

Sedges of Minnesota

Three Day Identification Workshop

Instructed by: Mr. Jason Husveth, MS, Botanist/Ecologist with 25 years *Carex* experience

Dates: Wednesday, June 15, Thursday, June 16 and Friday, June 17, 2022

Location: University of Minnesota Plant Growth Facilities, Lab 136, St. Paul Campus
High Quality Wetland Field Locations in Anoka/Washington Counties, MN

Cost: \$600 per Student (Enrollment is Limited to 25 Students)

Accreditation: 18 Direct Hours of Continuing Education Units (CEUs) for the
Minnesota's Wetland Professional Certification Program

Critical Connections Ecological Services, Inc. is pleased to offer a three day sedge identification workshop on Wednesday June 15 through Friday June 17, 2022. After a two year involuntary pause, we will offer for the first time a three day workshop; two days in the lab and one full day in the field. The course will be taught by Jason Husveth and will focus on the Sedges (*Carex*) of Minnesota. Now in our 12th year, the workshop is taught within a modern plant laboratory at the University of Minnesota's St. Paul Campus Plant Growth Facility. This three day workshop will be taught 2/3 in the lab/classroom, and 1/3 in the field. The curriculum will include an introduction to all of the Minnesota sedge genera (*Cyperaceae*), with a focus on the identification of *Carex* species using live plant material. Over 70 *Carex* species (half of the MN native species) were provided as live material at the 2019 workshop, as well as more than 20 additional species representative of other Minnesota sedge genera. The Minnesota Sedge Identification Workshop will be useful to a wide array of students, including novice and experienced field botanists, wetland ecologists, and wetland professionals with an interest in identifying *Carex* taxa to species. This course is accredited as 18 direct hours of continuing education units (CEUs) for the University of Minnesota's Wetland Delineator Certification Program. An updated and revised taxonomic key to the *Carex* of East-Central Minnesota will be provided. In addition to this customized key, we teach from Welby Smith's *Sedges and Rushes of Minnesota* book, which was published in August 2018.

Students can expect to complete the three day course with:

- 1) An introduction and basic knowledge of all sedge (*Cyperaceae*) genera occurring in Minnesota (15 genera as per *The Flora of North America*, Vol. 23, 2002),
- 2) The ability to recognize and identify common and unusual Minnesota native *Carex* species in the field and in the lab,
- 3) Knowledge of required specimen collection methods to enable proper *Carex* identification in the lab, (students can make a collection of pressed specimens from live material provided at the workshop),
- 4) The ability to use dichotomous keys to identify *Carex* to species in the field. Students will be taught useful *Carex* field-identification concepts and shortcuts, as described in Welby Smith's *Sedges and Rushes of Minnesota* (2018), Voss's *Michigan Flora* (Vol. 1.), Wheeler's *Key to the Carex of MN*, Husveth's revised *Key to the Carex of East-Central Minnesota*, Zager and Norris' *Carex of Iowa*, and the *Flora of North America* (Vol. 23: *Cyperaceae*),

- 5) Consistent with all of the past 11 years, students should expect to be successfully keying live *Carex* specimens to species by the noon lunch break on the first day of the workshop, and,
- 6) Experience applying two days of laboratory and key learning in the field at sedge-diverse natural areas.



Jason Husveth is a professional ecologist and botanist working throughout Minnesota and the Upper Midwestern United States. Jason has over twenty years of academic, professional, field, and herbarium experience identifying, collecting, photographing, and documenting sedge species in Minnesota and throughout the Upper Midwest. Jason has been trained in sedge identification by Dr. Anton Reznicek (Flora of North America, Michigan Flora), Dr. Robert H. Mohlenbrock (Flora of Illinois), Dr. Susan Galatowitsch (University of Minnesota), and Dr. William Norris (Sedges of Iowa). Mr. Husveth has taught sedge identification courses in the field and in lab settings, and has lead dozens of plant identification field trips within native wetland and upland plant communities throughout Minnesota. Jason not only knows and loves sedges; he knows how to teach others how to navigate through sedge diversity by understanding the key underlying concepts of how to identify, learn, and remember sedge species of Minnesota. Jason specializes in peatland restorations of the Anoka Sand Plain and rare species survey and conservation throughout the Upper Midwestern United States.



