

RARE AUSTRALIAN ORCHID SENT TO THE NETHERLANDS FOR GENETIC TESTING

Is a plant really a plant if it has no leaves, no roots and grows underground?

Samples of *Rhizanthella slateri*, a rare breed of orchid found in only a handful of locations in Australia's New South Wales, have been sent to the Netherlands for genetic testing to determine the plant's uniqueness.

The eastern underground orchid is one of a very small number of plants found around the world which cannot photosynthesise.

"The vulnerable NSW orchid does not get its energy from the sun, lacks roots and leaves, and instead relies on fungus to act as its substitute root system and to provide it with food," said Greg Steenbeeke, the NSW Office of Environment and Heritage senior threatened species officer.

Sequencing the plant's genetic blueprint will help botanists compare it with other non-photosynthesising plants to understand how they evolved and moved across the world, Mr Steenbeeke said.

Once sequenced, the plant's genetic code would be included in a global database, called Genbank, where sequences from other eastern underground orchids may be added in the future and used to map the variation between individual plants.

That plant species maintain the genetic differences they already have is necessary for their survival as the globe warms.

Plant evolutionary biologist Angela Moles said there were two ways plants could adapt to climate change, they could migrate to stay within their preferred climate zone at the moment, or they can adapt to their new environment.

"From paleo records, it looks like adapting in situ is the main thing species do, [which means] maintaining genetic variation is essential to have that ability to adapt," said Professor Moles, from the University of NSW.

Genetic research helps unlock the natural genetic diversity of plants and identify the populations best able to cope with changing climate conditions.

A principal research scientist at the Royal Botanic Gardens and Domain Trust, Maurizio Rossetto, said people were starting to understand the potential of genetics in plant conservation.

Advances in technology, including next generation sequencing, had made this research faster and cheaper than previously thought possible, said Dr Rossetto.

NICKY PHILLIPS



THE EASTERN UNDERGROUND ORCHID - *Rhizanthella slateri*

Rhizanthella slateri is the lesser known of the two underground orchid species found in Australia (4). Unlike the western underground orchid (*R. gardneri*), which never emerges from the soil, the small purple flowers of this species do break through and can be visible amongst the leaf litter on the forest floor .

THE DUBLIN ORCHID FAIR

Saturday 25th and Sunday 26th April 2015

The Irish Orchid Society invites all to attend **Dublin's 2015 Orchid Fair**.

This annual event is hosted by the National Botanic Gardens, Glasnevin and will take place in the Teak House from 10-5pm on both days; there is no admission charge.

Burnham Nurseries and Ray Creek Orchids will have a huge variety of orchids available to purchase as well as various sundries such as potting materials and orchid food. Both suppliers will accept pre-orders – please see www.orchids.uk.com and www.raycreekorchids.com

Members of the Irish Orchid Society who grow these plants in Irish conditions, will be present on both days to answer any questions and provide advice on how best to care for your orchids.

Please call to our stand for more information about the IOS, membership benefits and the chance to win an orchid.

Free events will include talks and a tour:

Saturday 1.30pm “Potting Basics”

Sunday 1.30pm “Orchids for Beginners”

Sunday 3pm Tour of the Orchid Collection of the National Botanic Gardens, Glasnevin

