

## DR. ARPAT OZGUL

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### RESEARCH INTERESTS

Population ecology, bio-demography, evolutionary biology, life-history evolution, metapopulation dynamics, behavioral ecology, wildlife disease dynamics, conservation biology

### EDUCATION

- 2006 PhD in Wildlife Ecology & Conservation, University of Florida, Gainesville, Florida  
Thesis: *Metapopulation dynamics of yellow-bellied marmots*  
Advisor: Prof. Madan K. Oli
- 2001 MSc in Environmental Sciences, Bosphorus University, Istanbul, Turkey  
Thesis: *Population distribution of cave-dwelling bat species and conservation status of underground roosts in Northwestern Turkey*  
Advisor: Prof. Andrzej Furman
- 1999 BA in Management, Bosphorus University, Istanbul, Turkey

### EMPLOYMENT

- 2012 - present Visiting Research Fellow  
Department of Zoology, University of Cambridge / Darwin College
- 2012 - present NERC Advanced Research Fellow  
Division of Biology, Imperial College London  
*Demographic and phenotypic signals of population change*
- 2011 - 2012 Postdoctoral Research Associate *supervised by Prof. Tim Clutton-Brock*  
Department of Zoology, University of Cambridge / Darwin College  
*Demography of social behavior*
- 2008 - 2011 Postdoctoral Research Associate *supervised by Prof. Tim Coulson*  
Division of Biology, Imperial College London  
*Individual differences and the dynamics of animal populations*
- 2006 - 2008 Postdoctoral Research Associate *supervised by Prof. Madan Oli*  
Department of Wildlife Ecology & Conservation, University of Florida  
*Wildlife disease dynamics*
- 2001 - 2006 Graduate Research Assistant  
Department of Wildlife Ecology & Conservation, University of Florida  
*Animal population dynamics*
- 1999 - 2001 Graduate Research Assistant  
Institute of Environmental Sciences, Bosphorus University  
*Community ecology of cave-dwelling bats*

## GRANTS AND QUALIFICATIONS

- 2012 NERC Advanced Fellowship, Imperial College London
- 2011 Darwin College Fellowship, University of Cambridge
- 2011 NERC Postdoctoral Grant, University of Cambridge
- 2011 Independent Statistical Consultant, The Wilderness Society
- 2010 Technical Scientific Advisor, Panthera
- 2010 Scientific Advisor, ‘Bat Research in Turkey’
- 2008 NERC Postdoctoral Grant, Imperial College London
- 2007 Courtesy Assistant Professor, Wildlife Ecology and Conservation, Uni. of Florida
- 2006 Graduate Student of the Year Award, Sigma Xi, University of Florida Chapter
- 2006 Departmental nomination for the Best Dissertation Award, University of Florida
- 2004 Rocky Mountain Biological Labs - Lee R. G. Snyder Memorial Fund, Gothic, CO
- 2004 Sigma Xi Grant-in-Aid of Research
- 2003 Best Student Presentation Award, The Wildlife Society, Florida Chapter
- 2002 William and Else Jennings Award, University of Florida
- 2001 Rufford Conservation Grant, Whitley Awards Foundation, UK
- 1999 Threatened Species Award, BP Conservation, BirdLife, Flora & Fauna Intl., UK

## PUBLICATIONS

- 26. **Ozgul A**, Coulson T, Reynolds A, Cameron T, Benton T (in press) Population responses to perturbations: the importance of trait-based analysis illustrated through a microcosm experiment. *American Naturalist*
- 25. Bateman A, **Ozgul A**, Coulson T, Clutton-Brock T (in press) Density dependence in group dynamics of a highly social mongoose, *Suricata suricatta*. *Journal of Animal Ecology*
- 24. Goswami VR, Getz LL, Hostetler JA, **Ozgul A**, Oli MK (2011) Synergistic influences of phase, density and climatic variation on the dynamics of fluctuating populations. *Ecology* 92:1680–1690
- 23. Armitage KB, Van Vuren DH, **Ozgul A**, Oli MK (2011) Causes of prenatal dispersal in yellow-bellied marmots. *Ecology* 92: 218-227
- 22. **Ozgul A**, Child DZ, Oli MK, Armitage KB, Blumstein DT, Olson LE, Tuljapurkar S, Coulson T (2010) Coupled dynamics of body mass and population growth in response to environmental change. *Nature* 466: 482:485  
*Reviewed:* Visser M (2010) Fatter marmots on the rise. *Nature* 466: 445-47  
*Featured:* Nature Podcast July 22<sup>nd</sup>, 2010 “Waking up to climate change”
- 21. Struve J, Lorenzen K, Blanchard J, Börger L, Bunnefeld N, Edwards C, Hortal J, MacCall A, Matthiopoulos JF, Moorber BV, **Ozgul A**, Royer F, Singh N, Yesson C, Bernard R (2010). Lost in space? Searching for directions in the spatial modelling of individuals, populations and species ranges. *Biology Letters* 6: 575–578

