

New and Noteworthy Sedge Records in Illinois

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ABSTRACT

Sedges (Cyperaceae) are a very diverse and significant group of plants in Illinois, as elsewhere, with approximately 250 species reported, approximately 150 of which are in the genus *Carex* (the most species-rich genus in Illinois). This study discusses 15 taxa in particular, three of which (*Carex cherokeensis*, *C. triangularis*, and *Lipocarpha aristulata*) are reported for the state of Illinois for the first time. Two additional taxa, *Carex aureolensis* and *C. oklahomensis*, were reported in 2002 for the first time in Illinois in the *Flora North America* based upon specimens cited here. The remaining sedges discussed here are examples of taxa whose nomenclature and ranges have been clarified recently (*C. corrugata*, *C. echinodes*, *C. opaca*, *C. stipata* var. *maxima*, *C. tonsa* var. *rugosperma*, and *C. tribuloides* var. *sangamonensis*) or that have new range extensions in the state (*Carex arkansana*, *C. socialis*, *C. texensis*, *Cyperus iria*). Each sedge is discussed in conjunction with significant collections. A summary of *Carex* species added to the Illinois flora since Mohlenbrock's 1986 *Guide to the vascular flora of Illinois* is presented.

Key words: sedges, *Carex*, *Lipocarpha*, additions to Illinois flora, new plant records

INTRODUCTION

The sedge family, Cyperaceae, is well-known to be diverse in Illinois, particularly within the genus *Carex*. The number of known Illinois species has increased over the years as botanists have continued to study and sample the flora. Jones (1963) included 14 sedge genera [*Bulbostylis*, *Carex*, *Cladium*, *Cyperus*, *Dulichium*, *Eleocharis*, *Eriophorum*, *Fimbristylis*, *Fuirena*, *Hemicarpha*, *Lipocarpha*, *Rhynchospora*, *Scirpus*, *Scleria*] in the state with 196 species, 122 of which were in the genus *Carex* alone. Mohlenbrock (1986) included 13 sedge genera in the state (combining *Hemicarpha* with *Scirpus*) with 230 species, 141 of which were in *Carex*. His increase of 34 species included (among others) 3 additions in *Rhynchospora*, 4 in *Cyperus*, 7 in *Scirpus*, and 19 additions in *Carex* - mostly as a result of new finds, but also partly as a result of combinations and splits in some species by sedge experts. The most recent treatment of the Illinois flora by Mohlenbrock (2002) included an increase of sedge genera to 19 due to changes in nomenclature rather than to finds of new genera in the state. *Scirpus* was divided into six genera: *Bolboschoenus*, *Hemicarpha* [resurrected], *Isolepis*, *Schoenoplectus*, *Scirpus*, and *Trichophorum*, and *Cyperus* was divided into *Cyperus* and *Kyllinga*. This 2002 treatment of Illinois Cyperaceae included 251 species, 159 of which were in *Carex*. The increase in

the number of reported *Carex* species can be explained by several nomenclatural changes as well as by new discoveries made since Mohlenbrock (1986). The new discoveries included, among others, *Carex arkansana* (L. H. Bailey) L. H. Bailey, *C. baileyi* Britt. (since discounted as occurring in Illinois, because the voucher was misidentified [Ebinger et al. 2010]), *C. canescens* L., *C. crawfordii* Fern., *C. formosa* Dewey, **C. hirta* L., **C. praticola* Rydb., and **C. spicata* Huds. (asterisks '*' indicate non-native species). Twelve of the new *Carex* records were discussed in detail by Swink and Wilhelm (1994). At least two of the other additions to *Carex* were based upon an examination of old records rather than the discovery of new sites, for example, *C. deweyana* Schwein. (not seen in Illinois since 1954 [Mohlenbrock 2002]) and *C. folliculata* L. (not seen in Illinois since 1926 [Swink and Wilhelm 1994; Mohlenbrock 2002]), and several other additions were the result of nomenclatural changes that split species, such as *C. longii* Mack. and *C. radiata* (Wahlenb.) Small. In the Illinois portion of the Chicago area, Swink and Wilhelm (1994) also included *C. annectens* Bickn., not included in the state by Mohlenbrock (2002), perhaps in error.

Volume 23 of the Flora of North America (FNA) was published in 2002, and this contained an account of the sedge family, Cyperaceae, for all of North America north of Mexico. From this work, taking into account synonyms and nomenclatural changes but excluding the accepted subspecific taxa, one can derive another list of the sedges known and reported to occur in Illinois, including 17 genera and 225 species, 138 of which were species of *Carex*.

Table 1 summarizes and compares the numbers of species and genera of Cyperaceae in Illinois as presented by the four major references cited above.

