

Blarney Castle and Gardens

Twenty-four tree enthusiasts gathered in County Cork in Ireland from Friday 18 to Sunday 20 October 2019, for a study week-end on 'managing historic gardens and plant collections'.

AARON BRENNAN writes about some of the highlights.

Blarney Castle is fortunate to have a continuous flow of trees and shrubs entering into the gardens from a multitude of sources which necessitates the keeping of accurate information including plant name, source of material, date of planting and the planting location within the castle environs. Under the direction of head gardener Adam Whitbourn, the gardens at Blarney Castle have been developed and maintained in order to complement the castle and for the enjoyment of the many visitors and season ticket holders. The addition of a wide range of plants provides year round colour and interest, helping to create a visually enjoyable experience for visitors once they enter the castle grounds.

In recent years a greater emphasis has been placed on developing a more biodiversity aware and friendly estate, with the objective being to protect all native flora and fauna found to be present within the estate. This approach can and has helped the gardens to both meet the requirements of Ireland's National Pollinator Plan and also to be an important and active contributor towards its implementation. Blarney Castle has the distinction of being the first Irish estate to receive the title of 'Wildlife Estate' by the European Land Owners

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Organisation in 2018. This highlights the aims of Adam and the gardening team as they strive to adhere to the philosophy of wildlife management and the sustainable use of land. Conservation and the continued development of their plant collections has also been made a priority and having become an accredited member of the Botanic Gardens Conservation International, this will allow the gardens to continue towards the development of their collections and contribute to the world of plant science.

These *ex-situ* collections include rare and endangered plants, not just native to Ireland but also plants from as far away as Vietnam which now take pride of place within the estate, in areas such as the newly developed Vietnam Walk, Himalayan borders and Birch Grove area. Having the opportunity and capabilities to develop such collections and to compile 'living collection' data provides Blarney Castle and Gardens with the possibility of contributing to the world of plant science, research and conservation.

Talks by head gardener Adam Whitbourn and plant-records manager Bruno Nicolai throughout the October IDS study weekend, gave members of the young IDS a valuable insight into how many of their plants and plant propagation materials are sourced for the gardens and how such data is recorded. Referring to the aforementioned collections, particularly with regards to the Vietnamese collections, Blarney is lucky in that both Adam and Bruno have been involved in the many processes right through from the collecting and transporting of seed from Vietnam to their continued care and development in Blarney's in-house propagation units and eventually out into the gardens, where they continually monitor and collect all data detailing the performance of individual plants.

Below, Ireland's Tree of the Year for 2019, an ancient yew (*Taxus baccata*) believed to be 600 years old in the Rock Close area of Blarney Gardens.



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Attendees at the Blarney study weekend were introduced to one of the finer examples from the endangered collection, the giant Himalayan conker tree, *Aesculus wangii*. A native to the sheltered valleys of the greater Himalaya and as the non-botanical name suggests, *A. wangii* produces impressively large conkers. The collection of a relatively large quantity of these conkers has allowed for some experimentation, with some being planted directly into woodland and other areas throughout the estate, while the majority were grown on in the glasshouse. As observed by Adam, those planted into the woodland area have had a much slower, steadier start to life and despite having germinated during a period of frost, the initial growth experienced no substantial damage. Another specimen, which was planted on an exposed, elevated, windy site, experienced some foliage burning due to the cold prevailing winds. However, it is hoped that many plants will adapt to the local climate and survive. Following the 2019 autumn trip to Vietnam, seeds of the endangered *Cupressus vietnamensis* and *Bretschneidera sinensis* have also been collected and these will hopefully be added to the collection of existing specimens currently growing in Blarney's arboretum and pinetum.

The collection of rare and endangered plants such as *Aesculus wangii* is both a physically and psychologically demanding exercise, yet one that both plantsmen and plant hunters fully embrace. For the aspiring plant hunters present at the weekend, Adam provided the group with invaluable insight and inspiration into the world of plant hunting, explaining how interested individuals can join up with and get involved with a team for future expeditions. The significance in the development of relationships through networking, and building a strong level of trust and understanding among fellow plantsmen was highlighted as being one of the necessary first steps to creating a strong and supportive team, which is important as are the many skills brought to the table by each member of the team. The experience and presence of seasoned plant hunters on such trips is key to ensuring that plant expeditions are successful.

As highlighted by Bruno during the workshop, when collecting plant materials for collections, the prioritising of seed over cuttings whenever possible, is not just best practice for the benefit of the propagator but also from a conservation point of view, allowing botanists to assist with ensuring plant genetic diversity and species survival. Knowing and recording the necessary details, such as the elevation and the climate of where the seeds are collected, is crucial, particularly for the propagator and is key to getting the seeds to germinate and to mature into healthy new plants. At Blarney Castle a small portion of seed is propagated in-house, the majority is then sent on to other botanical gardens who are willing to comply with the terms of Blarneys Material Supply Agreement, and seed is also donated to Kew's Millennium Seed Bank.

