

11. INDIGENOUS FOREST MANAGEMENT

Land settlement in New Zealand by Europeans was for the purpose of milling the vast natural forests existing here or for the establishment of grassland farming. In the first 100 years of European settlement to 1930, most forests on accessible land had gone.

Laing and Blackwell, in their 1907 book “Plants of New Zealand”, stated that in 1893 the area still bush-clad was estimated at 20 million acres (8 093 700 ha). It was being reduced by 100 000–200 000 acres per year (40 500–81 000 ha). Only a very small proportion of the timber was utilised; most of it was burnt on the spot.

Areas of good soil and contour became well grassed and formed the basis of the farming industry. Marginal land with steep contour, poor drainage, or low fertility often regenerated into manuka or fern, then back to bush. Secondary clearing of this type of land occurred when farm prices were good, or with Government incentives such as the Land Encouragement Loans of the 1970s. By then large tractor machinery and the widespread use of herbicides made land development easier.

Exotic forestry by the State, until 1970, was largely confined to these poorer sites not wanted for farming. The main exception was Kaingaroa Forest and the private NZ Forest Products Ltd forest on the pumice lands south of Rotorua, and this was only because farmers regarded this land as “cattle sick”—a problem later found to be easily cured by trace elements such as cobalt.

With the benefit of hindsight, and serious storms such as Cyclone Bola, we now know that the grassing of hill country of some soil types was a mistake, causing tremendous erosion, degrading the slopes, and silting up the valleys and plains.

Many farmers were pleased to have remnants of native bush on their properties, and gradually, as its value became demonstrated in a number of ways, other landowners have fenced, preserved, or planted native trees.

As the bush dwindled, the conservation movement became more strident—from the preservation of Waipoua Forest campaign led by Professor W.R.McGregor in the 1950s, to the huge petition collected by the Native Forest Action Council in 1978. This petition of 340 000 signatories was known as the “Maruia Declaration”, and called for the preservation of most remaining native forest and, with few exceptions, the cessation of logging within them. The “Beech Scheme” for the West Coast was undoubtedly the catalyst for this petition.

In 1991, the New Zealand Forest Accord was signed by a mix of forestry and conservation organisations which recognised the important heritage values of remaining indigenous forests, acknowledging that the existing area of natural forest should be maintained and enhanced, but defining areas in which it was appropriate to establish plantation forestry. The signatories to the Accord, including the conservation groups, supported production, management, and harvest if done in a sustainable manner.

Unfortunately, three of these groups have gone back on this, and are calling for total cessation of all logging in all indigenous forests.

The Accord also stressed the mutual benefits emanating from an agreement between commercial forestry enterprises and conservation groups.

Dugald Rutherford, then President of the Association, said farm foresters had no problem in signing the Accord as farmers had occupied a middle ground between environmentalists and forestry companies for many years.

At the first AGM of the Combined Farm Forestry Association in 1958, the Lower North branch raised the issue of possum control to save areas of native bush. This problem remains a huge cost to the country, with a biological control the only hope of real progress.

Jack Stronge from Taranaki stirred conservationists when he wrote of cutting and preserving native trees for use as posts on farms in *FF* 2/2 May 1960.

FF = the journal *Farm Forestry*, *TG* = *Tree Grower*

Byron Collin of Southern Hawke's Bay Branch replied in the following issue, hoping farmers would preserve their native bush, and grow exotics for commercial use.

Kauri Management

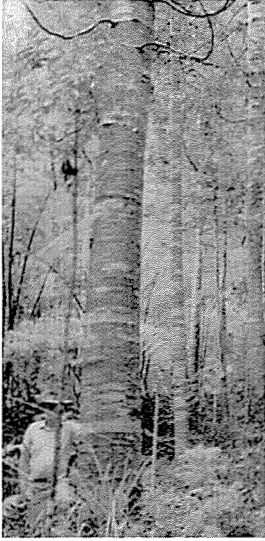
Lower North branch reported in *FF 6/1* February 1964 on a solitary kauri tree that had been left from an 1854 owner of Selwyn Lloyd's property at Wainui, to build a home for the owner. It was not required and was valued at the time at \$2-00. The value was put at \$84-00 in 1913, and estimated to be \$1000 in 1964. The tree was then 19 m to the first branch, and 7 m in girth. At a possible royalty of \$2000/m³ today, the value of this 19-m log would be about \$120 000. One kauri tree would be worth 2–3 ha of *P. radiata*.

