72. ADV
~~REG.~~ 24.8.26

THE SCIENCE CONGRESS.

OPENED IN PERTH.

ADDRESS BY PROFESSOR RENNIE.

In his opening address at the Science Congress in Perth last night, Professor Rennie said until the Australian Governments entered upon a vigorous campaign of afforestation on a large scale, the future supply of timber and other valuable products was very uncertain.

Perth, August 23.

The congress of the Australasian Association for the advancement of science was opened to-day. Delegates representing the Commonwealth, all the Australian States, and New Zealand were present. The first item on the official programme was a civic reception by the Mayor of Perth (Mr. J. T. Franklin) at the town hall.

The general council met in the afternoon at the Modern School, where the chairman of the Council of Scientific and Industrial Research (Mr. G. A. Julius) spoke on "The reorganised council of scientific and industrial research."

In the evening at the town hall the president (Professor E. H. Rennie), who has held the chair of chemistry at the Adelaide University for 42 years, delivered the inaugural address, the subject being "The chemical exploitation, past, present, and future of Australian plants."

Structures of the Atom.

Professor Rennie opened with appreciative references to the work and personality of two members of the association, Messrs. J. H. Maiden and Henry G. Smith, who had died since the last meeting in South Australia. The earlier part of his address was a review of recent researches into the structures of the atom. He dwelt upon the recent researches of Professor Millikan, which dealt with the existence of cosmic rays. Physicists, he said, had become aware of the radiation of an exceedingly penetrating nature, namely, a very short wavelength, far shorter than that of X-rays which, until recently, were the shortest known. These rays were, in fact, only about one-fiftieth of the length of gamma rays, or about one ten-millionth of ordinary light. The most penetrating X-rays used in hospitals could not pass through half an inch of lead, but Professor Millikan had shown that cosmic rays could pass through the equivalent of six feet of lead. They came to the earth from outside with equal intensity at all hours of the day and night, and with practically the same intensity in all directions. What their origin might be was a matter for speculation. From what was known of

Professor Rennie.

them Professor Millikan supposed that they must be due to some sort of transformation going on within the nuclei of atoms, but if so it must be far more energetic than any transformation of which they had knowledge such as was manifested in radio activity. The possibility of transmuting mercury into gold by powerful electric discharges was touched on by the president, who said it appeared advisable to suspend judgment for the time regarding the interpretation of the experimental results achieved. Reference was made to the five "missing elements," and the president explained that three of them had recently been discovered.

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SCIENCE AND THE PUBLIC.

A PLEA FOR POPULARITY.

SPECIAL ENDOWMENT NECESSARY.

Perth, August 23.

Lieutenant-General Sir John Monash, the retiring president of the Science Congress, responding to the toast of "The guests" at a civic welcome to delegates at the town hall to-day, said it was the prime and fundamental object of the association to make its activities public and popular. The great objective was not merely to meet together as scientists and to develop team work among the nation's scientists, but to interest the general public in scientific effort. Science could not progress unless it was adequately endowed. Most scientists had their careers mapped out either as teachers or in professional work, and could not devote that time to scientific pursuits which was necessary for the nation's needs. Something in the nature of a special endowment for science was imperative. It could come either from private munificence or public subsidy, but for this it was necessary to have the support of public sentiment. The world had developed so much in the last half a century that all civilised communities had come to recognise that they could not blunder forward by rule of thumb any more. They had the whole of the resources of scientific effort to guide them, and the more they learned and sought and found the bigger became the field that was opened up. Particularly was this so in Australia, where in every direction they had mighty problems. The association stood for the application of the talent and genius of Australian men and women towards the solution of these problems, and it stood for what was much more important, the awakening of active public interest in the work, so that as time went on the endowment of support, financial and otherwise, would in due course be forthcoming.

Australian Plant Products.

