

Abies ‘West Gate’

While researching the firs for IDS TSO, TOM CHRISTIAN encountered a hybrid between *Abies forrestii* and *Abies homolepis* which had been disseminated among collections from one plant at the Royal Botanic Garden Edinburgh and deserves naming.

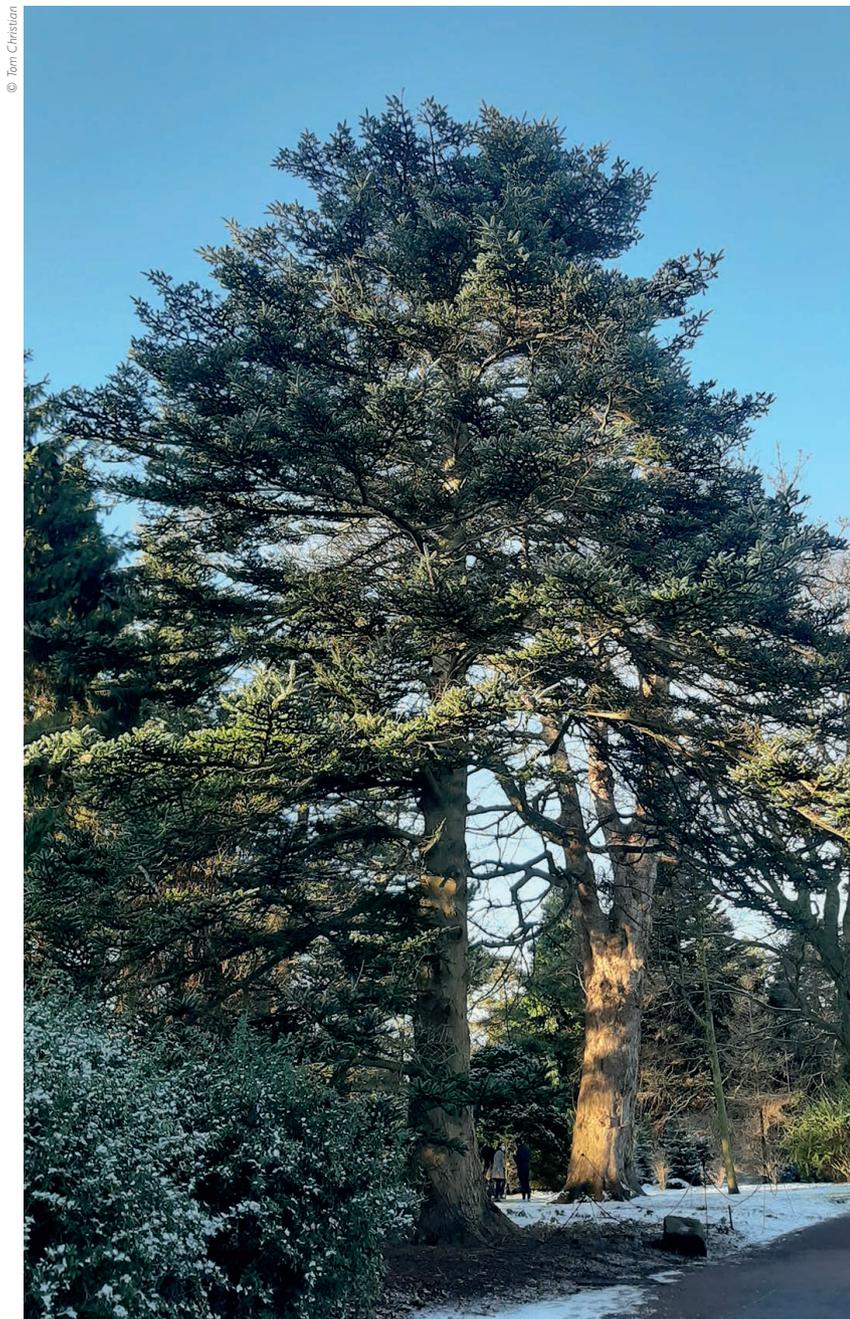
The firs (*Abies*) are a genus of *ca.* 60 species of evergreen, coniferous, mostly very large trees (Christian, 2021). The propensity for closely related firs to hybridise is well documented, and in cultivation home-grown seed will often yield hybrid forms when closely related species are grown together.

There is a long history of publishing formal nothospecies for hybrids of cultivated origin: *A. × arnoldiana* (*koreana* × *veitchii*), *A. × insignis* (*nordmanniana* × *pinsapo*), and *A. × vilmorinii* (*cephalonica* × *pinsapo*) are among the best known and most widely cultivated examples (Krüssman, 1985). Many deliberate crosses have been made by forest research organisations, and more recently by Christmas tree growers, who are experimenting with novel hybrids to improve traits such as disease resistance, although there do seem to be some barriers to hybridisation between distantly related species, and the majority of these novel crosses are never formally named (Galgóci *et al.*, 2013). Hybrids are also known to occur between some sympatric wild species; a few of these have been named, for example *A. × chengii* and *A. × umbellata*, but most have not.

