Asian Gypsy Moth threat

Cabinet approves funding for pheromone traps

Cabinet has approved the allocation of $500,000 for the purchase, placement and monitoring of pheromone traps to detect whether the Asian Gypsy Moth has entered New Zealand.

Forestry Minister John Falloon said the money would be used by the Ministry of Forestry to place 1978 traps in the vicinity of 11 ports around the country.

Traps will be placed around the ports of: Auckland; Tauranga; New Plymouth; Napier; Wellington; Nelson; Lyttelton; Timaru; Port Chalmers; Dunedin; and Bluff.

The selection of ports is based on visits over the last four years by vessels which could have hosted Asian Gypsy Moth.

The traps will be placed in a seven kilometre radius around each port, based on recommendations made by the United States Asian Gypsy Moth Science Advisory Panel.

Each trap will be checked every week over the six months during the 1993/4 summer.

Mr Falloon said these intensive measures were necessary to establish that the Asian Gypsy Moth has not come into New Zealand.

"Cabinet is concerned about the issue and saw the necessity to move swiftly because of the potential threat the Asian Gypsy Moth poses to our country’s forests. "Cabinet also recognised the need to talk with the Australian Government about the issue. I have already forwarded a letter to the Minister responsible for the Australian Quarantine Inspection Service, Simon Crean, expressing my concerns on the matter.

"Both the Government and the Ministry of Forestry understand the need for quick action on this issue, and are making every effort to protect our environment and economy from the Asian Gypsy Moth," Mr Falloon said.

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Cabbage tree decline

Sir,

As forest health specialists we were delighted with the excellent collection of articles in your last issue. However, having been principal contributors to the cabbage tree research effort we would like to comment on Philip Simpson’s discussion of cabbage tree decline. While Dr Simpson presented a lucid and comprehensive review of the special research project, we would take issue with him on two points: the contention that sudden decline is affecting all Cordyline species, and that the primary cause is pathological.

With regard to the first point the FRI national survey, covering over 700 sites from Cape Reinga to Bluff, showed no evidence of decline in either Cordyline banksii (forest cabbage tree) or C. indivisa (mountain cabbage tree). The second point at issue is Dr Simpson’s support for an MLO as the underlying cause of cabbage tree decline, a contention which deeply divided the two field-oriented ecological research groups from the then DSIR pathologists. Despite the numerous media pronouncements, encouraged by the research group involved and their political masters, no MLO has been observed in affected tissue, no remission of symptoms by antibiotics has been demonstrated, successful transmission of the disease has not been achieved, no vector has been demonstrated, and no epidemiological study of disease spread has been carried out. There is no evidence to support the contention that a virulent pathogen (the research group’s term) is the underlying cause of cabbage tree decline. It is worth remembering that although dead horses invariably contain maggots it would be a mistake to conclude blowflys are the primary mortality factor.

The unfortunate controversy which has arisen in the case of cabbage tree decline is, in our opinion, largely the result of the present research funding environment in which research groups search desperately for funds to maintain their year-to-year existence, at the cost of well-planned, collaborative longer-term research.

In the case of the cabbage tree project the most expensive component, the search for a pathogen, was funded in parallel with an investigation of the nature and extent of the problem, primarily due to the availability of funds for only one year. This approach contrasts sharply with a recent investigation into pohutukawa decline, where a wide-ranging problem assessment was followed by a more focused programme once the nature and extent of decline has been clarified. Interestingly, the resource managers’ (DOC) prime suspect, insects, was completely exonerated at stage one, and the real underlying cause, possums, identified.

As researchers, it is depressing to find the science reforms, which were to greatly enhance our ability to deliver high-quality and relevant research, also proving divisive, isolating and extremely costly. The cabbage tree research project exemplifies these negative aspects of the current research environment. The monsoon bucket approach to funding is unlikely to provide value for money when applied to forest health problems such as cabbage tree decline where effective action depends on first defining the problem.

Gordon Hosking and John Hutcheson
NZFRI, Rotorua

Phil Simpson replies

Sir,

Sudden Decline symptoms in other Cordylines

I have observed classic Sudden Decline in C. obecica (a Norfolk Is. species) and C. kuspar (cultivated), but not C. rubra or C. stricta (Australian species). I have observed symptoms consistent with Sudden Decline in C. banksii (Mt Messenger, Orongoronga Ra, Totaranui) and I have both observed and received reports of decline in C. indivisa (Mt Ruapehu and Taranaki and cultivated specimens) and C. pumilio (Hakarimata Ra, urban Auckland). C. banksii x australis hybrids are also prone. I have observed a similar die-back in Yucca gloriosa (a distantly related species to cabbage tree) in many individuals from North Cape to Nelson. It is important however not to confuse all cases of ill-thrift or die-back as Sudden Decline.

Pathogen hypothesis

I described my support for the MLO cause as a “working hypothesis” in order to get beyond the debate into conservation measures, because in fact Sudden Decline is not so important overall as “Slow Decline” caused by ecological dysfunction.

Two circumstantial observations influence my view in favour of an MLO cause of Sudden Decline. First, the death of seemingly perfectly healthy, young adult trees which lack any obvious environmental stress; secondly the symptomatic similarity and often close geographical association with Flax Yellow Leaf, a known MLO disease.