University of Minnesota Wetland Delineator Certification Program Continuing Education Credits:

From 2012-2019, the University of Minnesota Wetland Delineator Certification Program (WDCP) had recognized this workshop as eligible for wetland delineator continuing education credits. For the 2022 workshop, the newly formed Minnesota Wetland Professional Certification Program (MWPCP) has confirmed that successful completion of the entire three day sedge identification workshop will result in **18 direct hours of continuing education credit** applicable to maintaining MWPCP certification. If you have further questions about MWPCP continuing education credits, please contact Jason Husveth at jhusveth@ccesinc.com. Additional details and updated information regarding this workshop can be found at: www.ccesinc.com/workshops.

Sedges of Minnesota

Workshop Agenda:

Day 1: Wednesday, June 15, 2022

Location: University of Minnesota Plant Growth Facilities, Lab 136, St. Paul Campus (St. Paul, MN)

8:00 to 8:30AM	Check In and Registration
8:30 to 9:00AM	Introduction and Purpose
9:00 to 10:30AM	<i>Cyperaceae</i> : Genera in Minnesota with Slides and Live Specimens
10:30 to 11:00AM	Break with Refreshments, and Individual Instruction
11:00AM to 12:00PM	<i>Carex</i> Species: Introduction to Collecting, Keying, and Identifying <i>Carex</i> of MN Concepts, Identification Tools, and Shortcuts
12:00 to 1:15PM	Lunch Break – Student Center Cafeteria or Local Restaurants
1:15 to 3:00PM	Group Keying of <i>Carex</i> Live Specimens
3:00 to 3:30PM	Break with Refreshments, and Individual Instruction
3:30 to 4:30PM	Group and Individual Keying of <i>Carex</i> Live Specimens
4:30PM	Adjourn

Day 2: Thursday, June 16, 2022

Location: University of Minnesota Plant Growth Facilities, Lab 136, St. Paul Campus (St. Paul, MN)

8:00 to 8:15AM	Check In
8:15 to 10:30AM	<i>Carex</i> diversity in Minnesota (Sub-Genera Groups, 160+ Species Recognized) Sub-Genera Groups with Representative Live Specimens
10:30 to 11:00AM	Break with Refreshments, and Individual Instruction
11:00AM to 12:00PM	Introduction to <i>Ovales</i> Sedges: Key Concepts and Key Identification Characteristics
12:00 to 1:00PM	Lunch Break – Student Center Cafeteria or Local Restaurants
1:00 to 4:00PM	Key <i>Ovales</i> Sedges of Minnesota (and All Species) from Live and Pressed Specimens
4:00 to 4:30PM	Review of Major Concepts and Identification Tools, Applying What You Have Learned, and Questions and Answers
4:30PM	Adjourn

Day 3: Friday, June 17, 2022

Location: High Quality Field Sites within Northern Anoka and/or Northern Washington Counties, MN

8:30AM to 12:00PM	Visit High Quality Field Site 1 in Anoka / Washington County (Sites TBD)
12:00PM to 1:00PM	Lunch Break – Travel to Field Site 2
1:00PM to 4:00PM	Visit High Quality Field Site 2 in Anoka / Washington County (Sites TBD)
4:00PM	Adjourn

Registration Information

Registration for this three day workshop will be on a first come, first served basis. Registration will be open until filled. Registration is confirmed with full payment of registration fee. To maximize the instructors' time with each workshop participant, registration will be limited to 25 students. A waitlist will be maintained to allow for cancellations. Registration fees are non-refundable after May 16, 2022.

Once registration information and payments are received, all registration confirmations and workshop correspondence will be sent via email by Jason Husveth (jhusveth@ccesinc.com).

Registration fees will include refreshments and course materials. Other accommodations, such as lunch, campus parking, transportation, and lodging, will be at the registrants' own expense. If you cannot afford the full registration fee, please contact the instructor to discuss alternative arrangements.

Registration Fee: \$600 per attendee

Please make check payable to **Critical Connections Ecological Services, Inc.**

Special payment accommodations can be made via PayPal, upon request.

Mail Registration Form and Payment to:

Critical Connections Ecological Services, Inc.
c/o Sedge Workshop
450 Main Street North
Suite 130
Stillwater, MN 55082

Registration Form

Sedges of Minnesota – Three Day Identification Workshop

Instructor: Jason Husveth, Critical Connections Ecological Services, Inc.

Dates: Wednesday, June 15 to Friday, June 17, 2022

Location: University of Minnesota Plant Growth Facilities, Lab 136
1908 Dudley Ave, St. Paul Campus,
St. Paul, Minnesota

Student Name: _____

Organization /Company: _____

Address: _____

Phone Number: _____ (cell number preferred)

Email: _____

Questions?

Please contact Jason Husveth, Course Instructor at 651-433-4410 or jhusveth@ccesinc.com
For more information, please visit: www.ccesinc.com/workshops