20. Ezard T, Bullock J, Dalglish H, Millon A, Pelletier F, **Ozgul A**, Koons D (2010) Matrix models for a changeable world: the importance of transient dynamics in population management. *Journal of Applied Ecology* 47: 515-523
19. Wendland L, Wooding J, White CL, Demcovitz D, Littell R, Berish JD, **Ozgul A**, Oli MK, Klein PA, Christman MC, Brown MB (2010) Social behavior drives the dynamics of respiratory disease in threatened tortoises. *Ecology* 91: 1257-1262
18. **Ozgul A**, Tuljapurkar S, Benton TG, Pemberton JM, Clutton-Brock TH, Coulson T (2009) The dynamics of phenotypic change and the shrinking sheep of St. Kilda. *Science* 325: 464-467
17. **Ozgul A**, Oli MK, Bolker BM, Perez-Heydrich C (2009) Upper respiratory tract disease, force of infection, and effects on survival of gopher tortoises. *Ecological Application* 19: 786-798
16. **Ozgul A**, Armitage KB, Blumstein DT, Van Vuren DH, Oli MK (2009) Influence of local demographic processes on the metapopulation dynamics of the yellow-bellied marmot. *American Naturalist* 173: 517-530
15. Borrego N, **Ozgul A**, Armitage KB, Blumstein DT, Oli MK (2008) Spatiotemporal variation in survival of male yellow-bellied marmots. *Journal of Mammalogy* 89: 365–373
14. **Ozgul A**, Oli MK, Olson LE, Blumstein DT, Armitage KB (2007) Spatiotemporal variation in the reproductive rates of the yellow-bellied marmot. *Oecologia* 154: 95-106
13. Getz LL, **Ozgul A**, Oli MK, Hofmann JE, McGuire B (2007) Dynamics of vole populations: Influence of interspecific competition. *Acta Zoologica Sinica* 53: 800-811
12. **Ozgul A**, Armitage KB, Blumstein DT, Oli MK (2006) Spatiotemporal variation in survival rates: Implications for population dynamics of yellow-bellied marmots. *Ecology*, 87: 1027-1037
11. **Ozgul A**, Armitage KB, Oli MK, Blumstein DT, Van Vuren DH (2006) Effects of patch quality and network structure on patch occupancy dynamics of a yellow-bellied marmot metapopulation. *Journal of Animal Ecology* 75: 191-202
10. Dodd CK, **Ozgul A**, Oli MK (2006) Influence of disturbance events on survival and dispersal rates of Florida box turtles. *Ecological Applications* 16: 1936–1944
9. Blumstein DT, **Ozgul A**, Yovovich V, Van Vuren DH, Armitage KB (2006) Effect of predation risk on the presence and persistence of yellow-bellied marmot (*Marmota flaviventris*) colonies. *Journal of Zoology* 270: 132-138
8. Getz LL, **Ozgul A**, Oli MK, Hofmann JE, McGuire B (2006) Dynamics of vole populations: an experimental evaluation of the influence of food resources. *Acta Zoologica Sinica* 26: 114-122
7. Getz LL, Oli MK, Hofmann JE, McGuire B, **Ozgul A** (2005) Factors influencing movement distances of two species of sympatric voles. *Journal of Mammalogy* 86: 647-654
6. **Ozgul A**, Getz LL, Oli MK (2004) Demography of fluctuating populations: temporal and phase-related changes in vital rates of *Microtus ochrogaster*. *Journal of Animal Ecology* 73: 201-215
5. Blumstein DT, Runyan A, Seymour M, Nicodemus A, **Ozgul A**, Ransler F, Im S, Stark T, Zugmeyer C, Daniel JC (2004) Locomotor ability and wariness in yellow-bellied marmots. *Ethology* 110: 615-634

