



Dr. Alden C. Dirks | Curriculum Vitae

EDUCATION

PhD, Ecology and Evolutionary Biology University of Michigan Advisor: Professor Timothy Y. James	Sep. 2019 – June 2024
MS, Agroecology University of Wisconsin-Madison Advisor: Professor Randy Jackson	June 2017 – Aug. 2019
BA, Biology (Spanish and Latin American Studies minors) Swarthmore College GPA: 3.87/4.00	Sep. 2012 – May 2016

RELEVANT EMPLOYMENT

Postdoctoral Research Fellow Children's Hospital of Philadelphia NIH U54-funded grant to develop a biobank of pediatric invasive fungal strains, sequence 360 reference genomes, and analyze genetic determinants of antifungal susceptibility	Jan. 2026 – present
Postdoctoral Researcher University of Michigan Characterized the evolutionary history and genomic properties of <i>Sorochytrium milnesiophthora</i> , a tardigrade-infecting <i>Blastocladiomycota</i> fungus	Jan. – Aug. 2025
Doctoral Graduate Student Researcher and Instructor University of Michigan Explored the genetic basis and evolutionary history of the mycotoxin gyromitrin in false morel or lorchel mushrooms (<i>Gyromitra</i> spp. and related taxa, family <i>Discinaceae</i>)	Sep. 2019 – June 2024
Master's Graduate Student Researcher University of Wisconsin-Madison Evaluated the effects of nitrogen amendment on the community composition of arbuscular mycorrhizal fungi associating with switchgrass using PacBio metabarcoding	June 2017 – Aug. 2019
Research Assistant Harvard University & Boston Harbor Now Collected sporocarps from the Boston Harbor Islands National Recreation Area for a fungal biodiversity inventory and identified collections with DNA barcoding	Jan. – May 2017
NSF Research Experience for Undergraduates (REU) Fellow MDI Biological Laboratories Measured the tensile strength of seagrass under various growth regimens to determine the role of dissolved silica in plant health and disease prevention	June – Aug. 2014

TEACHING EXPERIENCE

Adjunct Professor Wagner Free Institute of Science Taught a 6-week introductory mycology course entitled "More than Mushrooms: The Stunning Diversity of Fungi" as part of the Wagner Institute's free public adult continuing education program	April – May 2025
Lead Mycologist Philly Forests Designed and delivered two-week workshop series on mycology and foraging to five cohorts of 15 students	May – Sep. 2023
Certification Instructor Midwest American Mycological Information (MAMI) Co-taught workshops to educate and certify mushroom hunters from the Great Lakes region in the safe and legal collection and sale of wild-foraged mushrooms	Sep. 2021 – Sep. 2023
Fungal Biology Graduate Student Instructor University of Michigan Developed hybrid course model with in-person and remote lab activities and utilized iNaturalist to organize and share students' macrofungi collections	Sep. – Dec. 2020
Microbiology Graduate Student Instructor University of Michigan Developed curriculum pertaining to introductory and supplementary background information as well as weekly lab assignments	Sep. 2019 – May 2020

GRANTS, AWARDS, & FELLOWSHIPS

MSA International Travel Award | \$1500 (March 2024)

Mycological Society of America (MSA) award to attend the 2024 International Mycological Congress (IMC) meeting in Maastricht, the Netherlands, and present my research on *Discinaceae* phylogenomics

Orson and Hope Miller MSA Travel Award | \$750 (March 2024)

Mycological Society of America (MSA) award to attend the 2024 MSA conference in Toronto, Ontario, Canada, and present my research on *Discinaceae* phylogenomics

Rackham Predoctoral Fellowship | one year of funding (February 2023)

Fellowship from the University of Michigan Graduate School to support “outstanding doctoral students” working on dissertations that are “unusually creative, ambitious, and impactful”

MTRAC Starter Grant Award | \$40,000 (April 2022)

Award from the Michigan Translational Research and Commercialization (MTRAC) Innovation Hub for AgBio to explore the licensing of a novel fungal product

MSA Rippon Award | \$500 (April 2022)

Mycological Society of America (MSA) award for the investigation of mycotoxins

Richard P. Korf MSA Travel Award | \$750 (April 2022)

Mycological Society of America (MSA) award to attend the 2022 MSA conference in Gainesville, Florida, and present my research on the distribution of gyromitrin

2021-2022 and 2022-2023 EEB Research Award | \$1,273 (May 2021), **\$2,067** (April 2022)

Awards from the University of Michigan Department of Ecology and Evolutionary Biology to conduct transcriptomics and gene knockout studies to elucidate gyromitrin-producing genes

Harold and Vivian Shapiro/John Malik/Jean Forrest Award | \$2,500 (December 2021)

Award from the University of Michigan Rackham Graduate School with the intent of helping to pay interest charges accruing on educational loans while in graduate school

Dr. Nancy Williams Walls Award for Field Research | \$1,112 (April 2020)

Award from the University of Michigan Department of Ecology and Evolutionary Biology for fieldwork to collect *Gyromitra* specimens (false morels) from around the state of Michigan

Leo M. Leva Memorial Prize | \$800 (May 2016)

Award from the Swarthmore College Department of Biology faculty to senior students for undergraduate work that showed exceptional promise for future societal impact

SERVICE & LEADERSHIP

SPORES Mentor | Mycological Society of America (MSA)

July 2025

Served as a mentor for first-time conference attendees who are underrepresented in the natural sciences at the 2025 MSA conference in Madison, Wisconsin

Foray Lead | Philadelphia Mycology Club

Sep. 2022 – present

Lead foray walks and give lectures for Philadelphia’s amateur mycology club

Webmaster | Mycological Society of America (MSA) Student and Postdoc Section (SPS)

Sep. 2021 – Sep. 2022

Updated and maintained MSA SPS’ website, msastudents.org, and made their monthly newsletter

Founder and President | Madison Mycological Society

Jan. 2018 – Aug. 2019

Founded Madison’s first amateur mycological society, acquired non-profit status, and led a board of directors consisting of seven volunteer community members. Led forays every other week and organized monthly local mycologist lecture series.

