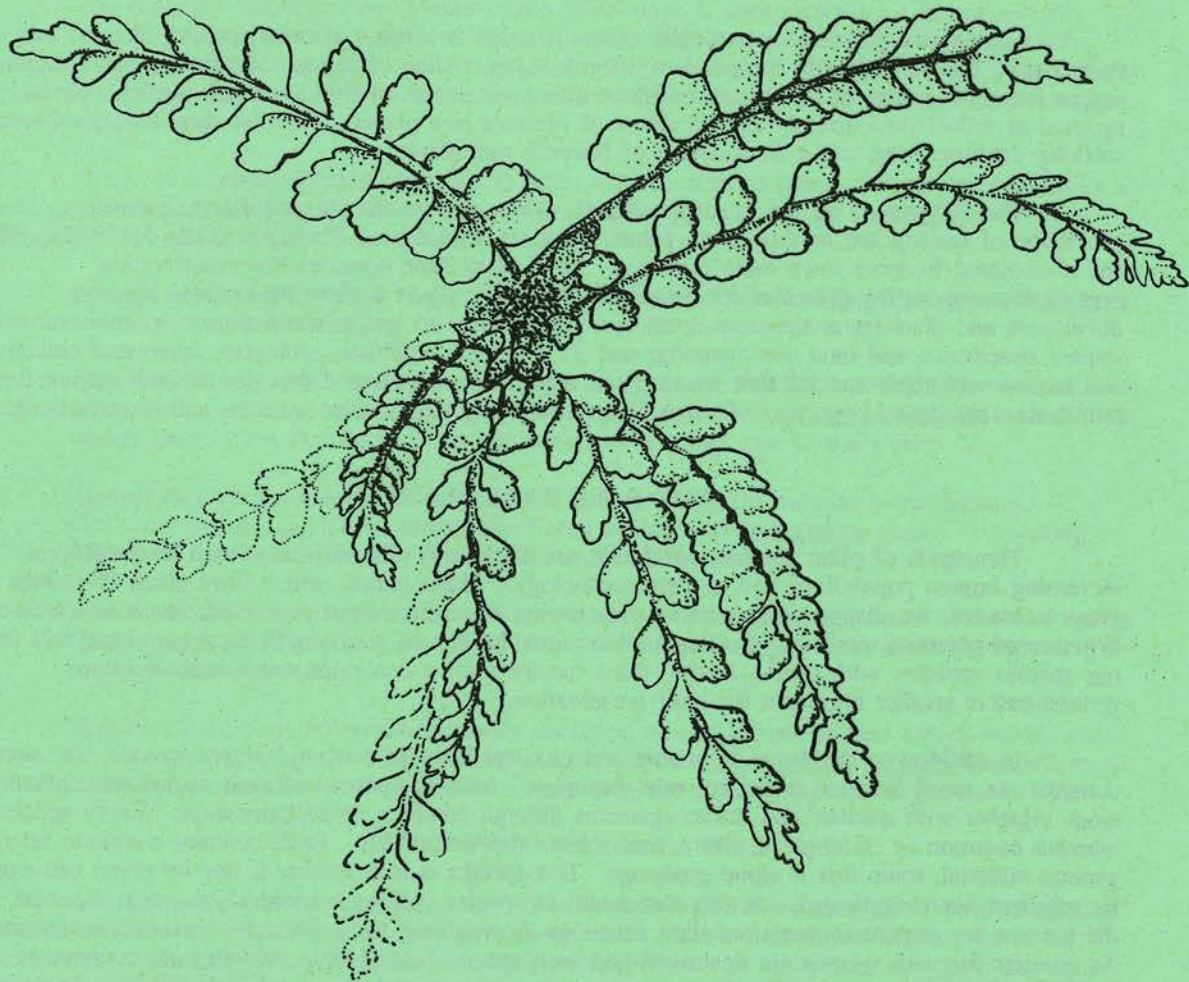


MAINE'S ENDANGERED AND THREATENED PLANTS



Executive Department
Maine State Planning Office
Critical Areas Program

May 1990

BACKGROUND and PURPOSE

In an effort to encourage the protection of native Maine plants that are naturally reduced or low in number, the State Planning Office has compiled a list of endangered and threatened plants. Of Maine's approximately 1500 native vascular plant species, 155, or about 10%, are included on the Official List of Maine's Plants that are Endangered or Threatened. Of the species on the list, three are also listed at the federal level. The U.S. Fish and Wildlife Service has designated the Furbish's Lousewort (Pedicularis furbishiae) and Small Whorled Pogonia (Isotria medeoloides) as Endangered species and the Prairie White-fringed Orchid (Platanthera leucophaea) as Threatened.

Listing rare plants of a particular state or region is a process rather than an isolated and finite event. As new data is compiled to document the decline or increase in numbers of populations and/or individuals, and as taxonomic revisions affect the names of listed species, the list will be updated to reflect the currently known status of Maine's rare plants. This list should be used as a working document and not a final listing of Maine's rare plants.

The purpose of the list is informational. There are no specific regulations providing protection of endangered or threatened plants under the Endangered Plant Act (Title 5 §3315). The list is designed to serve three main purposes: 1) to assist state agencies and conservation organizations in setting priorities for botanical inventories, 2) as a planning tool for industry, developers and planners at the state, local and federal level to use in site evaluations, environmental impact statements, and land use planning; and 3) to inform botanists, ecologists, interested citizens and landowners about species that are rare and significant. It is hoped that the list will inspire the public to share their knowledge of these plants with other individuals, agencies and organizations.

WHY SAVE RARE PLANTS?

Thousands of plant species worldwide are threatened with extinction as a result of ever-increasing human populations and modern technology. These plants, which have taken thousands of years to evolve, are disappearing without ever having been discovered or named, much less studied. Whether of potential medicinal, horticultural or agricultural use, any benefit they may have had for our species vanishes with them. Saving plant species for the continued enjoyment of future generations is another argument for their preservation.

