

## Anat Belasen

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### EDUCATION

#### University of Michigan Department of Ecology and Evolutionary Biology (Ann Arbor, MI)

- **Doctor of Philosophy**, Ecology and Evolutionary Biology, expected 2018
- Research focus: the evolutionary ecology of enigmatic amphibian disease including chytridiomycoses
- Advisor: Dr. Timothy James
- Courses: biology of fungi, genetics, statistical phylogeography, disease modeling, python programming

#### University of Michigan School of Natural Resources and Environment (Ann Arbor, MI)

- **Master of Science**, Natural Resources and Environment: Conservation Ecology, April 2013
- GPA: 3.9
- Thesis: Evaluating potential impacts of climate change on island populations of the Aegean Wall Lizard, *Podarcis erhardii*
- Committee Members: Dr. Johannes Foufopoulos (advisor; UM SNRE), Dr. Barry Sinervo (UC Santa Cruz)
- Courses: population and community ecology, macroecology, phylogenetics, agroecology, analysis and modeling of ecological data, field ecology, conservation biology, statistics, disease ecology and ecosystem health, geographic information systems (GIS), environmental policy and governance, environmental assessment

#### Tulane University

- **Bachelor of Science**, Ecology and Evolutionary Biology, August 2008
- GPA: 3.2
- Courses: herpetology, ichthyology, primate ecology and behavior, animal behavior, tropical ecology, speciation and macroevolution, general ecology, vertebrate biology
- President and founder, Tulane Environmental Action League
- Environmental service chair, Hillel Student Group

#### GRE scores

Quantitative	750
Analytical	620
Total	1370

## **RESEARCH INTERESTS AND EXPERIENCE**

**Research Interests:** anthropogenic impacts on wildlife including climate change, habitat fragmentation, landcover change, introduced species and pathogens; herpetology; tropical ecology; conservation biology

### **Amphibian Sampling** (ES George Reserve, Pinckney, MI) Summer 2013

- Field survey, collection, and identification of larval to adult amphibians in terrestrial and aquatic habitats as part of a research team based in the laboratory of Dr. Timothy James
- Standard protocols were used to sample individuals for the fungus *Batrachochytrium dendrobatidis*

### **Master's Thesis Research** (Greece) 05/2011-08/2011

- Research project focus: thermal ecology of island populations of the Aegean Wall Lizard, *Podarcis erhardii* – integration of effects of global climate change and habitat fragmentation
- Conducted daily field observations and collection of lizards (over 300 individuals captured and marked for study)
- Designed and carried out several experiments aimed to quantify thermal preferences and limits of focal species
- Trained three research assistants in husbandry and experimental manipulation
- Collaborated with University of Athens faculty
- Maintained subset of collected lizards at University of Athens laboratory for longer-term study

### **Tulane University Herpetology Lab, Research Assistant** (New Orleans, LA) 2009-2010

- Contributed to research protocol based on experience with local amphibians
- Assisted in field collection of larval and adult frogs

### **Tulane University Ecology Lab, Research Assistant** (New Orleans, LA) 2008

- Maintained thousands of general collection live caterpillar specimens
- Collected species-specific food plants for collected specimens
- Identified specimens to species
- Input and organized results into open-source database

### **Tulane University Ecology Lab, Laboratory Assistant** (New Orleans, LA) 2006-2008

- Reared and maintained three species of Lepidopteran
- Prepared experimental diets
- Recorded results of experiments as part of NIGEC study
- Performed chemical extractions of dried Piper leaf samples

### **La Selva Biological Station, Research Assistant** (Costa Rica) 2007

- Assisted with PhD thesis research on host-plant alkaloid effects in Geometrid caterpillars
- Collected specimens from field daily
- Prepared experimental diets

- Measured feeding efficiency and survival rate of caterpillars, and manipulated data in Excel
- Input and organized results into database