“Martha Bracken” of Ohaupo, wrote in *FF 10/3* August 1968 of her efforts to grow kauri from seed with no result. She was finally given seedlings and handled them with great care. After 3 years of very poor growth she moved them to a different site but they still looked miserable. She concluded “I wish I preferred to grow marigolds ... but then, what would there be to look forward to?”

At the other end of the scale, Forest Ranger Wulf Young reported in *TG 6/3* August 1985 on the rapid growth of kauri seedlings on Great Barrier Island where the Forest Service were planting about 12 500 trees a year. Growth of up to 1.2 m was recorded in 1 year, with the trees needing a stake to support them. Unfortunately, new policy meant the end of planting, and so much logged and burnt forest would now take hundreds of years to restore itself.

Ian Barton, now a forest consultant, but for many years manager of the Auckland Regional Council forests at Hunua, has worked a great deal on the establishment and management of kauri. He wrote three articles on managing kauri on the farm, in *TG 15/4* November 1994, *16/3* August 1995, and *17/2* May 1996. These articles covered seed collection and treatment, germination, and planting when at least 40 cm high, which takes 2 to 3 years.

Ian went on to say that although they are known to grow on poor soils, kauri are very slow in such situations, as is their



A thinned plot of kauri which has had nitrogen fertiliser applied.

growth under the shade of other trees. They grow best on fertile, damp, well-drained soils in a sheltered situation. An open site is best but, in order to achieve self pruning, trees need to be spaced at no more than 2×2 m, and so interplanting with say *Acacia melanoxylon* or *Pinus elliottii* could save money.

The final article Ian Barton dedicated to Neil Barr who had died a few months earlier. Ian referred to Neil as Te Matua Ngahere of farm forestry. Neil had asked Ian to write the articles as there was much interest in growing kauri on farms.

This third article discussed growth rates, and silvicultural management of kauri. It stated that dominant trees grow well regardless of thinning, but small trees grow very slowly until thinned and then growth accelerates. Diameter growth rates of 0.85 cm per annum were registered in the top 100 trees/ha.

Ian Barton suggested harvesting when the largest trees were 70 cm in diameter, and not cutting anything less than 50 cm. A harvest of perhaps 100 trees/ha every 25 years could be maintained, with replanting, fertiliser, and good management. This was on a site at Mangatangi.

Special Uses for Native Timber

Figures comparing the strength of hickory tool handles with that of tawa and kanuka were provided by the Forest Service in *FF 11/3* August 1969. Tawa was considered satisfactory for handles subject to bending stress, while kanuka, particularly when selected for straight grain, was suitable for handles needing impact strength, though still well short of imported hickory.

FF 12/1 February 1970 carried an editorial from President Allen Calvert commending the “Save Manapouri” campaign which was then stirring conservationists. Here a successful campaign was organised to prevent the proposed power scheme from allowing more than small defined limits in the rise and fall of the lake.

T.A.Foley from the Forest Service addressed the 1970 Conference on the use of hardwoods. He referred particularly

to the use of beech, saying that the successful exploitation of beech was dependent on harvesting the whole forest, and using the raw material according to its suitability. This would include chipping of low-grade material and the production of flooring and furniture from clean boards.

Professor Peter McKelvey addressed the 1975 Palmerston North Conference. After describing the remaining indigenous forest in New Zealand, he considered the small-scale management of modified remnants of native bush still found on many farms. He suggested the co-ordination of management within districts, possibly co-operatives, to maintain a market in certain species in a sustainable way, but considered that unless good marketing was associated with good prices, such an operation would not be profitable to the farmers involved.

