

Twenty-first century plant hunter



Bedgebury Pinetum

Above: Dan with the only parasitic conifer in the world, *Parasitaxus ustus*, in New Caledonia. It grows on the roots of another conifer

● To find out about the National Trust Careership scheme visit: <http://www.nationaltrust.org.uk/learninganddiscovery/learning/training/index.htm>

A pinetum is a collection of conifers or cone-bearing trees.

Dan Luscombe left school after taking GCSEs, unsure about what he wanted to do. He joined a Youth Training Scheme and had a spell of work experience in a record shop. One of the training scheme's advisers then suggested the National Trust Careership scheme. This is a practical 3-year training programme for gardeners and countryside wardens.

Dan joined the scheme, studying part-time at Cannington College in Somerset while working as a gardener at a National Trust property. He became keenly interested in plants but was not sure that he wanted to continue as a gardener.

For a year or two Dan earned a living doing various jobs but eventually he took an access course in the humanities which would normally lead on to a degree. However at this point he decided to take up horticulture again. He enrolled on an HND at Bicton College in east Devon and it was here that his enthusiasm for conifers began to grow. In September 2000, directly after leaving Bicton, he gained a 1-year studentship and then a permanent job at Bedgebury.

Expeditions

Dan's first trip took him to New Zealand where he visited both the North and South Islands. On this

Table 1 Dan's expeditions

New Zealand and New Caledonia	March 2002
North Queensland, Australia (tropical rainforest)	April 2003
South Africa	October 2003
Melbourne and Tasmania, Australia	April–May 2004

Dan Luscombe is an assistant curator at Bedgebury National Pinetum, which has the largest collection of conifers on one site in the world. Part of Dan's job is to find new species to add to the collection.

Box 1 Plants on the move

Many eighteenth- and nineteenth-century plant hunters were intrepid people, enduring great hardships to find new plants. There were few restrictions on gathering and transporting plant material and some of their activities caused damage to plants and natural habitats.

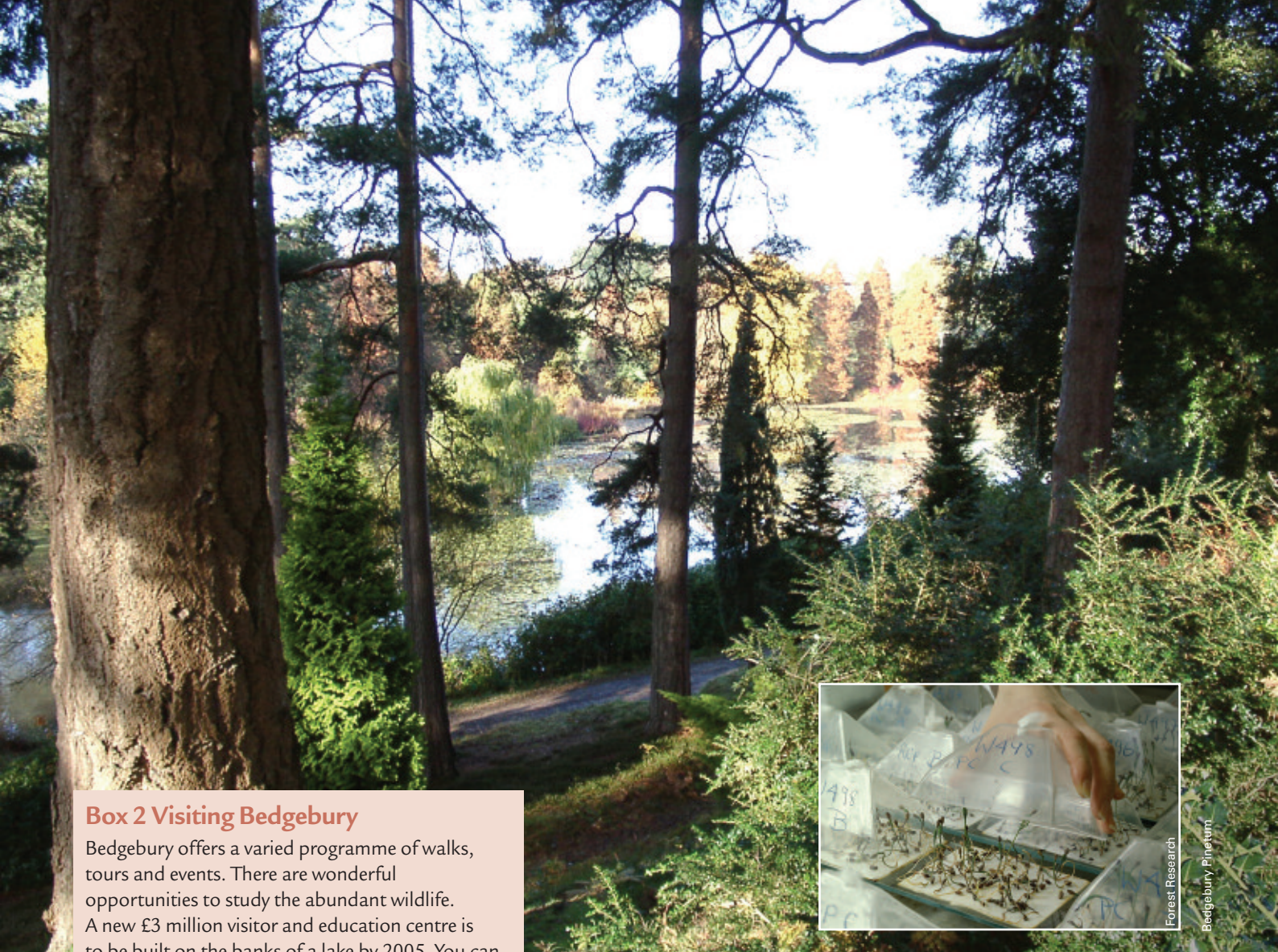
In the second half of the twentieth century people became more concerned about conservation. Collecting is now strictly controlled and plant collectors have to apply in advance for permits from the government of the country they wish to visit. Things like indiscriminate bulb collecting from the wild are banned. Dan mainly gathers seeds, although he has sometimes brought back dried specimens for herbariums. Collecting only seed also reduces the risk of unwittingly transferring plant diseases around the world.

