ECONOMIC ASPECTS OF BIODIVERSITY

USING SHEOAK TIMBER

by Graeme Siemon

THREE species of casuarinas growing in the south-west or Wheatbelt regions of Western Australia have considerable potential for use as specialty timbers. They are the WA sheoak (*Allocasuarina fraseriana*), rock sheoak (*Allocasuarina huegeliana*), and swamp sheoak (*Casuarina obesa*). Another species that has potential is karri sheoak (*Allocasuarina decussata*), an understorey species in the karri forest, but it is unlikely to be used commercially because of increasing environmental pressures.

WA sheoak is a secondary species in the jarrah / marri forest of the south-west and about 2000 tonnes is harvested each year. Rock sheoak occurs on granite soils in a band from Kalbarri to Esperance, including the Wheatbelt. Swamp sheoak occurs through the south-west near the coast and adjacent to inland salt lakes (it also is found in south-west NSW, north-west Victoria and South Australia. The salt tolerance of swamp sheoak is a great advantage for salinity-affected areas. There is no commercial harvesting of the last two species.

Sheoaks have advantages of attractive colour and figure, the prominent broad rays characteristic of oaks, and low shrinkage which makes the timber stable in use.

Uses of WA sheoak since early settlement included furniture, decorative woodwork and turnery, flooring and panelling, roofing shingles, and beer barrel staves. Current uses include outdoor furniture, where a Perth firm has achieved excellent export sales, and laminated flooring.

CALM research into rock sheoak and swamp sheoak from the Wheatbelt studied wood properties and possible utilisation, including sawmilling, drying and gluing behaviour. The research showed that these species are commercially useful. Rock sheoak has an attractive deep red colour and distinctive broad rays in the quartersawn timber (i.e. sawn at right angles to the growth rings). Swamp sheoak is straw-coloured to creamy-brown, and although the rays are less prominent, features such as tight knots give it appeal.

Both species have greater shrinkage in both tangential and radial directions than does WA sheoak, and both are heavier than that species. Working and gluing properties are good.

For planting in Wheatbelt areas, both rock sheoak and swamp sheoak have potential for later use as specialty timbers for furniture and craftwork. Other species such as jam (*Acacia acuminata*), York gum (*Eucalyptus loxophleba*) and brown mallet (*E. astringens*) are also being assessed by CALM, and other research will follow.

Dr Graeme Siemon is a Scientific Adviser in the Forest Resources Management Program, CALM, Como. phone 9334 0410

Bedroom suite in sheoak by Gold Seal Furniture (a Division of Good Sammy Industries). Manager Bruce Barrett says "The grain pattern and medullary rays of sheoak are typical of the character only these great hardwoods possess. In some instances the pattern can look almost like snakeskin."

EDITOR'S NOTE: We have little knowledge about how fast sheoaks planted for revegetation are growing - ie. how soon will they reach millable stage? Can anyone help, please? Measure your sheoaks' diameter at breast height and correlate it against location and time since planting (see e.g. from York, below). This will greatly assist planning for commercialisation of these timbers. Send the info to Penny Hussey, please.

Species	Location	Year planted	Year Measured	Diameter at breast height
Swamp sheoak	Saline seep	1993	1999	1.4 cm
Rock sheoak	Granites	1993	1999	2.3 cm

Nb also: if you wish to grow for timber, planting will have to be denser than usual, to cut down on side branches.