

BOTANIC GARDEN PROFILE: HARCOURT ARBORETUM

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ABSTRACT

Harcourt Arboretum has been managed by the University of Oxford Botanic Garden since 1963. The year 2013 will be the 50th anniversary of this union and improvements to the visitor facilities which will provide increased educational opportunities are planned as part of these celebrations. Details of the history, management and developments are provided along with images of the Arboretum.

INTRODUCTION

The University of Oxford Botanic Garden and Harcourt Arboretum are located at two sites. The Botanic Garden is situated on the bank of the River Cherwell in the centre of Oxford at the eastern end of the High Street. It extends over 2ha, the glasshouses occupying 883m² of these. The soil in the garden is a deep alluvial loam with pH 8.1.

The second site is Harcourt Arboretum at Nuneham Courtenay, six miles south of Oxford. The Arboretum is situated on a locally rare deposit of lower greensand and this acid soil enables the cultivation of many species intolerant of the soil conditions in Oxford.

HISTORICAL BACKGROUND

The Harcourt family

The Nuneham Park Estate was purchased by the Harcourt Family in 1712, but it was not until the end of the 18th century that the family moved into Nuneham House overlooking the River Thames and on towards Abingdon. Around the house a classic landscaped garden was maintained and one of the earliest flower gardens was created. The rest of the estate was extensive parkland and farmed. In the middle of the 19th century, between 1835 and 1865, a new feature was added on the eastern boundary of the estate on the Oxford to Reading road. This was the 44-acre Pinetum that now forms the nucleus of the Harcourt Arboretum (Fig. 1).

The first planting in the young Pinetum included some of the first generation of *Sequoiadendron giganteum* and *Sequoia sempervirens* (giant sequoia and coast redwood) to be introduced from western USA by William Lobb through Veitch's Nursery. The collection was planted in a landscape created by William Sawrey Gilpin.

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Fig. 1 An area of the original 44-acre Pinetum. Photo: Ben Jones.



Fig. 2 A selection of rhododendrons and azaleas that line the Serpentine Ride. Image composed by Ben Jones.

Due to the acid lower greensand soil in this part of the estate, *Rhododendron* and other lime-hating genera were included in the design, giving the Harcourts some horticultural one-upmanship over their neighbours (Fig. 2).

In addition to planting specimen trees of exotic species, William Vernon Harcourt planted many acres of the surrounding area with native species such as *Tilia platyphyllos* and *Quercus robur*. It is believed that he was encouraged to do this by Charles Daubeny, a friend from the University of Oxford who had recently become Professor of Botany at Oxford and hence Keeper of the University of Oxford Botanic Garden (UOBG).

The Harcourt family continued to own the estate until the end of the Second World War when they decided to sell the house and land to the University of Oxford. The mansion was rented out to a variety of tenants and is currently a Global Retreat Centre for the Brahma Kumaris spiritual organisation. The parkland was rented to tenant farmers for both arable crops and livestock. The University Land Agent N.D.G. James, considered by some to be the father of English forestry, managed the woodlands, including the Pinetum.

Harcourt Arboretum

In 1963 the University decided to sell off the woodlands, including the Pinetum, which by now contained a great collection of mature exotic trees. A total of 22ha of land, including the Pinetum, was purchased by the UOBG to augment its collection of plants



Fig. 3 Bluebell Wood. Photo: Ben Jones.

in the city. The Arboretum, as it was now known, gave the UOBG the opportunity to grow rhododendrons and camellias for the first time. It also provided more space into which the UOBG collection could expand, and of course it included the collection of trees, both exotic and native.

By 1963 the native plantings were mature and in the case of the oak woodland, full of English bluebells (Fig. 3). These areas are now being actively managed to promote the diversity not only of the plants but also of the native animals. New, young trees are being planted to provide continuity and a mixed age structure.

However, included in the 22ha was 4.8ha of former parkland. From 1963 this received neither fertilisers nor pesticides, the only management being the removal of a crop of hay in late July each year. In 1996 the opportunity arose to enlarge this meadow when the tenancy of the pasture to the north of the Arboretum became vacant. A bid was made to, and accepted by, the University Estates Committee for the Botanic Garden to rent the 10ha field now known as Pylon Meadow (Fig. 4). Whilst not an attractive name, this land is adjacent to the equally industrial Windmill Hill (Fig. 4) upon which no windmill has ever stood, and which forms part of the native woodland areas.

Acid grassland was once common in Oxfordshire but is now relatively rare and is hence considered to be a local conservation priority. Pylon Meadow has been regularly surveyed by staff and undergraduates and an accurate species list exists for these 15ha.



