



“A LIFETIME WITH TREES”

4th European I-Tree Conference

Dundee, Scotland

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Tony Kirkham MBE, VMH, FICFor (Hon)





Forestry in the UK with 51% of conifer forest being Sitka spruce, *Picea sitchensis* covering 323,000 ha in Britain (Forest Research 2018)



Sitka spruce *Picea sitchensis* Western USA
Original introduction of by David Douglas in 1831



David Douglas 1799 - 1834



Intro. 1827

Original Douglas Fir, *Pseudotsuga menziesii* at Scone Palace

“Big Lonely Doug” *Pseudotsuga menziesii* – Vancouver Island - 2011



The tapestry of trees in our landscape, arboreta and gardens
Kew created by Princess Augusta in 1759





Many tree introductions in the landscape
14,000 trees and 2,500 taxa



Japanese Pagoda tree

*Styphnolobium
japonicum*

Syn. *Sophora
japonica*

Planted in 1762

An “Old Lion”
Brought to England
from China via France
by London
nurseryman James
Gordon in 1753

Central & Southern China



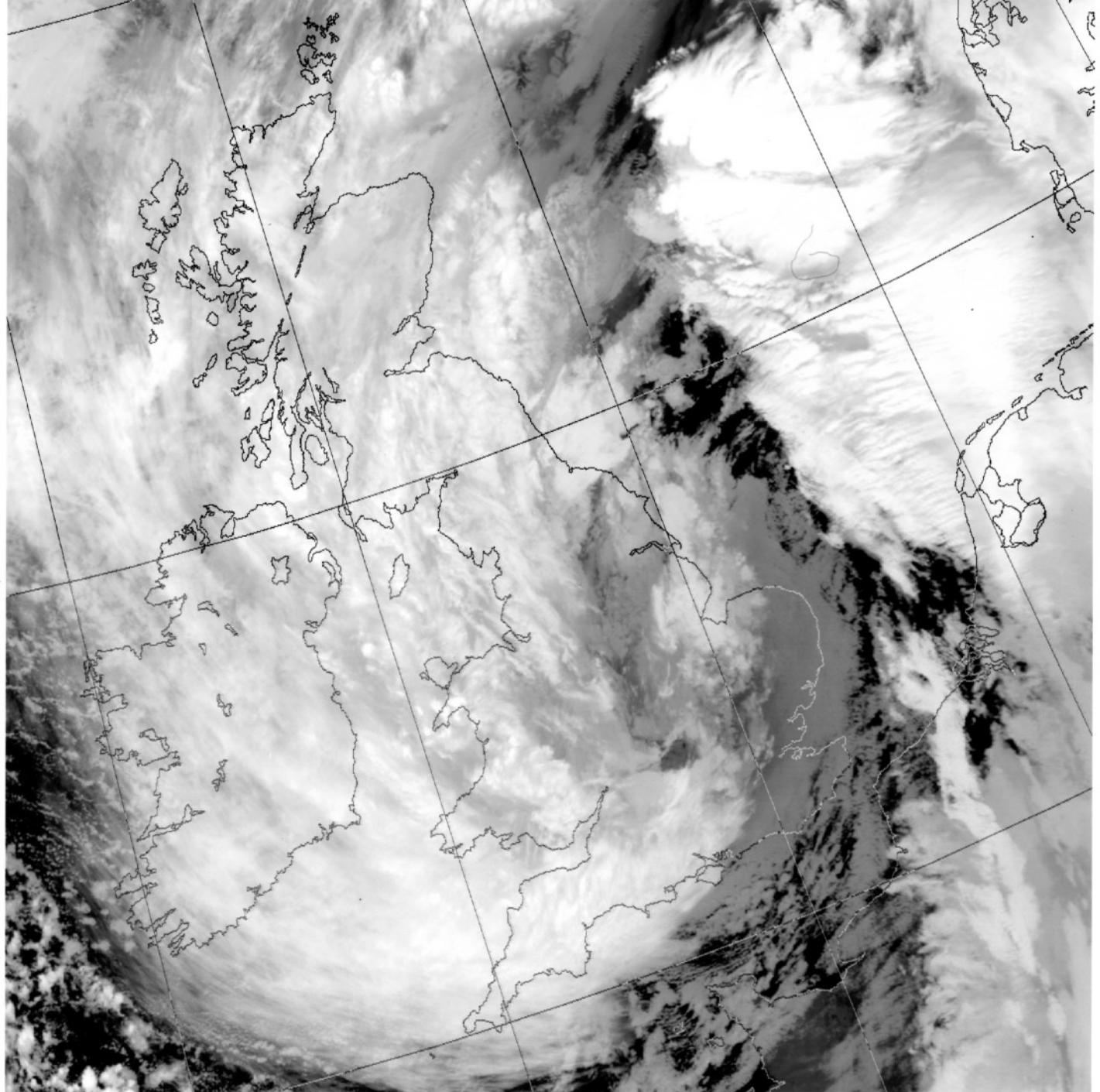
Turner's oak, *Quercus x turneri* 'Pseudoturneri' planted 1978

