
SONNY S. BLEICHER, PH.D.

EVOLUTIONARY WILDLIFE ECOLOGIST

CONTACT INFORMATION

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RÉSUMÉ

Publications

Published: 12	H-index: 5
In review/preparation: 8	Citations 75
I-Index: 3	RG Score: 21.29

Experience, Fellowships and Affiliations

2019	Washington and Lee University, Biology, Visiting Assistant Professor
2018-19	George Mason University, Environmental Science and Policy
2018	AAAS Science and Technology Policy Fellowship
2018	University of Jyväskylä, Behavioral Ecology Lab
2015-18	University of Arizona, Ike Russell Fellow, Ecology and Evolutionary Biology
2015	University of Sydney, Desert Biodiversity Lab.
2014	University of Illinois at Chicago, Biological Sciences

Education

PhD	Biology	2014	University of Illinois at Chicago
MSc	Desert Ecology	2012	Ben Gurion University of the Negev
BSc	Environmental Science	2009	Rochester Institute of Technology

Teaching Experience

Ecology
Urban Ecology
Population and Community Biology
Comparative Vertebrate Anatomy
Introductory Environmental Science/ Studies
Water policy, politics and conflict

Languages (and Nationalities)

English (USA), French (France), Hebrew (Israel)

Tel: +1 (415) 670-0595



EDUCATION

<u>Date</u>	<u>Degree</u>	<u>Institution</u>	<u>Field</u>	<u>Subtopic</u>	<u>Thesis Title</u>
July 2014	Ph.D.	University of Illinois at Chicago	Biological Science	Evolutionary and Behavioral Ecology	Divergent Behaviour Amid Convergent Evolution: Common Garden Experiments with Desert Rodents and Vipers
May 2012	M.Sc.	Ben Gurion University of The Negev	Desert Studies	Dryland Ecology/ Community and Population Ecology	Prey Response to Predator Scent Cues; A Manipulative Experimental Series of a Changing Climate
February 2009	B.S.	Rochester Institute of Technology	Environmental Science	Environmental Health Assessment and Biological Indicators of Environmental Degradation	Non-Point Source Pollutants found in the tributaries of Irondequoit Creek Watershed within the Town of Penfield

PROFESSIONAL EXPERIENCE

<i>Date</i>	<i>Title</i>	<i>Institution</i>	<i>Location</i>	<i>Responsibilities</i>
2019 -	Visiting Assistant Professor	Washington and Lee University	Lexington, VA, USA	Teach ecology, urban ecology, environmental studies electives and water policy and politics. Mentor undergraduate research students.
2018 -	Affiliate Faculty	George Mason University[†]	Fairfax, VA, USA	Provide administrative services and presentations



George Mason University
Environmental Science and Policy
Fairfax, VA, 22030, USA

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Washington and Lee University
Biology Department
Lexington, VA, 24450, USA

2018	Visiting Research Associate/ Affiliate	University of Jyvaskyla[†]	Konnevesi Research Station, Konnevesi, Finland	Research Project: The importance of information, how a predator cue is affected by environmental factors
2015-2018	Ike Russell Postdoctoral Fellow	University of Arizona	Tucson, Arizona, USA	Research Focus: Human-wildlife Interactions in Urban and Suburban Environments
2015-2016	Research and Development Manager	Felidae Conservation Fund	Mill Valley, California, USA	Manage Education and Outreach Programs, PI for Mountain Lion Research Programs, Fundraising and Grant-writing.
2015	Visiting Postdoctoral Research Associate	University of Sydney[†]	Camperdown, New South Wales, Australia	Research Projects: (1) Response of Dasyurid Carnivorous Marsupials to a Shelter Augmentation Management Regime; and (2) Foraging Dynamics of Dunnarts During a Population Bust
2014	Teaching Postdoctoral Researcher	University of Illinois at Chicago	Chicago, Illinois, USA	Teach Ecology Lab (BIOS331); Research: Bridging community ecology and Neurobiology and evolutionary dynamics in animal behavior.
2011-2014	Teaching Assistant and Research Assistant			Teaching: ecology (BIOS331), comparative vertebrate anatomy and physiology (BIOS227), biology of populations and communities (BIOS101). Research project: Intercontinental-wide consequences of compromise-breaking adaptations: the case of desert rodents and vipers.