## **TEACHING EXPERIENCE**

### **University of Michigan, Graduate Student Instructor (GSI) (Ann Arbor, MI) 2011-2012**

- Courses taught:
  - Biology of Fishes: Fall 2011 and Fall 2012
  - Introduction to Biology Laboratory: Winter 2012, Winter 2014
  - Natural Resource Statistics (graduate level): Winter 2013
  - Ecology Laboratory: Fall 2013
- Developed lesson plans to engage students from diverse backgrounds in scientific learning
- Covered topics from microbiology and ecology to basic statistical analysis (t-tests, ANOVAs, p-values, descriptive stats – Intro to Bio Lab only)
- Assumed responsibility for lab preparation and instruction, teaching field identification methods, lecturing, designing practical exams, grading, maintaining regular office hours

## **SERVICE AND OUTREACH**

### **Natural Area Preservation: Herpetological Inventory Coordinator (Ann Arbor, MI) Summer 2013**

- Involved in PR including radio interview for EMU's "The Green Room" report on wetland species conservation, and interview for children's magazine article on turtle nesting
- Trained and assisted volunteers collecting data on salamanders, frogs and toads, and turtles in Ann Arbor city parks
- Excavated areas where nesting turtles were reported and deployed predator excluding structures to protect active nests
- Organized a weekly Citizen Science project with 6<sup>th</sup> through 8<sup>th</sup> graders, in which resident turtles and water quality were monitored through canoe-based surveys on the Huron River following aquatic vegetation harvest
- Maintained contact with volunteers throughout the season, and gathered feedback to improve NAP's Herp Survey programs
- Collected and entered data from volunteers into Microsoft Access database and ArcGIS
- Generated data summaries in Crystal Reports

### **Herpetological Resource and Management: Herpetological Intern (Chelsea, MI) Summer 2012**

- Responsible for husbandry and care of rare ("Headstart") turtles from Michigan, Central America, and Africa, including adults, juveniles, hatchlings, and eggs
- Created guide to Michigan reptiles and amphibians for company website, including distribution maps created in ArcGIS
- Conducted herpetofaunal diversity surveys in a variety of urban to pristine habitats, including restored wetlands and abandoned agricultural land
- Participated in turtle nesting success surveys in metropolitan park: surveyed for nests, identified observed adults and nests/eggs to species
- Performed statistics in SPSS and ArcGIS on field data collected

- Prepared reports for completed projects
- Managed and databased entries for the Michigan Herp Atlas, a citizen science based inventory of Michigan herp observations
- Compiled articles for Michigan herp BMP (best management practices) manual

**University of Michigan Museum of Zoology, Fish Division Research Assistant** (Ann Arbor, MI) 2010-2011

- Sorted, identified, and data-based mixed species collections from the Great Lakes region, the Gulf of Mexico, and coral reefs of the South Pacific
- Maintained and updated second largest fish collection in the United States
- Assumed responsibility for producing radiographs of holotype specimens
- Assisted in accessions and de-accessions of research material, including preserved specimens, skeletons, and radiographs

**Gulf Restoration Network, Head Field Manager** (New Orleans, LA) 2009

- Fundraised as part of a door-to-door grassroots campaign: speaking to about 30-40 people per day and educating them about issues facing the Gulf Coast region
- Trained and supervised teams of three to five canvassers each day, as well as all other Field Managers
- Personally raised over \$25,000 for the organization

**Audubon Zoo Reptile House, Volunteer** (New Orleans, LA) 2008-2009

- Maintained, cleaned, and cared for reptiles and amphibians, including endangered, fragile, and developing animals
- Prepared diets and contributed to feeding/health database

**PUBLICATIONS**

Li, B., **Belasen, A.**, Pafilis, P., Bednekoff, P., and Foufopoulos, J. Effects of feral cats on the evolution of antipredator behaviors in island reptiles: insights from an ancient introduction. *Proc. R. Soc. B. In Press.*

Brock, K., **Belasen, A.**, and Foufopoulos, J. Voluntary autotomy in *Podarcis erhardii*. *Herpetological Review* 45(2): 332.

**Belasen, A.**, Burkett, E., Injaian, A., Li, K., Allen, D., and Perfecto, I. 2013. Habitat selection in Blue-spotted Salamanders (*Ambystoma laterale-jeffersonianum* complex). *Copeia* 2013(2): 254-261.

