

CURRICULUM VITAE

Omar Tonsi Eldakar Ph.D.

P.E.R.T. Postdoctoral Fellow, Center for Insect Science, University of Arizona

Office: Room 120, Bio West
Mailing address:
P.O. Box 210088,
University of Arizona,
Tucson, Arizona
Phone: (607) 624-6952
Fax: (520) 621-9190
E-mail: oeldakar@gmail.com

Education:

Ph.D. *Summa cum laude* (Spring 2006 – Spring 2008)
Supervising Professor: David Sloan Wilson
Department of Biology, SUNY Binghamton—Major: Biology
Dissertation title “The evolution of self-limiting behavioral strategies”

M.S. *Summa cum laude* (Fall 2003- Fall 2005)
Supervising Professor: David Sloan Wilson
Department of Biology, SUNY Binghamton—Major: Biology
Thesis title “Explaining individual differences in cooperation, cheating and punishment”

B.S. *Cum laude* (Fall 1998- Spring 2003)
Department of Biology, SUNY Binghamton—Major: Biology

Relevant Coursework: Animal Behavior, Entomology, Model Building in Ecology, Foundations of Ecology, Biostatistics, Tropical Ecology and Conservation, Animal Traditions, Discussions of Ecology Evolution and Behavior Seminar, Avian Ecology and Conservation, Mating Systems and Strategies, Mechanisms of Evolution, Paleobiology, Plant Systematics, Developmental Biology, Current Topics in Evolution, Cultural Evolution, Microbiology, Evolution and Human Affairs, Evolution and Human Behavior.

Introductory Chemistry (2 courses), Organic Chemistry (2 lecture courses plus lab course)

Teaching Experience: Instructor of Record

Biology for non-majors *Instructor of record* (Spring 09) Department of Biology, Widener University.

Animal Behavior *Instructor of record* (Fall 2008) Department of Biological Sciences, SUNY Binghamton.

Introductory Biology (Ecology, Evolution and Behavior) *Instructor of Record* (Summer 2008), Department of Biological Sciences, SUNY Binghamton.

Animal Behavior *Instructor of record* (Summer 2006) Department of Biological Sciences, SUNY Binghamton.

Introductory Biology (Ecology, Evolution and Behavior) *Instructor of Record* (Summer 2005), Department of Biological Sciences, SUNY Binghamton.

Teaching Experience: Teaching Assistant:

Developmental Biology *Teaching Assistant* (Fall 2007; Spring 2007, 2006; Fall 2005), Department of Biological Sciences, SUNY Binghamton.

Animal Behavior *Teaching Assistant* (Spring 2007) Department of Biological Sciences, SUNY Binghamton.

Entomology *Teaching Assistant* (Fall 2005), Department of Biological Sciences, SUNY Binghamton.

NSF K-12 Fellow (Fall 2003-Spring 2004), Department of Biological Sciences, SUNY Binghamton.

Awards:

Distinguished Dissertation Award (2008). Awarded in the category of Science and Mathematics.

The Graduate Community of Scholars (GCOS) Achievement Award (2008).

Evolutionary Studies (EvoS) Certificate (Spring 2008) Completion of required curriculum in evolutionary studies.

Binghamton University NSF AGEP representative at the 14th Compact for Faculty Diversity in Arlington VA. (2007).

All-American Scholar Athlete (Fall 2001-Spring 2003) Awarded to Division 1 athletes maintaining 3.0 gpa or greater.

Grants:

The Edmund Niles Huyck Preserve (Spring 2008); "The importance of population structure: The evolution of hyper-aggressivity in water striders" \$1000

NSF AGEP Fellowship summer research grant (Summer 2008) \$1500.

NSF AGEP Fellow (Fall 2004-Spring 2008) Alliances for Graduate Education and the Professoriate (~\$16,000-\$20,500 annually)

NSF AGEP Fellowship summer research grant (Summer 2005, 2006, 2007)
~\$3000 each.

The Edmund Niles Huyck Preserve (Spring 2006); “The evolutionary response of the Eastern Tree Hole Mosquito *Ochlerotatus triseriatus* to local acid rain environments” \$500

NSF AGEP Fellowship Travel Fund (Summer 2005) to attend and present research at the Human Behavior and Evolution Society (HBES) Conference in Austin Texas

NSF K-12 Fellow (Fall 2003-Spring 2004) National Science Fellow to promote science in local public schools (\$27,500 annual stipend). Also appointed to mentor underrepresented student participation/interest in the sciences.

NSF Summer Research Grant (Spring 2003) provided under the NSF grant for Binghamton University \$5000.