Fig. 4 Pylon Meadow with Windmill Hill in the background. Photo: Ben Jones.

Pylon Meadow had not been managed well from a commercial standpoint and so was a species-rich sward although slightly different from the 5ha of original parkland. The two areas were brought together by the removal of various wire stock fences, and a hedge containing native species such as *Acer campestre*, *Crataegus monogyna* and *Cornus sanguinea* was planted to the west, north and east. The hedge is now being traditionally laid and it is providing a habitat for invertebrates and small mammals, which in turn are supporting the resident barn owl population. The plants were purchased from a local supplier at Frilford in Oxfordshire and are of known local provenance. Since 2006 cattle or sheep have grazed Pylon Meadow from August to December.

STAFF STRUCTURE

The UOBG and Harcourt Arboretum are managed by the Director of the Botanic Garden and Arboretum and the Senior Curator. The plant collections and sites are managed by three Curators, referred to as Gardens, Glass and Arboretum Curators, each supported by teams of three to five staff who deal with the practical elements of the horticultural and arboricultural work. Additionally, there are three Education Officers across both sites and an administrative team whose roles cover Operations, Finance and the ticket offices.

EDUCATION AND FUTURE DEVELOPMENTS

Education is central to the activity of the UOBG. However, while the University-based education and expanding research programmes are supported by core funding, the schools and public education programmes have been entirely funded from sources external to the University since they started in 1993. Whether structured and directed towards specific groups or less structured for general visitors, education can be delivered through a wide range of media. The structured education programme is one of the strengths of Harcourt Arboretum, reaching over 1,000 schoolchildren each term. The public education programme is equally well supported, with a wide range of talks, walks and workshops offered to the general public.

Whilst the current programmes are thriving, one area that could be improved further is the 'unstructured' education programme. This can be delivered in a multitude of ways through interpretation boards, seasonal trails, leaflets and unguided walks, but regular feedback from our visitors has focused on the lack of covered facilities. Each year 45,000 people visit Harcourt. The facilities currently available to them extend no further than toilets in the Lodge. After much consideration and consultation, two areas have been identified for development.

The Wildlife Hide

A two-storey Wildlife Hide on Windmill Hill that will be accessible at both levels to all visitors to Harcourt is planned. The upper storey will be in the canopy of two magnificent old oak trees due to the lie of the land, with spectacular views over the newly restored wild flower meadow and the associated wildlife. Visitors will be able to watch red kites, peregrine falcons and buzzards which feed and nest in the area. It is also proposed that images from nest cameras will be transmitted to screens in the Hide.

The Wildlife Hide will be used to support both structured and unstructured schools education programmes and it is expected that schools will be far more willing to visit during the winter than they are now when a lack of covered facilities makes a winter visit less appealing. The Hide will also present an opportunity for engaging with other agencies such as the Royal Society for the Protection of Birds (RSPB) and local wildlife organisations.

This Wildlife Hide will be a huge asset to the site allowing us not only to improve our existing education offer, but also to develop it further to meet the needs of our 45,000 visitors. On the approach to the Hide, there will be a combination of tables and benches with some interpretation boards. The boards will inform visitors about the wildlife they might encounter and the view from the Wildlife Hide over the wild flower meadow. Much research to support the management of the meadow has been carried out by undergraduates since 2006 and additional interpretation will enable this to be shared with visitors.

It is also anticipated that this area will be hired out for private functions or third-party events and this will also be a valuable source of revenue.

The Coppice Barn

The Coppice Barn will provide a shelter between Bluebell Wood and the Coppice and production area where a charcoal burner is installed. It will be a valuable outdoor educational space and will provide a facility to represent traditional and sustainable woodland management and interpret each step of the process. The sourcing of material and the construction process is a great opportunity to engage with visitors, local woodland owners and craftsmen as well as organisations such as the Carpenters Fellowship and the Sylva Foundation.

The Coppice Barn will facilitate additional woodland craft courses such as pole lathing, hurdle making and charcoal production. These courses will be delivered through the Public Education Programme or by external groups who will hire the shelter as a venue. Like the Wildlife Hide, the Coppice Barn will be a valuable outdoor space for a range of types of education and interpretation.

CONCLUSION

The year 2013 will see the celebration of the 50th anniversary of UOBG's acquisition of Harcourt Arboretum. In this period of time the number of botanic gardens and arboreta around the world has doubled, proving that they are not an anachronistic Victorian legacy, but thriving institutions with a clear agenda for the 21st century. The proposed developments at Harcourt are indicative of the steps that UOBG is taking to respond to visitor needs and in particular the educational possibilities that botanic gardens offer the public.

