

# NEW ZEALAND INSTITUTE OF FORESTERS INCORPORATED

## OFFICERS 1950-52

**President:** A. N. Perham

**Vice-President:** G. H. Hooking

**Secretary:** A. P. Thomson

**Treasurer:** A. C. Forbes

**Council:** F. Allsop, E. A. Cooney, Owen Jones, R. B. Moorhouse

### Annual General Meeting

The 1950 meeting was held at Nelson and, as in recent years, extended over three days, 17th-19th June. The first day was devoted to formal business and the presentation of papers; the second to a tour of Golden Downs State Forest, with further lectures and films in the evening; the third to inspection of private forests in the district, culminating in the annual dinner at the Hotel Nelson. An attendance of 41 members made it the largest Institute meeting ever held, while Nelson weather and the excellent organisation by local members made it an outstandingly successful gathering.

The following were the principal matters dealt with at the meeting:

**Nature Protection Council**—During the year action was taken by the N.Z. Forest and Bird Protection Society to set up a body to co-ordinate efforts towards the reservation and protection of natural associations of both plants and animals. Mr. Poole, on behalf of the Institute, had attended a preliminary meeting at which it had been decided to proceed with the formation of such a body. The Institute was asked whether it wished to be associated with it and, if so, to appoint a delegate and confirm the provisional Standing Committee. A motion was passed agreeing to these three points, and appointing Mr. Poole to represent the Institute on the Standing Committee.

**Waipoua Forest**—In view of renewed consideration being given to the future of Waipoua State Forest, it was thought desirable to define and make known the views of the Institute on the matter. After some discussion it was agreed to issue a questionnaire to all members, seeking their views on the simple issue of total versus partial reservation; also that the questionnaire be accompanied by brief statements by the N.Z. Forest and Bird Protection Society and the N.Z. Forest Service as representing these two points of view.

**Seventh N.Z. Science Congress**—This Congress is to be held in Christchurch in May, 1951, under the aegis of the Royal Society of New Zealand. Mr. J. T. Holloway who represented the Institute on the General Committee of the Congress stated that forestry would be included in an Agriculture, Forestry and Soil Science Section. It was resolved that the Institute should participate and that Mr. Holloway should have power to act for it on the General Committee.

**Terminology Committee**—The Secretary reported that ten members had commented in detail on the draft glossary. There was evidently diversity of opinion on the desirability and scope of such a glossary. After considerable discussion it was apparent that the meeting wished its preparation to continue, but that very critical examination should be made of the list of terms to be included; the glossary should in no way give recognition to undesirable terms or usages.

It was resolved to set up a committee to examine the list of terms and make recommendations on the future work connected with the glossary. It was also

decided to restrict further the previously determined categories of words for inclusion by deletion of legal terms used in New Zealand and of significance in forestry and timber grading rules.

**Venue of Next Meeting**—It was decided to hold the next Annual Meeting at the Chateau Tongariro during the third weekend in June, 1951.

**Papers Presented**—

1. "Quality versus Quantity in Forestry and Forest Products" by A. R. Entrican.
2. "The Trend of Forest Law" by W. Boardman.
3. "Impressions of Finnish Forestry" by T. T. C. Birch.

**Field Excursions**—On the Sunday following the annual meeting an excursion was made to Golden Downs State Forest. After a brief inspection of Mr. R. A. Higgins' stand of 25-year-old *P. radiata* near the State Forest boundary on Spooner's Hill, the party entered a compartment of Japanese larch planted 4 x 4 ft. in 1933 and now 49 ft. high where a first thinning to 500 stems was in progress. Thinnings were being extracted by Polish labour using Russian sledges and converted to posts, rails, battens and hop poles, the last being a particularly profitable line. Some *Eucalyptus gigantea* in mixture with the larch was very promising.

