

Paul S. Hamilton
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January 27, 2012

Education

2005 PhD Biology, Arizona State University
1995 MA Ecology and Evolution, University of California at Riverside
1992 BS Biology, University of California at Riverside

Appointments

2003-current The Biodiversity Group
Positions: Founder, Executive Director, Biologist, Photographer, Webmaster, Photography
Workshop Instructor, Field Supervisor

2011-current Conservation Science Research and Consulting
Position: Field Biologist

2002-2009 Reptile Research and Arizona State University
Position: Field Instructor

2006 Glendale Community College
Position: Adjunct Faculty

1999-2005 Arizona State University at the West Campus, Department of Integrated Natural Sciences
Position: Adjunct Faculty

2005 International Student Volunteers
Field Leader

1997-2002 Arizona State University, Department of Biology
Teaching Associate

2000-2003 Arizona State University West Campus
Field Ecologist

1998-1999 SWCA and Northland Research
Field Biologist

1994-1997 USGS, Biological Resources Division
Staff Biologist

1995-1997 Mount San Jacinto Community College
Biology Instructor

1990-1994 University of California, Riverside, Department of Biology
Research Assistant

1992-1993 University of California, Riverside, Department of Biology
Teaching Assistant

Thesis and Dissertation

Hamilton, P.S. 1995. Environmental and geographic variation on the expression of sexual dimorphism in the chuckwalla, *Sauromalus obesus*. M.A. Thesis. Department of Biology, University of California at Riverside.

Hamilton, P.S. 2005. Sexual selection and life history evolution of color: Tests of evolutionary theory across biological levels of organization. Ph.D. Dissertation, School of Life Sciences, Arizona State University. Tempe, AZ.

Other Projects

2003-current	Field Studies of Reptiles and Amphibians in Imperiled Ecuadorian Ecosystems: Conservation Ecology and Systematics P.I. Paul Hamilton
2007-current	Conservation Ecology of Madrean Ecosystems in México. P.I. Paul Hamilton
2010-current	Cameras for Conservation: A Unique Approach to Citizen Science and Capacity Building P.I. Paul Hamilton
2011-current	Field Surveys of Desert Tortoises and other Mojave Fauna P.I. William Boarman
1999-2004	Sexual Dichromatism and Feeding Apparatus in the Genus <i>Crotaphytus</i> P.I. Joe Macedonia
2000-2003	Distribution and Status of the Arizona Whiptail, <i>Aspidoscelis arizonae</i> P.I. Brian Sullivan
1998-1999	Surveys for Desert Tortoises and Cactus-Ferruginous Pygmy Owls P.I. Andrea Helmstetter
1995-1997	Raven Ecology at it Relates to Predation on Juvenile Desert Tortoises P.I. William Boarman
1995-1997	Forensic Analysis of Desert Tortoise Remains P.I. William Boarman
1990-1994	Immunocompetence and sexual selection in red jungle fowl P.I. Marlene Zuk
1993	Raven and raptor surveys for a proposed desert landfill site P.I. Richard Knight

Courses Taught (number of terms taught)

- Biology for Non-science Majors lecture and lab (10; three different versions)
- Tropical Field Ecology, field and lecture (3)
- Arizona Natural History, lecture and field (4)
- Herpetology, lecture, field and lab (4)
- Field Zoology, lecture, field and lab (1)
- Environmental Science lecture (2)
- Vertebrate Zoology lab (6)
- Human Anatomy and Physiology lab (2)
- Introductory Biology for Majors lab (2)
- Population Biology lab (3)
- Organismal Biology lab (3)

