Creeping Sedge

Carex chordorrhiza

Photo credits: *Troy Weldy*

Scientific Name *Carex chordorrhiza* Ehrh. ex L. f.

Family Name Cyperaceae
Sedge Family

Did you know?
The name chordorrhiza means with cord-like roots (Fernald 1970). This is probably in reference to the vegetative stems which become prostrate and root at the nodes. As they become buried by mosses and other plants they appear like rhizomes (Reznicek and Catling 2002).

Summary

Protection Threatened in New York State, not listed federally.

This level of state protection means: listed species are those with: 1) 6 to fewer than 20 extant sites, or 2) 1,000 to fewer than 3,000 individuals, or 3) restricted to not less than 4 or more than 7 U.S.G.S. 7 ½ minute topographical maps, or 4) listed as threatened by U.S. Department of Interior.

Rarity G5, S2

A global rarity rank of G5 means: This species is demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
A state rarity rank of S2 means: This plant is threatened/imperiled in New York because of rarity (typically 6-20 populations or few remaining individuals) or is vulnerable to extirpation from New York due to biological factors.

Conservation Status in New York

There are at least fourteen known populations and equally as many historical locations. Most of these are located within Oswego County where many peatland habitats exist. Other populations are present in Warren, Wyoming, and Cattaraugus Counties. This plant is typically found in higher quality inland poor fens and similar habitats. These are relatively well protected, although succession is a possible threat. Many of the populations are large, including some with upwards of 10,000 culms. This sedge is relatively easy to identify, therefore it is not overlooked often.

Short-term Trends

There are about a dozen populations that have been seen in recent years. Exact trends at these populations are not clear although there is no indication that these populations are declining. At least half of these populations are large and robust. The other known extant populations are smaller. Overall, short term trends are not clear but may indicate that this species is currently stable.

Long-term Trends

There are at least two populations that appear to have been extirpated sometime in the past century. There are about another dozen populations that have not been seen in recent years. Many of these have very poor locality information. Therefore, finding these historical populations is difficult and it is unknown if these populations are still extant. Overall, long term trends indicate at least some decline.

Conservation and Management

Threats

Phragmites australis is becoming a serious threat to the habitat at one population. The hydrology at two populations appears to have been altered and perhaps is threatening the habitat where C. chordorrhiza occurs. Potential threats include development especially on the edges of the wetlands, trampling by scientists and people fishing, and alteration of the hydrology.

Conservation Strategies and Management Practices

Phragmites should be controlled at one population where it is encroaching the habitat where Carex chordorrhiza occurs. Further hydrological changes at or near habitat where C. chordorrhiza occurs should be prevented. Where possible, the hydrology of the general area should be restored to pre-altered conditions. In some cases, this is as simple as maintaining culverts.

Research Needs

Survey work is needed on all historical population.

Habitat

Carex chordorrhiza occurs primarily in peat lands that often are at least somewhat minerotrophic including rich, medium, and poor fens. The habitat is usually open although it does occur where there are some shrubs present and also in openings in forested wetlands (New York Natural Heritage Program 2006). Fens, bogs, floating mats on lakeshores, emergent sedge marshes, usually in very wet sites, often in shallow water (Reznicek and Catling 2002). Sphagnum bogs (Gleason and Cronquist 1991). Quagmires and inundated bogs (Fernald 1970). Found in very wet sphagnum bogs and lake-borders in calcareous districts (Mackenzie 1931-1935).

Associated Ecological Communities

Dwarf Shrub Bog
A wetland usually fed by rainwater or mineral-poor groundwater and dominated by short, evergreen shrubs and peat mosses. The surface of the peatland is usually hummocky, with shrubs more common on the hummocks and peat moss throughout. The water in the bog is usually nutrient-poor and acidic.

Inland Poor Fen
A wetland fed by acidic water from springs and seeps. Plant remains in these fens do not decompose rapidly and thus the plants in these fens usually grow on older, undecomposed plant parts of mostly sphagnum mosses.

Medium Fen
A wetland fed by water from springs and seeps. These waters are slightly acidic (pH values generally range from 4.5 to 6.5) and contain some dissolved minerals. Plant remains in these fens do not decompose rapidly and thus the plants in these fens usually grow on older, undecomposed plant parts of woody material, grasses, and mosses.