The Great Storm

The British Isles

4.41 am

16 October 1987





Biggest storm for over 250 years

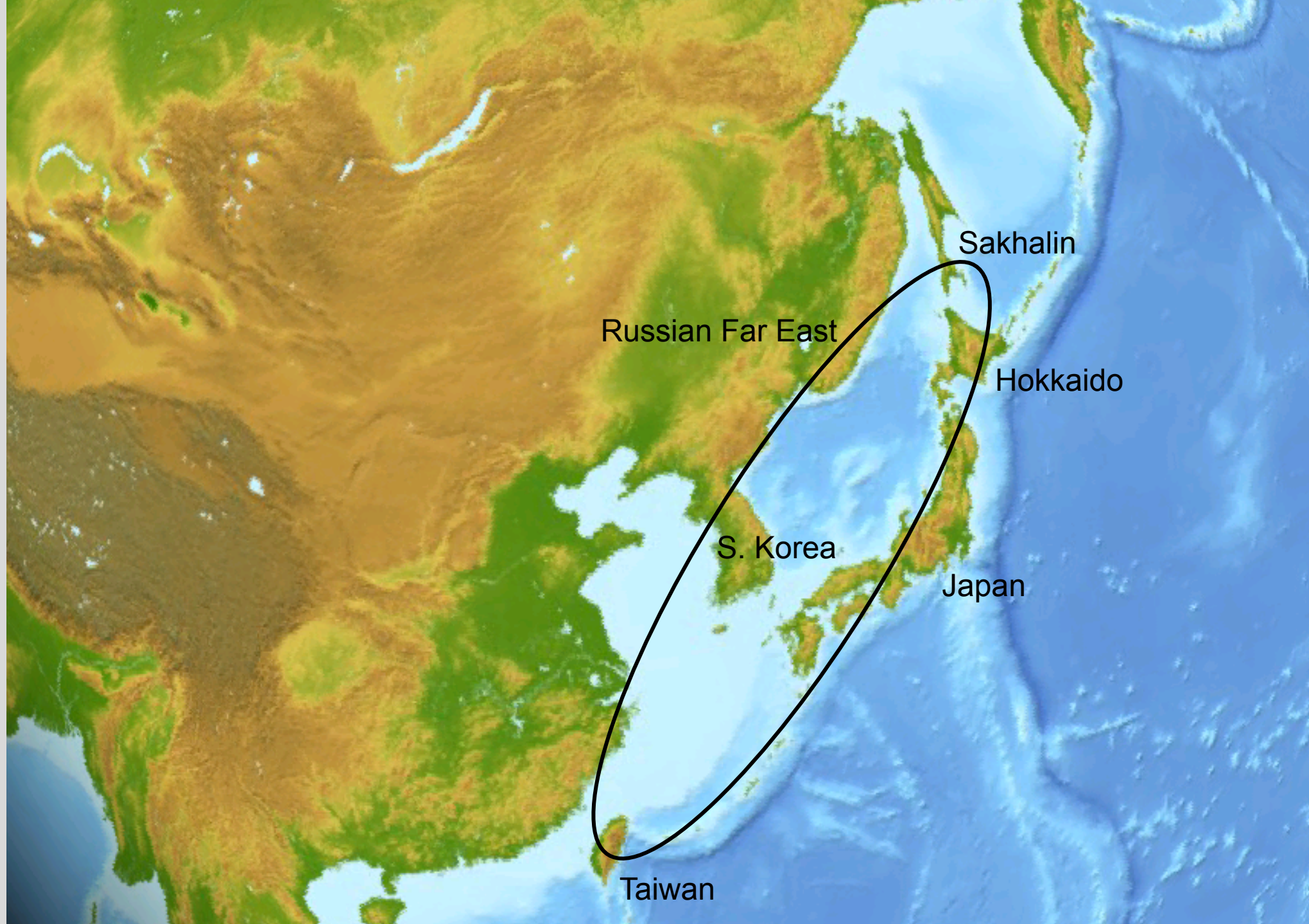
15 million trees felled in one night

700 trees lost in Kew Gardens

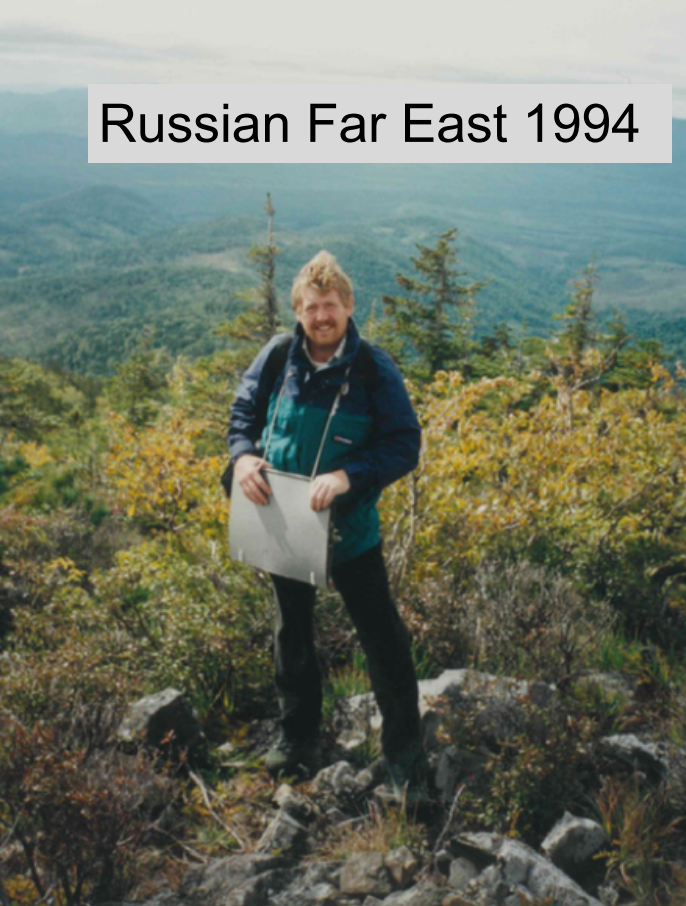


“Old Lion” **Caucasian elm** *Zelkova carpinifolia* planted in 1762 felled in 1987

The Temperate Loop



Russian Far East 1994



Taiwan 1992



China 1996



Hokkaido 1997



S. Korea 1989





1994 The Russian Far East and Sakhalin Island



Seed cleaning & changing herbarium specimens





“OBSERVATION”

Four Girls Mountain, Sichuan, W. China



Ulleung rowan

Sorbus ulleungensis
'Olympic Flame'

Syn. *S. commixta*
'Dodong'



