

try sector, new research directions, and an expanding forestry sector which is attracting considerable investment, combine to make the outlook for NZFRI very bright indeed.

Research Accomplishments

The NZFRI science report for 1992-93 provides a clear account of the Institute's research accomplishments which included the establishment of an international molecular biology team supported by industry and government, completion of an expanded pulp and paper fibre research facility, formation of a resource monitoring unit and development of an advanced fibre processing research unit. Other highlights were the formation of a joint venture company with Chemicca Ltd, and Tasman Forestry Ltd, to exploit the novel wood hardening technology developed at NZFRI, the commercialisation world wide of NZFRI's Greenweld technology and the advancement of the radiata pine embryogenesis project to a pre-commercial phase.

Wide Spectrum

It seems that NZFRI's clearly focussed and well balanced research programme and its emphasis on developing integrated research strategies across a wide spectrum of research areas encompassing forest establishment, growing and management, harvesting, wood product development and processing and environmental protection, will ensure that it remains a strong research provider. The newspaper article referred to above may have relevance to some other CRIs but it does not appear to provide a very accurate prognosis for NZFRI's future.

CONSULTANT RECOGNITION

The following has applied for a review of recognition as a general forestry consultant:

Paul Molloy

Nelson

Under the NZIF constitution, any members of the Institute may send objections in writing within 40 days of publication of the Journal to the Registrar, NZIF Consultants Committee, P.O. Box 1340, Rotorua.



RECENT EVENTS



1994 new forest planting areas may double

The Ministry of Forestry has completed its spring survey of forestry nursery stocks. Sufficient seedlings were produced in 1993 for a "new forest" planting level of 60,000 hectares. This is additional to an estimated restocking level of 26,700 hectares. The 1994 new planting estimate is even more dramatic. There are sufficient seedlings established to plant an additional 120,000 hectares of new forest with a further 28,700 hectares being restocked.

Prior to this, the highest level of new planting was 56,000 hectares in 1985. The level declined through the late 1980s to reach a nadir of 15,000 hectares in 1991.

Radiata pine is still the dominant species at over 90% of the total new plantings but there is a strong resurgence in the planting of hardwoods, predominantly eucalypts. Douglas fir is the other preferred species.

The large corporates, together with the NZ Forest Service, were the driving force

behind the new planting levels up until the late 1980s. However, much of the new plantings since that time are on the initiative of smaller, independent growers (predominantly farmers and private forestry investors).

This growing diversity in forest ownership is a healthy development in the industry. The importance of the independent smaller grower should continue to increase, particularly as their level of harvesting rises, and they begin to organise collectively. The initiative of the South Otago Farm Forestry Association to establish a marketing company in anticipation of an increasing woodflow is one of the first moves in this direction. It should not be forgotten that the rural community has a rich tradition of organising very competent cooperative and commercial organisations, from dairy co-ops, stock and station firms to companies such as Fortex.

Chris Perley

Dutch Elm Disease in Napier

A routine survey of Napier port environs by a Ministry of Forestry Forest Health Officer on December 22, 1993 discovered symptoms in elm trees in Sterms Gully Reserve, Bluff Hill typical of Dutch Elm Disease (DED). Samples were sent to the NZ Forest Research Institute, Rotorua and culturing confirmed the presence of the disease. Subsequent surveys by MOF Forest Health Officers and staff from the NZFRI over the Christmas period found no further evidence of the disease, or evidence of the bark beetle (*Scolytus multi-stratus*) that is the vector for the disease. NZFRI staff have set pheromone traps in the area but to date have not caught any beetles.

Six elms from the initial infection site were felled, treated by fumigation and disposed of by deep burial. To prevent the movement of possible infected elm, Napier City was declared infected for Dutch Elm Disease under the Forest Disease Control Regulations. NZFRI tests suggest that the fungus is the same as that present in Auckland, and samples have

been sent to the UK for confirmation by clonal testing.

At present the evidence suggests that the infection is an isolated one, but surveys and trapping will continue for the remaining summer and autumn. Napier's Bluff Hill has a considerable population of elms with a prolific number of elm suckers. At the discovery location the disease was transmitted to adjoining trees by root grafting, and, as there has been no evidence found of the beetle, MOF hope it has failed to establish.