2012-2013	Adjunct Professor of Environmental Science	Northeastern Illinois University	Chicago, Illinois, USA	Teach Introduction to Environmental Science Elective (BIO127)
2009-2012	Graduate Fellow	Ben Gurion University of the Negev	Bluestein Institutes for Desert Research, Albert Katz School of Desert Studies, Midreshet Ben Gurion, Sde Boker, Israel	Research on climate change on consequences on wildlife conservation in arid zones.
2008	Research Team Lead	Town of Penfield†	Penfield, New York, USA	Capstone (honors) project. Project title: Non-Point Source Pollutants found in the tributaries of Irondequoit Creek Watershed within the Town of Penfield
2007,2009	REU Research Fellow	Harvard University	Harvard Forest, Petersham, Massachusetts, USA	Research project: response of ant assemblages to grazing and logging along a rainfall gradient in mesic scrublands
2006-2009	bird bander (ringer) in training	Braddock Bay Bird Observatory†	Rochester, New York, USA	Research Project: passerine habitat-use during migration within reconstructed wetlands.
2005-2009	Undergraduate Research Fellow	Rochester Institute of Technology	Rochester, New York, USA	Research Project: River otter post-reintroduction monitoring using scat genetics, diet analysis and GIS.
2008-2009	Teaching Assistant			Teach: Conservation Biology and Ecology Labs
2006	Seasonal Interpretation Ranger	US National Park Service	Lava Beds National Monument, Tulelake, California, USA	Duties: lead lava-tube cave-tours and guided naturalist walks.
2005	Camp Councilor	Young Judea	Tel Yehuda Summer Camp, New York, USA	Provide social and educational activities to 16 year-old summer campers.
2003-2005	Informal Education Specialist	Shlomit National Service Agency	(1) TALI Education Fund, Jerusalem, Israel. (2) Yavne'el Community	(1) Provide Jewish education in informal activities from a progressive and pluralistic approach to children in the TALI schools in grades 2-9.

Center, Yavne'el, (2) Teach Hebrew literacy to
Israel illiterate refugee women
from North Africa and the
Middle East

[†] Not Supported by Payroll

TEACHING EXPERIENCE

Date (* upcoming)	Role	Course ([†] with lab)	Number of Classes (sessions)	Mean number of students
2019*	Assistant Professor	Environmental Studies Elective	2	18
2019*	Assistant Professor	Water, policies and politics	1	18
2019*	Assistant Professor	Urban Ecology [†]	1	12
2013-2014, 2008, 2019*	Assistant Professor	Ecology (331) [†]	7	27
2011-2012	Teaching Assistant in-charge of labs and discussions	Population and Community Biology (101) [†]	6	20
2013	Teaching Assistant in-charge of labs	Comparative Vertebrate Anatomy (227) [†]	1	20
2012-2013	Professor in Charge	Introductory Environmental Science Elective (127)	1	30
2009	Teaching Assistant	Conservation Biology (488)	1	30

MENTORSHIP

Year	Institution	Project-type	My Role	Number of Students
2019-	George Mason University	Graduate Project	Committee Member	1
2018-19	University of Jyväskylä	Graduate Research – Lab Focus	Advising (as postdoc)	1
2015	University of Sydney	Graduate Research – Field Focus	Advising (as postdoc)	2
2012-14	University of Illinois	Undergraduate Independent Research Project	Mentor	8

GRANTS, AWARDS and FELLOWSHIPS

<u>Year</u>	<u>Award Name</u>	<u>Granting Organization</u>	<u>Award Type</u>
2018	Science and Technology Policy Fellowship	American Association for Advancement of Science	Fellowship
2016	Ike Russel Postdoctoral Fellowship	University of Arizona	Fellowship (Includes Research Funds)
2015*	Wells Fargo National Fish and Wildlife Foundation	Wells Fargo	NGO Funding and Research Project – Bay Area Puma Project
2016*	Regina Bauer Foundation Grant	Regina Bauer	Small NGO support grant
2016*	NGO Education Grant	Frankenburg Foundation	Small NGO support grant
2016*	Wildlife Conservation Grant	Disney Foundation	NGO Funding and Research Project – Bay Area Puma Project
2016*	Conservation Education Grant	Summerlee Foundation	Small NGO support grant
2016*	Wells Fargo Small Family Foundations Grants (64 in total)	Mix of family foundations	2-20,000\$ grants for NGO support both research and education
2013	Bodmer International Research and Travel Award	University of Illinois	Travel Award and Research Support
2013	Grants In-Aid	American Society of Mammalogists	Small Research Grant
2012	Bodmer International Research and Travel Award	University of Illinois	Travel Award and Research Support
2009	REU Scholarship Award	US National Science Foundation + Harvard University	Fellowship and Research Support
2008	Research Scholars Award	Rochester Institute of Technology	Fellowship and Research Support
2007	REU Scholarship Award	US National Science Foundation + Harvard University	Fellowship and Research Support

