

Monroe Convention Center
Bloomington, Indiana

May 15-19, 2022

Rothrock
Sedge Symposium

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PRIMARY
UNDERWRITER



EVENT
ORGANIZER

Bill N. McKnight

OTHER
SPONSORS

The Mad Botanist | Eco Logic | Taylor University
Paul Rothrock & Anton Reznicek

HISTORY

I approached Paul with the idea of an event to honor, promote, and supplement his *Carex* book while it was still in manuscript form; I envisioned something more than a traditional book signing. This occurred pre-COVID. The pandemic not only delayed the book's production and release date, it also eventually resulted in a change of venue. Although the event originally was slated a week later at Pokagon State Park in extreme northeast Indiana, the revised south-central Indiana locale provided an equally diverse flora that was especially rich in noteworthy woodland species. —Bill N. McKnight

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Agenda

Field Trip Locations & Pairings

Participants & Group Photo

Welcome Video

Robert H. Mohlenbrock

Presentations

NOTE: Unfortunately, some of the audience comments were voiced without the aid of a microphone, thus barely audible, if at all, on the recording. Moreover, visuals were not captured from the screen, so pointer usage was not recorded.

- What Are We Doing?

Botany & Beyond: An Evaluation In Five Acts

Bill McKnight

see also, Word Cloud & New Paradigm

- The Evolution Of *Carex*

Anton Reznicek

- What Does Native Mean?

Michael Homoya & Gerould Wilhelm

- Cultivating & Landscaping With *Carex*: Challenges & Opportunities

[Preceded by a tribute from Carl Keener]

Kevin Tungesvick

- Symbiosis: Ants & *Carex*

Laura Rericha

- Primness & Promiscuity In Sedges & Oaks

Andrew Hipp

- Word Cloud

- New Paradigm

- Event Photos

Rothrock Sedge Symposium

AGENDA

SUNDAY (May 15)

7:00 ORGANIZERS DINNER for Speakers & Field Trip Leaders FARM

MONDAY (May 16)

FIELD TRIP LEADERS SITE RECONNAISSANCE

6:00 - 9:00 ICE BREAKER – WORKSHOP Convention Center

(7:00 - 8:00) Light BUFFET STYLE DINNER

TUESDAY (May 17)

7:00 - 8:00 BREAKFAST

8:20 - 8:40 INTRODUCTION (Welcome, Robert H. Mohlenbrock)

8:40 - 9:35 WHAT ARE WE DOING? BOTANY AND BEYOND: an evaluation in five acts
Bill McKnight themadbotanist.com, IAS Publications

9:35 - 10:10 GROUP PHOTO & BREAK

10:10 - 11:00 THE EVOLUTION OF CAREX
Anton Reznicek Univ Michigan (emeritus)

11:00 - 12:00 WHAT DOES NATIVE MEAN?
Michael Homoya IN DNR Nature Preserves (emeritus)
Gerould Wilhelm Conservation Research Institute (CRI), Flora of the Chicago Region

LUNCH (12:00 - 1:00)

AFTERNOON FIELD TRIPS (1:30 - 6:00)

GROUP DINNER (6:30 - 9:30) Upland Woodshop (Happy Hour 6:30 - 7:30)
Honored guests - Patricia Prather, Eric Taylor

WEDNESDAY (May 18)

7:00 - 8:00 BREAKFAST

8:20 - 8:40 ANNOUNCEMENTS

8:40 - 9:40 CULTIVATING AND LANDSCAPING WITH CAREX: CHALLENGES AND OPPORTUNITIES
Kevin Tungsveick Eco Logic, formerly at Spence Nursery (Muncie IN)

9:40 - 10:10 BREAK

10:10 - 11:05 SYMBIOSIS: ANTS AND CAREX
Laura Rericha Forest Preserve District of Cook Co (IL), CRI, FCR