expedition he was following in the footsteps of the famous eighteenth-century collectors Captain Cook and Sir Joseph Banks.

Even in remote parts of New Zealand the flora are quite well described. But this does not mean the plants are easy to find! Dan explained:

Because our climate is generally colder than New Zealand the seed I collected had to come from trees that were already growing in the coldest parts of the islands, usually up in the mountains. That way they would have a chance of withstanding our cold winter frosts.

Dan compared his search with being asked to find a specific orchid in England and simply being given a map of the country. He said 'I did, however, have help from the rangers in the National Parks who were able to give me directions for finding particular conifer species in the mountains.'



Box 2 Visiting Bedgebury

Bedgebury offers a varied programme of walks, tours and events. There are wonderful opportunities to study the abundant wildlife. A new £3 million visitor and education centre is to be built on the banks of a lake by 2005. You can find information about visiting Bedgebury on <http://www.bedgeburypinetum.org.uk>

Bedgebury Pinetum has now merged with Westonbirt Arboretum in Gloucestershire and they will in future be known as The National Arboretum.

I was also given the wonderful opportunity to study the unique flora on the island of New Caledonia, a place that could be described as the floral equivalent of the Galapagos Islands. There are 43 species of conifers (more species than in the whole of Europe) in an area the same size as Wales. Many of these are threatened with extinction in their native habitats.

During the trip Dan met with other botanical and conifer experts from around the world at the Araucariaceae Symposium, which provided an opportunity to bring together all the scientific work done on the monkey puzzle tree *Araucaria muelleri* for the first time.

Germinating the seeds

The cost of Dan's trips makes the seeds he brings home very valuable. They are sent to the Silviculture and Seed Research Branch of Forest Research at Alice Holt Lodge near Farnham. Here the germination



Above: Bedgebury in autumn **Inset:** Germinating seeds at Forest Research

facilities are excellent. They include X-ray equipment to check the condition of the embryo within the seed. When the seedlings are large enough they are transferred to the nursery at Bedgebury where they are grown on until they are well enough developed to be planted in the collection or transferred to other botanical gardens.

At the pinetum

Bedgebury National Pinetum is in the High Weald of Kent. It has valleys with streams, marshy land and drier ridges. Dan is responsible for planting new trees in the collection and has to decide where they are likely to do well. The experience he gains on expeditions is very useful here. Some new plants come from botanical gardens such as Kew and Edinburgh. Planting and keeping records is part of his everyday job. Besides his work with the collection Dan sometimes acts as a guide to the public, leading visitors on walks through the pinetum to discover the trees.

Janet Taylor is a science teacher and has contributed to many websites and textbooks.

A recent book, *The Plant Hunters: Two Hundred Years of Discovery and Adventure Around the World* by Toby Musgrave, Chris Gardner and Will Musgrave, tells the stories of earlier expeditions. It has beautiful illustrations.

● If you are interested in nature and working outdoors find out about courses in agriculture, horticulture and forestry at local colleges. Log on to <http://agrifor.ac.uk> and search for these subjects along with 'education UK'.