The Arboricultural Association's
54th National Amenity Conference

TREES & SOCIETY ONLINE

6–7 SEPTEMBER 2021

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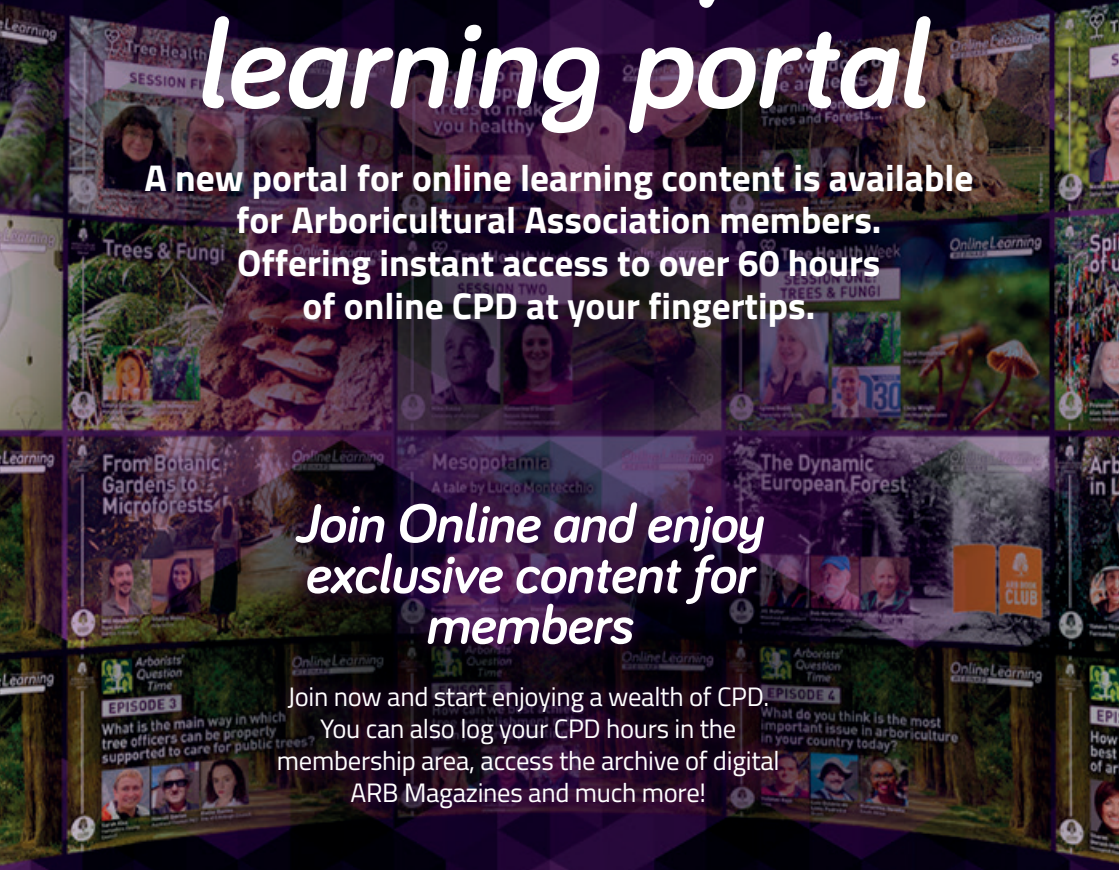

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WELCOME TO THE TREES & SOCIETY ONLINE CONFERENCE

On behalf of the whole team at the Arboricultural Association I would like to welcome you to the 2021 Amenity Conference, for the first time ever being held online. We were very much hoping to see all of you in person at Loughborough, but due to circumstances which you will appreciate, this unfortunately wasn't possible in the end. However, by moving online we have been able to guarantee that conference could go ahead with a fantastic international line-up of speakers, exciting and topical themes and all at a more affordable price than ever before.

Conference 2021 will undoubtedly be very different to previous conferences. Despite the advantages of being online, the fact is that it is pretty much impossible to recreate the in-person experience in this format. As soon as we are able to bring everyone together again, we will be doing so, although online events are here to stay and we do absolutely love them! Since spring 2020 the Association has been leading the way when it comes to online content, and our Wednesday Webinar series has now attracted more than 15,000 viewers from 140 countries around the world, enjoying presentations from more than 100 contributors on a huge range of topics.

Arboriculture is often just as much about people as it is about trees. How people interact with trees, what trees mean to them, and the often complex relationships between people and trees in urban areas should all be considerations for anyone who works with, or is interested in, amenity trees. The theme of Conference 2021 is **Trees and Society**, and seeks to explore this relationship in more depth through four sessions over two days. You'll find the full line-up, presenters and abstracts in this conference programme, and don't forget that if you miss any presentations you will have exclusive access to the recordings for several months after the event.

So.. sit back and relax, get ready to take plenty of notes, and enjoy the show.

