

Michael Kaspari

Dept. of Biology
 EEB Graduate Program
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Born 5 August 1961, Lincoln Nebraska. I am married to the artist Deborah Kaspari.

My research centers on the behavioral, community, and macro-ecology of soil invertebrates and their function in ecosystems. I combine lab and field experiments with comparative biology and biogeography to understand how these organisms function, how abiotic gradients shape their communities, and how these communities collectively perform work on their ecosystems. As Earth's biogeochemistry and climate continue to change, I work to understand, predict, and advise on the future behavior of its ecosystems.

Education

B.S. (with distinction) Univ. of Nebraska. (Biological Sciences). 1983. "A selective test of foraging theory using an assemblage of grassland birds."

M.S. Univ. of Nebraska. (Ecology and Systematics) 1985. "The ecology and evolution of prey preparation". Advisor: A. Joern.

Ph.D. Univ. of Arizona. (Ecology and Evolutionary Biology). 1992. "Niche relationships in an assemblage of Neotropical granivorous ants." Advisor: M. Rosenzweig

Positions Held

Post-Doctoral Research Biologist	University of Texas	1992 -1993
NATO Post-doctoral Fellow	University of Guelph	1993
DOE Global Change Fellow	Lawrence Livermore Labs	1994 - 1995
Assistant Professor of Zoology	University of Oklahoma	1995 - 2001
Associate Professor of Zoology	University of Oklahoma	2001 - 2009
Research Associate	Smithsonian Institution	2002
Bullard Fellow	Harvard University	2008
Presidential Professor	University of Oklahoma	2008
Full Professor of Biology	University of Oklahoma	2009
George Lynn Cross Research Professor	University of Oklahoma	2013

Selected grant support (not counting ca. \$70K of in-house support)

Current

DOE: GANN (co-PI, Jeff Kelly PI) “Ecology and Evolutionary Biology” (\$133,266 per annum, 5 years)

NSF: Macrosystems (with Jizhong Zhou, co-PI Jim Brown, Robert Waide, and Brian Enquist): Experimental Macroecology: the effects of temperature on biodiversity (\$2.8 million, \$4.8 million total)

Past

NSF DIGG (with Natalie Clay): Sodium availability regulates brown food web structure (\$14,903).

NSF Collaborative Research (RUI with Adam Kay): Toward a stoichiometric theory of ant ecology--from colony performance through community dynamics. (\$324K, \$634K total)

NSF EAGER: Does sodium limit the brown food web of an Ecuador forest? (70K)

National Geographic (PI): Toward a biogeography of salt (21K)

NSF: (PI) Workshop Proposal: 2008 Gordon Research Conference on the Metabolic Basis of Ecology (47K)

Harvard University: Bullard Fellow-“Towards a biogeography of brown food webs” (30K)

Center for Tropical Forest Science (PI) “Towards a spatial ecology of brown food webs: soil nutrients and trees as templates.” (6K)

NSF Ecology (PI) “Does ecological stoichiometry and defense theory predict patterns of resource and predator limitation in a tropical litter food web?” (300K) + 26K REU

National Geographic Society (Steve Yanoviak PI, with Robert Dudley) “Gliding flight in tropical canopy ants” (20K)

National Geographic Society (PI, with John Lattke and Sean O’Donnell) “Army ant biodiversity, behavior, and impact in 4 Neotropical forests.” (24K)

Mellon Exploratory Research Award (PI) “On the dynamics and regulation of brown food webs— a pilot study” (6K)

NASA (co-PI with Yiqi Luo) “Human Impacts on Ecosystem Biodiversity and Functions: Development of Partnerships with NASA Goddard Space Flight Center” (18K)

The Nature Conservancy (PI with Leeanne Alonso) "A Plan to Inventory and Monitor the Spread of *Solenopsis invicta*, the Imported Fire Ant, in Oklahoma" (7K)

Mellon Exploratory Research Award (PI) “Causes of Litter Ant Patchiness at the m² scale: studying the effects of rainfall and plant diversity” (4K)

NSF Interagency Terrestrial Ecology and Global Change Initiative (PI) “Climatic Regulation of Ant Assemblages in North and Central America” (349K) + 20K REU supplement

National Geographic Society (PI) “Climate, Body Size and the Diversity of Ant Assemblages” (8K)

NSF International Programs (PI with Larry Gilbert) “On the regulation of *Solenopsis invicta* in native Brazilian populations”. (10K)

