

THE SCIENCE CONGRESS.

VALUE OF NATIVE FLORA. WARNING BY PROFESSOR OSBORN.

Perth, August 29.

Professor T. G. B. Osborn, of the University of Adelaide, read a paper before the Science Congress on Friday on "Factors influencing the regeneration of vegetation in the arid parts of Australia, those with under 10 inches of rain per annum," in which, he said, the pastoral industry made use of native vegetation for feeding its animals, and the continued prosperity of the industry was intimately bound up with the study of arid plant life. The Koonamore vegetation reserve in South Australia was an area of 1,500 acres, which had been vermin-proof fenced and handed over to the University of Adelaide by the owners of Koonamore station for research by the department of botany. A field laboratory had been built adjacent to the reserve by the donors and equipped by the University for the work. It was the first of its kind in Australia. Work was begun this year upon the area, which was a typical piece of over-grazed saltbush and bluebush country. At the outset the regeneration of natural flora was being studied, by means of a detailed survey of selected spots, taken at regular intervals. As the work developed it was intended to conduct grazing tests on selected plots, and build up a body of scientific data that might be a guide to pastoralists. The full results of the investigations could not be expected for some years. He gave a warning that on no stations should grazing be carried on to such an extent that the natural permanent vegetation was destroyed, or its reproduction imperilled. There were no plants known so well suited to act as fodder in the arid regions as the natural and peculiarly Australian

THE SESSIONS CONCLUDED.

The sittings of the Science Congress have drawn to a close. Some of the visiting scientists have already left for the eastern States, but most have gone on excursions in the country, and will not leave here until the middle of next week. Among the papers read on Friday evening were "Harnessing the Murray River," by Mr. Grenfell Price, Warden of St. Mark's College, Adelaide; "An Australian forest objective," by Mr. L. G. Irby, Tasmanian Conservator of Forests, and "The need for a national health organisation," by Dr. F. S. Hone, Chief Quarantine Officer of South Australia.

Mr. Price said the growth of settlement and commerce in the Riverina, together with the extension of the locking system on the Murray, might possibly revive the chances of South Australia gaining control of the Murray River, but the matter was one hardly likely to be settled without Commonwealth intervention. A broad national policy, however, might still remedy the spectacle of the commerce of the western Riverina being dragged from its national path by the railways of rival States.

Mr. Irby's paper set out to show the objective which must be aimed at if Australia is ever to become self-supporting in the matter of timber and wood for all purposes essential to the welfare and development of the country. The pressing need of a forest policy broad enough to overtake ultimately the softwood shortage, was stressed.

Dr. Hone emphasised the need for a national organization in connection with notification of disease. At present the number and form of diseases notifiable differed in each State with no apparent rule upon which notification was based. For notification to be brought into accord with modern requirements it needed to be prompt; to be made under different forms for different diseases, which required different methods of control; to allow for notification for investigational purposes, and always to be made to a whole-time medical officer of health. This presupposed the gradual introduction of the scheme of whole-time medical officers of health recommended by the National Health Commission. Above all, the medical attendant needed to be made part of the administrative organization and invested with certain duties in prevention which he could carry out while he was making his notification.

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Dr. Hone emphasised the need for a national organization in connection with the notification of disease. At present the number and form of diseases notifiable differed in each State, with no apparent rule upon which notification was based. This lack of uniformity was one proof of the need for a national health organisation. At present notification was a failure in Australia, owing to the conditions under which it was practised. For notification to be brought into accord with modern requirements it needed to be prompt, to be made under different forms for different diseases, which required different methods of control, to allow for notification for investigational purposes, and always to be made to a whole-time medical officer of health. This presupposed the gradual introduction of the scheme of whole-time medical officers of health recommended by the National Health Commission. Above all, the medical attendant needed to be made part of the administrative organization, and invested with certain duties in prevention, which he could carry out while he was making his notification. In this way notification would become an adjunct to administrative measures, instead of being put in the forefront, and the medical practitioner would be made part of the fighting line, instead of merely an observer of intelligence officer.

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concentrated, from which gold could be successfully extracted by cyanidation, and that the cost of treatment with the introduction of flotation would be considerably less than under the present methods, thus enabling lower grade ores to be profitably mined and treated.

