

Marc T. J. Johnson

Present Position: Post-doctoral Fellow with M. Rausher, Duke University, U.S.A.

Funded by Natural Sciences and Engineering Research Council of Canada - PDF Fellowship

Education

Ph.D., 2007 (March), University of Toronto, Canada

B.Sc., 2000, University of Guelph, Canada

Publications

Peer-reviewed papers

Johnson, M.T.J., Dinnage, R. *, Zhou, A. *, and Hunter, M.D. Environmental variation trumps the ecological effects of plant genotype on competition among plant species. *J Ecol (In Review)*

Hughes, A.R., Inouye, B.D., **Johnson, M.T.J.**, Underwood, N., and Vellend, M. 2008 Ecological consequences of genetic diversity. *Ecol Lett (In Press)*

Jaramillo, A., **Johnson M.T.J.**, Rothfels C.R., and Johnson, R.A. 2008 The native and exotic avifauna of Easter Island: then and now. *Boletin Chileno de Ornitologia (In Press)*

Johnson, M.T.J. 2008 Bottom-up effects of plant genotype on aphids, ants and predators. *Ecology* 89:145-154

Larson, E.L., Bogdanowicz S.M., Agrawal A.A., **Johnson M.T.J.**, and Harrison, R.G. 2008. Isolation and characterization of polymorphic microsatellite loci in common evening primrose (*Oenothera biennis*). *Mol Ecol Notes* 9:434-436

Johnson, M.T.J., & Stinchcombe, J.R. 2007 An emerging synthesis between community ecology and evolutionary biology. *Trends Ecol Evol* 22:250-257

Johnson, M.T.J. 2007 Genotype-by-environment interactions lead to variable selection on life-history strategy in Evening Primrose (*Oenothera biennis*). *J Evol Biol* 20: 190-200

Johnson, M.T.J., & Agrawal, A.A. 2007 Covariation and composition of arthropod species across plant genotypes of Evening Primrose. *Oikos* 116:941-956

Johnson, M.T.J., Lajeunesse M.J., & Agrawal, A.A. 2006 Additive and interactive effects of plant genotypic diversity on arthropod communities and plant fitness. *Ecol Lett* 9: 24-34. Coverage in *ScienceNow* and *Faculty of 1000* (rated "landmark paper" by *F1000*).

McGuire, R.J. *, & **Johnson, M.T.J.** 2006 Plant genotype and induced responses affect resistance to herbivores on Evening Primrose (*Oenothera biennis*). *Ecol Entom* 31: 20-31.

Johnson, M.T.J., & Agrawal, A.A. 2005 Plant genotype and the environment interact to shape a diverse arthropod community on Evening Primrose. *Ecology* 86: 874-885.

Johnson, M.T.J., & Agrawal, A.A. 2003 The ecological play of predator-prey dynamics in an evolutionary theatre. *Trends Ecol Evol* 18: 549-551.

Johnson, M.T.J., Husband, B.C., & Burton, T.L. 2003 Habitat differentiation between diploid and tetraploid *Galax urceolata*. *Int J Plant Sci* 164: 703-710.

(Publications continued on next page)

* undergraduate coauthor

Agrawal, A.A., Conner, J.K., **Johnson, M.T.J.**, & Wallsgrove, R. 2002 Ecological genetics of an induced plant defense against herbivores: additive genetic variance and costs of phenotypic plasticity. *Evolution* 56: 2206-2213.

Johnson, M.T., & Rothfels, C.J. 2001 The establishment and proliferation of the rare exotic plant *Lythrum hyssopifolia* (Hyssop-leaved Loosestrife). *Can Field Nat* 115: 229-233.

Book Reviews, Symposium

Johnson, M.T.J. (2006) Food for thought on plant-carnivore interactions. Review of Wäckers, van Rijn, and Bruin (editors). *Plant Provided Foods for Carnivorous Insects*. *Ecology* 87: 2138-2139.

Johnson, M.T.J., & A.R. Hughes 2006 (symposium organizers) The ecological consequences of genetic diversity. Ecological Society of America Meetings, Memphis TN

Papers in preparation

Johnson, M.T.J. Community-level consequences of evolution by natural selection in plants (Submitting Feb. 2008).

Grants, Scholarships, Awards

Research Grants

NSF-DEB (In review), Evolution of Plant Defense: A Multigenerational Selection Experiment in the Field, 2008-2012. Co-PIs: A. Agrawal and M. Johnson. (Requested: \$760,000)

Duke University Research Council Grant, 2007-2008 (\$5,000, co-wrote with M. Rausher)

Mountain Equipment Co-op Environment Fund Research Grant, 2004-2006 (\$10,000)

Sigma Xi Grant in Aid of Research, 2002-2003 (\$986)

Fellowships and Scholarships

NSERC Post-doctoral Fellowship, 2007-2009 (\$80,000)

Canadian Graduate Scholar - NSERC, 2005-2006 (\$70,000)

Ontario Graduate Scholarship, 2004 (\$15,000)

University of Toronto Fellowship, 2002-2004 (\$4,500)

Post-graduate NSERC Award, 2002-2003 (\$42,000)

Ontario Graduate Scholarship, 2001 (declined) (\$15,000)

Undergraduate NSERC Award, 1999 (\$5,400)

Awards and Honours

NSERC Doctoral Prize (nominated by U. of T., decision pending), 2008

Governor General's Academic Gold Medal of Canada for top Ph.D., 2007

Best Student Presentation, Botany Graduate Seminar Series, 2004-2005

President's Prize for Best Student Presentation (Hon. mention) – Entom. Soc. Ontario, 2005

D. L. Bailey Award - best Ph.D. proposal in Botany, 2002-2003 (\$300)

Datatel Scholar, 1999 (\$2,000)

Research Assistantship Award, 1998 (\$6,400)

Employment and Teaching

Course Instructor, Field Ecology and Evolution, U. of T., 2005. I designed and taught this two week long field course to senior undergraduates.