PUBLICATIONS

- Dirks AC**, Vecchi M, Orozco-Quime M, Schwarz E, Calhim S, James TY. 2026. Rediscovery of the tardigrade pathogen *Sorochytrium milnesiophthora*, a blastoclad boasting the longest known fungal internal transcribed spacer. *Mycologia*, in press.
- Dirks AC**, Methven AS, Miller AN, Orozco-Quime M, Maurice S, Bonito G, Wyk J, Ahrendt S, Kuo A, Andreopoulos W, Riley R, Lipzen A, Chovatia M, Savage E, Barry K, Grigoriev I, Bradshaw A, Martin F, Arnold A, James TY. 2025. Phylogenomic insights into the taxonomy, ecology, and mating systems of the lorchel family *Discinaceae* (*Pezizales*, *Ascomycota*). *Molecular Phylogenetics and Evolution* 25:108286.
- Miller AN, **Dirks AC**, Van Vooren N, Methven AS. 2025. Studies in *Gyromitra* III: the *Gyromitra brunnea* lineage including *G. japonica* sp. nov. *Mycological Progress* 24:9.
- Ghobad-Nejhad M, Langer E, **Dirks AC**, Dai YC. 2024. *Steccherinum fragrans* Ghobad-Nejhad & Langer, sp. nov. in Crous et al. 2024. Fungal Planet description sheets: 1697–1780. *Fungal Systematics and Evolution* 14:325–577.
- Vohra V, **Dirks AC**, Bonito G, James TY, Carroll DK. 2024. A 19-year longitudinal assessment of gyromitrin-containing (*Gyromitra* spp.) mushroom poisonings in Michigan. *Toxicon* 247:107825.
- Lagrange E, Lorient M-A, Chaudhary NK, Schultz P, **Dirks AC**, Guissart C, James TY, Vernoux JP, Camu W, Tripathi A, Spencer PS. 2024. Corrected speciation and gyromitrin content of false morels linked to ALS patients with mostly slow-acetylator phenotypes. *eNeurologicalSci* 35:100502.
- Dirks AC**, Beug MW, Methven AS, Miller AN, James TY. 2024. *Gyromitra persicula* sp. nov. (*Discinaceae*, *Pezizales*), a novel discoid *Gyromitra* from Northwestern North America. *Phytotaxa* 644:49–55.
- Seto K, Simmons DR, Quandt CA, Frenken T, **Dirks AC**, Clemons RA, McKindles KM, McKay RML, James TY. 2023. A combined microscopy and single-cell sequencing approach reveals the ecology, morphology, and phylogeny of uncultured lineages of zoosporic fungi. *mBio* e01313-23.
- Dirks AC**. 2023. *Phaeotremella dejopia* sp. nov. In Lebeuf et al. 2023. Fungal Systematics and Evolution: FUSE 9. *Sydowia* 75:313–377.
- Dirks AC**, Mohamed OG, Schultz PJ, Miller AN, Tripathi A, James TY. 2023. Not all bad: gyromitrin has a limited distribution in the false morels as determined by a new ultra high-performance liquid chromatography method. *Mycologia* 115(1):1–15.
- Diederich P, Sulistyo BP, Haelewaters D, **Dirks AC**, Lawrey JD. 2022. Class *Agaricomycetes*, order *Atheliales*. In Diederich P, Millanes AM, Wedin M, Lawrey JD (Eds.), *Flora of Lichenicolous Fungi, Volume 1: Basidiomycota* (pp. 41–46).
- Miller AN, **Dirks AC**, Filippova N, Popov E, Methven AS. 2022. Studies in *Gyromitra* II: cryptic speciation in the *Gyromitra gigas* species complex; rediscovery of *G. ussuriensis* and *G. americanigigas* sp. nov. *Mycological Progress* 21(9):1–13.
- Dirks AC**, Jackson RD. 2020. Community structure of arbuscular mycorrhizal fungi in soils of switchgrass harvested for bioenergy. *Applied and Environmental Microbiology* 86:e00880-20.
- Dirks AC**, Russell SD. 2020. DNA barcoding of macrofungi from the 2018 Smith Foray: new fungal records for Wisconsin and the United States of America. *The Great Lakes Botanist* 59(3–4):191–201.
- Dirks AC**, Haelewaters D. 2019. Phylogeny of *Sphaerosporium lignatile*. In Song et al. 2019. Fungal Systematics and Evolution: FUSE 5. *Sydowia* Dec:141–245.
- Haelewaters D, **Dirks AC**, Kappler LA, Mitchell JK, Quijada L, Vandegrift R, Buyck B, Pfister DH. 2018. A preliminary checklist of fungi at the Boston Harbor Islands. *Northeastern Naturalist* 25(Special Issue 9):45.

REFERENCES

Professor Tim James
University of Michigan
PhD mentor
tyjames@umich.edu

Dr. Osama Mohamed
Corteva Agriscience
Collaborator
osama.mohamed@pharma.cu.edu.eg

Professor Andy Miller
University of Illinois Urbana-Champaign
Collaborator
amiller7@illinois.edu