PLANT CONSERVATION ALLIANCE NATIONAL FRAMEWORK FOR PROGRESS

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WHY PROTECT NATIVE PLANTS?

A spectacular array of native plants grace the landscapes of our nation. Together, these plants form diverse communities and ecosystems that directly support our economic prosperity and quality of life. No matter how small, all plants play a valuable role in our lives:

Ecological Values: Native plants convert the sun's energy into food; thus they are the source of all food to the animal kingdom. Plants cycle and clean fresh water upon which terrestrial animals depend, and ensure soil stability for ecosystems. We depend on plants to provide the oxygen that all living organisms require.

Economic Values: Plants are sources of genetic and raw materials that are used to expand or diversify agricultural and industrial products, including foods and medicine. Native plants provide a storehouse of genetic diversity for future exploration, discovery, and use, to meet human needs.

Aesthetic Values: The beauty of wildflowers is just one of the many aesthetic values of native plants. The presence of plants in their native habitats and in cultivation enhances our world in many ways. Native plant communities and natural areas provide opportunities for people to experience nature.

North American ecosystems are home to an estimated 20,000 native plant species. These native plants are found in a wide range of environments from boreal forests, alpine tundra, and prairie grasslands to interior deserts, coastal salt marshes, and tropical rainforests. Conservation of native plants in many of these habitats is threatened by a complex array of factors associated with human population growth and development. Mirroring world-wide trends in declining diversity, native plants are being lost at an alarming rate. According to scientists in the United States, more than 200 plants have become extinct since the early 1800's and nearly 5,000 native species are "at risk." Yet only 526 of these plant species have been offered protection under the U.S. Endangered Species Act.

Many plant species remain unknown to us and new plant species continue to be discovered. In California, more than 200 new species have been discovered in the last 25 years. Fifty new plant species have been discovered in Utah and Nevada during the past decade. Some of these species are already threatened at the time they are discovered.

It is important that we attempt to maintain the full complement of biological diversity. Ecological research has yielded only limited understanding on the complexities of our ecosystems. Each plant, each component, is essential to maintaining ecosystem integrity. It is impossible to know the full ramifications of the loss of one or more species in this intricate biological web of life.

NEED FOR ACTION

Conserving the biodiversity and health of native plants and ecosystems is essential to sustain the natural resource base upon which we depend for survival. There is an urgent need to develop effective plant conservation programs before more species and communities become critically endangered. Native plant conservation strategies are not only needed to protect the most imperiled species, but to ensure the long-term survival of all native plant species and plant communities.

Organizations and individuals interested in native plant conservation need to pool resources and combine energies to develop innovative approaches to ensure the continued existence of our plant resources. Most

current plant conservation efforts lack focus and are fragmented among Federal agencies, States, conservation groups, botanical gardens, academia, and private individuals.

The national Plant Conservation Alliance provides a framework and strategy for linking resources and expertise in developing a coordinated national approach to plant conservation. The strategy is guided by the following vision:

"For the enduring benefit of the Nation, its ecosystems, and its people, to conserve and protect our native plant heritage by ensuring that to the greatest extent feasible, native plant species and communities are maintained, enhanced, restored, or established on public lands, and that such activities are promoted on private lands."
- Federal Native Plant Conservation Memorandum of Understanding, May 25, 1994

This strategy is intended to be an evolving one that motivates thinking and catalyzes action toward plant conservation. Initially, six broad strategies and supporting goals and actions have been identified to launch the initiative, and suggested actions and opportunities have been identified to guide efforts for implementing the National Strategy. Different priorities will guide implementation at national, regional, and local levels.

STRATEGY A.

BRING PEOPLE AND ORGANIZATIONS TOGETHER TO SHARE RESOURCES AND TALENTS TO EFFECTIVELY CONSERVE THE NATION'S NATIVE PLANTS.

Problem:

Plant diversity is a universal resource upon which we depend for survival. However, the limited resources available for plant conservation are not being efficiently utilized. Plant conservation efforts are inconsistent, underfunded, and scattered.

Goals:

A1. Establish common goals and priorities.
A2. Promote effective and innovative partnerships that encompass diverse perspectives.
A3. Share expertise among organizations and individuals.
A4. Develop networking tools to facilitate communication and coordination.
A5. Utilize innovative approaches and nontraditional sources to increase funding.
A6. Promote consistent policies for plant conservation.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Form a coalition of local, national, and international partners in support of and as advocates for native plants.
- Support development of integrated regional plant programs involving public and private partners.
- Promote partnerships between Federal agencies, States, local governments, Native Americans, neighboring countries, and the private sector to identify, conserve, and restore native plant resources.
- Encourage land management agencies and other organizations to share expertise and resources beyond traditional organizational boundaries.
- Develop collaborative training programs.
- Develop a national directory of native plant conservation contacts.
- Develop an Internet clearinghouse.
- Utilize cost-sharing and grants.

