

PRESIDENTIAL ADDRESS 1963

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It has become customary for Presidential addresses to comment either specifically on the affairs of the Institute as such, or more generally to survey the progress in New Zealand forestry during the year just past. As far as Institute affairs are concerned I have to some degree stolen my own copy by writing editorial comments in each of the three issues of the *Newsletter* produced to date. I will therefore restrict my Institute comments here to the one observation that although the Institute, through no fault of its officers, has not yet managed to produce a biennial number of the *Journal*, it has taken a major step forward in becoming more literate by launching a regular *Newsletter*.

In regard to events and trends in the general field of forestry I do not propose to attempt an exhaustive or critical review of the past year. Instead I will select for comment three events which may prove to be of particular significance, or rather five events in three fields of endeavour, the fields being Government administration, industry, and scientific criticism.

In the administrative field the two major events obviously have been the re-affirmation by Government of an expanded afforestation programme and the approval by Government of an incentive scheme for farm forestry. The new afforestation programme has in fact been evolving for some years but it is only in the last year that it has been given definite shape, national and regional; and, of even more significance, it is only in the last year that it has received the necessary financial backing by Treasury and by Parliament. New Zealand has thus now officially entered into its second afforestation boom. It does so with more justification than existed in the first boom period of the 1920's and 1930's. The act of faith then taken was by comparison, a gigantic one. Today we know that our staple species, *Pinus radiata*, is of proven utility in a wide number of fields, not the least of which is the pulp and paper industry; and we know equally that both domestic and export industries can safely be based upon it. We can therefore plan ahead for larger forests and larger forest industries with far more assurance than was possible a generation ago. Some faith in the future of wood as a raw material is still needed; I think it is significant that this faith is shown not only in Government circles but also by forest industries who are themselves acquiring land and embarking on expanded afforestation programmes.

The farm forestry incentive scheme has been the subject of much provisional comment throughout the country. It will be agreed that the scheme is too young yet for any final comments to be made, but it will also, I think, be agreed that despite its limitations the scheme as conceived is both imaginative and courageous. Because of the long-term nature of forestry investments, most countries have found the need to encourage private tree growing, whether by free grants, by subsidies, by cheap loan money, or by some other means. Apart from some temporary and largely abortive efforts in the last

century, the hand-out of cheap trees in the 1920's, and the limited subsidies more recently available from the Soil Conservation Council, the farm forestry incentive scheme is the first step in this direction which New Zealand has chosen to make. Certainly it is the first major step. Once again it is a measure of the public's growing faith in forestry that a Government in power is prepared to commit considerable sums of money for farm forestry purposes on a long-term basis. We would all hope that it will be possible for the scheme to realize its ideals — healthy, productive, well-tended, and above all profitable farm plantations, creating a balanced and harmonious land-use pattern with equally healthy, productive, well-tended and profitable farm lands. These ideals will not be realized unless there is the closest co-operation and understanding between the farming community and the forestry profession. Neither group alone can make the scheme the success it should be.

The major events in the industrial field are the expansions which have taken place in the two integrated industries drawing their supplies from the two largest concentrations of exotic forests. As planned, Tasman's second newsprint machine started up towards the end of last year and it is building up to an operating speed which will be spectacular by world standards. It is expected that before long the production of newsprint will rise from 90,000 tons annually to 220,000 tons, and that the increase in export earnings will be no less than £6,000,000 per annum.

The new machine will use some 12 million cu. ft of wood annually thus taking much of the surplus available from Kaingaroa forest. To get this quantity into perspective it should be realized that this one machine alone will be absorbing a quantity of wood which is greater than the total production of Westland province. The annual felling programme necessary will be 1,500 acres of *Pinus radiata* or its equivalent, and the supplying forest must be at least 50,000 acres in extent. It could well be said that by now the marriage between a great industry and a great forest has finally been consummated.

Coming so soon after the first machine, which had to pioneer the use of radiata pine for newsprint, this second machine is truly a great success story. Credit for the success must, of course, go largely to the efficiency and virility of the industry itself; if Tasman is at the moment feeling most proud of its achievements it has every reason to do so. I do not need to point out to this audience that credit must also go to the earlier pioneers who had the faith and the vision to create the raw material resource upon which Tasman is based and to create it on a mammoth scale. The men who made the industry and the men who made the forest between them will share most of the credit. However, it should not be forgotten that credit is due also to another fact — the remarkable suitability for newsprint manufacture of the "remarkable pine" *P. radiata*. What we are witnessing today is in fact the most modern newsprint machine in the world making a high quality product from the most modern raw material source. It could well be a portent of the shape of things to come, in New Zealand as in other Southern Hemisphere countries.

