

Having said that, I now have a criticism, or perhaps a suggestion to make *New Zealand Forestry* even more professional.

I first picked up the problem when checking my letter (thanks for publishing that) on Green Lake's redwoods (Feb. 95), and noticed that the hyphen in Douglas-fir had gone missing. I didn't think I would make that mistake, and so became sensitised to it. I then noted several other places in other articles and contributions where this important species was listed as a fir named Douglas, rather than as the premier species of that very different genus, Douglas-fir. This is not to say I don't have some favourite species in the true fir genus (which is *Abies*), but just that *Pseudotsuga* is really not a very close relative of the true firs, and shouldn't be confused with them (even though the early botanists were not only confused, but indulged in some pretty stupid nomenclature). I began to suspect that this mistake was occurring at the editorial level, rather than being made by individual authors.

In 1982 Rich Hermann published a thorough review of the naming and proper nomenclature for Douglas-fir, an increasingly important addition to New Zealand forestry. The 1950 Stockholm botanical congress dealt with the general nomenclature problem, and not just for Douglas-fir. Their reasoning, unlike that for many botanical nomenclatural disputes, seems pretty good. Their rule is that only one genus gets a common name, and that other genera employing that common name must use the hyphen. Examples: Deodar cedar (*Cedrus deodara*) is OK, *Cedrus* being the genus of the true cedars, but western red-cedar (or western redcedar), being *Thuja plicata*, must be distinguished either by the hyphen or the compound name. Similarly, radiata pine is a member of the pine genus (*Pinus*) and needs no hyphen, but hoop-pine, being an *Araucaria*, and not a true pine, needs a hyphen.

Same deal for Douglas-fir. Nothing special. Just nomenclaturally correct. As Hermann pointed out, this hyphenation was being (grudgingly) accepted in the US in 1982 – not exactly a speed record – and one can still find a few holdouts even in 1995 in Oregon. But when both law and reason say we ought to hyphenate, I think it is appropriate that as professionals we do so.

An alternative, of course, is to follow a recent trend and give it its native-American name, Mula. That might be even better. Nobody would confuse a mula with a true fir ...

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**I am convinced by the logic. It was indeed my editorial pen that removed the hyphen. My apologies, and you may consider the editorial policy duly changed. Ed.**

## Interest rates: a reply to G. Fischer

Sir,

I apologise for not replying earlier, but I have only just seen Geoff Fischer's letter (NZ Forestry, November 1994) in reply to a previous letter of mine (NZ Forestry, May 1994).

### Historical Aspects of Interest Rates

Concerning Mr Fischer's remarks on historical aspects of interest rates and their effects on silviculture: I published a dreary review of interest rates for the period from the early 19th century to the mid 1960s in "The Rate of Interest in Forestry", FRI Econ. of Silviculture, Report No. 9, Jan 1969, which included 50 references – it could have had double this – and another on "Profitability Criteria in Relation to Forestry", FRI Econ. of Silviculture, Report No. 8, in the same month, with another 50 references. I did not stop work on these subjects, and present a brief summary below, as I doubt if I can find anyone likely to sponsor a paper on the topic, or on many others I have available.

The earliest record is from about 3600 Before Present, when the Babylonians not only manipulated compound interest, but in the example cited, used 20% ("Ancient Babylonian Algorithms" D. E. Knuth, Communication of the ACM 15 (7), July 1972). I am indebted to H. Fairburn, who sent me this reference.

Then the Greeks are well recorded: "... the Temple of Delos for centuries lent at 10%, regardless of changes in the value of money. However the interest curve may be given so far as known. In Alexander's reign [this would be about 2350BP] the usual rate was 12%, omitting the risky maritime loans which ran much higher. By about the 22nd century BP the rate had fallen to 10% although ... 8.3 and 6% (this last, apparently a political favour) also occur. In the second half of the 21st century BP we meet 7 and 6.3%, both business transactions. After this the rate rises again, and by Sulla's time it had got back to the old 12% ... and then increased due to Roman rapacity" (from Hellenistic Civilisation, W.W. Tarn, Arnold, 1927).