- As appropriate, cultivate relationships with legislators and foundations in order to share information and recommendations.
- Stretch the horizon to locate unique sources of funding.
- Support interagency efforts such as the Federal Memorandum of Understanding on pre-listing and candidate conservation.
- Develop a generic plant conservation policy document that provides broad, scientifically sound policy recommendations that could be modified to meet specific or unique agency requirements.

STRATEGY B.

PROVIDE OPPORTUNITIES FOR PEOPLE TO ENJOY, UNDERSTAND, AND VALUE NATIVE PLANTS AND PLANT COMMUNITIES.

Problem:

Most people do not appreciate and understand how important native plant diversity is to sustaining our world, health, and lifestyles. In addition, many people have not had opportunities to learn about native plants and to enjoy the beauty of wildflowers. Until more people are educated and interested in native plants and their conservation, the constituency necessary to promote programs and conservation actions is lacking.

Goals:

B1. Educate the public, policymakers, and land managers about native plant conservation.
B2. Provide opportunities for the public to participate in hands-on native plant conservation activities.
B3. Broaden participation of national and local educational, conservation, and professional organizations in plant conservation.
B4. Encourage plant appreciation and enjoyment activities.
B5. Encourage creative uses of the media.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Incorporate a native plant conservation message into primary, secondary, and adult education curricula.
- Educate land managers about plant conservation and encourage them to support unique and valuable botanical resources for which they are stewards.
- Share interesting stories and success stories about native plants.
- Promote careers in botany and plant ecology.
- Establish volunteer programs to assist with native plant inventories and monitoring.
- Encourage internship programs in native plant conservation.
- Work with national and local environmental education organizations.
- Work with national and local conservation organizations (NGOs).
- Seek professional society participation and support.
- Promote continued development of the Celebrating Wildflowers program and other efforts aimed at plant appreciation.
- Provide opportunities for people to observe, view, and appreciate native plants in their native habitats and in cultivation.
- Work with Watchable Wildlife programs to encourage establishment of sites with important or aesthetic plant values.
- Capitalize on the nationwide interest in gardening and encourage appropriate use of native plants for landscaping.

- Encourage participation of the arts community in helping convey the beauty of and appreciation for native plants.
- Seek non-traditional means for conveying plant conservation messages (e.g., grocery bags).
- Utilize public broadcasting system to convey plant conservation messages (e.g., public service announcements).
- Encourage participation of celebrities known to be interested in plant conservation to serve as spokespersons for plant conservation.
- Encourage private industries involved with native plant use (e.g., drug manufacturers) to promote native plant conservation through their advertising campaigns.

STRATEGY C.

ENSURE CONSERVATION AND RESTORATION OF NATIVE PLANTS AND NATURAL PLANT COMMUNITIES THROUGH ECOSYSTEM-BASED MANAGEMENT.

Problem:

The Center for Plant Conservation estimates that 200 plant species have gone extinct in the United States since the early 1800's, and nearly 5,000 native plants are "at risk." Current human population growth and associated development have greatly accelerated degradation of native plants and natural ecosystems. Native plant inventories, monitoring protocols, and management practices are, in many cases, inconsistent and inefficient.

Goals:

C1. Identify and act on extremely urgent plant conservation needs.
C2. Promote coordinated and standardized approaches to classification, inventory, and assessment.
C3. Encourage coordinated plant conservation planning and management.
C4. Seek protection for nationally and regionally significant native plant habitat.
C5. Promote aggressive management practices to prevent, control, and eradicate non-indigenous species that threaten native plant populations.
C6. Develop and implement guidelines and management techniques for collecting, propagating, and utilizing native plants in ecosystem restoration.
C7. Provide for ex situ conservation of the highest risk species.
C8. Provide training opportunities for plant conservationists.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Promote implementation of existing recovery, restoration, and habitat conservation plans for plants.
- Encourage rapid completion of recovery plans for all listed plants.
- Support efforts to develop a national vegetation classification.
- Promote integrated and coordinated inventories and assessments.
- Coordinate with existing efforts such as the Biological Conservation Database of The Nature Conservancy's Natural Heritage Program, Systematics Agenda 1000, and Flora North America project.
- Conduct inventories of native plants and plant communities, emphasizing imperiled species.
- Expand inventory efforts to include less emphasized groups, including mosses, lichens, fungi, and algae.
- Encourage coordinated development of conservation strategies for all imperiled species and communities.
- Develop a unified national list of plant taxa of range-wide conservation concern (Center for Plant Conservation is working on this.)
- Ensure that ecosystem management initiatives conserve plant biodiversity.

