

Shining Gums in Cromer's Wood, Sittingbourne

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Many visitors driving up to the Kent Wildlife Trust reserve at Cromer's Wood, south of Sittingbourne, will have noticed the unusual tree crowns visible to the west of the track before it reaches the small car park. These crowns are especially obvious in winter, because they are evergreen. I suspect few visitors will have made a closer inspection of these trees, but those who have will not have failed to be impressed by the superb form and massive size of the trunks – the largest had a breast height diameter of 59cm in March 2004. But I would guess that very few people know that they are just 15 years old!

The trees are Shining Gum (*Eucalyptus nitens*), a species that has been planted commercially on a large scale elsewhere in the world in the past 20 years. Yet as recently as 1980, the species was known only to a few researchers. For example, in Chile in 1987, the species was planted in a very few research plots. By 2001, 80,000 hectares had been planted with this species just in that country, primarily for pulpwood production.

Cromer's Wood was formerly part of the Shell's research station at Sittingbourne, and I was involved in the forestry research that was a small part of the wide range of activities carried out there. Shell Forestry became interested in *Eucalyptus nitens* in 1987, and I instigated the planting of the trees in Cromer's Wood because I thought they would be a useful resource for future research. The trees were seedlings that we raised in the greenhouses at the research centre, and they were planted in the winter of 1988/89 in an area of the wood that had just been coppiced. The area has not been coppiced since, so the mixed coppice regrowth today is the same age as the gums.

The evident vigour of the Shining Gums is characteristic of the species wherever it is able to establish in the open without competition from weeds. It is of course this feature that is one reason for the commercial interest in this species. Shining Gums grow to massive dimensions in their native habitat of the forests of the Great Dividing Range in Victoria and New South Wales. It is not clear what size they can achieve elsewhere in the world, because even trial quantities of seed from Australia only became generally available in the late 1970's. Thus few Shining Gums outside of Australia are more than 25 years old.

In the British Isles, the largest tree noted in the recent book on Champion Trees published by the Tree Register is one in Co. Cork. Its age is not recorded but its dimensions suggest to me that it was planted in the early 1980s. The Forestry Commission included the species in its eucalyptus trials planted in the early 1980s. These trials generally suffered from a combination of poor establishment silviculture and three very severe winters, and as a consequence many species suffered high losses soon after planting. However, where the Shining Gums in these trials have survived, as in Devon, Cumbria and Argyll, they are characteristically impressive. The research

branch of the Irish Forestry Commission (Coillte) planted Shining Gum in some demonstration plots throughout Eire in 1991, and all but one of these have grown very well indeed.

My interest in this species was renewed in 2001, because it offers a demonstration of the potential to produce high quality fuelwood on short rotations. The idea is not original – the New Zealand Forest Research Institute made a comprehensive study of the topic in the 1980s, using a wide range of fast-growing hardwoods and softwoods, and they showed how very good yields of fuelwood can be produced in as little as five years. Given our government's targets for development of renewable energy, it seemed that the potential of this approach to producing biomass fuel had been overlooked. I therefore included Shining Gum in a trial I started in North Kent in 2001. Its growth just three years later is astonishing, even for me – the trees had closed canopy at 14 months from planting, and many are now more than 10 metres tall.

The gums in Cromer's Wood have outlived Shell's presence at Sittingbourne and its involvement with forestry, and yet they still have value in demonstrating to us in Britain something well known elsewhere: that growing of trees need not be something that only future generations can benefit from.

In this brief account, I have not touched on many obvious questions about the biology and ecology of Shining Gum, its importance in plantation forestry around the world, and the practical uses of its timber. These are huge subjects, much studied and discussed elsewhere. The findings are frequently surprising, and one's intuition is a poor guide to reality. I suspect we will become more familiar with this remarkable species in the UK, as it is now sold by several specialist nurseries here, and I have recently seen young specimens planted in places as diverse as Kew Gardens and the amusement park at Southend, Essex. Hopefully some of these will become big trees within our lifetimes.

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