EDITORIAL NOTES

British Commonwealth Forestry Conference

As we go to press, arrangements are in hand for the forthcoming visit to New Zealand of the Seventh British Commonwealth Forestry Conference, and by the time this Journal appears the visitors will be with us. We take this opportunity to extend a cordial welcome to all delegates and to hope that their stay in New Zealand will be both profitable and enjoyable.

It is nearly thirty years since the last antipodean conference. In 1929 the Third Empire Forestry Conference took a good look at exotic forest practice in New Zealand, was appalled at the current "plant and leave" attitude, and made strong recommendations for the institution of a vigorous thinning programme. Despite the authority of the conference, the recommendations were not adopted by the State for over a decade, except locally and on a minor scale; and they are still largely ignored by the major private forest owners. It is to be hoped that any recommendations which the present conference sees fit to make will meet with a happier fate. New Zealand cannot help being insular in the purely geographical sense but it cannot afford to be insular in any other. We trust therefore that the visitors will be as frank and critical as they wish to be, and that we on our part will accept any criticisms gratefully, gracefully, and with no trace of the touchiness to which New Zealanders are so often said to be prone.

Whatever the conference in its most august deliberations may decide, and whatever the subsequent official reaction may be, we welcome the visit above all for the opportunity it presents for individual social and professional contacts. We look forward to renewing old friendships and acquaintances, and to meeting in person those many Empire foresters who have previously been well-known to us by name only; and we look forward particularly to the pleasure and
stimulation which these meetings will give. We hope that delegates will be sufficiently free from formal conference business to meet and mingle with the rank and file of New Zealand foresters. As with all such gatherings, the lasting value of the conference may well be more in its informal than in its formal sessions.

Quality and Markets

The year just passed has been a trying one for the exotic timber trade and a salutary one for foresters. After more than a decade of buoyant trading conditions, the industry is now in the throes of its first major recession. The internal demand for exotic timbers, particularly in the poorer grades and smaller dimensions, has slumped, and simultaneously the Australian market, of which so much was hoped, has proved to be far harder to capture than had generally been expected. Exports to Australia dropped from 36 million board feet in 1955 to 29 million board feet in 1956, the first decline since 1952. Total production at 285 million board feet was 23 million board feet less than the previous year, again the first decline for many years. As Tasman produced 24 million board feet, the drop in production from all other mills was 47 million board feet, or over 15 per cent. With this substantial and almost complete change from a sellers to a buyers market, the industry, not surprisingly, is carrying out an “agonising re-appraisal”, particularly in relationship to the quality of its product. It behoves foresters to do the same.

The central fact of the matter is that the first era of large scale exotic forest utilisation, coinciding as it did with a period of almost insatiable demand for timber, has been misleading both to the growers of forests and to the users. Although exotics had to compete with indigenous timbers, they were competing with a declining resource, in the North Island a rapidly declining one. The competition was nevertheless real. Despite this competition and despite the long standing prejudices against their use, exotic timbers were still relatively easy to sell. And being easy to sell, the emphasis, commonly though not invariably, was on quantity rather than on quality. With the emphasis now in reverse it is an opportune time for foresters and forest owners to ask themselves whether their concepts of quality have in the past been adequate or will be adequate in the future.

Foresters of course are always faced with a difficulty of being unable to prophesy what properties will be required in the timbers they grow. The time lag between silvicultural operations and harvesting is always great, and during this time lag there will undoubtedly be far-reaching technological developments in the processing and usage of timber. Nevertheless it is reasonably safe to assume that what are serious defects today will be serious defects tomorrow. The further assumption follows that if these defects can be removed, exotic timber will be better able in the future to compete with remnant indigenous timbers, with imported timber, and most important of all, with substitutes. Experience in marketing and end-use to date suggests that the exotic timber most commonly produced in New Zealand,
radiata pine, does intrinsically have the requisite properties to face such competition. In general its strength properties have not been found wanting, nor, in clear pieces, have such other properties as ease of working, ease of preservative treatment, dimensional stability and paintability. The defects which are making radiata pine so hard to sell at present are of a different nature; they are, predominantly, the frequency of loose dead knots, large intergrown knots and cone-stem holes. As foresters, we should now be asking ourselves if our silvicultural practices are doing everything possible to eliminate these three defects. The answer will rarely be yes.