Professor A. C. D. Rivett congratulated the authors on a fine attack on a problem vital to the existence of the mining industry. At present ore containing down to 7 dwt. per ton could be treated, but with lower grades the present methods failed. The estimated saving in expenses of treatment by adopting flotation and concentrating prior to roasting was about 5/ a ton. This substantially meant that ore of 1 dwt. lower content than the present minimum could be treated, and opened up possibilities for 8-dwt. ore. Anything below 6 dwt. was still unprofitable, and if it was to be used savings must be effected in other directions. Companies could amalgamate in an effort to reduce costs by putting up a single large concentration plant.

REG. 30.8.26

SCIENCE CONGRESS.

Concluding Papers.

PERTH, Sunday.

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REG. 3.9.26

STORY OF CREATION.

From "FAITH":—I was a little disappointed to read in The Register the statement by Professor Rennie with regard to the story of creation as recorded in the Book of Genesis. I have been an admirer of Professor Rennie for many years, and am surprised that he has seen fit to question the authenticity of the story of the origin of man. I am glad to know that there are great minds who still believe the Book as a whole and are not afraid to state their convictions. A book that is only part truth does not satisfy me. I give you the opinion of one whose words carry weight. In an address to the conference of tutors and schoolmasters at Cambridge Sir George Adam Smith expressed his belief that the Old Testament contains "a genuine revelation of God and of His will to mankind." Perhaps Professor Rennie will make it clear how he stands with regard to the Word of God.

Director of Agriculture, read a paper before members of agriculture and forestry section on "F.a.q. and other Commercial Wheat Standards." He said after some experience with the f.a.q. standard as a commercial trading standard it was realised that it was unsatisfactory in some respects, and in consequence a critical enquiry into the possibilities of other trading standards was decided upon, to determine whether it was advisable to introduce new standards or alter the f.a.q. The f.a.q. standard was not definite enough. It could not be fixed early enough, and it was not equitable enough. Some change was obviously desirable, and it was suggested that when a change was made it should be by the adoption of permanent standards. There was nothing unusual in having fixed standards. The great exporting countries of the United States and Canada had them, and it was recognised to be to their advantage. There was no wheat exporting country in the world which lent itself to the adoption of permanent standards under easier or more economic conditions than Australia. The standardisation system suitable for one State would be suitable for all States. It might be thought that because Australian wheat was in bags it would be impossible to deal with it according to fixed standards, but that was not so. The change would in no way interfere with existing methods of dealing with the grain crop. The present method of buying from farmers by sample, and according to the judgment of the agent, could continue.

Arnhem Land Natives.

The results of two years' close association with aborigines were embodied in a paper by the Rev. J. C. Jennison, formerly chairman of the Methodist Mission in the Northern Territory, before the Ethnology and Anthropology section on "the aborigines of the Arnhem Land coastal regions." He described Arnhem Land as a country of great swamps, sluggish rivers, with a mangrove-fringed tidal estuary. Game was plentiful along the streams, and seas abounded with fish, herds of buffalo roamed the pastures adjacent to the swamps and rivers, and geese, ducks, pheasants, scrub fowls, and great cranes inhabited the territory. Many kinds of reptiles, from huge pythons to brilliant-colored little tree snakes, were to be found, and in the lagoons and rivers crocodiles awaited their prey. Coming to the different aborigine tribes, the lecturer said the Wurrogo tribe was sadly reduced from the brave showing of the early days. Their tribal district was the part of the Coburg peninsula, west of Raffles Bay. The tribe inhabiting Croker Island was called the Margo tribe. Probably not more than 50 or 60 deer were found in the bush opposite the island, and occasionally they swam across Bowen Strait to the island, but the natives were afraid of them, and never killed them. The Iwadji tribe inhabited a permanent camp at Lagoon, where wild horses, buffalo, and deer were found, besides the kangaroo and other native game. The Guwingo tribe was a big one, and a most intelligent Iubra of his acquaintance who was attached to the South Goulburn Mission station, claimed that it was the largest tribe in the Territory. Another tribe, known as the Man tribe, inhabited South Goulburn Island, but through contact with disease-carrying Europeans, Malays, and Japanese their numbers had been reduced to 15. However, as they freely intermarried with neighboring tribes, there was hope of the tribe continuing its existence for generations. The Mauangari tribe was restricted wholly to the north of Goulburn Island. On the north side of the island the land rose into a hill, which was regarded by the aborigines with fear. To hunt on its thickly wooded slopes was to court death, although what was the source of its malign influence he could not discover.