John Parker
CEO, Arboricultural Association

Visit the website:

See the speakers:

Note QR active from 6 September

CONFERENCE PROGRAMME

MONDAY

08:45-08:50	**Welcome**	

THE SOCIAL BENEFITS AND PERCEPTIONS OF TREES

08:50-09:00	**Session 1 Intro**	
09:00-09:25	**Rob Northrop**	**Incorporating social science into arboricultural and urban forestry decision making**
09:25-09:50	**Catherine Nuttgens**	**Community forestry in Sheffield**
09:50-10:15	**Claudia García-Ventura**	**Urban trees: the characteristics most valued by citizens**
10:15-10:30	**Break**	
10:30-10:55	**Helen Davies**	**Citizen and business attitudes towards urban trees and the ecosystem services they provide**
10:55-11:20	**Camilo Ordóñez**	**The multiple values of urban forests: why and how are urban trees important to people?**
11:20-11:45	**Peter Duinker**	**The value of valuing trees: don't ignore the incalculable!**
11:45-12:20	**Questions**	
12:20-13:00	**Lunch**	

TREES, PEOPLE, COMMUNITY AND CULTURE

13:00-13:10	**Session 2 Intro**	
13:10-13:35	**Stefania Gasperini**	**Veteran Trees: from technical to ethical arboriculture**
13:35-14:00	**Ted Green**	**Four oaks and a Celtic maple**
14:00-14:25	**Tom Reed**	**Ancient Tree Inventory – how citizen science can produce a national database of ancient trees**
14:25-14:50	**Rebecca Gosling**	**Harnessing the benefit of trees through the use of Citizen Science**
14:50-15:05	**Break**	
15:05-15:30	**Jessica Stocks**	**Diversity matters**
15:30-15:55	**Dimitris Tsimplinas**	**Urban trees in Ancient Greece**
15:55-16:20	**Anastasia Petsi**	**Urban trees in Greek mytholoy**
16:20-16:50	**Questions**	
16:50-17:00	**Closing Remarks**	

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TUESDAY

08:45-08:50	Welcome	
TECHNOLOGY, INNOVATION AND INFRASTRUCTURE		
08:50-09:00	Session 3 Intro	
09:00-09:25	Clare Hall	Learning from engagement with greenspace: A qualitative focus
09:25-09:50	Neil Strong	Re-establishing the railway hedge – a boundary to the national network for people and nature
09:50-10:15	Andy Gardner	Utility arboriculture – protecting the national infrastructure that enables modern society
10:15-10:30	Break	
10:30-10:55	Berglind Karlsdóttir	How can technology encourage families to be more active in nature?
10:55-11:20	Lucio Montecchio	Tree health and biosecurity in the age of social media
11:20-11:45	Jo Homan	Mapping the impacts of in-depth training courses: community connectivity and resilient orchards
11:45-12:20	Questions	
12:20-13:00	Lunch	
TREES, HEALTH AND WELLBEING		
13:00-13:10	Session 4 Intro	
13:10-13:35	Carys Alder	Case Study: Planting 'Healthy Air' in London's most polluted schools
13:35-14:00	Tom Ogren	Urban pollen and the public perception of trees: Creating People-friendly city landscapes
14:00-14:25	Mandy Cook	Adapting to change, emotional well-being and the role of trees, woodlands, and forests during the Coronavirus lockdown
14:25-14:50	'AA Awards presentation	
14:50-15:05	Break	
15:05-15:30	Neville Fay	What is the tree community's role in developing an eco-politics fit for the challenge our times?
15:30-15:55	Alan Simson	Treetopia – the potential for urban forestry to create viable urban futures for all communities
15:55-16:20	Anna-Maria Pálsdóttir	An innovative nature vocational training programme involving long-term Swedish unemployed and migrants: impacts on health and wellbeing
16:20-16:50	Questions	
16:50-17:00	Closing Remarks	

SPEAKERS AND ABSTRACTS

THE SOCIAL BENEFITS AND PERCEPTIONS OF TREES

Rob Northrop

University of Florida IFAS Extension

Incorporating social science into arboricultural and urban forestry decision making

MONDAY
09:00
09:25

The management and conservation of the urban forest is based upon the same set of applied ecological principles that define traditional forestry as practiced in semi-natural or native wild forests. The urban forest context itself is distinct due to the high density of human habitation, which leads to more complex social interactions, increased variation in land cover and landform modification, and a greater degree of public control of land use and management.

The practice of urban forestry operates within the nexus of city residents and their bio-physical environment. A comprehensive understanding of the opportunities and constraints of the urban society is needed to develop and implement urban forest programs that are sustainable and support multiple and diverse outcomes. Successful management requires that the urban forester/ municipal arborist be astute at working within a socially and politically active context, with effective skills in critical thinking, communication, comprehensive planning and social assessment.

Prior to the initiation of project planning, urban foresters/municipal arborists should work with social scientists in the development and implementation of an assessment of prevailing societal attitudes and expectations within the project area. Such an initial assessment can be quickly and inexpensively undertaken. Along with the bio-physical assessment, they provide a logical foundation for the organization and implementation of urban forest projects at the community, city, regional or national geographic scales. Social assessments build political and citizen support by incorporating constituents' values into decision making process of project design. Citizen support and involvement is critical to the success urban forest projects and long-term conservation.

The use of integrated social and bio-physical inventories and analyses during the development of urban forest conservation planning will be illustrated with examples drawn from work with the City Tampa Florida, City of Gainesville Florida, and the Dept. of Conservation which manages a 32,000 hectare natural area system of rare, threatened and endangered habitats within the Tampa Bay Metropolitan region.

Catherine Nuttgens

Sheffield City Council

Community forestry in Sheffield

MONDAY
09:25
09:50

People in Sheffield have always had a strong connection to trees. Before the Industrial Revolution the city's many woodlands were a valuable asset, providing the charcoal to fuel the production of Sheffield Steel. In the early 20th century many of these working woodlands were handed over to the city as 'the antidote for the poison of town life'. Sheffield's heritage has left a woodland legacy. There are 3.9 million trees within the city boundary and 7 trees per head of the population, which makes the city one of the most wooded in the UK, even though the unwooded Peak District National Park falls in a significant area within the city boundary.

