



**Ecology, silviculture and  
management of spruce species in  
mixed forests**

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- 35 species of spruce worldwide
- Distribution:
  - North America – Mexico to northern treeline
  - Asia – India to northern treeline
  - Europe – Greece to northern treeline
  - Prominent in Montane, Subalpine and Boreal, also occurs in temperate



Uses: buildings, tonewood, pulp,  
energy, bioproducts



# Ecosystem services

- Spruce forests important for recreation, habitat, biodiversity, protection services, water supply, .....



# Mixtures

- Spruces typically grow in mixture with other trees
  - Broadleaves
  - Other conifers (firs, pines, larches)



# Spruce in mixtures

- Benefits

- Visual appeal
- Biodiversity (plants, animals, insect, ...)
- Productivity
- Resilience
- “More natural”

- Issues

- Slower growth
- Reduced yields
- Damage



# Purpose of this conference

- To explore and discuss benefits, issues, and options associated with growing and managing spruce in mixed forests
  - Review and discuss new research findings
  - Provide information useful to practitioners
  - Identify needs and priorities for future research
  - Reconnect with colleagues

