

# Alerce

## *Tetraclinis articulata*

In early December last year Jennifer Gardner from the Waite Arboretum invited me to collect some wood from small trees which had died and been cut down. One of these appeared to have little value as many of the branches had long spiral splits and were suitable only for firewood. However, the name of the tree intrigued me. It was labelled as Alerce (*Tetraclinis articulata*). From my experience as a member of the International Wood Collectors Society I know that Alerce is a very rare and special wood and therefore a precious tree. The Alerce that I had read so much about was a completely different tree - *Fitzrova cuvressoides*. This is a large slow growing tree from the swamps of southern Chile and has suffered from over exploitation so much so that in 1976 the species was declared a National Monument and the cutting of trees was prohibited. The naturally slow regeneration of this species means that any timber harvest is unsustainable and despite logging bans the species has not shown any sign of recovery. International trade is banned by its listing on Appendix I of the Convention on International Trade in Endangered Species (CITES). It is also on the IUCN red list. So began an interesting search into the two trees and the usual confusion about common names.

The Alerce from the Waite (*Tetraclinis articulata*) - incidentally there are also two specimens in the Adelaide Botanic Gardens - is widely known as Arar, Araar or Sictus tree. It is also known as *Thuja articulata* (syn), citron wood, sandarac, sandarac tree or Barbary thuja. In "Timbers of the World. Part 6" it is named as Thuya. On my last visit to London I visited a craft market near Greenwich and as usual sought out stalls selling crafted wood. I was attracted to one particular stall which had an impressive display of woodturning almost all of which were lidded boxes made from a wood unknown to me called 'Thuya' burl. The



wood itself was very attractive and each piece purchased was accompanied by a statement about the wood, none of which mentioned any botanical reference about the tree, its wood or its origins. In the reference cited above, Thuya is said to be a valuable craft wood although the burls only are sought after because of the intricate, curly grain patterns and varied colours.



Common names can be very confusing. The name Thuya has no true connection to the genus Thuia which contains the valuable commercial timber Western Red Cedar (*Thuja plicata*). Thuya is from the Greek meaning sacrifice because they used an oil distilled from it as incense in their religious ceremonies. Some churches still use it and as sandarac oil it is valued for medicinal uses. *Tetraclinis* is monotypic i.e a genus of one species only. It is endemic to the western Mediterranean region, northwestern Africa in the Atlas Mountains of Morocco, Algeria and Tunisia with two small outlying populations on Malta and near Cartagena in southeast Spain. It grows at relative low altitudes in a hot, dry subtropical Mediterranean climate. It is an attractive tree, having similar form and foliage to many of the Cypresses. The fruit however are very distinctive. They are four sided cones - thus *tetraclinis*. The four facets of the cones have beautiful pale but bright blue bracts. It is the national tree of Malta, where its wild occurrence is restricted to about 100 trees in the northern part of the island of Malta.

## Risk Status.

*Tetraclinis* is included on the IUCN (international Union for the Conservation of Nature) Red List, and although the species as a whole is "lower risk, not threatened," the Maltese and Spanish populations are listed as highly threatened. There are a number of web sites which advertise the wood (as Thuya burl) for sale. One such site from the US which trades under "Exotic Wood Group" talks about the difficulty in obtaining the wood, claiming that unfortunately over harvesting has caused the Moroccan government to prohibit the export of Thuya burl wood and then finishes up with the rather glib statement - "So, you may ask, how did we get our stock? Well, we'll never tell!"

## Thuya Burl

Tetraclinis is one of only a small number of conifers able to coppice (re-grow by sprouting from stumps), an adaptation to survive wildfire and moderate levels of browsing by animals. Old trees that have sprouted repeatedly over a long period form large burls at the base, known as lupias. These are often called root burls (or burrs in the UK) which we call lignotubers. One of the problems with the exploitation is that the root burl is the only part with commercial value - so the rest of the tree is wasted. The figure in the root burls is probably caused by the number of small shoots which provide the famous 'birds eye figure' like that in bird's-eye Huon Pine.

The resin, known as sandarac, is used to make varnish and lacquer; it is particularly valued for preserving paintings. The wood is naturally resinous and oily, and has a strong but pleasant cedar-like aroma - which is especially noticeable when it's being worked. Although the wood I collected was from a dead tree, it was still very wet - more than 30% according to my moisture meter. However, I could not resist the temptation to put some in the lathe to experience the wood. It is quite beautiful and the aroma emitted is as stated. The photo of the vase amply displays the beauty of the wood. This piece will probably crack as it dries out, but serves the purpose as a pictorial representation for this article. Although now after 4 months only one fine crack has appeared. The wood turns very well but because of its resin content clogs abrasive paper quickly. However if a small amount of water is used with wet and dry paper, a good result can be obtained. I used some of the normal felt backed paper in a power sander and it worked well when wet.

The wood from branches having straight grain seemed to have much less resin. The wood with the greatest figure seemed to come from parts nearest the roots. Some of the branches showed irregular lines in the transition from the sapwood to the heartwood. Some of the wood collected had several stems from the base, and it was this wood which created the most interesting colour and figure.

## References

Timbers of the World 1 - Africa

Timbers of the World 2 - South America

Timbers of the World 6 - Europe

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