Sheffield's connection with trees was more recently in the news due to the controversial felling of street trees by the Highways Department as part of a PFI with Amey. Thankfully, this issue is on its way to being resolved.

Sheffield City Council Community Forestry team have been operating for many years to help work with communities to plant and nurture trees. Since 2001, local communities and schools have planted hundreds of thousands of trees of all sizes in parks and schools. The initiative was given national recognition in the 2008 *Trees in Towns II* report and used as an example of good practice for other local authorities. The team were significantly reduced as a result of austerity, but circumstances have changed recently, and the team are beginning to grow again.

Catherine Nuttgens, Community Forestry Manager, will talk about their work over a very challenging and exciting couple of years; how a team on the brink of disappearing have had been revitalised; and what the future might hold for Community Forestry in the city.

SPEAKERS AND ABSTRACTS

THE SOCIAL BENEFITS AND PERCEPTIONS OF TREES

Claudia García-Ventura

Universidad Politécnica de Madrid

MONDAY
09:50
10:15

Urban trees: the characteristics most valued by citizens

Urban trees are an important part of the heritage of cities, from a social, environmental and economic point of view. At present, there isn´t valuation methods that considers the opinion of technicians and citizens. Therefore, the objective is to analyze the opinion of a group of citizens about the characteristics that are most valued in urban trees, taking variables included in appraisal methods.

After analyzing the main methods of economic valuation, variables were taken and a survey was prepared. The objective is to know the importance that these variables have for citizens. The survey was developed with Google Forms and spread through social networks (Facebook, Twitter and LinkedIn).

This survey included two parts: the first on socio-demographic variables; the second one with questions about the importance of the variables or characteristics of the trees, scoring from 1 (no importance) to 10 (maximum importance). Including six dendrometric variables, six intrinsic and extrinsic variables, eight functional variables and five economic variables.

After three months, 128 responses were obtained. The reliability of the questionnaire was analysed using Cronbach's Alpha, obtaining a value of 0.92, which allows the questionnaire as reliable.

The assessment that the respondents assigned to the different characteristics of the trees evaluated, is higher than 6.4 out of 10. That is, they considered all the characteristics of the trees relevant, both those related to their dasometric and their functional characteristics.

The most valued was functional variables: decreased pollution and improvement of the environment (8.70), followed by shade (8.61).

Among the variables, the most valued were those referred to the size of the canopy, which stands out since 5 of the 8 valuation methods analyzed were not considered in the calculation of the value of the tree.

Helen Davies

Natural Capital at Logika Consultants

MONDAY
10:30
10:55

Citizen and business attitudes towards urban trees and the ecosystem services they provide

Despite the wide range of ecosystem services (ES) that urban forests provide to society, austerity measures mean local government budgets for tree planting and maintenance have declined in many cities throughout the world. One solution to this could be the adoption of a beneficiary-pays model – payments for ecosystem services (PES). However, do the beneficiaries of urban forests value trees enough to want to pay for them?

This question was answered through interviews with 30 businesses and a survey of 415 citizens in the UK city of Southampton. Here I present the results of research that explores and contrasts the attitudes of business and citizens towards urban trees, the ecosystem services and disservices they provide, and their interest in paying for new tree planting and maintenance to secure enhanced provision of ecosystem services. In contrast to the perceptions of local authority tree officers, both groups showed strong support for the proposed PES scheme, with particular interest in tree planting that enhances air purification, flood reduction, aesthetic, and human wellbeing benefits.

Many factors are found to drive citizen and business preferences and willingness to pay for tree planting. Along with socio-demographic and economic factors, these include businesses' motivations for undertaking broader CSR activities, citizens' subjective beliefs about ecosystem service provision, and issues of fairness regarding who pays for tree planting, how much, and where.

For local authorities, the results of this research mean that considering the use of alternative funding for enhancing their urban forests is worthwhile. In particular, the research suggests that citizens and businesses would be willing to work in partnership with local authorities (with varying levels of involvement) to fund the planting and maintenance of new urban trees, e.g. through a PES scheme.

SPEAKERS AND ABSTRACTS

THE SOCIAL BENEFITS AND PERCEPTIONS OF TREES

Camilo Ordóñez

University of Toronto

The multiple values of urban forests: why and how are urban trees important to people

MONDAY
10:55
11:20

Urban trees are recognized as critical for biodiversity, health, well-being, and climate-adaptation. As trees age and increase in size, they provide more significant benefits, such as cooling and shade.

While many cities have ambitious plans to increase tree numbers and canopy cover, cities also struggle to maintain and increase tree numbers. This is because they also remove many urban trees every year.

Large, old trees can pose a hazard to human safety and hinder construction activities, and hence are often removed. While the environmental and biodiversity benefits of tree abundance are known, there is almost no evidence on how much benefit is lost when large, old trees are removed from a park or a street, particularly with regards to less tangible benefits, such as wildlife density and psycho-social benefits. Without this information, cities cannot develop quantifiable standards that could be used to advocate for tree protection or compensate for the costs associated with the loss of social and ecological benefits due to tree removal.

We present results from an experimental investigation that measured how the social and ecological benefits provided by urban trees change before and after trees are removed from parks and streets. We used selected park and street sites in the Cities of Melbourne, Ballarat, and Moreland, Australia, to investigate changes of density of birds and other fauna, tree herbivory, tree attitudes and preferences, subjective human well-being, and nature connectedness of the people visiting the sites.

