

Leyland cypress introductions to New Zealand

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Enquiries are often made on the availability, background and dates of introduction to this country of the various clones of the intergeneric hybrid *x Cupressocyparis leylandii* or Leyland cypress. In view of the current interest in cypresses for farm and specialist timber uses (e.g. Haslett et al., 1985), this note sets out the available information. The evidence for the earlier introductions (up to 1963) has been obtained through correspondence and file notes, the early import permits having been destroyed (N. Lund, pers. comm., 1989).

All the major clones (Haggerston 1 to 6; Leighton Hall 10 and 11; Stapehill 20 and 21) are now in this country with the sole exception of clone 5. Table 1 chronicles their introduction.

Haggerston Clones

The Haggerston clones, which include the named cultivars 'Green Spire' and 'Haggerston Grey', arose from a single sowing of Nootka cypress seed at Leighton Hall, Wales, in 1888. Shortly after, the six, atypical seedlings were transferred to Haggerston Castle, Northumberland where they still exist as tall trees.

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Clones 1, 2, and 3 were imported together in the early '60s by Bill Blight who worked for a short period with the NZ Forest Service. Blight co-authored, with H. Ovens and Alan Mitchell of the British Forestry Commission, the paper describing the history and identification of the Haggerston and Leighton Hall trees (Ovens et al., 1964).

There was a further importation of clone 2 in 1972 by R. Barry of South Taranaki Nurseries, Hawera (J. Miller, pers. comm., 1989).

The remaining Haggerston clones were imported in 1985 (Table 1) but unfortunately clone 5 did not survive and has not been reimported. This is a pity because there is currently some interest in this clone from the British Forestry Commission and it may be the most useful of the remaining Haggerston trees. Clones 4 and 6 are being propagated prior to release.

Leighton Hall Clones

Clones 10 and 11 arose in 1911 from a sowing of *Macrocarpa* cypress seed, also at Leighton Hall. These Leighton Hall trees were distinctive both from the Haggerston trees and from each other, but were only named in 1964 (Ovens et al., 1964), clone 10 becoming 'Naylors Blue' and clone 11 becoming 'Leighton Green'. The original seedling trees were planted 800 m apart on the hill behind the house. Leighton Green still survives but

TABLE 1. Main clonal introductions of Leyland cypress to New Zealand.

Importer	Affiliation/ location	Year Imported ¹	Clones		Purpose of introduction
			Clonal number	Cultivar name	
M. Sutherland	Dept. Agr., Rukuhia	1952	11	Leighton Green ²	To replace canker-affected macrocarpa cypress
I. Thulin	FRI, Rotorua	1962	10	Naylors Blue	Best form of the clones inspected in UK
W. Blight	NZFS	1963	1 2 3	Green Spire Haggerston Grey ³ —	
Tauranga nurseries J.W. Sturrock	Tauranga) DSIR, Lincoln)	1978	21	Ferndown	To complement clone 11? DSIR trial evaluation
J.W. Sturrock	DSIR, Lincoln	1978	20	Stapehill	DSIR trial evaluation
J.W. Sturrock	DSIR, Lincoln	1985	4 5 ⁴ 6 —	— — — Rostrevor	— — — —) DSIR trial evaluation

¹ Arrival in NZ quarantine. In most cases release date is approximately two years later.

² An unsuccessful attempt was made to import clone 11 in 1949 by the N. Otago Tree Planting Society (M. Bannister, through J. Miller, pers. comm.).

³ Also introduced in 1972 by R. Barry, Hawera (Miller, pers. comm.).

⁴ Failed to survive quarantine.

the original Naylor's Blue was destroyed by a small cyclone in 1954, fortunately after cutting material had been obtained. The temptation to name this clone 'Blue Down' was resisted!

Incidentally, the parent *C. macrocarpa* tree at Leighton Hall was of remarkably narrow form, eventually attaining great height (for an illustration, see Hadfield, 1968).