Following on from the more recent plant exhibitions, in order to adequately

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Above, left, *Pilgerodendron uviferum*, a small conifer that grows in acidic bogs in Chile, and right, one of many giant conker trees, *Aesculus wangii* growing in the grounds of Blarney Castle.

manage the continued development of the collections and the resulting influx of plants entering into the estate, designated plants-record manager Bruno Nicolai has developed an accurate and up to date record-keeping system which has already been of major benefit to the members of the gardening staff. The first step in this system has involved the recording of all relevant plant movement details into an accession book that is stored in the walled garden. This is the first entry point of plants and plant propagation materials into the gardens. Recorded in the accession book is the plant name and plant material type, whether it be a seed, cutting or an established specimen. The date of plant acquisition and its source is also recorded in the book along with the date and location of the plant once it has been removed from the walled garden, with the relevant planting plans for individual areas also being updated.

An important tool utilised in the initial steps of accessioning plants, and one which has been introduced into the garden in recent years, has been the online database and the Near Field Communication tagging system. This allows the plants-record manager to assign each plant its own unique digital signature or reference code and as a result providing it with a number and a place on the gardens online plant-record database. The system then becomes tangible with the use of Near Field Communication (NFC) tags which are easy to use and compatible with the majority of Android and Apple devices. By logging into the main plant-record database, the plants-record manager can create a tag which assigns individual plants within the tree and shrub

collections with their own identification number. All relevant information such as GPS location, photos and plant facts are added onto the NFC tag. Upon arrival at the walled garden all plants are accessioned. At this stage temporary NFC horti-tags are attached to the plants, after planting out the tree or shrub these tags are later replaced with a label and tag combination so that both gardeners and the public can identify the plants. Having the necessary equipment, in the form of a gravograph (an engraving machine), the plants-record manager can produce plant labels which include the plant name, place of origin and record number. The NFC tags arrive with sticky backs which can be attached onto the back of these labels. Labels are hung on trees using copper wire. On the more mature trees they are fixed into place using plastic screws. These screws can be altered to avoid inclusion into the bark as the tree ages, prolonging the life of the label and tag. Old labels are, in most cases left on the individual specimens unless the information on them requires updating or if they are damaged. The availability of an Android application for instant access onto the internal plant database enables gardening staff and estate arborists to update the database and records while working in the gardens. Such updates can include the input of observational notes for purpose of plant health and the management of pests and diseases, the changes to plant location if moved, work carried out on a particular specimen or the updating of a plant's status if in the event the plant has died.

The NFC tags are not only beneficial to the plants-record manager and arborists but the availability of the tags have helped to develop a more interactive plant labelling system providing visitors to the gardens with the opportunity to identify or record any exciting plant observations on their visits, helping to provide a more rounded experience. The tags and the information they contain can be accessed by first ensuring the user has access to the internet or a Wi-Fi hotspot and that both the data/Wi-Fi

A large *Nothofagus dombeyi*, another Chilean native, growing in the arboretum at Blarney Castle.



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James Garnett, Sam Lismont, Aude de Liedekerke and Elisabeth Ryelandt enjoying themselves under a huge *Thuja plicata* at Blarney Castle.

and NFC option are enabled on the smartphone device. They then proceed by hovering the device no more than 10 cm from the tag; a link will then be sent from the tag to the smartphone device opening the relevant page, providing the individual scanning the tag with the required information and photographs of the tree or shrub. IDS weekend attendees provided lots of relevant suggestions and recommendations into how the current system could be tweaked further and the maximum benefits of it adequately utilised.

Following a weekend of guided walks through both the established garden areas and recently added areas throughout the gardens and having had the chance to view the many plant collections, attendees were treated to two very inspiring presentations by Seamus O'Brien who is the head gardener of the National Botanic Gardens in Kilmacurragh and an experienced plant hunter. Seamus has led expeditions along with Neil Porteous, who is the head gardener at Mount Stewart and a renowned garden adviser. Neil also gave an enjoyable presentation. Both plantsmen were very generous with their time and they were happy to share their experiences with the group and to pass on their invaluable advice to attendees, making the study weekend a thoroughly enjoyable and educational one, in the lovely surrounds of Blarney Castle.

Participants: Christophe Crock, Bart Cuypers, Aude de Liedekerke, Sam Lismont, Elisabeth Ryelandt, Stephan Van Den Bergh, Wannas De Vos (Belgium); James Garnett, Flavien Saboureau (France); Felix Blank, Sam McCully (Germany); Theo Burke, Michael Brosnan, Aaron Brennan, Colin Jones, Seamus O'Brien, Colm O'Shea, Olive Ryan (Ireland); Gabrielle Cantalupi (Italy); Harry Baldwin, Tom Christian, Tim Shaw, Paul Smith (England); Neil Porteous (Northern Ireland).