Table 1. Summary of the numbers of species of Cyperaceae in Illinois among four standard references.

Genus	Jones (1963)	Mohlenbrock (1986)	Mohlenbrock (2002)	FNA (2002)
<i>Bolboschoenus</i>	Merged with <i>Scirpus</i>	Merged with <i>Scirpus</i>	2	2
<i>Bulbostylis</i>	1	1	1	1
<i>Carex</i>	122	141	159	138
<i>Cladium</i>	1	1	1	1
<i>Cyperus</i>	18	22	22	18
<i>Dulichium</i>	1	1	1	1
<i>Eleocharis</i>	18	16	17	18
<i>Eriophorum</i>	2	5	5	4
<i>Fimbristylis</i>	3	4	4	4
<i>Fuirena</i>	1	1	1	0
<i>Hemicarpha</i>	2	Merged with <i>Scirpus</i>	2	Merged with <i>Lipocarpha</i>
<i>Isolepis</i>	Merged with <i>Scirpus</i>	Merged with <i>Scirpus</i>	1	1
<i>Kyllinga</i>	Merged with <i>Cyperus</i>	Merged with <i>Cyperus</i>	1	1
<i>Lipocarpha</i>	1	1	1	3
<i>Rhynchospora</i>	5	6	6	7
<i>Schoenoplectus</i>	Merged with <i>Scirpus</i>	Merged with <i>Scirpus</i>	12	11
<i>Scirpus</i>	18	25	9	9
<i>Scleria</i>	3	5	5	5
<i>Trichophorum</i>	Merged with <i>Scirpus</i>	Merged with <i>Scirpus</i>	2	1
TOTALS	196	230	251	225

MATERIALS AND METHODS

Since 1994, I have collected more than 950 numbered herbarium specimens of Cyperaceae in Illinois, and these collections serve as the primary source of data for this study. In addition, the herbarium of the Illinois Natural History Survey (ILLS) at the University of Illinois, Champaign, was also used as a source of data concerning relatively recent collections of the family by other botanists, and it is also the primary location where the Hill vouchers have been deposited. In addition, the herbaria of the University of Michigan (MICH), Missouri Botanical Garden (MO), and New York Botanical Garden (NY) were also checked for Illinois specimens of the sedges in question.

Another source of information has been the published literature on the sedges of Illinois, including Jones (1963), Mohlenbrock (1986, 2002), and the Flora of North America (FNA; 2002) mentioned in the introduction. Additional information has been obtained from sedge scholars and colleagues with whom I work, especially Dr. Anton A. Reznicek of the University of Michigan, Ann Arbor, with whom I collaborated throughout the period of this study. Additional botanists are cited in the Acknowledgements in this paper.

Throughout this paper, an asterisk (*) indicates a non-native species in Illinois.

DISCUSSION

CAREX

The FNA list is certainly incomplete, because twenty species of *Carex* known to be in Illinois (Mohlenbrock 1986, 2002) were not credited for the state in this work. These are *C. aurea* Nutt., *C. brunnescens* (Pers.) Poir., *C. caroliniana* Schwein., *C. crawfordii* Fern., *C. cryptolepis* Mack., *C. disperma* Dewey, *C. flaccosperma* Dewey, *C. folliculata* L., *C. garberi* Fern., **C. hirta* L., *C. limosa* L., *C. lucorum* Willd., *C. oligosperma* Michx., *C. plantaginea* Lam., *C. platyphylla* Carey, *C. striatula* Michx., *C. texensis* (Torr.) L. H. Bailey, *C. tuckermanii* Boott, *C. vesicaria* L., and *C. virescens* Muhl. These twenty sedges are generally quite rare in Illinois, they are represented by few Illinois collections, and some may no longer occur in the state, but they have been verified previously to occur here.

Conversely, six *Carex* species that were not mentioned by Mohlenbrock (1986, 2002) were included in Illinois by the FNA treatment (2002). These included *C. aureolensis* Steud., *C. houghtoniana* Torr. ex Dewey, *C. missouriensis* P. E. Rothrock & Reznicek, *C. oklahomensis* Mack., *C. opaca* (F. J. Herm.) P. E. Rothrock & Reznicek, and *C. tincta* (Fern.) Fern. Subsequently, *C. tincta* was deleted from the state flora as a result of the misidentification of the voucher (Rothrock, Reznicek and Hipp 2009). Two of these species, *C. missouriensis* and *C. opaca*, were first reported for the state by Rothrock and Reznicek (2001). Three of these, *C. aureolensis*, *C. oklahomensis*, and *C. opaca* are discussed in greater detail below.