It is perhaps worthwhile attempting to analyse the motives which underlie current silvicultural practices. The need for producing adequate quantities of clear grades has long been realised, and there are few foresters who do not subscribe to a policy of high pruning crop trees. The bottom log is thus being looked after. Thinning is being done for a variety of reasons, amongst them, to favour high pruned trees; to concentrate increment on a fewer number of trees, thus increasing mean diameters (and incidentally increasing the amount of clear timber which can be cut from inter-branch zones); to improve the quality of the present crop by eliminating malformed or otherwise undesirable trees; to improve the quality of future crops by the mass selection of desirable phenotypes; to lessen fire and wind-throw hazards; and to improve the general health of the stands. Thinning regimes are commonly designed to fulfil several or all of these objectives. They have not commonly and consciously been designed to maintain green crowns as low as possible, thus eliminating or reducing to a minimum the zone of loose dead knots. Nor have they been designed (in conjunction with original espacement) to reduce to a minimum the core of low density wood close to the pith—a core whose undesirable properties are more closely related to age than to rate of growth. One cannot even say that they have been designed with any precision to maintain even growth rates and thus produce wood of an even texture. And finally it is doubtful if the importance of cone-stem holes has been sufficiently recognised, with the tree-types producing persistent main-trunk cones invariably removed in thinning operations.

There are several fields for profitable research here, and there are many others. They are fields in which the silviculturalist, the geneticist, the forest products officer and the sawmiller must all combine. The present market recession will have done much good if it enforces clearer thinking into these problems, and if it pin points the need for more carefully designed silvicultural and silvicultural relations research. Foresters must learn to think in terms of grades as well as increments, just as forest products workers must think in terms of the living tree as well as the dead wood.

Sir David Henry Scholarships

Late last year Sir David Henry, Chairman and Managing Director of New Zealand Forest Products Ltd., announced the foundation and
endowment of the David Henry Scholarship Fund. The purpose of the Fund is to grant Scholarships and Studentships "for the advancement of education and knowledge in the academic and practical fields of forest establishment, maintenance and utilisation, and in ancilliary and related services, and for this purpose to assist persons to undertake study and research either in New Zealand or overseas." In announcing the foundation Sir David stressed that both in its application and its associated services the forest industry encompasses a wide field of activity, any aspect of which would be considered by the Board of Selection in making an award. The Scholarships are open to any person without restriction as to age, nationality, or employment. The number, value and tenure of the Scholarships will be decided annually by the Board of Selection. Approximately £1,200 will be available annually for awards. One of the few conditions imposed is the most reasonable one that Scholars will be required to return to New Zealand and resume their former or similar employment for a period of at least two years.

We heartily congratulate Sir David on his generosity and public spiritedness in this matter. It would have been quite understandable had the Scholarships been restricted to the comparatively narrow field of forest utilisation and forest products research; and for this purpose they would still have been more than welcome. Sir David however has taken the larger view and has extended the scope of the Scholarships to include all aspects of forestry. In a similar manner he has refrained from imposing any restrictions whatsoever on the persons eligible to apply. In both matters he has displayed a breadth of vision which will not go unappreciated.

Research and scholarship have generally been poorly endowed in New Zealand in the past. Generous endowments can scarcely be expected in a country which is at once agricultural in nature and egalitarian in social structure, and which therefore has lacked the concentrations of capital which large industrial organisations make possible. It is a matter of some significance that this, probably the first major endowment arising from a purely indigenous industry, is in the fields of forestry and forest utilisation. The significance will not be lost to members of this Institute. We look forward to the stimulus to the profession which the David Henry Scholarships should provide, and we wish them and the scheme itself every success.

Parliamentary Select Committee on Soil Conservation and Rivers Control

The concern which members of the Institute have felt at the current state of protection forests and of mountain lands generally has been amply evident in the deliberations of recent annual meetings. The matter was first debated at the 1951 Annual General Meeting, when a sub-committee was set up to investigate and report. This was the first of several committees, several reports, and, naturally, several debates. The culmination of all this activity came at the Annual General Meeting, Hanmer 1956, when a full scale debate was held
and certain resolutions were passed. The Hanmer debate however reflected the difficulty, which has always faced the Institute, of how to do more than merely pass pious resolutions. The Institute has felt that it could make some small contribution to protection forest and soil conservation problems, but has not seen any way by which its views and recommendations could be brought, with sufficient force, to the notice of the most appropriate authorities.

