

# SOLEIL EVANTASH YOUNG

University of Wisconsin-Madison  
Department of Bacteriology  
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## EDUCATION

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**Ph.D. Candidate in the Microbiology Doctoral Training Program, 2018-present**

**University of Wisconsin-Madison**, Madison, WI

Advisor: Dr. Cameron Currie, Department of Bacteriology; Dr. Anne Pringle, Departments of Bacteriology and Botany

**Bachelor of Science in Biology & Bachelor of Arts in Anthropology, 2017**  
**Syracuse University**, Syracuse, NY, *summa cum laude*

**Honors Undergraduate Thesis:** Please Forget to Floss: Developing an Assay for Identifying Tuberculosis in Dental Calculus From the Smithsonian's Huntington Collection (1893-1921) Advisors: Dr. Shannon Novak and Dr. Anthony Garza

## PAPERS

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**Young, S.E.**, Gotting, K., Bryan, C.T. and Currie, C. (2024). Evidence for cryptic sex in the *Escovopsis*, a mycoparasite in the fungus-growing ant symbiosis (in preparation).

**Young, S.E.** and Pringle, A. (2024). The (mis)use of sex categories in fungi (in preparation).

**Young, S.E.** and Pringle, A. (2024). The limits of a love affair with analogy: 23,000 sexes and the fungus *Schizophyllum commune* (in review, *Phil. Theory and Practice in Bio.*).

Li, H., **Young, S.E.**, Poulsen, M., and Currie, C. R. (2020). Symbiont-Mediated Digestion of Plant Biomass in Fungus-Farming Insects. *Annu. Rev. Entomol.* 66(1), 297-316.

## BOOK CHAPTERS

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**Young, S.E.** and Pringle, A. (in press). Fungal Sex and Reproduction. In *The World of Fungi*, Ed. D. Hibbett. Princeton University Press, Princeton, NJ.

## RESEARCH EXPERIENCE

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**Ph.D. Candidate** January 2019 – Current

Currie and Pringle Labs, Department of Bacteriology, University of Wisconsin-Madison, Madison, WI.

**Major Topics of Research:** Characterizing the nuclear architecture of *Leucoagaricus gongylophorus*, a polyploid and polykaryotic fungal mutualist of fungus-growing ants; Comparative evolutionary genomics of ant-associated *Leucoagaricus* spp.; Evolution of sex in fungi.

**Research Assistant** August 2017 – July 2018

Welch Lab, Department of Biology, Syracuse University, Syracuse, NY

**Research:** Genetics and evolution of predatory social behavior in the bacterium *Myxococcus xanthus*.

**Collections Volunteer**, July 2017 – August 2017

National Museum of Health and Medicine, Silver Spring, MD

**Research:** Assisted in organization and upkeep of anatomical and developmental collections at the National Museum of Health and Medicine.

**Visiting Researcher**, June 2017

Stone Lab, School of Human Evolution and Social Change, Arizona State University, Tempe, AZ

**Research:** Developing a method for utilizing dental calculus to diagnose tuberculosis in skeletal remains (in collaboration with the Novak and Garza labs).

**Undergraduate Researcher** August 2013 – May 2017

Garza Lab, Department of Biology, Syracuse University, Syracuse, NY

**Research:** Molecular mechanisms of *Myxococcus xanthus* starvation induced sporulation.

**Undergraduate Researcher** May 2015 – May 2017

Novak Lab, Department of Anthropology, Syracuse University, Syracuse, NY

**Research:** The material manifestations of institutionalization at the Oneida Insane Asylum.

## PRESENTATIONS

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**Young, S.E.**, Khadempour, L., Francoeur, C., and Currie, C.R. (July 2024). An unusual mechanism of genetic organization in a polyploid and polykaryotic obligate fungal mutualist.

*9<sup>th</sup> Conference on Beneficial Microbes*, Madison, WI.

(Oral Presentation).

**Young, S.E.**, Gotting, K., and Currie, C.R. (June 2024). Identification and characterization of the mating-type loci in *Escovopsis*, a mycoparasite in the fungus-growing ant symbiosis.

*2024 Mycological Society of America Annual Meeting*, Ontario, Canada

(Oral Presentation).

**Young, S.E.**, Khadempour, L., Francoeur, C., and Currie, C.R. (April-June 2023). An unusual mechanism of genetic organization in a polyploid and polykaryotic obligate fungal mutualist.

*CIFAR's Fungal Kingdom: Threats and Opportunities (FKG) 2023*, Toronto, Canada (**Poster**).