We discuss how this research can give cities the tools to quantify how much social and ecological benefit is lost due to tree removal, so they can more effectively account for tree losses and protect their urban forests.

Peter Duinker

Dalhousie University

The Value of Valuing Trees: Don't Ignore the Incalculable!

MONDAY
11:20
11:45

The growth of applications of i-Tree software around the world suggests a firm commitment to the utility of communicating ecosystem-services calculations to municipal decision-makers to garner their commitment and support for urban-forest management programs.

i-Tree Eco, perhaps the most popular of the i-Tree tools, uses a statistical inventory of urban trees and a suite of conversion equations to calculate and subsequently monetize a range of ecosystem services such as carbon sequestration, avoided runoff,and air-pollutant removal. A key uncertainty for us is the weight of evidence that municipal councillors actually use that information when faced with staff requests for increased or maintained budgets for urban-forest management.

We are unaware of any rigorous evidence dealing with this uncertainty, nor can we address it because we also do not have the requisite data. But what we do know from several studies in Canada is that urban citizens, when asked what matters to them about trees in the city, identify other urban-forest values far more readily than the biophysical ecosystem services. We have asked urban citizens in the Canadian cities of Calgary, Winnipeg, Fredericton, and Halifax to identify what is important to them about trees in the city. Overwhelmingly, their responses centre on psycho-social values such asphysical comfort (shade), sense of place, appeal to the senses, and feelings of wellbeing. On the premise that municipal councillors are responsive to the citizens they represent, we hypothesize that the qualitative, incalculable tree values should be significantly profiled when municipal staff make appeals for money for aggressive urban-forest improvements. Studies of biophysical ecosystem services of urban forests should be paralleled with social surveys (e.g., interviews, online surveys, interception surveys) so municipal staff can broaden the palette of persuasive arguments for robust urban-forest management budgets.

SPEAKERS AND ABSTRACTS

TREES, PEOPLE, COMMUNITY AND CULTURE

Stefania Gasperini

AR.ES.

MONDAY
13:10
13:35

Veteran Trees: from technical to ethical arboriculture

Man's relationship to nature has changed in the short turn of a few thousand years. In the past, direct dependence on the environment, whether more or less "wild" (hunting/harvesting) or "domesticated" (breeding/agriculture), required knowledge based on the understanding of rules and needs which, even if modified, govern the life of both plants and animals. Of this today very little remains; deprived of daily relevance, such knowledge and skills are now lost or in fact relegated to a residual folkloric marginality. From a cultural point of view, however, it is a process dominated by anthropocentrism. For centuries man has placed himself at the centre of creation; the animal and plant worlds, considered intrinsically "inferior" were therefore subservient to the well-being of humanity.

More recently, tree conservation is justified through ecosystem services. These services, however, are translated into a universal language through their monetisation; the maintenance and protection of the tree are justified only to the extent that they allow a direct or indirect "gain" for the human community. In an industry in which the technical knowledge necessary for the good management of trees is now available, it is now necessary to take an ethical step: to give dignity to the trees and to ensure compliance with and respect for them, regardless of their relationship with humans.

In recent years, in Italy, attempts have been made to restore an equal relationship between trees and humans in anthropized contexts, based on the adoption of decalogues for the protection of trees inspired by the principle of contracting: tree specimens are welcomed in cities because of the ecological, environmental, aesthetic, compositional and cultural benefits that they ensure. In return, they are guaranteed inalienable rights. One of the most effective applications of this approach allows limits, opportunities and exceptions to be established during tree stability assessment campaigns by educating citizens to live together with what we call "acceptable minimum risk." The authors will present experiences that affirm the development of decalogues created in Italy.

Ted Green M.B.E.

MONDAY
13:35
14:00

Four oaks and a Celtic maple

Our history is well documented down the centuries. Throughout, man-made artifacts have always featured prominently in their importance.

From famous buildings, now piles of stone, to their contents, now colonies of wood worm, rags on the walls and floors full of clothes moths. Everyday millions of people shuffle around these damp and dusty halls, always leaving with something smelling of moth balls.

But where is our living heritage? Where is the real acknowledgement of the importance of our individual historic trees? Where is the acknowledgement for the part trees have played ever since man broke off a twig to use for a multitude of purposes? Trees are simply taken for granted. Through a choice of examples, I hope to stimulate a discussion. Our famous trees are not 'It's just a tree.' They need you.

SPEAKERS AND ABSTRACTS

TREES, PEOPLE, COMMUNITY AND CULTURE

Tom Reed

Woodland Trust

Ancient Tree Inventory – how citizen science can produce a national database of ancient trees

MONDAY
14:00
14:25

The Ancient Tree Inventory (ATI) is a citizen science project which aims of identify and map the oldest and most important trees across the UK. So far, over 170,000 trees have been recorded to the ATI, which includes over 14,500 ancient trees and over 108,000 veteran trees. However, the inventory is far from complete with irreplaceable ancient and veteran trees being added to the database every day.

The ATI provides an opportunity for anyone to record ancient, veteran and notable trees to the project's interactive map, which are subsequently verified by a network of volunteer verifiers. The project is a partnership between the Woodland Trust, the Ancient Tree Forum (ATF) and the Tree Register.