- Encourage development and implementation of management practices which ensure conservation of native plants in their natural habitats.
- Support continued establishment and management of protected areas to protect important genetic resources, representative and unique plant communities, and wild relatives of species of economic importance. (Protected areas include Research Natural Areas, National Parks, National Wildlife Refuges, Wilderness Areas, and Botanical Areas)
- As appropriate, encourage acquisition of significant plant habitat by public agencies and private organizations.
- Support work of the Federal Interagency Committee for the Management of Noxious and Exotic Weeds.
- Identify and inventory aggressive non-indigenous species that are a threat to native vegetation.
- Educate the public on the serious threat of non-indigenous species to native ecosystems.
- Support development and application of appropriate and successful management techniques to prevent, control, and eradicate aggressive non-indigenous species.
- Develop techniques to propagate native plants economically to ensure their availability for revegetation.
- Define "native species" from a regional (geographic) perspective.
- Assemble information on commercial sources for regional native plants.
- Compile information on the role of fire, grazing, species composition, succession, and soils in managing revegetation.
- Develop guide of contacts for assistance in defining regional native species and on obtaining information.
- Develop guidelines for collection of seed and plant propagules for restoration.
- Maintain ex situ genetic material using the best storage technology available.
- Develop reintroduction guidelines and policies for rare plants.
- Encourage research on long-term storage techniques for native plant species.
- Publish catalog of training opportunities in plant conservation.
- Sponsor regional training workshops.
- Enlist extension agents to provide training.

STRATEGY D.

ENCOURAGE THE SCIENTIFIC COMMUNITY TO CONDUCT RESEARCH AND TECHNOLOGY DEVELOPMENT IN SUPPORT OF NATIVE PLANT CONSERVATION.

Problem:

Our understanding of most native plants and communities is limited by the lack of applicable ecological research and supporting technology development. Basic information required for effective planning, protection, and management is limited or nonexistent for many plant species. Many plant scientists are not engaged in or rewarded for conservation work.

Goals:

D1. Using adaptive management principles, develop, and implement coordinated monitoring protocols and programs.
D2. Identify and prioritize basic and applied research needs.
D3. Encourage research institutions to staff botanists and plant ecologists and maintain adequate herbaria, oriented toward regional native floras.
D4. Encourage the scientific community to participate in plant conservation and associated education.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Develop defensible and objective-driven protocols to monitor native plants and communities.
- Encourage application of adaptive management principles.
- Promote implementation of long-term studies of plant populations and communities that are utilized to revise and improve conservation strategies and recovery plans.
- Develop a coordinated approach to identification and prioritization of basic and applied research needs.
- Encourage research on genetics; systematics; threatened, endangered, and sensitive plant species and communities; patterns of rarity; role of disturbance in maintaining natural ecosystems; control mechanisms for non-indigenous species; and ecosystem restoration.
- Encourage the National Science Foundation to direct research grants toward plant conservation investigations.
- Develop and implement native plant conservation research programs.
- Reverse the nationwide decline in support for herbaria, plant systematists, and botanical programs.
- Encourage the scientific community to share knowledge of native plants, especially in simple, easily understood public forums. Emphasize success stories; help sell plants to the American public.
- Actively seek linkages with existing related efforts such as American Society of Plant Taxonomists, Systematics 2000, and the Sustainable Biosphere Initiative of the Ecological Society of America.

STRATEGY E.

ENCOURAGE PRACTICES THAT SUPPORT APPROPRIATE AND SUSTAINABLE USES OF BENEFICIAL PLANTS.

Problem:

Demand for botanical products such as medicinals, herbals, florals, landscaping plants, and food is growing rapidly. Land management agencies are actively promoting development of non-traditional economic uses including these botanical products. Unfortunately, limited ecological information exists for these species, hindering development of appropriate management guidelines.

Goals:

E1 Identify and monitor the public demand for and impact on botanical resources.
E2 Promote sustainable and conscientious use of native plants.
E3 Document the indigenous people's knowledge about the ecology and uses of native plants and work with indigenous people to safeguard traditional collecting areas for native plants.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Work with the commercial sector in identifying uses of native plants.
- Identify and monitor uses that compromise or threaten the integrity of native plant populations and communities.
- Develop scientifically based policy and guidelines for sustainable use of native plants for medicinal, cultural, aesthetic, and economic purposes.
- Work with commercial interests that utilize native plant materials (e.g., nursery and pharmaceutical industries) to ensure that sound conservation practices are employed.
- Promote plants as a tourism resource (e.g., wildflower viewing). Broaden the definition of Watchable Wildlife programs to include plants.
- Work with commercial and noncommercial interests in promoting the appropriate use of native plants for garden and landscaping use.

- When demand dictates, encourage horticultural development of natives to take pressure off of natural populations.
- Encourage local tribal councils to document and share their knowledge and use of native plants.

STRATEGY F.

PROMOTE THE DEVELOPMENT AND USE OF COORDINATED DATABASES AND INFORMATION-SHARING TO SUPPORT NATIVE PLANT CONSERVATION.

Problem:

Numerous plant databases exist and continue to be developed independently. The lack of common data structures, coordination, and awareness of existing databases has hindered information-sharing and results in duplication of effort.

Goals:

F1. Identify and prioritize data needs for native plant conservation.
F2. Ensure compatibility and economy of existing plant conservation databases.
F3. Promote coordinated development and operation of future plant conservation information systems.
F4. Promote broad use and open exchange (as appropriate) of plant conservation information.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Encourage coordinated efforts to identify data and data system needs to support native plant conservation.
- Identify and evaluate existing plant conservation databases.
- Modify existing database structures to allow data exchange.
- Promote electronic database connections between Federal agencies, States, and organizations.