An interesting table of species was included in this paper, published in *FF 17/2* June 1975. Silvicultural features and timber properties of 19 species were described.

Peter McKelvey spoke of the non-timber values of amenity, erosion control, shelter, and protection of water supplies, and suggested that the current Forestry Encouragement Grant could extend to the fencing and tending of indigenous forest remnants. He said that the appearance of the countryside was greatly enhanced by these remnants, and suggested some recompense to farmers who looked after such areas.

Hew McKellar of Feilding also encouraged farmers to look after forest remnants (*FF 17/4* December 1975). He emphasised the need for fencing and for obtaining help from botanists in recording the species growing in the block.

Nursery Practice and Establishment

A.E.(Tony) Beveridge of FRI wrote a wide-ranging article on native trees on the farm in *FF 19/3* 1977. He suggested that at present emphasis should be on the conservation of remnants rather than on utilisation, as clearing of privately owned forest land appeared to be continuing unabated, with only token gestures in creating reserves.



Large kahikatea seedlings which, after wrenching, will be suitable for bare-rooted planting.

He described the methods developed at FRI nursery to produce large bare-root seedlings of some 40 species, using wrenching techniques developed for exotic trees. Specimens 1-m-tall of many species could be achieved in 3 to 4 years, and had been found to handle and transplant well. (Although there has been a big increase in the number of native trees grown in recent years, they are almost all container-grown, and very often small in size. It is a pity that the FRI experience has not been commercially developed.)

Tony Beveridge mentioned that broadleaved trees and shrubs were more affected by browse of both domestic animals and possums, and were also more at risk from spray drift of such herbicides as 2,4-D and 2,4,5-T.

He stated that seedlings were very intolerant of grass competition, and needed to be kept clear until about 2 m high. Slow-acting fertilisers were also beneficial to early growth.

Tony Beveridge said that nurse species were often necessary to get forest trees away in an open situation, and recommended starting with flax, cabbage trees, manuka, kanuka, coprosma (some species), and certain species of *Pittosporum* and *Hebe*.



Hardwood seedlings are undercut and wrenched with tractor-mounted machinery. Conditioning encourages the formation of compact fibrous root systems.

John Herbert of FRI wrote in *FF 20/3* August 1978 of germinating a variety of seedlings by raking duff from nearby native forests, sieving the coarse material out, and sowing in seed boxes. Surprising numbers and varieties of trees and shrubs usually germinated, some of them not growing in the parent bush, and so obviously brought in by birds. Late autumn was the best time for such seed collection.

Allan Summers of FRI also described raising your own seedlings, and their establishment, in *TG 1/3* August 1980.

The Annual Report of the Director-General of Forests, Andy Kirkland, in 1984 reported that 250 000 native trees had been planted to enrich natural forests the previous year, while tending operations such as fertiliser application, freeing seedlings from weed growth, and pruning were carried out over 970 ha of native forest.

Queen Elizabeth the Second National Trust

The Queen Elizabeth the Second National Trust: Open Space Covenants, were introduced in 1977, to give landowners the opportunity of binding themselves and their successors for a fixed period of time or in perpetuity to set aside part or all of their property for the “provision, protection, preservation, restoration, enhancement, and use of open space”.

Gordon Stephenson, a farmer and conservationist from the Waikato, used his Federated Farmers position (Head of the Dairy Section for 4 years) to push for acceptance of the principles of the Trust. Although Gordon was concerned that the name chosen for the Trust did not describe its activities, he was pleased to use a piece of native bush on his Putaruru farm to become the first ever area to be covenanted under the QE II National Trust.

There was no set formula. Covenanted land could vary from a few hectares of native bush to a whole area of property of good landscape value which was still farmed.

