

Timothy J. Polnaszek

Postdoctoral Fellow
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Ecology and Evolutionary Biology Department
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EDUCATION

Ph.D. **Ecology, Evolution and Behavior** Fall 2015
University of Minnesota, Twin Cities
Advisor: David W. Stephens, Ph.D.

Dissertation: Signaling economics and information problems in communication.
Attended Sept. 2009 – Dec. 2015

Partial M.S. work **Zoology** Transferred May 2009
Southern Illinois University, Carbondale
Advisor: Michael W. Sears, Ph.D.

Research topic: Decision making during predator-prey encounters.
Attended Jan. 2008 – May 2009; transferred after departure of advisor.

B.S. **Zoology – Magna cum Laude** December 2005
North Dakota State University, Fargo
Advisor: Mark Clark, Ph.D.

Senior capstone project: Contemporary evolution and selective harvest regimes.
Attended Aug. 2003 – Dec. 2005

PROFESSIONAL CONTRIBUTIONS

Publications

Polnaszek T.J. & Stephens, D.W. 2015. Why are signals reliable? Honesty depends on cost, sometimes. *Animal Behavior*.

Polnaszek T.J. & Stephens, D.W. 2014. Receiver tolerance for imperfect signal reliability: results from experimental signaling games. *Animal Behaviour*, 94, 1-8.

Polnaszek T.J. & Stephens, D.W. 2014. Why not lie? Costs enforce honesty in an experimental signaling game. *Proceedings of the Royal Society B*. 281.



Hellgren, E. & **Polnaszek, T.J.** 2011. Survival, habitat selection, and body condition of the Woodchuck (*Marmota monax*) across an urban-rural gradient. *The American Midland Naturalist*, 165, 150-161.

Unpublished Manuscripts (complete working drafts available upon request)

Polnaszek T.J., Stephens, D.W., Blazey, T. & Dunlap, A.S. Discriminability, reliability and uncertainty in an experimental simulation of aposematic signaling.

Stephens, D.W., **Polnaszek T.J.**, & Rubi T.R. Receiver economics and the value of conspicuousness: an experimental simulation of aposematism.

HONORS & AWARDS

Doctoral Dissertation Fellowship Graduate School, University of Minnesota	2013-2014
Finalist - Warder Clyde Allee Competition (for best student paper) Animal Behavior Society	2014
Finalist - Best Student Paper Competition Society for Integrative and Comparative Biology, Division of Animal Behavior	2014
DDF Conference Travel Award Graduate School, University of Minnesota	2014
Ecology, Evolution and Behavior Travel Grant University of Minnesota	2012, 2013, 2014
Animal Behavior Student Research Grant Animal Behavior Society	2013
Provosts Award (summer fellowship) College of Biological Sciences, University of Minnesota	2013, 2014
Frank McKinney Fellowship in Avian Ethology (research grant) Bell Museum of Natural History	2012, 2013
Student Travel Grant International Society for Behavioral Ecology	2012
Mathematical Biology Travel Award Midwest Ecology and Evolution Conference	2009
Masters Fellowship Southern Illinois University	2008-2009
Presidential Honor Scholarship North Dakota State University	2003-2005

PRESENTATIONS & CONTRIBUTED ABSTRACTS

- Polnaszek, T.J.** 2014. Exploring signal reliability and receiver tolerance using experimental signaling games. Allee Competition, Animal Behavior Society Meeting, Princeton University.
- Polnaszek, T.J.** & Stephens, D.W. 2014. Causes and consequences of receiver gullibility: results from experimental signaling games. *Poster*. International Society for Behavioral Ecology Conference, New York, NY.
- Polnaszek, T.J.** & Stephens, D.W. 2014. Why not lie? Costs enforce honesty in an experimental signaling game. Best Student Paper competition (DAB). Society for Integrative and Comparative Biology Meeting, Austin TX.
- Polnaszek, T.J.** & Stephens, D.W. 2013. Why not lie? Costs enforce honesty in an experimental signaling game. Animal Behavior Society Meeting, University of Colorado.
- Keller*†, J., Rohleder*, E., Juntunen*, H, Rubi, T.R. & **Polnaszek, T.J.** 2013. Observational learning of foraging strategies in blue jays. *Poster*. Ecological Society of America Meeting, Minneapolis, MN. *undergraduate co-investigators; †presenting author
- Polnaszek, T.J.** & Stephens, D.W. 2012. Honesty and uncertainty: an experimental study of a signaler-receiver game. *Poster*. International Society for Behavioral Ecology Congress, Lund University.
- Polnaszek, T.J.** 2011. Signaling interactions in a Skinner box. *Poster*. Joint Meeting of the Animal Behavior Society and the International Ethological Conference, Indiana University.
- Polnaszek, T.J.** & Stephens, D.W. 2010. Receiver economics: an experimental simulation of aposomatic signaling. *Poster*. Animal Behavior Society Meeting, William & Mary College.
- Polnaszek, T.**, 2010. Discriminability and the maintenance of mimicry. *Poster*. Midwest Ecology and Evolution Conference, Iowa State University.
- Polnaszek, T.J.** 2009. Should I stay or should I go? Optimal decisions for attack and flight during predator-prey interactions. Midwest Ecology and Evolution Conference, University of Nebraska.
- Polnaszek, T.J.**, Artita, K. & Sears, M.W. 2009. Should I stay or should I go? Optimal decisions for attack and flight during predator-prey interactions. *Poster*. Society for Integrative and Comparative Biology Meeting, Boston MA.