NSF NATO (PI with Peter Yodzis) “Using cellular automata toward understanding spatial interactions in ant communities”

Selected invited lectures, symposia, working groups

- 2014:** SICB symposium: *The Micro and Macro of Nutrient Effects in Animal Physiology and Ecology*
- 2012:** NSF Working Group, *The future of tropical litter ecology*, La Selva, Costa Rica
- 2011:** XX Symposium of Myrmecology, *Ant ecology in a changing world*, Petropolis Brazil
- 2010:** Entomological Society of America, Symposium on Nutritional Ecology, *Toward a link between geochemistry and the geography of social insect populations*, San Diego.
Int. Society for Study of Social Insects, Copenhagen, *Toward a link between geochemistry and the geography of social insect populations*. Ent. Soc. America, San Diego
- 2009:** Head Ecology working group: Global Ant Project, Field Museum, Chicago
- 2008:** co-Chair Gordon Research Conference *Metabolic Approaches to Ecology and Evolution*
- 2005:** Smithsonian Institution *Biodiversity science and education initiative* Working group
Universita' degli Studi di Firenze: *Distinguished lectures on conservation and biodiversity*. Multiple titles.
- 2004:** Gordon Conference on *Metabolic Approaches to Ecology*: “Beyond Bergmann’s Rule”
- 2002:** Assoc. for Tropical Biology on *Food Webs in Tropical Research*: “The Brown Food Web”
- 2000:** NCEAS *Productivity and Diversity*: “Body size, species diversity and abundance in ant communities”
- 1997:** Santa Fe Institute *Thermodynamics in Ecology*: “Energetic approaches to ant communities”
- 1996:** 20th Intl. Congress of Entomology *Life Histories of Social Insects*: “Size in ants”
- 1995:** Dept. of Energy on *New Research in Global Change*: “Energetic approaches to diversity and abundance”

Harvard University, Stanford University, UC-Berkeley, UC-Davis, Louisiana State University, Mount Holyoke College, Smithsonian Tropical Research Institute, St. Louis University, University of Arizona, University of Missouri, University of Georgia, University of Kansas, University of New Orleans, University of Tennessee, University of Vermont, University of Utah, University of Florida, University of Champagne-Urbana, Brown University, Cambridge Entomological Club, Boston University, North Carolina State, University of Miami, Oklahoma State University, University of Arkansas Little Rock, University of Texas, University of Louisville, Tulane University, Texas A&M, University of Nanjing, Tulsa University, Universite de Pierre et Marie Curie

Publications students underlined

Journals

86. Clay, NA, D. Donoso, M Kaspari. (*in Press*) Urine as a source of sodium increases decomposition in an inland but not coastal tropical forest. *Oecologia*.

