COLORADO BUTTERFLY PLANT (*Gaura neomexicana var. coloradensis)*

Description

The Colorado butterfly plant is a short-lived perennial herb with one or more reddish, pubescent stems 20-32 inches tall. The lance-shaped leaves average 2-4 inches long and have smooth or wavy margins. The inflorescence is located above the leaves and consists of numerous branches that continue to grow throughout the flowering season. Individual flowers are 3/8 inches long with 4 reddish sepals and 4 white petals that turn pink or red with age. The hard nut-like fruits are 4-angled and sessile. Non-flowering plants consist of a rosette of oblong, mostly glabrous, entire or toothed leaves 1.5-8 inches long.

Distribution

Colorado butterfly plant is a regional endemic, restricted to approximately 1,700 acres of habitat in western Kimball County, Nebraska, Laramie County, Wyoming and Weld County, Colorado. Historically, native populations were also known from two other Colorado counties, but these populations have been extirpated. The two known Nebraska populations (with about 8 subpopulations) are located in the floodplain of Lodgepole Creek in western Kimball County. In 1992 approximately 600 plants were counted at these two sites. A small population of Colorado butterfly plant is located on the Oliver Reservoir State Recreation Area. All other Nebraska populations are located on privately owned property.

Habitat

In Nebraska, Colorado butterfly plant grows at elevations of 4,800 -5,000 feet within native subirrigated meadows on floodplain and lower stream terraces. Soils at these sites are formed in alluvium. The plants typically grow in lower depressions or along bends in the wide meandering stream channel. The Colorado butterfly plant is an early succession species and requires some form of disturbance (e.g. fire, grazing, or flooding) to become established and maintain itself at a site. In the absence of disturbance, habitats become overgrown with exotic plants or dense, brushy, late succession vegetation, conditions not suitable for the Colorado butterfly plant. Meadows with this plant are typically hayed or grazed with cattle. On wetter sites it typically grows in association with redtop (*Agrostis stolonifera*) and Kentucky bluegrass (*Poa pratensis*). In somewhat drier sites it is often associated with wild licorice (*Glycyrrihiza lepidota*), Flodman thistle (*Cirsium flodmanii*), and horsetail (*Equisetum laevigatum*).

Status

Global T2-Imperiled. Federally Threatened. State Endangered. Nebraska: S1-Critically Imperiled.
The range-wide population of Colorado butterfly plant is estimated to be around 300,000 plants. Loss, degradation, and alteration of habitat has been the primary cause of its decline and currently is the greatest threat to the species. Colorado butterfly plant is an early succession species that is dependent on disturbance to create habitat suitable for germination and establishment. Human mediated reductions in natural disturbances (e.g. wildfires, flooding) have reduced the availability of suitable habitat for the species.

Conversion of native meadow habitats to cropland has eliminated suitable habitat and is a continued threat to the Colorado butterfly plant. Overgrazing by cattle can also be a threat to the Colorado butterfly plant, especially if the animals are not periodically rotated or if they are concentrated in a small area. Conversely, total protection from grazing or haying can cause plants to be out competed by shrubs and other late successional plants. A serious threat to Colorado butterfly plant is the application of broadleaf herbicides to meadows to control exotic thistles and leafy spurge (*Euphorbia esula*). Observations indicate that Colorado butterfly plant is highly susceptible to commonly used herbicides. The population of one Nebraska subpopulation dropped from nearly 1,000 plants to 5 plants in 1992 after extensive herbicide use on the site.

Management

Studies have shown that Colorado butterfly plants can thrive in pastures that are winter grazed or managed on a short-term grazing rotation cycle. Haying is not considered to be a threat to Colorado butterfly plant populations unless cutting is done before fruits are able to mature. It is critical that pesticides not be used in close proximity to known populations. Long-term field surveys strongly suggest that periodic disturbances are necessary to create and maintain suitable habitat for the establishment of seedling Colorado butterfly plants.

More Information
http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q0VV
http://www.fws.gov/mountain%2Dprairie/species/plants/cobutterfly/