It was defined when set up in each case to show permitted activities, and obligations of the owner or the Trust which might assist in fencing costs or in track formation. Trees

could be felled only with the approval of the Trust, or further tree planting or improvements could be carried out under the direction of the Trust.

The covenant was registered against the title under the Queen Elizabeth the Second National Trust Act 1977.

Since 1977, the Trust has been successful in having over 1000 covenants registered, and has been a considerable influence in maintaining remnants of native bush, and in keeping landscape values.



A remnant area of native forest which requires protection as, without fencing, it will disappear.

Bruce Treeby described in *TG 3/3* August 1982 how the Trust was preparing a practical manual entitled “A Guide to Revegetation Using New Zealand Native Plants”.

Bunny Mortimer, a Director of the Trust for 7 years, reported (pers. comm.) that the Department of Conservation and some local bodies also have schemes for the preservation of bush on private land. The privately funded Native Forests Restoration Trust buys forested land which is under threat of being felled, saving about 200 ha per annum, and the Government provides money to the Forest Heritage Trust, and for Maori land to Nga Whenua Rahui, as part of the Indigenous Forest Policy to give the option for preservation of native forest on private land.

Since 1990 these two funds have been responsible for the protection of approximately 224 000 ha of forest.

Members' Efforts

Allan Totty of Stavely wrote of his land development retaining native trees (*FF 20/4* November 1978). In developing a 32-ha block of native grasses, bush, and gorse into productive farmland, he retained the native trees for—

- conservation of both the trees and large boulders,
- economy where complete land clearing would have been expensive,
- shelter and shade needed on his farm, and
- amenity where the trees create a park-like effect.

The cover of *TG 4/3* August 1983, and an article within, showed some of the efforts made by Bill Whittle of Puketitiri, Hawke's Bay. Bill had protected bush remnants by fencing and enrichment planting, and had planted low shelter of cabbage trees and flax. The property created a most attractive landscape. Bill Whittle wrote in the Hawke's Bay newsletter, 1985, encouraging local farmers to fence off and look after any remaining native bush, to break the "grass desert".

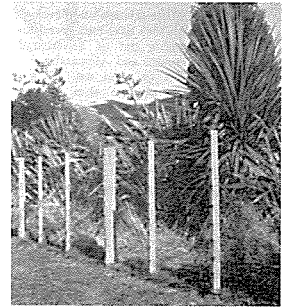
Bill Gimblett drew up a list of hardy native plants growing in a harsh coastal environment near Tuatapere in Southland. He suggested in *TG 5/1* February 1984 that many of these species would be useful farm shelter.

Totara Management

John Millett wrote a piece on the pros and cons of growing totara on his farm in the Lower North newsletter, 1987. He concluded that the pros won, with no fencing necessary, and with the totara providing high-quality timber growing well on exposed sites as well as giving soil stabilisation.

Dr Tom Richardson, FRI, reported in *TG 17/1* February 1996 on work done by FRI in DNA fingerprinting totara to observe its variation from one end of New Zealand to the other. Considerable variation was found and, combining this knowledge with the physical characteristics of the tree, there would be potential to increase tree quality through tree breeding, should plantations be envisaged.

A detailed article on totara by Rachel Ebbett was carried in *TG 19/4* November 1998. All aspects of the tree were



Low shelter using native flax and cabbage trees.



The clean bole of a fast-growing lowland totara.

considered, from germination of the seed to the use of the tree as a plantation species. Totara is one of the fastest growing New Zealand timber trees, with a height of 17 m and a diameter of 61 cm being recorded after 60 years.

Rachel Ebbett gave a planting regime for totara as a timber tree, recommending that growers gain consent from local councils to avoid any problem in harvesting in the future. She suggested planting in manuka or kanuka as a nurse crop, planting seed of local origin at about 2×2 m spacing, and thinning later to 4 m spacing.