The president was on his own ground when he reached consideration of plant products, and the remainder of his address was devoted to an exhaustive analysis of the constituents and potentialities of Australian plant products. He divided them for convenience into essential oils, gums, and resins, coloring matters, poisons, and miscellaneous subetances not included in any of these classes. Passing on to the importance of essential oils from a perfumery point of view, Professor Reunie said boronia magastigma, the Western Australian specie, had acquired special importance from the fact that two manufacturing chemists were producing from it valuable perfume. Apparently nothing of importance had yet been published respecting the nature of the oil, but from private information, which he understood would be contained in a paper which was to be read before the chemical section by Mr. W. B. Garner, he gathered that the substances constituting the perfume were yet unknown, but were likely to be examined in the near future. The flowers were gathered in enormous quantities by specially contrived apparatus which did not injure the plant. The extract from the flowers on evaporation yielded a green waxy material, which was of intense color, and was apparently used in its crude state for perfumery. This waxy residue decomposed if heated with steam, but almost certainly contained the volatile oils to which the perfume was due. The material, however, owing to the cost of collecting the flowers, was very expensive. In the essential oils section the professor left to the last the one which he described as the most important in Western Australia, namely, oil of sandalwood. This was distilled chiefly from the wood of the sandalum cygnorium, and its importance might be gathered from the fact that up to the end of 1924 70,000 lb. had been exported. The wood of a closely allied species, the santalum album had been used for ages past in the East for incense and the oil as a drug. The wood and oil of the Western Australian species were used for similar purposes. The oil was valuable for three reasons. It was used in perfumery, not so much for its pleasant smell, but as a fixative for other perfumes, the latter being retained by the oil, in, for instance, the perfumery of soap. More important, however, was its use in medicine. The medicinal properties were due to the large quantities of santalol which it contained. There had been some controversy regarding the exact chemical composition of the oil, but this had arisen partly from the fact that the oil before exportation from Western Australia began, was derived entirely from santalum album, and that it was this latter material which had been chiefly examined and reported upon. There was abundant medical evidence that the local oil was at least equal to the East Indian product, although it did not quite answer to the official requirements of the British Pharmacopoea. It must be confessed that although many Australian oils were of commercial importance, little use had been made of them up to the present.

Afforestation.

Before concluding, Professor Rennie said he would like to plead for a more vigorous policy of afforestation everywhere in Australia. A school of forestry was to be established in Canberra, but unless and until the various Governments were prepared to enter upon a vigorous campaign of actual afforestation upon a large scale the future of the supply not only of timber, but of many products, such as had been referred to, was, to say the least of it, very uncertain. In this connection it was satisfactory to learn that steps were being taken to regenerate the sandalwood forests in Western Australia, but was it too much to ask that in any scheme of afforestation regard might be had not only to the supply of timber, but also to the study of conditions under which other products might be conserved? Although it was possible that with the progress of organic chemistry such substances as santalol, for example, might be manufactured more cheaply than it could be obtained from the sandalwood tree, that did not appear to be probable in the near future, and therefore every precaution should be taken to provide against the complete extinction of this valuable tree.

Election of Officers.

The first business meeting was held this afternoon, the retiring president (Sir John Monash) occupying the chair. The election of officers resulted:—General treasurer, Mr. D. Carment (New South Wales); permanent hon. secretary, Dr. A. B. Walkom (New South Wales), local State secretaries—Queensland, Mr. C. T. White; New South Wales, Dr. Walkom; Victoria, Mr. E. R. Pitt; Western Australia, Mr. A. Gibb Maitland Tasmania, Mr. C. E. Lord; New Zealand, Professor C. C. Farr.

The chairman announced that the Mueller Memorial Medal Committee had decided to award the medal to Professor F. Wood Jones, of the University of Adelaide, for his researches in zoology and anthropology in South Australia.

It was decided that the twentieth meeting of the association be held in Brisbane in May, 1930, it having been already arranged that the nineteenth meeting be held in Hobart in January next year. Mr. R. H. Gambage, C.B.E., was appointed president-elect for the Hobart meeting.

Professor N. T. M. Wilsmore resigned from the office of local secretary for Western Australia on account of pressure of other duties, and it was decided to place on record the council's appreciation of his services in connection with the organisation of the Perth meeting.

Work of the Council.

The aims of the reorganised Commonwealth Institute of Science and Industry and some of its achievements and the programme upon which it is embarking, were outlined by the chairman (Mr. G. A. Julius). There was a clear realisation, he said, that results in the field of research could not be expected in a week or a month, or even a year, and that probably long periods would elapse before many of the problems were solved, if they were ever solved. The formation of State committees was well in hand, and there was nothing to prevent them from getting to work at once. The Prime Minister had instructed the council that it was not the wish of the Government that extensive new laboratories should be established by it, but that the work should be done with the assistance of existing institutions in the various States. The Government had instituted a trust fund of £100,000, the income from which was to provide assistance to workers engaged in scientific work and the training of students in scientific research. With regard to further provision in the Endowment Act, providing assistance to persons engaged in scientific research, the Council hoped to formulate at an early date machinery for making grants in aid on the lines followed in Great Britain.