Further down Spooner's Hill species trial plots were visited. These plots, planted between 1932 and 1937, included *Alnus rubra*, *Cedrus atlantica*, *Cupressus arizonica*, *C. macrocarpa*, *C. sempervirens*, *Larix eurolepis*, *Pinus caribaea*, *P. excelsa*, *P. halepensis*, *P. jeffreyi*, *P. laricio*, *P. laricio* var. *calabrica*, *P. murrayana*, *P. patula*, *P. sylvestris*, *P. tabulaeformis*, *P. torreyana* and *Pseudotsuga taxifolia*.

The *P. jeffreyi* impressed as a tree of better form and lighter branches than the *P. ponderosa* on the forest. The hybrid larch was second generation stock and consequently contained a wide range of forms and demonstrated the limitation in the use of hybrids beyond the first generation. After two thinnings this plot showed more of the Japanese than the European characteristics.

Proceeding up the Motueka Valley stands of *P. ponderosa* and *P. murrayana* were passed. In one place two contrasting types of *P. murrayana* were seen. Opossums, which have done a great deal of damage to this species, are said to show a preference for the inferior yellow-brown type. In Compartment 55 a very fine stand of 19-year-old Douglas fir was seen on a steep rocky hillside. Permanent sample plots were being established but the prescribed thinnings had not yet been made.

After taking lunch at the large new hostel at the forest headquarters, the party continued up the valley, stopping at Compartment 70 to examine a stand of *P. ponderosa* planted 8 x 8 ft. in 1933 and interplanted with *P. murrayana* in 1937. Both species had reach the same height of 33 ft. and a trial area had been pruned and thinned to 400 stems favouring the *P. ponderosa*. There was some discussion as to whether this favouring of *P. ponderosa* was justified as the *P. murrayana* was of a superior type. Some members commented on the great difference in growth rate between different types of *P. murrayana* quoting cases of similar mixtures in which inferior type *P. murrayana* had not suppressed *P. ponderosa* even when planted at the same time.

Passing King's Camp plantings of *Cupressus macrocarpa* and *C. lawsoniana* were seen. Generally they appeared yellowish and unthrifty. There was a discussion on the planting of *C. macrocarpa* in mixture; an area over-planted with *P. laricio* was promising. Scattered *P. canariensis* amongst younger *P. laricio* were pointed out as the survivors of repeated efforts to establish this species. Certainly the surviving *P. canariensis* were doing well. Passing groves of *Alnus rubra* and eucalypts, one of the oldest stands of *P. radiata* on the forest was reached on the slopes of Kerr's Hill. Planted 8 x 8 ft. in 1928 it had a crop height of 73 ft. and a stocking of 373 trees in 1948, with a total volume of 5,374 cu. ft.; there had been a pruning and light thinning in 1939. There was much discussion and divergence of opinion over whether this stand could safely be given any further thinning.

On the opposite side of Kerr's Hill 9-year-old *P. radiata* was seen in Compartment 80. At a spacing of 6 x 6 ft., with a height of 36 ft., and d.b.h. averaging 6 in., it was generally felt that this stand was at an optimum stage for first pruning and thinning. One opinion maintained that it was already too late to hope to treat the compartment effectively and preferred to devote available labour to more recent plantings.

After leaving Golden Downs a trip was made to Tophouse. Here a bird's-eye view was had of the red and silver beech forest known as "Big Bush," one of the most promising beech management areas in the country. Members were also able to see, at closer quarters, the oldest hotel in the South Island, a cob building redolent of the coaching days, doughty pioneers and at least one murder.

The second day's tour began with a visit to the Cawthron Institute where the activities of the different sections were illustrated and explained. A stop was then made at Baigent's Nursery, Brightwater, where a very attractive line of about half a million yearling *P. radiata* were seen. These were line sown in September, but owing to the dry season had not received the customary two wrenchings carried out with a U blade attached to a nursery tractor.

The rest of the morning was spent at Nelson Pine Forests, Belgrove, where an unorthodox early thinning of dominants in *P. radiata* had been carried out during the past 12 years.

