

Cat-tail Sedge



Carex typhina line drawing

Scientific Name *Carex typhina*
Michx.

Family Name Cyperaceae
Sedge Family

Did you know?

The specific epithet *typhina* refers to cat-tails (Fernald 1970) perhaps due to the resemblance of the spikes of *Carex typhina* to the spikes of cat-tails (the plant not Whiskers).

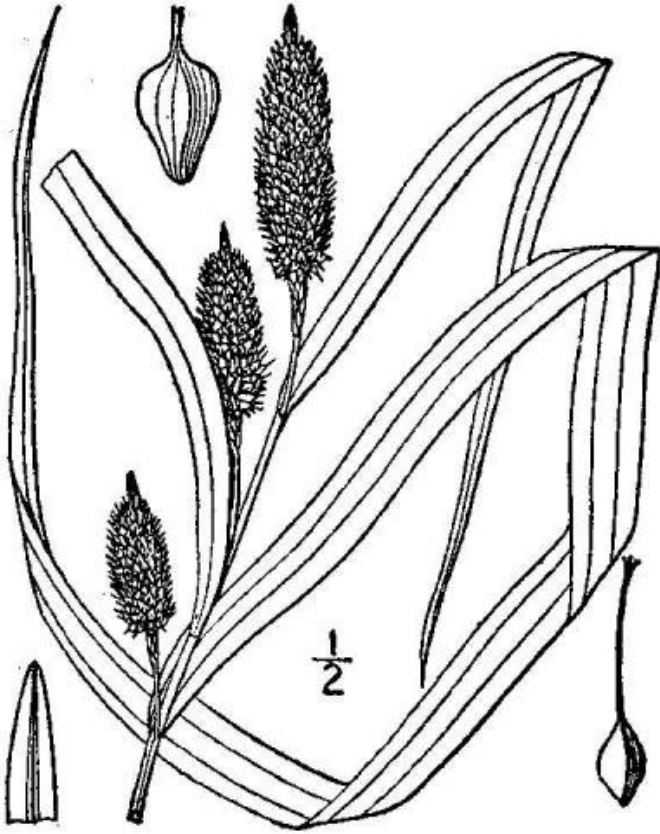


Photo credits: Britton, N.L., and A. Brown (1913); downloaded from
USDA-Plants Database.

Summary

Protection Endangered in New York State, not listed federally.

This level of state protection means: listed species are those with: 1) 5 or fewer extant sites, or 2) fewer than 1,000 individuals, or 3) restricted to fewer than 4 U.S.G.S. 7 1/2 minute topographical maps, or 4) species listed as endangered 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 six known populations but only one has more than a hundred plants. Twenty-two historical locations need additional surveys. One may jump to the conclusion that this sedge is overlooked, however, it appears to be rare throughout the northeastern U.S. and adjacent Canada. This plant is typically found as small populations within wet woods and may be subject to hydrological changes, invasive species, or land-use changes.

Short-term Trends

Most of the populations that have been observed within the past 20 years have only been surveyed once so the short term trends are unknown.

Long-term Trends

There are at least 9 populations (mostly from Queens, Bronx, and Kings Counties) that are believed to be extirpated mostly due to urban development. An additional 10 populations have not been seen in over 50 years but these populations have not been looked for or the location information is not precise so it is unclear if these populations are still extant. There are 8 extant populations most of which have only recently been found. As with many *Carex* species these populations were probably overlooked in the past. Over the long term *Carex typhina* appears to be declining in New York.

Conservation and Management

Threats

Potential threats include invasive species, residential and commercial development, trampling, and road work.

Conservation Strategies and Management Practices

Coordination with the DEC at one site is needed to protect a population. At this site the population is close to a parking area and needs to be protected from trampling. In addition, work on the parking lot or adjacent road should be done with awareness of the need to maintain the hydrology as well as not directly cause the extirpation of the population.

Other management needs include monitoring logging operations and monitoring an adjacent development project.

Research Needs

Further inventory work is needed at historical sites. In addition, follow up at extant sites will be helpful to fully assess these populations and how they may be changing.

Habitat

Carex typhina occurs in floodplain forests, vernal pools in forests, wet forests, swamps, marshes, sedge dominated meadows, and flats along rivers (New York Natural Heritage Program 2005). Wet woods (Ford and Reznicek 2002). Moist or wet woods and marshes (Gleason &

Cronquist 1991). Calcareous meadows and wooded bottomlands (Fernald 1970).

Associated Ecological Communities

Floodplain Forest

A hardwood forest that occurs on mineral soils on low terraces of river floodplains and river deltas. These sites are characterized by their flood regime; low areas are annually flooded in spring, and high areas are flooded irregularly.

Silver Maple-ash Swamp

A hardwood basin swamp that typically occurs in poorly-drained depressions or along the borders of large lakes, and less frequently in poorly drained soils along rivers. These sites are characterized by uniformly wet conditions with minimal seasonal fluctuations in water levels. The dominant trees are usually silver maple and green ash.

