The Great War Project

Plant Classification Basics
Botany vs. Horticulture

• Botany: the scientific study of plants, including their physiology, structure, genetics, ecology, distribution, classification, and economic importance.

• Horticulture: the art or practice of garden cultivation and management.
Classification

- Human instinct to classify
- We classify everything
  - Books, vehicles, furniture, people
- Helps manage information
- Efficient communication
- Practical concerns
  - Poisonous, dangerous, edible, etc.
Types of plant classification

• Artificial classification
  – Designed for usefulness
  • Flower colour, growth habit, use, etc

• Natural (phylogenetic) classification
  – Based on genetic (evolutionary) relationship
Are these daisies?
• Early classification restricted to morphology
• Later classification was based on reproduction (flowers) and basic physiology
• Problem: Convergent Evolution
• Modern-times strong reliance on genetics
Cactus???
Scientific names

• Scientific names utilize Latin or less commonly, Greek language.
• This was the language of the educated back in the 1700-1800’s.
• Today Latin is a dead language so using this puts the scientific world on even ground.
• Avoids complications from “local” names.
Binomial System of Naming: Genus and Species

• Genus similar to “surname”
• Species is like a “first name”
• Species name refers to a specific organism while Genus refers to a group of closely related organisms.
Example - Maples

- Genus of maples = *Acer* (surname)
- There are many types of maples
- Norway = *Acer platanoides*
- Red maple = *Acer rubrum*
- Mountain maple = *Acer spicatum*
- Japanese maple = *Acer palmatum*
Anemone blanda

Caltha palustris

Lilium formosanum

Pulsatilla alpina
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