The forest was established between 1923 and 1925 at a spacing of 9 x 9 ft. A first thinning was begun at 11 years but averaged 14 years; it removed "wolf" trees and other dominants averaging 13-15 in. d.b.h. yielding 6,382 ft. b.m. per acre. A second thinning was begun at 19 years and was continuing; unlike the first thinning this operation favoured the then dominant stems yielding on an average 9,594 ft. b.m. at 24 years. A rotation of 37 years is proposed with an anticipated final yield of 60,000 ft. b.m. It is stated that the initial wide spacing and early removal of dominants has enabled establishment and early maintenance costs to be wiped out at 14 years.

Much discussion took place on the merits of this method of management and its application elsewhere. Stems removed in the second thinning were of excellent quality showing unusually even growth. However, doubt was expressed whether the final crop achieved by these means could equal in quantity or quality the results obtainable by more normal silviculture favouring the best stems from the outset. The increased risk of wind and other injury might make its adoption in other localities very hazardous.

After lunch at Golden Downs the party travelled through the 88 Valley to see the famous short-branched, 180 ft., open grown specimen of *P. radiata* there (see frontispiece of Vol. V, No. 4, 1947). Thence it went through the forest and orchard land of the Tasman district to a 55-acre block of Dr. J. P. S. Jamieson's *P. radiata* forest at Braeburn. This forest, managed on orthodox lines, provided an interesting silvicultural and financial comparison with the Belgrove forest seen in the morning. Planted at 6 x 6 ft. in 1918, it had been thinned in 1927, 1931, 1941-45 and 1948-50; a rotation of 40 years is proposed. The first two thinnings were to waste, while the third and fourth have yielded an average of 7,137 ft. b.m. and 4,031 ft. b.m. per acre respectively; the present stocking is 90 trees per acre which Dr. Jamieson proposes to reduce to about 70 in two or three years.

While it cannot be claimed that returns from thinnings have offset expenditure including interest, the forest is impressive both in volume and quality. Unfortunately no assessment has been made of the residual stand. Dr. Jamieson now believes that a wider initial spacing than 6 x 6 ft. is warranted and desirable on this site.

### Rotorua Section

The Rotorua Section of the Institute had an active and successful year, with a membership of 52.

At the Annual Meeting held on 26th May, Mr. F. Allsop was elected Chairman, Mr. M. McKee Secretary, and Messrs R. B. Moorhouse, D. Kennedy and J. K. Overington to the Programme Committee.

Addresses given during the year were :

"Some Aspects of Silviculture in Tropical Forests," by Mr. F. Allsop.

"Pulp and Paper Manufacture," by Mr. Pyner, Chemist for Whakatane Board Mills Ltd.

"Soils and Forestry," by Mr. F. L. Miller.

On 30th September a party of eighteen spent an enjoyable and informative day as the guests of Afforestation (Aust.) Pty. Ltd. and N.Z. Forest Products Ltd. on a field trip through parts of the forests of these two companies. Sample plots demonstrating various treatments of the regeneration which followed the 1946 fires were seen on areas owned by both companies, and a thinned stand of natural regeneration following a fire in 1942 was also inspected on a N.Z. Forest Products area.

A most enjoyable lunch was provided by Mr. V. T. Fail of Afforestation (Aust.) Pty. Ltd. and an excellent view of the forests around Taupo obtained from his company's fire lookout on Mt. Tauhara.

### **Waipoua Forest**

As resolved by the Annual Meeting a questionnaire was sent to all Members and Associate Members to ascertain their views on the question of total versus partial reservation of Waipoua Forest from silvicultural activities. The questionnaire was accompanied by brief statements by the New Zealand Forest and Bird Protection Society and the New Zealand Forest Service representing the two conflicting proposals. Of the 65 replies received 62 favoured the proposal to reserve 7,700 acres in its present state while applying forest management to the remainder of the forest, and three favoured reservation of the whole area (44,200 acres).

The results of this enquiry were forwarded to the Lands Committee of the House of Representatives which dealt with the petition of the N.Z. Forest and Bird Protection Society and others. The President, Mr. A. N. Perham, also appeared before the Committee and was examined at some length.

The Committee and Parliament subsequently adopted the proposal for partial reservation.

### **Professional Foresters in the Public Service**

The Secretary has assembled data to support the case of foresters as a group for consideration in the general regrading of the Public Service to be undertaken in 1951.

