



Acadia National Park

Standard Operating Procedure

Title Subject: Rare Plant Protection	Policy Number: ACAD-2015-2
Effective Date: July 2, 2015	Rescinds: None
Division: Resource Management	Distribution: All Park Personnel

PURPOSE

The intent of this policy is to provide employees, cooperators, and researchers with guidance and direction for managing and conducting projects, operations, and research that have the potential to affect—adversely or beneficially—rare vascular plants and rare vegetative communities, so that these plants and habitats may be identified and protected. It also outlines how rare plants and plant communities are defined, who will be considered qualified to conduct detection inventories for rare vascular plants, how rare plants will be identified, marked, and protected during work, the information that will be collected during surveys, and how that information should be managed and incorporated into work plans to ensure rare plants are protected.

NPS policies also call for the protection of fungi, lichens and algae—technically not plants but traditionally included in botany programs. These standard operating procedures could generally be applied to their protection. However, identifying these organisms requires additional specialized experience, which may not be available at this time.

POLICY

NPS Management Policies 2006 “sets the framework and provides direction for all management decisions.” Policies related to protecting rare species and habitats are found throughout Chapter 4. Notable sections follow:

- Natural resources will be managed to preserve fundamental physical and biological process, as well as individual species, features, and plant and animal communities.” (p. 36)
- Similarly, planning for park operations, development, and management activities that might affect natural resources will be guided by high-quality, scientifically acceptable information, data and impact assessment. (page 37)

- The Service will successfully maintain native plants and animals by...
 - minimizing human impacts on native plants, animals, populations, communities, and ecosystems and the processes that sustain them. (p.42)
- The National Park Service will inventory, monitor and manage state and locally listed species in a manner similar to its treatment of federally listed species to the greatest extent possible. In addition, the Service will inventory other native species that are of special management concern to parks (such as rare, declining, sensitive, or unique species and their habitats) and will manage them to maintain their natural distribution and abundance. (p.45)
- The Service will determine all management actions for the protection and perpetuation of federally, state, or locally listed species through the management planning process, and will include consultation with lead federal and state agencies as appropriate. (p. 45-46)

Such standards are essential to protect federally, state, and locally rare vascular plants and rare plant communities, as defined by the Maine Natural Areas Program and knowledgeable professionals, and to uphold public trust. Managers recognize the importance of protecting not only rare plants and plant communities, but also species that are not rare in a scientific sense but are of management concern because they are attractive to visitors and may be subject to illegal collecting, have ethnographic importance, or populations are declining but not yet considered rare on a state, federal or global level.

Accordingly, it shall be the policy of Acadia National Park that,

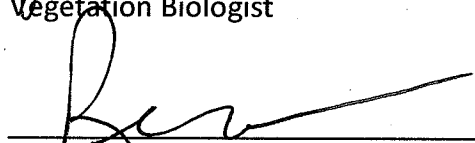
1. All activities and projects proposed within the park shall be planned, to the extent possible, to avoid adverse impacts on rare plant species and habitats.
2. Before implementing any action that has the potential to adversely affect rare plants or habitats, staff shall consult with the park's vegetation program leader to determine if field surveys to identify rare plants or habitats have been performed or will need to be performed prior to work. The consultation should occur at least one full growing season in advance of proposed work, when possible, to facilitate field surveys by qualified botanists. Project leaders should provide information about the exact location, scope, description of activity including storage areas for equipment and materials, proposed timing of work and other relevant information. In most instances, surveys will be coordinated by the park vegetation biologist, and costs for rare plant surveys will be borne by the project or operation.
3. Surveys for rare plants will generally be considered good for a four-year period. The exception would be if a major disturbance event occurred in the area that significantly changes the habitat, such as a beaver dam washout that significantly lowers water levels, exposing soil and creating new seed beds, or a major change in canopy cover, exposing understory areas to sunlight. Because they are less subject to change, surveys of rare plant communities, such as broom crowberry/pitch pine, will be considered good for ten years. These periods may be extended at the discretion of the park's vegetation biologist.