85. Kaspari, M, NA Clay, J Lucas, SP Yanoviak, A Kay. (*in Press*) Boundary layers generate a diversity of thermal limits in a rainforest ant community. *Global Change Biology*.
84. Kaspari, M (2014) Road salt offers insights into the connections between diet and neural development. *Proceedings of the National Academy of Science* 111: 10033-10034.
83. Clay, NA, SP Yanoviak, M Kaspari. (2014) Short-term sodium inputs attract microbe-detritivores and their predators. *Soil Biology and Biochemistry* 75: 248-253.
82. Shik, JZ, JC Santos, JN Neal, AD Kay, UG Mueller, M Kaspari. (2014) Metabolism and the rise of fungus cultivation by ants. *The American Naturalist* 184: 364-373.
81. Kaspari, M, Clay NA, Donoso D, Yanoviak SP. (2014) Sodium fertilization increases termites and enhances decomposition in an Amazonian forest. *Ecology* 95: 795-800.
80. Kaspari, M, MD Weiser (2014) Meet the new boss, same as the old boss. *Science* 343: 974-975.
79. Kay, AD, JA Bruning, A Van Alst, TA Abrahamson, WOH Hughes, M Kaspari. (2014) A carbohydrate-rich diet increases social immunity. *Proceedings of the Royal Society B: Biological Sciences*: 281
78. Shik, JZ, D Donoso, M Kaspari. (2013) The life history continuum hypothesis links traits of male ants with life outside the nest. *Entomologia Experimentalis et Applicata* 149: 99-109.
77. Helms, JA, M Kaspari. (2013) Found or Fly: nutrient loading of dispersing ant queens decreases metrics of flight ability (Hymenoptera:Formicidae). *Myrmecological News* 19: 85-91.
76. Clay, NA, J Lucas, M Kaspari, AD Kay. (2013) Manna from heaven: refuse from an arboreal ant connects above- and below-ground processes in a lowland tropical forest. *Ecosphere* 4: Article 141.
75. Kerekes, J, M Kaspari, B Stevenson, H Nilsson, M Hartmann, A Amend, T Bruns (2013) Nutrient enrichment increased species richness of leaf litter fungal assemblages in a tropical forest. *Molecular Ecology* 22: 2827-2838.
74. Donoso, D, MK Johnston, NA Clay, M Kaspari. (2013) Trees as templates for trophic structure of tropical litter arthropod communities. *Soil Biology and Biogeochemistry* 61:45-51.
73. Mulder, C, A Boit, S Mori JA Vonk, SD Dyer, L Faggiano, S Geisen, AL Gonzalez, M Kaspari, S Lavorel, PA Marquet, AG Rossberg, RW Sterner, W Voight, DH Wall. (2012) Distributional (In)Congruence of Biodiversity-Ecosystem Functioning. *Advances in Ecological Research* 46: 1-88.
72. Shik, JZ, C Hou, A Kay, M Kaspari, JF Gillooly. (2012) Towards a general life-history model of the superorganism: predicting the survival, growth and reproduction of ant societies. *Biology Letters* 8:1059-1062.
71. Kaspari M, Donoso D, JA Lucas, T Zumbusch, Kay AD. (2012) Using nutritional ecology to predict community structure: a field test in Neotropical ants. *Ecosphere* 3: 1-12.
70. Shik, JZ, D Flatt, A Kay, M Kaspari. (2012) A life history continuum in the males of a Neotropical ant assemblage: refuting the sperm vessel hypothesis. *Naturwissenschaften* 99: 191-197.
69. Dudley, R, M Kaspari, SP Yanoviak. (2012) Lust for salt in the western Amazon. *Biotropica* 44: 6-9.
68. Kay, A D, J Z Shik, A Van Alst, K A Miller, M Kaspari. (2012) Diet composition does not affect ant colony tempo. *Functional Ecology* 26:317-323.

67. Sayer, E, SJ Wright, E Tanner, J Yavitt, K Harms, J Powers, M. Kaspari, M Garcia, B Turner. (2012) Variable responses of lowland tropical forest nutrient cycles to fertilization and litter manipulation. *Ecosystems* 15: 387-400.
66. Lattke, JE, M Kaspari, S O'Donnell, S Powell (2007) Las hormigas ecitoninas de Venezuela (Hymenoptera: Formicidae: Ecitoninae) elenco preliminar. *Entomotropica* 22: 153-170.
65. Shik, JZ, M Kaspari, SP Yanoviak (2011) Preliminary assessment of metabolic costs of the nematode *Myrmeconema neotropicalum* on its host, the tropical ant *Cephalotes atratus*. *J. Parasitology* 97: 958-959.
64. Kaspari M. Chapter 4: Stoichiometry, in *Metabolic Ecology: a scaling approach*. (2012) Eds. Richard Sibly, James H Brown, Astrid Kodric Brown, Oxford University Press.
63. Wright, SJ, JB Yavitt, N Wurzburger, BL Turner, EVJ Tanner, EJ Sayer, LS Santiago, M Kaspari, LO Hedin, KE Harms, MN Garcia, MD Corre (2011) Potassium, phosphorus or nitrogen limit root allocation, tree growth and litter production in a lowland tropical forest. *Ecology* 92: 1616-1625
62. Kaspari M, S O'Donnell, J Lattke, S Powell. (2011) Predation and patchiness in the tropical litter: do swarm-raiding army ants skim the cream or drain the bottle? *Journal of Animal Ecology* 80: 818-823.
61. Kaspari M. and MD Weiser. (2011) Per-capita energy availability and the regulation of abundance. *Ecography* 35: 65-72.
60. O'Donnell, S, M Kaspari, A Kumar, J Lattke, S Powell (2010) Elevational and geographic variation in army ant swarm raid rates. *Insectes Sociaux*.
59. Weiser, M...Kaspari, and 25 authors (2010) Canopy and litter ant assemblages share similar climate-species density relationships. *Biology Letters* 6: 1744-9561.
58. Gillooly, JF, C Hou, and M. Kaspari (2010) Eusocial insects as superorganisms: insights from Metabolic Theory. *Communicative and Integrative Biology* 3:4 1-3.
57. Donoso, D, MK Johnston, and M Kaspari (2010) Trees as templates for tropical litter arthropod diversity. *Oecologia* 164: 201-211
56. Yanoviak SP, Y Munk, M Kaspari, R Dudley. (2010) Aerial maneuverability in wingless gliding ants. *Proceedings of the Royal Academy B* 277: 2194-2204
55. Kaspari M, C Chang, J Weaver. (2010) Salted roads and sodium limitation in a northern forest ant community. *Ecological Entomology* 35: 543-548.
54. Kaspari M, B Stevenson, J Kerekes, J Shik (2010) Scaling community structure: body size and the differentiation of bacteria, fungi, and ant taxocenes across a tropical forest floor. *Ecology* 91(8) 2221-2226
53. Hou, C, M Kaspari, HV Zanden, JF Gillooly. (2010) The energetic basis of colonial living in social insects *PNAS* 107:3634-3638
52. Shik, JZ and M Kaspari (2010) More food, less habitat: how necromass and litter decomposition combine to regulate a litter ant community. *Ecological Entomology* 35: 1-8
51. Kaspari M. SP Yanoviak, R Dudley, M Yuan, and NA Clay. (2009) Sodium shortage as a constraint on the carbon cycle in an inland tropical rainforest *PNAS* 106:19405-19409.