## **PUBLICATIONS RECEIVED**

Receipt of the following publications during 1950 is acknowledged by the New Zealand Institute of Foresters.

*Institute members are reminded that forestry literature received by the Institute and listed in the Journal annually is available on application to Mr. A. C. Forbes, Forest Research Institute, Private Bag, Whakarewarewa, Rotorua.*

Australia, Council for Scientific and Industrial Research, Division of Forest Products.

Reprint No. 115 : The Chemistry of Eucalypt Woods.

Reprint No. 116 : What is Reaction Wood ?

Reprint No. 117 : The Development of Tyloses and Secretion of Gum in Heartwood Formation.

Reprint No. 118 : The Measurement of Internal Tearing Resistance.

Reprint No. 119 : The Influence of Electrolytes on Pulp and Paper Properties.

Reprint No. 120 : The Nature of Reaction Wood. II. The Cell Wall Organisation of Compression Wood Tracheids.

Reprint No. 122 : Changes in Fibre-length within One Growth Ring of Certain Angiosperms.

Reprint No. 125 : The Variation of Fibre Length within One Tree of *Eucalyptus regnans* F.v.M.

- Chromatographic Analysis of Eucalypt Kinos (Reprint from Nature).  
Australia, Forests Commission of Victoria.  
Annual Report, 1948-49.  
Leaflet No. 4 : Tree Planting Hints.  
Leaflet No. 5 : Forestry as a Career for Boys.
- Australian Timber Journal. Vol. 15, Nos. 11 and 12 ; Vol. 16, Nos. 1-9.  
British Forestry Commission.  
Report on Forest Research for the Year Ending March, 1949.  
Britain's Forests : Rheola.  
Britain's Forests : Kielder.  
National Forest Park Guides : Glen Trool.  
Leaflet No. 12 (revised 1949) : Income Tax and Death Duties on Woodlands.  
Leaflet No. 25 (revised 1949) : Replanting of Felled Coniferous Woodland in Relation to Insect Pests.  
Forest Record No. 4 : Cambial Injuries in a Pruned Stand of Norway Spruce.  
Forest Record No. 5 : General Volume Table for Oak in Great Britain.  
Forest Record No. 6 : General Volume Table for Beech in Great Britain.  
Forest Record No. 8 : General Volume Tables for Scots Pine in Great Britain.  
Forest Record No. 9 : General Volume Tables for European Larch in Great Britain.
- Canada, British Columbia, Forest Service.  
Forest Management.
- Commonwealth Agricultural Bureaux.  
Joint Publication No. 14 : The Establishment of Vegetation on Industrial Waste Land.
- Empire Forestry Review. Vol. 28, No. 4, 1949 ; Vol. 29, Nos. 1-3, 1950.  
F.A.O.  
Bulletin. Vol. IV, Nos. 5-7, 1949 ; Vol. V, Nos. 1 and 2, 1950.  
Bibliography of Forestry and Forest Products. June—November, 1949 ; May—July, 1950.  
Report of the Forestry and Timber Utilisation Conference for Asia and the Pacific.  
Yearbook of Forest Products Statistics, 1949.  
Planning a National Forest Inventory.
- Foreste. Anno 1, N.2, Oct., 1949.
- Forestry. Vol. 23, No. 1, 1949.
- Forestry Abstracts. Vol. 11, Nos. 1-4 ; Vol. 12, No. 1.
- Forestry Chronicle. Vol. 26, Nos. 1-3, 1950.
- Great Britain, Department of Scientific and Industrial Research, Forest Products Research Laboratory.  
Forest Products Research, 1939-1947.  
Bulletin No. 23 : Flooring Softwoods.  
Leaflet No. 44, Supplement No. 1 : The Seasoning Properties of Exotic Timbers.  
Leaflet No. 45 : The Steam Bending Properties of Various Timbers—Part I.  
Leaflet No. 46 : Marine Borers and Methods of Preserving Timber against their Attack.
- Imperial Forestry Institute. Annual Report, 1948-49.
- Indonesia, Forest Research Institute, Buitenzorg.  
Report No. 21 : Trees Producing Gum Arabic.  
Report No. 23 : Data about Growth of Exotic Conifers in "Experiment Gardens" on Java.  
Report No. 24 : Data about Growth of *Eucalyptus* in "Experiment-Gardens" on Java.  
Report No. 27 : Data about Growth of Exotic Broadleaf Species in "Experiment-Gardens" on Java II.  
Report No. 28 : Lac Cultivation in Indonesia.  
Report No. 34 : Some Data about the Development of Even-Aged Stands of *Pinus merkusii*.

