

Tedward Erker

CONTACT INFORMATION

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SUMMARY OF QUALIFICATIONS AND SKILLS

Biometry M.S. and Forestry Ph.D. (expected spring 2019) with 5 years of research and data analysis experience and 2 years of high school teaching experience. Familiar with a wide range of statistical methods including GLMs, GAMs, shrinkage and dimension reduction, tree-based methods, some bayesian techniques and working with dependent data and large datasets in R. Driven to understand complex problems in depth and then distill key findings for nonexpert audiences via fully reproducible literate programming reports and compelling figures. Independently motivated and a positive, constructive team member. Passionate about working in education.

timely completion

EDUCATION

Sep 2013 - May 2019 (expected)	Ph.D. Forestry Department of Forest and Wildlife Ecology University of Wisconsin–Madison GPA: 3.929
Sep 2013 - May 2019 (expected)	M.S. Biometry Department of Statistics University of Wisconsin–Madison
Aug 2006 - May 2008 & Aug 2009 - May 2010	B.A. Environmental Studies–Ecology/Biology Summa Cum Laude Washington University in St. Louis GPA: 3.83

RELEVANT GRADUATE COURSEWORK

Tools for Reproducible Research	Advanced Data Analysis with R
Statistical Methods-Spatial Data	Multilevel Models
Intro Mathematical Statistics I & II	Statistical Methods for Bioscience I & II
Teaching Statistics	Inquiry-Based Biology Teaching

AWARDS, GRANTS, AND FELLOWSHIPS

Jan 2018	Stan Conference 2018 Scholarship
2015-2018	NASA Earth and Space Science Fellowship \$105,000
Sep 2016	Mapping Wisconsin's Urban Tree Canopy (co-author), Wisconsin Department of Natural Resources \$50,000
Oct 2016	George Kress Award for Outstanding Contribution of a Forestry Graduate Student \$1,000
May 2016	Travel Award, UW-Madison Department of Forest and Wildlife Ecology
Mar 2016	Cool Science Image contest winner, "Madison Lakes"
May 2010	Outstanding Overall Achievement in Environmental Studies (highest award in major), Washington University in St. Louis
Jun 2008	Tyson Research Center Summer Undergraduate Research Fellowship \$3,750

PRESENTATIONS

November 2016	Mapping Urban Tree Canopy of Wisconsin Society of American Foresters National Convention. Madison, WI.
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POSTERS

April 2018	Functional and Species Diversity of Trees in Urban Streets NASA Biodiversity and Ecological Forecasting Team Meeting in Washington, D.C.
May 2016	How Does Structural and Functional Diversity of the Urban Forest Affect the Urban Heat Island and Building Energy Use in Madison, WI? NASA Biodiversity and Ecological Forecasting Team Meeting in Silver Springs, MD.

TEACHING EXPERIENCE

Spring 2015	Statistical Methods for Bioscience II Teaching Assistant Led 2 weekly discussion groups, graded homework and exams for this graduate-level course. Prof. Murray Clayton.
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Fall 2013 and Fall 2014	Forest Ecology Teaching Assistant Redesigned, created and independently implemented lab lessons in field and computer lab for ~70 students. Prof. Tom Gower (2013) and Prof. Phil Townsend (2014).
Spring 2014	Living With Wildlife Teaching Assistant Graded journals and exams, assisted students during office hours. Prof. Stan Temple.
August 2010 - May 2012	High School Chemistry and Biology Teacher Educated over 120 students in six classes daily. As first year teacher, developed chemistry curriculum for new charter school integrating College Readiness Standards with Missouri Science Standards. Cross-country coach. Confluence Preparatory Academy . St. Louis, MO.
June 2010 - May 2012	Teach For America Corps Member Selected from over 46,000 applicants nationwide to join the national teacher corps of recent college graduates who commit two years to teach in under-resourced public schools. Chicago, IL & St. Louis, MO.

MENTORING

	My undergraduate mentees research a topic, collect new data, perform statistical analyses, and write final papers to complete small research projects. They create posters or presentations to share their work.
Fall 2017	Cheyenne Brandt Undergraduate Research Project: Effect of Leaf Area and Tree Canopy on the Urban Heat Island of Madison, WI.
Fall 2015	Bobby Shepherd Undergraduate Research Project: Investigating the influence of the urban heat island on autumn phenology of Norway Maple (<i>Acer platanoides</i>) with smartphone hemispherical photos.

RELEVANT WORK EXPERIENCE

August 2013 - December 2014	Arborist Worked part time as ground crew, hauling brush and aiding climber. Developed online Wisconsin tree species identification application. Urban Tree Alliance , Non-profit. Madison, WI.
February 2013 - August 2013	Arborist Performed ground crew work, climbed, and as certified pesticide applicator treated for a number of pests including the emerald ash borer. American Tree Experts . New Berlin, WI

March 2007 - May 2010	Greenhouse Assistant Water, transplant, propagate plants; maintain greenhouse. Work-Study at Washington University Plant Research Facility . St. Louis, MO.
April - August 2009	Farm Education Intern and Farmer Organized and guided trips of 16-40 students at farm and wilderness education center. Managed 3/4 acre garden and cared for sheep, goats, chickens, pigs, and cows as part of farm team. Farm And Wilderness Summer Camps . Plymouth, VT.
May - August 2008	Research Assistant Sampled vegetation, identified over 100 plant species as part of study to explore phylogenetic relationships in invasiveness. Tyson Research Center . Eureka, MO.

PROFESSIONAL AFFILIATIONS

Society of American Foresters, 2016–Present

LANGUAGES

Spoken: English, Spanish

Computing: R

SERVICE TO THE DEPARTMENT AND UNIVERSITY

Oct 2015 - Present	Graduate Student Representative, Department of Forest and Wildlife Ecology
Jul 2017	Software Carpentry Volunteer

SERVICE TO COMMUNITY

Fall 2014 and Fall 2015	Guest Lab Instructor, Sustainability by the Numbers, Shabazz High School
Fall 2017	Guest Lab Instructor, AP Environmental Studies, East High School

GRADUATE COURSEWORK

Semester	Code	Course	Credits	Grade
F 2013	F&W ECOL 309	Diseases of Trees and Shrubs	3	A
	F&W ECOL 415	Tree Physiology	3	A
	HORT 571	Statistical Methods for Bioscience I	4	A
S 2014	PL PATH 800	Inquiry-Based Biology Teaching	1	A
	STAT 692	Intermediate Data Analysis with R	1	A
	F&W ECOL 410	Principles of Silviculture	audit	S
	STAT 572	Statistical Methods for Bioscience II	4	A
	PL PATH 801	Teaching Biology: Special Topics	1	A
	STAT 692	Advanced Data Analysis with R	1	A
	MATH 234	Calculus-Functions of Variables	4	S
F 2014	F&W ECOL 875	Field Methods in Remote Sensing	1	A
	SOIL SCI 532	Environmental Biophysics	3	A
	STAT 311	Intro Mathematical Statistics I	3	A
S 2015	BMI 826	Tools for Reproducible Research	1	A
	ENVIR ST 556	Remote Sensing Digital Image Processing	3	A
	STAT 312	Intro Mathematical Statistics II	3	AB
	STAT 692	Teaching Statistics	1	A
Su 2015	STAT 699	Statistical Consulting	3	A
F 2015	STAT 575	Statistical Methods-Spatial Data	3	AB
S 2016	STAT 679	Multilevel Models	3	A
S 2017	ZOOLOGY 725	Ecosystem Concepts	3	