

THREATENED AND ENDANGERED:
PLANTS IN PERIL
OR
RARE PLANT CONSERVATION IN IDAHO

DEREK ANTONELLI

IDAHO NATIVE PLANT SOCIETY

MARCH 28, 2023



Photo by Ben Legler

RARE PLANTS IN IDAHO

- Threatened and endangered plants
 - Only a handful of officially threatened or endangered plants in Idaho
 - Minimal interaction with family forests
- Idaho Native Plant Society (INPS) maintains a list of about 500 plants species considered to be rare in Idaho
 - INPS has process in place to continually update list
 - The INPS Rare Plant List is for guidance only

THREATENED AND ENDANGERED PLANTS

- T&E plants are officially designated as threatened or endangered under the Endangered Species Act
 - Very complex process
- Current Idaho T&E plant species
 - Zero endangered plant species
 - Five threatened plant species
 - One recently delisted plant species
 - Water howellia – Palouse River and Hangman Creek

WHITEBARK PINE (THREATENED)



SLICKSPOT PEPPERGRASS (THREATENED)



SPALDING'S CATCHFLY (THREATENED)



UTE LADIES'-TRESSES (THREATENED)



MACFARLAND'S FOUR O'CLOCK (THREATENED)



WATER HOWELLIA (DELISTED)



INPS RARE PLANT CONSERVATION PROCESS IN IDAHO

- Research potential rare plant species
- Review species at Rare Plant Working Group
- Approve species rank at Rare Plant Conference
- Update INPS Rare Plant Species List
- Protection of rare plants by land management agencies

SPECIES RESEARCH

- Volunteer researches and gathers information about potential rare plant species within Idaho
 - Reviews university herbarium collections of the species
 - Visits known or potential species sites
 - Locates reports on the size and location of the various populations of the species
 - Determine the range of the species, the total number of known populations, the condition of those populations, and threats to those populations
- Volunteer inputs information into a species rank calculator
- Volunteer makes recommendation to Rare Plant Working Group

NATURESERVE TOOL

- Excel-based calculator
- Input values for a set of factors
 - Range extent
 - Area occupied
 - Number of occurrences
 - Population size
 - Number of occurrences with good viability
 - Threats to the populations
- Calculator produces rank

SPECIES STATUS RANKS

- The volunteer uses a tool provided by NatureServe to rank each species reviewed
- Ranks can be global or subnational (state)
 - G1/S1 – Critically imperiled
 - G2/S2 – Imperiled
 - G3/S3 – Vulnerable
 - G4/S4 – Apparently secure
 - G5/S5 – Secure
- Ranks G1 thru G3 are considered rare globally
- Ranks S1 thru S3 are considered rare within the state

RARE PLANT WORKING GROUP

- Idaho has two Rare Plant Working Groups—one for north Idaho and one for south Idaho
 - Each RPWG meets several times a year
- The RPWG evaluates the details of the research performed by the volunteer
- The RPWG accepts or modifies the recommendation of the volunteer
- The RPWG reaches a consensus on the proposed rank for the species and forwards that recommendation on to the Rare Plant Conference

TYPICAL RARE PLANT WORKING GROUP MEETING



RARE PLANT CONFERENCE

- Idaho Native Plant Society sponsors RPC every other year as an independent organization
- Statewide participants include botanists and others with an interest in rare plants
 - Agencies (USFS, BLM, IDFG, USFWS)
 - Tribal governments
 - Academics (UI, C of I, BSU, ISU)
 - Consultants
 - General public
- An overview of each species being considered is presented to the RPC
- The recommended rank is either approved or adjusted
- Following the conference the INPS Rare Plant List is updated

RARE PLANT CONFERENCE



RARE PLANT CONFERENCE



IDAHO RARE PLANT LIST

- Rare Plant List includes over 500 species of plants
- The list can be found on INPS website
 - idahonativeplants.org
- Results of RPC are incorporated in the Idaho Rare Plant List
 - New species are added, ranks are updated, more common species are removed
- Botanists throughout the state begin to track newly added species