Dutch Elm Disease was first discovered in New Zealand in 1989 in Auckland and had been confined to five suburbs. So far this year the location of infected trees represents a reduction in the area with infection and the Ministry of Forestry is still optimistic that eradication can be achieved. It is uncertain whether the Napier case is ex-Auckland or related to the port.

Dave Kershaw
Ministry of Forestry

First forestry company to gain quality award

The Kinleith operations of Carter Holt Harvey Forests Limited is the first forest management company in New Zealand to achieve ISO 9002 certification, according to Bob Pickles, chief auditor at registering firm Telarc.

The Minister of Forestry, John Falloon, presented the award at Kinleith at the end of last year.

The certification encompasses the wood supply departments of Kinleith Region, which includes over 70 staff and has a further contract workforce of 800 people.

Roger Kay, manager of the forestry department and quality manager for the Kinleith Region is joint facilitator of the ISO project, and he is adamant about the tangible benefits of achieving ISO 9002 registration.

"Actions speak louder than words. Our customers can now be absolutely confident about, not just our commitment to value and quality, but our ability to deliver these.

"We have monitored our improvement since the beginning of the project in April 1992. Our data shows that log returns by customers have reduced significantly in the last 18 months," he says.

Carter Holt Harvey Forests Limited's Kinleith operation has had a quality management system in place since the mid 1980s. This meant that the process of obtaining ISO 9002 certification was greatly accelerated.

"Essentially, many of the practices we had to document were already in place, but the process was an excellent discipline for all of us and the staff commitment has also helped to speed up the process," says Roger Kay.

The Kinleith Region is encouraging its contractors to undertake a quality management programme. It is currently assisting an initial 44 contractors to undertake Telarc's "Q Base" quality management system.

Roger Kay anticipates that by 1996 all contractors to Carter Holt Harvey Forests Ltd will be required to have a quality man-



Pictured at the presentation of the award are (from left): Warren Yardley (Regional Manager, Kinleith Forest), Reeyce Hausman (Logging Trainer), Wayne Jones (Logging Trainer) and Hon. John Falloon (Minister of Forestry).

agement qualification.

"Our reputation as a high-quality supplier demands that we take our quality management processes seriously. This means applying the same standards to all areas of our business, whether directly managed or contracted," he says.

Likewise, there are plans underway for Carter Holt Harvey Forests' other operational areas to achieve ISO 9002 certification by the 1996 deadline. Work has already started in the forestry area and forest engineering and management information systems will be next.

New forestry appointments at Lincoln University

The expanding forestry and agroforestry programme at Lincoln University has been boosted by recent appointments.

Joanna Sasse has been appointed as a Lecturer in Forestry to the Plant Science Department. Joanna is currently completing her Ph.D at the University of Melbourne under the supervision of Dr Roger Sands. Her current research is on the comparative physiology of *Eucalyptus globulus* cuttings and seedlings. She is expected to take up her appointment by the middle of the year. Joanna has also worked as a plantation silviculture project officer with the Plantation Management section of the Department of Conservation, Forest and Lands in Victoria.

Joanna thus becomes the first woman appointed to a forestry lecturing position at a New Zealand University. (See the article by Frances Maplesden and Lisa Langer in the last issue.) She will be lecturing in the B. Comm (Forestry) programme which begins this year at Lincoln.

Last November Dr Glenn Stewart began as lecturer in ecology within the

Plant Science Department. Glenn is well known for his forest ecology research in native forests – his presence will strengthen the ecology group at Lincoln and will add to the forest ecology skills already present with Dr Jonathan Palmer. Glenn has retained his connection with Landcare Research NZ Ltd by continuing to work with them for part of his time. Dr Rob Allan, another forest ecologist at Landcare, will also be teaching on a part-time basis into Lincoln courses.

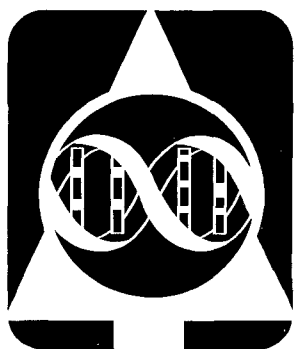
Dr Isa Yunusa, the post doctorate fellow working in plant physiology within the agroforestry experiment, has recently taken up an appointment at Mildura in Australia. Papers based on his research are currently being submitted for publication. A replacement is expected to be appointed.