A paper on the replanting of logged areas of the Mamaku Plateau was given in *TG 9/2* May 1988 by David Bergin, George Pardy, and Tony Beveridge, of FRI. This described the planting of mostly rimu, kahikatea, and totara, with some tanekaha and matai, on this cool moist site with a history of logging. Bare-root seedlings of 30–40 cm were used, and the survival rate after 25 years was 45%–70%.

Bergin and Pardy had a further article in *TG 11/3* August 1990 on a survey of planted native trees. A table of 24 species with height and diameter measurements gave figures for 30- and 60-year-old trees. Much older specimens were also measured and photographed.

Additional measurements in various sites around the country were recorded by the same authors in *TG 13/1* February 1992, in which 26 years of growth were measured and photographed.

George Pardy and David Bergin transferred their attention, in *TG 10/1* February 1989, to the raising of native hardwoods. Kohekohe, titoki, rewarewa, pukatea, mangeao, and puriri were sown in outdoor beds, then the following year lined out to give more room for development. The trees grew well, handled machine wrenching well, and were suitable for transplanting at age 2 or 3 years. The first trial planting near Auckland occurred in 1987, and will be monitored for growth and survival.

Beech Management

Beech forest with its various species and hybrids covers vast areas of Nelson, Westland, Southland, and also the

central mountain ranges of the lower half of the North Island. Conservationists have long wished for these forests to be closed to all milling, while commercial ventures have argued for milling or chipping for pulp. The 1991 Accord found agreement whereby most beech forest is now safe from exploitation, but where it occurs on private land, there are now examples of good sustainable management.

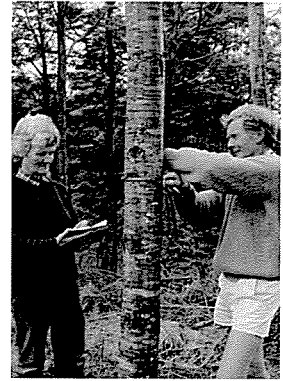
The 1990 Conference in Christchurch provided the opportunity of visiting John and Rosalie Wardle's property at Coopers Creek near Oxford. Here the Wardles had developed a diversified forestry and farming operation, with sheep, *P. radiata*, beech management, and honey dew harvesting.

Their 84 ha of black beech forest were being managed to provide high-quality furniture timber on a 50-year rotation, and 200 hives were producing honey dew from the beech trees. Small areas of no more than 0.8 ha were logged and allowed to regenerate, with thinning and pruning of seedlings aiming at a 45-cm log with a 75-mm knotty core.

Degrade wood had previously been sold for pulp to a particleboard factory but then was being sold as firewood, while John cut the good logs on his Varteg mill. About 1 ha of pruned beech sawlogs a year, a similar area of *P. radiata*, plus honey dew and sheep products had the potential to provide an income for six people, all from 120 ha, on a sustainable basis, provided the logs were sawn on the property.

The Wardles had a collection of beeches from New Zealand, Australia, and South America, and John had written a well-researched book on "The New Zealand Beeches" which was published by the NZ Forest Service in 1984.

TG 15/4 November 1994 carried a more-detailed description of the Wardle's operation, written by Ian Platt from the Ministry of Forestry. This article had excellent photographs of black beech, from regeneration through thinning to milling. It also showed a plaque presented to John Wardle by the Minister of Forests, the Hon John Falloon, recognising the first sustainable forest management plan approved under the Forests Amendment Act 1993.



John and Rosalie Wardle measuring 17-year-old beech (average dbh 12.5 cm).



Peter Topping explaining his beech forest management at a field day at Glenhope.

John and Rosalie Wardle were the South Island Farm Foresters of the year in 1995, receiving their Husqvarna chainsaw and vacuum cleaner at the Tauranga Conference.

Bruce Treeby described this operation in *TG 11/2* May 1990, and another privately owned beech management scheme was described in *TG 12/3* August 1991 by Fred Braxton. Peter Topping was managing a 400-ha block of moderate to steep beech-clad hills as a family trust. Peter wanted to demonstrate an alternative to large-scale clearfelling for chips which had taken the forest from parts of the block earlier. With three assistants, he was harvesting 4 ha/year on a 100-year rotation. Regeneration of previously logged areas had very dense regrowth of red and silver beech, with frequent heavy thinning required during the rotation. To avoid pinhole borer numbers building up, slash needed to be removed.