During research for the revision of the firs for IDS Trees and Shrubs *Online* material was seen in several collections fitting a known hybrid of two Asian firs, *A. homolepis* of Japan and *A. forrestii* or one of its close allies from south-west China. Where and when it first arose is unclear, but perhaps the best-known example grows just north of the John Hope Gateway building (formerly the West Gate) at the Royal Botanic Garden Edinburgh, where it was accessioned in 1971 (19715734*A).

Michael Frankis was the first authority to suggest such a cross existed, after observing trees of this parentage during a visit to Foxhill Arboretum, Cheshire, in *ca.* 1980. ‘There was a group of three young trees there (4–5 m tall, ~15–20 years old?), which had cones just about exactly intermediate between *A. forrestii* and *A. homolepis*; the foliage was also intermediate’ (M. Frankis pers. comm., 2020). A tree growing in the pinetum at Gosford Castle, Co Armagh, Northern Ireland, was later identified as the same hybrid (TROBI) and it has also been observed during research for IDS Trees and Shrubs *Online* at the Yorkshire Arboretum (pers. obs.). As Frankis has observed ‘there seem to be enough to suggest that some nursery... had raised a batch of seedlings and sold them to a number of gardens, so there may be more yet waiting to be found’ (M. Frankis pers. comm., 2020).

The Edinburgh tree grows in a prominent location beside a major route through the garden and is a particularly attractive form of this hybrid. Being



© Tom Christen



photographs © Tom Christen



Right, seed cones on the tree at RBG Edinburgh (19715734*A) when it was labelled *Abies forrestii* × *homolepis*. The needles resemble those of both parents, but the shoots (**above**) are far too pale for *A. forrestii*.

Opposite, the particularly attractive form of the hybrid fir that grows just north of the John Hope Gateway Building (formerly the West Gate) at the Royal Botanic Garden Edinburgh, where it was accessioned in 1971 and is now named *Abies* 'West Gate'.

of remarkable vigour and beauty it soon attracted the attention of conifer enthusiasts, and both sanctioned and unsanctioned propagation events have taken place. Consequently, this clone is now represented in multiple UK collections, mostly as young trees.

The tree growing in Edinburgh has a complex verification history. It arrived in 1971 labelled *A. delavayi* var. *georgei* (now *A. georgei*) and for a long time continued to bear some permutation of this name. At some stage it was labelled *A. homolepis* var. *umbellata* (now *A. × umbellata*) a name which stayed with the tree until just a few years ago, when it was finally labelled *A. forrestii* × *homolepis*. Unfortunately, on all the occasions when this tree was propagated it was bearing erroneous names; most scions from it are labelled *Abies homolepis* var. *umbellata*.

Traditionally, a new binomial would be proposed to bring the nomenclature of this material into line with other widely grown fir hybrids, but there are unresolved and possibly unresolvable questions surrounding the parentage. Its ostensible *A. forrestii* parent belongs to a group of closely related southwest Chinese firs which are notoriously difficult to identify, and misidentifications of these taxa abound to this day even in the most august institutions. Rather than proposing a binomial, it seems better to continue to refer to trees of this



Abies forrestii agg. × *homolepis* at the Yorkshire Arboretum: **left**, the extremely beautiful female strobili in early May and **below** the underside of the needles in July.

type as *A. forrestii* agg. × *homolepis* but to afford the distinctive, much admired, and much propagated Edinburgh tree prominence as a named cultivar:

***Abies* 'West Gate'**

This cultivar name is proposed for clonal material derived from the RBG Edinburgh tree (accession 19715734*A). It has been vegetatively propagated on multiple occasions and was occasionally offered for sale by the late Derek Spicer, and possibly by the Kirkdale Nursery in Aberdeenshire. Young trees are known at Crathes Castle in Aberdeenshire, and in several private collections in Perthshire. Others will be found in collections elsewhere in the UK. Both the original specimen and its scions (once these establish apical dominance) are especially beautiful trees, broad-pyramidal in outline, exhibiting extraordinary hardiness, vigour, and resilience. It may be distinguished from *Abies homolepis* by the seed cones, which are much larger than in that species, and in the much longer first-order branches of established trees. It is set apart from its various possible Chinese parents (*A. forrestii*, *A. georgei*, etc.) by its bark, remarkable vigour and resilience, and in the seed cones with bracts more or less included at maturity. For more images see <https://treesandshrubsonline.org/articles/abies/abies-forrestii-agg-x-homolepis/>

References

Christian, T. (2021). *Abies* from the website IDS Trees and Shrubs Online (treesandshrubsonline.org/articles/abies).

Galgóci, M., Maňka, P., Kormut'ak, A., Čamek, V. & Gömöry, D. (2013). Differentiation of some interspecific hybrids of firs (*Abies* sp.) according to the length of primary branches and number of their secondary branches. *Folia Oecologica* 40 (2) pp. 176–180

Krüssmann, G. (1985). *Manual of Cultivated Conifers* Timber Press, Portland, Oregon.