The Council had decided that for the present the work be concentrated mainly in following five major divisions—animal pests and diseases, plant pests and diseases, forest products, fuel problems, especially liquid fuel, and the preservation of food, especially cold storage. Owing probably to a lack of natural oil in Australia, it appeared to be a question of the provision of substitutes. The most promising of the latter were oils from the low temperature distillation of coal, synthetic fuel from hydrogenation of coal, high pressure catalysis of gases, &c., and power alcohol. The Council was watching what wealthy corporations were doing in regard to obtaining power alcohol from sugar and starchy raw materials, and was ready to give assistance if required. Committees had been appointed to enquire into the question of synthetic stone. Great hopes were held out for a solution of the prickly pear problem. The Council proposed to undertake the investigation of the composition of shale oil obtained by distillation in order to ascertain whether it contained substances which could be separated commercially.

MAIL 21.8.26.

When Darwin grew old he expressed regret that scientific investigations throughout his life had prevented him from the study and enjoyment of music, for, so he said, his sense of the beautiful was atrophied and his old age left dry and colorless.

With a sense of responsibility in this respect toward all the scientific notabilities who have been gathered together in Adelaide during the past week Dr. E. Harold Davies arranged an attractive concert in the Elder Hall for last Monday evening. The hall was fairly well filled, though the Prime Minister's meeting in the Town Hall attracted a good many of the visitors and friends. The gathering was representative, and members of Parliament and their wives hob-nobbed with M.Bs., Bs.Ch., Ms.Sc., Ms.A. D.P.Hs, and all the other letters of the alphabet as represented by every type of scientific and scholarly personage. Snatches of conversation heard indicated an interest in music here and abroad, especially in reference to orchestral music, so that it was apparent that the musical sense was not quite atrophied as far as Adelaide professorial folk are concerned.

The string quartet played a minuet. Miss Puddy and Mr. William Silver discoursed sweetly on two pianos, and Miss Sylvia Whitington and Mr. George Pearce played a particularly tuneful sonata for violin and piano. Mr. Harold Parsons did his usual good work on the 'cello, and Dr. Davies presided at the organ.

Mr. Carey maintained his usual popularity as a singer with a group of quaint old-new English numbers, and Mrs. Smedley Palmer, well known as Miss Ethel Ridings, was given a warm round of applause for her dainty group of songs. Mrs. Palmer's return to the concert platform is welcomed by her many friends. Her voice has gained in mellowness and maturity since her student days.

Among the participants in the University functions was Henry Brose, now a scholar and scientist of high standing, but at heart just the same unspoiled boy of his student days at the Conservatorium. As a small, rather anxious-faced lad, he used to present himself each year for the musical examinations at the University, and always got through with distinction, winning scholarships galore, and playing the piano under Bryceson Treharne, as if it had been his chief study. Even now there is nothing he likes better than to get back to the old musical circle, and the happy memories of his student days.

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THE UNIVERSITY JUBILEE.

From F. W. EARDLEY, Registrar:—I have been directed to convey to you the thanks of the University for the valuable and interesting reports which you have published from day to day of the proceedings in connection with the jubilee celebrations. The portraits and the blocks in The Register illustrating the buildings added greatly to the value of the letterpress and the series of articles constitute an important record of the ceremonies. (We much appreciate this testimony to the excellence of our reports of a great and memorable celebration.—Ed.)

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Dr. and Mrs. C. Mervyn Deland left by the Melbourne express on Tuesday afternoon for Sydney, en route to the island of Vanikoro, beyond the New Hebrides, where Dr. Deland has accepted an appointment as medical officer.

REG. 28.8.26.

COLLEGE OF SURGEONS.

Much Preliminary Work.

SYDNEY, Friday.

The proposal to establish an Australasian College of Surgeons has been thoroughly formulated, and the delegates to the convention have returned to their homes.

Sir George Syme, who will be President of the new institution, will choose in Melbourne an executive committee to draft bylaws and classify the vast amount of material, decisions, proposals, and arrangements gathered during the convention. This will be presented to the Medical Congress in Dunedin next year, when the college will be formally inaugurated.

The executvie committee will appoint in the various States and New Zealand subcommittees or individuals to collect the names of physicians who intend to apply for fellowships of the college. Little will be heard of the proposal for three months, in which period the subcommittee will have to overcome a considerable amount of work.