50. Yanoviak SP, M Kaspari and R Dudley. (2009) Gliding bristletails and the evolution of flight. *Biology Letters* 5:510-512
49. Shik, JZ and M Kaspari. (2009) Lifespan in male ants linked to mating syndrome. *Insectes Sociaux* 56:131-134
48. Kaspari M and S Yanoviak (2009) Biogeochemistry and the structure of tropical brown food webs *Ecology* 90:3342-3351.
47. Dunn RR, ... M Kaspari...and 26 others (2009) Climatic drivers of assymetry in global patterns of ant diversity. *Ecology Letters* 12:324-333
46. O'Donnell, J Lattke, S Powell, M Kaspari. (2009) Species and site differences in Neotropical army ant migration behavior. *Ecological Entomology* 34: 476-482
45. Kaspari, M and B. Stevenson. (2008) Evolutionary ecology, antibiosis and all that rot. *PNAS* 105: 19027-19028
44. Kaspari, M, S Yanoviak, R Dudley. (2008) On the biogeography of salt limitation: a study of ant communities. *PNAS* 105: 17848-17851.
43. Kaspari M. (2008) Knowing your warblers: thoughts on the 50th anniversary of MacArthur (1958). *Bulletin of the Ecology Society of America*. Online at [http://www.esajournals.org/doi/pdf/10.1890/0012-9623\(2008\)89%5B448:KYWTOT%5D2.o.CO;2](http://www.esajournals.org/doi/pdf/10.1890/0012-9623(2008)89%5B448:KYWTOT%5D2.o.CO;2)
42. Kaspari M and S Yanoviak. (2008) The biogeography of litter depth in tropical forests: evaluating the phosphorus growth rate hypothesis *Functional Ecology* 22: 919-923.
41. Yanoviak SP, M Kaspari, R Dudley, G Poinar Jr. (2008) Parasite induced fruit mimicry in a tropical canopy ant. *The American Naturalist*. 171: 536-544
40. Dunn RR, ... M Kaspari, and 26 others. (2007) Global Ant Biodiversity and Biogeography--A New Database and its Possibilities. *Mymecological News* 10:77-83.
39. Kaspari M, J Wright, J Yavitt, K Harms, M Garcia, M Santana. (2008). Multiple nutrients limit litterfall and decomposition in a tropical forest. *Ecology Letters* 11: 35-43
38. O'Donnell S, Lattke, J, Powell S, Kaspari, M. (2007) Army ants in four forests: Geographical variation in raid rates and species abundance. *Journal of Animal Ecology* 76: 580-589
37. Milton, Y and M. Kaspari. (2007) Bottom-up and top-down regulation of decomposition in a tropical forest. *Oecologia* 153:163-172
36. Kaspari M. and M Weiser. (2007) The size-grain hypothesis: do macroarthropods see a fractal world? *Ecological Entomology* 32: 279-282.
35. Weiser, M & M Kaspari. (2006) Ecological morphospace of New World ants. *Ecological Entomology* 31: 131-142.
34. O'Donnell, S, M Kaspari & John Lattke (2005) Extraordinary predation by the Neotropical army ant *Cheliomyrmex andicola*: implications for the evolution of the army ant syndrome. *Biotropica* 38:706-709
33. Kaspari M. (2005) Global energy gradients and the regulation of body size: worker mass and worker number in ant colonies *Proceedings of the National Academy of Science USA* 102:5079-5083

