



Quantified Tree Risk Assessment

Simply Balancing Risks with Benefits

Issue 26 | Newsletter and Training Calendar | December 2017

Training Calendar

UNITED KINGDOM

20 - 21 March, 2018
Macclesfield, UK
QTRA Training (2 days)

10 - 11 April, 2018
Guildford, UK
QTRA Training (2 days)

12 April, 2018
Guildford, UK
QTRA Advanced User
Training

17 - 18 April, 2018
Glasgow, UK
QTRA Training (2 days)

08 - 09 May, 2018
Sheffield, UK
QTRA Training (2 days)

22 - 23 May, 2018
Bath, UK
QTRA Training (2 days)

AUSTRALIA

31 Jan - 01 Feb, 2018
Hobart, TAS
QTRA Training (2 days)

02 Feb, 2018
Hobart, TAS
QTRA Advanced User
Training

06 - 07 Feb, 2018
Perth, WA
QTRA Training (2 days)



QTRA Training field session Madrid

International QTRA

The last year has seen QTRA User training across the UK, Australia, New Zealand, Europe and South Africa. Increasing numbers of large landowners and particularly municipalities are finding value in the QTRA approach to balancing the limited risks from trees with the many benefits they bring. In addition to our scheduled calendar of training, we are organising increasing numbers of events for councils to train their staff in the use of our method. Although a huge paradigm shift for many tree professionals, most arborists and tree managers transition easily to the QTRA approach of taking a more balanced view.

08 Feb, 2018
Perth, WA
QTRA Advanced User
Training

15 - 16 Feb, 2018
Cleveland, QLD
QTRA Training (2 days)

22 - 23 Feb, 2018
Melbourne, VIC
QTRA Training (2 days)

26 February, 2018
Melbourne, VIC
QTRA Advanced User
Training

01 - 02 March, 2018
Canberra, ACT
QTRA Training (2 days)

05 - 06 March, 2018
Sydney, NSW
QTRA Training (2 days)

07 March, 2018
Sydney, NSW
QTRA Advanced User
Training

12 - 14 March, 2018
Sydney, NSW
Three-day Tree Anatomy
Workshop

NEW ZEALAND

19 - 20 Feb, 2018
Auckland, NZ
QTRA Training (2 days)

In Europe, we have trained new users in France, working with William Moore of Atelier de l'Arbre in Périgueux. At the wonderful Parque de El Retiro in Madrid we held our second three-day training workshop assisted by Jose Lobato and with great support from the park staff; with between 18 and 20 million visitors each year this has proven to be a great venue for QTRA training. In Italy, Marcello & Irene Parisini provided the translation for a workshop organised by the Order of agronomists of Lombardy at Varese, north of Milan, with great support from Marco Giorgetti and his colleagues.



QTRA Training field session Varese

In South Africa we worked with arboricultural consultant John Parker to run training in Johannesburg and Stellenbosch. With an ever increasing tightening of the public purse-strings, the QTRA approach will help local government, zoos and botanical gardens in South Africa to balance the reduction of risk from trees with its costs in terms of both financial expenditure the benefits that are lost when trees are removed. Stellenbosch has many veteran oak trees on its streets, which are a legacy of its European founders, and having been managed by heavy pruning and topping, many are hollow and their ongoing management requires the careful balancing of risks and benefits.



Veteran oak at the Vergelegen Estate in Stellenbosch,
South Africa

Three-day Tree Anatomy Workshop

In 2018, we are running a three-day workshop on Tree Anatomy from March 12th to 14th. Based on the program used by Dr Alex Shigo to educate and inspire many of our current leaders in arboriculture, this workshop will show you the inner majesty, complexity and beauty of trees. The workshop will develop your understanding of the various types of cells and tissues that make up trees. As we develop our knowledge of the different types of cells, and how they interact to form the various structures within a tree, we get a clearer understanding of how trees function.

The course instructor is Mark Hartley, a highly respected arboricultural consultant and teacher of arboriculture who has inspired many of our current generation of arboriculturists in Australia and beyond. Mark will be aided by one or two assistants, depending on the size of the class of up to a maximum of 22. If you diagnose tree problems, assess development impact on trees, or prune trees, understanding their inner workings will help you to make better decisions.

Learners will:

- develop a clearer insight into the differences between woody and absorbing roots and will start to gain an understanding of how this knowledge can be used diagnostically
- gain an understanding of the anisotropic nature of wood and how examining the structure of woody parts in 3 different planes aids in the process of identification and diagnosis
- using microscopy, discover and identify many of the cells found in the stem by preparing and examining sections and with the aid of pre-prepared slides and images
- develop improved understanding of how large woody plants grow and will see how trees apply an identical process thousands and even millions of times
- observe that the cambium, bark cambium and xylem usually start as strips and not rings
- observe at a cellular level, the differences between woody stems above ground and woody roots below ground
- develop improved understanding of how these differences between roots and stem allow optimum efficiency in the environment and how we can take advantage of this knowledge in better caring for trees
- observe how vessels interact around the branch collar and discover how different pruning cuts result in different growth responses and why, in comparison to pruning cuts, stem injuries form very regular shaped wounds

All profits from this workshop will be donated to a charitable tree industry organisation or organisations to be chosen by the delegates.