A summary of the thirty *Carex* species additions made since the publication of *Guide to the vascular flora of Illinois* by Mohlenbrock (1986) is presented in Table 2. This

includes two (*C. baileyi*, *C. tincta*) that have been discounted because of specimen misidentifications, resulting in a total 28 additional species reported in the state since the 1986 treatment. The table includes the new records discussed in this paper.

Table 2. Summary of *Carex* species additions to the flora of Illinois since Mohlenbrock (1986). Simple name changes without a change in species circumscription are not included, nor are subspecific taxa. * = non-native species; S&W 1994 = Swink & Wilhelm (1994); M 1986 = Mohlenbrock (1986); M 2002 = Mohlenbrock (2002); FNA 2002 = Flora North America vol. 23 (2002); H&E 2002 = Herkert and Ebinger (2002).

Taxon	References	Notes
<i>Carex arkansana</i> (L.H.Bailey) L.H.Bailey	M 2002; FNA 2002; H&E 2002; see this paper	Recent discovery 1992. Endangered in Illinois
<i>Carex aureolensis</i> Steudel	FNA 2002; see this paper	Name change; [segregated from <i>C. frankii</i> ; both species currently recognized]
<i>Carex baileyi</i> Britt.	M 2002; Ebinger et al. (2010)	Recent discovery, but based upon misidentification; <i>species not present</i>
<i>Carex brunnescens</i> (Pers.) Poir.	S&W 1994; M 2002; H&E 2002	Recent discovery 1985. Endangered in Illinois
<i>Carex canescens</i> L.	S&W 1994; M 2002; FNA 2002; H&E 2002 [var. <i>disjuncta</i> Fern.]	Recent discovery 1988. Endangered in Illinois [var. <i>disjuncta</i> Fern.]
<i>Carex cherokeensis</i> Schweinitz	see this paper	Recent discovery 2000
<i>Carex corrugata</i> Fern.	M 2002; FNA 2002; see this paper	Recent discovery 1990
<i>Carex crawfordii</i> Fern.	M 2002; H&E 2002	Recent discovery 1991. Endangered in Illinois
<i>Carex X deamii</i> F.J. Herm.	Hess and Shildneck (1982); M 2002; FNA 2002	Recent discovery 1982
<i>Carex deweyana</i> Schwein.	S&W 1994; M 2002; FNA 2002	Old records – most recent 1954 Probably extirpated in Illinois
<i>Carex echinata</i> Murray	S&W 1994; M 2002; FNA 2002	Recent discovery 1988. Endangered in Illinois
<i>Carex echinodes</i> (Fern.) Rothrock, Reznicek & Hipp	S&W 1994; FNA 2002; see this paper	Name change [segregated from <i>C. tenera</i> Dewey – both species currently recognized]
<i>Carex folliculata</i> L.	S&W 1994; M 2002	Old records – most recent 1926. Probably extirpated in Illinois
<i>Carex formosa</i> Dewey	S&W 1994; M 2002; FNA 2002	Recent discovery 1985. Endangered in Illinois
* <i>Carex hirta</i> L.	M 2002	Recent discovery 1991 [based on <i>Gardner 49</i> at ILLS]
<i>Carex houghtoniana</i> Torr. ex Dewey	FNA 2002	Recent discovery 1999; first report FNA 2002. Either native or introduced
<i>Carex inops</i> L. H. Bailey	M 2002 and H&E 2002 as <i>Carex heliophila</i> Mack.; FNA 2002 as <i>C. inops</i> subsp. <i>heliophila</i> (Mack.) Crins	Name change and recent discovery 1985. Endangered in Illinois [var. <i>heliophila</i>]
<i>Carex longii</i> Mack.	S&W 1994; M 2002; FNA 2002	Name change [segregated from <i>C. albulascens</i> Schwein.– both species currently recognized]

