

firewood, and honey produced from its nectar is unpleasantly bitter, but if you wanted to poison someone you might find latex helpful.

Kenya's podocarps

I do not know how the biogeographers explain it, but Kenya's two principal indigenous quality softwoods are podocarps. They are *Podocarpus falcatus* and *Podocarpus latifolius*. You do not have to be much of a botanist to notice close relationships with our New Zealand podocarps. Like our rimu, the male and female trees grow separately and both *P. falcatus* and *P. latifolius* have foliage like miro or matai. Except for the presence of elephants or giant wart-hogs, if you are an antipodean three thousand metres up Mt Elgon looking at these handsome podocarps through the fronds of punga-like *Cyathea* tree fern species you could easily imagine yourself transported magically back to the Tararuas.

Plantation trees of Kenya

Kenya's plantation species are familiar to New Zealand foresters too.

Radiata pine represents about 10% of all planted trees in Kenya. (I saw some which Jomo Kenyatta was coerced into planting when he was an internee during the Mau Mau rebellion.) Patula pine accounts for nearly 30% and *Cupressus lusitanica* over 40% of Kenya's plantations.

Pinus radiata

Some of the radiata pine I saw on the road towards Eldoret looked very vigorous, but according to Noad and Birnie in "Trees of Kenya" it is "unfortunately no longer planted in Kenya following heavy attack by the fungus *Diplodea* and by woolly aphids. In 1969 further planting around Nairobi was prohibited and trees within the city boundary had to be felled."

Cupressus lusitanica

This has been the most successful plantation tree in Kenya, reaching marketable size in 20 years. It grows best at more than 1500 metres a.s.l. with good soil and fair rainfall. Because of their plyable nature, the pruned branches are in high demand for the construction of lattice work for mud and straw native huts. This means the species is producing ample clearwood.

A message for New Zealand border control services

Unfortunately, all of a sudden, a majority of Kenya's beautiful *C. lusitanica* stands and hedgerows have begun to die. The devastating mortality is attributed to an unknown pathogen disseminated by a new aphid immigrant from Zambia.



Tree groundsel and giant lobelia on top of Mt Elgon, Kenya.

This Kenyan experience with both *Pinus radiata* and *Cupressus lusitanica* is a sobering lesson for New Zealand. It is vital that we maintain vigilance on our border and stop any unwanted tree pathogens from entering the country. Unfortunately, the New Zealand Government is doing just the opposite. From July 1, 1992 a significant proportion of the country's current timber inspectors at the ports will be made redundant along with many other Ministry of Forestry staff. (See page 5, MOF to change focus and Asian Gypsy Moth.)

Trees are only a part of the Kenya experience. The wild mammals, birds and other fauna the trees shelter are another wonderful dimension. If any reader wants a good contact for a safari, try writing to Tony Mills Safaris, P.O. Box 122 Kitale, Kenya.

I met Noel Burns-Murdoch in Nairobi. He referred me to a board with the names of ex-colonial district officers on it which included fellow NZIF members - Phil Matthews, George Fry, and Robin Cutler. What an international family we are!

**Hamish Levack
Editor**

Introspection and the future of forestry

There is nowadays - or so it seems from a distance - a disturbing air of complacency, as foresters lounge back contentedly in expectation of forestry shares rising and the new planting graph racing for the ceiling.

After all the setbacks of the past, in a culture traditionally frightened of trees, this is perhaps understandable. Not so long ago only a few enlightened farmers would allow trees on their land, politicians were indifferent, and treasury and

green economic gurus thundered against long-term investment. In sheep, tourists and Forex gambling lay New Zealand's future.

But now it seems a shadow looms to threaten these cherished beliefs. Economically impossible forestry begins to pay the bills. For a summary, read the New Zealand Forest Owners Association "Forestry Facts and Figures 1991" which on page 10 shows the following:

	Value (\$NZMillion) Export Earnings	Land use (Million ha)	Export Earning/ha (\$NZ)	Share of NZ Export Income	Share of NZ land
Total Forest Products	1387	1.24	1109	9.1%	4.0%
Total Agriculture produce:	6498	14.4	451	42.7%	54.0%
Of which:					
Meat	2318	*13.57	171	15.2	
Dairy	2065	1.39	1484	13.6	
Wool	1315	*11.01	119	8.6	
Horticulture	800	0.20	4020	5.3	

* A considerable overlap, and a very wide range of production, which tends to understate the mean earning/ha.

