

# Carex of Northeastern Illinois and Northwestern Indiana, USA

WEB VERSION

## Sedges (*Carex* spp.) of the Chicago Region

1

Volunteer Stewardship Network – Chicago Wilderness

Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.  
© Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fnmh.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)

### Group 1.

#### ONE-HEADED SEDGES:

One solitary spike per inflorescence.



1 *C. jamesii*



2 *C. jamesii*



3 *C. squarrosa*



4 *C. squarrosa*

GRASS SEDGE: spike solitary, tipped with staminate flowers; inflorescence with long, leaf-like lowermost pistillate scale, which resembles the bracts subtending spikes in most other sections; perigynia globose, beak almost conical. Mesic woods.

NARROW-LEAVED CATTAIL SEDGE: spike typically solitary, terminal, always plump with staminate flowers or apparently empty scales at base; perigynia densely packed onto spike, tapered to the base with distinctive shoulders above, abruptly beaked. Wet woods.

### Group 2.

#### HAIRY SEDGES:

Some spikes wholly female; often pedunculate spikes; plant hairy all over, as in *C. hirtifolia* and *C. swanii* (2a); or, only perigynia or foliage pubescent (2b).



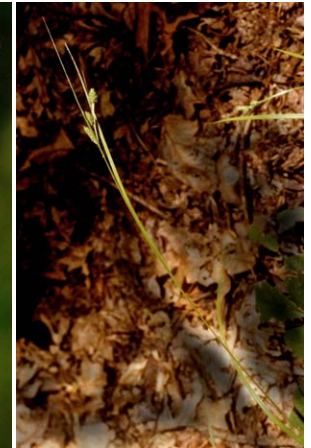
5 *C. hirtifolia*



6 *C. hirtifolia*



7 *C. hirtifolia*



8 *C. swanii*

HAIRY WOOD SEDGE: entire plant softly pubescent, including the distinctly beaked perigynia, which are veinless except for two distinct ribs. Mesic woods.

DOWNY GREEN SEDGE: spikes slender, cylindrical and densely packed with perigynia, sparsely fringed with short awns of pistillate scales; terminal spike tipped w/...



9 *C. swanii*



10 *C. davisii*



11 *C. davisii*



12 *C. davisii*



13 *C. pellita*

DOWNY GREEN SEDGE: ...perigynia; perigynia gray-green, beakless, pubescent with long, spreading hairs. Usually dry open woods (e.g. oak savannas).

AWNED GRACEFUL SEDGE: lower leaf sheaths pubescent; terminal spike tipped with perigynia; pistillate scales prominently awned; perigynia 4.5-6 mm long, short beaked, smooth and chestnut brown when ripe. Wet woods.

BROAD-LEAVED WOOLLY SEDGE: [= *C. lanuginosa*] plants rhizomatous, forming large beds, often blooming mostly at the edges; continued...

# Carex of Northeastern Illinois and Northwestern Indiana, USA

## 2 Sedges (*Carex* spp.) of the Chicago Region

WEB VERSION

Volunteer Stewardship Network – Chicago Wilderness

Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.  
© Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fmn.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)



**Group 3.  
LARGE-  
HEADED  
SEDGES:**  
Some spikes wholly female; often pedunculate spikes; perigynia > 1 cm long.

**14** *C. pellita*  
BROAD-LEAVED WOOLLY SEDGE: bases fibrillose; lower leaf sheaths commonly yellowish-brown in the inner face. Common in wet prairies.

**15** *C. pensylvanica* **16** *C. pensylvanica* **17** *C. pensylvanica*  
COMMON OAK SEDGE: narrow dead leaves typically abundant around the red, fibrous bases; rhizomes slender, elongate; perigynia few per spike, pubescent. This is one of our first sedges to bloom, the first perigynia falling when most *Carex* species are just becoming identifiable. Dry to mesic, frequently sunny, woods, ranging to sandy prairies.



**Group 4.  
BEAKED  
BOTTLEBRUSH  
SEDGES:**  
Some spikes wholly female; often pedunculate spikes; perigynia < 1cm long.



**18** *C. grayi*  
COMMON BURR SEDGE: spikes large, spherical, mace-like appearance; perigynia large, dull or hairy. Wet woods.

**19** *C. lupulina*  
COMMON HOP SEDGE: pistillate “caterpillar” spikes longer than wide, with up to 80 perigynia; perigynia swollen, bladder-like, resembling *C. grayi* and *C. intumescens*. Wet woods.