**Earned as fundraising team for the Felidae Conservation Fund*

ASSOCIATION MEMBERSHIPS

- American Association for Advancement of Science
- MacArthur Academy for Evolutionary Ecology

- American Association of Mammalogists
- International Society for Behavioral Ecology
- Israeli Zoological Society
- Society for Conservation Biology

LANGUAGES AND NATIONALITIES

	<u>NATIONALITY</u>	<u>SPOKEN</u>	<u>READ</u>	<u>WRITTEN</u>
ENGLISH	USA	Native Speaker	Native Speaker	Native Speaker
FRENCH	France	Native Speaker	Proficient	Intermediate
HEBREW	Israel	Native Speaker	Native Speaker	Native Speaker

PUBLICATIONS

1. **Bleicher, S. S.**, B. P. Kotler, and J. S. Brown. 2019. Comparing Plasticity of Response to Perceived Risk in the Textbook Example of Convergent Evolution of Desert Rodents and Their Predators; a Manipulative Study Employing the Landscape of Fear. *Frontiers in Behavioral Neuroscience* 13:1–12. (impact factor 3.38)
2. **Bleicher, S. S.**, H. Ylonen, T. Käpylä, and M. Haapakoski. 2018. Olfactory cues and the value of Information: voles interpret cues based on recent predator encounters. *Behavioral Ecology and Sociobiology* 72:187–199. (impact factor 2.382)
3. **Bleicher, S. S.**, and M. L. Rosenzweig. 2018. Too much of a good thing? A landscape-of-fear analysis for collared peccaries (*Pecari tajacu*) reveals hikers act as a greater deterrent than thorny or bitter food. *Canadian Journal of Zoology* 96:317–324. (impact factor 1.52)
4. **Bleicher, S. S.**, B. P. Kotler, O. Shalev, A. Dixon, K. Embar, and J. S. Brown. 2018. Divergent behavior amid convergent evolution: A case of four desert rodents learning to respond to known and novel vipers. *PLoS ONE* 13:1–17. (impact factor 2.766)
5. Embar, K., B. P. Kotler, **S. S. Bleicher**, and J. S. Brown. 2018. Pit fights: predators in evolutionarily independent communities. *Journal of Mammalogy* 1–25. (impact factor 2.139)
6. **Bleicher, S. S.** 2017. The landscape of fear conceptual framework: Definition and review of current applications and misuses. *PeerJ* 1:1–14. (impact factor 2.118)
7. **Bleicher, S. S.**, and C. R. Dickman. 2016. Bust economics: Foragers choose high quality habitats in lean times. *PeerJ* 2016. (impact factor 2.118)
8. **Bleicher, S. S.**, J. S. Brown, K. Embar, and B.P. Kotler. 2016. Novel predator recognition by Allenby’s gerbil (*Gerbillus andersoni allenbyi*): do gerbils learn to respond to a snake that can “see” in the dark? *Israel Journal of Ecology and Evolution* 62:178–185. (impact factor 0.69)
9. Kotler, B. P., J. S. Brown, **S. S. Bleicher**, and K. Embar. 2016. Intercontinental-wide consequences of compromise-breaking adaptations: the case of desert rodents. *Israel Journal of Ecology & Evolution* 62:186–195. (impact factor 0.69)
10. **Bleicher S.S.**, Haapakoski M., Morin D., Kaapala T., and Ylonen, H. 2019. Balancing food, activity and the dangers of sunlit nights. *Behavioral Ecology and Socio Biology*. 73: 7. 95-103 (impact factor 2.382)

11. ***Bleicher, S. S.**, and C. R. Dickman. Artificial shelters alter dunnart's landscape of fear (Accepted Journal of Mammalogy – August 2019)
12. ***Bleicher S.S.**, Brown J.S., C.J. Downs, Kotler B.P., Heteromyid rodents play their evolutionary strengths and provide examples of opposite snake evasion strategies in face of danger from a known and novel snake (Accepted with minor edits Journal of Arid Environments, August 2019)