Rich Shrub Fen
A wetland with many shrubs that is usually fed by water from springs and seeps. These waters have high concentrations of minerals and high pH values, generally from 6.0 to 7.8. Plant remains in these fens do not decompose rapidly and thus the plants in these fens usually grow on older, undecomposed woody plant parts.

Associated Species

Bog Rosemary (*Andromeda polifolia*)
American Woollyfruit Sedge (*Carex lasiocarpa*)
Mud Sedge (*Carex limosa*)
Leatherleaf (*Chamaedaphne calyculata*)
Twig Rush (*Cladium mariscoides*)
Marsh Willow-herb (*Epilobium palustre*)
Bog Buckbean (*Menyanthes trifoliata*)
Sweet Bayberry (*Myrica gale*)
Bog Willow (*Salix pedicellaris*)
Large Cranberry (*Vaccinium macrocarpon*)

Identification Comments

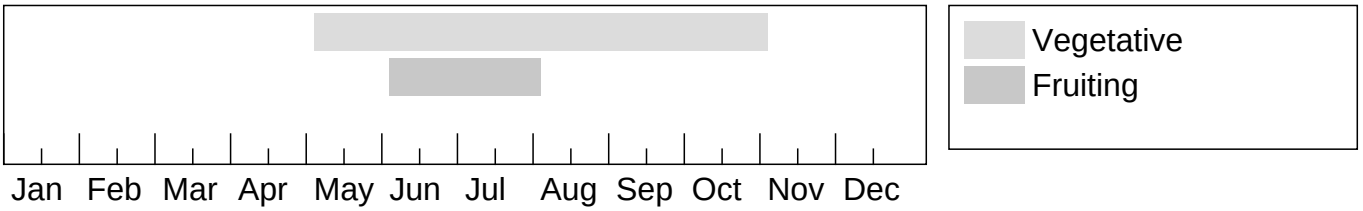
Creeping sedge is a grass-like perennial that grows in patches. The leaves are strap-like and 0.4-3.0 mm long. The stems arise singly and are 5-35 cm long. Some of the stems do not produce flowers and these stems fall down and elongate up to 120 cm long. Some of the stems have 2-7 flower/fruit clusters (spikes) towards their apices. These spikes are egg shaped, attach directly to the stems, and are composed of male flowers above and female flowers below. The female flowers mature into fruits (perigynia) which are 2.0-4.5 mm long and have a small beak at their apex (Reznicek and Catling 2002).

Best Life Stage for Identifying This Species

This species is easiest to identify when it has mature or just immature perigynia. It can be identified at other times of the year based on its vegetative characteristics but not as easily or definitively.

The Best Time to See

Carex chordorrhiza starts to produce immature perigynia in June. These mature and perist till late July or early August. Towards the end of this season the perigynia start to shed easily. This species can be recognized at other times of the year based on vegetative charcteristics but it is most obvious when it is in fruit. Therefore, the best time to survey for this species is from the second week in June through mid-July.



The time of year you would expect to find Creeping Sedge in New York.

Similar Species

Carex chordorrhiza is a very distinctive sedge especially because it has vegetative culms that root at the nodes. This character is shared by only a few other species of Carex which are all quite distinct from C. chordorrhiza.

Conservation Comments

Carex chordorrhiza is in the only member of section Chordorrhizae (Reznicek and Catling 2002).

Taxonomy

Kingdom Plantae
- **Phylum** Anthophyta
  - **Class** Monocots (Monocotyledoneae)
    - **Order** Cyperales
      - **Family** Cyperaceae (Sedge Family)

Additional Common Names

Sedge

Additional Resources

Links

Identification on YouTube
http://www.youtube.com/watch?v=afCG6TkTDBc&NR=1

New York Flora Atlas
http://www.newyork.plantatlas.usf.edu/Plant.aspx?id=962

USDA Plants Database
http://plants.usda.gov/java/nameSearch?mode=sciname&keywordquery=CAREX+CHORDORRHIZA

NatureServe Explorer
http://natureserve.org/explorer/servlet/NatureServe?searchName=CAREX+CHORDORRHIZA

Google Images
http://images.google.com/images?q=CAREX+CHORDORRHIZA

Flora of North America
http://efloras.org/florataxon.aspx?flora_id=1&taxon_id=242357115

Ecology on YouTube
http://www.youtube.com/watch?v=kymVBr8X-BM

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(original application development), Florida Center for Community Design and Research http://www.fccdr.usf.edu/. University of South Florida http://www.usf.edu/]. New York Flora Association http://wwws.nyflora.org/, Albany, New York

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