The team had markets for all the wood they could produce, doing their own milling. Drying of the boards was slow, and finished in a kiln at Richmond. Visitors were shown how a sustainable, community-based living could be achieved from caring for the land instead of allowing it to be logged for the short-term gain of big business.

Hew McKellar raised an often-discussed topic in *TG 11/2* May 1990 when he took issue with conservation purists who wanted only local populations of plants used for seed in regenerating or blanking native bush remnants. He described the geological changes that have occurred with ice ages and changing sea levels, and the movement of species under such conditions.

He also advocated planting exotic trees, *P. radiata* if necessary but preferably *Acacia melanoxylon*, in fenced-off areas so that periodically an income was available for refencing and maintenance. It was not possible to rely on outside money being available for such work.

A letter to *TG 11/4* November 1990 by Peter Wardle and Eric Godley took exception to the “purist” comment above, and gave reasons for the use of local genetic material in revegetation.

A Balanced View

Geoff Chavasse of FRI, had a considerable influence on many farm foresters, and his address to the 1990 Conference in Auckland (published in *TG 11/3* August 1990) was a very impressive wide-ranging discussion on many aspects of forestry—including an attack on monetarism and its lack of understanding of long-term forestry investment.

Geoff clearly defined sustained yield, with many New Zealand and overseas examples, and decried the lack of political understanding that was at that time contemplating selling State forests after having already destroyed the Forest Service. Covering some six pages, this paper was a fine outline of the benefits of indigenous and exotic forestry, and the increasing role farm forestry would play.

Geoff Chavasse also gave the opening address to the Greymouth Conference in 1994, where he gave an amusing but informative outline of his days in Westland, and of the whole debate concerning the milling of native forest on the Coast. At the Conference, Geoff and Shirley Chavasse were presented with a jewel box made from figured West Coast rimu, in appreciation of their support of the New Zealand farm forestry movement.

John Prebble wrote about native trees for shelter in *TG 12/1* February 1991. He listed a number of species, for both inland and coastal conditions, that provided excellent low shelter in the severe North Otago climate. While realising the need for tall shelter such as *P. radiata* or *Eucalyptus nitens*, John encouraged farmers to use natives both for low shelter and for conservation values, particularly for the encouragement of birds and bees.

John Beachman spoke to the delegates of the 1991 Conference at Ian Page's property near Whangarei, on the work of the Department of Conservation with its \$90m budget. He said that most of New Zealand is not owned by the Department, that many endangered species are not on protected habitats, and that by using such vehicles as the QEII Trust or the Reserves Act farmers could help considerably in the total conservation effort.

Following on from the success of the Farm Forestry Course at the Open Polytechnic of New Zealand, Bruce

Treeby produced the New Zealand Native Plants Course in 1992. This course covered not only the growing of native plants but also the whole ecology into which they fit and their origins, and provided information enabling students to take part in revegetation projects.

The Forests Amendment Act 1993 was outlined by Tony Newton of the Ministry of Forestry in *TG 15/2* May 1994. This Act encouraged forest owners, sawmillers of indigenous timber, and exporters to ensure forests were managed according to sustainable forest management principles.

Tony envisaged prices for native timber going through the roof—he said kauri had already increased 20 times over the previous few months—but this would encourage the manufacture and sale of high-value products.