Set in a simple league table this is:

1. Horticulture (\$4020/ha)
2. Dairy (\$1484/ha)
3. Forestry (\$1109/ha)
4. Meat and Wool (\$147/ha)

Look again to page two. A table there shows that only 17% of the productive forest area is over 20 years old. Most is still at best an adolescent spectator whose day has not yet come. Production now is less than a quarter of what it will be when the cycle of sustained production is complete. Then the league table becomes:

1. Forestry (× 4 or more) (\$4436/ha)
2. Horticulture (\$4020/ha)
3. Dairy (\$1484/ha)
4. Meat and Wool (\$147/ha)

To be fair, of course, there may also be adolescent horticultural crops, though in that Hollywood industry fashions change like underclothes and crops barely reach maturity before being rooted out and replaced by the latest craze. Meat and wool too may improve, since their average is unduly influenced by large areas of extensive grazing on marginal land, much of it likely to be abandoned.

Even allowing for this, it is clear that plantation forestry is in fact a very high-yielding land use, and one which, moreover, does not require only the best land. So perhaps complacency is justified, and foresters in charity may lift their eyes from the red faces in farming unions, of land use planners and economists and green doubters generally, and forgive them for their lack of understanding.

But these are the bare statistics, as usual hiding as much as they display. The bulk of the production forest estate of 1.24 million ha is plantation, and the bulk of the plantation is radiata pine. Most of it belongs to a few large owners, one of whom owns one-third of it.

New Zealanders have traditionally opposed two things – land aggregation and trees. The first seems a justified fear – things are better if the resource base of land or whatever is widely owned – and the second is a part of our British heritage. Britain, aboriginally 90% forest covered, now has only 5% of acceptable forest cover, though also another 5% is despised plantations. Its missionaries fan out through the third world preaching sustainable forest use and at home greens shrill “no more trees here”.

Put the two together and there is an irresistible target for critics, lacking wide public involvement and politicians indifferent, an excellent scapegoat to carry away every other feeling of environmental guilt. Foresters have been here before.

But perhaps more important to foresters, who have lived with indiffer-

ence for a long, long time, is the corporate attitude to forests. Generally that too is one of indifference. Real interest lies in the process, for which resources are, regrettably, essential. Money and enquiry will go to the machine, not the forest.

Silviculture, species choice and product diversity not dependent on the machine are ignored. All that is required of the forest is a bland uniformity, which at best can only be described as boring.

Embarrassingly, some of the Asian purchasers of State forest seem to be the exception to this rule. While the Treasury directed heirs to the Forestry Corporation drive relentlessly down market, these newcomers are busy catching up with delayed silviculture, pruning and thinning and investing in clearwood production, their vision of what their markets need.

To New Zealand Incorporated unfortunately the only advantage of clearwood is that knots cost energy to pulp.

But this is not to say that the present form of industry has nothing to offer. It has and does. It is now the baseline for the figures given earlier and it will continue so for a while yet. It is a necessary foundation without which we would not have got as far as we have.

The question is: what of the future and the next million hectares? Will it all have to be the same, corporately owned, all marching in step, singing the company song, or is there another, more interesting way?

This surely is the problem the Institute must face. Corporate forestry needs no help. It is very well able to look after itself, but it will not, on its past track record, innovate in the forest. If the economic value of the forest is to be increased it has to be done elsewhere.

The obvious solution is farm forestry. When industrial sheep farming has reduced agriculture to a role where the need for thinking had become less and less important, many inquiring farmers, once free of the bank, turned to trees. It can be fairly said that much of our understanding of other species and, latterly, of silviculture has come from these initiatives.

These people have the land and many are looking for something to do with it. They have the ideas and are receptive to new ones, and they will feed any size or quality of matter. They will sell on the best market they can find. In other words, they will help free the resources from the under-valuing and loss of market opportunity inherent in “vertical integration”.

How is this to be done? Where will the next million hectares be and what will it grow? Who will introduce concepts of economics more favourable to sustain resource use than internal rates of return, so that more valuable crops may be grown?

Who will swing economic forecasters and treasury gurus from their unquestioning drive for the inferior and convince them that the forest itself is actually worth something beyond a source of capital for another dreamboat tourist enterprise? Who will convince them that time itself is not the enemy they think it is?

It may take more effort still to convince greens that there is more to trees than an example to the third world. There is an interesting and challenging job to be done here, turning to a forest-based lifestyle, and the Institute is well placed to lead the way.

There is no room for complacency.

John Purey-Cust
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New Zealand Forestry

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- comment on forestry or Institute of Forestry affairs;
- items on current events;
- letters to the editor;
- items from local sections;
- advertising.

Comments, letters, news items, and Institute news need to be with the Editor at the beginning of the month prior to publication.