Forest Service Botany Program

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Botany Program

• Rare Plants
• Vegetation Inventories
• Native Plant Materials
• Ethnobotany
• Pollinator
Rare Plants

- Conservation and management of rare plants.
  - Threatened, endangered, or proposed under ESA.
  - Regional Forester designated species
Rare Plants

• Botanists
  – Inventory and monitor rare plants and the plant communities they depend upon; and
  – Prepare conservation assessment, conservation strategies and biological assessments.
Vegetation Inventories

• Delineate, inventory, map, and monitor various types of vegetation.
• Manage and conserve rare plant communities such as fens and bogs, barrens, rock outcrop communities, and rare plant habitats
Welcome to the Fire Science Laboratory’s native prairie. Fire Lab staff planted this area in 2010. Perennial grasses and forbs like these once covered Montana’s valleys and foothills. Bluebunch wheatgrass, Idaho fescue, prairie Junegrass, and needle-and-thread grass dominate these prairies. Penstemons, arrowleaf balsamroot, and aspen fleabane add spring color. Montana’s prairies provide habitat for elk, mule deer, coyotes, and mountain cottontails. Long-billed curlews, vesper sparrows, and western meadowlarks fill the prairies with song.

Foothill prairies once provided corridors for grizzly bears traveling between mountain ranges. Wildfires were historically common in Montana’s foothill prairies, with fires burning about every 10 years. Fire-return intervals ranged from 3 to 40 years.

Learning your local flora
Can you find these native plants in Montana?

Fun Facts:
- Elk calves know to avoid this plant since their mothers cow elk teach them not to grass it. (Silky lupine can be toxic if consumed in large quantities).
- Did you know Montana has a state grass? Though fire consumes the leaves, bluebunch wheatgrass grows back from the root crown.
- Does hide their fawns beneath the branches of silver sagebrush. This shrub sprouts anew establishes from seeds after fire.
- Blanketflower may be resistant to burning. It does burn, it grows back quickly. The showy blooms attract bees and butterflies.
Native Plant Materials

• Needed for revegetation, rehabilitation, or restoration projects.
• Material includes seed, plugs, stem cuttings, trees and shrub seedlings.
• Plant geneticists and ecologists determine appropriate plant selection, collection, propagation, storage and planting techniques.
Native Plant Materials

• Native Plant Policy
  – Native plants are defined as all indigenous plant species that evolved naturally in a defined native ecosystem.
  – Native plant materials will be the first choice in revegetation for restoration and rehabilitation of native ecosystems.
  – Non-native, non-invasive plant species may be used.
Common Garden Studies

- Showy fleabane (*Erigeron speciosus*)
  - This project aims to ensure appropriate plant material is available and in the quantities needed to improve sage-grouse habitat following disturbance.
  - Seed collection, voucher specimens and written documentation.
Midewin National Tallgrass Prairie

- University of Illinois Heritage Garden Program
  - Technology transfer project.
  - Internship program to expose students to horticultural career.
  - Hands-on native seed processing.
  - Introduction to seed cleaning equipment.
Ethnobotany

• Provide leadership in the conservation and management of ethnobotanical resources.
  – Plants that are important to people and society.
  – Examples include wild crop relatives, food plants, dye plants, medicinal plants, resins, and ornamentals.
Pollinator

• Many plants rely on animal pollination to complete their life cycle.

• Without the pollinator services provided by many animals, plants would become extinct.
Pollinator

Glidden Native Garden
In spring 2005, staff mowed more than 6 acres of lawn weekly. By 2016, mowing has been reduced to less than 1 acre.

Legend
- 2005 Native Planting
- 2016 Short Stature Native Planting
- 2016 Tall Stature Native Planting
- 2017 Tree Planting
Pollinator
Thank you!