Peer-Reviewed Publications

- BOARMAN, W. I., T. GOODLETT, G. GOODLETT AND P. S. HAMILTON. 1998. Review of radio transmitter attachment techniques for turtle research and recommendations for improvement. *Herpetological Review*. 29:26-33.
- HAMILTON, P. S., D. E. GAALEMA, S. L. LAAGE AND B. K. SULLIVAN. 2005. A photographic method for quantifying color characteristics and patch morphometrics in lizards. *Herpetological Review*. 36:402-406.
- HAMILTON, P. S., D. GAALEMA AND B. K. SULLIVAN. 2008. Short-term changes in dorsal reflectance for background matching in Ornate Tree Lizards (*Urosaurus ornatus*). *Amphibia-Reptilia*. 29:473-477.
- HAMILTON, P. S. AND B. K. SULLIVAN. 2005. Mate choice in ornate tree lizards, *Urosaurus ornatus*: a multivariate analysis. *Animal Behavior*. 69:219-224.
- HAMILTON, P. S. AND J. WRIEDEN. 2004. *Crotalus molossus molossus* (Black-tailed Rattlesnake) [Natural History Note]. Male-male fighting. *Herpetological Review*. 35:63.
- HURT, C. R., S. MEREDITH AND P. HAMILTON. 2003. Evolutionary ecology: Concepts and case studies [book review]. *Conservation Biology*. 17:242-243.
- LAPPIN, A. K., P. S. HAMILTON AND B. K. SULLIVAN. 2006. Bite-force performance in the Common Chuckwalla (*Sauromalus ater* [= *obesus*]): Evidence for antagonistic natural and sexual selection on head form. *Biological Journal of the Linnean Society*. 88:215-222.
- MACEDONIA, J. M., A. K. LAPPIN, E. R. LOEW, J. A. MCGUIRE, P. S. HAMILTON, M. PLASMAN, Y. BRANDT, J. A. LEMOS-ESPINAL AND D. J. KEMP. 2008. Conspicuousness of Dickerson's collared lizard (*Crotaphytus dickersonae*) through the eyes of conspecifics and predators. *Biological Journal of the Linnean Society*.
- SULLIVAN, B. K., M. KWIATKOWSKI AND P. S. HAMILTON. 2004. Growth in Sonoran Desert populations of the common chuckwalla (*Sauromalus obesus*). *Western North American Naturalist*. 64:137-140.
- SULLIVAN, B. K., P. S. HAMILTON AND M. A. KWIATKOWSKI. 2005. The Arizona striped whiptail: past and present. pp. 145-148 in: *Connecting mountain islands and desert seas: biodiversity and management of the Madrean Archipelago II* (ed. by G. J. Gottfried, B. S. Gebow, L. G. Eskew, and C. B. Edminster). Proceedings RMRS-P-36, USDA, FS, Rocky Mtn Research Station, 631 pp.
- ZUK, M., L. ALLEN, L. CUPP, K. ELLER, P. HAMILTON, L. C. HAZARD, M. JORGENSON, M. KAUFFMAN, V. MIRMOVITCH, E. RABITOY AND E. TAYLOR 1992. The evolution of parental care [book review]. *Copeia* 1992:594-596.

Reports

- HAMILTON, P. S., A. ALMENDARÍZ AND C. MOUETTE. 2007. Initial Analysis of Coastal Ecuadorian Herpetofauna of Dry and Moist Forests. Report to Ministerio de Ambiente, Ecuador, in English and Spanish.
- HAMILTON, P. S. AND A. ALMENDARÍZ. 2008. Results of an inventorying and monitoring program in Provincia de Manabí, western Ecuador. Report in Spanish to Provincia de Manabí Ministerio de Ambiente, Ecuador.

HAMILTON, P.S. AND A. ALMENDARÍZ. 2008. Results of an inventorying and monitoring program in Provincia de Esmeraldas, western Ecuador. Report in Spanish to Provincia de Esmeraldas Ministerio de Ambiente, Ecuador.

Photography Credits

- Press/Magazines: National Geographic Explorer, National Geographic Israel, National Geographic News, BBC News, BBC Wildlife Magazine, BBC Television, MSN News, Geo Magazine, Geo International Magazine, The Mubai Mirror, Time Magazine, China Central Television, New Scientist, El Mundo (Spain), El Diario (Ecuador), New Zealand Herald News, Arizona Daily Star, Nature Magazine Online, The Guardian London, Slate.Fr, Daily Mail UK, RZECZPOSPOLITA (Poland), Freshwater Magazine, Know Magazine, Esti Loodus, Biofutur, Science & Vie Junior, Yes Mag, Les Explorateurs, Biological Journal of the Linnean Society, Herpetological Review, and over 60 other print and online products.
- Books, Field Guides, etc.: Alcock 2005, Animal Behavior; Alcock 2006 Animal Behavior; Dugatkin 2004, Principles of Animal Behavior; Miller 2006-2007, annual reports, newsletters and website for The Center for Biological Diversity; Ortega 2009, A field guide to the Herpetofauna of Esmeraldas Province, Ecuador; Valencia et. al 2009, Guia de Campo de Anfibios de Ecuador; Valencia et. al 2009, Guia de Campo de Reptiles de Ecuador, Lemos Espinal and Smith 2009, Keys to the Amphibians and Reptiles of Sonora, Chihuahua and Coahuila, Mexico.
- Fine Art: Photographic Prints are hanging in the homes and offices of approximately 100 clients.