*Animal-Microbe Symbioses Gordon Research Seminar 2023*, Tuscany, Italy (**Oral Presentation**).

*Animal-Microbe Symbioses Gordon Research Conference 2023*, Tuscany, Italy (**Poster**).

**Young, S.E. (February 2023)**. An unusual mechanism of genetic organization in a polyploid and polykaryotic obligate fungal mutualist.

Fungal Supergroup, University of Wisconsin-Madison (**Oral Presentation**).

**Young, S.E.**, Khadempour, L., Francoeur, C., Chevrette, M., and Currie, C. R. (May -July 2022). Examining the Nuclear Architecture of a host-restricted fungal mutualist.

*The Biology of Genomes 2022*, Cold Spring Harbor, NY. (**Published Abstract and Poster**).

*8<sup>th</sup> Conference on Beneficial Microbes*, Madison, WI. (**Published Abstract and Poster**).

**Young, S.E.** (April 2022). Examining the nuclear architecture of *Leucoagaricus* spp., host-restricted nutritional fungal mutualists.

*Microbiology Doctoral Training Program Fourth Year Seminar*, Madison, WI. (**Oral Presentation**).

**Young, S.E.** (March 2021). Fungal mediation of mutualism maintenance: Investigating the role of *Leucoagaricus* spp. in the evolution of the ant-fungus farming symbiosis.

*Microbiology Doctoral Training Program Third Year Seminar*, Madison, WI. (**Oral Presentation**).

**Young, S.E.**, Gotting, K., Khadempour, L., and Currie, C. R. (2019). Characterizing asexuality in the fungal cultivar of leaf-cutting ants.

*33rd Annual Raper Symposium*, Madison, WI (**Poster**).

**Young, S.E.** and Warner-Smith, A. (2017). Identification of *Mycobacterium tuberculosis* in dental calculus from the Smithsonian's Huntington Collection.

*86<sup>th</sup> annual meeting of the American Association of Physical Anthropologists*, New Orleans, LA (**Published Abstract and Poster**).

*Bioarchaeologists' Northeast Regional Dialogue*, New Haven, CT (**Oral Presentation**).

## FELLOWSHIPS, AWARDS, AND GRANTS

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**Michael and Winona Foster Predoctoral Fellowship (2023)** One year fellowship awarded yearly to a PhD. student in the department of Bacteriology at UW-Madison

**National Science Foundation Graduate Research Fellowship (2020)**

**Gates Cambridge Scholarship (2018)** Declined to attend UW-Madison Microbiology Doctoral Training Program.

**University Scholar (2017)** 10-12 seniors are chosen each year to receive this designation. It is the highest academic honor undergraduates at Syracuse University can receive.

**Outstanding Achievement in Biology – The Donald G. Lundgren Memorial Award (2017)** This award is given to one outstanding graduating Biology major based on their excellence in academics, scholarship and research.

**The Orlin Prize for Best Overall Capstone (2017)**

**Best Honors Capstone in the Social Sciences (2017)**

**Remembrance Scholar (2016-2017)** The Remembrance Scholarship honors the 35 Syracuse University students killed in the bombing of Pan Am Flight 103 in 1988, and is one of the most prestigious honors awarded at Syracuse University.

**Gordon Bowles Prize for Undergraduate Writing in Anthropology (2016)**, for my paper “Dangerous Bodies: An Osteobiography of a Female with Syphilis from the Oneida Insane Asylum (1860-1895).”

**Crown-Wise Honors Capstone Funding (2016)**, Renée Crown Honors Program, Syracuse University, Syracuse, NY (\$2,700)

## **PROFESSIONAL AND UNIVERSITY SERVICE**

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Microbiology Doctoral Training Program, *Diversity, Equity, and Inclusion committee student representative*, 2021-2023.

Mycological Society of America, *Webpage and Electronic Communication committee member*, 2022-2023.

Microbiology Doctoral Training Program, *Accommodations Diversity, Equity, and Inclusion subcommittee member*, 2021-2022.

Mycological Society of America Student and Postdoc Section, *Treasurer*, 2020-2021.

## **MENTORSHIP AND TEACHING EXPERIENCE**

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**Undergraduate Research Mentor (2019-2020)** to Lexis Wedell (graduated May 2020).

**Microbiology 450: Diversity, Ecology, and Evolution of Microorganisms**  
(Fall 2019), Teaching Assistant, University of Wisconsin-Madison.

**Anthropology 433: Human Skeletal Osteology** (Fall 2016), Teaching  
Assistant, Syracuse University.