Inevitably it was Aristotle who frowned on any interest rate at all, "of all modes of getting wealth this is the most unnatural" – a view clearly retained by

Rotorua Conservancy and the NZ Forest Service Head Office to the last. They are not alone. Both the Catholic Church and Islam also rejected interest; this still applies in stricter Islamic States. I think the Catholic Church dropped its opposition in the early part of their 19th century? Which leads us to Adam Smith, no reference necessary. Interest returned to England with, of all people, Henry VIII at 10% maximum, a rate directed to be used by Muldoon later. (Of course, banking and credit were transformed under William III with the establishment of the Bank of England, and the reform of the coinage. No doubt these combined effects greatly affected commerce.) Rates apparently dropped and around 250BP (1750 AD) "5% seems to have been rather above than below the market rate". Smith also gives data on the rate in Scotland, France, the American Colonies, and Holland. The last had rates as low as 2 and 3%, whereas China had 12% and Bengal 40 to 60%. (Not many trees seem to have resulted from these low rates, though FAO etc. are chocked with Dutch foresters.)

I tend to use Keynes after this: "There is evidence that for a period of almost 150 years the long-run typical rate of interest in the leading financial centres was about 5% and the gilt-edged rate between 3 and 3.5%." (I think this means to about 1914.) He continues and notes: "Today [1935] the schedule of the marginal efficiency of capital is ... much lower than ... in the 19th century". In the particular context, it can be taken, I think, that Keynes means the interest rate. It is not a technical section of the work "The General theory of Employment, Interest and Money", 1936.

It was also necessary to plough through the more technical "The Theory of Interest" by I. Fisher, 1930; I confess I find this heavy going. I followed the USSR contortions in devising means of charging interest for a decade if anyone is interested.

I have details of the situation that led to the 10% Ukase by the NZ Treasury/Muldoon. It gets mentioned in NZJFor. Sci., Vol 2(1), on p. 148 *et seq.* The zero-interest reference is in Vol 2(3), p. 313. Gaffney is the source cited for zero-interest doctrines and says: "One finds strong undercurrents of support ... based on what is fair to characterise as sheer mysticism, yet which still carry weight in determining public policy". This is true of the late NZ Forest Service; it deserved its fate as it showed lack of an ethical basis in spending other people's money and the restraint of any economic limitation was safely ignored. It really aimed at maximum volume, along with Herman Goering; Pinochet; the US Forest Service and Kaingaroa.

My definition of a forester, which is

slowly becoming known, is someone who spends other people's money.

I reject the implication by Mr Fischer that "our consideration of the matter of discount rates has lacked a historical perspective." Mine hasn't. If anyone wants a fuller version of this reply let me know.

#### **The Effect of Ideas**

As for Mr Fischer's last paragraph, alas he does me too much honour, and far too little credit to my critics. I suggest he read recent obituaries for the economic/silvicultural effects in practice; and elsewhere the persistent ignorance over Douglas-fir economics.

#### **The Flat-earth Society and all that**

I had reserved this association for zero-interest doctrines and this is clear in my original letter (May 1994), so I do not follow the points about a 4% interest rate.

#### **The Nobel prize for finding an objective way of determining interest rates**

I am serious in my contention (see original letter) that a Nobel Prize awaits an objective solution to choosing a discount rate. (I tested this recently when I was fortunate enough to work in an International Research Centre. None of the economists I questioned, and they came from a cosmopolitan background, had much idea on the subject and seemed embarrassed by having to face the question at all.)

I grant that science has no full basis for what it does either. The philosopher David Hume's contention that there is no theoretical basis for accepting "induction as an independent logical principle" has not been refuted [I accept Bertrand Russell's version, I have no philosophical training], but in almost every pragmatic way science can develop without this.

Economics, in my view, has nothing like the range of achievement that most sciences have, and the cost of capital is an essential constituent of much of economics. This does not make me unduly popular with economists either.

**R. Fenton**

#### **Editor's Note**

I am getting a little confused. Are the rates being argued real or nominal? As for Hume's argument concerning induction, more recently than Russell, Popper and Strawson have made some counter arguments. Ed.

