Threatened and Endangered Species

Prairie Bush Clover *(Lespedeza leptostachya)*

The prairie bush clover is a threatened species. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. Endangered species are animals and plants that are in danger of becoming extinct. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.

What is prairie bush clover and where does it occur?

Prairie bush clover (*Lespedeza leptostachya*) is a federally threatened prairie legume found only in the tallgrass prairie region of four midwestern states. Prairie bush clover is found today at fewer than 40 sites in 23 counties of Iowa, Illinois, Minnesota and Wisconsin.

Because it is known only from the tallgrass prairie region of the upper Mississippi River Valley, the prairie bush clover is considered a midwestern "endemic" - i.e., a plant restricted to only a small area.

Why be concerned about prairie bush clover?

Like all native species, prairie bush clover has its own specific niche in the ecosystem and its own unique relationships to other plants and animals with which it lives. The loss of prairie bush clover could result in the disappearance of as yet unknown dependent species such as tiny predatory insects specialized to live on its seeds.

Prairie bush clover possesses a unique genetic and chemical makeup, different from that of any other species. This genetic information has an unknown potential value. For example, cultivated crops such as wheat and corn have been developed and improved by using wild relatives as breeding stock. Native and imported bush clovers are important fodder in the southern states. Prairie bush clover and round headed bush clover provide the only potential native genetic stock for breeding of cold tolerant bush clovers suitable for the midwest.

Alkaloids from wild plants are used as the active agents in anesthetics, insecticides, anticancer drugs and muscle relaxants. Loss of prairie bush clover would eliminate forever the opportunity for future biological research and the potential for such medical and agricultural benefits.

What does prairie bush clover look like?

Prairie bush clover is a member of the pea family. Also known as slender-leaved bush clover, it has a clover-like leaf comprised of three leaflets about an inch long and a quarter inch wide. Flowering plants are generally between nine and eighteen inches tall with the flowers loosely arranged on an open spike.

The pale pink or cream colored flowers bloom in mid-July. The entire plant has a grayish-silver sheen, making it easy to distinguish from its more round-leaved cultivated relative, the sweet clover (*Melilotus species*). The only closely related bush clover species that is widespread throughout the range of prairie bush clover is the round headed bush clover (*Lespedeza capitata*). This plant is similar in color but more robust, with leaflets about 1-1/2 inches long and 3/8 inches wide and a tight round flowering head. The more southern Virginia bush clover (*Lespedeza virginica*) overlaps the range of prairie bush clover in Illinois. Although it has slender leaves like the prairie bush clover, Virginia bush clover can be distinguished by the fact that its leaves are closer together on the stem and its flowers are the brighter pink.

Photo by USFWS; Phil Delphey

The showy pink flowers of prairie bush clover are less often seen than the silvery-green pods because of the plant's short blooming season and its ability to produce pods directly from flowers that never open.

What laws protect prairie bush clover?

Prairie bush clover was listed as federally threatened in February 1987. It is protected by the 1988 reauthorization of the 1973 Endangered Species Act (PL 100-478). Under the provisions of this act it is against Federal statutes to remove or destroy prairie bush clover by any Federal action or on any area under Federal jurisdiction, or to knowingly violate any state law protecting this species.

In addition to its Federal status, prairie bush clover is listed as endangereed or threatened in each of the four states where it occurs. Specific provisions of state law vary from state to state and

can be obtained from the appropriate state contact listed at the end of this fact sheet.

As a general guideline, citizens should contact these agencies before engaging in any action that would alter a population of prairie bush clover, including the removal of plants or harvest of seeds for research purposes or commercial sale.

It is not a violation of law for private land owners to continue agricultural activities on their own lands where prairie bush clover occurs. Although heavy summer grazing appears to have an adverse effect on prairie bush clover, populations exposed to light grazing appear to be less affected.

The effect of mowing remains unknown, although the concentration of bush clover in unmown areas of hayland suggests that long term late-summer mowing removes the seeds, thus reducing population size.

Caution should be exerted to assure that herbicides do not affect bush clover populations. Users of herbicides should always be sure to follow label directions and restrictions.