Leighton Green was the first clone of Leyland cypress to reach New Zealand and was imported as a substitute tree for canker-affected *Macrocarpa* cypress in the Waikato (Table 1). This early introduction, trial work in the '70s that demonstrated the worth of Leighton Green (Sturrock, 1976; Sturrock and Smail, 1978) and subsequent popularity with horticulturists, account for the clone's preponderance in this country (Fig. 1).



Figure 1. 'Leighton Green' is the most commonly seen clone of Leyland cypress in New Zealand; shown here is a specimen five years after planting at Reefton.

Photo: J.W. Sturrock.

Naylor's Blue, in spite of better form, is much less common, contributing factors being poorer rooting ability from cuttings and a slower initial rate of growth. It is gaining in popularity.

Stapehill Clones

A further spontaneous hybridisation was revealed in 1940 in a garden at Ferndown, Dorset. Among the seedlings from a sowing of seed from a *Macrocarpa* cypress were two that were to become Stapehill clones 20 and 21 before recently being given the cultivar names 'Stapehill' and 'Ferndown' respectively (Jobling, 1984). On release from NZ quarantine, both clones entered trials with other Leyland cypress clones and two other hybrid cypresses in 1983 (Sturrock et al., 1986). Stapehill 20 has the best form of any Leyland clone (Fig. 2), but it is not now favoured in Britain because of its sparser foliage and alleged drought susceptibility (Sturrock, 1989).

Other Clones

Included in the last importation was the Northern Ireland green clone 'Rostrevor'. This arose as a seedling at Daisy Hill, Rostrevor, a few miles south-east of Newry. The date of disco-



Figure 2. The parent of Stapehill 20 ('Stapehill') at Ferndown, Dorset, September 1988. Cutting material was imported in 1978.

Photo: J.W. Sturrock.

very is uncertain but by 1908 cuttings were being taken and the original tree was soon transferred to the arboretum at Castlewellan, 30 miles south of Belfast. Only recently has some commercial interest in this clone arisen in Britain (J. Jobling, pers. comm., 1985), in part because of its reasonable tolerance to wind and salt damage in coastal locations (Whalley, 1987). Rostrevor is presently being bulked prior to release in New Zealand.

Ornamental cultivars have also entered the country, including 'Castlewellan', 'Robinsons Gold', both originating in Northern Ireland, and 'Silver Dust', originating in the USA. Best known is 'Castlewellan' (syn. 'Castlewellan Gold'), a yellow-green clone, with plumose foliage similar to Haggerston Grey: it was imported by nurserymen Duncan and Davies Ltd and released in 1976. Silver Dust originated as a branch sport of Leighton Green at the US National Arboretum, Washington, in 1960 (March, 1976).

Clonal Authenticity

Leyland cypress is virtually 100% infertile and, unlike some other cypresses, hybridisation with other cypresses does not occur. The very few F_2 plants that have been produced from mass sowing of seeds (usually from Leighton Green, the most prolific producer of cones) are easily distinguished. Nevertheless, reliance on vegetative propagation, if conducted on a sufficient scale and for a long enough period, invariably results in some clonal variation, especially in the more easily rooted golden cultivars. Thus in Britain, up to 1985, there were some 14 different clones of Castlewellan and seven of Robinsons Gold (Jobling, pers. comm., 1985).

The question then arises as to the authenticity of the clones introduced and propagated in New Zealand. Although no certainty can exist on this point, the probability is that the major green clones are close to the original types. Not only do the green clones produce sports less often than the golden ones, but major mutation is easily recognised. Thus, for example, a distinctive sport of Green Spire arose at Lincoln during experimental propagation extending over about a decade. There is the possibility of nurserymen marketing a new form under an existing cultivar name, especially if the cultivar is selling well. On the other hand, it will be advantageous to them to name and promote sports which are distinctive in form or appearance. So far, neither of these possibilities seems to have occurred.

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