This presentation will be led by Tom Reed (Citizen Science Officer, Woodland Trust) and will discuss how the ATI is helping to give more insight into ancient tree distribution across the UK, with emphasis on the following topics:

- What does the data tell us so far; insights from the 2021 State of Woods and Trees Report?
- Highlights from Victoria Nolan's ancient tree distribution modelling research; finding England's ancient tree hotspots.
- How can the ATI data provide opportunities for ancient tree protection, restoration and ecological research to improve the future for ancient trees?

Rebecca Gosling

Observatree

Harnessing the benefit of trees through the use of Citizen Science

MONDAY
14:25
14:50

The Woodland Trust supports a programme of Citizen Science, with partners, which encompasses three major projects. The projects are seemingly very different, but all have the power to engage local communities with trees, from the more expert members of the population to casual observers.

Observatree is a tree health early-warning system. It contains a UK network of over 150 specialist volunteers who undertake a range of surveys to assist with spotting new tree pests and diseases. Volunteers receive annual training to help with identification and surveying techniques. This provides an opportunity for people with a more expert knowledge to engage with trees.

Nature's Calendar asks members of the public to record seasonal events in their local area in an attempt to track the effect of climate change on species. With over 4,000 recorders and nearly 3 million records, this is a powerful tool. Nature's Calendar asks for records for 11 different tree species with multiple events such as first leaf and bud burst. As no previous experience is necessary to get involved with Nature's Calendar, this allows a much greater number of people to engage with their local trees.

The Ancient Tree Inventory (ATI) works to map the UK's most important trees, asking members of the public to record notable, veteran, and ancient trees. The ATI incorporates models from the other two Citizen Science projects in that anyone can go on to the website and record a tree and engage in this way, but a team of expert volunteers verifies all the records.

SPEAKERS AND ABSTRACTS

TREES, PEOPLE, COMMUNITY AND CULTURE

Jessica Stocks

Royal Borough of Kensington & Chelsea

MONDAY
15:05
15:30

Diversity matters

The purpose of this presentation is to inform the participants of the Arboricultural Association Conference of the actions of the LTOA Diversity Working Party and continue to encourage Arboricultural professionals to think about the meaning of diversity in a broad sense and the benefits of having a diverse workforce.

The presentation will start with a short introduction, to introduce myself and establish the topic. This will include a definition of diversity, asking Conference what it means to them, what are the limitations with our understanding of it and what are the benefits.

The main body of the presentation will focus on the two aims of the LTOA Diversity Working Party. The first was to produce a survey after the group identified a lack of data regarding the diversity of current Tree Officers and felt it was vital to gather this data to understand the extent of the diversity issues. The survey was shared with full LTOA members in May 2019 and the results presented at the National Tree Officers Conference 2019.

The second aim was formed in response to the accessibility issue of the role of a Tree Officer, an issue also supported by Anna Murphy's research. The Diversity Working Party identified inaccuracy within the Tree Officer job description, not only published by the National Careers Service, but also by the LTOA itself. The presentation will detail how the LTOA Diversity Working Party responded to this and the success of the outcome.

The presentation will demonstrate the necessity of the sector to be proactive in encouraging difference and the need for collaboration and courage of every individual.

Dimitris Tsimplinas

Department of Protection and Forest Management
of Regional Unity of Kozani

MONDAY
15:30
15:55

Urban trees in Ancient Greece

The use of trees in cities and their beneficial effects have long been recognized. The Egyptians, the Babylonians, the Assyrians, the Persians, the Ancient Greeks and the Romans used the trees for aesthetic and other purposes in the cities, either in the form of trees or sacred groves or in the gardens of houses and mansions.

In the 3rd century BC there were many places of worship in Athens whose plantations used artificial irrigation systems, such as laurel groves and olive groves around the altar of the twelve gods. The tree planting at the Athens marketplace consisted of two rows of plane trees and many individual trees as reported by Plutarch and Kimon (510-450 BC). Near one of them people used to gather for discussions or dating, whereas the tax collectors used to meet near another tree, a *Populous alba*. The example of Athens was followed by other cities and until today there are plane trees in the central square of almost all villages. In the Peloponnesian War, the Spartans cut all the trees in Attica along with the olive trees. Platon writes that in the ideal state there should be a law that prohibits logging in civil conflicts. A secondary consequence of deforestation was the creation of swamps. Malaria was the main disease in ancient Greece. The sacred groves were forests dedicated to gods. They were small or large parts of forests and the smaller ones were fenced with stone walls. The protection was full. It was self-evident, the connection of the sacred space with nature. From ancient times, with the sacred groves, until the Christian, with the green spaces of churches and chapels. Xerxes, a Persian king, saw a plane tree for the first time and was so dazzled by the beauty that his military campaign in Greece was in danger because of this tree!

This presentation is highlighting the power of urban trees from ancient times as well as their important role in the religious and social life.

SPEAKERS AND ABSTRACTS

TREES, PEOPLE, COMMUNITY AND CULTURE

Anastasia Petsi

Yloriki Ltd

Urban trees in Greek mythology

MONDAY
15:55
16:20

The prehistoric man of the Eastern Mediterranean has witnessed violent natural phenomena, such as earthquakes, floods, subsidence, volcanic eruptions, landslides, rising sea levels, the appearance of islands, etc.