In addition to the direct economic and physical benefits that wild plants provide, one must consider the much broader ecological role they play. As a component of their ecosystems, plants work together with animals and microorganisms through complex interrelationships. Every species, whether common or endangered, has a vital role in the web of life. Each contains a unique set of genetic material, traits that it alone possesses. If a species is lost, neither it nor its genes can ever be regained nor reduplicated. A rich assortment of species ensures a healthy ecosystem, because all the players are present to carry out their functions in providing for a naturally balanced environment. As habitats for wild species are destroyed and crop species having little diversity are continually produced, Earth's once naturally diverse ecosystems are progressively simplified, and may become more and more unstable.

TYPES OF RARE PLANTS IN MAINE

The vegetation of Maine is a composite of several phytogeographic elements. Maine's flora as a whole can be considered transitional between a temperate Appalachian type and a boreal Canadian type. In southern Maine, there are many species that are characteristic of the flora of the Atlantic coastal plain or that have a typically Appalachian range. The northern part of the state, on the other hand, harbors many plant species of boreal distribution that are at the southern edge of their range in Maine. Many of these boreal species occur in few other areas of the U.S., and can be considered rare from a national perspective.

The diversity resulting from Maine's latitudinal range is compounded by the topographic variability of the state. A wide variety of habitats can be found: sand beaches and rocky cliffs along the coast; extensive peatlands as well as smaller bogs; numerous rivers, lakes and ponds; forest types ranging from rich deciduous to boreal spruce-fir; arctic-alpine zones above tree-line; limestone outcrops and others.

"Rare" is a poorly-defined term that is often used to refer to plants that are uncommon in a given geographic area. Most of Maine's rare plants can be put into one or more of five types or categories of so-called "rarity":

- 1) Species at the limit of their range -- e.g., Atlantic White-Cedar (Chamaecyparis thyoides), a southern species that reaches the northern limit of its range in Maine;
- 2) Endemics (species with a very small natural range) are scientifically valuable in the study of plant evolution, taxonomy and geography -- e.g., Orono Sedge (Carex oronensis), which occurs only in the Penobscot River drainage and nowhere else in the world;
- 3) Species requiring a habitat that is scarce in Maine, though it may be more common elsewhere -- e.g., calciphilic plants like Green Spleenwort (Asplenium viride) -- requiring substrates rich in calcium (lime) that are uncommon in Maine;
- 4) Species that, for some reason, are rare throughout their range -- e.g., Small Whorled Pogonia (Isotria medeoloides), which occurs in few, widely separated populations over a wide area in eastern North America;
- 5) Species whose populations are seriously declining due to natural causes, habitat modification or over-picking/ digging -- e.g., Showy Lady's Slipper (Cypripedium reginae), populations of which have been damaged or locally eradicated by people digging up the plants.

THREATS TO RARE PLANTS

A rare plant population is threatened if it is subjected to unwarranted disturbance coupled with an ignorance or, less frequently, an insensitivity to the plant's importance. Ignorance is the crucial factor: once the rare plant's presence is known, the site can often be managed to perpetuate the population with little or no inconvenience to the landowner. The greatest overall threat to rare plants is habitat loss, including industrial or residential development, changes in water distribution and quality, and forestry and agricultural practices that alter the habitat.

Some other very serious threats are over-picking or digging of plants for horticultural purposes, and trampling or other disturbances caused by heavy visitation of a site. Undue publicity of the site can lead to such exploitation. Attempts at minimizing such threats include educating gardeners, photographers and native plant enthusiasts about the sensitivity of a plant's habitat, and encouraging people not to divulge location information to those who might misuse it. Gardeners are usually willing to use propagated native plant stock in place of plants dug from the wild once they have been informed of the issue. Rare plant occurrences that are not threatened may be protected by their inaccessibility or by conscientious landowners, both public and private. As people become increasingly aware of the ecological and aesthetic values of Maine's native flora, this protection is expected to increase.

RARE PLANT CONSERVATION

The conservation of rare plant species has only recently become a nationally recognized issue, primarily as a result of the increased environmental awareness which marked the 1970s. The federal Endangered Species Act of 1973, for example, was the first version of that law to specifically include plants as well as animals.

Conservation of Maine's rare plants depends not only on Maine botanists, conservation organizations, and the individual landowners, but on public awareness and support. Various groups, such as the Maine Chapters of The Nature Conservancy and the New England Wild Flower Society, Audubon Society chapters and garden clubs, sponsor programs to foster an appreciation of Maine's flora. The Maine Department of Education at one time published a list of wild flowers that should not be picked, and has recently begun to make information about Maine's rare features an integral part of its school curriculum. With these efforts, Maine people are coming to realize both how valuable and how vulnerable the state's native flora is.

State, federal and local government agencies play an important role in the conservation of Maine's rare plant areas. The Maine Natural Heritage Program maintains a data system to keep track of unusual natural resources including rare plants and Critical Areas. The Critical Areas Program continues to work with landowners, both public and private, on the conservation of the most significant rare plant occurrences, over 250 of which are included on the Register of Critical Areas. Other state agencies such as the Land Use Regulation Commission and the Department of Environmental Protection consider information on endangered and threatened plants when granting permits or drawing up management plans. At the municipal level, unique botanical areas may be placed in a protective zoning district. Many aquatic, semi-aquatic or estuarine plants fall under shoreland zoning and may be protected in resource protection subdistricts.

Private non-profit groups, as well as government agencies, can protect rare plant areas by outright fee acquisition or by the acquisition of a conservation easement. The Nature Conservancy, New England Wild Flower Society, Baxter State Park, White Mountain National Forest, Maine Dept. of Inland Fisheries and Wildlife and others all own and/or manage very special rare plant areas in Maine as parks, sanctuaries or nature preserves. Since most of Maine's rare plant areas are privately owned, acquisition as a means of protection is, and should remain, the exception rather than the rule. Many of these areas can be protected through landowner awareness and through broad-based public support for the conservation of rare plants in general.

