

ALEX J. MAILE

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(Current as of : 4/25/2025)

EDUCATION

2023 – (Current) Ph.D. Ecology and Evolution

University of Kansas, Lawrence, Kansas

Graduate Advisor: Dr. W. Leo Smith

2023 – M.S. Biological Sciences

Thesis: **Evolutionary Relationships of the Anglerfishes (Lophioidei) with a Total Evidence**

Approach: Illuminating Habitat Transition Impacts on Anglerfish Lures and Body Shapes

St. Cloud State University, St. Cloud, Minnesota

Graduate Advisor: Dr. Matthew P. Davis

2020 – B.S. Biology: Biodiversity, Ecology, and Evolution (Honors)

St. Cloud State University, St. Cloud, Minnesota

Undergraduate Advisor: Dr. Matthew P. Davis

PROFESSIONAL EXPERIENCE

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| 2025 | Graduate Teaching Assistant: Introduction to Systematics (BIOL 428), University of Kansas, Lawrence, Kansas. Supervisor: Dr. W. Leo Smith |
| 2024 | Curatorial Assistant: Ichthyology, University of Kansas, Lawrence, Kansas.
Supervisor: Andy Bentley. <ul style="list-style-type: none">• Identified and processed freshwater Pflieger fish collection. |
| 2024 | Graduate Teaching Assistant: Ichthyology (Biol 592), University of Kansas, Lawrence, Kansas. Supervisor: Dr. W. Leo Smith <ul style="list-style-type: none">• Assisting undergraduate students with fish identification and gross anatomy dissections during laboratory sessions. Graduate Teaching Assistant: Principles of Biology (BIOL 100), University of Kansas, Lawrence, Kansas. Supervisor: Dr. Trevor Rivers. |

	<ul style="list-style-type: none"> • Grading online assignments and discussions.
2023	<p>Graduate Teaching Assistant: Introduction to Biostatistics (BIOL 370), University of Kansas, Lawrence, Kansas. Supervisor: Dr. Maggie Wagner and Dr. Tara Marriage.</p> <ul style="list-style-type: none"> • Assisting undergraduate students with lecture problems, supervising multiple lab sessions, and help students utilize R to compute and demonstrate statistical concepts for lab questions.
2023	<p>Graduate Media Production Assistant, Innovating the Science Classroom for Widespread Student Engagement, St. Cloud, Minnesota. Supervisor: Dr. Matthew P. Davis</p> <ul style="list-style-type: none"> • Collaborating with experts in producing high-quality short scientific videos for open-source access used specifically toward targeting underrepresented STEM groups and provide digital and technological equity to students from various backgrounds.
2022 – 2023	<p>Graduate Teaching Assistant: Genetics (BIOL 262), St. Cloud State University, St. Cloud, Minnesota. Supervisor: Dr. Christopher Kvaal</p> <ul style="list-style-type: none"> • Assisting and lead genetics laboratories including practicing DNA techniques, PCR, and exercises related to evolution and agriculture.
2021 – 2022	<p>Graduate Teaching Assistant: Cell Biology and Function (BIOL 151), St. Cloud State University, St. Cloud, Minnesota. Supervisor: Dr. Michelle Wagner</p> <ul style="list-style-type: none"> • Supervised introductory biology laboratories including coordinating of student lab scheduling, grading, and running labs involving cell biology, inheritance, and function.
2016-2021	<p>Invertebrate Aquaculturist and Custom Aquaria 3D Designer, Maile Made Reef Supplies, Avon, Minnesota. Personal Business</p> <ul style="list-style-type: none"> • Production of invertebrate aquaculture products to be sold directly to consumers and aquarium stores in the Twin Cities of Minnesota. • Consult, collaborate, and design aquaria supplies and equipment through 3D modeling and 3D printing by custom request from direct consumers and aquarium stores in the Twin Cities of Minnesota.
2019	<p>Huskies Summer Undergraduate Research Fellowship, St. Cloud State University, St. Cloud, Minnesota. Supervisor: Dr. Matthew P. Davis.</p> <ul style="list-style-type: none"> • Studying the evolution of color and pattern changes in deep-sea fishes.
2017 – 2020	<p>Undergraduate Researcher, St. Cloud State University, St. Cloud, Minnesota. Supervisor: Dr. Matthew P. Davis</p> <ul style="list-style-type: none"> • Studying the evolution of body shape changes and habitat transitions in Lizardfishes (Aulopiformes).