Landcare Research NZ Ltd has several current research projects (for completion June 1994) to further test the MLO hypothesis: the distribution of MLO in the
Influences of site and discount rate on silviculture

Sir,

In Cpt 236 of Oji Sankoku’s Mohaka Forest we were shown a stand grown on the “Timberlands Regime” – 250 pruned stems per ha at age five, with very heavy branching following at age eight. Evidence, it was suggested, of the disastrous consequences of thinning too heavily too early.

Yet on the journey back from this ridge-top stop we passed without comment through a ravine where scattered radiata were growing straight, tall, and with fine branching despite no tree competition.

The contemporary wisdom seems to be that competition inhibits branch size. Older foresters have long held that shelter, rather than competition, is the critical determinant, and that high stocking controls branch size and encourages height growth by providing mutual shelter for the crop trees. On sites sheltered from the wind the “Timberlands regime” might look much more attractive in terms of both height growth and branch size than it would on a windswept ridge. No doubt Carter Holt or FRI staff could easily put this proposition to the test. It would be unfortunate for the profession to make a rushed judgement against heavy early thinning for the wrong reasons.

Having said that, I am not a proponent of low early stocking. At the risk of gaining (or reinforcing) a reputation for idiosyncrasy, I suggest that those who say that such regimes are economically attractive but silviculturally repugnant have the wrong end of the stick. The weakness of heavy early thinning is that it sacrifices crop volume, quality of the upper logs and revenue per hectare-year on the altar of the 10% discount rate. In other words, the economic viability of heavy early thinning hinges on the propriety of the 10% rate, which is in turn dependent on the overall rate of capital accumulation in the global economy. My contention is that over time discount rates can be expected to follow a sigmoid path – the “S” curve so familiar to foresters in tree and stand growth. I have put this argument before, based upon the analysis of surplus value in the economy, though foresters may prefer to see it in terms of simple biological analogy. As we all know, a fixed discount rate equals to an exponential rate of capital growth, and biological systems do not sustain exponential growth rates indefinitely. Once the external environment is fully utilised the system comes under increased internal stress, and growth decreases or ceases altogether.

If the global economy does conform to the laws of natural growth, then we can expect rates of return on capital to drop, and the emphasis to shift more toward maximisation of yield and net revenue, meaning higher stockings, commercial thinning, and longer rotations. In other words, the regimes considered appropriate to the period before the global economy entered the exponential growth phase, may come back into force if, and when, we move onto the top of the “S” curve.

Those who remember me advocating this case against short rotation regimes in 1978 may feel that the intervening 15 years have not entirely vindicated my position. I am prepared, however, to wait another 15 years for a more conclusive verdict, for or against!

Geoff Fischer

Institute links with Whirinaki initiative

Sir,

In the deserved praise handed out to the Napier Section of the Institute of Foresters in May, I was surprised that a major commercial initiative which that section successfully brought off in 1966 received no mention.

The Napier Section conceived and ran a large public meeting which launched the concept that as the 16 million cubic feet of wood available per annum from the Kaingaroa 320 million cubic feet 20 year sale roughly matched the volumes then envisaged Hawkes Bay State Forests 20 years hence, then by allocating the bulk of that Kaingaroa sale to an envisaged Hawkes Bay processing plant, such a plant could be operative 20 years earlier than the HB wood supplies would allow.

On the panel for that meeting were the backbench MP for Hastings, Duncan MacIntyre, the then Deputy General of Forestry, Priestley Thomson, plus the local Harbour Board and County, chaired by the local NZIF Section Chairman.

Soon after, Duncan MacIntyre became Minister of Forests, thence followed the 1969 Forestry Development Conference, which allocated to HB a number one priority for extra planting to achieve wood-based exports. Thence followed the successful tender of the Carter Holt Kokosaku Sangyo Consortium for a sawmill and pulp mill initially conceived to operate at the Napier Wharf, but eventually to become the PanPac Mill at Whirinaki. This history is used to demonstrate that the Institute, through knowledge, foresight and drive, can influence major strategic commercial decisions and developments; in this case one whose benefit to the region is now well established.

Ross Usmar

Sustainable yield

Sir,

May I refer to Paul Smale’s letter in Vol. 38(2), which caused me some dismay. The fact is that forest crops, which may take up to 150 years to mature, are in a different category from beef or strawberries. Those countries which found, within the last three centuries, that their forest resources were well nigh exhausted (e.g. Japan, Germany, Finland) understand perfectly well that a sustained yield of wood is imperative for their well-being, and legislate accordingly. The impending world-wide wood famine (see “State of the World, 1993” pp 16-17) reinforces the wisdom of these countries.

We have been led into a semantic and philosophical quagmire where words no longer mean what we thought they did. “Natural” finds its way into innumerable advertisements, but it no longer means the opposite of “un-natural”. I was recently offered “organic honey” although I foolishly thought that all honey is organic; it certainly isn’t “inorganic”! “Sustainable use of resources” has been obfuscated by the Resource Management Act because it is there applied to non-renewable resources which, by definition, can’t also be sustainable. The word has come to mean “rationing until the resource is totally consumed”, with the pious hope that something else can be found to replace it. And why sustainable yield should not apply to forests as much as to land I fail to understand. Land can be sustainable if it produces nothing.

What your correspondent is championing is the current orthodoxy that every thing must be decided by the market (that is, by those who control the levers of economic power), whereas it is patently obvious that the market can’t deliver welfare, and can’t look forward much beyond its