May 4, 1990

**OFFICIAL LIST OF MAINE'S PLANTS THAT ARE ENDANGERED OR THREATENED
and list of plants that are of Special Concern, Possibly Extirpated, or that belong on a Watch List**

This list includes only seed plants, ferns and their relatives. Algae, fungi, lichens, mosses and liverworts are not currently included.

<u>STATUS IN MAINE</u>	<u>NUMBER OF DOCUMENTED, RECENT OCCURRENCES</u>
PE -- Possibly Extirpated	0 (locally extinct)
E -- Endangered	1 (or federally listed Endangered)
T -- Threatened	2 - 4 (or federally Threatened)
SC -- Special Concern	5 - 10, and could become Threatened within the foreseeable future.
WL -- Watch List	> 10, but is of concern (includes rare subspecies and varieties of relatively common species)

Exceptions to the numerical criteria for these categories: populations are (a) = small, (b) = confined to a small geographic area, and/or (c) = clearly and imminently jeopardized.

Federal status (U.S. Fish and Wildlife Service):

/LE = formally listed as Endangered; /LT = formally listed as Threatened; /2 = candidate species, but uncertainties regarding taxonomic status or biological vulnerability need to be resolved; or /3 = candidate species no longer being considered for listing because the taxon does not meet the Endangered Species Act's definition of species (/3B) or is more abundant or widespread than previously believed, and/or not subject to any identifiable threat (/3C).

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
<i>Acalypha virginica</i>	Three-seeded Mercury	1902	PE
<i>Adiantum pedatum</i> var. <i>aleuticum</i>	Aleutian Maidenhair Fern	1980	WL
<i>Adlumia fungosa</i>	Allegheny Vine	1986	E
<i>Agalinis maritima</i>	Seaside Agalinis	1986	WL
<i>Agalinis neoscotica</i>	Nova Scotia Agalinis	1987	E
<i>Agrostis mertensii</i>	Boreal Bentgrass	1984	SC
<i>Aletris farinosa</i>	Unicorn-root	1884	PE
<i>Allium canadense</i>	Wild Garlic	1983	SC
<i>Allium tricoccum</i>	Wild Leek; Ramps	1986	WL
<i>Amelanchier humilis</i>	Low Shadbush	1971	E
<i>Amerorchis rotundifolia</i>	Small Round-leaved Orchis	1987	T
<i>Anemone multifida</i>	Cut-leaved Anemone	1986	T(a, b)
<i>Arabis divaricarpa</i>	Purple Rock-cress	1924	PE
<i>Arabis laevigata</i>	Smooth Rock-cress	1983	E(a)
<i>Arabis missouriensis</i>	Missouri Rock-cress	1985	T
<i>Arctostaphylos alpina</i>	Alpine Bearberry	1984	T
<i>Arethusa bulbosa</i>	Arethusa	1985	WL
<i>Arnica mollis</i>	Arnica	1984	SC
<i>Asarum canadense</i>	Wild Ginger	1987	T(c)
<i>Asclepias tuberosa</i>	Butterfly-weed	1985	E
<i>Asplenium platyneuron</i>	Ebony Spleenwort	1985	T
<i>Asplenium rhizophyllum</i>	Walking Fern	1892	PE
<i>Asplenium viride</i>	Green Spleenwort	1982	E
<i>Aster borealis</i>	Rush Aster	1985	SC

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
<i>Aster divaricatus</i>	White Wood Aster	1984	T
<i>Aster dumosus</i>	Bushy Aster	1980	E
<i>Aster foliaceus</i>	Leafy-bracted Aster	1985	T
<i>Aster patens</i>	Late Purple Aster	1878	PE
<i>Aster paternus</i>	White-topped Aster	1986	T
<i>Aster schreberi</i>	Schreber's Aster	1894	PE
<i>Aster subulatus</i>	Small Salt-marsh Aster	1982	E
<i>Astragalus alpinus</i>	Alpine Milk-vetch	1984	SC
var. <i>brunetianus</i>			
<i>Astragalus eucosmus</i>	Elegant Milk-vetch	1945	PE
<i>Astragalus robbinsii</i>	Robbin's Milk-vetch	1939	PE
var. <i>minor</i>			
<i>Baptisia tinctoria</i>	Wild Indigo	1979	E
var. <i>crebra</i>			
<i>Barbarea orthoceras</i>	A Winter-cress	1903	PE
<i>Bartonia paniculata</i>	Screw-stem	1986	E
<i>Betula X caerulea</i>	Blue Birch	1987	SC
<i>Betula glandulosa</i>	Dwarf Birch	1980	E
<i>Betula minor</i>	Dwarf White Birch	1980	E
<i>Betula pumila</i>	Swamp Birch	1987	SC
<i>Bidens eatonii</i>	Eaton's Bur-marigold	1983	T
<i>Bidens hyperborea</i>	Estuary Bur-marigold	1984	T
<i>Botrychium lunaria</i>	Moonwort	1986	E(a)
<i>Bromus kalmii</i>	Kalm's Brome Grass	1971	E
<i>Bromus pubescens</i>	Brome Grass	1975	E
<i>Calamagrostis cinnoides</i>	A Reed-Bentgrass	1938	PE
<i>Calamagrostis pickeringii</i>	Reed-Bentgrass	1986	E
<i>Calamagrostis stricta</i>	A Reed-Bentgrass	1978	T
ssp. <i>inexpansa</i>			
<i>Calamagrostis stricta</i>	A Reed-Bentgrass	1989	E
ssp. <i>stricta</i>			
<i>Callitriche anceps</i>	Water-Starwort	1975	E
<i>Calypso bulbosa</i>	Fairy Slipper	1985	WL
<i>Calystegia spithamea</i>	Upright Bindweed	1987	T
<i>Cardamine bellidifolia</i>	A Bitter-cress	1978	E
<i>Cardamine longii</i>	Long's Bitter-cress	1986	T(b)/2
<i>Carex X mainensis</i>	A Sedge	1900	PE
<i>Carex X trichina</i>	A Sedge	1902	PE
<i>Carex adusta</i>	A Sedge	1988	E
<i>Carex alopecoidea</i>	Fox-tail Sedge	1974	E
<i>Carex atherodes</i>	Awned Sedge	1920	PE
<i>Carex atratifomis</i>	Black Sedge	1984	SC
<i>Carex bigelowii</i>	Bigelow's Sedge	1985	SC
<i>Carex bushii</i>	Bush's Sedge	1898	PE
<i>Carex capillaris</i>	Hair-like Sedge	1987	SC
<i>Carex crawei</i>	Crawe's Sedge	1941	PE
<i>Carex eburnea</i>	Ebony Sedge	1985	T
<i>Carex echinata</i>	Little Prickly Sedge	1982	T
<i>Carex flava</i> var. <i>gaspensis</i>	A Sedge	1953	WL
<i>Carex gynocrates</i>	A Sedge	1987	T