AGENCY PROTECTIONS

- Land management agencies use the INPS Rare Plant List to determine which plants require protection
 - BLM develops a Special Status Plant List at the state level based on the species found on their properties
 - USFS develops a Sensitive Species list at a regional level in the same manner
- Surveys are conducted to determine the location and status of populations of these species
- Proposed projects on Federal lands are reviewed for impacts
 - Reviews may result in modifications to proposed project to limit impacts on rare plants

RARE PLANTS AND FAMILY FORESTS

- Over 500 rare plant species in Idaho
 - Most are found in rare or specialized habitat
 - Bogs, alpine peaks, special soils, deserts, etc.
 - Still some can be found in family forests
 - Can't develop a list but can show a few I have come across in my work
- Learn what plants are found on your property
 - Compare to INPS Rare Plant List
 - Get help identifying unusual plants
 - County extension, local INPS chapter, university herbarium
- Protecting rare plants
 - No obligations for private land owners
 - Know what's there—use common sense
 - Good forestry practices will provide a lot of protection

Black snakeroot (*Sanicula marilandica*)



Photo by Craig Althen



Photo by Clem Yonkers

Maidenhair spleenwort (*Asplenium trichomanes*)



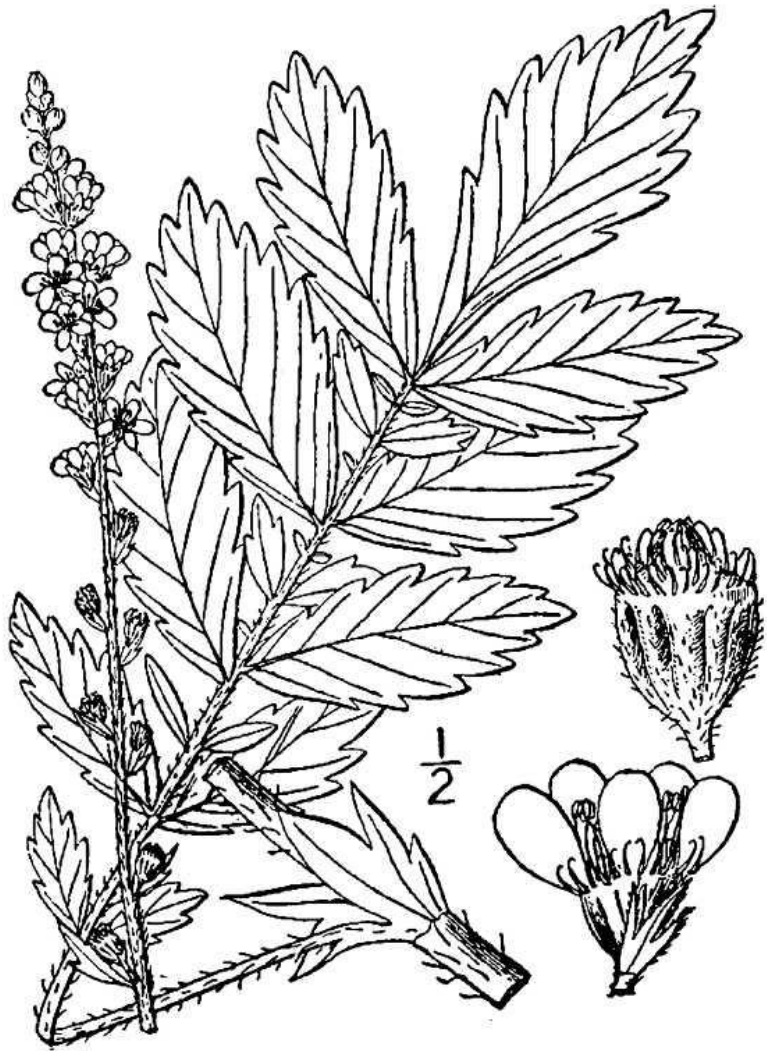
Photo by G. D. Carr

Bristle-stalked Sedge (*Carex leptalea*)



Photos by Ben Legler

Roadside agrimony (*Agrimonia striata*)



Britton and Brown

Collected by Derek Antonelli

Lanceleaf Grapefern (*Botrychium lanceolatum*)



Photo by Ben Legler



Photo by Marilyn George



QUESTIONS?

DEREK ANTONELLI

DS.CA.ANTONELLI@GMAIL.COM