- Studying biofluorescence and venom association in marine Rabbitfishes (Siganidae).

2018 – 2019 **Undergraduate Lab Assistant**, Xcel Energy Larval Fishes Identification Project, St. Cloud State University, St. Cloud, Minnesota. Supervisor: Dr. Matthew P. Davis

- Identifying larval and juvenile fishes of the Mississippi River in Minnesota contributing to Xcel Energy's Biological Impact Assessment of water intake from coal plants.

2016 – 2018 **AIS Watercraft Inspector Level 2**, Lamb Labor Services, Paynesville, Minnesota

- On site coordinator for removal and decontamination of watercraft at multiple public lake access points. Work also involving coordinating AIS Inspector Level 1s in large scale fishing events requiring watercraft decontamination.

PUBLICATIONS

- 2025 **Maile, A.J.** & Davis, M. P. 2025 Diversity and evolution of lure types and movement in anglerfishes (Lophioidei). *Journal of Ichthyology and Herpetology*. In review.
- 2025 **Maile, A.J.**, Smith, W.L., & Davis, M. P. 2025. A total-evidence phylogenetic approach to understanding the evolution, depth transitions, and body-shape changes in the anglerfishes and allies (Acanthuriformes: Lophioidei). *PLOS ONE*. In Press.
- 2021 Ghedotti, M. J., DeKay, H.M., **Maile, A.J.**, Smith, W. L., & Davis, M. P. 2021. Anatomy and evolution of bioluminescent organs in the slimeheads (Teleostei: Trachichthyidae). *Journal of Morphology* 282. doi: 10.1002/jmor.21349
- 2020 **Maile, A.J.**, DeArmon, E.S, May, Z.A., Martin, R., & Davis, M.P. 2020. Marine Habitat Transitions and Body Shape Evolution in Lizardfishes and their allies (Aulopiformes). *Copeia* 108(4): 820-832. **Awarded Best Student Paper in Copeia (Journal of Ichthyology and Herpetology) 2020**

PROFESSIONAL PRESENTATIONS

- 2024 **Maile, A.J.** Smith, W.L., & Davis, M.P. A Combined Morphological and Molecular Phylogenetic Analysis of the Anglerfishes (Acanturiformes: Lophioidei). Joint Meeting of Ichthyologists and Herpetologists, Pittsburgh, Pennsylvania, July 2024. Oral Presentation.
- 2022 **Maile, A.J.** & Davis, M.P. Evolutionary Relationships of Anglerfishes Based on Genomic and Morphological Data. Huskies Showcase, St. Cloud State University, St. Cloud, Minnesota, April 2022. Poster Presentation.
- 2020 **Maile, A.J.** & Davis, M.P. Evolution of Biofluorescence in Rabbitfishes (Siganidae). Huskies Showcase, St. Cloud State University, St. Cloud, Minnesota, April 2020. Poster Presentation.
- 2019 **Maile, A.J.** & Davis, M.P. Evolution of Biofluorescence in Rabbitfishes (Siganidae). Joint Meeting of Ichthyologists and Herpetologists, Snowbird, Utah, June 2019. Poster Presentation.
- Maile, A.J.** & Davis, M.P. Body Shape Changes Across Habitat Transitions in Lizardfishes (Aulopiformes). Huskies Showcase, St. Cloud State University, St. Cloud, Minnesota, April 2019. Poster Presentation.
- Maile, A.J.** & Davis, M.P. Body Shape Changes Across Habitat Transitions in Lizardfishes (Aulopiformes). Huskies Showcase, St. Cloud State University, St. Cloud, Minnesota, April 2019. Oral Presentation.
- 2018 **Maile, A.J.** & Davis, M.P. Body Shape Changes Across Habitat Transitions in Lizardfishes (Aulopiformes). Joint Meeting of Ichthyologists and Herpetologists, Rochester, New York, July 2018. Poster Presentation.

JOURNAL SERVICE

- 2024 – Current I have reviewed 2 manuscripts from the following 2 journals:
 Frontiers in Zoology (1) *ZooKeys* (1)

PROFESSIONAL SERVICE AND ASSOCIATIONS

- 2023 – Current **Member of the Ecology and Evolutionary Biology Graduate Student Organization**, University of Kansas.
- 2022 - 2023 **Secretary of the Biology Graduate Student Association (BGSA)**, St. Cloud State University

- Mentoring BGSA newly elected officers while striving to regain and increase graduate student participation and membership.