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
<i>Carex hassei</i>	Garber's Sedge	1985	WL
<i>Carex livida</i> var. <i>grayana</i>	Livid Sedge	1987	T
<i>Carex media</i>	Intermediate Sedge	1987	E
<i>Carex oronensis</i>	Orono Sedge	1987	E(a,b)/2
<i>Carex polymorpha</i>	Variable Sedge	1987	T/2
<i>Carex prairea</i>	Prairie Sedge	1987	T
<i>Carex praticola</i>	A Sedge	1898	PE
<i>Carex rariflora</i>	Loose-flowered Sedge	1937	PE
<i>Carex salina</i>	Salt-marsh Sedge	1987	E
var. <i>kattegatensis</i>			
<i>Carex saxatilis</i>	Russett Sedge	1985	E
<i>Carex scirpoidea</i>	Bulrush Sedge	1985	T
<i>Carex sparganioides</i>	Bur-Reed Sedge	1974	E
<i>Carex sterilis</i>	Atlantic Sedge	1986	T
<i>Carex tenuiflora</i>	Sparse-flowered Sedge	1987	SC
<i>Carex typhina</i>	Cat-tail Sedge	1940	PE
<i>Carex vaginata</i>	Sheathed Sedge	1987	T
<i>Carex wiegandii</i>	Wiegand Sedge	1987	SC
<i>Carya cordiformis</i>	Bitternut Hickory	1986	E
<i>Cassiope hypnoides</i>	Moss Plant	1980	E
<i>Castanea dentata</i>	American Chestnut	1982	SC
<i>Castilleja coccinea</i>	Scarlet Painted-cup	18??	PE
<i>Castilleja septentrionalis</i>	Northern Painted-cup	1987	WL
<i>Ceanothus americanus</i>	New Jersey-Tea	1987	T(c)
<i>Chamaecyparis thyoides</i>	Atlantic White-Cedar	1985	T(c)
<i>Chenopodium berlandieri</i>	Bosc's Goosefoot	1974	E
var. <i>boscianum</i>			
<i>Chenopodium rubrum</i>	Coast-Blite	1983	T
<i>Chimaphila maculata</i>	Spotted Wintergreen	1987	SC
<i>Clematis occidentalis</i>	Purple Clematis	1985	SC
<i>Clethra alnifolia</i>	Sweet Pepperbush	1986	T(c)
<i>Corallorhiza odontorhiza</i>	Autumn Coral Root	1984	E(a)
<i>Cornus florida</i>	Flowering Dogwood	1984	E(a)
<i>Crassula aquatica</i>	Pygmyweed	1986	SC
<i>Cryptogramma stelleri</i>	Slender Cliff-brake	1983	T
<i>Cryptotaenia canadensis</i>	Wild Chervil	1936	PE
<i>Cyperus houghtonii</i>	Houghton's Umbrella Sedge	1905	PE
<i>Cypripedium arietinum</i>	Ram's Head Lady's Slipper	1986	T/3C
<i>Cypripedium reginae</i>	Showy Lady's Slipper	1987	SC(c)
<i>Danthonia spicata</i>	White Oat-grass	1980	WL
var. <i>pinetorum</i>			
<i>Dentaria laciniata</i>	Cut-leaved Toothwort	1983	E
<i>Dentaria maxima</i>	Great Toothwort	1905	PE
<i>Deschampsia atropurpurea</i>	A Hairgrass	1967	E
<i>Descurainia richardsonii</i>	Richardson's	1945	PE
	Tansy-mustard		
<i>Diapensia lapponica</i>	Diapensia	1987	SC
<i>Dicentra canadensis</i>	Squirrel-corn	1983	T
<i>Draba arabisans</i>	Rock Whitlow-Grass	1986	T
<i>Draba lanceolata</i>	Lance-leaved Draba	1982	E

