

CURRENT POSITION

Post-doctoral Associate

PERSONAL INFORMATION

Nationality: Hungarian
US status: Permanent resident

AFFILIATION

Department of Ecology and Evolutionary Biology
University of Arizona
Tucson, AZ 85721-0088
USA

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ACADEMIC EDUCATION

- 1996 Masters Degree in Biology and Chemistry, Eötvös University of Sciences, Budapest, Hungary
- 2002 PhD in Evolutionary Genetics, Population and Conservation Biology, Department of Genetics, Eötvös University of Sciences, Budapest, Hungary

ACADEMIC EXPERIENCE

- 2002-2005 Post-doctoral Research Associate, Section of Evolution and Ecology, University of California, Davis
- 2005-present Post-doctoral Research Associate, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson

GRANTS

- 1996 Dutch-Hungarian (NWO-OTKA) Research Cooperation, study grant
- 1998 European Science Foundation (ESF), Program on Plant Adaptation, research grant
- 1999 Ministry of Education, France, Coopération Scientifique et Universitaire, Modeling the Adaptive Evolution of Seed Germination and Dispersal, research grant
- 1999 European Science Foundation (ESF), Program on Theoretical Biology of Adaptation, travel grant
- 2001 European Science Foundation (ESF), Program on Theoretical Biology of Adaptation, research grant
- 2002-present National Science Foundation (NSF), research grant on Life History Evolution in Variable Environments

TRAINING AND RESEARCH EXPERIENCE

- 1996 1st Winter School on Population Dynamics, Woudschoten, The Netherlands
- 1996 Vth Congress of Systematic and Evolutionary Biology, Workshop on Adaptive Dynamics, Mátraháza, Hungary
- 1996 The International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, visiting researcher
- 1997 Department of Zoology, University of Maryland, College Park, Maryland, visiting scientist
- 1998 2nd Winter School on Population Dynamics, Woudschoten, The Netherlands
- 1998-99 Institut de Génétique et de l'Evolution, University Paul Valéry, Montpellier, France, visiting scientist
- 1999 Department of Mathematics, University of Turku, Finland, visiting scientist
- 1999 Workshop on Metapopulation Dynamics, Tvarminne, Finland
- 2001 Department of Mathematics, University of Turku, Finland, visiting scientist
- 2001-02 Section of Evolution and Ecology, University of California, Davis, research collaboration
- 2005 Symposium on Nitrogen Eutrophication in Xeric Wildland and Agricultural Systems, University of California, Riverside

MEMBERSHIP

- 2002-05 Center for Population Biology, University of California, Davis, Post-doctoral Associate
- 2003-present Ecological Society of America, Regular Member

PUBLICATIONS

Published articles

Mathias, A., Olivieri, I. and Kisdi, É. 2001. Divergent evolution of dispersal in a heterogeneous landscape. *Evolution* 55, 246-259.

Cheptou, P. O. and Mathias, A. 2001. Can varying inbreeding depression select for intermediary selfing rates? *American Naturalist* 157, 361-373.

Mathias, A. and Kisdi, É. 2002. Adaptive diversification of germination strategies. Proceedings of the Royal Society of London, Series B, 269, 151-155.

Articles in process

Chesson, P. and Mathias, A. Quantifying species coexistence from endogenous consumer resource cycles with relatively non-linear competition.

Mathias, A. and Chesson, P. Life history evolution of seed dormancy cycles in desert winter annuals.

Friesen, M. and Mathias, A. Trade-offs repel temptation: evolutionary dynamics of exploitation in the rhizobia-legume mutualism. Submitted for publication to The American Naturalist, 2006.

Book chapter

Mathias, A. and Kisdi, É. Evolutionary branching and coexistence of germination strategies. In Elements of Adaptive Dynamics (eds. Dieckmann, U. and Metz, J.A.J.), Cambridge: Cambridge University Press, also available as IIASA Interim Report: <http://www.iiasa.ac.at/Publications/Documents/IR-99-014.pdf>

Master's Thesis

Evolution of Germination Rate in Fluctuating Environments, 1996, Department of Genetics, Eötvös University of Sciences, Budapest, in Hungarian

Doctoral Dissertation

Adaptive Diversification of Plant Life-history Strategies, 2002, Department of Genetics, Eötvös University of Sciences, Budapest

CONFERENCE PARTICIPATION

Presentations

1997 Evolutionary branching and cyclical extinction of germination rate, Workshop on Arabidopsis, Sete, France, invited lecture

1997 Evolutionary branching and coexistence of germination strategies, Vth. Conference of The European Society for Evolutionary Biology, Arnhem, The Netherlands

1999 Divergent evolution of dispersal in a heterogeneous landscape, Workshop on Metapopulation Dynamics, Tvarminne, Finland

- 2003 Quantifying species coexistence from endogenous consumer resource cycles with relatively non-linear competition, 88th Annual Meeting of The Ecological Society of America, Savannah, GA
- 2004 Life history evolution of seed dormancy cycles in desert winter annuals, 89th Annual Meeting of The Ecological Society of America, Portland, OR
- 2005 How the diversity of seed dormancy cycles contributes to the coexistence of desert winter annuals?, American Mathematical Society, Joint Mathematics Meeting, Atlanta, GA

Posters

- 1996 Mathias, A. and Kisdi, É. Evolution of germination rate in fluctuating environments, Vth International Congress of Systematic and Evolutionary Biology, Budapest, Hungary
- 1997 Mathias, A. Evolution of germination rate in fluctuating environments, Conference on Ecology, Pécs, Hungary
- 1999 Mathias, A. Evolution of intermediary self-fertilization rates, Conference on Mathematical Biology, Szombathely, Hungary
- 1999 Cheptou, P.O. and Mathias, A. Evolution of selfing rate under varying environments, VIth Conference of The European Society for Evolutionary Biology, Barcelona, Spain
- 2006 Mathias, A. and Chesson, P. Exact quantification of the storage effect in desert ecosystems, 91st Annual Meeting of The Ecological Society of America, Memphis, TN

SPECIAL SEMINARS

Evolutionary branching and cyclical extinction of germination rate, August 1997, Department of Zoology, University of Maryland

Adaptive diversification of germination fraction and dispersal rate, April 1999, Department of Mathematics, Biomathematics Group, University of Turku

Modeling the evolution of intermediate self fertilization, November 2001, Department of Mathematics, Biomathematics Group, University of Turku

Seed dormancy cycles and the coexistence of desert winter annuals, February 2006, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson

Trade-offs repel temptation: evolutionary dynamics of rhizobia effectiveness, November 2006, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson

PROGRAMMING SKILLS

Delphi
Gauss
Mathematica

LANGUAGES

Hungarian, fluent
French, fluent
English, fluent