4. Furman A & **Ozgul A** (2004) The distribution of cave-dwelling bats and conservation status of underground habitats in Northwestern Turkey. *Biological Conservation* 120: 243-248
3. Karatas A & **Ozgul A** (2003) On the occurrence of *Myotis emarginatus* (Geoffroy, 1806) in Turkey (Chiroptera: Vespertilionidae). *Zoology in the Middle East* 28: 17-24
2. Furman A & **Ozgul A** (2002) Distribution of cave-dwelling bats and conservation status of underground habitats in the Istanbul area. *Ecological Research* 17: 69-77
1. **Ozgul A**, Bilgin R, Furman A (2000) Cave-dwelling bats of Çatalca-Kocaeli Region, Northwestern Turkey. *Proceedings of the 8<sup>th</sup> European Bat Research Symposium* (ed. BW Woloszyn) 17: 191-198

#### In review / preparation

- **Ozgul A**, Bateman AW, English S, Coulson T, Clutton-Brock TH (in review) Linking group and trait dynamics in an obligate cooperative breeder, *Suricata suricatta*
- Bateman AW, **Ozgul A**, Nielsen JF, Coulson T, Clutton-Brock TH (in review) Social structure mediates environmental effects on group size regulation in an obligate cooperative breeder, *Suricata suricatta*.
- Dietz MS, Murdock CC, Romero LM, **Ozgul A**, Foufopoulos J (in review) Distance to an unpaved road is associated with reproductive success and physiological stress response in a migratory land bird.
- Foufopoulos J & **Ozgul A** (in prep) Effect of disease on nest and individual survival of white-crowned sparrows (*Zonotrichia leucophrys*) in Colorado.
- Kubasiewicz, L, **Ozgul A**, Coulson T (in prep) Dynamics of phenotypic change in Soay sheep: Individual and environmental effects.
- Donnelly S, Fontaneto D, **Ozgul A** (in prep) Life history adaptations to environmental stress: Prediction and response from two rotifer species.
- Froy H, Getz LL, Oli MK, Coulson T, **Ozgul A** (in prep) Joint dynamics of body mass and demography underlying small mammal population fluctuations.

## TEACHING EXPERIENCE

### Instructor

Quantitative Wildlife Ecology (WIS4601C) - University of Florida (Springs 2004, 2006)  
Demography & Management - Imperial College London (November 2009)

### Guest lecturer

Wildlife Population Modeling (WIS6466) - University of Florida (Spring 2006)  
Wildlife Population Ecology (WIS4501) - University of Florida (Spring 2004, 2005, 2007)  
Advanced Topics in Population Ecology (WIS6455) – Uni. of Florida (Spring 2004, 2005)  
Quantitative Wildlife Ecology (WIS4601C) - University of Florida (Spring 2005, 2007)

### Teaching assistant

Generalized Linear Modeling in R – Imperial College London (February 2009)  
Analysis and Management of Animal Populations – Uni. of Florida (Springs 2004 & 2006)

Wildlife Issues (WIS2040) - University of Florida (Fall 2005)  
Quantitative Data Analysis - Bosphorus University (Fall 2001)  
Environmental Dimension - Bosphorus University (Fall 2000)  
Models & Concepts in Ecology - Bosphorus University (Spring 2000)

#### Thesis supervision

Hannah Froy, MSc Thesis, Imperial College London (2010)  
Sebastien Perceau-Wells, MSc Thesis, Imperial College London (2010)  
Laura Kubasiewicz, MSc Thesis, Imperial College London (2009)  
Shane Donnelly, MSc Thesis, Imperial College London (2009)  
Natalia Borrego, Undergraduate intern, University of Florida (2005)