A suitable opportunity presented itself late last year when the Government announced the setting-up of a Parliamentary Select Committee to investigate the administration of soil conservation and rivers control in New Zealand. It called for evidence from any interested persons or organisations. The Institute promptly advised that it wished to submit evidence, and the Institute's standing sub-committee prepared a full and lengthy statement. This was formally submitted by Mr A. N. Perham at the Wellington hearings of the Select Committee.

The Institute's statement is a composite one, embodying parts of previous reports, the resolutions passed at Hanmer, and certain further recommendations covering land-use and the organisation of research, all prefaced by a general statement of the nature of the problem as seen by foresters. It is published in full in this issue of the Journal.

At the time of writing the Select Committee's report has not been tabled in the House. We look forward to its findings and to the debate that will follow; and we hope that some at least of the Institute's recommendations will commend themselves to the Committee. The prospects of a more effective attack on soil conservation problems in New Zealand will be bleak indeed if the Government misses this opportunity to make administrative reforms.

Logged and derelict forests

The land-use pattern that evolved in New Zealand during the first century of European settlement has its peculiar aspects. Millions of acres were cleared of indigenous forest and converted to exotic pasture. And almost a million acres of non-forest land carrying indigenous fern and scrub were planted in exotic tree-crops; today these yield half the country's total wood supply. But large areas of indigenous forest on the poorer soils were exploited for their timber resources and virtually abandoned, often becoming a harbour for noxious animals and weeds. Current exploitation is adding thousands of acres every year to the already formidable total of idle land.

The abandonment of logged indigenous forest land was not of critical importance to New Zealand in the early stages of settlement. It was generally assumed that such land constituted a reserve to be used for agriculture when economic conditions demanded. Management of the land as permanent forest presented many difficulties; and alternative timber resources could be created cheaply and quickly by planting exotics on "prairie" country, then considered useless for farming.
Knowledge and experience accumulated in the course of a century have forced a radical change in outlook. Most of the once-despised fern and scrub lands have been proved capable of supporting high-quality pasture; hence they are no longer readily available for afforestation. Increasing difficulty can be expected in acquiring this type of land even to attain that desirable objective, regional self-sufficiency in wood products. On the other hand, forest clearances in the guise of agriculture have obviously been carried too far in most districts, bringing in their wake local timber shortages, soil erosion, and widespread floods.

New Zealand is now under stern necessity to expand her primary production. It appears inevitable that major production increases can be only in the form of animal and wood products. This in turn implies greater pressure on the soil resources, and more intensive land usage than has been called for in the past. In a country with a strong agricultural bias, foresters can scarcely expect to be allocated land even of low farming potential while large areas of logged indigenous forest remain unproductive. Most of these exploited forests occupy rough broken country with soils of low fertility. They are true forest soils which have produced high-quality tree-crops. And as yet they are under little or no pressure from agricultural interests. Surely these soils can contribute some of the timber supplies that will be needed in future.

It is understandable that the maintenance of indigenous forest land in permanent timber production had only recently been recognised as a problem meriting high priority. The economic management of indigenous forests is complex—perhaps even impossible; they certainly do not lend themselves to the simple planting, thinning, clearfelling techniques so spectacularly successful in New Zealand with exotic softwoods. Logged indigenous forest provides an unattractive site for the establishment of exotics. Logging debris and unmerchantable trees, often of large size, sterilise much of the ground, and an adequate density of replacement stock is difficult to obtain without costly clearing of the site. In some high-rainfall districts, particularly in the terrace rimu forests of Westland, clearfelling induces bog conditions, made worse when slash fires occur subsequent to logging. The unholy alliance of logging and fire has turned large areas of high-quality rimu forest into marshy waste, shunned by the farmer and a real problem for the forester. And even on the better sites capable of growing exotics, these forests have their own ready-made populations of animals, insects, and fungi, all a potential threat to newly introduced tree species.