1989 - Todong, Ulleungdo, S. Korea



1992 - The Sapphire dragon tree
Paulownia kawakamii ETOT 41



1992 - Taiwan incense cedar *Calocedrus formosanus* ETOT 10



Taiwan incense cedar ETOT 10
Calocedrus formosana

August



The Wollemi pine *Wollemia nobilis* seen by David Noble in 1994





Wollemia nobilis planted at Kew 2005



David Noble &
family 2006



Monkey Puzzle *Araucaria araucana*



Parana pine *Araucaria angustifolia*

Horse chestnut, *Aesculus hippocastanum*





Indian horse chestnut *Aesculus indica*
'Sydney Pearce' planted 1935

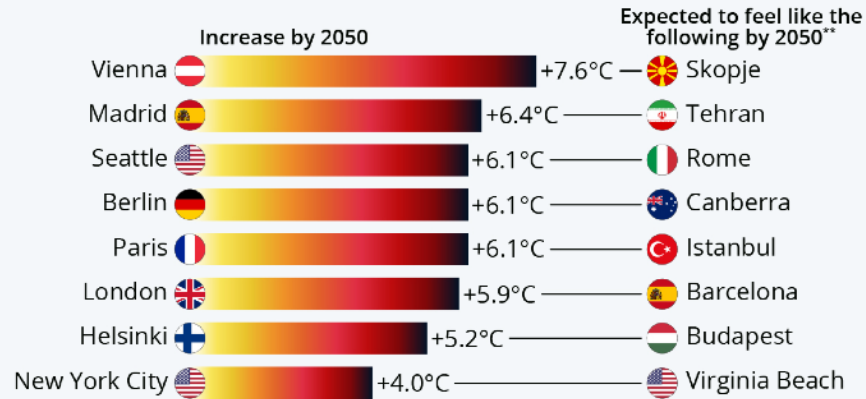
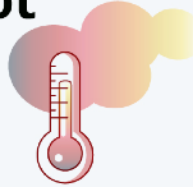


Vietnamese buckeye *Aesculus wangii*

Climate and Seasonal Change By 2050

London Could Feel as Hot as Barcelona by 2050

Expected increase of average temperature in warmest month by 2050 in selected cities*



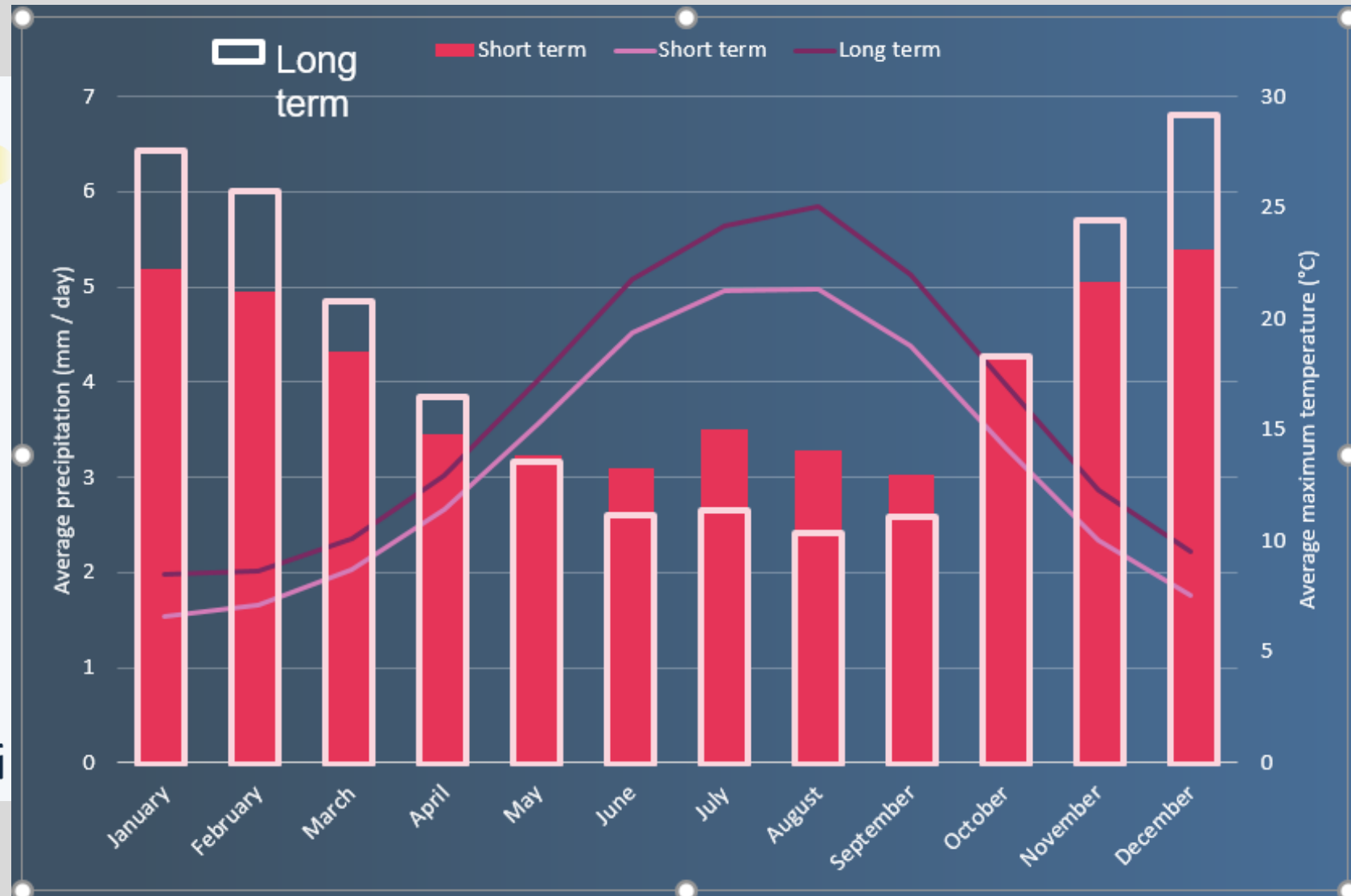
* average based on weather reports from 1985-2015