IN REVIEW

1. **Bleicher S.S.** and Kabbani N. Game on Game Off: bridging ecological and neurological approaches to fear (Frontiers in Behavioral Neuroscience- July 2019)
2. **Bleicher S.S.**, Embar K., and Kotler P.B. Ninja Owl; Risk perception outweighs information on predator lethality. (Behavioural Ecology and Sociobiology- August 2019)
3. **Bleicher S.S.**, Brown J.S., C.J. Downs, and Kotler B.P., Intracontinental Common Garden Experiments: Comparing snake evasion strategies of kangaroo rats to gerbils. (Journal of Animal Ecology – July 2019)

IN-PREPARATION (sample)

4. **Bleicher S.S.**, Eichenwald A., Reinhardt S. and Laundre J. The landscape of fear future outlook (Trends in Ecology and Evolution).
5. **Bleicher S.S.** Revisiting Sympatric Speciation – A Case for the Landscape of Fear (special issue- Diversity)

OTHER PUBLICATIONS

Bleicher S.S. 2014, Divergent behaviour amid convergent evolution; Common-garden experiments with desert rodents and vipers, PhD Dissertation, University of Illinois at Chicago

Bleicher S.S., 2012, Heat and Humidity Alter Predation Cues in *Gerbillus andersoni allebyi*. MS Thesis. Ben Gurion University of the Negev

CONFERENCE PRESENTATIONS and SYMPOSIA (subset)

2019. **Washington and Lee University Biological Symposium** – Evolutionary Ecology and Behavioral Optimization. Lexington, VA, USA

2019*. **MacArthur Academy for Evolutionary Ecology** – Assessing Risk in the Environment; an evolution of interacting methods to address predation risk. Logan, Utah, USA

2019 **American Mammalogical Congress** – Risk, Energy and Cognition; Addressing the game-theoretic challenges of predation cues. Washington, District of Columbia, USA

2019. **Neurobiology Symposium**. Ecological Fear- and why Neuroscientists should care about it. George Mason University, Fairfax, Virginia, USA

2019. **Environmental Science and Policy Symposium.** Landscapes of Fear: incorporating anti-predator behaviors in evolutionary theory and conservation. George Mason University, Fairfax, Virginia, USA

2018. **Biological Science Symposium.** Landscapes of Fear: incorporating anti-predator behaviors in evolutionary theory and conservation. University of Jyvaskyla. Jyvaskyla, Finland.

2018. **Gordon Research Conference on Predator Prey Interactions**— Section Leader: Macroevolutionary Patterns in Predator-Prey Interactions. Ventura, CA, USA.

2018. **Biology Undergraduate Research Symposium** – Landscapes of fear: foraging, fear and conservation. University of Redlands, Redlands, California.

2017. **International Mammalogical Congress (IMC) 12**—Game-on Game-Off: Bridging Ecological and Neurological Pathways to Fear. Perth, Western Australia, Australia.

2017. **International Mammalogical Congress (IMC) 12**— Bringing the landscape of fear back to conservation, Perth, Western Australia, Australia.

2017. **Natural Resource Department Symposium**— Bringing the Fit of Form and Function to Applied Ecology. University of Nebraska Lincoln, Lincoln, Nebraska, USA.

2017. **Rosenzweig Festschrift**— Conflicts of recreation and conservation, the case of Javelinas on Tumamoc Hill. Tucson, AZ, USA.

2016. **Tumamoc Hill Visiting Scholars Symposium** - The study of fear and conservation efforts: applying landscapes of fear to human-wildlife interactions in examples from the Australian sand crest desert and Tumamoc Hill, Arizona. Tumamoc People and Habitats, University of Arizona, Tucson, Arizona, USA.

2015. **Biology Symposium** - Divergent Behavior amid Convergent Evolution. University of Sydney, Sydney, New South Wales, Australia.

2014. **Dissertation Seminar EEB Symposium**- Divergent Behavior amid Convergent Evolution: common garden experiments with desert rodents and vipers. University of Illinois at Chicago, Chicago, Illinois, USA

2013. **International Mammalogical Congress (IMC) 11** — Landscapes of Fear; Spatial Effects of Predator Facilitation on Convergent Rodents. Belfast, United Kingdom.

2013. **International Mammalogical Congress (IMC) 11** — Landscapes of Fear; Spatial Effects of Predator Facilitation on Convergent Rodents. Belfast, United Kingdom.