Dr Bill Bentley (Fullbright Fellow from Yale) made a brief visit in December. He will be returning later this year.

Don Mead
Reader in Forestry

John Hayward

Dr John Hayward, Director of the Centre for Resource Management at Lincoln University, died on December 9, 1993. Dr Hayward had a significant influence on land and resource use in New Zealand over the last decade, exercised not least through his students of resource management. A full obituary will be included in the next journal.



MAKING THE GRADE

An international symposium on
planting stock performance and
quality assessment

Sault Ste. Marie, Ontario, Canada September 11-15, 1994

The goal of this meeting is to bring together world leaders in plant quality assessment to synthesize the current state of knowledge and to point to directions for the future of this important field of study. The meeting will be of interest to anyone involved in the development and application of procedures for the assessment of plant quality, particularly as it relates to reforestation success.

INVITED PAPERS

Using Plant Quality Assessment to Produce
the Designer Tree

Dr. Michael Menzies,
New Zealand Forest Research Institute

Predicting Field Performance Using Plant
Quality Assessment

Prof. Anders Mattsson,
Swedish University of Agricultural Sciences

Effects of Rough Handling on Plant Quality
and Performance

Dr. Helen McKay,
Forestry Commission, Great Britain

Does Root Growth Potential Predict Field
Performance? A Debate.

Mr. David G. Simpson,
British Columbia Ministry of Forests
-speaking for the proposition
Dr. Gary Ritchie, *Weyerhaeuser Company*
-speaking against the proposition

Looking For the "Silver Bullet" (Can One Test
Do it All?)

Dr. Pasi Puttonen,
British Columbia Ministry of Forests

Plant Quality Assessment: An Industrial
Perspective

Mr. Glen Dunsworth, *MacMillan Bloedel*

**The symposium will involve presentations,
field tours, and poster sessions relating
to seedling quality issues.**

Anyone wishing to attend the meeting
and/or present a volunteer paper or
poster as it relates to seedling quality
assessment should contact us for more
information at:

MAKING THE GRADE

Ontario Forest Research Institute,
P.O. Box 969,
1235 Queen Street E.,
Sault Ste. Marie, Ontario.
P6A 5N5
Canada

For more information please contact:
Erika Menes, Conference Coordinator
Telephone and Facsimile +1-705-949-9188



Voluntary papers now being accepted.

Selected papers to be published in a special issue of *New Forests*

Botanists sue US Forest Service to preserve biodiversity

Biological diversity in the USA has, until recently, been fought species by species. However, three botanists from the University of Wisconsin, together with the Sierra Club and the Wisconsin Audubon Council, have filed two lawsuits against the US Forest Service, in an attempt to force it to manage its millions of acres in a way that will promote and preserve overall biological diversity.

They argue that relevant scientific data and ideas accumulated during the 1970s and 1980s were not considered in Forest Service planning; specifically that 1985 draft management plans for the Nicolet and Chequamegon forests largely ignored a provision in the 1976 National Forest Management Act which is supposed to ensure "diversity of plant and animal communities".

Management plans for the forests, argued the botanists, would have fragmented ecological communities by allowing roads and clearcuts and would have created large amounts of 'edge' habitat.

The botanists commented on the draft plans and suggested a rearrangement of timber sales which would have avoided fragmentation and allowed a few 15,000- to 38,000 ha blocks of forest to develop into roadless old growth, but would have allowed the same amount of logging overall as the Forest Service plan.

The lawsuits, as argued in the federal courtroom, have focussed on awareness of scientific knowledge: what, and how much did the forest planners know about the relevant science, and when did they know it?

The botanists maintain that knowledge of habitat fragmentation and edge effects was widely accepted at the time the plans were drawn up and so should have been accommodated.

The Forest Service, however, has stated in one brief that 'the conservation biology theories advanced by the plaintiffs were emerging at the time the plans were developed and could not be expected to be incorporated, to the degree advocated, into federal land management planning'. A judicial decision is expected to be made by the end of 1992.

(From an article in *Science*, Vol. 257, September 18, 1992).

Give forestry a 'fair go', says Ministry

Getting forestry a fair deal under regional and district management plans will be a key issue for the Ministry of Forestry this year, says the Chief Executive, Dr John Valentine.

This was one of the targets outlined in the Ministry's Post Election Briefing.