**20** *C. comosa* **21** *C. comosa*  
BRISTLY SEDGE: plants often forming large clumps; spikes borne on drooping stalks, plump; perigynium beak teeth spreading or outcurved, 1-2 mm long. Open wetlands, often in standing water.



**22** *C. hystericina* **23** *C. hystericina* **24** *C. hystericina*  
PORCUPINE SEDGE: bristly inflorescences, composed of 1 cm thick cylindrical spikes, make this common plant distinctive; because of the densely packed, slightly inflated perigynia, the scabrous awn is the only part of the pistillate scale visible; shoot bases reddish to purple, slightly fibrillose; beaks about 2 mm long, tipped by very short straight teeth. Calcareous wetlands.

**25** *C. lacustris* **26** *C. lacustris*  
COMMON LAKE SEDGE: plants often forming large clones with few inflorescences; bases thick, spongy, clothed in dead leaves from previous year; ligule hyaline and shaped as a long, inverted “V”;

continued...

### Volunteer Stewardship Network – Chicago Wilderness

Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.  
© Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fnmh.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)



**27 *C. lacustris***  
COMMON LAKE SEDGE: perigynia narrow with 3 beak-teeth, one significantly smaller than the others. Open wetlands.

**28 *C. utriculata*** **29 *C. utriculata***  
COMMON YELLOW LAKE SEDGE: plants form large colonies; bases spongy; foliage often yellow; pistillate spikes slender, arching; perigynia small, inflated, glabrous, distinctly beaked. Open wetlands.

**30 *C. sprengeii*** **31 *C. sprengeii***  
LONG-BEAKED SEDGE: bases strongly fibrous; spikes on slender, drooping stalks;



**Group 5.**  
**BEAK-LESS SEDGES:**  
Some spikes wholly female; often pedunculate spikes; perigynia < 1cm long; perigynia with no beak or beak < 1mm.



**32 *C. sprengeii***  
LONG-BEAKED SEDGE: perigynium bodies are globose with slender beaks, resembling a chemist's volumetric flask. Mesic woods.

**33 *C. albursina***  
WHITE BEAR WOOD SEDGE: bases pale, soft; basal leaves unusually wide, 1-4 cm; upper bacts wider than the spikes, concealing them. Mesic woods.

**34 *C. albursina***

**35 *C. blanda***  
COMMON WOOD SEDGE: bases pale to brownish, soft; staminate spike sessile or very short-stalked, the base roughly even w/ the base of the...



**36 *C. blanda***  
...uppermost pistillate spike. Our commonest sedge favors wet and mesic woods, especially disturbed soils, but may be found almost anywhere there's dirt!

**37 *C. crinita*** **38 *C. crinita***  
FRINGED SEDGE: plants form large hummocks; pistillate spikes long, pendulous, bristly with scabrous-awned scales, densely packed with perigynia; pistillate scale bodies notched at the apex. Wetlands, open or forested.

**39 *C. gracilescens*** **40 *C. gracilescens***  
SLENDER WOOD SEDGE: like *C. blanda*, but with bases red or purplish and staminate spike long-stalked. Mesic woods.

# Carex of Northeastern Illinois and Northwestern Indiana, USA

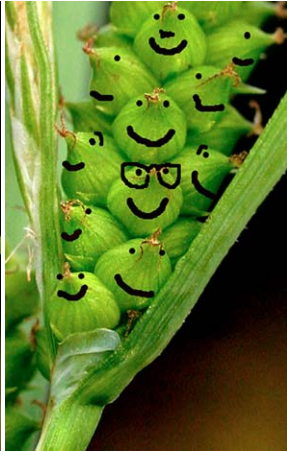
## 4 Sedges (Carex spp.) of the Chicago Region

### WEB VERSION

### Volunteer Stewardship Network – Chicago Wilderness

Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.

© Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fnmh.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)



**41 *C. granularis*** **42 *C. granularis***  
PALE SEDGE: basal rosettes of blue-gray, glaucous leaves are distinctive even without the flowering stems; perigynia pale green with very small flecks of red pigment, packed on the spikes like corn on the cob. Calcareous wetlands.

**43 *C. grisea***  
WOOD GRAY SEDGE: similar to *C. blanda*, but plants stouter, taller, not as soft at the bases, and perigynia football-shaped. Mesic to wet woods.