Unable to interpret these phenomena and, much more, to control them, he recorded them in the collective memory, personifying their elements and creating myths that were transmitted for thousands of years by word of mouth until they were finally recorded by its great poets, historians and geographers of ancient Greece. Nature is not simply the place for productive activities, but a place where human beings are born, mature and die, become an element of their identity and a symbol of the community in which they act. For this reason in ancient times environmental protection was indissolubly linked to the sanctity of nature. The forests in ancient Greece were associated with religion and many of them were characterized as sacred. Thus, in Greek Mythology we find the mythical Dryades, the Forest Nymphs, who lived in the trees and the cutting of a tree meant the death of a nymph. There is a connection between places and stories behind them, as the people perceived it in the old days. A myth can be read in many ways and everyone can interpret it differently. This presentation explores the power of trees from ancient times as well as the myths of Ancient Greece related to the protection of trees and their sanctity.

TECHNOLOGY, INNOVATION AND INFRASTRUCTURE

Clare Hall

Social and Economic Research Group, Forest Research

How different types of engagement with trees and greenspace can lead to learning, new knowledge and skills development: A qualitative focus

TUESDAY
09:00
09:25

The ecosystem services (ES) concept gained widespread exposure following the publication of the Millennium Ecosystem Assessment in 2003, and, in the United Kingdom, the National Ecosystem Assessment (NEA) in 2011 and the NEA Follow On in 2014. The now widely recognised ES framework includes four categories, namely supporting, regulating, provisioning and cultural.

Cultural services provide the non-material benefits that people obtain from ecosystems through recreation, aesthetic experiences and reflection that may lead to spiritual enrichment, cognitive development and improvements in health and well-being. This paper is concerned with the cultural ecosystem (CE) benefits that derive from these CE services. The findings of three UK studies are presented, namely an evaluation of Observatree, an evaluation of Mission: Invertebrate and a visitor study at Bedgebury Pinetum. These studies were concerned with how human engagement with trees and greenspaces can lead to learning, new knowledge and new skills via a spectrum of formal and informal activities and outdoor experiences. They point to a number of important questions that need to be addressed: Does new knowledge about environmental actions lead to habitual behaviours? To what extent can informal activities lead to learning? What is the significance of new knowledge versus building on existing knowledge and interests? All these points should be considered by policy makers and practitioners promoting learning through engagement with trees and greenspace.

SPEAKERS AND ABSTRACTS

TECHNOLOGY, INNOVATION AND INFRASTRUCTURE

Neil Strong

Network Rail

Re-establishing the railway hedge – a boundary to the national network for people and nature

TUESDAY
09:25
09:50

Network Rail operates 32,000 kilometres of railway across Britain on an estate covering 52,000 hectares running 25,000 trains per day at up to 200 kph. The original construction of the railway included provision of fences or hedges to demarcate the boundary and which, over time and with legislation changes, have become methods to prevent trespass by people and animals.

Over those same 170 years, the management of vegetation, including the hedges, on the railway estate has changed from regular, labour-intensive management to a fault-led, reactive regime. The original grassland habitat has undergone succession and, in many places, has become semi-mature, naturally regenerated woodland that has undergone unmanaged coppicing over the last 80 or 90 years. Management of the trees and other vegetation is necessary for safety reasons, but this can create conflict with some of our seven million lineside neighbours.

Initiatives to improve performance on the east coast main line in April 2018 lead to the removal of trees alongside the railway at Hadley Wood, Hertfordshire. The resulting furore was key in instigating the Varley Review of Network Rail's lineside vegetation management.

This paper will describe the interactions between Network Rail, the Tree Council and the Hadley Wood Rail User Group which ultimately resulted in the laying down of a trial to re-establish a hedgerow alongside the operational railway comparing techniques of direct seeding, whip planting and natural regeneration. The paper will describe the initial results after a couple of growing seasons. The paper will also look at the opportunities that sustainable land management on the railway estate can have for local communities and biodiversity, as well as contributing to nature recovery across Britain.

Andy Gardner

EOS Contracting

Utility Arboriculture – Protecting the National Infrastructure that enables Modern Society

TUESDAY
09:50
10:15

Our aim is to inform and expand on the Utility Arb Sector. We feel this sector may have a bad reputation.

It may be true that, in the past, tree management around our national infrastructure (most obviously around over-head powerlines) was carried out with little thought about tree health, safety of operatives and impact on both the environment and the reputation of asset managers and those who work in this sector.

However, Utility Arboriculture has been on a journey over the past 10 to 15 years! Our sector now employs arborists at all levels from working arborists to managers and budget holders who control work valued in millions of £'s. We are proud to part of this industry that has taken decision making away from engineers, now policies and programmes involve significant input from Arboricultural professionals. The presentation will cover this journey. From the "bad old days" of "slash and burn" tree work undertaken on behalf of the infrastructure owners to present day practice (levels of qualification/competence/expertise) and on to what the future may hold for this important sector of Arboricultural operations.

SPEAKERS AND ABSTRACTS

TECHNOLOGY, INNOVATION AND INFRASTRUCTURE

Berglind Karlsdóttir

Social and Economic Research, Forest Research

How can technology encourage families to be more active in nature?

TUESDAY
10:30
10:55

On the 1st of October 2019, LuLa the alien arrived in twenty-three Forestry England forests. Families across the country headed to these sites, armed with an augmented reality app, to take the 'Glow Trail' and assist Shaun the Sheep in the quest of returning LuLa safely back to space. The app, developed in a partnership between Forestry England, Sport England and Aardman Studios, aimed to encourage less active families (primarily with children between the ages 6-12) to be physically active in the forest.

The benefits of physical activity in nature are numerous and widely reported. They include improved physical health, reduction of stress and trait anxiety, and improvement of mood, attention capacity and even self-esteem. Outdoor activities are often targeted at young people, a group which is increasingly inactive and prone to poor mental health and loneliness. However, encouraging increased engagement with such activities remains a challenge.

