

Dr Natasha de Vere, head of conservation and research, on the exciting discovery of new tree species, many on display at the Garden



BERRIED TREASURE: Dr Natashe de Vere

New trees are taking root in Britain

Here in the UK we know our plant species fairly well, due to our fairly small flora and long history of botanising, so it is not every day that new plant species are named. It is a rare day indeed when 14 new species and hybrids of tree are named, but that is what has happened recently. Many of these new trees can be seen at the National Botanic Garden of Wales and are part of one of our conservation and

research programmes.

The new tree species have been named by Dr Tim Rich at the National Museum Wales in conjunction with scientists from Bristol University, Exeter University, Oxford University and the Royal Botanic Gardens, Kew.

Six of the new species and hybrids are found in Wales and one species has been named in honour of the founder director of NBGW, Professor Charles Stirton.

The new trees are all members of the genus *Sorbus*. Some of these trees have probably developed recently as a result of hybridisation between their parent species; this is an example of the ongoing evolution of new species.

Others are older types that have been known for some time but are only now described as 'species' thanks to more information that has come from looking at their DNA.



Whitebeams at the National Botanic Garden of Wales

In recognition of the new whitebeam trees, we have developed a new garden here at NBGW dedicated to whitebeams. Whitebeams look fantastic planted together and it will be fascinating to see these trees develop over the years.

The new garden also allows visitors and botanists to see these trees up close and growing together. This is a great way to learn how to identify these species that are rare in the wild and generally found in areas that are difficult to access.

The new trees will also be used for scientific research. We are collaborating with Tim Rich at the National Museum Wales, along with Exeter University and the Whitley Wildlife Conservation Trust on a PhD looking at the origins and conservation of the endemic whitebeams of south-west England.

This is a project being carried out by Tracey Hamston of the Whitley Wildlife Conservation Trust.

Having a number of each species all planted together is also a good resource for investigating the reproductive biology of these trees.

The new whitebeam garden was officially opened during the Garden's Plant Conservation Day in May.

References: Rich, TCG & Proctor, MCF (2009). *Some new British and Irish Sorbus L taxa (Rosaceae)*. *Watsonia* 27: 207-216.

Rich, TCG, Harris, SA & Hiscock, SJ (2009). *Five new Sorbus (Rosaceae) taxa from the Avon Gorge, England*. *Watsonia* 27: 217-228.

The new Welsh trees are:

Stirton's Whitebeam (*Sorbus stirtoniana*) can only be found in one place in the world – on the cliffs of Craig Breidden, Montgomeryshire. There are only around 40 trees in the wild and it is critically endangered. It is named after Prof. Charles Stirton for his work establishing the National Botanic Garden of Wales.

Llangollen Whitebeam (*Sorbus cuneifolia*) is confined to the cliffs of Eglwyseg Mountain, Denbighshire, where only about 240 plants are known.

Welsh Whitebeam (*Sorbus cambrensis*) and **Llanthony Valley Whitebeam** (*Sorbus stenophylla*) – these two species are found in the Brecon Beacons and are closely related. Recent biochemical studies have shown that they differ from

each other and from the more widespread grey-leaved whitebeam, within which they were formally included. There are about 100 plants of the Welsh whitebeam known from the eastern Brecon Beacons west of Abergavenny. The Llanthony Valley Whitebeam was first found in the Llanthony Valley by the Rev. Augustin Ley in 1874; there are around 100-200 trees in the wild.

Doward Whitebeam (*Sorbus eminentiformis*) known only from the Wye Valley in England and Wales. The total population is probably under 100, most occurring on the Great Doward.

Motley's Whitebeam (*Sorbus motleyi*) this is a new hybrid found from just one site near Merthyr Tydfil, where two young trees have been discovered. It

originated as a cross between Ley's whitebeam (*Sorbus leyana*) and rowan (*Sorbus aucuparia*) in a wood near Merthyr Tydfil after the 1989 hurricane, which felled one of the few remaining Ley's whitebeams. The extra light from the gap in the woodland canopy allowed seeds in the soil to germinate and grow. It was first found in 1999 by Graham Motley of the Countryside Council for Wales and is named after him.

In England seven new species and hybrids have been named from the Avon Gorge and Devon, while in Ireland one new species has been named from the Killarney National Park in County Kerry.

All of the new trees are described in the journal *Watsonia*, the scientific publication of the Botanical Society of the British Isles. ■