

KATRINA WHITLOW

618-698-5725

<http://kwhitlow.com>Kwhitlow@uchicago.edu

Department of Organismal Biology and Anatomy

University of Chicago

1027 E 57th St.

Chicago, IL 60637

EDUCATION

University of Chicago , Ph.D. Integrative Biology	current
<i>Thesis: Coordination of locomotor and skull mechanics in fishes during feeding</i>	
Towson University , M.S. Organism Biology and Ecology	7/2016
<i>Thesis: Effects of gymnotiform locomotion on performance and morphological diversity</i>	
Southern Illinois University Edwardsville , B.S Ecology, Evolution, and Environment	5/2014

PUBLICATIONS

- Whitlow, K.R.**, Ross, C.F., Gidmark, N.J., Laurence-Chasen, J.D., Westneat, M.W. *In press*. Suction feeding biomechanics of *Polypterus bichir*: investigating linkage mechanisms and the contributions of cranial kinesis to oral cavity volume change. *Journal of Experimental Biology*
- Whitlow, K.R.**, Santini, F. and Oufiero, C.E. 2019. Convergent evolution of locomotor morphology but not performance in Gymnotiform swimmers. *Journal of Evolutionary Biology*. doi:10.1111/jeb.13399
- Oufiero, C.E., and **Whitlow, K.R.** 2016. The evolution of plasticity in fish swimming. *Current Zoology*. 62: 475-488

MANUSCRIPTS IN PREPARATION

- Whitlow, K.R.**, Laurence-Chasen, J.D., Gartner, S.M., Westneat, M.W, Nyakatura, J.A., Granatosky, M.C. Lungfish Hindlimb Propulsion Enables Generation of Quadrupedal Gaits: Implications for the Fin to Limb Transition. *In prep for submission to Nature Brief Communications*
- Gartner, S.M., **Whitlow, K.R.**, Laurence-Chasen, J.D., Granatosky, M.C., Ross, C.F, Westneat, M.W. Suction feeding of the African lungfish, *Protopterus annectens*; XROMM analysis of jaw mechanics, cranial kinesis, and hyoid mobility in a novel feeding mechanism. *In prep for submission to Journal of Experimental Biology*

GRANTS AND AWARDS

2022 Society of Integrative and Comparative Biology: Division of Biomechanics Best Student Presentation: Mimi A. R. Koehl and Stephen A. Wainwright Award	Finalist
2019 Organismal Biology and Anatomy Core Facilities Grant	\$1200
2018 Henry Hinds Fund for Graduate Student Research in Evolutionary Biology	\$2150
2015 Towson University Graduate Student Research Award	\$500
2015 Towson University Graduate Student Travel Award	\$500
2014 Towson University Graduate Student Research Award	\$500

PRESENTATIONS

- Society of Integrative and Comparative Biology National Meeting** **2021**
Quantifying the contribution of cranial bones to oral cavity volume change during suction feeding: a case study in lungfish, bichirs, and bowfin (talk)
- National Great Rivers Research and Education Center: Riverwatch Winter Speaker Series** **2021**
Underwater Adventures in Illinois (invited talk)