Undergraduate Thesis Advisor, U. of T., 2005-2006. I supervised the undergraduate thesis of Alice Zhou. Thesis title: The community genetics of plant competition.

Plant-Animal Interactions, U. of T., 2004. Coordinated and taught tutorial sessions.

Community Ecology, U. of T., 2002-2003. Designed and taught the lab exercises and tutorials.

Lab Technician (Drs. A. Agrawal and J. Thaler), U. of T., 2000–2001

Field Research Technician (Dr. P. Kotanen), U. of T., 1999-2000.

Field Assistant (Dr. B. Husband), Univ. of Guelph, 1998-1999

Tropical Field Assistant (Dr. K. Rabenold), Purdue Univ (*in Venezuela*) 1997

Park Naturalist, Algonquin Provincial Park, Ontario Parks, 1995-1998

Invited Lectures and Public Outreach

Invited Academic Lectures

Evolution in Communities Symposium, Ecological Society of America Meetings, 2008

Dept. of Biology, University of Windsor, 2008

Dept. of Zoology, Michigan State University, 2008

Dept. of Biology, University of Toronto Scarborough, 2007

Dept. of Ecology and Evolutionary Biology, University of Toronto, 2007

Dept. of Entomology, Rutgers University, 2007

Dept. of Integrative Biology, Univ. Guelph, 2007

Young Scientist Symposium, Dept. Ecology and Evolutionary Biology, Univ. Michigan, 2007

Dept. of Organismic and Evolutionary Biology, Harvard Univ., 2007

Dept. Ecology and Evolutionary Biology, Yale Univ., 2007

Dept. Biology, SUNY-Buffalo, 2006

Undergraduate Community Ecology (guest lecturer), Univ. of Toronto, 2004, 2005

Public Outreach

Sunnybrook Hospital, Toronto. Various seminars to retired war veterans, 2006-2007

Biology Undergraduate Society - U. of T., “Do you have a future in science?”, 2005

Botany Undergraduate Dept. Society - U. of T., “Do you have a future in biology?”, 2005

Field Botanists of Ontario AGM – Keynote address. “Exploring the world’s flora”, 2002

Algonquin Park, approximately 200 public presentations between 1995-1998

Presented Papers

2008 – Ecological Society of America

2006 - Society for the Study of Evolution

2006 - Ecological Society of America (two papers)

2006 - Ontario Ecology and Ethology Colloquium

2006 - Yodzis Colloquium in Fundamental Ecology

(Presented papers continued on next page)

2005 - Entomological Society of Ontario
2005 - Ecological Society of America
2004 - Ecological Society of America
2004 - Ontario Ecol and Ethol. Colloquium (two papers)
2004 - Gordon Conference, Plant-Herbivore
2003 - Ecological Society of America
2003 - Ontario Ecology and Ethology Colloquium

Professional Affiliations and Service

External reviewer

Over the past three years I reviewed ca. 12 papers/grants per year from:

NSF, Proc Nat Acad Sci USA, Trends Ecol Evol, Am Nat, Ecology, Ecology Letters, Evolution, Glob Change Biol, Func Ecol, Heredity, Oecologia, Oikos, Am J Bot, Ann Bot, Acta Oecol, Ann Ent Soc Am, Biochem Syst Ecol, Can J Bot, Ecol Entomol, Ecoscience

Mentoring

Academic advisor, 2nd year undergraduate thesis, U. of T., 2004-2005 (A. Zhou)

Academic advisor, undergraduate field research projects, U. of T., 2003-2004 (R. McGuire, R. Dinnage)

Supervised over ten undergraduate and post-graduate students who have worked with me as field and lab assistants

Committees and Service Positions

Director of Koffler Scientific Reserve - search committee, U. of T., 2005-2006

Departmental Chair in Botany - search committee, U. of T., 2004

Darwin Day - organizer, U. of T., 2003, 2005

Student-Faculty Liaison, Department of Botany, U. of T., 2003-2004

Ombudsman, Botany Graduate Student Association, U. of T., 2002-2004

Curriculum Committee, Dept. of Zoology, U. of Guelph, 1996-1998

Societies

The Canadian Society of Ecology and Evolution, 2005-present

The Ecological Society of America, 2000-present

The Society for the Study of Evolution, 2000-2003

Eastern-branch Entomological Society of America, 2003-2005

The Society for Canadian Ecologists 2004-present

Collaborators

Multidisciplinary collaboration is a fun and important part of my research. I have ongoing or recent collaborations with the following scholars:

A.A. Agrawal (Cornell), S. Bogdanowicz (Cornell), R. Dinnage* (U Toronto), R. Harrison (Cornell), R. Hughes (UC Davis), M. Hunter (Univ. Michigan), B. Inouye (Florida State U), M. Lajeunesse (Cornell), E. Larson (Cornell), J. Maron (U Montana), R. McGuire* (York Univ.), M. Rausher (Duke U), C. Rodriguez-Soana (Rutgers), J.-P. Salminen (Turku, Finland), S. Smith (Duke U), J. Stinchcombe (U Toronto), N. Underwood (Florida State U), M. Vellend (U British Columbia), A. Zhou* (U Toronto)