2013. **International Mammalogical Congress (IMC) 11** —Macroevolution Meets Microecology: Intercontinental wide consequences of compromise-breaking adaptations. Belfast, United Kingdom.

2013. **International Mammalogical Congress (IMC) 11** —Evolutionarily convergent yet behaviorally divergent: cross-continental predator-prey cross exposure. Belfast, United Kingdom.

2013. **European Society for Evolutionary Biology Congress** — Do prey respond appropriately to evolutionarily novel predators? Lisbon, Portugal

2013. **European Society for Evolutionary Biology Congress** — Evolutionarily Convergent Rodents do not converge on predator evasion strategy. Lisbon, Portugal

2013. **Biology Symposium** – Using game theory to assess the convergence of communities. Rochester Institute of Technology, Rochester, New York, USA.

2012. **Albert Katz School of Desert Studies Dissertation Defense** - Prey Response to Predator Scent Cues; A Manipulative Experimental Series of a Changing Climate. Ben Gurion University of the Negev, Sde Boker, Israel.

2011. **Behavior 2011 - Joint meeting of the Animal Behaviour Society & the International Ethological Conference** – Heat and humidity perceived risk in the face of climate change. Bloomington, Indiana, USA.

2010. **What Makes Good Science?** Conference organizing team. NATO. Blaustein Institutes for Desert Research, Ben Gurion University of the Negev. Sde Boker, Israel

2010. **Drylands Deserts and Desertification.** Conference organizing team. NATO. Blaustein Institutes for Desert Research, Ben Gurion University of the Negev. Sde Boker, Israel

2009. **Ecological Society of America** - Similar effects on myrmecological assemblages based on grazing and logging along a rainfall gradient in Israel. Albuquerque, New Mexico, USA.

2009. **Harvard Forest Summer Research Symposium** – Similar effects on myrmecological assemblages based on grazing and logging along a rainfall gradient. Petersham, Massachusetts, USA.

2008. **Biology Summer Research Symposium** – Impacts of biochar as insect repellent. Rochester Institute of Technology, Rochester, New York, USA.

2007. **Ecological Society of America** - Effects of grazing and removal of woody species on ant diversity. Milwaukee, Wisconsin, USA

2007. **Harvard Forest Summer Research Symposium** - Effects of grazing and removal of woody species on ant diversity. Petersham, Massachusetts, USA.

* upcoming conference presentations

REVIEWER DUTIES

- Behavioral Ecology and Sociobiology
- Zoology and Ecology (Francis and Taylor)
- Animal Behavior
- Israel Journal of Ecology and Evolution
- Functional Ecology
- Ecology Letters
- Biology Letters
- The Open Ecology Journal
- PLOS ONE
- Frontiers in Behavioral Neuroscience
- Oikos
- Conservation and Biogeography

SKILLS

Pedagogy

- Curriculum Design
- Applications of pedagogic tools to course aims and audience (Bloom's taxonomy)
- Test Writing and Student Evaluations
- Discussion leading
- Lab and field course management
- Teaching in formal and in-formal styles to audiences from kindergarten age to golden ages.
- Student mentoring and guidance (undergraduate and graduate)

Field Skills

- Wildlife surveys (mammals, birds, herps, invertebrates)
- Vegetation and ground cover surveys
- Ground and surface water chemistry sampling and kit testing
- Wildlife immobilization
- Animal husbandry
- Microcosm experiments
- GIS, Radio, and RFID Tracking
- GPS
- CPR, first-aid

Project Management

- Proposal writing
- HR. Recruiting and interviewing
- Schedule management
- Interdisciplinary report authoring
- Stakeholder management and recruiting.
- Public speaking
- Representation on interdisciplinary committees
- Interagency communication
- Permit acquisition
- Informational material design and authoring
- Presentations to, and communications with, NGOs board of trustees
- Volunteer training recruiting and management

Fund-raising

- Small and large grant proposal writing
- Tabling and community outreach
- Public speaking
- Networking at local, national and international levels

Software

- Microsoft Suite
- Adobe Suite/ Cloud
- Systat
- Statistica
- R
- ArcGIS
- IDRISI
- JMP
- PAST
- EstimateS
- Mendeley
- EndNote
- Database Management (SQL, Access)

Miscellaneous

- Meta-analysis
- Ethics based experimentation training
- International field travel logistics
- Science and education policy advocacy