Why is prairie bush clover rare?

Prairie bush clover's rarity is probably best explained by the loss of its tall-grass prairie habitat. At the time of white settlement, native prairie covered almost all of Illinois and Iowa, a third of Minnesota and six percent of Wisconsin. Mesic moderately damp to dry prairie favored by prairie bush clover was also prime cropland, and today only scattered remnants of prairie can be (*Lespedeza leptostachya*) found in the four states. Many of today's prairie bush clover populations occur in sites that escaped the plow because they were too steep or rocky.

How is prairie bush clover threatened?

Prairie bush clover is listed as a federally threatened species because it is jeopardized with the possibility of extinction. Some of today's populations are threatened by conversion of pasture to cropland, overgrazing, agricultural expansion, herbicide application, urban expansion, rock quarrying and right-of-way maintenance and rerouting.

Who knows the location of prairie bush clover populations & how is this information used?

Up-to-date information on the status and location of populations is maintained in computerized databases of the state's Natural Heritage Program and is used for environmental review and conservation planning. A federally-appointed recovery team uses this information to plan for the protection of the species and to assess progress toward its recovery.

Information from these databases is available to consulting firms and state agencies preparing environmental assessments of proposed projects.

Where is prairie bush clover protected?

Approximately 40 percent of the known prairie bush clover sites are protected as dedicated state nature preserves, scientific and natural areas and preserves managed by private conservation organizations such as The Nature Conservancy.

A large number of prairie bush clover sites occur on private lands where farmers or other landowners have maintained the species through conservation-minded agricultural practices. Many landowners are proud to have such a rare species on their land and keep the plant in mind when planning agricultural activities. Prairie bush clover persists on lightly grazed prairie pastures, haylands, and prairie remnants that families have maintained for their own enjoyment.

How are prairie bush clover preserves managed?

Prairie bush clover is one of many native prairie species that occur in prairie preserves. Before white settlement, frequent fires helped maintain the species composition and treeless structure of the tall-grass prairie. Today's remnants are often invaded by non-native grasses which create a buildup of mulch and by woody species which can shade out bush clover populations. For these reasons, natural area managers have reintroduced prescribed fires as a way of maintaining the natural balance of species in the prairie ecosystem.

Such fires are carefully planned and controlled by teams of trained managers. Research suggests that although summer fires can be detrimental to emerging prairie bush clover plants, early spring fires are not harmful.

Although prescribed burns are an important prairie management tool, burning every year, with no years of rest, may be harmful to prairie bush clover. Annual burns may result in a cover of native warm-season grasses that is too dense.

At times when fire cannot be used to control shrubby invasion, handcutting or haying may be used to maintain the open prairie condition required by prairie bush clover for flowering.

Whom do I contact?

In Illinois Contact:

Illinois Natural Areas Inventory
Illinois Department of Conservation
524 S. 2nd Street
Springfield, Illinois 62706
(217/785-8774)

U.S. Fish & Wildlife Service
4469 - 48th Avenue Court
Rock Island, Illinois 61201
(309/793-5800)

In Iowa Contact:

Bureau of Preserves and Ecological Services
Department of Natural Resources
Wallace State Office Building
Des Moines, Iowa 50319
(515/281-8524)

U.S. Fish & Wildlife Service
4469 - 48th Avenue Court
Rock Island, Illinois 61201
(309/793-5800)

In Minnesota Contact:

Minnesota Natural Heritage Program
Department of Natural Resources
Box 7, 500 Lafayette Road
St. Paul, Minnesota 55155
(651/296-3344)

U.S. Fish & Wildlife Service
4101 E. 80th Street
Bloomington, Minnesota 55425-1665
(612/725-3548)

In Wisconsin Contact:

Bureau of Endangered Resources
Department of Natural Resources
P.O. Box 7921
Madison, Wisconsin 53707
(608/267-5037)

U.S. Fish & Wildlife Service
2061 Scott Tower Drive
New Franken, Wisconsin 54229
(920/866-1700)