**44 *C. stricta*** **45 *C. stricta***  
COMMON TUSsock SEDGE: plants form large hummocks in saturated soils: hear the crunch and feel them wobbling under your feet when walking across a sedge meadow in early spring, when just the bluish shoots are visible;



**46 *C. stricta*** **47 *C. stricta***  
COMMON TUSsock SEDGE: shoots with red, ladder-fibrillose bases; perigynia flattened, lenticular. Open wetlands.

**48 *C. woodii*** **49 *C. woodii*** **50 *C. woodii***  
WOOD'S STIFF SEDGE: rhizomatous; basal sheaths bladeless, deep red, not fibrous; leaves narrow, erect; sometimes confused with *C. pennsylvanica*, but taller with glabrous perigynia borne in looser, elongate spikes. Wet woods.

**Group 6. FEMALE-TIPPED SEDGES:**  
Some spikes wholly female; terminal spike bisexual with female flowers above male; often pedunculate spikes; perigynia < 1cm long.



**51 *C. buxbaumii*** **52 *C. buxbaumii***  
DARK-SCALED SEDGE: terminal spike bisexual, resembling an ice cream cone topped w/ perigynia; pistillate scales dark-margined, tapering to a long-pointed apex; perigynia whitish to gray-green, granular, beakless to short-beaked. Calcareous wetlands.

**53 *C. gracillima*** **54 *C. gracillima***  
PURPLE-SHEATHED GRACEFUL SEDGE: bases red to purple; terminal spike tipped with perigynia, lateral spikes drooping; perigynia beakless. Mesic to wet woods.

# Carex of Northeastern Illinois and Northwestern Indiana, USA

WEB VERSION

## Sedges (*Carex* spp.) of the Chicago Region

5

### Volunteer Stewardship Network – Chicago Wilderness

Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.

© Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fmn.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)



**Group 7.  
FOX AND  
WOODLAND-  
STAR SEDGES:**  
Spikes sessile and  
bisexual; perigynia  
edges thin or  
rounded.



**55 *C. shortiana*** **56 *C. shortiana***  
SHORT'S SEDGE: terminal spike tipped with perigynia; perigynia short-stalked, flattened, abruptly short-beaked, ripening to a dark green or chocolate brown. Wet woods.

**57 *C. bromoides*** **58 *C. bromoides***  
BROME HUMMOCK SEDGE: like *Sporobolus* of the woods; plants form graceful "waterfalls" like dropseed, large clumps that often look rather unkempt by mid to late summer.



**59 *C. bromoides***  
BROME HUMMOCK SEDGE: perigynia lance-shaped, greater than 4 times as long as wide, strongly veined on the backs. Wet woods.

**60 *C. cephalophora*** **61 *C. cephalophora***  
SHORT-HEADED BRACKETED SEDGE: plants form clumps of stiff, straight stems; inflorescence compact, head-like, with stiff, needle-like bracts. Dry to mesic woods, prairie margins.

**62 *C. radiata*** **63 *C. radiata***  
STRAIGHT-STYLED WOOD SEDGE: like *C. rosea*, but in wetter places, stems and leaves much more delicate, lax, plants sprawling by late summer; stigmas straight or wavy. Mesic to dry woods.



**64 *C. rosea*** **65 *C. rosea*** **66 *C. rosea*** **67 *C. rosea***  
CURLY-STYLED WOOD SEDGE: foliage wider and stems thicker than in *C. radiata*; spikes form starburst clusters, well spaced on reasonably stiff stem; stigma dark, thick and tightly coiled. Mesic to dry woods.

**68 *C. stipata***  
COMMON FOX SEDGE: stems thick, easily compressible, sharply triangular;

continued...

# Carex of Northeastern Illinois and Northwestern Indiana, USA

## 6 Sedges (*Carex* spp.) of the Chicago Region

### WEB VERSION

### Volunteer Stewardship Network – Chicago Wilderness

Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.  
© Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fmnh.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)



**Group 8.**  
**OVAL SEDGES:**  
Spikes sessile and bisexual; perigynia winged. The ovals group is tricky due to its many, similar appearing species; sometimes habitat is an important clue.

**69** *C. stipata* **70** *C. stipata*  
COMMON FOX SEDGE: leaf sheaths cross-puckered (corrugated) on the inner band, weak, easily torn; inflorescence large, branched; perigynia long-triangular in shape and very spongy at the base. Open to shaded wet woods.

**71** *C. vulpinoidea* **72** *C. vulpinoidea*  
BROWN FOX SEDGE: leaves longer than the firm, stiff culm; inner band of the leaf sheath cross-puckered (corrugated); inflorescence stiff with numerous needle-like bracts, the lower spikes branched; perigynia small, short beaked. Open to wooded wetlands.