Grants

- The McGrory Family Fund (with Stephanie Bowman): Biodiversity PEEK: Using Photography for Citizen Science (\$10,000)
- The Biocommunications Association: Cameras, Photography, and Citizen Science (\$700)
- Google Grants: (\$120,000/yr in-kind)
- American Museum of Natural History Southwest Research Station Graduate Student Support Fund: A comparative study of sexual selection and life history in Phrynosomatid lizards. (\$1,200)
- Sigma Xi Grant in Aid of Research: Microsatellite Determination of paternity in Tree Lizards, *Urosaurus ornatus* (\$1200)
- ASU West SRCA Fund (with Brian Sullivan): DNA fingerprinting for paternity in Tree Lizards, *Urosaurus ornatus* (\$6,000)
- Arizona State University: Four separate departmental and university grants for research and travel
- University of California, Riverside: Five separate graduate and undergraduate research grants

Presentations

- Emporia State University (Departmental Seminar): "Undescribed Species with Uncertain Futures"
- BIOCOMM: Annual meeting of the Biocommunications Association: "Documenting the Diversity of Life Through Photography" (invited)
- Southwestern Association of Biologists: Presented "A photographic method for quantifying color characteristics and patch morphometrics in lizards"
- American Society of Ichthyologists and Herpetologists: Presented "A photographic method for quantifying color characteristics and patch morphometrics in lizards"

- Current Research on the Herpetofauna of the Sonoran Desert II: Presented "Mate choice in tree lizards, *Urosaurus ornatus*."
- ASU Department of Biology Graduate Student Seminar: Presented "Sexual selection, life history at multiple levels of organization in lizards."
- American Society of Ichthyologists and Herpetologists: Presented "Sexual Selection and Life History trade offs in the Phrynosomatid lizards."
- American Society of Ichthyologists and Herpetologists: Presented "Mate choice on behavior and morphology in *Urosaurus ornatus*", and (with Norah DeBellis) "The predation costs of sexually selected traits in *Urosaurus ornatus* using *Crotaphytus nebrius* as a model predator."
- Society for the Study of Evolution: Presented "Geographic and interspecific variation of sexual dimorphism in the lizard genus *Sauromalus* in relation to environment"
- Desert Tortoise Council: Presented "Statistical power of biological surveys"

Professional and Community Service

1996-current Community outreach and education; presented research at schools and community functions (number of presentations in parentheses):

- Town of Tabuga, Ecuador (Spanish)
- Audubon Society Green Valley
- Coachella Valley Camera Club
- Green Valley Camera Club
- Sonoran Arthropod Studies Institute
- Sierra Club, San Diego Chapter
- Arizona Academy Village
- Hillbrook School
- Oakland Zoo
- Civano Middle School (2)
- Empire High School (8)
- Estacion Biologica Jatun Sacha
- Punta Prieta Beach Resort (Spanish)
- North American Field Herping Association
- San Diego Herpetological Society (2)
- Tucson Herpetological Society (2)
- Arizona Herpetological Association (2)
- San Francisco Zoo
- Tucson Herpetological Society, University of Arizona Chapter (2)
- San Francisco Naturalist's Society
- Ocean Shore Grade School, Pacifica, CA (8)
- Northern California Herpetological Society
- Tucson Reptile and Amphibian Expo (2)
- Southwestern Herpetological Society, Los Angeles Chapter
- South Mountain Environmental Education Center
- Various public schools in Riverside, CA (3)

2009-current Member of the Board of Advisors, Save the Frogs!, an organization dedicated to amphibian conservation and education.

1997-2004 Collaboration and supervision with 34 undergraduates assisting research projects with histology, specimen dissection and measurement, animal husbandry, data entry, specimen collection, and behavioral observations in the lab and field.

Select Undergraduate Collaborated Projects:

2000-2011 Guest Lectures (Class: Topic)

- Robotic Engineering: What can snake pit organs tell us about design of human technology? (3 occasions)
- Conservation Ecology: Undescribed Species with Uncertain Futures: Conservation Ecology of the Unknown
- Ecology: Population Ecology and Life History
- Ecology: Tropical Biodiversity and Conservation: a case study from Ecuador (2 occasions)
- Evolution: Adaptation and the Comparative Method
- Vertebrate Zoology: Squamate reptiles (2 occasions)
- Vertebrate Zoology: Tropical biodiversity and Conservation: a case study from Ecuador
- Herpetology: Tropical biodiversity and conservation: a case study from Ecuador
- Arizona Natural History: Tropical versus temperate biodiversity (2 occasions)
- Modes of Biological Thought: Biodiversity and conservation, a case study in the tropics

1997-current Manuscript reviews for the Journal of Zoology, Copeia, The Journal of Herpetology, Herpetologica, Herpetological Review, the Herpetological Journal and The Australian Journal of Zoology

Professional References

Brian K. Sullivan [Dissertation Advisor]. Arizona State University West. bsullivan@asu.edu.

Dale Denardo [Colleague]. Arizona State University. denardo@asu.edu.

William Boarman [Colleague]. Conservation Science Research and Consulting. conservation-science@cox.net