

Dune Thistle (*Cirsium pitcheri*)

It may be difficult to convince some people that a thistle is rare and needs protection. But that is precisely the case with Pitcher's thistle. It is quite a different plant from the thistle that is a pest in farms and gardens. Dune thistle is important for the lessons it teaches in evolution and adaptation - for its beauty and the role it plays in the dune plant community.

What does the dune thistle look like?

Less prickly than other thistles, dune thistle has deeply dissected blue-green leaves with a downy surface. Its flowers have the familiar thistle shape, but are cream to pinkish-tan in color. During its first few years of life, this dune plant bears only a rosette of leaves at the surface of the sand. When mature, it sends up a 3 foot tall stalk on which flowers appear.

What growing conditions does this thistle like?

The ideal site for this rare plant is that area between an open sandy beach and a fully vegetated dune. It is found in slowly changing dynamic dune systems where appropriate openings occur in different places for short periods of time. This plant needs a mosaic of habitat types; as occupied areas disappear, it must invade newly created ones. In other words, it likes a little bit of disturbance, but not too much. It only grows on sand dunes next to the fresh water of the Great Lakes.

What is the history of the dune thistle?

Strangely enough, it appears that this thistle is related to a thistle that now is found far away in hot dry areas of Nebraska. The likely ancestor of both thistles probably lived farther south during glacial times. When the glacier retreated northward one population migrated westward to Nebraska where it adjusted to the hot weather there. Another population migrated northward adapting to cold damp nights along the shores of the Great Lakes.

How does this thistle grow and reproduce itself?

Dune thistle reproduces only by seed. After a seed germinates it sends a tap root deep into the sandy soil. Mature plants have tap roots that extend 6 feet deep and more. A new seedling bears only a few strap-like leaves. During the next few years the plant forms a rosette of leaves at the surface of the sand. (See illustration at right above.) At last, after 5 to 8 years of growth, it sends up a flower stalk, blooming in early to mid-summer. Once seeds form and ripen the parent plant has completed its mission in life and dies.

Where does this thistle grow in Wisconsin and in North America? It's mostly on Lake Michigan dunes that the thistle is found, though there are also a few sites near the shores of Lake Superior and Lake Huron. In the US it grows only in Indiana, Michigan and Wisconsin. While it once could be found in Illinois, it no longer is there. Within Wisconsin, the thistle grows only in Door, Manitowoc and Sheboygan Counties. In addition to the United States sites, dune thistle has been found in a few sites in Ontario, Canada. Together, these are the only places in the world where this rare thistle may be seen.

How rare is the plant?

This thistle is so rare that it is listed both by the State of Wisconsin and by the federal government as "threatened". Indeed, its habitat, Great Lakes dunes, is threatened, too. Much construction of second homes and condominiums is taking place here. Added to this is the destruction caused by the building of



roads to serve these home sites. Nor are these the only threats. All-Terrain-Vehicles (ATV's) are doing more and more damage to dunes and the plants that grow there. Trampling by growing numbers of vacationers kills more thistle plants. The US Fish and Wildlife Service has organized a dune thistle recovery team made up of botanists and conservationists.

What can I do to protect this valuable species?

The key to protecting this rare thistle is to protect its habitat from destruction by construction and development. Beyond that, it is important to restrict the use of herbicides/pesticides and foot traffic in the neighborhood of the plant. Up-rooting the plant must be avoided. Pulling up the plant precludes the formation of seeds, and thus there is no chance for new plants to germinate. Construction sites should be kept away from thistle colonies and paths through dunes areas kept to a minimum. Property owners on whose land the thistle grows can help by keeping track of plant numbers and locations. This information may be reported to the Bureau of Endangered Resources.

To report such data or to get more information contact:

Landowner Contact Specialist
Bureau of Endangered Resources
Department of Natural Resources
P. O. Box 7921
Madison, WI 53707
(608) 267-9789

Excerpt from The Endangered and Threatened Plants of Wisconsin

Synonym:

Status: threatened in Wisconsin; threatened in U.S.

Habitat Description: sand dunes

Habitat Classification

WI NHI: Lake Dune

Curtis: Lake Dune

Kotar:

Forest Cover:

Range: Door, Manitowoc, and Sheboygan

Comments:

Phenology: a biennial, forming a handsome rosette of leaves flattened against the dune sands the first year, blooming and dying the next year; blooms from mid-June to July and sets seed in July and August

Field Guides:

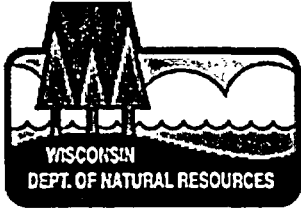
Britton and Brown, p.3:511/p.3:510

Gleason 1963, p.751

Gleason 1991, p.613

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