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
<i>Drosera anglica</i>	English Sundew	1985	E
<i>Drosera linearis</i>	Linear-leaf Sundew	1985	E
<i>Dryopteris filix-mas</i>	Male Fern	1979	E
<i>Dryopteris fragrans</i>	Fragrant Cliff-fern	1987	SC
<i>Dryopteris goldiana</i>	Goldie's Wood-Fern	1983	SC
<i>Eleocharis pauciflora</i>	A Spike-rush	1985	E
<i>Eleocharis rostellata</i>	Beaked Spike-rush	1968	E
<i>Eleocharis tuberculosa</i>	Long-tubercled Spike-rush	1977	E
<i>Epilobium anagallidifolium</i>	Alpine Willow-herb	1978	T
<i>Epilobium ciliatum</i>	Hairy Willow-herb	1983	T
<i>Epilobium hornemannii</i>	Hornemann's Willow-herb	1982	T
<i>Equisetum X trachyodon</i>	A Scouring Rush	1915	PE
<i>Equisetum variegatum</i>	Variegated Scouring-rush	1987	SC
<i>Eragrostis capillaris</i>	Lace-Grass	1972	E
<i>Erigeron acris</i>	A Fleabane	1900	PE
<i>var. kamschaticus</i>			
<i>Erigeron hyssopifolius</i>	Hyssop-leaved Fleabane	1984	WL
<i>Eriocaulon parkeri</i>	Parker's Pipewort	1986	SC/2
<i>Eupatorium dubium</i>	Eastern Joe-Pye-Weed	1985	E
<i>Eupatorium fistulosum</i>	Trumpet-Weed	1989	E
<i>Eupatorium rotundifolium</i>	Hairy Boneset	1870	PE
<i>var. ovatum</i>			
<i>Euphrasia disjuncta</i>	Disjunct Eyebright	1860	PE
<i>Euphrasia oakesii</i>	Oakes' Eyebright	1988	E
<i>Festuca rubra</i>	Proliferous Red Fescue	1981	E
<i>var. prolifera</i>			
<i>Galearis spectabilis</i>	Showy Orchis	1986	T
<i>Galium obtusum</i>	Blunt-leaved Bedstraw	1885	PE
<i>Gentiana rubricaulis</i>	Red-stemmed Gentian	1923	PE
<i>Gentianella amarella</i>	Northern Gentian	1987	E
<i>Gentianella quinquefolia</i>	Stiff Gentian	1952	PE
<i>Gentianopsis crinita</i>	Fringed Gentian	1987	WL
<i>Geocaulon lividum</i>	Northern Comandra	1984	SC
<i>Gnaphalium purpureum</i>	Purple Cudweed	1898	PE
<i>Gnaphalium supinum</i>	Alpine Cudweed	1978	E
<i>Goodyera oblongifolia</i>	Giant Rattlesnake-plantain	1983	E(c)
<i>Hackelia deflexa</i>	American Stickseed	1978	E
<i>var. americana</i>			
<i>Hedyotis longifolia</i>	Long-leaved Bluet	1986	WL
<i>Hedyotis purpurea</i>	Lance-leaved Bluet	1905	PE
<i>var. calycosa</i>			
<i>Hedysarum alpinum</i>	Alpine Sweet-broom	1985	SC
<i>var. alpinum</i>			
<i>Hemicarpha micrantha</i>	Dwarf Bulrush	1985	T
<i>Hepatica nobilis</i>	Sharp-lobed Hepatica	1896	PE
<i>var. acuta</i>			
<i>Heteranthera dubia</i>	Water Stargrass	1985	E
<i>Hieracium gronovii</i>	Gronovius' Hawkweed	1882	PE
<i>Hieracium robinsonii</i>	Robinson's Hawkweed	1916	PE/2

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
<i>Hieracium venosum</i>	Poor Robin's Plantain	1989	E
var. <i>nudicaule</i>			
<i>Hierochloa alpina</i>	Alpine Holy-grass	1987	T
<i>Hottonia inflata</i>	Feather-foil	1914	PE
<i>Hypericum pyramidatum</i>	Great St. Johnswort	1951	PE
<i>Hypoxis hirsuta</i>	Yellow Stargrass	1936	PE
<i>Ilex glabra</i>	Inkberry	1986	E
<i>Ilex laevigata</i>	Smooth Winterberry	1985	WL
<i>Impatiens pallida</i>	Yellow Jewelweed	1987	T
<i>Iris prismatica</i>	Slender Blue-flag	1986	T
<i>Iris setosa</i>	Beach-head Iris	1987	WL
var. <i>canadensis</i>			
<i>Isotria medeoloides</i>	Small Whorled Pogonia	1987	E/LE
<i>Isotria verticillata</i>	Large Whorled Pogonia	1979	E
<i>Iva frutescens</i> var. <i>oraria</i>	Marsh-elder	1981	T
<i>Juncus alpinus</i>	Alpine Rush	1982	T
<i>Juncus oronensis</i>	Orono Rush	1892	PE/2
<i>Juncus stygius</i>	Moor Rush	1985	SC
var. <i>americanus</i>			
<i>Juncus subtilis</i>	A Rush	1937	PE
<i>Juncus trifidus</i>	Highland Rush	1987	WL
<i>Juniperus horizontalis</i>	A Juniper hybrid	1979	WL
X <i>J. virginica</i> var. <i>crebra</i>			
<i>Kalmia latifolia</i>	Mountain-Laurel	1985	WL
<i>Lechea tenuifolia</i>	Slender Pinweed	1908	PE
<i>Lespedeza</i> X <i>nuttallii</i>	Nuttall's Bush Clover	1936	PE
<i>Lespedeza hirta</i>	Hairy Bush-clover	1936	PE
<i>Liatris scariosa</i>	Northern Blazing Star	1985	T/2
var. <i>novae-angliae</i>			
<i>Lilaeopsis chinensis</i>	Lilaeopsis	1984	SC
<i>Limosella australis</i>	Mudwort	1986	WL
<i>Lindera benzoin</i>	Spicebush	1985	SC
<i>Lindernia dubia</i>	False Pimpernel	1980	WL
var. <i>anagallidea</i>			
<i>Listera auriculata</i>	Auricled Twayblade	1986	SC/2
<i>Littorella americana</i>	American Shore-Grass	1985	SC
<i>Lobelia siphilitica</i>	Blue Cardinal Flower	1905	PE
<i>Loiseleuria procumbens</i>	Alpine Azalea	1987	E
<i>Lomatogonium rotatum</i>	Marsh Felwort	1986	SC
<i>Lonicera dioica</i>	Mountain Honeysuckle	1981	E(a)
<i>Lonicera oblongifolia</i>	Swamp Fly-Honeysuckle	1987	SC
<i>Lonicera sempervirens</i>	Trumpet Honeysuckle	1916	PE
<i>Lupinus perennis</i>	Wild Lupine	1967	PE
<i>Luzula confusa</i>	Northern Woodrush	1978	E
<i>Luzula spicata</i>	Spiked Woodrush	1978	E
<i>Lycopodium sabinaefolium</i>	Ground-Fir	1986	T
<i>Lycopodium selago</i>	Alpine Clubmoss	1987	SC
<i>Lycopodium sitchense</i>	Sitka Clubmoss	1985	E
<i>Malaxis brachypoda</i>	White Adder's-mouth	1985	E
<i>Mikania scandens</i>	Climbing Hempweed	1916	PE