Taxon	References	Notes
<i>Carex lucorum</i> Willd.	M 2002; H&E 2002; Ebinger et al. (2010)	Recent discovery 1981. Voucher misplaced, no extant locations known; report possibly in error
<i>Carex mesochorea</i> Mack.	S&W 1994; M 2002; FNA 2002	Apparently overlooked by M 1986 or included in <i>C. cephalophora</i> Muhl. ex Willd., ISM has collections from IL dated 1952
<i>Carex missouriensis</i> P.E.Rothrock & Reznicek	Rothrock and Reznicek (2001); FNA 2002	Recent discovery – new species
* <i>Carex nebrascensis</i> Dewey	S&W 1994; M 2002; FNA 2002	Recent discovery ? apparently first reported by S&W 1994
<i>Carex oklahomensis</i> Mack.	FNA 2002; see this paper	Recent discovery 2002. Either native or introduced
<i>Carex opaca</i> (F.J.Herm.) P.E.Rothrock & Reznicek	Rothrock and Reznicek (2001); FNA 2002; see this paper	Name change; [segregated from <i>C. bicknellii</i> Britton, both species currently recognized]
* <i>Carex praticola</i> Rydb.	S&W 1994; M 2002; FNA 2002	Recent discovery 1989 [?]
<i>Carex radiata</i> (Wahlenb.) Small	S&W 1994; M 2002; FNA 2002	Name change [incl. in <i>C. rosea</i> in M 1986; both currently recognized]
* <i>Carex spicata</i> Huds.	S&W 1994; M 2002; FNA 2002	Recent discovery 1982
<i>Carex tinctoria</i> (Fern.) Fern.	FNA 2002; Rothrock, Reznicek and Hipp 2009	Recent discovery, but based upon misidentification; <i>species not present</i>
<i>Carex triangularis</i> Boeckler	see this paper	Recent discovery 2004
<i>Carex willdenowii</i> Schk. ex Willd.	M 2002; FNA 2002	Recent discovery 1984. Threatened in Illinois

***Carex arkansana* (L. H. Bailey) L. H. Bailey (Arkansas sedge)**

Carex arkansana was first reported for Illinois by Mohlenbrock (1999) based upon its first finding in 1992 in Saline County by John Taft. This location was at the Illinois Natural Areas Inventory (INAI) Site Krigia Flats, INAI # 1457, north of US Rt. 45 and west of the Middle Fork of the Saline River, Harrisburg. Subsequently, additional sites have been found, one of which contained thousands of plants. This sedge is listed as Endangered in Illinois (Herkert and Ebinger 2002; Illinois Endangered Species Protection Board [IESPB]. 2009). **IL: SALINE CO.:** Harrisburg; south side of US Rt. 45, 0.1-0.4 mi W of Middle Fork of Saline River; Sons of Liberty Gun Club, 4 May 1995, *Hill 26445* (ILLS); Eldorado / Texas City, southwest side of US Rt. 45, southwest of original channel of the North Fork Saline River, from 37.88396° N. Lat., 088.38795° W. Long. south to edge of agricultural land at 37.88199° N. Lat., 088.38951° W. Long., 9 Jul 2008, *Hill 37790* (ILLS, MICH, MO, NY); Eldorado / Texas City, approximately 472 m north-northeast of intersection of US Route 45 and North Fork Saline River, southeast of US Route 45, 37.89179° N. Lat., 088.38183° W. Lat.; 37.89136° N. Lat., 088.38205° W. Long., 10 Jul 2008, *Hill 37818* (ILLS); Eldorado / Texas City, approximately 487.7 m north of Cottonwood Road, 7.6 m west of US Route 45, 37.883778° N. Lat., 088.388958° W. Long., 7 Aug 2008, *Hill 37868* (ILLS); Eldorado / Texas City, approximately 335 m north-northeast of intersection of US Route 45 and North Fork Saline River, 15 m southeast of US Route 45, 37.89127° N. Lat., 088.38222° W. Long., 5 May 2009, *Hill 38031* (ILLS, MICH, MO, NY).

***Carex aureolensis* Steudel (Goldenfruit sedge)**

Carex aureolensis was first reported for Illinois by Ford and Reznicek (2002). Formerly confused with *Carex frankii* Kunth, it is quite a distinct species that is colonial-rhizomatous and has significant structural differences in its scales, as well as being more southern in range. In October, 2001, at the suggestion of A.A.Reznicek, I went through all of the *C. frankii* specimens at ILLS and annotated those that were actually *C. aureolensis*, discovering that the species is actually widespread in southern Illinois. In 2008 P. Marcum and I presented a poster at the ISAS meetings summarizing the findings on this species, recognized in 11 Illinois counties at that time (Marcum and Hill 2008). Many specimens are at ILLS; a few representative collections are presented here, most originally identified as *Carex frankii*. **IL: ALEXANDER CO.:** north of Fayville, 30 Jun 1954, *Evers 44502* (ILLS); **GALLATIN CO.:** On summit of Gold Hill, south of New Shawneetown, 16 Oct 1956, *Evers 52746* (ILLS); **JACKSON CO.:** Shawnee National Forest, Oakwood Bottoms, Murphysboro Ranger District, Compartment 16, 24 Jun 1993, *Philippe & Gehlhausen 22262* (ILLS); **MASSAC CO.:** 2 miles southeast of Mermet, 30 Jun 1954, *Evers 44425* (ILLS); **PERRY CO.:** Southwest of Old Du Quoin, 5 miles east of U.S. 51, 30 May 1990, *Ulaszek 1464* (ILLS); **POPE CO.:** Pine Hollow, 2.5 miles east of Dixon Springs, 18 Aug 1931, *Schopf 1372* (ILLS); **SALINE CO.:** approximately 594 m north-northeast of intersection of US Route 45 and North Fork Saline River, 6.1 m southeast of US Route 45, 37.89289° N.Lat., 088.38031° W. Long., 7 Jul 2008, *Hill 37817* (ILLS); approximately 640 m north-northeast of intersection of US Route 45 and North Fork Saline River, 30.5 m southeast of US Route 45, 37.89294° N.Lat., 088.37992° W. Long., 10 Jul 2008, *Hill 37822* (ILLS); **UNION CO.:** 5 miles east of Dongola, 25 Aug 1960, *Evers 66961* (ILLS); **WILLIAMSON CO.:** Paineville, 0.8 mile east of Herrin, south side of East Herrin Road, north of Road 1450 North, 5 Jun 2002, *Hill 34684* (ILLS, MICH, MO, NY).