"We have been working with councils throughout New Zealand as they develop their regional policy statements and plans and in most cases have found a cooperative and balanced approach," said Dr Valentine.

"There is a mutual understanding between the Ministry and most councils that all land users should be treated equally, particularly when controls are put into place to protect the environment," he

said.

"The reality is that other councils are continuing to stay with old attitudes from the days of the Town and Country Planning Act 1977 and are deliberately limiting forestry development in their area. This is entirely inconsistent with the intent of the Resource Management Act 1991.

"These attitudes have the potential to seriously limit future investment in the establishment, management and harvesting of forests, and in the downstream processing of forest products.

"A heavy-handed approach imposing unnecessary external constraints on management will kill forestry investment or cause investors, be they overseas companies or local farmers, to look elsewhere.

"In short, everybody loses. Farmers are picking up forestry as they pursue sustainable land-management objectives and opportunities to balance their business. Forestry is an industry wanting to expand and add value, but the vast potential for forestry to make a substantial economic contribution to regional development and create jobs will be handicapped if councils continue with outmoded 'protectionist planning'.

"Modern forestry development demands environmental performance – minimising pollution, protecting soils and water values, landscapes and historical sites, and preserving representative ecosystems, endemic plants and animals. The technology today enables us to balance commercial and environmental needs. New Zealand is a forestry country with huge potential for providing economic benefits while acting as a model for environmental and resource management.

"A collaborative, forward-looking approach between Government, local government, industry, and individuals and their communities is the most effective means of achieving this."

Forestry jobs increase

Employment in the forestry industry is continuing to increase, according to Forestry Minister John Falloon.

Mr Falloon said that the number of people employed at mid-February 1993 was 4.8 per cent greater than at the same time in 1992.

"This figure shows a real increase in jobs for New Zealanders, and has happened against a backdrop of increased investment and private sector interest in the forestry sector," he said.

"The greatest increases in the number of jobs have been in the activities of sawmilling, 7.3 per cent; planing, preserving and seasoning timber, 16.4 per cent; and in the manufacture of plywood, veneer, and other wood-based boards, 18.4 per cent."

Mr Falloon said there were many indicators that pointed to continued growth of employment in the forestry sector.

"For example, the overall level of investment in the sector is increasing, and private investment in new planting is also rising at record levels," he said.

"While log exports have increased, it is important to note that there has been impressive growth of new jobs related to on-shore processing.

"The growth of new jobs in the forestry sector can be traced to the increased production and export of New Zealand's forest products. In the year ended June 1993, the volume of sawn timber exports increased by about 17 per cent."

Mr Falloon said that the employment figures reflected the increased amount of wood available from our planted forest and the projections for continued growth in the area of planted forest. They also pointed towards the success of the forest industry's efforts to develop and compete in export markets.

Recognised Forestry Consultants who are currently available for work as at December 23, 1993

GENERAL FORESTRY CONSULTANTS

Surname	First names	Membership Category	Postal address
ALLAN	Gordon Peter	Full	PO Box 80, Hokitika
BANNAN	Kenneth James	Full	PO Box 1127, Rotorua
BARTON	Ian Leonard	Fellow	Hunua, RD 3, Papakura, Auckland
BROWN	Peter Charles	Full	PO Box 424, Rotorua
CHANDLER	Keith Campbell	Full	PO Box 2246, Rotorua
CLARK	Peter Douglas	Full	PO Box 1127, Rotorua
CREQUER	Patrick Clyde	Full	PO Box 169, Taupo
ELLIOTT	David Alexander	Full	22 Fairley Road, Lynmore, Rotorua
GROOME	John de Berri	Honorary	PO Box 73-141, Auckland
GUILD	Dennys William	Full	PO Box 740, Invercargill
KEACH	Peter Allan	Full	PO Box 1127, Rotorua
KEATING	John Edmund	Full	PO Box 9266, Newmarket, Auckland
LILEY	William Bruce	Full	PO Box 73-141, Auckland
McKENZIE	Colin Richard	Fellow	PO Box 73-141, Auckland
MOLLOY	Paul Francis	Full	PO Box 3033, Nelson
OLSEN	Peter Francis	Fellow	PO Box 1127, Rotorua
PAGE	Arthur Ian	Full	Tahere Farm, Pataua North Road, RD 5 Whangarei
POOLE	Barry Richard	Full	80 Gillies Ave, Epsom, Auckland
RAMSAY	Geddes Lees	Full	77 Conway Crescent, Invercargill
SPRINGFORD	Owen John	Full	PO Box 8378, Christchurch
STRAND	Stephen Sanford	Full	PO Box 11-884, Wellington
THORP	Geoffrey Edward	Full	PO Box 73-141, Auckland
USMAR	Ross	Full	PO Box 35-481, Auckland 10
VOS	Theo Gijbertus	Full	PO Box 1127, Rotorua
WILLIS	Arnold Bruce	Full	Harpers Road, RD 1, Gisborne