Less spectacular but pleasing and significant in its implications is the steady expansion which has taken place in the industries operated by New Zealand Forest Products Ltd. All sections of the plant

increased production during the year under review, the most notable gain being in sulphate pulp which rose by 16,000 tons or not less than 22 per cent. Total wood usage rose by approximately 3 million cu. ft, or 12 per cent. Again to put these quantities into perspective, it may be noted that Forest Products' increased wood usage in one year alone was the equivalent of the total yield from two forests the size of Maramarua. The most significant development however has not been the overall increase but the commencement, also late last year, of the Company's third paper machine. This machine will concentrate on fine printings and writings, thus further diversifying the range of products being manufactured from New Zealand's exotic forests and further contributing to the savings of overseas funds.

The event in the field of scientific criticism to which I refer is the publication, in a volume of geographic essays in honour of George Jobberns,* of a lengthy article by K. B. Cumberland entitled "Climatic Change or Cultural Interference". This is an analysis and critique of all recent New Zealand writings dealing directly or indirectly with the climatic change hypothesis; and in particular it is a criticism of J. T. Holloway's major work "Forests and Climates of the South Island".† Cumberland's case in brief is that Polynesian man was responsible for far greater vegetational changes than Holloway, Raeside, and others have ever admitted. He argues and documents his case with great industry and at times with compelling conviction.

The essay is of interest firstly as a most vivid illustration of the basic strength and the basic weakness of the modern eclectic geographical technique. The strength is that through his knowledge and understanding of many disciplines, the geographer can synthesize in a manner which is not so easy for the specialist in one particular science. The weakness is that the geographer is very rarely a specialist himself in any of the disciplines and as a result he can too easily misconstrue or misinterpret original research findings. The fact that Cumberland has done this very thing in the field of forest ecology has been sharply pointed out by Holloway in his reply to the article in question.

The second and more important point of interest is that Cumberland's essay is the first serious challenge that has been made to the Holloway-Raeside climatic-change hypothesis. The general acceptance of Holloway's views by foresters in this country is itself a tribute to the quality of his original work, thought, and writing; as is the degree to which these views have influenced botanical and ecological thinking in fields other than forestry. Further, and of even more importance, the Holloway hypothesis has had and still has a profound influence on official attitudes and policies towards the management of indigenous forests. Its implications are so great that it would be tragic alike to Holloway and to forestry if they were to go unchallenged. Holloway has been the first to admit this and has frequently deplored the paucity of contradictory or corroborative work by young investigators. Failing this detailed checking and re-checking in the field, and in the absence of substantial

* Land and Livelihood: Geographic Essays in Honour of George Jobberns. Ed.: Murray McCaskill. Christchurch Branch, N.Z. Geographical Society (Miscellaneous Series No. 4). 1962. 280 pp.

† Trans. Roy. Soc. N.Z.: 82 (2), 329-410, 1954.

criticism from forest ecologists whose experience and observational powers approach that of Holloway, the type of intellectual criticism attempted by Cumberland can be of extreme value, particularly because of the broad and catholic approach used. One would perhaps wish that Cumberland had couched his criticisms in more temperate language, that he had not lessened the effectiveness of some of his arguments by basing them on unsound ecological premises, and that he had displayed more faith in the integrity of his colleagues. One would wish also that when stirred to reply, Holloway himself had been more temperate, and perhaps less selective in the points which he chose to refute. But despite these reservations the facts remain that Cumberland has endeavoured seriously to challenge the Holloway-Raeside hypothesis and that the challenge has stimulated a controversy about a matter which is of great importance to all thinking foresters. It is not only the substance of Cumberland's criticisms which is significant; equally important is the fact that he has made and published them. It is because controversy in such matters is wholly conducive to healthy growth and development, and is indeed essential to prevent the onset of complacency, that I have considered the Holloway/Cumberland debate of sufficient importance to bring it to your notice.