11:05 - 12:00 PRIMNESS AND PROMISCUITY IN SEDGES AND OAKS
Andrew Hipp The Morton Arboretum, The Univ Chicago

LUNCH (12:00 - 1:00)

AFTERNOON FIELD TRIPS (1:30 - 6:00)

GROUP DINNER (6:30 - 10:00) Woolery Mill (Happy Hour 6:30 - 7:30)
Special guests - John & Carrie Lawrence, Edwin Squiers, Todd Thompson

THURSDAY (May 19)

7:00 - 8:30 BREAKFAST OPTIONAL AM FIELD TRIP (Burnham Garden)

May 15-19, 2022

Monroe Convention
Center,
Bloomington IN

Honoring
*PAUL ERNEST
ROTHROCK*



Rothrock Sedge Symposium

FIELD TRIP LOCATIONS & PAIRINGS

Beanblossom Bottoms Nature Preserve - an ancient lake bottom with a mix of mature bottomland woods, marsh, and mid-successional sedge meadow. The extensive (2-mile) boardwalk allows easy access to a large range of habitats. Abundant species include 27 *Carex* species.

Monroe Co., owned by Sycamore Land Trust, began as a 42-acre parcel donation in 1993, now a 598-acre property, located in the Highland Rim Natural Region on Mitchell Karst Plain

Trevlac Bluff Nature Preserve - features a bluff with *Tsuga canadensis*, mature upland woods, a marsh, and an extensive alluvial wood along Beanblossom Creek. Diverse habitats with over 350 species, including 32 *Carex* species.

Brown Co., owned by Sycamore Land Trust, ca. 100-acre property, featuring both a lowland and upland section, located in the Highland Rim Natural Region in Brown County Hills

Kent Farm Research and Teaching Preserve - early successional woods with an extensive forested knob rising over 250 feet. Features a steep northeast-facing slope of amazing floristic richness as well as more xeric sites. Nearly 20 woodland *Carex* species, including the rare *Carex timida*.

Monroe Co., owned by Indiana University, 90-acre property, located in the Highland Rim Natural Region in Brown County Hills

Green's Bluff Nature Preserve - features an upland forest, rocky bluffs with *Tsuga canadensis*, and a lush floodplain forest along Raccoon Creek. The sedge flora has ca. 30 species; ferns are diverse. The rare and awesome freshwater red alga *Batrachospermum* is found attached to limestone bedrock in the creek.

Owen Co., owned by The Nature Conservancy, established in 1985, now a 1,134-acre property, located in the Escarpment Section of the Shawnee Hills Natural Region

TUESDAY (May 17)

BEANBLOSSOM BOTTOMS	BEANBLOSSOM BOTTOMS	TREVLAC BLUFFS	KENT FARM
Hipp - Namestnik	Wilhelm - Rericha	Homoya - Tungesvick	Reznicek - Rothrock

WEDNESDAY (May 18)

