

Society and has always remained under the umbrella of the Royal Horticultural Society.

The original Lily Circle has more than justified its existence by importing seeds and bulbs and some of the rare species and disseminating knowledge on the cultivation and management of these fascinating and beautiful plants. It had set out what it planned to do – to bring before the flower-loving community the garden value of these most interesting and noble plants.

Today, the New Zealand Lily Society continues to flourish with a membership of about 240, having members in both the North and South Island and internationally. There is also an active Lily group that was established in Timaru during 1995 and another in Dunedin (date to be checked). In the North Island there is the Auckland Lily Society and the Waikato Lily Society based in Hamilton.

References

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DESCENDENTS OF TANE MAHUTA

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On 18 February 1975, I visited the nationally important Kauri Forest Sanctuary at Waipoua with the eminent NZ Forest Service photographer, the late John Johns. Whilst preparing to photograph the iconic kauri, Tane Mahuta, a mature intact female cone fell to the ground from its canopy missing us by a mere inch or two. I placed this cone in a plastic bag to carry it back to Botany Division, DSIR, Lincoln. Upon arrival there on 25 February I noticed that the cone had shed its seed bearing scales from the cone axis, yielding many ripe seeds. A sample of these was sown that day in a trough of standard potting mix and placed in an unheated greenhouse. Many seedlings emerged the following week and were subsequently grown on and distributed to Lincoln colleagues and local institutions such as the Christchurch Botanic Gardens in 1979-80. I also planted one in our home garden in Riccarton. Here, I wish to report briefly on the growth and

reproductive behaviour of our tree well south of the natural limit of kauri, and subject to the dry summers and frosty winter conditions of Christchurch. This tree is now 35 years old.

At the time of writing it is a straight healthy "ricker" just over 12m or 40ft tall, with a diameter at the customary breast height (in my case 1.15m) of 22cm. It sheds its lower branches at infrequent intervals by abscission, and its bark has a typical somewhat blistered outer surface with raised horizontal branch scars characteristic of young trees. The familiar flaky bark of mature trees such as Tane Mahuta is developed later in a kauri's life, say after 50 or more years.



Kauri ricker grown from seed of Tane Mahuta (Kauri Forest Sanctuary, Waipoua) in 1975 at 20 Darvel Street, Riccarton and now 12 m. high

A few female cones first appeared on our tree in 1993 when it was 18 years old. Since then female cones have been produced each year but in very low numbers and scattered throughout the canopy. These cones have remained small, clearly have not been pollinated and fertilised, and the empty seed scales and axes fall to the ground. In 2009 the first few male cones were formed and in 2010 many more were produced, mainly in the very top of the tree mixed with female cones that are larger than previous crops and most probably have been pollinated and fertilised. It will be interesting to see whether viable seed is produced after a 34-35 year wait for the first appearance of male and female cones together on this tree.

What has happened to the other offspring of Tane Mahuta distributed in 1979-80? Sadly, I cannot say as several of the recipients have since passed away, or moved elsewhere. And the tree given to the Christchurch Botanic Gardens was

blown over in a storm. However, our tree is very much alive and thriving, although growth in some years has been better than others. An increment core taken from the trunk at breast height yielded the same number of growth rings as the age of the tree, namely 35, but some rings away from the central core measured 2mm in width while others achieved 5 mm, no doubt

a reflection of the variable growing conditions experienced in Christchurch, especially unusually dry spells.

Interestingly, our 110 year-old brick villa was built by the first Professor of Chemistry at Canterbury College, Professor W. P. Evans, who studied the chemistry of the Tertiary lignites of Canterbury, Otago, and Southland. Evans wrote several papers on the plant fossils he found in these lignites, noting "Four of the five araucarians obtained from the lignites could not be distinguished from *Agathis australis*, and for these fossil woods the writer therefore proposes the name *Agathoxylon australe*"; later he noted that this and similar evidence from the lignites "appear to place the the existence of *Agathis australis* in the South Island during the Tertiary period beyond all doubt." (NZ J Sci & Tech, 18: 188-193, 1937).

Perhaps greater use should be made of the stately kauri as an amenity tree in Christchurch and other parts of Canterbury, not only as single specimen trees in private gardens, but also as stands of trees in parklands and other public places.

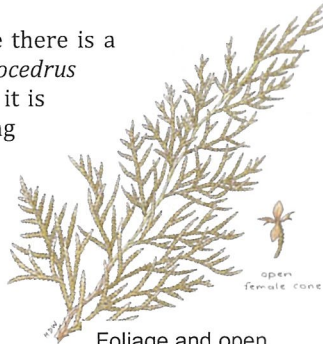
WHAT KILLED BANKS PENINSULA'S CEDARS?

Hugh Wilson

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Near the Visitor Centre on Hinewai Reserve there is a 4m tall native cedar or pāhautea (*Libocedrus bidwillii*). At this time of year (late winter) it is laden with little brown female cones, gaping open, the seeds long shed.

Some reserve visitors don't know that New Zealand has native members of the cypress family, Cupressaceae, and wonder out loud why an exotic conifer is planted in the arboretum. Other visitors know about *Libocedrus*, but are surprised to learn that it is native to Banks Peninsula. When a few paces further on they encounter a magnificent specimen of tōi or broadleaved cabbage tree (*Cordyline indivisa*) their surprised eyes open wider. This is because they know that both species thrive only in cool uplands with high rainfall. How can such conditions be met anywhere on drought-prone Banks Peninsula?



Foliage and open female cone of pāhautea. Watercolour by Hugh Wilson