## **PRESENTATIONS**

### ***Linking trait and group dynamics in meerkats***

2011 University of Cambridge, Department of Zoology

### ***Demographic and phenotypic signals of impending population change***

2011 Natural Environment Research Council, Swindon

### ***Coupled dynamics of populations and phenotypic traits in changing environments***

2011 Darwin College, Cambridge

2011 Microsoft Research, Cambridge

2011 University of Sheffield, Animal and Plant Sciences

2011 University of Cambridge, Department of Zoology

2011 University of Zurich, Evolutionary Biology and Environmental Studies

2011 University of Montana, Wildlife Biology Program

2011 Brown University, Ecology & Evolutionary Biology

### ***A spatially-structured matrix population model: Vec-permutation matrix approach***

2010 Imperial College London, Spatial Ecology Workshop

### ***Bio-demographic methods in population ecology and evolutionary biology***

2009 Istanbul Technical University, Ecology & Evolution Symposium

2009 Istanbul Technical University, Dept. of Molecular Biology & Genetics

### ***The dynamics of phenotypic change and the shrinking sheep of St. Kilda***

2009 University of Aberdeen, Inst. of Biological and Environmental Sciences

2009 University of Florida, Dept. of Wildlife Ecology and Conservation

2009 University of Lyon, Ecology and Evolution Dept.

2009 Imperial College London, Center for Population Biology

2008 Bosphorus University, Environmental Sciences Dept.

2008 University of Cambridge, Department of Zoology

### ***Influence of local demography on asymptotic and transient dynamics of a yellow-bellied marmot metapopulation***

2008 Populations Under Pressure Symposium, Imperial College London (Poster)

2007 Ecological Society of America Meeting, San Jose, California

2005 Ph.D. Exit Seminar, University of Florida

***Effects of upper respiratory tract disease in gopher tortoise populations in Florida - populations in transition***

2006 Ecology of Infectious Diseases - NSF Meeting, Atlanta, Georgia (Poster)

***Spatiotemporal variation in vital rates: Implications for population dynamics of yellow-bellied marmots***

2006 Florida Wildlife Society Meeting, Cocoa Beach, Florida (by Borrego N)

2005 Ecological Society of America Meeting, Montreal, Canada

2005 Wildlife Graduate Student Seminar, University of Florida

***Patch occupancy dynamics of a yellow-bellied marmot metapopulation***

2004 Florida Wildlife Society Meeting, Mount Dora, Florida

2004 Rocky Mountain Biological Laboratory, Gothic, Colorado

***Demography of fluctuating vole populations***

2003 Ecological Society of America Meeting, Savannah, Georgia

2003 Florida Wildlife Society Meeting, Vero Beach, Florida

2003 Rocky Mountain Biological Laboratory, Gothic, Colorado

2003 Wildlife Graduate Student Seminar, University of Florida

***Population distribution of cave-dwelling bat species and conservation status of underground roosts in Northwestern Turkey***

2001 MSc Exit Seminar, Bosphorus University, Istanbul

1999 BP Conservation Programme, London, UK

1999 European Bat Research Symposium, Krakow, Poland (Poster)

1999 'Research and Development in Turkey' Symposium, Istanbul, Turkey (Poster)

**WORKSHOPS & SEMINARS**

2011 Evolutionary Adaptations to Environmental Change, University of Zurich

2010 Spatial Ecology Workshop, Imperial College London

2009 Ecology & Evolution Workshop, Istanbul Technical University

2009 Planning for an Academic Career, Imperial College London

2008 Ecology & Evolution Seminar Series (**Organizer**), Imperial College London

2008 Linking Ecological and Evolutionary Dynamics II, Imperial College London

2008 Populations Under Pressure, Imperial College London

2008 Linking Ecological and Evolutionary Dynamics I, Imperial College London

2007 IFAS Grant Writing Workshop, University of Florida

2007 Analysis and Management of Animal Populations, Uni. of Florida

2006 Teaching Excellence Workshop, University of Florida

2006 Model Selection and Inference in Ecology, University of Central Florida

1999 Wildlife Management Workshop - The Society for Protection of Nature, Adana, TR

1999 Biological Surveys Workshops, Expedition Advisory Centre, London, UK

## **PROFESSIONAL REVIEW**

Reviewed manuscripts for the following peer reviewed journals:

*American Naturalist; Biological Conservation; Biology Letters; Biotropica; Chelonian Conservation and Biology; Ecology; Ecoscience; International Journal of Biometeorology; Journal of Animal Ecology; Journal of Applied Ecology; Journal of Mammalogy, Journal of Wildlife Management; Landscape Ecology; Oecologia; Oikos; Proceedings of the Royal Society B; Wildlife Biology*

## **POPULAR ARTICLES**

Ozgul A (2010) Ekolojinin arka bahçeleri / Backyards of ecology. NTV Bilim Magazine 19: 52-56 [in Turkish]

Ozgul A (1998) Peynirlikönü Sinkhole Expedition: the deepest cave in Turkey (-1377m). Atlas Magazine 41: 57-71 [in Turkish]

## **COMPUTER SKILLS**

Proficient in computer programming (R, MATLAB), ecological (MARK, PRESENCE, DISTANCE, RMARK, MSURGE), statistical (R, S-plus, SAS, SPSS), spatial analysis (ARCVIEW/ARCGIS), and database management (MS ACCESS) software packages

## **PUBLISHED PHOTOGRAPHY**

Wildlife photography work ([www.arpat.net/randfx](http://www.arpat.net/randfx)) published in several scientific journals (Ecology, Ecological Applications, Science, Nature, TREE, Functional Ecology, Cell, Evolutionary Biology, Molecular Ecology) and over 300 international newspapers and magazines (inc. BBC, CNN, New York Times, Time, Guardian, The Scientist, Encyclopædia Britannica).