

## MURRAY EROSION PROBLEMS.

Canberra, September 28.

The subject for the consideration of delegates to the Empire Forestry Conference to-day was "Climate and Erosion," but the discussion developed into an important contribution with reference to erosion problems on the River Murray and their possible effect upon the huge works which are being carried out there.

The main paper on the subject was contributed by Professor G. L. Wood, of the Melbourne University, and portions were read to the conference in his absence by Mr. H. R. Gray, lecturer at the Forestry School. The definitely ascertainable benefits of forests, he said, were so great that it was unnecessary to go beyond them and to claim beneficial effects for which there was no conclusive evidence. Unfortunately from time immemorial the subject had been a favorite theme for amateur forestry propagandists, with the result that their statements had been discounted by the discerning, and the ascertainable benefits of forests had been often overlooked. After reviewing the work on the River Murray, he contended that forests should be retained on the catchment areas, because however inconclusive the evidence was of the effect of forests in increasing rainfall, the fact that after it had fallen they conserved it and regulated its flow was beyond dispute. There was definite evidence of this on the Murray, and the deforestation of the watershed had seriously disturbed the natural balance between the winter and summer flows. Gaugings over a term of fifty years enabled them to prove that the summer flow had decreased from 40 per cent. to 26 per cent. of the annual flow, and that the winter flow had increased as a corollary, and the surface velocity had increased in the winter over the whole area. The first measure of prevention was to declare national reserves round the head-quarters of all streams. Land which was obviously unfitted for cultivation, and which at best would support a few beasts for fewer years, should be reserved for all time. The grazing license, which was the root cause of deforestation in the hill sections, should be abolished. Other measures of forest fire prevention had proved useless, and nothing short of ejection from the hills of the cattlemen would serve. Much of the damage already perpetrated would be remedied by natural regeneration, and expensive measures for afforestation in future would be rendered unnecessary.

Every delegate who spoke told a tale of devastation in various parts of the world caused by rivers, whose catchments had been denuded of the restraining influence of trees, with the result that floods and siltation had destroyed large areas of agricultural land, wiped away whole towns, and depopulated countrysides.

Australian speakers crystallised the discussion round Murray problems. After Mr. H. W. Gepp, chairman of the Development and Migration Commission, had explained the work and hopes in the Murray Valley, and spoken of the value of the production of that huge area, where the land was undoubtedly greatly in excess of all the water which could possibly be stored.

Mr. N. W. Jolly (New South Wales Forestry Department) stated that rabbits, particularly on the Murray watershed, were a great factor in erosion, as they were the worst over-grazers in Australia. The mountains along the Murray were the most important breeding ground in Australia, but the New South Wales Government were taking steps to deal with Crown lands there.

Mr. R. T. Ball (Minister of Lands in New South Wales) stated that his Government would do all in their power, in conjunction with the Commonwealth and the States, on Crown and leasehold lands. Private land would need legislation.

Mr. F. Chaffey (Minister of Forests in New South Wales) appealed to all the authorities concerned to go into every aspect of the question. He suggested a joint committee to take decisive action without delay.

Mr. Beckett (Minister of Forests in Victoria) stated that four-fifths of the Murray siltation came from Victoria, but in that State up to two months ago it had not been looked upon as a forestry question. Every effort should be made to keep graziers off. They were the curse of foresters, and the small amount they paid in grazing fees was not commensurate with the damage they did. Victoria recognised her responsibility, and would not hesitate to meet it.

Mr. Richmond (India) stated that the delegates had been deeply impressed with what was in progress in connection with the protection of watersheds and catchment areas in Australia, and it was evident that more was being done here than in some countries more advanced. Those engaged could be heartened and assisted in their efforts by the need of the encouragement and respectful commendation that the conference was able to give. He hoped the resolutions committee would draft a strong resolution which it would be impossible for the various Governments to ignore or resist.

Lord Clinton (chairman) suggested that the Commonwealth and State delegates should meet at once to formulate a plan of action.

When the debate concluded, and the question had been referred to the resolutions committee, a meeting such as Lord Clinton suggested was held.

The conference then addressed itself to forestry finance, and was set the problem by Mr. Gepp of declaring the correct rate of interest on money in forestry investments. A discussion followed. The consensus of opinion seemed to be that it was practically impossible to fix that rate. The question was referred to the resolutions committee.

## Important Recommendations.

CANBERRA, Wednesday.

Important considerations for the Federal and State Governments are presented by the special committee of the Empire Forestry Conference, which was appointed to deal with Australian forestry, and whose report was made available to-day. The committee consisted of Professor R. S. Troup, and Messrs. C. G. Trevor, C. E. Lane Poole, N. W. Jolly, A. V. Galbraith, S. F. Swain, E. Julius, and S. L. Kessell.