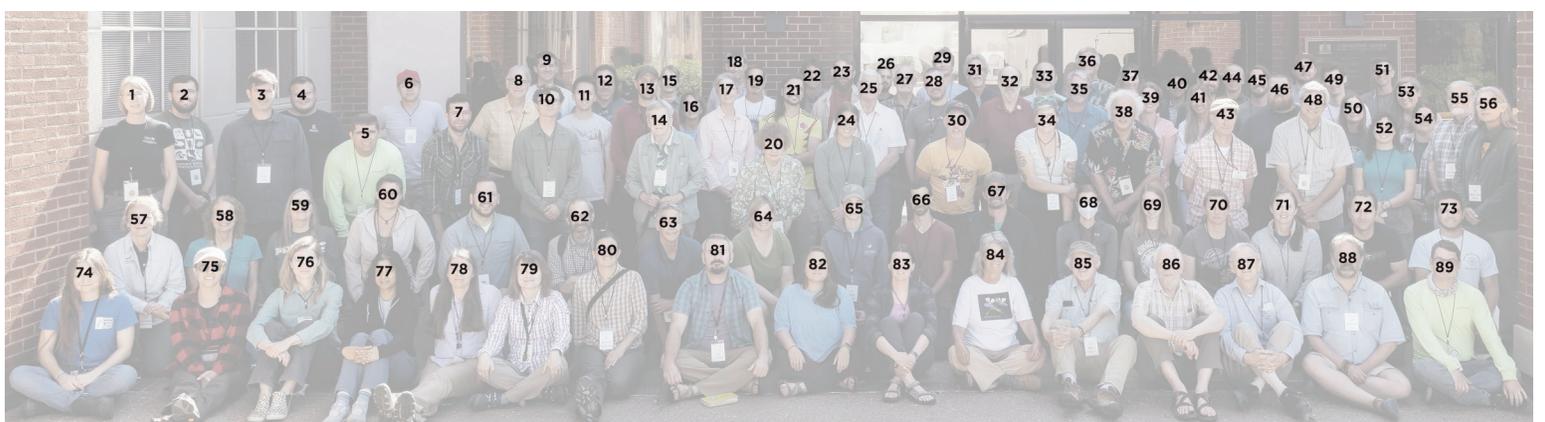
BEANBLOSSOM BOTTOMS	BEANBLOSSOM BOTTOMS	TREVLAC BLUFFS	GREEN'S BLUFF
Reznicek - Rothrock	Homoya - Tungesvick	Wilhelm - Rericha	Hipp - Namestnik

Rothrock Sedge Symposium

ATTENDEES



- | | | | |
|---|------------------------------------|---|--|
| 38. ADELSON, Glenn | 36. HARBY, Nick | 44. LAYTON, Daniel John | 87. ROTHROCK, Paul |
| 13. BALZER, Adam | 61. HARMON, Matt | LEAVENS, Emma
<i>(not pictured)</i> | RUCH, Donald
<i>(no show)</i> |
| 10. BANKS, Cody | 26. HECK, Zachery | 35. MARCUM, Paul | 53. SCHOUTEN, Olivia |
| 3. BART, David | 58. HEIKENS, Alice | 80. MARINOVA, Natalie | 28. SLAUGHTER, Brad |
| 83. BAYERT, Melissa | 5. HESS, Ben | 27. MCKNIGHT, Bill | 6. SPYREAS, Greg |
| 37. BECKSTEDT, Madison | 71. HILLIER, Kaitlin | 46. MEEKS, Timothy | 41. STEBING, Joanna |
| 63. BERGMAN, Daniel | 62. HIPPI, Andrew | 72. MENDENHALL, Ryan | 52. STULIK, Emily |
| 24. BOMAR, Kate | 9. HOBBS, Collin | MILLER, Grace
<i>(not pictured)</i> | 18. TUNGESVICK, Kevin |
| 43. BOTKA, Douglas | 22. HOFFMAN, John | MOHLENBROCK, Robert
<i>(via rec message)</i> | 7. VAN HEMESSEN, William |
| 60. CATLING, Pauline | 16. HOMOYA, Barbara | 78. MUELLER, Monica | 65. VAN KAN, Grace |
| 81. CUNNINGHAM, Wes | 19. HOMOYA, Mike | 42. NAMESTNIK, Scott | 74. VISNYAK, Allison |
| 84. DAMM, Mary | 49. HULL, Rich | 51. NICHOLSON, Jody | 69. VOLZ, Emily |
| 88. DOAK, Thomas | 12. HUSVETH, Jason | NIESET, Julie
<i>(not pictured)</i> | 29. WEISS, Hunter |
| 75. ELSENBROEK, Kimberly | 67. HUTCHINS, Jamison | 57. PAINE CROSSIN, Stephanie | 66. WELDY, Phillip |
| 33. ERDOGAN, Eyup | 39. JACOBI, Christy | 32. PENSKAR, Michael | 50. WELZ, Mary |
| 56. FEIST, Mary Ann | 1. JACQUART, Ellen | 21. PILLA, Nathanael | 25. WILHELM, Gerould |
| FERGUSON, John
<i>(not pictured)</i> | 2. JANSSEN, Eric | 76. PINK, Kristin | 45. WILLIAMS, Wyatt |
| 4. FINZEL, Matthew | 77. JOG, Suneeeti | 73. POYNTER, Zach | 14. ZIMMERMAN, Elizabeth |
| 59. FISHER-DUNHAM, Mary | 82. JOHNSON, Morgan | 8. REBER, Rob | |
| 15. FRISCHIE, Stephanie | JONES, Timothy
<i>(no show)</i> | 30. REINIER, John | SPECIAL DINNER GUESTS
<i>(not pictured)</i> |
| 20. GARNESS, Kathleen | 64. KEARNS, Michelle | 70. RENSKERS, Crystal | LAWRENCE, Carrie & John |
| 40. GARZA, Nicolas | 79. KEYES, Dorrie | 17. RERICHA, Laura | PRATHER, Patricia |
| GIBSON, Anthony
<i>(no show)</i> | 11. KIEHL, Nick | 23. REUST, Brenten | SQUIERS, Edwin |
| 54. GOMEZ, Jessica | 48. KLICK, Ken | 55. REZNICEK, Anton "Tony" | TAYLOR, Eric |
| 89. GOODSPEED, Andrew | 85. KLUGE, Mark | | THOMPSON, Todd |
| 68. HABER, Elizabeth | 31. KNOX, Eric | | |
| 86. HANGARTER, Roger | 47. KWOLEK, Aaron | | |
| | 34. LAMB, Caitlin | | |



