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*The Vision: - to create a hardwood timber industry in New Zealand  
 - to produce high-quality timbers for different markets than radiata*



The search - for eucalypt species that are fast-grown, relatively free of pests and diseases, with good sawing, seasoning and timber properties.

## INTRODUCTION

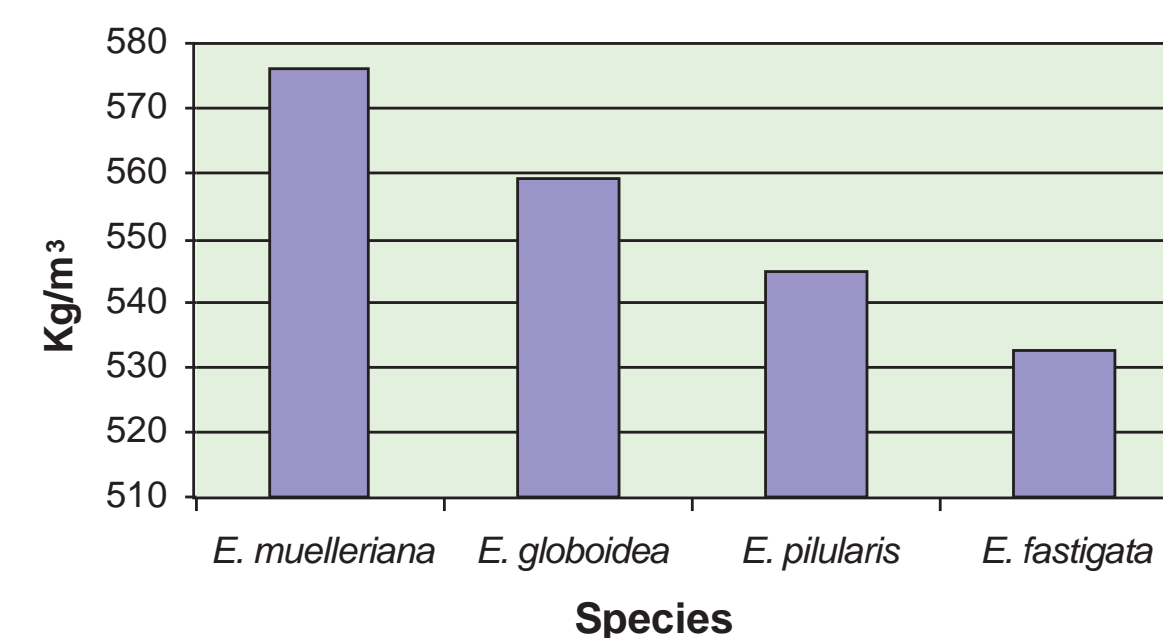
Sawmilling experience has identified the 'stringybark' group of eucalypts as more easily-sawn, and suitable for the production of naturally-durable, engineering and appearance grade timber.

This study compared the wood properties, and sawn lumber characteristics of 4 eucalypt species at age 25 years, *E. muelleriana* and *E. globoidea* both stringybarks, closely related *E. pilularis*, and *E. fastigata*, an ash.

15 trees selected per species

	Diam. underbark at 2.7m
<i>E. pilularis</i>	29cm
<i>E. muelleriana</i>	30cm
<i>E. globoidea</i>	32cm
<i>E. fastigata</i>	42cm

Average basic density of 5.5m logs



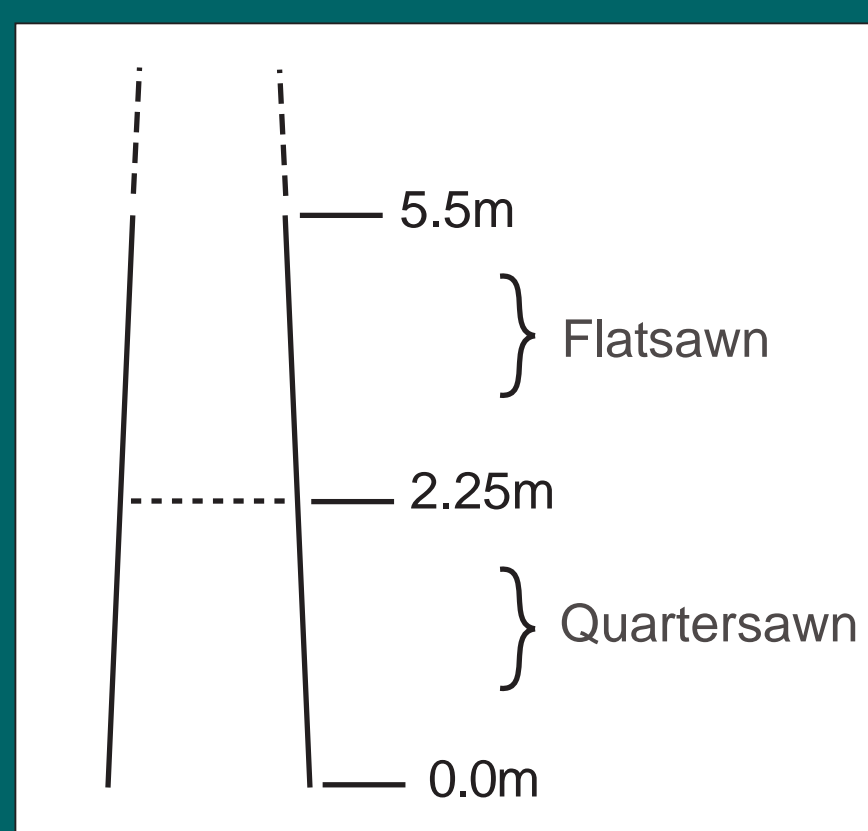
■ *E. muelleriana* ■ *E. globoidea* ■ *E. pilularis*