RESEARCH & RELATED EXPERIENCE

Acting Lab Manager Stephens Behavioral Ecology Lab May 2010 – Present
University of Minnesota

Sustained clean, safe living environment for research subjects; coordinated personnel schedule; facilitated research projects.

Research Assistant Stephens Behavioral Ecology Lab August 2009 – July 2011
University of Minnesota
Principal Investigator: David W. Stephens, Ph.D.

Project title: Receiver psychology and the value of information. Gained experience with experimental, quantitative approaches to studying animal decision-making; supervised experiments; performed data analysis.

Research Assistant Cooperative Wildlife Research Lab January 2008 – May 2009
Southern Illinois University
Principal Investigator: Eric C. Hellgren, Ph.D.

Project title: Effects of urban-rural environments on woodchucks. Performed small mammal trapping and radio tracking; mentored undergraduate research intern.

ADVISING & MENTORING

Directed Research Program Stephens Behavioral Ecology Lab
University of Minnesota

*Served an advisory role for the following students while they assisted with lab research:
Will Blanco, Rachel Diamond, Lauren Greenberg, Erica Langen, and Karla Wallner*

Independent Research Projects Stephens Behavioral Ecology Lab
University of Minnesota

*Served as mentor or co-mentor for the following undergrad research projects:
Social learning in blue jays – Jonathan Keller, Emma Rohleder, Haley Juntunen
Individual recognition of humans by blue jays – Erica Langen
Response biases and timing of cue presentation – Benjamin Seese*

TEACHING EXPERIENCE

Community Faculty **Intro to Life Sciences** Fall 2014
Metropolitan State University

Science elective for non-science majors; develop syllabus; created course content (discussions, exams, etc.); planned lab experiments; taught scientific writing.

Teaching Assistant Foundations of Biology Fall 2012, Fall 2014
University of Minnesota

Introductory biology course; organized and facilitated lab activities; taught students about lab research techniques; mentored students in scientific writing; graded exams.

Teaching Assistant Animal Behavior Spring 2010, Fall 2011, Spring 2012 & 2013
University of Minnesota

Elective course for Juniors and Seniors; guided students through lab activities; advisor to student groups completing research projects; managed grade records and maintained course website; graded exams.

TEACHING DEVELOPMENT

Teaching in Higher Education Graduate Coursework 2012
University of Minnesota

Practiced implementing active learning strategies and facilitating discussion; gained experience creating syllabi and lesson plans; discussed teaching philosophies; learned approaches that promote meaningful student learning.

Preparing Future Faculty Retreat Center for Teaching and Learning 2012
University of Minnesota

Acquired knowledge on how to design and apply interactive lectures.

Commenting & Grading Workshop Center for Writing 2011
University of Minnesota

Learned about and practiced commenting techniques that foster purposeful revision and teach students about writing.

Teaching Animal Behavior Workshop Animal Behavior Society Annual Meeting 2011
Indiana University, Bloomington

Gained knowledge on how to employ active learning activities (e.g., case studies) in animal behavior courses, which often lack hands-on lab activities.

COMMUNITY SERVICE

Volunteer Animal Behavior Workshop 2013

Created and hosted a table with games and activities designed to introduce all ages to animal behavior and scientific inquiry.

Volunteer **Teaching SMART** 2012
Assisted with elementary school program teaching science, math and research technology.

Visiting Scientist **4-H summer camp** 2010
Designed and presented a lesson on animal behavior and learning theory; helped students complete a maze-learning research activity.

INSTITUTIONAL SERVICE

Committee Chair **Student Invited Seminar Speaker Elections** 2012, 2013, 2014
Ecology, Evolution and Behavior Department
University of Minnesota

Coordinating Assistant **Departmental Seminar Series** 2009-2010, 2011-2012, 2013-2014
Ecology, Evolution and Behavior Department
University of Minnesota

Committee Member **Outstanding Advisor Award Nominations** 2012
Ecology, Evolution and Behavior Department
University of Minnesota

Representative **Teaching Assistant Liaison Committee** 2010-2011
Center for Teaching and Learning
University of Minnesota

Representative **Student Academic Grievance Committee** 2010-2011
College of Biological Sciences
University of Minnesota