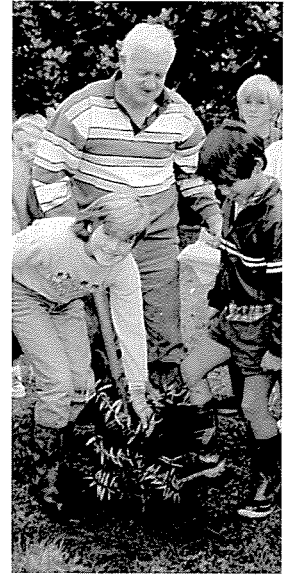
Permits would be necessary to harvest trees from small forests, and limited to 10% of the merchantable timber present in the forest block. Return harvesting would not be permitted until growth had replaced the timber taken. Permits would also be necessary to mill very small quantities of timber for the owner's personal use, it must be milled by a sawmill registered to mill indigenous timber, and the timber was not to be available for sale.

Peter Allan, a forestry consultant from the West Coast, gave advice on managing patches of native bush for conservation and sustainable yield, in *TG 16/1* February 1995. He described how an agreement with the Crown could be registered against the land title to perpetuate the native forest, but also allow sustainable production of timber.

Of the total privately owned indigenous forest (mostly small to medium-sized holdings), it was considered that about 700 000 ha were suitable and available for the production of timber. On a sustainable basis this should give an annual yield of at least 630 000 m³ which, allowing a 50% conversion, would yield 315 000 m³ of sawn timber. The annual cash value of this would be about \$190–250 million. Processed, this could mean about a \$2 billion annual return to the industry.

Roger MacGibbon of Taupo wrote in *TG 15/4* November 1994 of the work of the Taupo Native Plant Nursery, originally set up by the Ministry of Works in 1960 to produce native plants for revegetating the land around the Aratiatia Dam. Through various changes in ownership, the nursery had continued to supply native plants for a wide variety of sites, and had been particularly keen to source parent material from close to where the trees were to be planted. Roger encouraged landowners to plant natives for timber production, manuka for oil and honey, and various species for shelter.

John Bell from Mid Northland, in *TG 16/4* November 1995 described the “Puririlands” property of Geoff and Pat Wightman near Okaihau. While Pat was running the Kerikeri Wool Shop, Geoff was growing a variety of native tree seedlings for sale and, in his spare time, making furniture or turning attractive pieces from native timbers. Several field days have been held at Wightman’s property, with visitors wandering under the huge old puriris. Geoff has contributed a great deal to farm forestry for probably 30 years or more.



Geoff Wightman shows children how to plant a kauri tree.

Indigenous Forestry Action Group Formed

Increased interest in indigenous trees resulted in the convening of the NZ Farm Forestry Association Indigenous Forestry Action Group following the Greymouth Conference in 1994. A registration form for membership appeared in *TG 15/4* November 1994, with Iain Macdonald of Winton as the Convener. Iain owned 550 ha of silver beech forest in Southland, and had recently had a sustainable management permit approved by the Ministry of Forestry. Members looking at production forestry from native trees, or with any interest in native trees, were invited to join, and it was hoped other organisations representing indigenous forest owners would also join.

Ket Bradshaw announced a seminar for the new Action Group, to be held in Christchurch on 21 and 22 July 1995. This meeting created a lot of interest with 80 people attending, and speakers included the Association President Graeme Flett, Tony Newton from the Ministry of Forestry, Dr John Wardle, Roger MacGibbon, and others. Those present agreed to change the name of the group to the Native Forestry

Section of NZFFA. This name was amended at the first committee meeting to the Farm Forestry Indigenous Forests Section (IFS).

The initial executive comprised Dr John Wardle as President with Iain Macdonald as Secretary, and a committee of Bruce Lightfoot (West Coast), Peter Topping (Nelson), Hugh Riddiford (Hawke's Bay), Ian Barton (South Auckland), and Grant Rosoman (Auckland).

A field day on 22 July was held at Wardle's property, with snow covering the ground and trees.

At the first committee meeting in October 1995, Ket Bradshaw recommended that the group be considered as a section of NZFFA, and that it operate like a branch. A subscription of \$15-00 was set (above the Association subscription). There would be an annual meeting at each conference, with newsletters sent out as required, and input to the *Tree Grower* on indigenous forest topics.