4. If the vegetation biologist does not object to the action, staff may proceed with implementation including any mitigation or considerations that the vegetation biologist feels necessary to protect rare plants and rare habitats. Mitigations may include avoiding the plant by installing fencing or staking to protect it, reducing the size of the disturbance area, or in rare cases as a last resort, transplanting the plant until work is completed and re-planting it back in the same area or nearby.
5. If the vegetation biologist objects to the action based on its potential to adversely affect rare plants or rare habitats, the project may not proceed until such time as it can be modified to eliminate the adverse effects. Objections to the vegetation biologist's determination of possible adverse effect may be appealed to the deputy superintendent, who may rule on the objection or refer the issue to the management team for discussion.
6. The vegetation biologist will work with state botanists and local experts and will develop and maintain a list of rare plant species and rare habitats for the park. This list will be reviewed at least every five years by a panel of botanical experts coordinated by the park's vegetation biologist to ensure that the list is up to date and accurate.

This policy is effective as of the date signed by the superintendent.


Prepared by Judith Hazen Connery,
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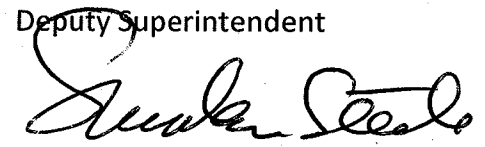
7/2/2015
Date


Reviewed by Rebecca Cole-Will,
Chief, Resource Management

7/8/2015
Date


Recommended by R. Michael Madell
Deputy Superintendent

7/13/15
Date


Approved by Sheridan Steele, Superintendent:
Signed original on file

7/14/15
Date

BACKGROUND AND SUPPORTING INFORMATION

This Standard Operating Procedure is based on rare plant pre-disturbance protocols used by the US Department of the Interior, Bureau of Land Management/US Department of Agriculture, Forest Service (1998), suggested survey guidelines for Washington State (date unknown), guidelines produced by the California Native Plant Society (1998 revision), advice from six professional botanists with specific, current knowledge of the biology of the rare plant species of Acadia National Park, personal communication with the botanist and fire ecologist at Shenandoah National Park, and best professional judgment by Acadia National Park's vegetation biologist.

Visitors and park neighbors monitor some plant populations on a regular basis, and park managers have received complaints when plants are killed or impacted by park operations. When rare plants or plant habitats are found, mitigations can be used to protect these resources. In the last 30 years, no project or operation at Acadia National Park has been prevented from being accomplished because of the presence of a rare plant or rare plant habitat.

PRE-DISTURBANCE SURVEYS

Rare plant and rare plant community surveys are undertaken to ascertain the presence or absence of rare plant species or communities on a site that may be disturbed by park operations. A rare plant survey conducted by a qualified botanist can confirm the presence of rare plants and communities on a site, but unless the site is small (for example, less than one-tenth of an acre) or severely degraded, most rare plant surveys cannot rule out with absolute certainty the presence of rare plants. During field surveys, qualified botanists may also identify invasive exotic species that threaten the integrity of native plant communities or plant species of concern to management.

DEFINITION OF A RARE PLANT:

Rare plants will include those that are federally or state listed (i.e. follow rarity rankings developed by the Maine Natural Areas Program), are identified on NatureServe (a network that connects science with conservation and maintains an extensive, searchable database of rare species and habitats) as being ranked S3 or lower, or that follow definitions published by Green et al. (2005):

“species usually restricted to small areas, specialized habitat, or consisting of one or a few populations.”

Rare species may also be identified by qualified botanists familiar with local species and the species status regionally and nationally as being of concern based on their best professional judgment.

DEFINITION OF A RARE PLANT COMMUNITY

The Maine Natural Areas Program has classified and distinguished 104 different natural community types in the state. Each habitat type has been assigned a rarity rank based on state or global rarity. Communities ranked as S1, S2, S3 and any globally-ranked communities are considered rare.