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
Mimulus ringens var. colpophilus	Estuarine Monkeyflower	1986	WL/2
Minuartia glabra	Smooth Sandwort	1987	WL
Minuartia groenlandica	Mountain Sandwort	1987	WL
Minuartia rubella	Arctic Sandwort	1983	E
Montia fontana	Blinks	1985	SC
Muhlenbergia sobolifera	Cliff Muhly Grass	1974	E
Najas guadalupensis	Guadalupe Naiad	1920	PE
Nymphaea tetragona	Pygmy Water-lily	1986	SC
Osmorhiza chilensis	Western Sweet Cicely	1987	T
Oxytropis campestris var. johannensis	St. John Oxytrope	1987	T(b)/2
Panax quinquefolius	American Ginseng	1985	T(c)/3C
Parietaria pennsylvanica	Pennsylvania Pellitory	1899	PE
Parnassia glauca	Grass-of-Parnassus	1987	WL
Paronychia argyrocoma	White Mountain Silverling	1987	SC/3B
Pedicularis furbishiae	Furbish's Lousewort	1987	E/LE
Peltandra virginica	Arrow-Arum	1985	SC
Phleum alpinum	Mountain Timothy	1985	T
Phryma leptostachya	Lopseed	1916	PE
Phyllodoce caerulea	Mountain Heath	1980	E
Platanthera flava var. herbiola	Pale Green Orchid	1985	SC/3C
Platanthera leucophaea	Prairie White-fringed Orchid	1985	E/LT
Platanus occidentalis	Sycamore	1948	PE
Poa fernaldiana	Wavy Bluegrass	1985	E
Podostemon ceratophyllum	Threadfoot	1984	WL
Polemonium vanbruntiae	Jacob's Ladder	1987	E
Polygala cruciata	Marsh Milkwort	1903	PE
Polygala senega	Seneca Snakeroot	1980	T
Polygonum douglasii	Douglas' Knotweed	1985	T
Polygonum viviparum	Alpine Bistort	1981	E
Potamogeton confervoides	A Pondweed	1984	T/2
Potamogeton filiformis	Slender Pondweed	1979	SC
Potamogeton friesii	Fries' Pondweed	1979	E
Potamogeton pulcher	A Pondweed	1979	T
Potamogeton vaseyi	Vasey's Pondweed	1972	E
Prenanthes X mainensis	Hybrid Rattle-snake Root	1946	PE
Prenanthes boottii	Boott's Rattlesnake-root	1984	T/2
Prenanthes nana	Dwarf Rattlesnake-root	1969	E
Prenanthes racemosa	Racemed Rattlesnake-root	1987	SC
Primula farinosa	Bird's-eye Primrose	1986	WL
Primula mistassinica	Mistassini Primrose	1984	WL/3C
Pyrola asarifolia	Purple Pyrola	1983	WL
Quercus coccinea	Scarlet Oak	1937	E
Quercus montana	Chestnut Oak	1984	E
Ranunculus ambigens	Water-plantain Spearwort	1914	PE
Ranunculus fascicularis	Early Crowfoot	1985	T

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
<i>Ranunculus gmelini</i>	Small Yellow Water-Crowfoot	1986	T
<i>Ranunculus lapponicus</i>	Lapland Buttercup	1987	T
<i>Rhododendron lapponicum</i>	Lapland Rosebay	1987	E
<i>Rhododendron maximum</i>	Great Rhododendron	1985	T(c)
<i>Rhododendron viscosum</i>	Clammy Azalea	1985	T
<i>Rhynchospora capillacea</i>	A Beak-Rush	1985	E
<i>Rhynchospora macrostachya</i>	Horned-rush	1938	PE
<i>Rubus chamaemorus</i>	Baked-apple Berry	1987	WL
<i>Rumex occidentalis</i>	A Dock	1916	PE
var. <i>fenestratus</i>			
<i>Sagina nodosa</i>	Pearlwort	1985	WL
ssp. <i>borealis</i>			
<i>Sagina nodosa</i> ssp. <i>nodosa</i>	Pearlwort	1985	WL
<i>Sagittaria calycina</i>	Spongy Arrowhead	1986	WL
var. <i>spongiosa</i>			
<i>Sagittaria rigida</i>	Stiff Arrowhead	1976	E
<i>Salicornia virginica</i>	Dwarf Glasswort	1981	E
<i>Salix arctophila</i>	Arctic Willow	1978	E
<i>Salix argyrocarpa</i>	Silverleaf Willow	1940	PE
<i>Salix candida</i>	Hoary Willow	1985	T
<i>Salix cordata</i>	Heartleaf Willow	1914	PE
<i>Salix exigua</i>	Sandbar Willow	1978	T/3B
<i>Salix herbacea</i>	Dwarf Willow	1980	E
<i>Salix pedicellaris</i>	A Willow	1917	PE
var. <i>pedicellaris</i>			
<i>Salix planifolia</i>	Flatleaf Willow	1985	E
<i>Salix uva-ursi</i>	Bearberry Willow	1983	T
<i>Samolus valerandi</i>	Water-pimpernel	1986	WL
ssp. <i>parviflorus</i>			
<i>Sanguisorba canadensis</i>	Canada Burnet	1933	E
<i>Sassafras albidum</i>	Sassafras	1987	SC
<i>Saxifraga foliolosa</i>	Star Saxifrage	1980	E
<i>Saxifraga paniculata</i>	Livelong Saxifrage	1979	T
<i>Saxifraga pennsylvanica</i>	Swamp Saxifrage	1987	T(b,c)
<i>Scirpus longii</i>	Long's Bulrush	1927	E/2
<i>Scirpus pendulus</i>	Pendulous Bulrush	1941	PE
<i>Scrophularia marilandica</i>	Carpenter's Square	1898	PE
<i>Scutellaria leonardii</i>	Leonard's Skullcap	1896	PE
<i>Scutellaria parvula</i>	Small Skullcap	1942	PE
<i>Selaginella apoda</i>	Creeping Spikemoss	1986	E
<i>Selaginella selaginoides</i>	Northern Spikemoss	1917	E
<i>Shepherdia canadensis</i>	Canada Buffaloberry	1980	E
<i>Silene acaulis</i>	Moss Campion	1860	PE
var. <i>acaulis</i>			
<i>Solidago calcicola</i>	Rock Goldenrod	1894	PE
<i>Solidago canadensis</i>	A Goldenrod	1974	WL
var. <i>salebrosa</i>			
<i>Solidago canadensis</i>	A Goldenrod	1970	WL
var. <i>scabra</i>			