Forest Research evaluated the immediate outcomes of the Glow Trail using face-to-face questionnaires and through qualitative data collected from participating families and their children as they finished the trail.

The app with the Shaun the Sheep theme was successful in encouraging participation and engaging the children. Results show a range of benefits, most of which related to nature and physical activity (being outside in nature; walking or running in the forest). Children especially enjoyed the cognitive aspects of the trail, such as looking for clues, and described it as an "adventure". Interestingly, self-reported physical activity levels of adults participating in the Glow Trail were approximately half that of the UK average, while children's physical activity levels were considerably higher than the UK average.

We discuss whether app-based trails such as the Shaun the Sheep Glow Trail can be used as a tool to encourage young people to undertake social physical activity in nature.

Lucio Montecchio

University of Padova, Italy

Tree health and biosecurity in the age of social media

TUESDAY
10:55
11:20

Scientifically sound communication in plant care and biosecurity is one of the weakest rings in the chain of custody of our trees, and the slow spread of updated and correct knowledge is at the origin of the dissemination of common sense-based information, often incorrect but quickly shared through social media.

Some examples of misleading information on emerging diseases, related risks and biosecurity available on popular websites and social media will be shown and discussed.

A more intense and far-sighted cooperation among the many actors involved in the planning and management of urban green remains of primary importance.

SPEAKERS AND ABSTRACTS

TECHNOLOGY, INNOVATION AND INFRASTRUCTURE

Jo Homan

The Orchard Project

Mapping the impacts of in-depth training courses: community connectivity and resilient orchards

TUESDAY
11:20
11:45

The adage "knowledge is power" is something The Orchard Project has taken to heart. From immersing children in the 'outdoor classroom' of orchards to giving unemployed adults access to accredited training in exchange for their volunteering time, we have been innovative in our ways of empowering people with knowledge.

Find out some of the ways The Orchard Project has successfully engaged with local communities to ensure they have the skills and confidence to maintain our valuable assets; the community orchards that bring us food, biodiversity and tranquillity.

TREES, HEALTH AND WELLBEING

Carys Alder

Trees for Cities

Case Study: Planting 'Healthy Air' in London's most polluted schools

TUESDAY
13:10
13:35

This case study measures the effectiveness of trees and green infrastructure on reducing pollution in urban school playgrounds and through this identifies a replicable best practice approach.

Air pollution is a key public health issue in London, responsible for 9,500 premature deaths per year. Children are at increased risk because of their smaller lung capacity and proximity to exhaust fumes at street level. In 2017, 25% of all schools within London were identified as being in areas which exceed the annual mean NO_2 EU limit, so there is urgent need to tackle the problem.

The Mayor of London's Air Quality Audit (AQA) in 50 of London's most polluted primary schools identified that 'Playgrounds are often exposed - fronting onto busy roads with few barriers.'

A common recommendation was the introduction of green infrastructure in the form of green screening/ climbers, trees and/or other planting. This case study puts these recommendations into practice. Working with four London schools identified through the AQA, Trees for Cities, Lancaster University and Mapping for Change are assessing the effectiveness of these interventions to reduce children's exposure to NO_2 and $PM_{2.5}$ levels within school playgrounds.

Starting in September 2019, activities included an initial analysis of each school's pollution levels, outside space and use of space. Through a bespoke design, trees and green infrastructure were planted as a barrier to pollution. Schools undertake citizen science activities to monitor and track pollution, and participate in assemblies and planting days.

Measurements include NO_2 and $PM_{2.5}$ at a 3-month baseline and at intervals over 12 months and will also include subjective quality of life indicators measured through surveys.

SPEAKERS AND ABSTRACTS

TREES, HEALTH AND WELLBEING

Tom Ogren

The Society for Allergy-Friendly Environmental Gardening (SAFE Gardening)

Urban pollen and the public perception of trees: Creating People-friendly city landscapes

TUESDAY
13:35
14:00

Both allergy and asthma continue to increase. Pollen allergy is now considered epidemic. It is getting worse every year.

Climate change and increases in carbon dioxide are making the pollen season longer, and much more intense.

Urban air pollution combines with airborne pollen, causing the grains to fracture. Particulates of pollen are extra allergenic, and because they're so much smaller, they can be inhaled much deeper into the chest. This results in asthma.

We who plant and tend to city trees owe it to the citizens of our cities to be knowledgeable about tree/allergy issues. We need to know which trees to plant, and which to avoid. We need to know how to effectively prune city trees to limit pollen exposure. We also need to understand cultural methods that will limit pollen production.

All of this will be covered in my talk.

Mandy Cook

Centre for International Research on Care, Labour and Equalities

Adapting to change, emotional well-being and the role of trees, woodlands, and forests during the Coronavirus lockdown

TUESDAY
14:00
14:25

This paper explores the role trees, woodlands, and forests played in people's responses and reactions to the Covid-19 restrictions of 2020 and reports on the ways in which trees, woodlands, and forests contributed to people's emotional well-being during the pandemic. Qualitative data from an online survey and telephone interviews is framed using the Kübler-Ross Change Curve (1969), a model often used to help explain and predict how individual people and organisations respond to dramatic change and perceived crisis (Malone, 2018; Dzhurova, 2020). The research was carried out as part of the Active Forests Programme funded by Forestry England and Sport England with support from the National Lottery.

Neville Fay

Treework Environmental Practice / Sustainable Soils Alliance

What is the tree community's role in developing an eco-politics fit for the challenge our times?