** based on 19 bioclimatic variables

Source: Jean-Francois Bastin et al. Understanding climate change from a global analysis of city analogues. Plos One journals



statista



Manchester predicted Climate by 2050

Tree Species Selection for Green Infrastructure

A Guide for Specifiers

Written by:
Dr Andrew Hirons and Dr Henrik Sjöman



Trees & Design
Action Group

Primary Project Funder



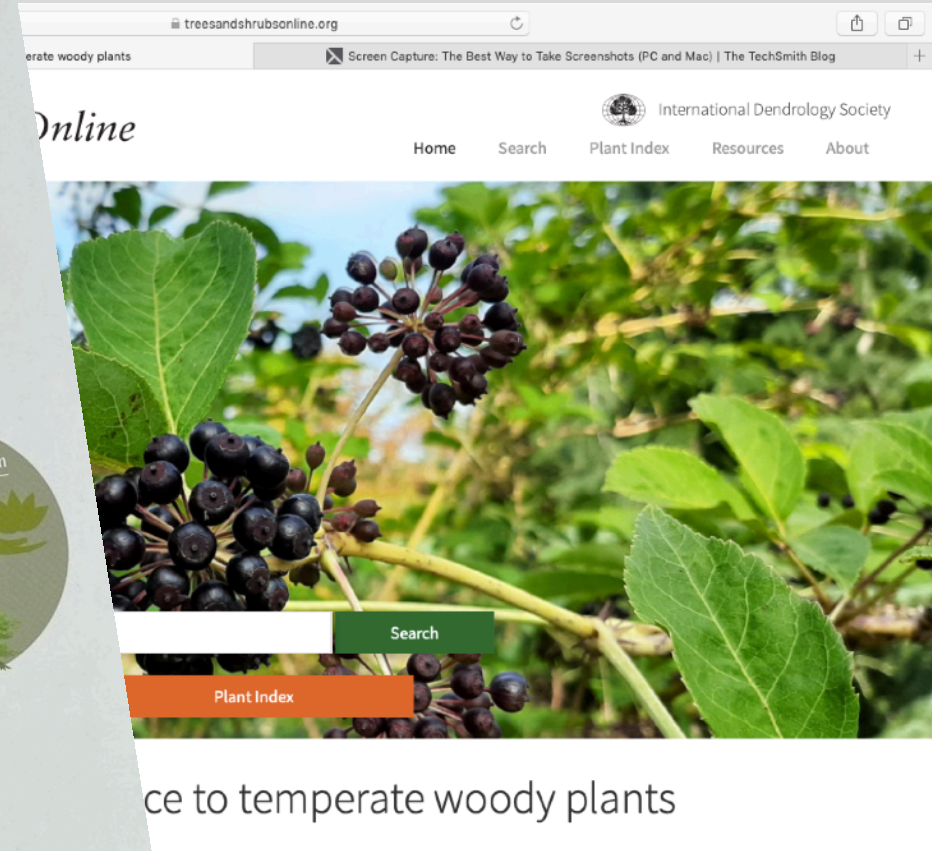
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International Dendrology Society
Trees & Shrubs Online



A plethora of information published and on the internet



What do we need in our future tree selection and tree establishment

- Diversity for resilience.
- A mix of native and non-native species.
- Shade trees (large canopy trees) for canopy cover not pioneer species.
- Drought tolerant species.
- Tree species that will tolerate high UV levels and summer heat.
- Tree species that will tolerate urban stress.