Eight aims and objectives were established, to promote indigenous forestry in the widest possible sense, and these were set out in *TG 16/4* November 1995.

These objectives were just as much about amenity and protection where appropriate, as they were about production of wood. They were certainly about encouraging restoration and establishment of indigenous communities, whether for production, protection, or amenity.

The second annual field day of the IFS was held at Peter Topping's property in Nelson (described under "Beech Management"), with over 100 people attending. Peter's operation in which he harvested an annual cut 20% less than the forest's annual increment, was well discussed.

Means of controlling a build-up in pinhole borer were outlined. John Wardle made a strong case for management of natural forests. He said that just fencing and leaving forest remnants would not stop the decline unless efforts were made to control pests and maintain the species diversity.

This topic was covered in much more detail in *TG 17/2* May 1996 by Roger MacGibbon.

At the Nelson Conference in 1995, the IFS committee discussed committee membership to represent such a diverse group, and the Indigenous Forestry Handbook being prepared by the Ministry of Forestry and NZFFA with financial help from the Farm Forestry Foundation and Timberlands West Coast Ltd. The committee could also see the need for some form of certification for the sale of wood products, so that they were seen to come from environmentally managed forests.

Roger MacGibbon wrote of establishment methods for native trees in *TG 17/3* August 1996, covering herbicides, pest control before planting, hardening-off of nursery stock before planting, planting techniques, and protection by adequate fencing.

Ket Bradshaw accompanied the Minister of Forestry the Hon Lockwood Smith, and the Chief Executive of the new Ministry of Agriculture and Forestry Dr Bruce Ross, on a visit to John Wardle's property in 1997. The visitors were able to see the operation, and discuss the way such forest management fitted in with the Forests Amendment Act and the Resource Management Act. Ket explained in *TG 18/4* November 1997 how the Wardles were able to sell low-quality material as firewood, but in other parts of the country where this was not an option, chipping should be permitted as it would help with the viability of the operation and maintain forest health by reducing slash for pinhole borers.

The Indigenous Forestry Handbook was available in 1998, at \$25 per copy, and represented a great contribution from Roger MacGibbon for the Association and IFS, to go with the work of the Ministry of Forestry. The book is an excellent introduction to sustainable forest management in indigenous forestry.

Roger May from Motueka wrote in *TG 19/5* February 1999 of the move toward forest certification by the IFS. A steering group including four members of the Association had been set up to look at options and draw up standards which would be acceptable under the Forests Act. This would involve a legal entity closely linked to the Association. It would provide a management system for participants to

enable them to market their products to the best advantage, both domestically and internationally.

At present (1999) before the Waitangi Tribunal is Claim No. 262. This Claim seeks Maori ownership over natural resources including flora and fauna, and seeks to participate in or benefit from technological advances as they relate to breeding or genetic manipulation.

While far too early to understand the outcome of this Claim, it is possible that some royalty system could apply to all native plants sold or bred for sale, which in turn could have a detrimental effect on research and future planting of native trees and shrubs.

The membership of the Association has seen a rapid change in the way we have viewed our indigenous flora over the past 50 years. There have been many fine examples of members covenanting areas of bush under the QE II National Trust, or just fencing and protecting bush remnants.

We have passed through an era of rapid demolition of marginal bush under agricultural development subsidies, through a period when the conservation movement became perhaps too strident and demanding. Recent surveys by the Ministry of Agriculture and Forestry show the area in indigenous forest is currently increasing at an appreciable rate.

The establishment of the IFS within the Association, the move toward certification guaranteeing sustainable management practices, and the pride many people now take in growing natives or using small amounts of wood for high-value furniture and turnery, are surely a sign of the nation's maturity.

What is particularly noticeable is the calibre of the people leading the indigenous forestry movement within the Association. Perhaps the reasoned thinking of foresters such as Lindsay Poole and Geoff Chavasse from that much-maligned Forest Service will finally be recognised.