SCIENTIFIC NAME	COMMON NAME	YEAR LAST DOCUMENTED	STATUS ME/FED
<i>Solidago canadensis</i>	A Goldenrod	1953	WL
var. <i>subserata</i>			
<i>Solidago cutleri</i>	Cutler's Goldenrod	1984	SC
<i>Solidago ulmifolia</i>	Elm-leaved Goldenrod	1896	PE
<i>Spartina X caespitosa</i>	A Cord-Grass	1913	PE
<i>Sphenopholis obtusata</i>	Prairie Wedgegrass	1932	PE
<i>Spiraea septentrionalis</i>	Northern Meadowsweet	1967	E
<i>Spiranthes lucida</i>	Shining Ladies'-tresses	1987	T(a)
<i>Sporobolus asper</i>	A Drop-Seed Grass	1984	E
<i>Stachys tenuifolia</i>	Thin-leaved Hedge-nettle	1910	PE
var. <i>hispida</i>			
<i>Streptopus X oreopolus</i>	A Twisted Stalks hybrid	1929	PE
<i>Suaeda americana</i>	American Sea-blite	1959	PE
<i>Suaeda richii</i>	Rich's Sea-blite	1967	E
<i>Subularia aquatica</i>	Water Awlwort	1985	SC
<i>Tanacetum bipinnatum</i>	Saint John Tansy	1983	T(b)
ssp. <i>huronense</i>			
<i>Thalictrum thalictroides</i>	Rue-Anemone	1898	PE
<i>Thalictrum venulosum</i>	Boundary Meadow-Rue	1941	PE
var. <i>confine</i>			
<i>Tofieldia glutinosa</i>	Sticky False-Asphodel	1984	WL
<i>Triglochin gaspense</i>	Gaspé Arrow-grass	1932	PE/2
<i>Trillium grandiflorum</i>	Large-flowered Trillium	1926	PE
<i>Triosteum aurantiacum</i>	Wild-Coffee	1984	T
<i>Triphora trianthophora</i>	Nodding Pogonia	1984	T(b)
<i>Trisetum melicoides</i>	Purple False Oats	1983	E
<i>Trisetum triflorum</i>	Narrow False Oats	1978	T
<i>Ulmus rubra</i>	Slippery Elm	1935	PE
<i>Utricularia resupinata</i>	Small Purple Bladderwort	1985	T
<i>Vaccinium boreale</i>	Alpine Blueberry	1928	PE
<i>Valeriana sitchense</i>	Northern Valerian	1987	SC/3C
ssp. <i>uliginosa</i>			
<i>Verbena urticifolia</i>	White Vervain	1905	PE
<i>Veronica wormskjoldii</i>	Alpine Speedwell	1978	E
var. <i>wormskjoldii</i>			
<i>Viburnum edule</i>	Squashberry, Mooseberry	1983	WL
<i>Viola adunca</i> var. <i>minor</i>	A Violet	1964	PE
<i>Viola brittoniana</i>	Coast Violet	1900	PE
<i>Viola novae-angliae</i>	New England Violet	1987	SC/2
<i>Viola palustris</i>	Alpine Marsh Violet	1984	E
<i>Viola triloba</i>	Three-lobed Violet	1908	PE
<i>Vitis aestivalis</i>	Summer Grape	1985	T
<i>Waldsteinia fragarioides</i>	Barren-Strawberry	1987	T
<i>Wolffia columbiana</i>	Columbia Water-meal	1981	T
<i>Woodsia alpina</i>	Northern Woodsia	1981	T
<i>Woodsia glabella</i>	Smooth Woodsia	1987	T
<i>Woodsia obtusa</i>	Blunt-lobed Woodsia	1980	T
<i>Woodwardia areolata</i>	Netted Chain-fern	1861	PE
<i>Xyris smalliana</i>	A Yellow-eyed Grass	1984	E
<i>Zannichellia palustris</i>	Horned Pondweed	1984	SC

KEEPING TRACK OF MAINE'S RARE PLANTS

With the surge of recent botanical work throughout New England following the Endangered Species Act of 1973, it soon became necessary to revise working lists of Maine's rare plants. The current list is a culmination of over ten years of the Critical Areas Program's botanical work. It is rooted in the labors of the many naturalists who have documented the flora of Maine over the past 150 years. The background for this list draws on extensive herbarium and library research, and field work by many consultants. It makes use of work by other agencies, public and private, particularly the Maine Natural Heritage Program's data base originated nationally by The Nature Conservancy and now maintained cooperatively by the Maine Chapter and several state agencies.