Vernal Pool

An aquatic community of one or more intermittently ponded, small, shallow depressions typically within an upland forest. Vernal pools are typically flooded in spring or after a heavy rainfall, but are usually dry during summer. Substrate is typically dense leaf litter over hydric soils. Vernal pools typically occupy a confined basin (i.e., a standing waterbody without a flowing outlet), but may have an intermittent stream flowing out of it during high water. This community includes a diverse group of invertebrates and amphibians that depend upon temporary pools as breeding habitat. These include amphibians, reptiles, crustaceans, mollusks, annelids, and insects.

Other Probable Associated Communities

Red maple-hardwood swamp

Shallow emergent marsh

Associated Species

Red Maple (*Acer rubrum*)

Silver Maple (*Acer saccharinum*)

Gray's Sedge (*Carex grayi*)

False Hop Sedge (*Carex lupuliformis*)

Hop Sedge (*Carex lupulina*)

Tuckerman Sedge (*Carex tuckermanii*)

Common Buttonbush (*Cephalanthus occidentalis*)

Hairy Swamp Loosestrife (*Decodon verticillatus*)

Green Ash (*Fraxinus pennsylvanica*)

Spicebush (*Lindera benzoin*)

Blackgum (*Nyssa sylvatica*)

Sensitive Fern (*Onoclea sensibilis*)

Cinnamon Fern (*Osmunda cinnamomea*)

Douglas Knotweed (*Polygonum douglasii*)

Pin Oak (*Quercus palustris*)

Identification Comments

Carex typhina is a tufted, perennial, grass-like plant. It has strap-like leaves that are 3.9-8.7 mm wide. Arising from the leaves at the bases of the plants are stems that are

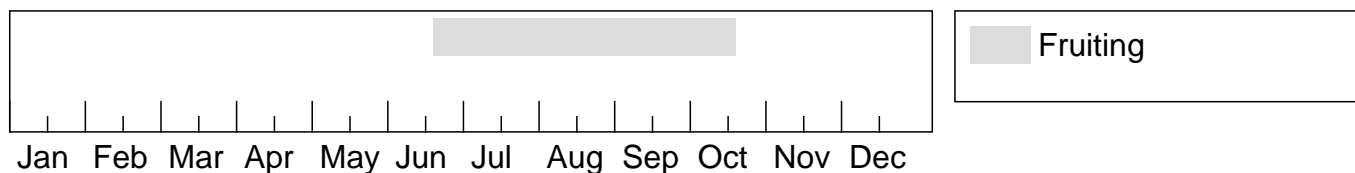
30-80 cm tall. Leaves and secondary branches with flower/fruit clusters occur on the main stems. The fruit clusters are erect with the fruits densely crowded. Fruits are 5.5-7.8 mm long (Ford & Reznicek 2002).

Best Life Stage for Identifying This Species

Carex frankii is easiest to identify when the perigynia are just immature or mature but not yet shedding heavily.

The Best Time to See

The plants start to go to fruit in late June and the fruits persist on the plants through at least mid October but toward the end of this season they are shedding heavily. Early on in this season the fruits are quite immature. So, surveys are most successful from mid-July till mid-September. Adjustments should be made depending on where in the state surveys are being conducted.



The time of year you would expect to find Cat-tail Sedge in New York.

Similar Species

Carex squarrosa is somewhat similar. It differs in having 1-2(-3) spikes (including the terminal one), lower perigynia spreading to reflexed, styles persistent and curved, and achenes 1.9-2.5 times as long as wide.

Carex frankii (which is rare in NY) is also somewhat similar to *C. typhina*. *Carex frankii* has the terminal spikes usually staminate although they can be gynecandrous, pistillate, or abortive. In addition, *C. frankii* has pistillate scales with long awns that are larger than the body of the perigynia (Ford & Reznicek 2002).

Conservation Comments

Carex typhina is in section *Squarrosae*. There is a hybrid *C. x deamii* F. J. Hermann which was considered to be a cross between *C. typhina* and *C. shortiana*. Current evidence is instead leaning toward this hybrid being a cross between *C. squarrosa* and *C. shortiana* (Cochrane 2002, Ford & Reznicek 2002).

Taxonomy

Kingdom Plantae

└ Phylum Anthophyta

└

Class Monocots (Monocotyledoneae)
└─ **Order** Cyperales
 └─ **Family** Cyperaceae (Sedge Family)

Additional Common Names

Sedge

Synonyms

Carex typhinoides (Schweinitz)

Additional Resources

Links

New York Flora Atlas

<http://www.newyork.plantatlas.usf.edu/Plant.aspx?id=1207>

Flora of North America

http://efloras.org/florataxon.aspx?flora_id=1&taxon_id=242357605

USDA Plants Database

<http://plants.usda.gov/java/nameSearch?mode=sciname&keywordquery=CAREX+TYPHINA>

NatureServe Explorer

<http://natureserve.org/explorer/servlet/NatureServe?searchName=CAREX+TYPHINA>

Google Images

<http://images.google.com/images?q=CAREX+TYPHINA>

Best Identification Reference

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This project is made possible with funding from:

- New York State Department of Environmental Conservation Hudson River Estuary Program
- Division of Lands & Forests, Department of Environmental Conservation
- New York State Office of Parks, Recreation and Historic Preservation

Information for this guide was last updated on Aug 18, 2017

This guide was authored by