Looks can be deceiving when it comes to tree health

When assessing damage to your trees after a storm, it turns out experts and homeowners perceive the risk of a tree damage very differently. 'While there are a number of factors tied to tree *risk*, most respondents were fixated on tree *defects*' said Andrew Koeser, an assistant professor in environmental horticulture.

Koeser showed photos of trees to more than 90 people and asked them to give a rating of risk from the photographs. The trees in the photographs varied by species, condition, size and location in relation to a target, as well as other factors that relate to the true risk posed by a tree.

There are two risks associated with a tree: the real level of risk to nearby targets, such as cars, dwellings and people, and its perceived risks. Koeser wanted to assess perceived risk, in other words, how risky we think a tree is. "Sometimes the perceived risk associated with a tree is close to its actual risk. Sometimes the two are way off," he said. "In the latter case, a structurally sound tree may be unnecessarily removed out of fear or a truly hazardous tree may not managed as it should be, removed or supported in some manner."

Koeser urges homeowners to look for tree defects, including abnormal growth patterns, decay or other conditions that reduce a tree's structural strength. "Taking time to look at your tree's crown, main structural branches, trunk and roots can reveal a great deal about the current health and structural integrity of a tree," he said. "If you find easily recognisable defects like dead and falling branches, cavities, or newly-formed leans on a tree around your home, you should consider having the tree examined by a qualified arborist."

Source: Andrew K. Koeser, Ryan W. Klein, Gitta Hasing, Robert J. Northrop. Factors driving professional and public urban tree risk perception. Urban Forestry & Urban Greening, 2015; 14 (4)



Do Eucalyptus trees and bushfire go hand-in-hand?

As parts of Australia brace for a potentially severe bushfire season this summer, eucalyptus trees are adapted to not only survive, but thrive after bushfires.

Fallen eucalyptus leaves create dense carpets of flammable material, and the bark of some trees peels off in long streamers that drop to the ground, providing additional fuel that draws ground fires up into the leaves, creating massive, fast-spreading "crown fires" in the upper canopy of eucalyptus forests.

Additionally, the eucalyptus oil that gives the trees their characteristic spicy fragrance is a flammable oil: This oil, combined with leaf litter and peeling bark during periods of dry, windy weather, can turn a small ground fire into a terrifying, explosive firestorm in a matter of minutes. That's why eucalyptus trees, especially the blue gums, that are common throughout New South Wales — are sometimes referred to 'gasoline trees'.

However, after a bushfire sweeps through an area, the eucalyptus trees have an advantage over other plants. Their seed capsules open up when burned, and the seedlings thrive in freshly burned, ash-rich soils. "Give a hillside a really good torching and the eucalyptus will absolutely dominate," said David Bowman, a forest ecologist at the University of Tasmania in Australia. "They'll grow intensively in the first few years of life and outcompete everything."

Source: <https://www.livescience.com/40583-australia-wildfires-eucalyptus-trees-bushfires.html>



Is the beech tree native to Scotland after all?

It seems beech trees should be considered native to Scotland, despite a long-running debate over their national identity, researchers at the University of Stirling and Science and Advice for Scottish Agriculture report.

The team examined the DNA of more than 800 beech trees at 42 locations across the UK and made direct comparisons with trees growing on mainland Europe.

The study, funded by the Natural Environment Research Council, shows almost all of the beeches growing in the UK tested by researchers, are derived from native populations and, as a result, could not have been planted from abroad.

Professor Alistair Jump, of the University of Stirling's Centre for Environment, Heritage and Policy, said: "The beech tree has been experiencing an identity crisis in Scotland. Evidence shows that the European beech was mainly confined to the south-east of England after the last Ice Age. However, this tree now occurs throughout Scotland and has been considered 'not native' by many land managers.

"This tree can colonise ancient woodland in Scotland, and is sometimes removed because it poses a threat to the persistence of other native species. Our study shows that beech should be considered native throughout the UK, including Scotland."

Dr Jennifer Sjölund added: "The beech tree has been planted in Scotland in the past but the planting was from native British stock and, although humans have speeded its northward spread, it would have naturally spread up the length of the country regardless.

"Our findings have significant implications on how we define native species and how we consider natural processes when deciding what we base woodland management plans on. It points to a need to look again at the identity and distinctiveness of native Scottish forests, which historically haven't featured the beech tree."

M. Jennifer Sjölund, Patricia González-Díaz, Jose J. Moreno-Villena, Alistair S. Jump. Understanding the legacy of widespread population translocations on the post-glacial genetic structure of the European beech, Fagus sylvatica L.. Journal of Biogeography, 2017;



Beech forest in Scotland

Source: <https://www.csiro.au/>

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