32. Yanoviak, S, R Dudley, M Kaspari. (2005) Directed aerial descent in canopy ants. *Nature* 433: 624-626
31. Valone, TJ & M Kaspari. (2005) The response of a desert grassland ant community to the reduction of common granivores. *Ecological Entomology* 30: 116-121
30. Kaspari M, P Ward & M Yuan (2004). Energy gradients and the geographic distribution of local ant diversity. *Oecologia* 140: 407-414
29. Kaspari M. (2004) Using the Metabolic Theory of Ecology to predict global patterns of abundance. *Ecology* 85: 1800-1802.
28. Kaspari M & S. O'Donnell. (2003) High rates of army ant raids in the Neotropics and implications for ant colony and community structure. *Evolutionary Ecology Research* 5:933-939.
27. Kaspari M, M Yuan, & L Alonso. (2003) Spatial grain and gradients of ant species richness. *American Naturalist* 161: 459-477.
26. Kaspari M & T Valone. (2002) Seasonal resource availability and the abundance of ectotherms. *Ecology* 83: 2991-2996
25. Kaspari M, J Longino, J Pickering & D Windsor. (2001) The phenology of a Neotropical ant assemblage—evidence for continuous and overlapping reproduction. *Behavioral Ecology and Sociobiology* 50: 382-390.
24. Kaspari M & S Yanoviak. (2001) Bait use in tropical litter and canopy ants--evidence for differences in nutrient limitation. *Biotropica* 33: 207-211.
23. Kaspari M. (2001) Taxonomic level, trophic biology, and the regulation of local abundance. *Global Ecology and Biogeography* 10:229-244.
22. Kaspari M, J Pickering & D Windsor (2001) The reproductive flight phenology of a neotropical ant assemblage. *Ecological Entomology* 26: 245-257.
21. Kaspari, M & M Weiser. (2000) Ant activity along moisture gradients in a tropical forest. *Biotropica* 32:703-711.
20. Scheiner SM, SB Cox, M Willig, G Mittlebach, C Osenberg, & M Kaspari (2000) Species richness, species area curves, and Simpson's paradox. *Evolutionary Ecology Research* 2: 791-802.
19. Kaspari M (2000) Do imported fires ants impact canopy arthropods? Evidence from simple arboreal pitfall traps. *Southwestern Naturalist* 45:118-122.
18. Yanoviak, S & M Kaspari (2000) Community structure and the habitat template: ants in the tropical forest canopy and litter. *Oikos* 89:259-266.
17. Kaspari M, S O'Donnell & JR Kercher (2000) Energy, density, and constraints to species richness: studies of ant assemblages along a productivity gradient. *American Naturalist* 155:280-293
16. Kaspari M, S. O'Donnell, & L Alonso (2000) Three energy variables predict ant abundance at a geographic scale. *Proceedings of the Royal Society B* 267:485-490.
15. Kaspari M & M Weiser (1999) Interspecific scaling in ants: the Size-Grain hypothesis. *Functional Ecology* 13:530-538.

14. Kaspari M (1996) Testing resource-based models of patchiness in 4 Neotropical litter ant assemblages. *Oikos* 76:443-454.
13. Kaspari M (1996) Litter Ant Patchiness at the m² scale: disturbance dynamics in three Neotropical forests. *Oecologia* 107:265-273
12. Kaspari M (1996) Worker size and seed size selection by harvester ants in a Neotropical forest. *Oecologia* 105:397-404
11. Kaspari M & M Byrne (1995) Caste allocation in litter *Pheidole*: lessons from plant defense theory. *Behavioral Ecology and Sociobiology* 37:255-263
10. Kaspari M & E Vargo (1995) Does colony size buffer environmental variation? Bergmann's rule and social insects. *American Naturalist* 145:610-632
9. Kaspari M & E Vargo (1994) Nest site selection by fire ant queens. *Insectes Sociaux* 41:331-333
8. Kaspari M (1993) Body size and microclimate use in Neotropical granivorous ants. *Oecologia* 96:500-507
7. Kaspari M and A Joern (1993) Prey choice in three grassland birds: reevaluating opportunism. *Oikos* 68:414-430
6. Kaspari M (1993) Removal of seeds from Neotropical frugivore droppings: ant responses to seed number. *Oecologia* 95:81-88.
5. Kaspari M (1991) Preparation as a strategy to maximize nutrient concentration in prey. *Behav. Ecology* 2:234-241.
4. Kaspari M (1991) Central place foraging in the grasshopper sparrow: opportunism or optimal foraging in a variable environment? *Oikos* 60:307-312.
3. Kaspari M (1990) Prey preparation and the determinants of handling time. *Animal Behaviour* 40:118-126.
2. Young BE, M Kaspari & TE Martin (1990) Species-specific nest site selection by birds in Ant-Acacia Trees. *Biotropica* 22:310-315.
1. Kaspari M & H O'Leary (1988) Non-parental attendants in a north-temperate migrant. *Auk* 105: 792-793.