In a review of the history of Australian forestry, the report states that forestry might be said to have commenced in South Australia, where native forests were least in evidence. The planting of Pinus insignis there by Mr. J. Ednie Brown 40 years ago, appeared to have been the opening phase. In the establishment of a school of forestry in South Australia in 1911, that State made an important contribution to the future of forestry in the Commonwealth by training men for technical appointments. Regarding timber supplies, the report states that the question of an adequate supply must play an important part in future development. During 1926-27 the total Australian consumption was 91,160,000 cubic ft., and the per capita consumption 6.27 cubic ft. With a normal increase in population and further industrial development, the demand for timber might be expected to increase steadily, and a further shortage in the world's softwood supplies, which was predicted during the next few decades, would render it increasingly difficult and costly for Australia to satisfy her demands from imported timber. It behoved her therefore, to take all possible steps to become self-supporting by permanent reservation and proper management of a sufficient area of indigenous forests, chiefly of hardwoods, and by the establishment of plantations of softwoods. The reports recommend the sowing of areas near growing towns for firewood supplies. Efforts should be made to reserve all available areas of first-class forest land rather than large tracts of poor forest which might prove an embarrassment.

Regarding the plantations of softwoods, the report says the area available is insufficient. It was imperative that every effort should be made to plant the maximum area available. The committee was not satisfied that, in the Pinus insignis, Australia had found a complete solution or softwoods requirements. The species should be varied to meet site and market conditions. Seed supply of conifers warranted further detailed study and experimental plantations of selected strains should be made. Forestry should be recognised as one of the learned professions and recruits should have a standard of education fitting them for such a position.

## Position in South Australia.

The report then reviews the position of forestry in the various States. Referring to South Australia it states:—"Areas at present permanently reserved as State forests total 204,800 acres. The area allocated to South Australia by the interstate forestry conference of 1920, was 500,000 acres, so that there remain 295,200 acres to be reserved if the State is to fulfil its obligation. Mr. Julius has carried out a close examination of the forest land throughout the State, and has found it will not be possible to attain the goal of 500,000 acres from Crown land, but that an area not far short of this total could be reserved if certain lands now held in fee simple were purchased by the Crown. He informed the committee that these areas, together with the remaining Crown lands would bring the total to about 400,000 acres. It is most desirable that the acquirement of land be proceeded with until the whole of the forest area is obtained and permanently reserved. We are informed that an examination and soil survey of land in the Second Valley district have revealed the presence of a satisfactory area for coniferous planting. In view of its close proximity to the capital, and therefore the largest market for softwoods, the development of a plantation scheme on a scale equal to one of the south-eastern units is very desirable. The present Government policy is to plant 5,000 acres annually. With a further extension of State forests, the annual area to be planted will, no doubt, be increased.

The proposal to establish the paper pulp industry in the south-east is viewed with some apprehension, in view of the statement made to us that the supply of thinning not marketable for sawmilling is inadequate for the maintenance of the pulp industry in South Australia. We are of opinion that South Australia plantations are valuable primarily to reduce the great softwoods deficit in that State, and that the proposal advanced in some quarters for the conversion of the objects of the working plan for these plantations from that of growing timber to that of growing pulp wood, should not be given consideration, until it can be clearly demonstrated that the return from growing pulp wood will exceed in benefits to the State the results obtainable from growing saw timber.

Continued from page 10

## AUSTRALIAN FORESTS DEVASTATED.

CANBERRA, Tuesday.

Delegates to the conference were entertained at dinner to-night at Parliament House by the Commonwealth Ministers.

Proposing the health of the guests, the Prime Minister (Mr. Bruce), said Australian people would be receptive to any suggestions, and would welcome criticisms. The Empire basis of co-operation should be a great inspiration to Australia in her forest policy. It was vital that ever closer economic relations should be established.

Replying, Lord Clinton, (president of the conference), said the Australian forestry committee had worked hard since its arrival in Australia, and its report was designed to help the nation. It would speak plainly, and would say that Australian forests had been exploited almost to the limit of devastation and that the remaining forests had not been established on the principle of sustained yield. Yet that criticism could be applied to practically all the forests of the Empire. Their report would be criticized.

Lord Clinton then referred to "some people who had been broadcasting throughout the country some possibilities of profits which might be made out of planting trees." He said he regretted this very much, as it might cause disappointment to many people, and out of that disappointment there might be some reaction dangerous to State forestry. He would not trouble to allude to this matter, but for fact that it appeared to them that during the last few weeks there had been some attempt to use the conference as some kind of advertisement, or as a support for the financial ideas of those people or those companies. "We resent altogether," he said, "the idea of any connection even being suggested between the forester's idea of finance and that put forward so sedulously recently." "He trusted profits would be made out of forests, but he had never advocated any forestry scheme to his Government on financial grounds. They brought forestry into the orbit on higher policy.

The delegates left Canberra to-night for Sydney.

## Sittings Concluded.

## Report and Recommendations.

CANBERRA, Tuesday.

The Empire Forestry Conference concluded to-day.