Rothrock

Word Cloud
McKnight Presentation

Sedge Symposium



Rothrock Sedge Symposium

A New Paradigm

A NEW PARADIGM FOR NATURAL HISTORY STUDY & COLLECTION MANAGEMENT

Proposed by B.N. McKnight at Rothrock Sedge Symposium, May 2022

GIVEN: colleges and universities have and continue to divest from whole organism and ecologically oriented biology despite the fact there is a real, serious, and continuing need for this kind of science, thus it is imperative that a new way forward be considered with emphasis on assessing the changing landscape and exposition of human behavior as it relates to the function and maintenance of the manmade and natural landscape.

Many “biology departments” and new age biologists no longer consider natural history scientists to be biologists or that what these non-molecular researchers do is important or relevant (i.e., worthy of position, space, or funding).

GOAL: to free ourselves of this failing marriage, before it is too late, WE need to consider other options. We need to be more proactive. We need to do a better job of justifying the research we do, and that will require that we rethink the classical model of biologist, affiliation, and collections.

(A) TOWARDS THIS GOAL, THE FOLLOWING IS SUGGESTED:

- o establish a non-profit research organization
- o near a college or university (but administratively independent)
- o regional center (template for others?)
- o a new approach tailored to the short- and long-term needs of an imperiled world
- o will require thinking outside the box
- o predicated on better stewardship -- why the work is being done
- o could, in part, be the ecological equivalent of a think tank (e.g., Hoover Institute)
- o administration light
- o advisory board (incl. some staff)
- o an INHS from the ground up for now and the future
- o e.g., “SMITH” INSTITUTE FOR TRANSITION ECOLOGY (SITE) or ?

KEY CONSIDERATIONS FOR A NEW, FEASIBLE & PREFERRED TEMPLATE

(B) Key Q re personnel:

- o what is the critical minimum?
- o at what number does the size and scope become problematic?

