



Male flowers and a female cone on
x Cuprocyparis leylandii 'Naylor's Blue'

All photographs by Barry Phillips / RRS

The fertility of Leyland cypress

Authorities disagree on whether *x Cuprocyparis leylandii* produces viable seed. JAMES ARMITAGE finds that it does

HORTICULTURALLY, taxonomically and historically, there are few plants that can have a greater claim to being misunderstood than *x Cuprocyparis leylandii*, the Leyland cypress.

Horticulturally, it is often unwisely used, planted in places where its vigorous habit soon makes it a pest and an eyesore. Its merits as a shelter planting and as a specimen plant for larger gardens are often ignored.

Taxonomically, its correct placement is unresolved and over

the years it has been classified in the genera *Cupressus*, *x Cupressocyparis*, *x Cuprocyparis*, *Callitropsis* and *x Neocupropsis*.

Historically, it is wrongly reported. The story of its origin is given by Jackson & Dallimore (1926) who state that the hybrid first arose at Leighton Hall, near Welshpool, Wales, in 1888 and then again at the same place in 1911. This version of events is now well established and has been repeated unquestioningly in many publications subsequently. However, although the facts

concerning the Leighton Hall plants are not in dispute, these appear not to be the first instances of the occurrence of the hybrid. This honour goes to the cultivar 'Rostrevor' which was planted at Rostrevor, Co Down, Northern Ireland, in about 1870 (Mitchell 1985), although its origin is not recorded.

One further aspect of this remarkable plant requires clarification: the question of its fertility. There are few reports concerning the fertility of

x Cuprocypris leylandii and a survey of relevant literature reveals a surprising lack of consensus. Matthews *et al.* (1960) state 'Leyland cypress is not a common tree because it has not produced fertile seed itself'. Bean (1970) reflects this in asserting that 'Leyland cypress must be propagated by cuttings taken from side growths' and this view has been generally supported in more recent works. Buczacki (2007) is unequivocal as to its sterility and Bitner (2007) says Leyland cypress 'does not set seed and must be propagated by cuttings', though Eckenwalder (2009) is more cautious, giving 'Some cultivars sterile'. Farjon (1994) says simply that it 'originated in cultivation and is sterile'.

However, these references are at odds with Jackson & Dallimore (1926) who, in discussing the origins of the hybrid and providing the name *Cupressus x leylandii*, affirm 'these hybrids are fertile, seedlings of the F₂ generation having been raised'. Though the unambiguous reference to F₂ seedlings appears to

settle the question of fertility, the lack of any subsequent mention of these second generation progeny is difficult to explain and an error must be suspected.

Only 15 cultivars of Leyland cypress appear in the 2011–2012 edition of *RHS Plant Finder* (*Chamaecyparis lawsoniana*, by comparison, has well over 100 cultivars listed) and a check of those whose origins can be easily verified show them to be either F₁ hybrids or branch sports. However, the cultivar 'Rus', raised in New Zealand, is stated to have originated as a seedling of 'Leighton Green' (Clive Stace, pers. comm.).

Resolving its fertility

In January 2011 the question of the viability of Leyland cypress seed was brought to my attention by plantsman Roy Lancaster. He had received a query from Prof. Clive Stace, author of the *New Flora of the British Isles*, who had been confronted with the issue by a report of a Leyland cypress seedling appearing spontaneously outside gardens in west Kent.

Conifer experts consulted were unable to provide a definite answer. Therefore I decided to sow some seeds, in the hope of gaining more concrete evidence.

RHS Garden Wisley has surprisingly few specimens of Leyland cypress and no cones could be found on the large specimen of 'Castlewellan' in the Pinetum. However, the plant of 'Naylor's Blue' which grows with it had a large number of mature female cones and some of these I collected.

Surely one of the best of the Leyland cypress cultivars, 'Naylor's Blue' is also one of the least commonly grown in Britain, though it is apparently more common on the Continent (Lewis 1992). It arose at Leighton Hall in 1911 and was only propagated after it was blown over by a small whirlwind in 1955 (Mitchell (1972) gives 1954). It received its cultivar name in 1964, having been hitherto identified only as Clone 10. Compared to other Leyland cypresses, 'Naylor's Blue' is distinct in its blue-grey foliage and its graceful, less congested growth which is reminiscent of *Cupressus macrocarpa*. Ovens *et al.* (1964) say that flowers of either sex are rare in this plant, while Lewis (1992) claims male cones are seldom seen and females are very rare indeed. That these statements are so strongly contradicted by the tree at Wisley, which bears both in profusion, might be explained by the lack of mature trees available for study due to the destruction of the original plant. The specimen in the Pinetum was planted in 1966, having been received from Kew, and is considered the Champion Tree.

Seeds were sown on 27 January 2011 and in the last week of May a single seedling emerged bearing three cotyledons. This was reassuring as the parents of Leyland



The seedling at two stages of growth that arose from seed collected from a Leyland cypress

cypress, *Xanthocyparis nootkatensis* and *Cupressus macrocarpa*, usually have two and four respectively. The young plant has grown well and displays the glaucous foliage of its parent.

As a specimen of *Xanthocyparis nootkatensis* grows near to 'Naylor's Blue' in the Pinetum and there are various species of *Cupressus* close by, it might be that the seedling is of mixed parentage. Ovens *et al.* (1964) suggest that *x Cuprocyparis leylandii* is self-sterile, which would necessitate the availability of a compatible pollen donor in order for seed to be set, and may help to account for reports of its sterility. The possibility is lent support by a report from New Zealand (Clive Stace, pers. comm.) of about 50 seedlings having been raised in the 1980s from trees of Leyland cypress which probably had *Cupressus arizonica* as their male parent. However, it is at odds with Sturrock (1989) who states 'hybridisation with other cypresses does not occur'.

Clearly, the whole issue requires further study. Meanwhile, the prospect of raising, through careful selection, a new generation of Leyland cypress seedlings, better suited to small gardens, is surely an exciting one.

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The Champion Tree at Wisley of *x Cuprocyparis leylandii* 'Naylor's Blue' which yielded fertile seed

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