- Report No. 42: Tabellarisch Overzicht van de Beste Kiem—Bawaar en Verzendingswijze van Zaad van Een Aantal Boomsorten en Groenbesters.
- Communication No. 30: Yield Prediction and Thinning of *Agathis loranthifolia* Salisb. in Pure Crops.
- Miscellaneous Publication No. 5: Research Programme, 1950.
- Tectona. Deel 39, Afl. 4, 1949; Deel 40, Afl. 1 and 2, 1950.
- Irish Forestry. Vol. VI, Nos. 1 and 2, 1949.
- Journal of the South African Forestry Association. No. 19, 1950.
- New York State College of Forestry.  
The Manufacture of Chemigroundwood Pulp from Hardwoods.
- New Zealand Forest Service.  
Information Series No. 11: Forest Taxation in Europe and New Zealand.
- New Zealand Gardener.  
Vol. 6, Nos. 6—12; Vol. 7, Nos. 1—4, 1950.
- New Zealand Geographer. Vol. 6, No. 1, April, 1950.
- New Zealand Geographical Society.  
Record No. 8, 1949.
- Miscellaneous Series No. 1: New Zealand Weather and Climate.
- New Zealand Journal of Science and Technology.  
Sect. A. Vol. 30, Nos. 3—6; Vol. 31, Nos. 1—3.  
Sect. B. Vol. 30, Nos. 4—6.
- New Zealand Manufacturer. Vol. 1, Nos. 7—12; Vol. 2, Nos. 1—6.
- Norwegian Forest Research Institute.  
Report No. 35: Studies on the Parent Material of the Moranic Covers of the South-eastern Part of Norway.
- Report No. 37: Cutting Studies in Norwegian Spruce Forest.
- Portugal, Department of Forestry.  
Publications, Vol. X, 1943.  
Latin-American Conference on Forestry and Forest Products, 1948.
- Quarterly Journal of Forestry. Vol. 44, Nos. 1—4, 1950.
- Royal Society of New Zealand.  
Transactions and Proceedings, Vol. 78, Parts 1—4, 1950.  
Report of the Sixth Science Congress, 1947.
- Scottish Forestry. Vol. 4, Nos. 1—3, 1950.
- Spain, Instituto Forestal de Investigaciones y Experiencias.  
Año XX, Num. 48: El Castino en Espana.  
Año XX, Num. 49: Jarales y Jaras.  
Año XXI, Num. 50: Abastecimiento Nacional de Traviesas.  
Año XXI, Num. 51: Revision del Genero *Quercus* en Espana.  
Año XXI, Num. 52: Fitoquimica Forestal.
- Sweden, Forest Research Institute.  
Reports, Vol. 38, 1949-50.  
Newsletter No. 63.
- Sweden, Royal School of Forestry, Stockholm.  
Bulletin No. 1: Economy of Artificial Regeneration.  
Bulletins No. 2 and 3: Simplified Deduction of Some Statistical Formulae.  
Bulletin No. 4: Decay Injuries in Spruce Forests and their Importance for the Production of Chemical Paper Pulp and Rayon Pulp.
- Unasylva. Vol. III, No. 6, 1949; Vol. IV, Nos. 1—3, 1950.
- Union of South Africa, Department of Forestry.  
Annual Report, 1948-49.
- United States, Department of Agriculture.  
Yearbook Separate No. 1988: Machine-made Forests.  
Farmers' Bulletin No. 1256: Slash Pine.  
Farmers' Bulletin No. 1405: The Windbreak as a Farm Asset.  
Farmers' Bulletin No. 1486: Longleaf Pine Primer.  
Farmers' Bulletin No. 1517: Loblolly Pine Primer.  
Farmers' Bulletin No. 1671: Shortleaf Pine.  
Farmers' Bulletin No. 1892: Pruning Southern Pines.