Society of Integrative and Comparative Biology National Meeting	2021
<i>Cranial kinesis in actinopterygian suction feeding: mechanical correlates of prey motion in Polypterus bichir</i> (talk)	
Society of Integrative and Comparative Biology National Meeting	2020
<i>Strike biomechanics in Polypterus bichir described with XROMM: implications for actinopterygian feeding evolution</i> (talk)	
University of Chicago Darwin Cluster Retreat	2019
<i>Polypterus bichir pectoral girdle and hyoid rotation are linked during suction feeding</i> (invited talk)	
University of Chicago Fish Group	2019
<i>Cranial kinematics and coordination during feeding in actinopterygians</i> (talk)	
University of Chicago Organismal Biology and Anatomy Department	2018
<i>Finning forward for food: Coordination of locomotor and skull mechanics in fishes during feeding</i> (thesis proposal talk)	
Society of Integrative and Comparative Biology National Meeting	2018
<i>Escape response performance of gymnotiform and closely related body-caudal fin swimmers</i> (talk)	
Society of Integrative and Comparative Biology National Meeting	2017
<i>A comparative study of locomotor performance in gymnotiform and body-caudal fin swimmers</i> (talk)	
University of Chicago Fish Group	2016
<i>Morphology and performance of gymnotiform swimmers</i> (talk)	
Residential Learning Community: Science, Technology, Engineering, and Math	2016
<i>STEM: at Towson and Beyond</i> (invited talk)	
Society of Integrative and Comparative Biology National Meeting	2016
<i>Effects of gymnotiform locomotion on swimming performance and efficiency in knifefish</i> (poster)	
Society of Integrative and Comp. Bio. Mid-Atlantic Regional DVM/DCB	2015
<i>Effects of gymnotiform locomotion on swimming performance and efficiency in knifefish</i> (talk)	
University of Washington Friday Harbor Labs	2015
<i>Personality and escape response of the pacific staghorn sculpin</i> (talk)	
Illinois State Academy of Science Annual Meeting	2014
<i>Comparative functional morphology of two syntopic freshwater snails</i> (poster)	
Southern Illinois University Edwardsville	2013
<i>Macro-invertebrate species diversity and water quality analysis of Gold Creek and Wellington Creek in the Kaniksu National Forest</i> (talk)	

TEACHING EXPERIENCE

University of Chicago

- 2021** The Human Body PSOM (head TA and 2 guest lectures)
- 2020** The Human Body PSOM
- 2020** Teaching Assistant Training BSDG 50000 (instructor of record)
- 2019** Comparative Vertebrate Anatomy BIOS 22233

Towson University

- 2014-2016** Human Anatomy and Physiology Lab I BIOL221L (4 semesters)

CERTIFICATIONS AND SPECIAL COURSES

NAUI Master Diver	2021
NAUI Advanced, Nitrox, and Rescue SCUBA Diver	2018
Fish Swimming: Kinematics, Ecomorphology, Behavior and Environmental Physiology	2015

Wildlife Techniques and Natural History of the Rocky Mountains	2013
Wildland Firefighter Training (Completion of I100, L180, S130, & S190)	2013
PADI Open-Water SCUBA Diver	2012

LEADERSHIP AND SERVICE

Society of Integrative and Comparative Biology

Code of Conduct Ally (2021-2022)

Chicago Undersea Explorers Society

Founding Board Member: Secretary (2020-current)

The Chapin School

Senior Internship Week Project coordinator (June 2021)

University of Chicago

Integrative Biology Graduate Admissions Committee: Student representative (2021 cycle)

Diversity, Inclusion, Equity, and Accessibility Initiative: Established departmental DEIA committee election process and oversaw committee nominations (2020)

Annual Gargoyle Consulting Club Case Competition, sponsored by McKinsey & Co.: Member of Graduate Division winning team (Spring 2020)

Elementary Science Olympiad: Founding Board Member (Oct 2019-current)

Science Olympiad: Lesson plan writer (2019)

Dean's Council: Department rep (2016-2020), *Sporting event chair* (January 2018- May 2020)

Learn SCUBA Chicago

Divemaster Candidate: June 2017-June 2020

Information Technology Committee: Committee Chair (Oct 2018-June 2020)

Towson University

TU Biology Grad. Student Organization: Secretary (2015), *Active member* (2014-2016)

Women in Science: Active member (2015-2016)

Southern Illinois University Edwardsville

The Wildlife and Conservation Bio. Club: Treasurer (2014), *Active member* (2013-2014)

National Society of Leadership and Success: Active member (2012-2014)

REVIEWER

Proceedings of the Royal Society B: Biological Sciences

Scientific Reports

Copeia

Journal of Fish Biology