SPECIALIST FORESTRY CONSULTANTS

Surname	First names	Membership category	Postal address and specialist area
BELL	Alan Charles	Full	Level 4, Braemar Building, 31 The Terrace, Wellington Assessment, Investment Analysis & Valuation of Forest Resources
BUNTING	Nicholas Anthony	Full	PO Box 516, Gisborne Forest and woodlot management
CHILDS	Bruce Hector	Fellow	1/39 Rita Street, Mt Maunganui Domestic & Export Marketing (Solid Wood Products)
COOPER	Arthur Neill	Full	1 Orangi Kaupapa Rd, Northland, Wellington Forest and rural fire prevention and control
DEY	Jon Finlay	Full	PO Box 56-030, Tawa, Wellington Work Study & Management Systems in Forestry
GEDDES	Donald James	Full	Hydro Rd, RD2, Whakatane. Forest and Rural Fire Protection Vegetation Control – Establishment
JERVIS	David	Full	PO Box 128, Masterton Small Forest & Woodlot Management
LAURIE	Alan Cecil	Full	PO Box 6, Waimate Small Forest & Woodlot Management
RURU	John Tupai	Full	41 Haronga Rd, Gisborne Forestry Land Development & Management
SCHRIDER	John Alexander	Full	PO Box 56-030, Tawa, Wellington Productivity Management & Work Study
OGLE	Alan John	Full	PO Box 8378, Riccarton, Christchurch Forestry Finance, Valuation & Marketing
WATT	Anthony Joseph	Full	31 Breadalbane Rd, Havelock North, Hawkes Bay Small Forest & Woodlot Management
WILCOX	Michael	Full	PO Box 73-141, Auckland Species Selection & Tree Improvement
WILL	Graham Melville	Full	20 McDowell Street, Rotorua Soil Fertility & Tree Nutrition

This list contains the names of recognised forestry consultants who are currently available. It excludes those whose existing work commitments are such that they are unavailable for other work over the next twelve months. A full list of recognised consultants is available from the Registrar, PO Box 1340, Rotorua. General Forestry Consultants are recognised as having a wide range of professional skills. Specialist Forestry Consultants are recognised to practise in the areas specified. Reviews of recognition are undertaken at no greater than five-yearly intervals.

Mackenzie transitional district plan: proposed Change 21

Proposed Change 21 (Mackenzie Basin Forestry) to the Mackenzie Transitional District Plan was notified in February 1993. It is an initiative by the District Council to provide more flexibility in planning provisions for forestry, and to facilitate forestry development as a sustainable land use in an area struggling with the problems of rabbits, *Hieracium*, land degradation, and low fine wool prices. The hearing of submissions was conducted from September 6 to 8 before an independent Commissioner, Mr Tony Hearn QC.

Commercial forestry up to 50 hectares in extent is currently provided for under the Transitional District Plan as a permitted activity, and above this area as a discretionary activity. Protection and amenity forestry are provided for as permitted activities. There are currently no rules or guidelines focusing on maintaining or enhancing landscape values. With respect to commercial forestry the Transitional District Plan is arguably one of the most conservative in the country.

The proposed change does not distinguish among "types" of forestry, but seeks to provide generally for forestry as a permitted activity subject to rules maintaining landscape values and controlling wilding tree spread. On delineated areas of outstanding landscape value, and on areas of important natural value, forestry would be a discretionary activity under the

proposed change.

