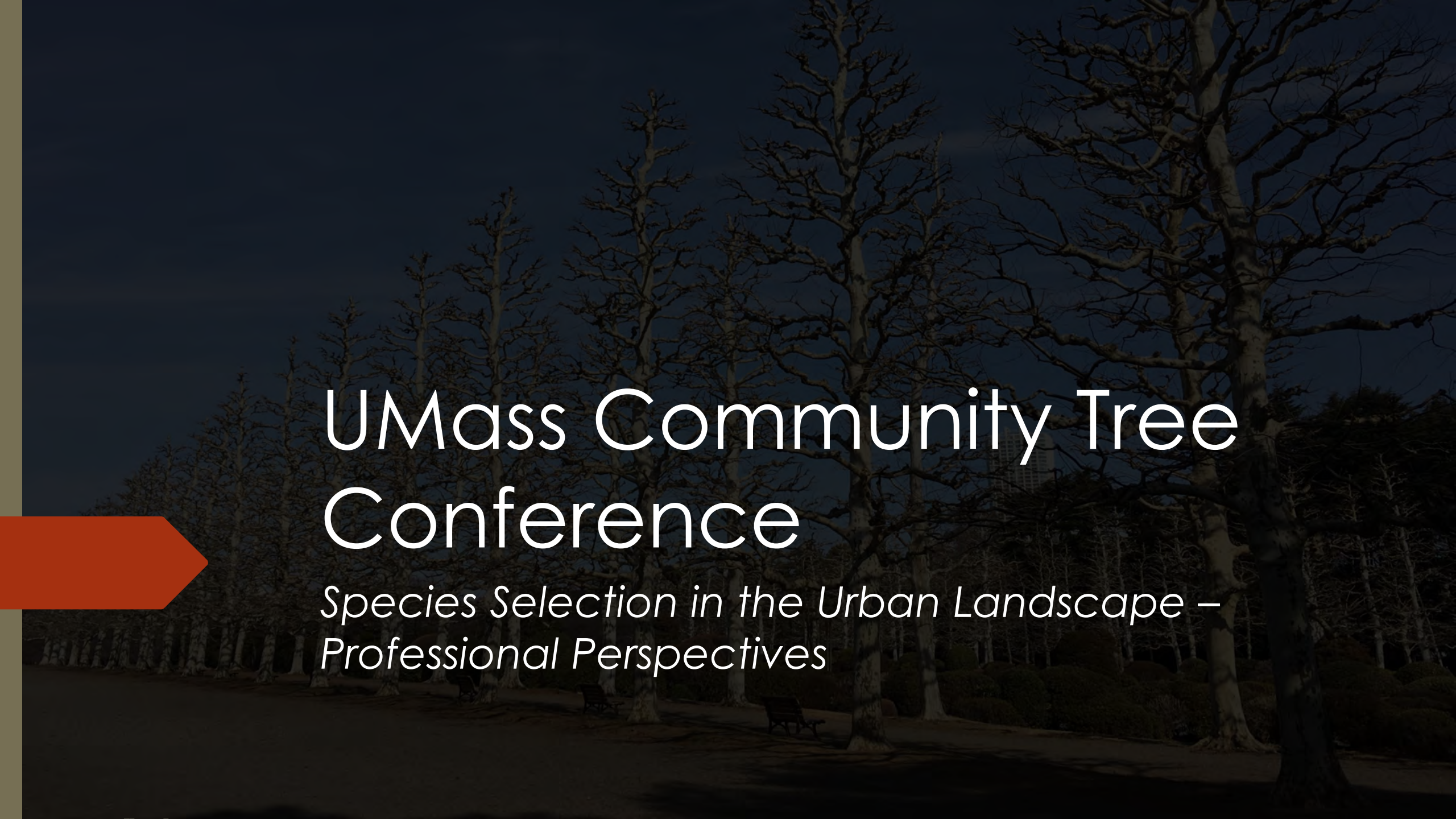

UMass Community Tree Conference

Species Selection in the Urban Landscape – Professional Perspectives

Things to Remember

- Please turn off your cell phone or set to vibrate
- Breaks at 10:30 and 1:20
- Lunch is on your own (11:40 – 12:30)
- Scholarship presentations at 12:30 (MAA, MATWFA, SEMATWFA)
- CEUs at end of day

Why is Species Selection Important?

