

The New Basal Angiosperm Collection

by Jenny Chapman

The Botanic Garden has an exciting new collection of evolutionary ancient flowering plants known as 'basal angiosperms'. Jenny Chapman worked this summer at the Botanic Garden since July on a project funded by Magdalen College to establish the collection, which will be of great interest to the public and will also act as an important resource for academics in the Department of Plant Sciences. This heterogeneous group of plants has only been recognised since the advent of DNA sequencing, when it was discovered that the clean monocot-dicot split in the flowering plants was an oversimplification of the diversity of the group and did not accurately reflect their ancestry.

Analyses examined the DNA codes of over 400 plant species to determine their evolutionary relationships and the results were incredibly influential. The monocots remained as they always had been, defined by a clear suite of features, but there were major shake-ups in the way the dicots were classified. Many of the closely related dicots were placed in a new group – the eudicots ('true dicots'), leaving a handful of non-monocot, non-eudicot flowering plants.

Botanists now recognise this third group and the members are very important in many areas of plant science research. Groups around the World are attempting to reconstruct the structure of the first flower which evolved over 120 million years ago. Another exciting area of work is the elucidation of the mechanisms of anther

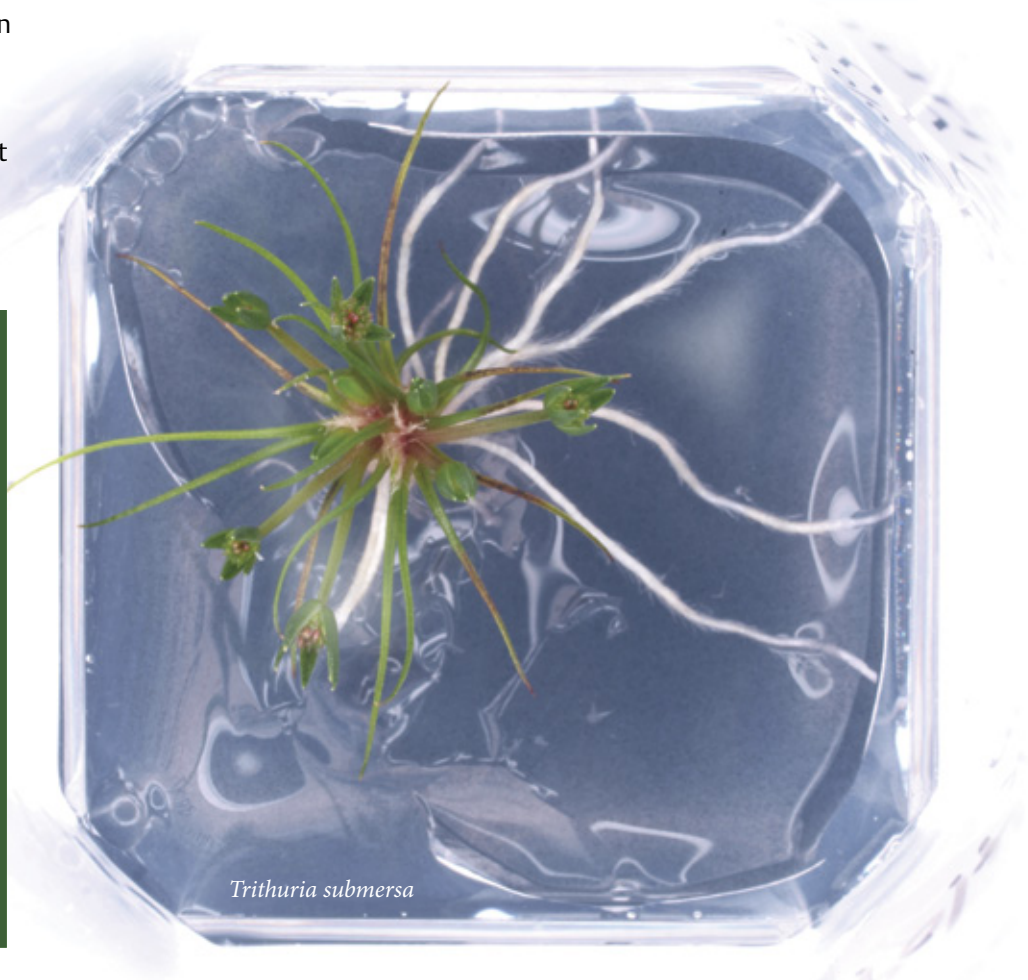
and root development in these plants, with world-class research being carried out by groups in the Department of Plant Sciences.

In addition to the importance of these plants in cutting-edge science, many of the species are familiar to us. Magnolias and waterlilies are two evolutionary ancient plant groups. The plants that give us cinnamon, nutmeg, bay leaves, pepper and star anise are also 'basal angiosperms'. Even the plant from which Tamiflu is synthesised is a member of this group! The collection is developing over the next few years and will be officially opened to the public in the summer of 2011.

Jenny Chapman joined the Staff in July 2009 to improve the Garden's collection of basal angiosperms

2010 Seed Collection

The 2010 Friends Seed Collection is now available. The collection consists of a selection of six good garden plants selected by the Hardy Collection Staff. To receive your free seed collection please send your name and address with a large letter second class stamp to the University of Oxford Botanic Garden, Rose Lane, Oxford OX1 4AZ.



Trithuria submersa