***Carex cherokeensis* Schweinitz (Cherokee sedge)**

This is the first report of *Carex cherokeensis* for Illinois. I discovered this on 3 May 2000 at the south end of Tamms, along the west side of IL Rt. 127 just west of the original Cache River channel in a long low-lying area between the highway and crop fields. A second population was found in 2003 in Union County by David Ketzner and Dennis Keene. **IL: ALEXANDER CO.:** south end of Tamms, west side IL Rt. 127, 37° 14' 06" N; 89° 16' 12" W., 3 May 2000, *Hill 32294* (ILLS, MICH, NY); same location, 6 Jun 2002, *Hill 34719* (ILLS, MICH); **UNION CO.:** south of Ware at Union County State Conservation Area, east of State Route 3, north of Refuge Road along Line C Ditch, 37° 24' 37" N., 089° 23' 15" W., 23 Jul 2003, *Ketzner & Keene 3301* (ILLS).

***Carex corrugata* Fern. (Corrugated sedge)**

Carex corrugata has apparently been known in Illinois previously as *Carex amphibola* Steud. var. *globosa* L. H. Bailey (Mohlenbrock 2002) but it has been overlooked in most treatments of the Illinois flora. It is actually not uncommon in floodplain forests in southern Illinois, and it was included in the state by Naczi and Bryson (2002). It is especially common in the southern states (Bryson, pers. comm.). As far as can be determined, it was first reported for Illinois by R. Naczi in his Ph.D. dissertation (Naczi 1992), and was collected by him in Illinois in 1990 (Naczi, pers. comm.), though it was collected previously by other collectors but not recognized as this species. Representative collections include:

IL: JACKSON CO.: Just east of landfill, west of Crab Orchard Creek, 3 May 1991, *Taft* 836 (ILLS); Murphysboro, CH 5 (20th Street) bridge over the Big Muddy River, 19 May 1998, *Hill* 30257 (ILLS, MO, NY); **PULASKI CO.:** 2.1 miles southwest of Olmsted along east side of Rt. 37, 26 May 1990, *Naczi* 2492 (MICH); **UNION CO.:** Ware (south), Illinois Rt. 3 east side, 3.15 mile south of Illinois Route 146, Mississippi River floodplain, 37° 24.149' N., 89° 23.328' W., 16 May 2001, *Hill* 33800A (ILLS, MICH); Ware (south), Illinois Rt. 3 east side, north side of bridge over Running Lake Ditch, 1.95 miles south of Illinois Rt. 146, Mississippi River floodplain, 22 May 2001, *Hill* 33815 (ILLS); **WABASH CO.:** Ridgeway Trail (west side, and east side of Coffee Creek) Beall Woods State Park, on Illinois Rt. 1 east of Keensburg, 6 miles south of Mount Carmel, banks of the Wabash River, 20 May 2004, *Hill* 35881 (ILLS).

***Carex echinodes* (Fern.) Rothrock, Reznicek & Hipp [= *Carex tenera* Dewey var. *echinodes* (Fern.) Wiegand] (Spiny sedge)**

Carex tenera, the Remote sedge, is rather common in Illinois, but it appears that the first reports of var. *echinodes* (known first as *C. straminea* Willd. ex Schkuhr var. *echinodes* Fern.) were published by Swink and Wilhelm (1994) and later by Mastroguseppe et al. (2002). Recently the variety has been raised to the species level, as *Carex echinodes* (Fern.) Rothrock, Reznicek & Hipp (Rothrock, Reznicek and Hipp 2009). It differs from the typical variety by its smooth leaf sheaths and its larger perigynia with more tapering, elongate, spreading ('spiny') beaks. Only three Illinois specimens identified as this variety are in the ILLS herbarium. **IL: COOK CO.:** Palos Hills, east side US Rt. 45 (96th Ave), Crooked Creek Woods, 11 Jun 1997, *Hill* 29302 (ILLS, MICH, NY); Palos Hills, southwest corner of Belly Deep Slough, US Rt. 45 (96th Ave), west side of road, 11 Jun 1997, *Hill* 29322 (ILLS, MICH); **CARROLL CO.:** Savanna Army Depot, Blackhawk 7.5 minute quadrangle, bottomland woods at base of fill for railroad tracks, 16 Jul 1996, *Philippe* 27806 (ILLS).

