Section D (Zoology), Prof. D. M. S. Watson; Section E (Geography), Brigadier E. M. Jack; Section F (Economics), Prof. Henry Clay; Section G (Engineering), Prof. F. C. Lea; Section H (Anthropology), Mr. Henry Balfour; Section I (Physiology), Prof. W. E. Dixon; Section J (Psychology), Mr. F. C. Bartlett; Section K (Botany), Prof. A. C. Seward; Section L (Education), Dr. C. W. Kimmins; Section M (Agriculture), Sir Robert Greig.

Among the many subjects which are already under consideration for lectures and discussions it is probable that the relation between science and industry will take an important place, following upon the subject of Sir William Bragg's presidential address at last year's meeting in Glasgow. It is contemplated that discussions on this topic should be initiated at Cape Town and continued at Johannesburg by representatives in the principal departments of science concerned. A special programme is being arranged for geological members, in order that they may co-operate with the International Geological Congress which will be meeting in Pretoria concurrently with the Association in Johannesburg; and the agricultural members will be afforded opportunity for meetings with their colleagues in the Pan-African Agricultural and Veterinary Congress, which also will be sitting in Pretoria at the same time.

After the meetings the majority of the visiting members, who are expected to number upwards of 400, will divide into three main parties; each of these will visit the Victoria Falls, and two will afterwards make extended journeys through the Union territory,

visiting the eastern Transvaal and Lourenço Marques, in Portuguese East Africa, and terminating their journeys at Durban and Cape Town, respectively. The third main party will probably proceed from the Victoria Falls to Beira, visiting en route the ruins at Great Zimbabwe, where it is hoped that Miss Caton-Thompson will have brought to a successful issue the investigation of the ancient remains which she is about to undertake at the instance of the Association.

The sectional organising committees held their usual joint meetings at King's College, London, on Jan. 4, when a number of important subjects were brought under consideration for joint meetings of various sections in South Africa. Among these was a general discussion on the conception of life, which it was proposed should be opened by General Smuts. Other discussions are expected to deal with problems of special interest to South Africa, such as those connected with deep mine ventilation and with the relation of dust to miners' diseases. The geologists, zoologists, and botanists expect to be associated in a discussion on Gondwanaland. Educational problems to be discussed include psychological tests in relation to education and vocational guidance, and the teaching of geography, both of which are understood to be of special interest to South African educationists at the present time. A discussion on vitamins is contemplated between the chemical and physiological sections.

The South African Association for the Advancement of Science, which initiated and forwarded the invitation to the British Association and, through an executive committee, is undertaking the arrangements in South Africa in co-operation with the Travel and Tourist Branch of the South African Railways, has issued special invitations to certain distinguished Dutch and other foreign scientific representatives, of whom the following have accepted: Prof. E. J. Cohen, Prof. W. de Sitter, Prof. G. A. F. Molengraaf, Prof. R. Casimir, Prof. O. Abel, M. l'Abbé Breuil, Prof. C. Dragoni, and Prof. A. S. Hitchcock

Science Masters Association.

CAMBRIDGE MEETING.

THE twenty-ninth annual meeting of the Science Masters' Association was held at Cambridge on Jan. 2-5. The members were accommodated partly in Trinity College, partly in Gonville and Caius. The deputy vice-chancellor, master of Sidney Sussex College, heartily welcomed the Association to Cambridge. The president—Prof. A. C. Seward, master of Downing College—delivered his presidential address on "The Flora of the Carboniferous Period."

As is usual on these occasions, when the Association goes to one of the university towns, many topics which do not appear in the programme were discussed informally. Prof. Seward broached one of these in the preface to his address, namely, the need for more botanists. There has probably never been a time when the demand for trained men in all branches of science has been either so great or so varied as it is to-day. The staple product, namely, mental ability, is in the schools in quality and quantity sufficient to meet all demands; the willingness to develop it in the best possible way is also there, but somehow the available talent is not being so economically distributed as both schoolmasters and university teachers would wish. There are too many potential chemists, not enough biologists, and extremely few geologists.

The pressing need of the moment is biologists, and

especially pure botanists, and what makes matters worse in this branch is that the already inadequate supply is being depleted to some extent by the claims of forestry, which naturally encroaches more on botany than on zoology.

"It would be foolish," said Prof. Seward, in his opening remarks to more than four hundred science masters, "not to seize this exceptional opportunity of asking for sympathetic co-operation in an endeavour to meet a very pressing need. In recent years it has been impossible to satisfy demands from Government Departments and from various other quarters for men qualified to fill administrative and research posts requiring more than an elementary acquaintance with botany. At Cambridge we have plenty of men who take botany as one of three subjects in the first part of the Natural Science Tripos, but there is a shortage of men of first-rate ability who choose botany as the one subject in the second part of the Tripos."

"I have recently circulated a memorandum to tutors and directors of studies drawing attention to the great increase, during the last few years, in the number of well-paid and attractive posts in the Dominions, the Colonies, and at home, which cannot be satisfactorily filled because of the lack of suitable candidates. May I entreat my colleagues who advise

boys on the selection of subjects at the university to assist, not so much the Cambridge Botany School as the Empire as a whole, by encouraging promising pupils to consider the possibility of making an acquaintance with botany as an alternative to choosing what, to many, would be a more familiar and therefore an easier course—the further study of chemistry, physics, and mathematics?