**73** *C. muskingumensis* **74** *C. muskingumensis*  
SWAMP OVAL SEDGE: vegetative shoots prominent with numerous, distinctly 3-ranked leaves; spikes and perigynia long, slender, narrowly tapered at both ends. Wet woods; sometimes found in the same habitat as *C. tribuloides*, a similar species with much smaller perigynia.

**75** *C. normalis* **76** *C. normalis*  
SPREADING OVAL SEDGE: lower leaf sheaths whitened on the back between the veins; Similar to *C. cephaloidea*, but terminal spike with staminate flowers or empty scales evident at the base; perigynium tips spreading at maturity. Brushy fields and open, dry to mesic woods.

**77** *C. scoparia*  
LANCE-FRUITED OVAL SEDGE: perigynia thin, scale-like; inflorescence variable, compact to elongate, but spikes typically overlapping and...



**78** *C. scoparia*  
LANCE-FRUITED OVAL SEDGE: ...tapered to both ends; vegetative culms with nodes often visible by late summer. Open wetlands.

**79** *C. tenera* var. *tenera*  
NARROW-LEAVED OVAL SEDGE: inflorescence slender, gracefully bending just below the lower spike. Wet to mesic woods.

### RESOURCES:

#### Literature:

*Carex*. by P. W. Ball and A. A. Reznicek. In *Flora of North America North of Mexico*. Flora of North America Editorial Committee, eds. Vol. 23. New York and Oxford. 1993. ISBN: 0-1951-5207-7

*The Genus Carex in the Chicago Region*. by Gerould Wilhelm. Conservation Design Forum, Inc. Naperville, Ill. 1996.

*The Illustrated Flora of Illinois. Sedges: Carex*. by R. H. Mohlenbrock. Southern Illinois University Press. 1999. ISBN: 0-8093-2074-6

#### Websites:

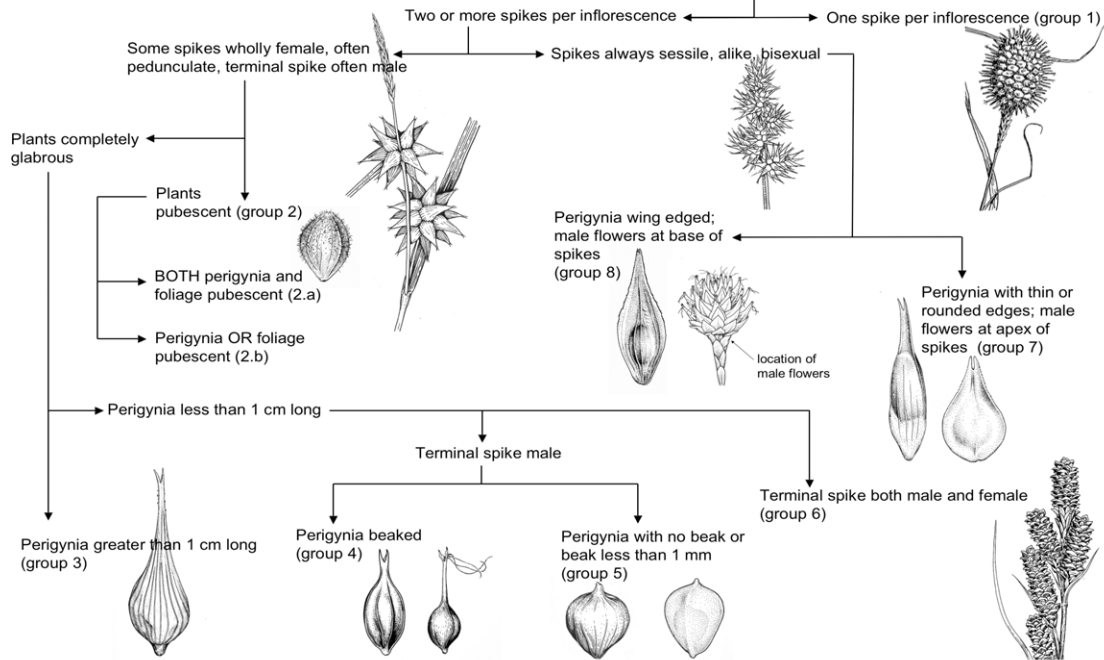
<http://www.csdl.tamu.edu/FLORA/carex/carexout.htm>  
<http://www.taylor.edu/academics/acadDepts/ees/sedges/>  
<http://utc.usu.edu/keys/> (site includes *Carex* key and facts sheets)  
<http://wisplants.uwsp.edu/scripts/SearchResults.asp?Genus=Carex>  
<http://www.vplants.org>