The discovery (or rediscovery) and documentation of rare plant occurrences across the state is an ongoing effort of botanists throughout the state. Historical records, in the form of published reports or specimens at the University of Maine herbarium and other collections, can give clues as to the location of some of these rarities.

Many individuals volunteered information and time that has added greatly to the effort to compile and update this list. Since the establishment of the official list in June 1988, several plants have been rediscovered because of searches conducted by volunteers, and amateur and professional botanists. These plants were then added to the Endangered plant list from the Possibly Extirpated category because of the documentation of one recent occurrence.

Maine's rare plant inventory continues to be carried out by the Critical Areas Program as part of its role in the identification and documentation of the most unusual natural features in the State. Along with rare plant species, the program studies unusual plant communities such as arctic-alpine vegetation and peatlands. The Critical Areas Program also has signed a limited cooperative agreement with the U.S. Fish and Wildlife Service's Office of Endangered Species. Federal and state matching funds are used to inventory, monitor and work toward the conservation of Maine's federally listed endangered and threatened species.

Information on rare plant occurrences is continually being updated as part of the Maine Natural Heritage Data System. Now part of the Office of Comprehensive Planning, the Natural Heritage Program continues to track the location and condition of endangered and rare plants, animals, natural communities, and Critical Areas. The program works to provide information to towns for comprehensive municipal planning. By using the Heritage data base, planners can determine early in the planning process if proposed projects will affect rare species, natural communities and Critical Areas, and thus avoid or mitigate negative impacts. For any specified area in Maine, the Natural Heritage Program can provide locational and life history information on these rare species and communities.

WHAT TO DO IF YOU FIND AN ENDANGERED PLANT

Without destroying, injuring or picking the plant, confirm its identity by making sure the plant matches the description for that species in a field guide or botany manual. Note the exact location and bring an expert to the site, or show him/her a photograph of the suspected rarity. Leave specimen collecting to be done by a professional and then only if absolutely necessary for a positive identification.

If you are certain that you have found a rare plant, count the number of individual plants, stems, flowers or fruits (if any) and make a sketch map of the exact location showing landmarks and scale, and write directions so that the site may be relocated later. Be careful not to trample or uproot any plants, nor divulge the location to anyone else who might. If you can, find out who owns the land and where the property boundaries lie in relation to the rare plants. Providing this information to the Critical Areas Program or the Natural Heritage Program will greatly enhance the prospects for conservation of the site and its rare plants (see addresses and phone numbers below; please call if you have questions).

FOR MORE INFORMATION

Native plant conservation organizations in Maine/ New England

Center for Plant Conservation, 125 Arborway, Jamaica Plain MA 02130-3520 (propagation of endangered plants in cooperation with botanical gardens and arboreta).

Garden Club Federation of Maine, P.O. Box 56, Salsbury Cove, ME 04672 (supports native plant conservation through public awareness).

Josselyn Botanical Society, c/o Marilyn Dwelley, P.O. Box 41, China ME 04926 (four-day summer and one-day winter meetings; publishes checklist of vascular plants of Maine).

New England Botanical Club, Harvard University Herbaria, 22 Divinity Ave., Cambridge MA 02138 (monthly meetings, field trips; publishes Rhodora four times/year).

New England Wild Flower Society, Hemenway Rd., Framingham MA 01701 (Garden in the Woods; field trips, educational and native plant certificate programs; annual Wild Flower Notes; slide library; four sanctuaries in Maine).

The Nature Conservancy, Maine Chapter, P.O. Box 338, Topsham ME 04086 (numerous preserves in Maine protect endangered and threatened plants; field trips; stewardship workshops).

Other organizations and agencies mentioned:

→ Maine Critical Areas Program, State Planning Office, State House Station 38, Augusta, Maine 04333-0038. 207/289-6041.

→ Maine Natural Heritage Program, Office of Comprehensive Planning, Department of Economic and Community Development, State House Station 130, Augusta ME 04330-0130. 207/289-6800.

University of Maine Herbarium, Department of Botany and Plant Pathology, 202 Deering Hall, Orono ME 04469-0118. 207/581-2970.



An official list of endangered and threatened animals in Maine is available from the Endangered Species and Non-game Project, Department of Inland Fisheries and Wildlife, P.O. Box 1298, Bangor ME 04401.

This booklet was written and illustrated by Patricia DeHond based in part upon An annotated list of Maine's rare vascular plants by Susan C. Gawler, and the criteria established for the Official List of Maine's Endangered and Threatened Plants by Alison C. Dibble, Christopher S. Campbell, and the Endangered Plant Technical Advisory Committee.

Definitions of Endangered and Threatened plants and guidelines for their classification were established in June 1986 by the Maine Legislature (Endangered Plant Act, Title 5 §3315), which directed the State Planning Office and the Critical Areas Advisory Board to compile the Official List of Endangered and Threatened Plants for the State. The list will be updated at least biennially (or as needed), with the assistance of the Endangered Plant Technical Advisory Committee.

The following educational brochures on Maine's native plants are also available (free of charge) from the Critical Areas Program:

Alpine Tundra
Atlantic White-Cedar
Furbish's Lousewort
Mountain-Laurel
Nodding Pogonia

Old-Growth Forests
Old-Growth White Pine
Orchids
Peatlands (in progress)
Rhododendron

Sassafras
Shagbark Hickory
Small Whorled Pogonia
Tupelo (Black Gum)
White Oak

For additional copies of this booklet, educational brochures listed above, or technical information about the establishment of this list, please contact the Maine Critical Areas Program, State Planning Office, State House Station 38, Augusta, Maine 04333-0038 (Phone 207/289-6041).

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Cover illustration: Green Spleenwort (*Asplenium viride*)