QUALIFICATIONS OF SURVEYORS

Surveyors should have:

- Academic background in plant taxonomy (a bachelor's degree or higher in botany) or equivalent experience.
- The taxonomic experience to identify, through personal knowledge or the use of technical floras, most or all of the plant species they encounter in the field, and an understanding of how to contact taxonomic experts for the species they can't identify.
- Knowledge of the potential rare plant species in the survey area.
- Ability to use maps, GPS and other tools to adequately map rare plant populations.
- Knowledge of plant species and community status on a regional or national basis.

The park's vegetation biologist will ultimately determine who is qualified to conduct surveys for rare plants.

PREPARATION FOR FIELDWORK

1. Field surveys will be designed by the surveying botanist based on complete project descriptions of work areas (including associated staging or materials storage areas) so that each habitat within the survey area is visited at the appropriate time for the potential species in that habitat. Many park habitats will require more than one visit, as some of our rarest plants are ephemeral—they may appear for only a short period of time in the growing season.
2. The appropriate level of survey intensity will be chosen for the project based on the risk posed by the proposed activity, resources at risk, site conditions, and best professional judgment. Complete surveys attempt to cover the entire area at a high level of certainty. Other surveys can focus on most likely habitats or areas most likely to be affected by the project. The survey intensity should be identified in the survey report.

FIELDWORK

Surveys will be conducted at the appropriate season for each potential rare species or rare community/habitat. Multiple site visits may be necessary. All vascular plant species that are observed will be listed, not just the target rare species. A full floristic inventory is standard practice for rare plant surveys. Rare plants or plants of management concern, such as invasive exotics, should be mapped as precisely as possible using a handheld GPS device.

REPORTS

Survey reports should include a written description of the project area, maps of the project area (USGS and project detail) maps of survey routes, survey dates and survey methodology, names of surveyors, list of all vascular plant species occurring on the project site, potential rare plant species for the project area, and factors that might have influenced the presence or abundance of rare species (annual rainfall, historic records of plant presence, etc.). Reports should note whether the habitat for the suspected rare species is present or absent. If rare plants are found, sighting forms, maps of the population(s), and photos should be included. All reports should be uploaded as an internal document in PEPC. The vegetation biologist may also request that basic rare plant survey information be entered into the PEPC Environmental

Screening Form for the project. In accordance with *NPS Policies 2006*, rare plant information should be considered privileged and protected from Freedom of Information Act and other requests to protect plants from collectors.

MOST IMPORTANT FACTORS IN RARE PLANT AND HABITAT SURVEYS FOR PROTECTION

- Advanced planning and communication of proposed work that has the potential to disturb vegetation – at least one full growing season in advance.
- Taxonomic competence of surveyors.
- Surveys conducted at the appropriate time of the growing season.
- Full documentation of methods and results in a timely way to influence plant protection.

PROTECTING RARE PLANTS AND HABITATS DURING PROJECTS, OPERATIONS, OR RESEARCH

When rare plants or rare communities are identified and reported, the following actions will be taken to protect those resources:

- 1) The park's National Environmental Policy Act (NEPA) coordinator will work with the vegetation biologist to identify and document mitigations that will be required to protect rare plants. If the proposed activity does not trigger formal NEPA compliance documentation, the vegetation stewardship program leader will provide written guidance about field or research operations to the project leader and it will be the responsibility of the project leader to incorporate specified mitigations into the project to protect plant resources. Mitigations may include avoiding the plant by installing fencing or staking to protect it, reducing the size of the disturbance area, or in rare cases as a last resort, transplanting the plant until work is completed and re-planting it back in the same area or nearby.
- 2) Whenever possible, the botanist who conducted the survey will mark rare plant populations immediately prior to field operations, and will meet with field work leaders or researchers to locate and train field workers on how to identify resources to be protected. In some cases, projects, operations or research may actually enhance habitat for rare plants, provided seed and other propagules are protected. When possible, actions that might enhance populations will be incorporated into the activity.
- 3) Field work leaders or researchers will notify the vegetation biologist when work is about to commence and when it is finished.
- 4) The vegetation biologist will conduct monitoring following the project to determine if mitigations and field operations provided adequate protection for rare plants and habitats. Findings will be incorporated into future activities to enhance rare plant and habitat protection.

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