The report issued to-day states that the total area of Empire forests dealt with by the conference was 1,910,000 square miles in practically equal proportions of soft and hardwoods; but, of the total area, only 624,000 square miles is at present merchantable. The area definitely dedicated to timber production was about 214,250 square miles. The total volume of timber estimated to be standing in the forests was 185,800 million cubic feet of softwoods, and 200,500 million cubic feet of hardwoods, or 386,300 million cubic feet in all. The amount of timber felled annually for use was estimated at 2,000 million cubic feet softwoods, and 1,600 million cubic feet hardwoods, but this did not give an adequate picture of the drain on the forests, as no account was taken of the great annual losses by fire and insects. Progress during the past five years had been generally substantial and, in some cases, remarkable. There was evidence of considerable general progress in policy, but much remained to be done. Encouraging progress had been made in softwood planting, and all parts of the Empire were alive to the importance of conserving and augmenting the coniferous resources. It was clear however, that difficulties in the way of organizing any large increase in Empire trade and forest products were not easily to be overcome.

Conference reaffirmed the resolution of the 1920 conference, which emphasized the necessity of a definite forest policy administered by an adequate service, and urged the Governments, which had not acted, to do so.

Conference considered that the decision to set up an Imperial Forestry Institute recommended by previous conferences had been fully justified by the result, and recommended that steps be taken forthwith to obtain from the Governments of the Empire such financial and other support as would place the institute on a permanent footing and equip it fully.

Conference draws the attention of all Governments to the necessity of bringing their forest estates under organized management as soon as possible, and emphasize the necessity for silvicultural research.

Conference accepted the invitation of the South African Government to hold the fourth conference there in 1933 and expressed high appreciation of the arrangements of the Commonwealth and State Governments for the present conference and the courtesies extended by civic and municipal bodies.

## Empire Trade in Forest Products.

The committee appointed to consider Empire trade in forest products recommended the establishment of an office in London, where information necessary for the marketing of all Empire timber would be obtainable. The committee pointed out that, if Empire trade is to be fostered, the granting of preferential tariffs might be required and fully justified in certain instances. Moreover, existing tariffs might well be scrutinized carefully with a view to removing any preferences which are prejudicial to Empire trade in forest products. The committee had been informed of cases where foreign timber receives preference on import duties over Empire timbers which, in the opinion of the committee, were equally good in all respects.

This year's interest of the Schlich Memorial Fund—£75—is to be given to the School of Forestry, Canberra, to provide a yearly medal for the most advanced student. The late Professor Schlich was Professor of Forestry at Oxford, and the fund was established to commemorate the work he did for forestry.

## EMPIRE FORESTRY CONFERENCE.

## SHORT SESSION IN ADELAIDE.

The Empire Forestry Conference met in a business session at the Brookman Hall, School of Mines, on Thursday. The chairman (Lord Clinton) presided.

The Conference heard reports of delegates on resolutions carried at the last conference regarding the adoption of a definite forestry policy and a survey of forest resources.

The chairman said although considerable progress had been made in carrying out the items there still remained a great deal to be done. The matters mentioned were the most important work of the conference, and they could not be got over in a few short sessions. The resolution of the last conference was re-affirmed, and short reports were given on other resolutions.

Dealing with the Empire marketing of soft timbers, Mr. C. E. Lane-Poole, representing the Commonwealth, said it was a peculiar fact that while New Zealand imported most of its soft timber from Canada, Australia drew most of its supplies from the United States. It was a matter worthy of serious consideration.

Speaking of the suggestion for the establishment of an Imperial Forestry Bureau, Mr. R. L. Robinson (Great Britain) said it was proposed originally to set up an elaborate bureau costing about £10,000 a year, but one of the main reasons for its creation had disappeared, because of the developments which had taken place in the interval. The Empire Forestry Conferences had done a great deal of good, and it was certain another would be held in 1933, and there was every indication that a further one would take place in 1938.

Major R. D. Furze, of the Colonial Office, London, said it was better to make use of existing institutions if possible than to set up new ones.

Sir Edward Lucas and Dr. A. E. V. Richardson (Director of the Waite Agricultural Research Institute) delivered short addresses.

In commenting on the creation of an Imperial Forestry Bureau Mr. Robinson said the unanimous feeling among the delegates was that such a bureau was not necessary.

A sub-committee consisting of the following was appointed to enquire into the allocation of work among the existing institutions:—Sir Peter Clutterbuck, Major Furze, Sir William Furze, and Messrs. C. E. Legat (chairman), R. D. Richmond, A. Haussan, and E. H. Finlayson.

A discussion on forestry technique was opened by Major C. G. Trevor (India), and a committee was appointed to report to the conference at the annual meeting at Canberra. The members are:—Major Trevor (chairman), Professor R. S. Troup, and Messrs. H. A. Pritchard, H. R. Blanford, S. H. Howard, J. Bunny, E. H. Zanitz, H. M. Gardner, D. K. Grant, and the Australian Forester in the State in which the conference is sitting.

The delegates left on the Melbourne express yesterday afternoon for Wolsley. They will reach Kalangadoo this morning and will inspect the forest and grazing areas there. After lunch at Lowan the party will leave for Mount Gambier, inspecting plantations on the way. Saturday morning will be spent looking over the plantations there and at Mount Burr, and in the afternoon they will go to Wolsley, where they will board the train for Ballarat.