***Carex oklahomensis* Mack. (Oklahoma sedge)**

Carex oklahomensis was first reported for Illinois by Standley (2002) based upon my collection made that same year. Known initially from only a single site bordering a southern flatwoods in Williamson County, it has since been found to occur in Saline County as well. All known populations are likely to be extirpated by highway construction or expansion. This species may either be native in Illinois or it may be increasing its range eastward from adjacent states bordering on the west. **IL: SALINE CO.:** Eldorado, opposite junction Gandertown Road and US Rt. 45, approximately 6.1 m west of US Rt. 45, 2 Jun 2009, *Hill* 38086 (ILLS, MICH); Eldorado, approximately 207.3 m north-northeast of junction Carter Farm Road and US Rt. 45, 6.1 m west of US Rt. 45, 2 Jun 2009, *Hill* 38100 (ILLS, MICH.); **WILLIAMSON CO.:** west of Burlington Northern railroad, 0.5 mile east of Herrin, Paineville, North right-of-way of East Herrin Road, 15 May 2002, *Hill* 34611 (ILLS, MICH, NY); same location, 11 Jul 2002, *Hill* 34855 (ILLS, MICH); same location, 11 Jul 2008, *Hill* 37829 (ILLS, MICH).

***Carex opaca* (F. J. Herm.) P. Rothrock & Reznicek (Darkened sedge)**

Carex opaca was raised to species rank and reported for Illinois in 2001 (Rothrock and Reznicek 2001). The species was previously known as *Carex bicknellii* Britton var. *opaca* F. J. Herm. but it was usually found in herbaria as just *C. bicknellii*. Known only in six states (Arkansas, Illinois, Kansas, Mississippi, Missouri, Oklahoma), it grows in wet,

poorly drained open sites. Few specimens have been collected in Illinois, and my collection was a new county record. ILLS specimens are included here. **IL: SAINT CLAIR CO.:** east of Fayetteville, 6 Jun 1962, *Evers 73553* (ILLS); same location, 30 May 1974, *Evers 113139* (ILLS); **SALINE CO.:** Harrisburg; 0.2 mile north of US Rt. 45, 0.3 mile southwest of Middle Fork of the Saline River, just south of Krigia Flats Natural Area, 30 May 2000, *Hill 32379* (ILLS, MICH); **WASHINGTON CO.:** at Venedy Station, along railroad, 20 Jun 1952, *Evers 33943* (ILLS); same location - south side of Highway 177, between Highway and railway tracks, at Venedy Station, about 0.25 mile east of road to Venedy, 9 Jun 1999, *Reznicek & Reznicek 10856* (ILLS, MICH).

***Carex socialis* Mohlenbrock & Schwegman (Social sedge)**

Carex socialis is not new to Illinois, and, in fact, it was described from a collection near the Ohio River in southern Illinois (Mohlenbrock and Schwegman 1969; Hill 2006). The most recent treatment (Ball 2002) indicated that this sedge occurs in thirteen states, namely, Alabama, Arkansas, Georgia, Illinois, Indiana, Kentucky, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas. As with most other species, it becomes scarce at the margins of its range. Searches in Illinois continue to reveal additional populations. *Carex socialis* has been reported to occur historically in Jackson, Johnson, Massac, Pulaski, and Union counties (Mohlenbrock 1986, 2002, Mohlenbrock and Ladd 1978), and to this list can now be added Alexander, Gallatin, Saline, and Wabash Counties (specimens in the ILLS herbarium) for a total of nine counties. Surveys for it in 2008-2009 showed it to be quite common in some places especially in Saline County. Several noteworthy recent collections not presented in Hill (2006) are provided here. **IL: SALINE CO.:** Eldorado, approximately 100.6 m southwest of Garner Road, 18.3 m west of US Rt. 45, 37.86547° N, 088.40117° W., 10 Jul 2008, *Hill 37826* (ILLS, MICH, MO, NY); same location, 2 Jun 2009, *Hill 38112* (ILLS, MICH); Eldorado / Texas City, approximately 792.5 m north of Cottonwood Road, 24.4 m northwest of US Route 45, 37.88656° N.Lat., 088.38731° W., 7 Aug 2008, *Hill 37871* (ILLS, MICH); Eldorado / Texas City, approximately 731.5 m north of Cottonwood Road, 29 m southeast of US Route 45, 37.88427° N.Lat., 088.38722° W., 5 May 2009, *Hill 38047* (ILLS, MICH, MO, NY), **WABASH CO.:** Ridgeway Trail (west side, and east side of Coffee Creek) Beall Woods State Park, on Illinois Rt. 1 east of Keensburg, 6 miles south of Mount Carmel, banks of the Wabash River, 20 May 2004, *Hill 35879* (ILLS, MICH).