TUESDAY
15:05
15:30

But a few people in Europe put their families on the line, challenging the dominant interests – but some truly are and they should be recognised and celebrated as their vision is capable of arresting the decline and realising the restoration of our ecological heritage, whose grounding is in the soil and riparian systems the pinnacle of which is in the healthy function of our treescapes.

Globally indigenous peoples are burning, dying, on behalf of our and the world forests. Our challenge is to deliver common purpose for an honest non-competitive new mutual eco-politics. We are at a crossroads of defining the decisive pathways. What is the role of the tree profession in the face of such profound challenges.

SPEAKERS AND ABSTRACTS

TREES, HEALTH AND WELLBEING

Alan Simson

Treetopia - the potential for urban forestry to create viable urban futures for all communities

TUESDAY
15:30
15:55

The 21st century is the urban century. It has been forecast that urban areas across the world will have expanded by more than 2.4 million people by 2050, covering an area in excess of 1.2 million km2. and the UK will not be immune from this expansion. Part of the reason behind this huge increase in urbanism is the fact that human beings are social animals, who respond positively to the opportunities that urban living can bring. Thus there have been many attempts over the years to design 'urban utopias' to create the ideal urban experience, but these have not always been successful. A quality of life has all too often not materialized for all urban communities - a situation sometimes made worse by a lack of contact with the natural world. Thus the design of urban areas has to significantly change, and the benefits that urban forestry can bring to this change are increasingly being recognized.

This presentation will specifically consider the issues associated with climate change, particularly the urban heat island effect, and the contribution that urban forestry will make in mitigating this effect. In addition, it will also suggest that urban forestry can assist communities to engage with 'reconciliation ecology', re-connecting them with the natural world. This could be deemed to be the creation of an urban 'Treetopia'.

Significant change is needed in how we recognise, value and make decisions about the urban forest and nature, as we move forward to developing Treetopia, or a more treed urban environment. The presentation will conclude by highlighting how the urban forest will make cities of the future worth living in, and that Treepotia will become the symbol of hope and life, gathering spaces for community health, wellbeing and cultural interactions.

Anna-Maria Pálsdóttir

Department of People and Society at the Swedish University of Agricultural Sciences (SLU)

An innovative nature vocational training programme involving long term Swedish unemployed and migrants: impacts on health and wellbeing

TUESDAY
15:55
16:20

The influx of migrants into Europe from the Middle East and Africa has meant that their integration into different societies has become an important topic in recent years. A partnership between the Swedish Public Employment Service, Swedish Forestry Agency and the Swedish Nature Conservation Unit is using a nature based integration programme to bring together migrants as well as long term Swedish unemployed to participate in a year (for migrants) and two-year long (for Swedish unemployed) vocational training programme.

The programme in Southern Sweden provides training in nature conservation skills for all the participants and lessons in the Swedish language for the migrants. An evaluation of the programme is exploring whether it has brought about changes in general health, physical activity, self-efficacy and nature connectedness. A mixed methodological approach is being used through the use of surveys and in-depth interviews to explore the impacts of the programme on wellbeing.

Preliminary results show that to date there has been no change in physical activity levels or connectedness to nature over the 3 survey waves for migrants or Swedes. There has been a small but statistically significant change in perceived health for both Swedes and migrants between the baseline and follow up at the end of the programme.

The qualitative results highlight that the trainees feel the conservation activities are physically demanding and are perceived as meaningful work. Many of the trainees talked about inviting friends and family to the sites where they worked and proudly showing them what they have been doing. This has meant the migrant families have been introduced to nature sites they would not have visited otherwise. Many migrants talked about starting to feel more rooted in Swedish society.

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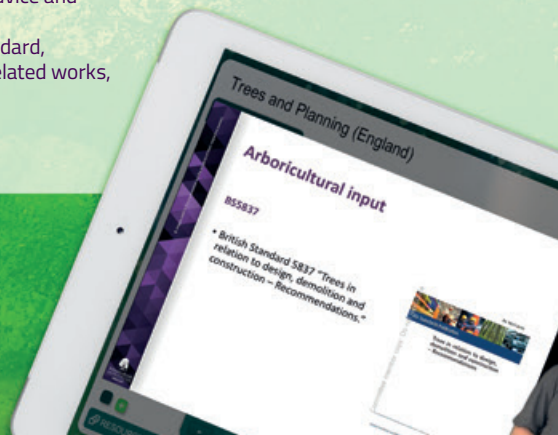

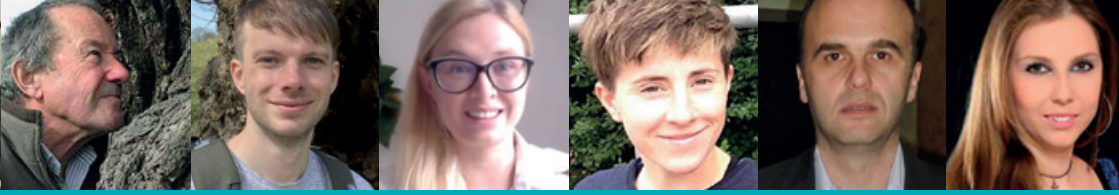

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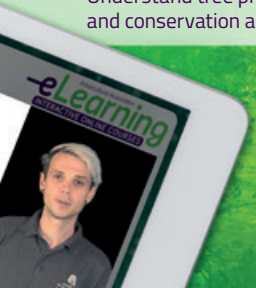
- Understand tree preservation order and conservation area legislation



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