### Volunteer Stewardship Network – Chicago Wilderness

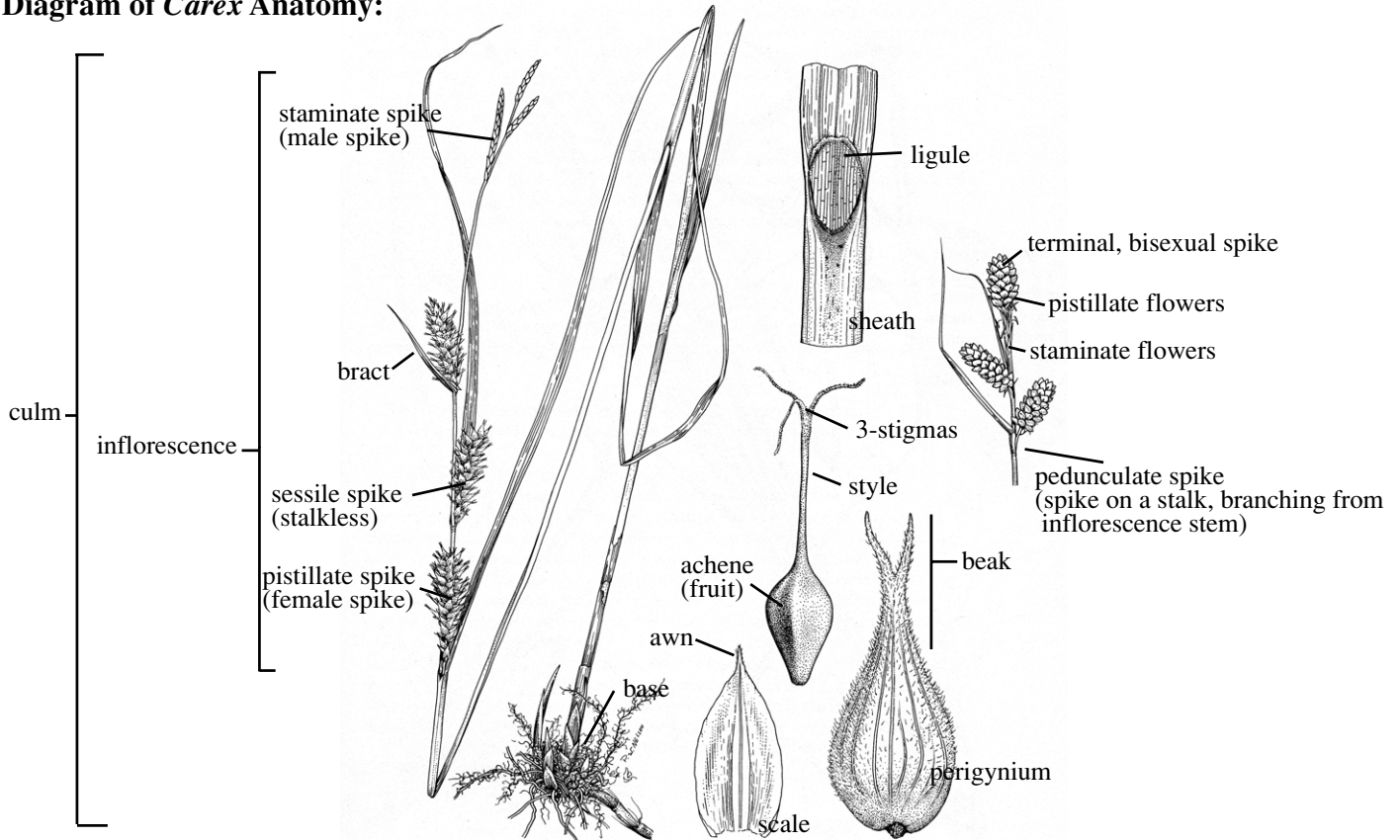
Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.  
 © Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fmn.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)

### Flow Chart to *Carex* Groups:

Cyperaceae: genus *Carex* – sedges with unisexual flowers and perigynia



### Diagram of *Carex* Anatomy:



Illustrations used with permission from Molenbrock, R. H. 1999. *The Illustrated Flora of Illinois. Sedges: Carex*. Southern Illinois University Press. Includes perigynium: page 50 plate 11e, p.95 plate 35c, p.109 plate 42e, p.179 plate 82c, p.212 plate 101c, p.224 plate 108c, p.226 plate 109d, p.301 plate 152c, and p.309 plate 156c; inflorescence: p.122 plate 49b, p.195 plate 91b, and p.205 plate 97b; and whole plant: p.84 plate 29a, p.269 plate 135a, p.281 plate 142 a-e, and p.294 plate 149a.

