# NZ Journal of Forestry Science 39 (2009)

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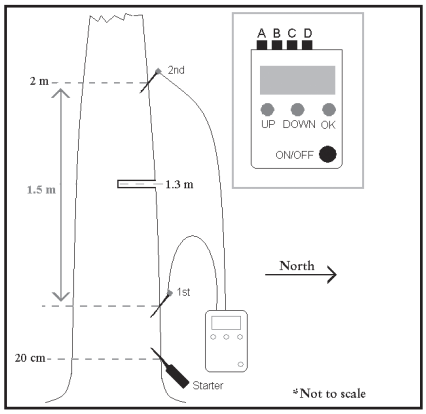
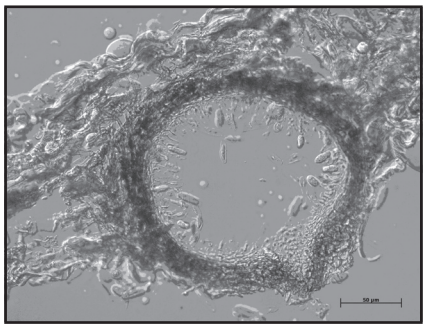
Period: 1 January - 3 July 2009




## Effect of Green Density Values on Pinus radiata Stiffness Estimation using a Stress-wave Technique

Published on-line: 3 July 2009

Use of acoustic tools for assessing stiffness of green wood in standing trees relies on the assumption of a constant value for wood density. Wielinga et al (pp. 71-79) examined the variability in the green density of the outerwood of 13-year-old Pinus radiata trees and determined the error introduced by using a constant value. Assuming a constant green density introduced a small (~3%) error in the calculated modulus of elasticity (i.e. density 'as measured' x acoustic velocity$^2$). Acoustic velocity was the dominant term in the equation. Green density of the fresh core samples showed little variation and was more strongly determined by the sample's moisture saturation than the amount of wood material (basic density). Modulus of elasticity was inversely related to diameter at 1.3 m. Basic density and fresh moisture content were inversely related. Basic density and fresh moisture content both influenced the acoustic velocity, but their effects were weak and opposite.



## Fungi Silvicolae Novazelandiae: 8

Published on-line: 24 June 2009

Gadgil & Dick (pp. 65-69) describe three species of fungi that have been recorded but not fully described from New Zealand.

## Variation In Seedlings of Cupressus lusitanica

Published on-line: 5 June 2009

Bannister (pp. 57-64) studied the variation in growth habit of seedlings from 28 lots of "Cupressus lusitanica" seed, of indigenous provenances in Mexico and Guatemala, and of exotic provenances in Portugal, Kenya and New Zealand. Significant seedlot variation was found both within and between geographical groups. Many of the differences between seedlots may be ascribed to differences in the intensity of inbreeding.

### Pruned Plantation-Grown Eucalyptus nitens: Effect of Thinning and Conventional Processing Practices on Sawn Board Quality and Recovery

Published on-line: 4 June 2009

Washusen et al. (pp. 39-55) found thinned and pruned plantation-grown Eucalyptus nitens has the potential to supplement native forest 'ash' eucalypt logs for the Tasmanian sawmilling industry. Thinning treatment affected some shrinkage traits but for all other measures of processing performance was not significant, for logs of matched size processed with either a back-sawing or quarter-sawing strategy in conventional sawmills.

### Characterisation of the Polygalacturonase Gene of the Dutch Elm Disease Pathogen Ophiostoma novo-ulmi

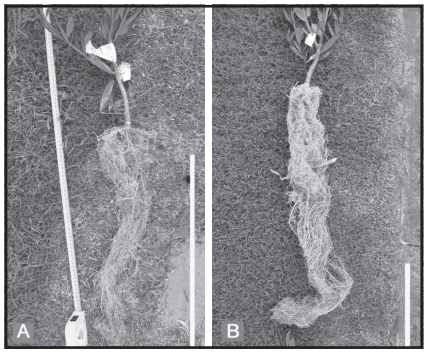
Published on-line: 11 May 2009

Temple et al. (pp. 29-37) characterised the polygalacturonase gene from the highly aggressive fungal pathogen Ophiostoma novo-ulmi, one of the causal agents of Dutch elm disease. Disruption of the polygalacturonase gene was not lethal to the pathogen but led to a reduction of pectinolytic activity in vitro.

### Market Access for New Zealand Forest Products: An Economic and Environmental Case for Development of Alternative Phytosanitary Treatments

Published on-line: 29 April 2009

Using a dynamic market equilibrium model, Self and Turner (pp. 15-27) estimated the benefits of using various alternative fumigation treatments instead of methyl bromide for export forest products.




### Suitability of Acacia longifolia var. sophorae (Mimosaceae) in Sand-Dune Restoration in the Central Coast of New South Wales, Australia

Published on-line: 6 March 2009

Bakewell et al. (pp. 5-13) reported that long-stem planting of Acacia longifolia var. sophorae is an effective and reliable method for use in the restoration of coastal sand dunes in New South Wales, Australia overcoming the need for either protective structures or post-planting irrigation.


### Editorial

Published on-line: 6 March 2009

The Editor of the New Zealand Journal of Forestry Science outlined the changes being made to the Journal in 2009 (Falshaw p. 3).