

# Tedward Erker

## CONTACT INFORMATION

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## EDUCATION

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

## RELEVANT GRADUATE COURSEWORK

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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

## RELEVANT GRADUATE COURSEWORK

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Course	Grade
Statistical Methods for Bioscience I	A
Inquiry-Based Biology Teaching	A
Intermediate Data Analysis with R	A
Statistical Methods for Bioscience II	A
Teaching Biology: Special Topics	A
Advanced Data Analysis with R	A
Calculus–Functions of Variables	S
Intro Mathematical Statistics I	A
Tools for Reproducible Research	A
Intro Mathematical Statistics II	AB
Teaching Statistics	A
Statistical Consulting	A
Statistical Methods-Spatial Data	AB
Multilevel Models	A

## SUMMARY OF QUALIFICATIONS AND SKILLS

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R familiarity with other languages (Python and Stan).  
reproducible research git  
science  
statistics  
making figures  
writing  
background in education  
manage undergraduates  
independent work but also part of a team.  
deadlines.  
coursework

## SKILLS

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Statistical methods I have implemented: GLMs, GAMs, mixed effects/ multi-level models, partial least squares regression, elastic net, principal components analysis, random forests, support vector machines, boosted regression trees.

Computing: Daily use of R, familiarity with python and Stan.

## WORK HISTORY

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maybe not include this irrelevant things

where	what	when
Urban Tree Alliance	Arborist	2013/08 - 2014-12
American Tree Experts	Arborist	2013/02 - 2013-08
	Greenhouse Assistant	

## AWARDS, GRANTS, AND FELLOWSHIPS

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

## PRESENTATIONS

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November 2016	<a href="#">Mapping Urban Tree Canopy of Wisconsin</a> Society of American Foresters National Convention. Madison, WI.
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## POSTERS

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

## TEACHING EXPERIENCE

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Spring 2015	<b>Statistical Methods for Bioscience II Teaching Assistant</b> 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	<b>Forest Ecology Teaching Assistant</b> 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	<b>Living With Wildlife Teaching Assistant</b> Graded journals and exams, assisted students during office hours. Prof. Stan Temple.
August 2010 - May 2012	<b>High School Chemistry and Biology Teacher</b> 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. <a href="#">Confluence Preparatory Academy</a> . St. Louis, MO.
June 2010 - May 2012	<b>Teach For America Corps Member</b> 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

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	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	<b>Cheyenne Brandt</b> Undergraduate Research Project: Effect of Leaf Area and Tree Canopy on the Urban Heat Island of Madison, WI.
Fall 2015	<b>Bobby Shepherd</b> 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

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

March 2007 - May 2010	<b>Greenhouse Assistant</b> Water, transplant, propagate plants; maintain greenhouse. Work-Study at <a href="#">Washington University Plant Research Facility</a> . St. Louis, MO.
April - August 2009	<b>Farm Education Intern and Farmer</b> 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. <a href="#">Farm And Wilderness Summer Camps</a> . Plymouth, VT.
May - August 2008	<b>Research Assistant</b> Sampled vegetation, identified over 100 plant species as part of study to explore phylogenetic relationships in invasiveness. <a href="#">Tyson Research Center</a> . Eureka, MO.

## PROFESSIONAL AFFILIATIONS

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Society of American Foresters, 2016–Present

## LANGUAGES

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Spoken: English, Spanish

Computing: R

## SERVICE TO THE DEPARTMENT AND UNIVERSITY

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

## SERVICE TO COMMUNITY

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

## 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	