Inevitably the proposed change has witnessed a wide range of positions emerge on forestry in the South Island high country. Submissions were evenly divided between those generally supporting the proposed change and those actually seeking more stringent controls (resource consents for all forestry) than exist under the current Transitional District Plan. One notable aspect of the hearing, however, was that all the requests for greater control of forestry came from regionally and nationally based agencies and groups, while locally support for the District Council and the proposed change was led by Federated Farmers and the Farm Forestry Association. The New Zealand Forest Owners' Association and the Ministry of Forestry have also supported the proposed change.

The debate really comes down to priorities among issues which focus upon the maintenance of the life-supporting capacity of the soil, enabling people and communities to manage resources for their social and economic wellbeing, the protection of landscapes and natural values, and the possible effects of afforestation of tussock grasslands in reducing water flows.

These are all matters that hinge around Part II of the Resource Management Act 1991. Part II concerns the purpose and principles of the Act. (Sections 5-8). One

of the key problems in resolving the debates regarding the proposed change is the absence of case law to assist in the interpretation of Part II of the Act. As a result, it is probably fair to say that all parties are to some degree developing and pursuing interpretations that support their own particular goals. It is to be hoped that the Commissioner, Mr Hearn, will provide authoritative guidance in this area. No doubt most parties will review their position and arguments in the light of his conclusions.

From a forestry perspective the landscape debate in the South Island high country was always going to be the Resource Management Act equivalent of the former debates under section 3(1)(d) of the Town and Country Planning Act 1977. (Protection of land having high actual or potential value for the production of food.) The debate is interesting in that while there is a strong lobby against forestry in the largely treeless Mackenzie Basin you do not hear equally vociferous calls to remove the existing exotic trees from the landscapes around Hanmer, Naseby, Queenstown and Tekapo, for example. What it reveals is that there will always be a bias towards the current landscape.

Using the Resource Management Act to implement the Protected Natural Areas (PNA) Programme is interesting because it would deliver a form of blanket protection to recommended areas for protection (RAPs) in the Mackenzie Basin. (Assuming it is not just targeted against forestry, but will be applied to all activities that may affect the identified natural values.) It would be stretching reality to call this a negotiated process, negotiation not having been a feature of implementation to date. The Mackenzie situation must cause some alarm for land holders nationally.

The potential effect of forestry on water flows was a late runner in the debate, but was pursued with vigour at the hearing by ECNZ who sought the withdrawal of the Proposed Change until substantial research on this issue has been undertaken within the Basin. Apart from the fact that something in the order of 90% of the water flows of the Mackenzie Basin originate in areas beyond the physical limits of forestry, and any effect of extensive afforestation on water flows must consequently be small, it has also raised the issue of whether it is reasonable for land holders to expect to have first use of rain that falls on their properties. Should it be



These hieracium-covered flats on Grays Hills Station have been retired from grazing for almost a decade. The area is near the centre of the Mackenzie Basin and has an annual rainfall of about 470 mm. The 70-year ponderosa pine plantation visible in the distance carries a standing volume of about 350 m³/ha. Photo: M. Belton

decided that this is not a reasonable expectation, then there must be some concern as to where the Act might next take resource management planning.

At the end of the day, however, there remains the issue of extensive and severe land degradation. One must ask the question whether restraining forestry in an attempt to "protect" the existing landscape and natural values at the expense, to some degree at least, of soil values, is true conservation? The situation is serious in much of the Mackenzie Basin and a good case can be made for all land uses which could help mitigate land degradation being given the fullest encouragement through the District Plan.

Decisions on submissions to the Proposed Change will hopefully be available in early 1994. In the meantime, for those interested, the transcript of the evidence presented at the hearing is available. It runs to three volumes and 660 typed pages!

John Novis



Redwood revisited

Sir,

I note that Bill Libby (NZ Forestry, Nov. 1993, p. 5) claims that Coast Redwood is "difficult to establish". He includes a photo of the Skyline-Skyrides 1984 plantings of this species on the lower slopes of Mt Ngongotaha, the caption of which contains some incorrect information.

The myth that redwoods are difficult to establish arose because much of the early planting of this species failed. The reasons for this are unknown. In the mid-1970s I was asked to investigate this myth by establishing redwoods near Ruatoria and in Mangatu Forest. The background to this was that redwoods grown in the East Cape region had wood properties similar to those found in California, and that one strategy for the slumping mudstone country in this locality would be to establish redwoods to be grown to large size and then logged by helicopter by single tree selection. This kind of stand would provide a permanent anchor for the land and would obviate any adverse effects of logging on the soil.