***Carex stipata* Muhl. ex Willd. var. *maxima* Chapman ex Boott (Great stipate sedge)**

While *C. stipata* var. *stipata* is common and well-known in Illinois, var. *maxima* is not. Included in the Illinois flora by Mohlenbrock (1986), it was not included in his next treatment of the flora (Mohlenbrock 2002) nor for Illinois by Standley (2002). It is distinguished from the typical variety by its larger size, longer perigynia, and longer beaks, as well as by its more southeastern distribution (Standley 2002). This record serves to confirm its presence in the state. **IL: WILLIAMSON CO.:** North side of Imhoff Lane, north of East Herrin Road, 0.35-0.5 miles west of Johnston City, 0.1-0.3 mile west of Interstate Rt. 57, 37° 49' 00" N., 088° 57' 30" W., 4 Jun 2002, *Hill 34663* (ILLS, MICH, NY).

***Carex texensis* (Torr.) L. H. Bailey (Texas sedge)**

There are nine collections of this species from six Illinois locations in the ILLS herbarium. Concerning this species, Mohlenbrock (1986) stated: "occasional in the s. ½ of Ill." and Mohlenbrock (2002) stated: "rare and scattered in Ill.; apparently absent from the n. 1/3 of the state". Swink and Wilhelm (1994), while indicating its absence in the Illinois portion of the Chicago area, suspected that this species (in Indiana) was introduced from farther south. Ball (2002) did not indicate its occurrence in Illinois, but he remarked that it is often mistaken for *C. retroflexa* Muhl. ex Willd. and vice versa. The Illinois records suggest that it is, indeed, in the state and that it is widely distributed. It may or may not be native here, however. **IL: JACKSON CO.:** Mesic woodland behind the Carbondale Annex, below Carbondale Reservoir and the prairie restoration site, 7 Jun 1992, *Basinger 3776* (ILLS); Along a paved trail around Thompson Lake on the campus of Southern Illinois University at Carbondale, 7 May 1993, *Basinger 4994* (ILLS); same location, 18 May 1993, *Basinger 5142* (ILLS); **OGLE CO.:** Oregon, west side of Illinois Rt. 2 in vicinity of pasture road west of large stone gate, 0.5 mile north of Mud Creek Road, 17 May 2005, *Hill 36252* (ILLS, MICH); **PEORIA CO.:** Peoria, Springdale Cemetery, 30 Jun 1950, *Chase 11181* (ILLS); same location, 18 May 1962, *Chase 16942* (ILLS); **SHELBY CO.:** IDOT U.S. Route 51 Project Area, 39.31076° N., 089.08163° W., 3 Jun 2008, *Murphy 2697* (ILLS); **WILLIAMSON CO.:** Crab Orchard National Wildlife Refuge, T. 10S, R. 1E, SW1/4 NW1/4 Sect. 34, 8 May 1983, *Ulaszek 157* (ILLS); same location, 10 Jun 1983, *Ulaszek 242* (ILLS).

***Carex tonsa* (Fern.) E. P. Bicknell var. *rugosperma* (Mack.) Crins (Roughseed sedge)**

Carex tonsa was included in Illinois by Mohlenbrock (1986, 2002) without the var. *rugosperma*. Swink and Wilhelm (1994) discussed some of the problems in nomenclature in the species as well as in the similar *C. umbellata* Schkuhr ex Willd. Crins and Rettig (2002) accepted the var. *rugosperma* as distinct and included it within Illinois. While this group appears to have some taxonomic and nomenclatural difficulties, it may be useful to present the ILLS data on its distribution in the state based on several confirmed specimens. **IL: CASS CO.:** Beardstown; east side of U.S. Rt. 67, about 3 miles south of Beardstown, residential area, 14 Jul 2006, *Hill 36986* (ILLS, NY); **LAKE CO.:** Cove Hollow, west of Cedar Lake, T. 10S, R. 2W, NE1/4 SW1/4 Sect. 23, 10 May 1988, *Philippe 13119* (ILLS); **LA SALLE CO.:** Starved Rock State Park, west side of La Salle Canyon, on narrow peninsula between that and Tonti Canyon, north of Illinois Rt. 71, south side of Illinois River, 41.3117° N., 88.9713° W., 23 Jul 2003, *Hill 35346* (ILLS, MICH); **MASON CO.:** Sand Ridge State Forest, 40.39268° N., 89.88023° W., 10 May 2004, *Busemeyer et al. 1677* (ILLS); **POPE CO.:** Lusk Creek, south of Little Bear Branch and north of Bear Branch, 23 May 1988, *Philippe 13209* (ILLS).