The Millingimbi people were addicted to cannibalism. They ate their enemies killed in war, sometimes their own comrades when slain, and sometimes those who died a natural death. They followed up wounded men and ate the dried blood which came from them. Eastern Arnhem Land ought to be permanently reserved for natives. He did not advocate prohibition of pearl fishing, fish curing, and trepanning, but suggested that check stations be established, at which all boats should be compelled to report. This would prevent the present illegal exploitation of natives, who were picked up by troopers, taken 200 or 300 miles from their home, and worked for three or four months, after which they were often treated in such a way that as soon as they got within safe distance of their own country they deserted.

Professor Wood Jones (president of the ethnology section) moved that the Commonwealth Government be appealed to to make an aboriginal reserve of the whole of Arnhem Land north of the Koper River watershed.

This was seconded by Mr. L. Glanert, and carried.

Low Grade Ores.

Mr. B. H. Moore, lecturer on metallurgy at the Western Australian School of Mines, Kalgoorlie, read a paper on "The treatment of low grade ores," prepared by himself and Mr. A. S. Winter, Research Metallurgist at the same school. He said experimental investigation had shown that the oil flotation process could be successfully applied to Western Australian pyritic gold ores, with the production of low grade residues and high grade

consecrated cunning to the devising of ways and means whereby the spontaneous activity of play, which the child had to express in some way or other, should be directed upon those materials in playing with which he could learn those lessons he must needs be taught. In doing so, however, there was no limitation of the "play way" which the teacher of the older boys and girls should bear in mind, though the caution was perhaps hardly necessary. It was that there was one of life's most important lessons that could never be learned in play, and that was the lesson to work. (Cheers.)

At the instance of Mr. R. A. West and Miss L. A. Lamb, the speakers were heartily thanked. Vocal items were rendered by Miss Joy Watson and Mr. F. Williamson, who sang the "Miserere" ("Il Trovatore") and "Annie Laurie."

ADV. 28.8.26.

THE SCIENCE CONGRESS.

EXCURSIONS BY DELEGATES.

Perth, August 27.

About 60 members of the various sections of the Science Congress left Perth this evening on an extended tour of the south-western and agricultural portions of the State, for which purpose the Railway Department provided a special train. Some of the local officers of the zoological, agricultural, forestry, and botanical sections will accompany the party to act as leaders. The party will return to Perth on Wednesday.

Members of the social and statistical science section left this morning on a visit to Busselton and the group settlements. They will be back in Perth on Monday evening.

A geological party, comprising about 30 members, left last night by the Geraldton express on a four days' trip to the Irwin River. A visit will probably be made to the fossiliferous jurassic beds near Geraldton.

Children's Reading Matter.

The opinion was expressed by Mr. C. R. Long, of the Victorian Education Department, in a paper on "Problems of the Australian child's reading matter," before the mental science and education section to-day, that the ideal might well be a series of readers comprising choice literature, including a fair proportion of Australian writers, continuous readers, several of which should treat of Australian life and nature, a school paper, and a well-organised library. The series of reading books was needed to provide literature of power, not mere information. The school paper matter should be mainly informative and designed to create and develop the interest of the young people. Although to have the same reading matter in use throughout the Commonwealth was not desirable, the Federal Government might with advantage supply from time to time, with the advice of the State authorities, certain items in order to spread information concerning Australia, combat State jealousies, and foster a national spirit.

Poison Plants.

The chemistry, agriculture, veterinary science, and botany sections, after discussing poison plants adopted a recommendation to the Council of Science and Industry that special committees, consisting of a botanist, a chemist, and a veterinary surgeon, be appointed in each State for research in regard to poison plants, and that funds be made available for the work.

Timber Preservation.

Dealing with the subject of timber preservation before the agricultural and forestry section, Mr. J. E. Cummins, of the Forests Department of Western Australia, said in the northern districts jarrah was by no means immune from rot, although it was naturally a durable timber. In the north-west powdered jarrah sleepers were laid in 1910, and the greater percentage of them were still sound, although untreated sleepers and sleepers brush-coated with various patent white and protective paints, had been badly attacked. Untreated karri was particularly liable to attack from termites, but when powdered became extremely resistant. Such sleepers had given excellent service on the northern railways. A total number of 120,000 powdered karri sleepers had been inspected in Western Australia, and no signs of appreciable damage due to white ant attack had been found. Unfortunately, however, powdered timber was not resistant to certain species of wood destroying fungi occurring in this State. As the result of a field examination of powdered karri sleepers it was found that in the northern districts the sleepers were in a remarkably fine condition, compared with those in the south-west, where the sleepers were decaying to a great extent owing to the ravages of wood-destroying fungus known as *Trametes lilacina* giva.

Wheat Standards.

Mr. C. T. Sutton, Western Australian