Trials were established in Mangatu Forest in areas already planted with radiata pine two years previously, because there was some evidence that redwoods need shelter. At the lower altitude, some

300 m asl, on a very exposed wet site, the redwoods were badly toppled after planting directly in rank grass, although most of them survived. At the higher altitude, some 1000 m asl, survival and growth were excellent.

In June 1984 Skyline-Skyrides Ltd asked me to advise them on a crash planting programme. They wanted something pleasant to look at which would eventually be saleable as a valuable timber. The site was run-down, reverting hill pasture which hadn't been topdressed for years. I recommended Coast Redwood, which they accepted. Groups of three trees more or less at three-metre spacing, were planted along the contour with 10 m centres. The idea was to thin them irregularly, and to prune them progressively, to give in due course a more or less irregular, natural-looking stand.

Contrary to the photo caption, trees were obtained from four nurseries and varied considerably in size and quality. The largest were between 75 cm and 1.25 m tall; others were 22-36 cm tall; the smallest around 15 cm tall. All had reasonably good fibrous roots due to wrenching.

The planting gang, fortunately, consisted of people who had no previous experience of planting, so I was able to give them precise training which they adhered to religiously. On arrival, tree bundles were dunked in water and thereafter planted as rapidly as possible in grass-free planting spots which had been sprayed with glyphosate four weeks previously.

Survival was over 95% but unfortunately the management introduced sheep and a few goats which made short work of the small seedlings.

The lessons to be learnt from these experiences is that, contrary to myth, Coast Redwood is easy to establish provided grass competition is eliminated, seedlings are well wrenched, and properly handled in transit and planting.

C.G.R. Chavasse

The Redwood Grove

Sir,

It was a delight to read about "Redwoods" in the November issue of NZ Forestry, with the article by W.J. Libby (Redwood - An Addition to Exotic Forestry), and also some comments on the Redwood Grove by Dennis Richardson (Thinking Aloud).

Both authors brought back strong memories for me of the redwoods in Whaka forest, especially Richardson's

statements about the Redwood Grove being previously a "failed larch mixture closed to the public"; thereon hangs a tale.

An opportunity was taken in 1968 to fell and remove the dead and dying larch from the Grove area, which had been planted in 1901 and remained untouched for 60 odd years. The larch were not only ugly, but could be a terrifying sight under certain strong wind conditions, and extremely dangerous. They were mainly whips, 20 to 30 metres in height. Very little light came through the canopy in summer, and masses of dead larch needles suffocated any vegetation trying to grow on the forest floor.

Because of "closed gates" at that time, only a few privileged members of the public and Whaka and FRI staff could visit the Grove.

Unfortunately, an FRI scientist wrote to the Minister of Forests at the time (Duncan MacIntyre) saying that "Cooper was destroying the Redwood Grove" in relation to the larch thinning operations. This accusation led to a flurry of telexes between the Minister, the Director General of the Forest Service (Lindsay Poole), and the late Dave Kennedy, Conservator of Forests, Rotorua.

Dave Kennedy advised Lindsay Poole that it was a "Bert Roche" situation and the Minister should be advised accordingly. Duncan MacIntyre was subsequently very keen to hear about the Bert Roche diction (basically fools and idiots should not be shown, or asked to comment, on a job half done!).

Dave Kennedy's reply was a masterpiece of diplomacy and evasion. He gave me all the correspondence with the comment that he "would probably get the sack", but that never happened, of course.

The photograph by J.C. Libby in "Figure 3 - The Long Mile Redwood Grove in Rotorua Planted in 1901" (Redwood an addition to exotic forestry), shows that all the trauma of thinning out the larch has paid off in the long term. The heavy undergrowth of *Cyathea* and *Dicksonia* species is one of the outstanding developments in the Grove, another being that public visitors must have run into a total of several hundreds of thousands since the late 1960s. It is good to see the Grove being maintained and enjoyed still.

In the rest of the compartment adjoining the Grove, the larch plantings succeeded and redwoods of any size were scattered and others suppressed. The larch was very heavily thinned in order that further redwoods could be planted and the original redwoods develop further. This has also been successful. Richardson was wrong when he stated in "Thinking Aloud" that the objective for the area may have been "coming perilously close to