***Carex triangularis* Boeckeler (Triangular sedge)**

This is the first report for *Carex triangularis* in Illinois. The species has a limited distribution in only nine states (Arkansas, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, Texas and now Illinois). According to Standley (2002), the red-dotted perigynia of this species separates it from the other similar taxa in its section, including *C. annectens* (Bickn.) Bickn. and *C. vulpinoidea* Michx. It is probably more widely distributed than this single record suggests due to misidentifications. **IL: MAS-SAC CO.:** just west of boundary of Sielbeck Woods State Natural Area, Ohio River

Floodplain, vicinity of Upper Salem Road, about 2 miles northwest of Metropolis, 27 May 2004, *Hill 35885A* (ILLS, MICH, NY).

***Carex tribuloides* Wahlen. var. *sangamonensis* Clokey (Blunt broom sedge)**

Carex tribuloides is a very common species in Illinois, but the variety *sangamonensis* is often overlooked or ignored and was not included in Mohlenbrock (1986, 2002). It is of interest in Illinois partly because its type was collected in Macon County in low-lying areas along the Sangamon River, though it is primarily a southern plant extending south to the Gulf Coast. This variety has been accepted as distinct by Mastrogiuseppe et al. (2002) and occurs (as expected) in Illinois. It differs from the typical variety by its perigynia that are 2.2 – 2.8 (– 3) times as long as wide, those of the typical variety being 3 – 5 times as long as wide. Only two collections are in ILLS under this name. **IL: ALEXANDER CO.:** Illinois Rt. 3, McClure, west side, between highway and agricultural land, opposite VFW post at slough, 12 Jun 2001, *Hill 33860* (ILLS, MICH); **UNION CO.:** Bordering Wolf Lake, north of town of Wolf Lake, 25 Jun 1954, *Buser 5082* (ILLS).

CYPERUS

One range extension.

***Cyperus iria* L. (Rice-field Flatsedge)**

Cyperus iria has been known in Illinois for some time (Mohlenbrock 1986, 2002) as an adventive sedge of meadows and rice fields. It was first reported in Alexander County (Mohlenbrock 1986) then in Alexander and Pulaski cos. (Mohlenbrock 2002). This species appears to be spreading as a weed in the state as rice growing expands as well as in wet landscape plantings, and new records are here reported for Coles and Union counties. **IL: COLES CO.:** Ashmore: Lincoln Springs Resort on north side of Route 16, just east of Embarras River, weed in landscape planting, 30 Aug 2007, *Tucker 15115* (EIU, ILLS); **UNION CO.:** IL Rt. 3, Ware (south), west side, 0.35 mile north of Refuge Drive, rice growing area, Mississippi River floodplain, 26 Oct 2001, *Hill 34412* (ILLS, MICH).

LIPOCARPHA

One addition to the flora of Illinois.

***Lipocarpa aristulata* (Coville) G. Tucker (Awned Lipocarpa)**

Lipocarpa aristulata is here reported in Illinois for the first time. I found it in Illinois in June 2002 in Williamson County during a botanical survey. It has been reported from Missouri and states farther west (Tucker 2002) and its habitat in Illinois, in potholes on disturbed periodically wet cinders and sand along a dismantled railroad parallel to a highway, strongly suggests that this is not native to Illinois. This annual sedge is very small and inconspicuous (2 – 12 cm tall) but individuals can be locally numerous. It can easily be mistaken for the much more common *Lipocarpa micrantha* (Vahl) G. Tucker, from which it differs by a relatively well-developed inner (second) scale that is 0.5 – 0.8 mm in contrast to the lack of a scale or presence of one only 0.1 – 0.2 mm in *L. micrantha*. So far it has been found only at the single site: **IL: WILLIAMSON CO.:** Along abandoned railroad grade (and powerline right-of-way), south side of East Herrin Road at eastern

corporate limits of Herrin, 5 Jun 2002, *Hill 34671* ILLS, MICH, MO, NY); same location, 11 Jul 2008, *Hill 37830* (ILLS, MICH, MO).

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