“This request is made partly because, in my opinion, a man who takes a degree in science should have some knowledge of a biological subject, but primarily because I am convinced of the vital importance of turning out men who can supply one of the greatest needs of the present day by devoting themselves to the investigation of problems which lie at the root of our national prosperity. There are, no doubt, many boys whose mental chords are more responsive to the calls of mathematics, physics, or chemistry than to those of biology: the trouble is a disinclination on the part of some schoolmasters to admit the probability that not a few of their pupils who have shown themselves to be competent students on the physics side might, given an opportunity, discover that biology is their destiny. The safe course at the university, it may be said, is a continuation of that followed successfully at school. I recall a Spanish saying: ‘Go with God, Your Grace, and may nothing new happen.’ On the other hand, it is perhaps desirable to encourage self-determination, to give all a chance of experiencing the joy of entering a new world, the thrill of a novel quest.”

Prof. Seward also put in a plea for a little more geology, an extremely modest plea considering the importance of the subject and the fascination that it has for many boys. “I dare not suggest the addition of geology to an already overburdened curriculum, though I cannot help thinking that more effort might be made to bring boys into touch with this branch of natural knowledge, either by devoting part of a general elementary course in science to geological talks, or, in suitable districts, by encouraging boys to spend some of their free time, if they have any, in making observations for themselves, in collecting fossils—a by no means contemptible occupation—or

by studying the more obvious phenomena connected with erosion and rock-building which provide clues to the interpretation of the documents from which geological history is compiled.”

A little more autonomy in school certificate and matriculation examinations, or even a little more elasticity in examinations, would do a great deal towards equalising matters. University authorities are apt to blame advanced courses in schools, but the trouble begins with the school certificate, which is also the first statutory examination of a boy's university career. If he gets credit in chemistry and physics in the school certificate, he is entitled to think he has done something in those subjects and he is reluctant to make a fresh start for the higher certificate; consequently, he does (as he sometimes puts it) chemistry and physics again. When he gets to the university, he is still more reluctant to strike out on entirely new lines.

When the Science Masters' Association meets, as it does, in alternate years at one of the universities—old or new—the members get what is in reality a short but intensive refresher course, relieved by very pleasant social intercourse. University professors and lecturers are astonishingly generous in providing most stimulating lectures, the laboratories and museums are all thrown open, visits to works and attractive demonstrations are arranged. The latest useful devices for aiding science masters in their work and the newest books are brought to their notice in the manufacturers' and publishers' exhibition. It is difficult to appraise the value of conferences, because they vary so much both in utility and in achievement, but whatever may be said in mild disparagement of the conference habit—the ‘talker feast,’ as our American colleagues put it—there is no doubt that these meetings of the Science Masters' Association are most stimulating and a powerful antidote to that bane of the schoolmaster's work—stagnation.

The next meeting of the Association will be held in London, in January 1930, under the presidency of Prof. James C. Philip, professor of physical chemistry in the Imperial College of Science and Technology.

Whales Landed in Scotland.

PROF. D'ARCY W. THOMPSON has written a most interesting account of the whales landed at the Scottish whaling stations during the years 1908–14 and 1920–27 (*Fishery Board for Scotland: Scientific Investigations*, 1928, No. 3), including a detailed examination of all the records, illustrated by sketch maps showing the place of capture, and by tables and diagrams, as well as a full bibliography of references to the species.

The old Scottish industry was almost at an end when in 1903 the harpoon-gun was introduced from Norway and gave a new impetus to whaling. The harpoon-gun was used in Ireland a hundred years before its re-invention by Captain Svend Foyn about 1865. It is apparently, however, not the harpoon gun alone which has made the modern whaling industry, but the gun used with the explosive bullet.

A system of licences was introduced in 1908, and full records with measurements are kept of all whales captured. Thus a large amount of valuable information is available on which the present paper is based. 6817 whales were landed in Shetland and Harris from 1908 to 1927 (excluding the years of the War, and 1919 and 1921, when no whaling was conducted). Seven species are represented, the Common Finner, *Balænoptera musculus*, being the commonest, the

Bottlenose, *Hyperodon rostratus*, the rarest. In between in order of frequency come the Sci-whale, *Balænoptera borealis*; the Blue whale, *B. Sibbaldi*; the Sperm whale, *Physeta macrocephalus*; the Nordcaper, *Balæna biscayensis*; and the Humpback, *Megaptera longimana*.

Of these the Nordcaper or ‘Sarde,’ the whale of the old Basque fishery, is one of the most interesting. For some time it was thought to be extinct, but although never taken in numbers, 69 individuals, 35 males and 34 females, have been captured since 1908, nearly all of which have been landed at the whaling station at Bunaveneader and caught within an area lying to the west and south-west of the Hebrides and beyond St. Kilda. Most of these were taken in 1908 and 1909, and it is shown that there are very definite fluctuations in their occurrence, apparently dependent on variations in Gulf Stream water. In those years when the Atlantic overflow to the north-east is strongest these whales are scarce and vice versa, probably owing to their tendency to linger on the coasts of Britain when there is little Gulf Stream current to carry them northwards.

75 Sperm whales are recorded, all but one being males. They do not breed in Scottish waters, and it is thought that these were young bulls which had