**Belasen, A.**, Li, B., and Foufopoulos, J. 2012. Geographic distribution: *Chalcides ocellatus*. *Herpetol. Rev.* *Herpetological Review* 43: 102.

**Belasen, A.**, Li, B., Brock, K., Pafilis, P., Valakos, E., Chremou, D., Li, B., Sinervo, B., and Foufopoulos, J. Thermal ecology across island populations of Erhard's Wall Lizard, *Podarcis erhardii*. *In prep.*

Brock, K., **Belasen, A.**, and Fofopoulos, J. Shifts in reproductive biology across Cycladic populations of Erhard's Wall Lizard, *Podarcis erhardii*. *In Prep.*

#### **PEER REVIEWS**

- Hydrobiologia, July 2013
- Herpetological Review, September 2013

#### **AWARDS AND FELLOWSHIPS**

- Research Fellowship, University of Michigan Rackham Graduate School, \$1,500 (2011)
- Thesis Fellowship, University of Michigan School of Natural Resources, \$1,000 (2011)
- Conference Travel Award, University of Michigan, \$1,150 (2012)
- Amphibian Academy Travel Award, Amphibian Ark, \$450 (2013)

#### **PROFESSIONAL MEETINGS AND TRAINING**

- Michigan Partners in Amphibian and Reptile Conservation (MIPARC), Detroit, MI (2011)
- MIPARC, Grand Rapids, MI (2012) – **Poster presentation:** Habitat selection in Blue-spotted Salamanders
- International Congress on the Zoogeography and Ecology of Greece and Adjacent Regions, Athens, GR (2012) – **Poster presentation:** Physiology and thermal ecology in island populations of the Aegean Wall Lizard, *Podarcis erhardii*
- Ecological Society of America (ESA)
  - Portland, OR (2012) – **Poster presentation:** Thermal ecology in island populations of the Aegean Wall Lizard, *Podarcis erhardii*
  - Minneapolis, MN (2013) – **Oral presentation:** Interactions of habitat fragmentation and climate change in Erhard's Wall Lizard, *Podarcis erhardii*
- Joint Meeting of Ichthyologists and Herpetologists (JMIH), Albuquerque, NM (2013) – **Oral presentation:** Habitat selection in the Blue-spotted Salamander (*Ambystoma laterale-jeffersonianum* unisexual complex)
- World Congress of Herpetology, Vancouver, BC (2012) – **Oral presentation:** Thermal preference, water loss, and thermal tolerances across island populations of the Aegean Wall Lizard, *Podarcis erhardii*
- Student Conference on Conservation Science, New York, NY (2012)
- Amphibian Conservation Academy (Amphibian Ark), Toledo Zoo, OH (2013)

#### **PROFESSIONAL MEMBERSHIPS**

- Society for the Study of Amphibians and Reptiles (2010-present)
- American Society of Ichthyologists and Herpetologists (2010-present)
- Audubon Society of America (2008-present)
- Michigan Partners in Amphibian and Reptile Conservation (2010-present)
- Ecological Society of America (2012-present)

#### **TECHNICAL SKILLS**

- Software proficiency in: Microsoft Office (Word, Excel, Power Point, Access), ArcGIS, SPSS, R, OpenBugs, HEC DSSvue, STELLA Modeling and Simulation Software

#### **LANGUAGES**

- French – speaking and writing: near fluent
- Hebrew – speaking and writing: near fluent

- Spanish – speaking and writing: intermediate
- Greek – speaking and writing: novice
- Japanese – speaking and writing: novice
- Portuguese – speaking: novice

#### **INTERNATIONAL EXPERIENCE**

- Greece: Naxos, Syros, Oviokastro, and Aspronissi islands; Athens – research trip, Summer 2011
- Israel: Jerusalem, Tel Aviv – multiple personal trips and professional meeting, Summer 2011
- Brazil: Rio de Janeiro, Sao Paulo – personal, March 2009
- Belize: Tropical Ecology course trip, involving tropical forest, rural agroecosystem, and marine aquatic study, Summer 2008
- Costa Rica: La Selva Biological Station, Puerto Viejo – research assistantship December 2007