■ *E. fastigata*

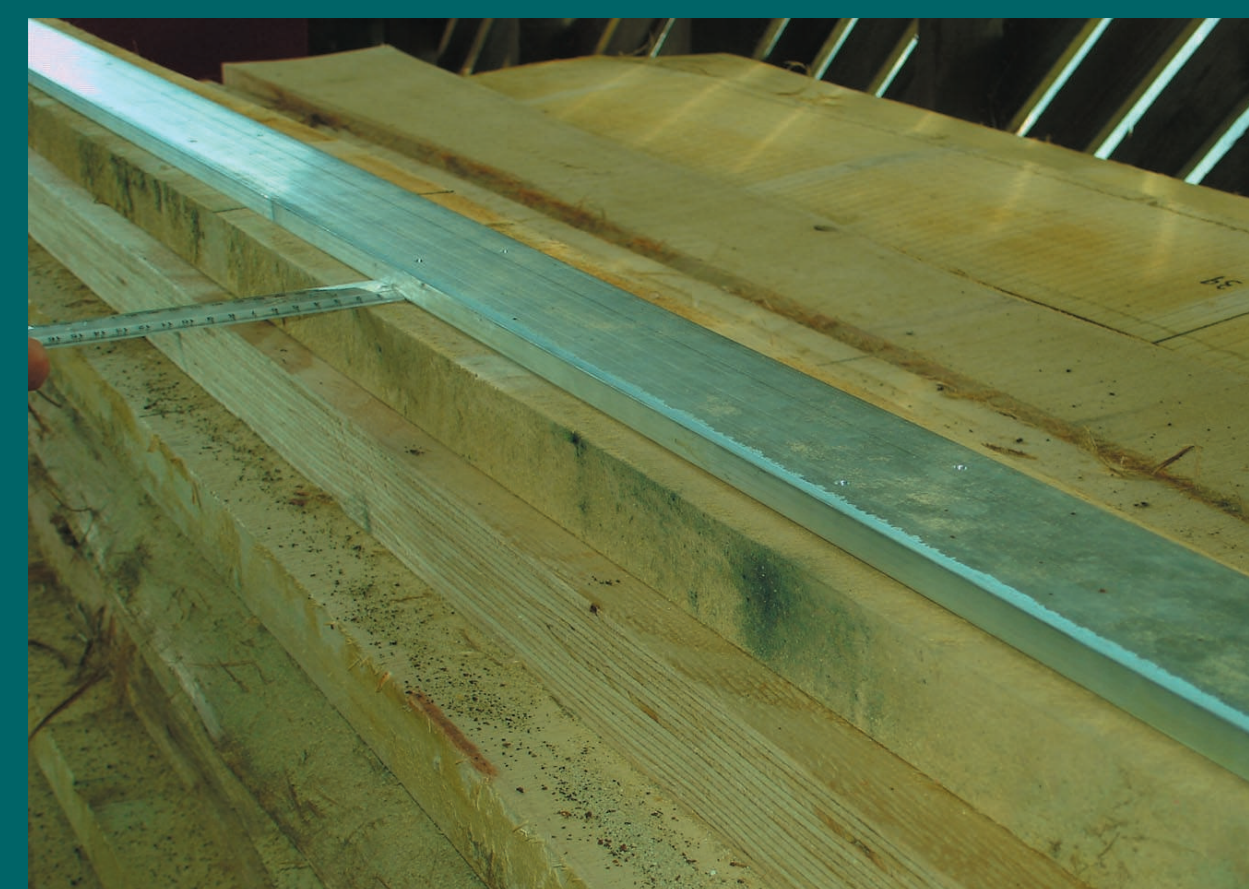
	End-Split Index 0 = no splitting	Heartwood %
<i>E. pilularis</i>	18.4	84.8
<i>E. muelleriana</i>	15.1	84.0
<i>E. globoidea</i>	16.7	81.0
<i>E. fastigata</i>	24.9	82.3

## SAWING



Board Distortion

Species	Quartersawn		Flatsawn	
	Crook	Bow	Crook	Bow
<i>E. pilularis</i>	11.2 a	8.2 a	5.2 a	4.9 a
<i>E. muelleriana</i>	10.2 a	7.2 ab	5.9 a	5.6 a
<i>E. globoidea</i>	10.5 a	8.3 a	5.4 a	4.8 a
<i>E. fastigata</i>	10.5 a	6.7 b	5.3 a	3.0 b
Tukeys Test				



Crook



Bow



Other properties measured:

- Tangential and radial shrinkage
- Board grades
- Stiffness, hardness
- Log conversion

## Preliminary Conclusions:

- High variation among the 15 trees sampled of each species for most traits measured, masks the differences between species.
- Internal checking insignificant for all 4 species.
- All 4 species were similar in appearance and wood characteristics and could be marketed together. *E. fastigata* is restricted to internal use, whereas *E. pilularis*, *E. muelleriana* and *E. globoidea* have durable heartwood and can be used externally.