WILLIAM T KOVAL

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Erman Biology Center, Room 103

EDUCATION

University of Chicago *September 2018 - Present*

- Doctoral Program, Biological Sciences Collegiate Division; *Ecology and Evolution*
- **Advisor**: Dr. Greg Dwyer

Emory University *May 2017*

- *B.S.* in Biology, *B.S.* in Environmental Sciences (*summa cum laude*)
- **Thesis title**: The interactive effect of environmental stochasticity and resource-driven intraspecific competition on Culex quinquefasciatus (Diptera: Culicidae) larval productivity
- **Advisor**: Dr. Gonzalo Vazquez-Prokopec
- Zell Miller Scholar

PUBLICATIONS

Vazquez-Prokopec, Gonzalo M, AC Morrison, VA Paz-Soldan, ST Stoddard, **WT Koval**, LA Waller, TA Perkins, AL Lloyd, H Astete, JP Elder, TW Scott, U Kitron. Inapparent infections shape the transmission heterogeneity of dengue. PNAS Nexus, 2023; pgad024.

Koval, WT and GM Vazquez-Prokopec. Environmental stochasticity and intraspecific competition influence the population dynamics of Culex quinquefasciatus (Diptera: Culicidae). Parasit Vectors. 2018; 11:114.

McMillan, JR, RA Blakney, D Mead, **WT Koval**, S Coker, LA Waller, UD Kitron, GM Vazquez-Prokopec. Linking transmission potential of multiple vectors to observed patterns of pathogen transmission. J Appl Ecol. 2019; 56:956-965.

OUTREACH AND SERVICE

Committee member. Better Common Names Project; *Lymantria dispar* working group. *Entomological Society of America.*

Committee member. Diversity, Equity, and Inclusion Committee. *Department of Ecology and Evolution, University of Chicago.*

Oral presentation. Geographic and genetic variation in the viruses of the Douglas-fir tussock moth, *Orgyia pseudotsugata*; October 2020, *Western North America Defoliator Working Group (WNADWG).*

Oral presentation. Dynamic tools for Douglas-fir Tussock Moth management; October 2019, *WNADWG.*

Instructor. Computational Biology Workshop; May 2019, *Rauner College Prep High School*

Moderator. University of Chicago Science Olympiad; January 2019.

Oral presentation. Urban vector research in the Atlanta metropolitan area. July 2017, *Dekalb Board of Health; Environmental Health Division*

Referee/Reviewer (Journal[First Year]). Journal of Medical Entomology[2018];

AWARDS AND RECOGNITION

ARCS Foundation Scholar 2020-2023

National Science Foundation Graduate Research Fellowship; Honorable Mention 2020

ESA SEB 2018 oral presentation; 1st place Undergraduate Student Competition

GRANT SUPPORT

Theodore Roosevelt Memorial Fund, American Museum of Natural History; *$1,200 Nov 2020*

ARCS Foundation Scholarship; *$22,500 Aug 2020*

Hinds Fund (University of Chicago); *$2,500 Feb 2020*

NIH Genetics and Regulation Training Grant (T32GM007197-45); *Oct 2019 - Jun 2020*

Lester Study Abroad Grant (Emory University); *$1,500 May 2016*

Lester Research Grant (Emory University); *$820 May 2014*

Zell Miller Scholarship; *Aug 2013 - May 2017*

POSTERS AND PRESENTATIONS

Poster. Individual variation drives patterns of large-scale transmission: insights from the Douglas-fir tussock moth and its baculovirus. April 2023, **Society for Integrative and Comparative Biology, Midwest Branch (SICB)**.

Poster. Small-scale demographic stochasticity drives large-scale epizootic dynamics in a virus of the Douglas-fir tussock moth; June 2022, **Ecology and Evoluiton of Infectious Diseases (EEID)**.

Oral presentation. Hungry Hungry Skeeters: modeling density dependent response mechanisms in the urban *Culex quinquefasciatus* (Diptera: Culicidae) system; March 2018, **Entomological Society of America, Southeastern Branch (ESA SEB)**.

Poster. The interactive effect of environmental stochasticity and resource-driven intraspecific competition on *Culex quinquefasciatus* (Diptera: Culicidae) larval productivity (2); August 2017, **Ecological Society of America (ESA)**.

Poster. The interactive effect of environmental stochasticity and resource-driven intraspecific competition on *Culex quinquefasciatus* (Diptera: Culicidae) larval productivity; November 2016, **American Society for Tropical Medicine and Hygiene (ASTMH)**.

MENTORSHIP

Undergraduates Eli Bussel [2019-21] *biology honors thesis*; Isabella Cisnero [2020]; Jacob Feingold [2020-22] *ecology and evolution honors thesis*;

TEACHING

BIOS 23409: Ecology & Evolution of Infectious Diseases (Teaching Assistant), University of Chicago, Spring 2022

ECEV 429: Theoretical Ecology (Teaching Assistant), University of Chicago, Winter 2020

Biology 142: Foundations of Modern Biology II (Teaching Assistant), Emory University, Spring 2015

Biology 141: Foundations of Modern Biology I (Teaching Assistant), Emory University, Fall 2014

WORK EXPERIENCE AND SKILLS

Graduate Student Researcher September 2018 - Present
Greg Dwyer *University of Chicago, Chicago, IL*

· High-performance computing; theoretical and statistical modelling; field research; fluency in C, R, LaTeX, and Python coding languages

Information Analyst and Lab Manager May 2017 - June 2018
Gonzalo M. Vazquez-Prokopec *Emory University, Atlanta, GA*

· Proficiency in R; statistics and modeling; ArcGIS experience; Field research lead

Lab Technician August 2014 - May 2017
Gonzalo M. Vazquez-Prokopec *Emory University, Atlanta, GA*

· Experimental design; R modeling; mist netting & sample processing

Sustainability Commission Member December 2011 - July 2013
City of Dunwoody *Dunwoody, GA*

· School system liaison and gardening program coordinator