

The changing Leyland Cypress

Derrick Rooney¹

Thanks to a recent discovery in Vietnam, the long arm of taxonomy is set to reach out yet again with a name change for the Leyland cypress, one of New Zealand's most popular farm and horticultural shelter trees.

Although it did not become widely known even in England until the 1960s and in New Zealand until the late 1980s and 1990s, when mass propagation techniques were developed, the Leyland cypress was first raised by chance way back in the 1880s (in 1883 according to some accounts and 1888 according to others) at Leighton Hall, Welshpool, England, from cones picked off a Nootka cypress. Six of the seedlings were sent to Haggerston Castle, in Northumberland, for planting in 1892. The clone 'Haggerston Grey' is one of these seedlings.

Nineteen years later two similar seedlings were raised at Leighton Hall from seed collected off a Monterey cypress. These were later named 'Naylor's Blue' and 'Leighton Green'.

Despite the unusual appearance and vigorous growth of the seedlings they attracted little attention until 1926, when they were brought to the attention of W. Dallimore, curator of the British National Pinetum at Bedgebury, who described them and arranged for the 'Haggerston Grey' and 'Leighton Green' clones to be propagated. 'Naylor's Blue', which grew near 'Leighton Green' on a hillside behind Leighton Hall, was propagated only after it was felled by a freak windstorm in 1954. A fourth clone, 'Green Spire', remains less well known.

Dallimore recognised the seedlings as that uncommon occurrence, an intergeneric cross, between the Monterey and Nootka cypresses. This meant that a new name, incorporating bits of both generic names, had to be erected.

At the time, the Monterey cypress was known to taxonomists, as it is still, as *Cupressus macrocarpa*. However, the Nootka cypress, also popularly known in the American Pacific North-West as yellow spruce, was classified in the same false-cypress genus as the better-known Lawson cypress, and was known as *Chamaecyparis nootkatensis*. Dallimore coined the name *xCupressocyparis leylandii* for the Leyland hybrids.

Two more clones were selected in Dorset in 1940 from a different source: seedlings from a Nootka cypress growing at Ferndown. The seed was raised at the Barthelemy nursery at Stapehill and for some years the seedlings were known only under Stapehill code numbers, 20 and 21. Eventually, the clone that has become more popular was named 'Ferndown'. Two more recently named clones, 'Castlewellan' and 'Robinson's Gold', arose in Northern Ireland, have yellow or yellow-tipped foliage, and are more ornamental than utilitarian.

In 1956 the research division of the British Forestry Commission sent a genetics team back to Leighton Park to collect seed in the hope that new Leyland hybrids could be raised from the original source. They were unsuccessful in this, but they also collected seed from an Arizona

cypress, *Cupressus glabra*, growing about 20 metres from the Nootka cypress that had produced the original Leyland clones. Two seedlings from this tree displayed unusual adult foliage and were subsequently propagated and named *xCupressocyparis 'Notabilis'*. Later still, in the early 1960s, a Mr Harold Ovens, from Cardiganshire, collected seed from a Mexican cypress, *Cupressus lusitanica*, surrounded by Nootka cypresses, at the Westonbirt Arboretum. Two of the resultant seedlings were clearly crossed with Nootka cypress. One of these, now known as *xCupressocyparis 'Ovensii'*, is grown in New Zealand and has become popular, particularly in the North Island, where it seems to grow better than it does in the South Island. The "original" Leyland clones, as is now well known, thrive almost anywhere in New Zealand below the treeline.

Dallimore's compound name of *xCupressocyparis* for the group continued in use until about the beginning of the present century, when intensive research, including DNA analysis, by scientists including one in Australia indicated that the Nootka cypress was closer to the true cypresses than to the other false-cypresses. Thus, *Chamaecyparis nootkatensis* became *Cupressus nootkatensis*.

As a result, *xCupressocyparis leylandii* became plain *Cupressus xleylandii*, which, if nothing else, made the name a lot easier to spell and pronounce.

Now all that is changed again, as a result of the discovery, far away in the mountains of northern Vietnam,

¹ P.O. Box 43, Hororata, Canterbury

of a conifer completely new to science.

The "new" conifer, found by a joint expedition of botanists from Vietnam, Russia, the United States, and England, proved after detailed taxonomic studies to be the closest known relative of the Nootka cypress.

The Vietnamese tree has hard, yellow-brown, fragrant, fine-grained timber that is valued highly by local residents, which might account for why the scientists found large specimens only on steep ridges where access is difficult.

"This tree was already rare and endangered when we discovered it," an American member of the botanical team was reported as saying.

The common name of the new conifer is "Vietnamese golden cypress". The species is unusual in that mature specimens carry both juvenile and adult foliage.

The "Leyland" in Leyland cypress commemorates the family who owned the Haggerston and Leighton estates when the original seedlings were raised and propagated. C.J. Naylor was managing the Leighton part of the estates when the first batch of seedlings was raised in the 1880s. After inheriting both the entailed estates from his great-great-uncle Thomas Leyland in 1892, he moved to Haggerston (taking the hybrid cypresses with him) and changed his surname to Leyland. Subsequently, he sold his lifetime interest in Leighton Hall to his brother John Naylor, who died in 1906. John Naylor's son, Captain J.M. Naylor, took over Leighton Hall in 1909 and remained there until 1931. He was probably the Naylor of 'Naylor's Blue'. Under the modern convention controlling the naming of cultivated hybrid plants, the Latin specific name "leylandii" would not be permitted, but as the name was in use before the 1950s, its continuation is permissible.

To accommodate it and its Nootka relative, taxonomists have erected a completely new genus, named *Xanthocyparis*, which, literally translated, means "golden false-cypress". The Vietnamese golden cypress becomes *Xanthocyparis vietnamensis*, while Nootka cypress becomes *Xanthocyparis nootkatensis*.

Whether these discoveries will require a new Latin name with a touch of yellow in it for the Leyland cypress is still not known, but it seems that in the meantime nurserymen will have to re-sharpen their spelling pencils for a switch back from *Cupressus* to *Xanthocyparis*, which has once again become a valid name.

Many treegrowers and nurserymen may prefer to dispense with Latin names altogether and simply call the group Leyland cypresses.

Predictably, the clones of Leyland cypress, as is expected of intergeneric crosses (among which the mule is a classic) have proved to be largely infertile. However, about 20 years ago Dr J.W. (Hamish) Sturrock, then with the DSIR, found seeds on a small number of Leyland and 'Notabilis' cypresses in a trial planting near Mosgiel, in Otago. About 50 seedlings were raised by the DSIR. Dr Sturrock was given permission to retain the seedlings when he retired, and currently has them growing on his property near Rangiora, in North Canterbury. There are considerable differences in their appearance and vigour. Farm Forestry Association members who inspected Dr Sturrock's trees during a field day several years ago concluded that although it was possible the less vigorous seedlings had been "selfed" (a very rare occurrence in intergeneric hybrids of known low fertility) most had probably been outcrossed to windblown pollen from other cypresses growing nearby (Arizona rather than Monterey cypresses). As

most of the Arizona cypresses grown in New Zealand are raised from locally collected seed and are extensively hybridised, Dr Sturrock's trees most likely have a complex hybrid background which would explain their variability.

And, of course, they have a distant but undeniable link to the rare golden cypress of northern Vietnam.



The upper and undersides of foliage of the Nootka cypress (*Xanthocyparis nootkatensis*)