(C) Key Concern re Collections Management

- o given that a collection can get too big, need a protocol for accession, deaccession & transfer
- o primary goal NOT amassing specimens from inventories (i.e., not merely taxonomic / phytogeography orientation)

(D) SCOPE OF WORK

- o in depth study of systems & key specific organisms
- o terrestrial & wetland
- o 75%+ of the work must be in the region (i.e., NOT like Mo Bot)
- o cross disciplinary collaboration
- o to include but not limited to inventory & surveys
- o not a museum in the classical sense
- o require outreach (teaching & workshops / field trips)
- o monitoring baseline/benchmark studies (esp. quantitative and qualitative analysis of populations)
- o transitional changes (phenology)
- o pollination biology & reproductive strategies
- o conservation & restoration activities (endangered & invasive species)
- o analysis of traditional landscape management practices with recommended alternatives
- o association bottlenecks (find the weak or imperiled link in the synergism)

(E) ASSOCIATED ACTIVITIES

- o outreach (teaching & workshops/field trips)
- o seminar series
- o occasional symposia
- o institutional publication

(F) PHYSICAL PLANT

- o \$20M for campus - land & building
- o @ \$600/sq ft (based on INHS 2010 build @ \$520/)
- o office & appropriate lab space
- o near a college or university (but administratively independent)
- o size of land plot
- o building(s?) laid out in a manner to promote interaction
- o library (essential)
- o small conference rooms
- o 200+ person auditorium
- o lounge / commons area
- o large drive in wet / dirty layout area
- o greenhouse(s) & outdoor plots
- o collections storage space
- o exhibit space
- o associated gardens / arboretum
- o parking (100 spots)

(G) FUNDING / EXPENSES

- o endowed (naming opportunity)
- o 100M 20M for land & to build & 5M for initial equip
75M invested for annual operating expenses
increase corpus at least 5% per year
@ 4% annual return = 3M
- o source of revenue (contracted service fees, grants, other)
indirect cost 10%? (incl speaking fees)
return on corpus of endowment
500K+ (total) from service/contract fees & grants
- o salaries & benefits (2.5M)
- o 4K annually travel & for professional development line item
- o equipment & supplies (initial & annual)
- o physical plant (quality, state of the art)
- o utilities
- o insurance
- o transportation (contracted out)
- o custodial (contracted out)

(H) AFFILIATION

- o colleges & universities
- o state agencies (academies & DNR)
- o federal agencies
- o land trusts
- o various others

(I) POSITIONS (general)

- o est. 40-50 (w/ support staff never >100) see below
- o base salary for primary positions \$50-60K + benefits (est 30%) + travel expenses & prof dev (4K annually)
- o salary cap 120K
- o 1-5% possible annual increase pay package
- o option for occasional 1-time bonuses
- o egalitarian (as much as possible)
- o advanced degree preferred but NOT required
- o prefer at least some science background for ALL positions (much like Fermilab)
- o no tenure (biannual review / job assessment, all positions)
- o fully integrated & team projects
- o administration
some tasks shared by staff on rotating basis

(J) POSITIONS (specific, at least)

- o chemist (2) at least one allelopathy, one toxicologist
- o geneticist
- o geologist / soil scientist
- o sociologist / anthropologist
- o ecologist (2) one physiological
- o agronomist (weeds)
- o dendrologist
- o mycologist (2) mycorrhizae, plant pathologist
- o microbiologist (bacteria / viruses)
- o entomologist (3) one a gall specialist
- o other invertebrate zoologist (3) mollusks, crustaceans, worms
- o ornithologist

- o mammologist
- o herpetologist
- o ichthyologist
- o bryologist
- o lichenologist
- o phycologist
- o vascular plant experts (3) at least one graminoid specialist
- o statistician / biometrics
- o IT
- o collections managers (4)
- o librarian (essential/core needs)
- o director (CEO) & secretary
- o grants / external funding coordinator
- o accountant (CFO)
- o HR person
- o illustrator / graphic designer
- o facilities director & assistant
- o assistants / paid interns (salary + benefits)
- o board of directors
- o some work/positions might be affiliated or independently contracted

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Event Photos

Photo Gallery