Forestry in New Zealand has been largely concerned with the management of exotic forests established on soils now proved to be, in the main, equally suitable for agriculture. Because of preoccupation with more amenable sites, the difficult and growing problem of derelict forest land has remained out of focus in the background. Small scale operations aimed at restoring productivity
to logged forests have been carried out over a considerable period. The work has usually taken the form of replanting with exotics; but its scope is obviously in no way commensurate with the magnitude of the task to be performed. It is well to remember that economic pressure will ultimately force the restoration of full productivity to all idle forest lands; because they are the logical, if not the only available sites on which to grow an increasing proportion of the Dominion's future timber needs. Many problems must be solved before the position can be regarded as satisfactory, and much will be demanded of foresters in the process. This challenge is a present-day responsibility. Continued delay in meeting it will inevitably multiply its difficulties and create a legacy for which future generations are not likely to be grateful.

A.N.Z.A.A.S. and A.P.P.I.T.A. Conferences

We live in an era of conferences, inter-Dominion as well as internal and international. In January of this year the Australian and New Zealand Association for the Advancement of Science held its 32nd meeting, the first in New Zealand since 1937. The Institute was one of the many participating organisations and its members played a prominent part in the proceedings of the Agriculture and Forestry Section. Two of the papers presented (Henry and Reid) are published in this issue of the Journal. Other New Zealand papers of forestry interested included:

G. C. Weston: Soils in Relation to Exotic Forestry.
A. L. Poole: The Entire Leaved Beeches of New Zealand.
I. J. Thulin: Application of Tree Breeding to Forestry in New Zealand.
M. H. Bannister: Juvenile Variation in a Progeny of P. radiata.
F. Newhook: The Association of Phytophthora cinnamoni with dying and unthrifty P. radiata.

Appropriately, the Agriculture and Forestry Section was chaired by Dr M. R. Jacobs of the Australian Forestry School, Canberra; appropriately since Dr Jacobs is not only eminent as a forester in his own country but also, through his teaching, exerts a most profound influence on New Zealand forestry.

The annual conference of the Australian Pulp and Paper Industry Technical Association was held in March of this year at Rotorua. Again, many members of the Institute attended and took part in proceedings. This was the first time that the A.P.P.I.T.A. Conference has been held in New Zealand. The move across the Tasman is yet another indication of the growing importance (to both countries) of New Zealand's pulp and paper industries. Perhaps we may yet
be faced with an unpronounceable A.N.Z.P.P.I.T.A.; for that is what it seems to be becoming.

For the first time also the A.P.P.I.T.A. Conference held a Forestry session. The theme, naturally, was the inter-dependence of forest industries and sustained yield forest management. The New Zealand papers presented were:

- F. E. Hutchinson and J. E. Henry: Growth and Development of *P. radiata* Forests on Holdings of N.Z. Forest Products Ltd.

It is somewhat surprising to note that there were no papers on the greatest of all the new integrated forest industries, Tasman, or on the management methods employed in its area of raw material supply, the Murupara Working Circle.

Institute members will have the opportunity to read the papers of both conferences in the published proceedings.

**OBITUARY**

**S. E. MASTERS**

With deep regret we record the death of S. E. Masters, a member of this Institute and a forester held high in the esteem and affection of all who knew him.

It is probable that, in the years to come, Stan Masters will be best remembered for the part he played in the work of the National Forest Survey. He will be remembered as the man to whom the lion's share of all credit for the work of the survey properly belonged. In particular, he will be remembered as the man who, starting from scratch, built up as fine a photogrammetric survey draughting unit as any forest service could wish to see. But those of us who knew him best would prefer to see him remembered for his personal qualities, for his dogged determination, for his willing acceptance of any task thrust upon him, for his capacity for sheer hard work, and for his unfailing loyalty to his fellow officers, superior or subordinate.

Some of us rise high in the ranks of our profession through natural inborn ability, an ability for which we can take no personal credit. Some of us rise high almost by chance; the dice fall happily for us. Stan Masters found nothing easy. The one quality that he possessed in abundance, the quality that brought him through the ranks, was guts. There is no other word that is at all adequate. Courage, determination, endurance, fortitude, the quality comprehends all these and more. This quality was his hallmark.

He entered the New Zealand Forest Service in 1928 as a cadet draughtsman, serving his apprenticeship in Wellington before transfer,