- Farmers' Bulletin No. 1984 : Modern Turpentine Practices.  
 Leaflet No. 156 : Harvesting and Selling Seed of Southern Pines.  
 Leaflet No. 244 : Community Forests for Rural People.  
 Circular No. 131 : Utilisation of Black Locust.  
 Circular No. 379 : Shippmast Locust, a Valuable Undescribed Variety of *Robinia pseudoacacia*.  
 Circular No. 677 : Dutch Elm Disease and its Control.  
 Circular No. 716 : Little Leaf Disease of Pine.  
 Circular No. 717 : Chemical Impregnation of Trees and Poles for Wood Preservation.  
 Circular No. 772 : Seeding as a Means of Reforestation in the Northern Rocky Mountain Region.  
 Circular No. 845 : Management of Natural Slash Pine Stands in the Flatwoods of South Georgia and North Florida.  
 Technical Bulletin No. 876 : Decay of Logging Slash in the Northeast.  
 Technical Bulletin No. 171 : Principles of Box and Crate Construction.  
 Technical Bulletin No. 174 : The Air Seasoning of Wood.  
 Miscellaneous Publication No. 162 : Our Forests : what they are and what they mean to us.  
 Miscellaneous Publication No. 225 : Converting Factors and Tables of Equivalents Used in Forestry.  
 Miscellaneous Publication No. 247 : Forestry and Permanent Prosperity.  
 Miscellaneous Publication No. 306 : The Forest Products Laboratory.  
 Miscellaneous Publication No. 600 : Water and Our Forests.  
 Agriculture Handbook No. 1 : Forest Fire-Danger Measurement in the Eastern United States.  
 How to Control Upland Hardwoods with Ammate.  
 Yale University. Bulletin. School of Forestry for 1950-51.

## ROLL OF MEMBERS

### Honorary Members:

#### Year elected

- 1929 *Leonard Cockayne, Esq., C.M.G., Ph.D., F.R.S., F.R.S.N.Z.*  
 1929 *Professor H. B. Kirk, M.A., F.R.S.N.Z.*  
 1931 *Right Hon. Sir H. F. D. Bell, P.C., G.C.M.G., K.C.*  
 1932 *Roderick Macrae, Esq., c/o T. Lindsay, Esq., 11 Malfroy Road, Rotorua.*  
 1933 *Professor A. J. Cajander.*  
 1936 *G. H. Cunningham, Esq., C.B.E., D.Sc., Ph.D., F.R.S., F.R.S.N.Z., Plant Research Bureau, D.S.I.R., Auckland.*  
 1936 *A. C. Forbes, Esq., O.B.E., F.H.A.S., M.R.I.A.*  
 1936 *C. E. Legat, Esq., C.B.E., B.Sc., Beechdene, Lower Bourne, Farnham, Surrey, England.*  
 1937 *Professor R. S. Troup, C.I.E., C.M.G., D.Sc., F.R.S.*  
 1937 *D. Tannock, Esq., O.B.E., A.H.R.H.S., 33 Montgomery Avenue, Dunedin.*  
 1937 *D. Miller, Esq., D.Sc., Ph.D., F.R.E.S., F.R.S.N.Z., Cawthron Institute, Nelson.*  
 1939 *Professor H. H. Chapman, M.F., Sc.D., School of Forestry, Yale University, New Haven, Connecticut, U.S.A.*  
 1945 *H. R. Blanford, Esq., O.B.E., Sherwood, Fitzroy Road, Fleet, Hants, England.*  
 1946 *H. Roche, Esq., Beach Road, Tahunanui, Nelson.*  
 1947 *Professor H. G. Champion, C.I.E., M.A. (Hons.), Imperial Forestry Institute, Oxford University, Oxford, England.*