2022

Best Ichthyological Papers in Ichthyology and Herpetology Committee

- Requested in helping to select the best papers in Ichthyology and Herpetology. Evaluated publications in Ichthyology and Herpetology (formerly Copeia) to rank the papers according to the categories of Best Paper Overall, Best Paper Young Scholar, and Best Student Paper.

2021-2022

President of the Biology Graduate Student Association (BGSA), St. Cloud State University

- Leading in developing a comprehensive strategy focused on rejuvenating a biological graduate student organization stifled by COVID 19 to help ensure the organization's short and long-term objectives and success.
 - Assisted the Biochemistry and Molecular Biology club in designing a Research Open House to allow students to get first-hand experience in the levels and types of research conducted in the School of Science and Engineering.

2020-2021

President of Into the Wild Society (ITWS), St. Cloud State University

Vice President of Into the Wild Society (ITWS), St. Cloud State University

- Founder of a student-led organization on campus dedicated to creating a diverse and inclusive community of individuals with a strong interest in ecology and evolution while organizing workshops and networking with experts of their field.

2019-2020

COSE Strategic Planning Committee, St. Cloud State University

- Articulating the needs and concerns of biological students to collaborate with faculty in creating a transformative educational strategic plan that responds to students, our society, and the world.
 - Discussed with department heads of the School of Science and Engineering about the implementation of required student-teacher evaluations.

2018-2020

Dean's Student Advisory Board, St. Cloud State University

- The student nominee for the department of biological sciences tasked with creating a direct line of communication voicing the needs and concerns of unvoiced students directly to the dean of the school of science and engineering.

2017

Huskies Cinema – Huskies Events and Activities Team, St. Cloud State University

2017- Current **Member of American Society of Ichthyologists and Herpetologist**

GRANTS AND SCHOLARSHIPS

- 2025 **Val and Marilyn Smith PhD Graduate Student Support Endowment Fund (\$350)**, University of Kansas
- 2024 **Martha Mitchell Pearson Scholarship (\$7300)**, University of Kansas
Graduate Student Organization Travel Award (\$500), University of Kansas
Val and Marilyn Smith PhD Graduate Student Support Endowment Fund (\$300), University of Kansas
- 2023 **Student Research Travel Grant (\$500)**, St. Cloud State University
- 2022 **George W. Friedrich Wildlife Protection Fund (\$3000)**, St. Cloud State University
Dorthy Esler Memorial Scholarship (\$500), St. Cloud State University
Natural History Museum of Los Angeles County Student Collections Study Award (\$1344), Natural History Museum of Los Angeles County
- 2021 **Student Research Grant (\$962)**, St. Cloud State University
Raney Grant (\$1000), American Society of Ichthyologists and Herpetologists
George Friedrich Scholarship (\$1000), St. Cloud State University
- 2020 **Student Research Grant (\$1000)**, St. Cloud State University
Charles and Ellora Alliss Scholarship (\$1500), St. Cloud State University
Harold and Gladys I. Hopkins Scholarship Fund Scholarship (\$1000), St. Cloud State University
Jackie Hanson Environmental Studies Scholarship (\$200), St. Cloud State University

2019	SCSU Scholarship (\$1500) , St. Cloud State University
	Student Research Grant (\$1000) , St. Cloud State University
	Huskies Summer Undergraduate Research Fellowship SURF (\$500) , St. Cloud State University
2018	Harold and Gladys I. Hopkins Scholarship Fund Scholarship (\$1000) , St. Cloud State University
	Jackie Hanson Environmental Studies Scholarship (\$200) , St. Cloud State University
	Student Research Grant (\$950) , St. Cloud State University
	Huskies Summer Undergraduate Research Fellowship SURF (\$500) , St. Cloud State University
2017	Avon Sportsmen's Club (\$200) , Albany High School

AWARDS AND HONORS

2021	Copeia 2020: Best Student Paper in Ichthyology <ul style="list-style-type: none"> • See Maile et al., 2020. First undergraduate ever selected as Best Student Paper in Ichthyology by the American Society of Ichthyologists and Herpetologists
2019-2020	Deans Student List , Spring Semester & Fall Semester
2019	Best Our Husky Compact Reflection , Husky Showcase