- Trees provide benefits and have value
- Value is maximized when benefits exceed costs
- Arguably, the most effective way to reduce costs is to plant the right tree in the right place
- But there are many factors to consider—some are mutually exclusive

Overview

- Storm resistance [*Alex Sherman*]
- Wildlife habitat [*Desirée Narango]*
- Public health [*Neil Angus]*
- (Changing) Climate [*Matthew Cahill*]
- Pest susceptibility [*Jennifer Forman-Orth*]

- Aesthetics
- Maintenance needs
- Messiness
- Invasiveness
- Ecosystem services & functional benefits

Summary

- Right tree, right place
  - Key factors that affect survival and growth
  - Specific functions
- Online tools
- Synthesis of recommendations

RIGHT TREE, RIGHT PLACE: *Key Factors*

- Climate (hardiness zone, precipitation)
- Available sunlight (full sun, partial sun, shade)
- Soil properties (pH, bulk density, drainage, structure, texture)
- Available growing space (above- and below-ground)

RIGHT TREE, RIGHT PLACE: *Specific Functions*

- Reduce air or water pollution
- Reduce building energy consumption
- Provide wildlife habitat
- Control erosion
- Reduce noise
- Design
  - Aesthetics
  - Create view
  - Direct traffic or attention

Online Tools

- Missouri Botanic Garden Plant Finder
- www.CITREE.de

Selection

by criteria

by names

RESET

TRAFFIC AREAS

DENSELY BUILT-UP AREAS

GREEN ROOFS AND CONTAINER PLANTS

SPARELY BUILT-UP URBAN AREAS

INDUSTRIAL AND COMMERCIAL AREAS

PARKS, GARDENS AND CEMETERIES

WAT POR

RENATURATION AREAS / DERELICT LAND

ALLOTMENT GARDENS

CHILDREN

ELDERLY

SPECIFICATION

Site characteristics and natural distribution

Tree appearance

Ecosystem services

Required management activities

Risks and Interferences

Synthesis of Recommendations

Maintain diversity: Taxonomic & Functional

Species	Net
Gymnocladus dioicus 'Espresso'	4
Ginkgo biloba	3
Nyssa sylvatica	3
Zelkova serrata	2
Carpinus caroliniana	2
Liquidambar styraciflua 'Rotundiloba'	2
Quercus bicolor	2
Acer campestre	1
Amelanchier laevis	1
Betula nigra	1
Carya ovata	1
Celtics occidentalis	1
Cladrastis lutea	1
Continus obovatus	1

Species	Net
Corylus avellana	1
Eucommia ulmoides	1
Gleditsia triacanthos 'Inermis'	1
Liquidambar styraciflua 'Hapdell'	1
Metasequoia glyptostroboides	1
Ostrya virginiana	1
Parrotia persica	1
Populus tremuloides	1
Prunus serotina	1
Quercus palustris	1
Salix nigra	1
Taxodium distichum	1
Ulmus americana 'Princeton'	1
Ulmus hybrids	1

DESIRABLE

Species	Birds	Climate change	Pests	Public Health	Storm resistance
Ginkgo biloba					
Gymnocladus dioicus 'Espresso'					
Nyssa sylvatica					
Zelkova serrata					
Carpinus caroliniana					
Liquidambar styraciflua 'Rotundiloba'					
Quercus bicolor					

UNDESIRABLE

Species	Birds	Climate change	Pests	Public Health	Storm resistance
Acer platanoides	■		■		
Fraxinus sp.		■	■		
Liriodendron tulipifera			■	■	
Pinus strobus		■			■
Pyrus calleryana 'Bradford'		■			■
Quercus alba		■		■	
Styphnolobium japonicum	■			■	
Ulmus americana			■		■