# Carex of Northeastern Illinois and Northwestern Indiana, USA

## 8 Sedges (Carex spp.) of the Chicago Region

### WEB VERSION

### Volunteer Stewardship Network – Chicago Wilderness

Photos by: © Paul Rothrock (Taylor University, IN), © John & Jane Balaban (balx2@comcast.net; North Branch Restoration Project), © Andrew Hipp (Morton Arboretum) and © Anton Reznicek (University of Michigan). Produced by: John & Jane Balaban, Paul Rothrock, Andrew Hipp, Jennie Kluse & Robin Foster, with assistance of Laurel Ross and Anton Reznicek. Support from: the Dorothy and Gaylord Donnelley Foundation and the John D. and Catherine T. MacArthur Foundation.

© Environmental & Conservation Programs, The Field Museum, Chicago, IL 60605 USA. [http://www.fnmh.org/temperateguides/]. Chicago Wilderness Guide #4 version 1 (01/2007)

### Species Index and Photo and Illustration Credits:

SPECIES	PLATE #'s	IMAGE CREDITS (respective to plate #'s)
<i>C. albursina</i> .....	33 and 34.....	JJB and JJB
<i>C. blanda</i> .....	35 and 36.....	JJB and JJB
<i>C. bromoides</i> .....	57, 58, and 59.....	PR, PR, and PR
<i>C. buxbaumii</i> .....	51 and 52.....	PR and PR
<i>C. cephalophora</i> .....	60 and 61.....	PR and PR
<i>C. comosa</i> .....	20 and 21.....	PR and PR
<i>C. crinita</i> .....	37 and 38.....	PR and PR
<i>C. davisii</i> .....	10, 11, and 12.....	JJB, PR, and PR
<i>C. gracilescens</i> .....	39 and 40.....	JJB and PR
<i>C. gracillima</i> .....	53 and 54.....	AH and JJB
<i>C. granularis</i> .....	41 and 42.....	PR and PR
<i>C. grayi</i> .....	18.....	PR
<i>C. grisea</i> .....	43.....	PR (PR inset)
<i>C. hirtifolia</i> .....	5, 6, and 7.....	JJB, PR, and PR
<i>C. hystericina</i> .....	22, 23, and 24.....	PR, PR, and PR
<i>C. jamesii</i> .....	1 and 2.....	PR and PR
<i>C. lacustris</i> .....	25, 26, and 27.....	PR, PR, and PR
<i>C. lupulina</i> .....	19.....	JJB
<i>C. muskingumensis</i> .....	73 and 74.....	PR and AH
<i>C. normalis</i> .....	75 and 76.....	PR and PR
<i>C. pellita</i> .....	13 and 14.....	PR and PR
<i>C. pennsylvanica</i> .....	15, 16, and 17.....	PR, JJB, and JJB
<i>C. radiata</i> .....	62 and 63.....	AH and PR (PR inset)
<i>C. rosea</i> .....	64, 65, 66 and 67.....	PR, PR, PR (PR inset), and PR
<i>C. scoparia</i> .....	77 and 78.....	PR and PR (PR inset)
<i>C. shortiana</i> .....	55 and 56.....	PR and PR
<i>C. sprengelii</i> .....	30, 31, and 32.....	PR, PR, and PR
<i>C. squarrosa</i> .....	3 and 4.....	JJB and PR
<i>C. stipata</i> .....	68, 69, and 70.....	JJB, PR, and PR (PR inset)
<i>C. stricta</i> .....	44, 45, 46, and 47.....	PR, PR, PR, and PR
<i>C. swanii</i> .....	8 and 9.....	PR and PR
<i>C. tenera</i> var. <i>tenera</i> .....	79.....	AR (PR inset)
<i>C. utriculata</i> .....	28 and 29.....	PR and PR
<i>C. vulpinoidea</i> .....	71 and 72.....	PR and PR (PR inset)
<i>C. woodii</i> .....	48, 49, and 50.....	AH, AH, and PR

Photographs and illustrations are copyright of the following people: John and Jane Balaban= JJB, Andrew Hipp= AH, Anton Reznicek= AR, and Paul Rothrock=PR