## **Tour to Siberia**

Sir,

For the past three years Ministry of Forestry people have worked in close con-

tact with the Russian Federal Forest Service in monitoring the Asian gypsy moth build-up in and around the ports of the Russian Far East, and also with the Russian Quarantine Inspection Service in the inspection of ships for egg masses done under memorandum of understanding between Russia and New Zealand.

The contact with the Russians has provided the opportunity to arrange a forestry tour of the Russian Far East forests by interested New Zealand forestry personnel. This is tentatively proposed between August 17 and 31, 1996.

The forests of the Russian Far East contain some of the world's most extensive wood resources. They are varied and extensive. They contain a wide variety of forest types and species, and wildlife, including the Siberian tiger. The uniqueness of the forests, and the social and economic significance which the forests have for the Russian people make this tour one of particular interest to forestry people.

Full details have yet to be worked through with the Russians, but it is proposed to fly to Khabarovsk (on the Chinese border) to spend three days looking at the larch and mixed conifer/hardwood forests of the region, and also some time at a research faculty, and then to travel overnight by the Siberian express to Vladivostok and spend about eight days looking at the mountain, coastal and hardwood forests of the Primorskye region.

The tour is not for the faint-hearted, or those with weak stomachs. The Russian hospitality is lavish, and their liking for vodka and the toasting of their hosts can be demanding on the system; there really is an expectation to participate. Outside the main hotel in Vladivostok accommodation is not good, and security cannot be guaranteed. It may also be necessary to spend some nights in Russian forestry camps or in tents.

On the other hand the Russian forests are magnificent, the history of the place and the culture fascinating, and the people very friendly and hospitable.

A block booking flying to and from Russia has been made for 10 people. The estimated cost of this plus the train journey and accommodation and travel is about \$7000 per person but will depend on forthcoming negotiations with the Russians as far as internal accommodation and internal travel costs are concerned.

If you are interested in registering for this tour please write/ring me - (03) 379 1040.

**Alan Flux**

## **Biodiversity**

Sir,

Biodiversity is a keystone issue for the future of life in New Zealand and on planet Earth, so I am pleased that Wink Sutton made a focus of it in his comment (Nov. 1995). I would like to correct him on a few aspects and discuss further a few points he raises.

Firstly, "maximising biodiversity" is not an aim of any organisation I know. As I pointed out in my letter in the November '95 issue, "good" biodiversity has got nothing to do with the number of species but rather the degree of representation of indigenous biodiversity. Biodiversity, meaning here from genetic through to landscape diversity. Sutton cites hunter/gatherer cultures as requiring 100 hectares of natural forest to sustain one person. In Sarawak with the rainforest-dwelling Penan tribe, it takes only an average of 10 ha of forest.

Moves by society in recent decades to take on board biodiversity protection in its fullest sense, have come about through shifts in values, just as previously society chose to eliminate the smallpox (has it been eliminated entirely?), of which Sutton made a point. The term 'biodiversity' is very recent, but has achieved such popular appeal because it coalesced a description of earth's unique biological resources. Biodiversity protection is a value judgement made through a culmination of ecological knowledge (including elements of indigenous knowing), and committed through the signing of the Convention on Biological Diversity by more than 140 countries. This is no fringe movement by a handful of passionate nature lovers but a global consensus.

Article 8(d) of the CBD: "promote the protection of ecosystems, natural habits and the maintenance of viable populations of species in natural surroundings". When nearly 90% of our lowland forest ecosystems and over 95% of our wetland ecosystems have been converted to farming, forestry and urban areas, it is simply not sufficient to just not clear any more forest or wetlands. This is especially so with many of our remnant forest areas in a very sorry state, due largely to introduced animal. If we are to seriously protect biodiversity and meet our commitments laid down in the CBD, then restoration and renewal is inevitable, including in existing indigenous areas.

The continued clearance of native regenerating forest for plantations (mainly by non-NZ Forest Accord signatories), flies in the face of Sutton's claim that plantations save biodiversity. Furthermore, in Latin America, parts of Europe, Asia and the Pacific, plantations are dis-