Presentations at Symposia:

U.C. Riverside - Invited speaker (May 2009) “Aggressive mating as a tragedy of the commons”

Northeast Evolutionary Psychology Conference (May 2008) “Carving out a niche: Selfish punishment as a self-limiting strategy in humans” *poster presentation*

Human Behavior and Evolution Society Conference (June 2007) “Selfishness as second-order altruism” *oral presentation*

Binghamton University Graduate Research Day (Spring 2007) “Selfish Punishment: Altruism can be maintained by competition amongst cheaters.” *poster presentation*

Sigma Xi – regional at Cornell (Spring 2007) “Selfish Punishment: Altruism can be maintained by competition amongst cheaters.” *poster presentation*

Human Behavior and Evolution Society Conference (June 2006) “Selfish Punishment: Altruism can be maintained by competition amongst cheaters.” *poster presentation*

The Edmund Niles Huyck Preserve Research Symposium (Summer 2006); “The evolutionary response of the Eastern Tree Hole Mosquito *Ochlerotatus triseriatus* to local acid rain environments” *oral presentation*

Binghamton University Biological Sciences Department Annual Symposium (January 2006) “Selfish Punishment: Modeling view of selfishness promoting altruism.” *oral presentation*

Human Behavior and Evolution Society Conference (June 2005) “Explaining individual differences in economic games” *poster presentation*

Binghamton University Noon EEB Departmental Lecture Series (Fall 2004) “Emotions and actions associated with altruistic helping and punishment.” *oral presentation*

Research Experience:

Hyper-aggressivity as a self-limiting strategy in the water strider *Aquarius remigis* (Summer 2007-current)

Ecological and social influences of mating tactic choice in the water strider *Aquarius remigis* (Summer 2007)

Theoretical and empirical research on the evolution of altruism (2007-current)

Exploring the special heterogeneity of cooperation and punishment in the Binghamton city area using experimental economics (2007- 2009)

Activities:

Biological Sciences Graduate Student Organization (BGSO)—Senator (Fall 2005 2008)

Friends of the Nature Preserve (2003-2008)—A volunteer group that takes care of SUNY Binghamton’s nature preserve

Philosophical discussions of issues faced by minorities in upper education. Interdisciplinary participation by NSF AGEP Fellows and encouraged involvement of university undergraduates (2007-2008 academic year)

Mentoring/Tutoring at risk youths after school program at the Roberson Science Center, Binghamton NY. (2002-2003 academic year)

Interests:

Binghamton University division 1 Track and Field captain (Fall 1999- Spring 2002)

Exploring evolution across disciplines

Press coverage:

Thriving on Selfishness. Scientific American (April 2009)

Altruism’s unexpected ally—selfishness (2008)

Covered by: AOL News, Science Daily, Human Nature News, Medical News Today, Scientific Blogging, Psyorg.com, Myspace News and others.

Evolution: Nice guys finish last. Research highlights *Nature* 460, 308 (2009).

Publications (peer reviewed):

Eldakar, O. T., Dlugos, M., Pepper, J. W. and Wilson, D. S. (2009) Population structure mediated sexual conflict in water striders. *Science*. *In press*.

Eldakar, O. T., Dlugos, M., Wilcox, R. S. and Wilson, D. S. (2009) Aggressive mating as a tragedy of the commons in a water strider *Aquarius remigis*. *Beh. Ecol. Sociobiol.* *In press*.

Eldakar, O. T. and Wilson, D. S. (2008) Selfishness as second-order altruism. *Proc. Natl. Acad. Sci.*, 109, 6982-6986

Eldakar, O. T., Farrell, D. and Wilson, D. S. (2007) Selfish punishment: Altruism can be maintained by competition among cheaters. *Journal of Theoretical Biology*, 29, 198-205

Eldakar, O. T., Wilson, D. S. and O’Gorman, R (2006) Emotions and actions associated with altruistic helping and punishment. *Evolutionary Psychology*, 4, 274-286

Eldakar, O. T., Wilson, D. S. and O’Gorman, R (2006) Emotions and actions associated with altruistic helping and punishment, in *Understanding Altruism* (ed. S. Gopalan) Icfai University Press.

Publications (non-peer reviewed)

Eldakar, O. T. An evolutionary biologist learns how to be remembered: cheat someone. *Nature* 460, 783-783 (12 August 2009)

O’Brien, D. T., **Eldakar, O. T.** and Gallup, A. C. (2008) Carving out a niche: selfish punishment as a self-limiting strategy in humans. (proceedings of the NEEPS conference, Southern New Hampshire University) in the *Journal of Social, Evolutionary and Cultural Psychology*. *In press*

In preparation:

O’Brien, D. T, Wilson, D. S., **Eldakar, O. T.**, and Carpenter, J. (2009) World in a city. *In review*

Eldakar, O. T., Dlugos, M., Pepper J. W. and Wilson, D. S. (2009) Nice guys don’t always finish last: The role of dispersion in regulating aggressive mating in the water strider *Aquarius remigis*. *In preparation*

Eldakar, O. T., Dlugos, M., Hall, G., and Pepper J. W. (2009) Differences in aggression between ephemeral and perennial streams in the water strider *Aquarius remigis*. *In preparation*

Dlugos, M., **Eldakar, O. T.** and Wilcox, R. S. (2009) Individual differences in mating tactic choice of the water strider *Aquarius remigis*. *In preparation*

Dlugos, M., Wilcox, R. S. and **Eldakar, O. T.** (2009) Ecological influences of mating tactic choice in the water strider *Aquarius remigis*. *In preparation*