books

Kaspari M & D Vleck (1991) *Introductory Biology: a laboratory manual*. Bellweather Press, Minnesota.

chapters

1. Kaspari, M (2003) Introducción a la ecología de las hormigas, Pp 97-112, in: Fernández, F., *Introducción a las hormigas de la region Neotropical*. Smithsonian Institution Press. Washington DC.
2. Kaspari, M & JD. Majer. (2000) Using Ants to Monitor Environmental Change. Pp. 89-98, in: Agosti, D., Majer, J., Alonso, E. and Schultz, T., (eds.). *Ants: Standard Methods for Measuring and Monitoring Biodiversity*. Biological Diversity Handbook Series. Smithsonian Institution Press. Washington D.C., 20+280pp.
3. Kaspari, M (2000) A Primer in Ant Ecology. Pp. 9-24, in: Agosti, D., Majer, J., Alonso, E. and Schultz, T., (eds.). *Ants: Standard Methods for Measuring and Monitoring*

Biodiversity. Biological Diversity Handbook Series. Smithsonian Institution Press. Washington D.C., 20+280pp.

Book reviews

Kaspari M (1997) "Forest Litter Insect Communities: biology and chemical ecology" by T. N. Ananthakrishnan. *Quarterly Review of Biology* 72: 104

Kaspari M (2009) "The Lives of Ants" by L Keller and E Gordon. *BioScience* 60: 78-79.

Kaspari M (2011) "Adventures among ants" by MW Moffett. *Quarterly Review of Biology*.

Kaspari M (2013) "The Art of Ecology: the writings of G. Evelyn Hutchinson" edited by D. Skelly, D. Post, M. Smith. *Quarterly Review of Biology* 88:31

Kaspari M (2013) Community Ecology: too big for any one book. *Ecology* 94:1207-1208.

Society memberships

American Society of Naturalists, Ecological Society of America, Society for Integrative Biology

Administrative experience

Director of EEB Graduate Program-- Ecology and evolutionary biologists are housed in a variety of units across a modern university. At OU, the separate Departments of Zoology and Botany/Microbiology, without any overarching organization, hindered us in two ways. First, there was no regular vehicle to bring us together. Second, when advertising for graduate students, the breadth of opportunities at OU was diminished. The EEB Graduate Program is an opportunity to remedy both issues.

The program had its genesis in discussions with Yiqi Luo (BOMI). We were later joined by Lee Krumholz, Larry Weider, and Ola Fincke. Over a series of years, the EEB program took shape. I was elected its Director in November of 2004, and its steering committees have included ten other members of the EEB faculty from ZOO and BOMI. Associate faculty come from another 5 departments.

Since our first class in the fall of 2005, EEB has had 19 students in the program, two which are now assistant professors and two in private industry. We also celebrated our first biennial EEB Spring in 2006, bringing in four internationally celebrated scientists, and playing a small role in bringing in Al Gore (who spoke at the OU Coliseum to ca. 9000 screaming undergraduates).

EEBies have a weekly venue--Ecomunch--whose attendance had steadily increased.

As Director I am the first contact in the program, and also maintain its "web face": <http://www.ou.edu/eeb>. I also teach its inaugural course, *Advanced EEB*. I hold as many meetings with the steering committee as possible over email, and we are in the process of organizing EEB Spring 2009.

Co-Chair Gordon Conference Metabolic Ecology-- The Gordon Research Conference on Metabolic Ecology has now had three meetings in 2004, 2006 and 2008. At the close of the 2006 meeting I was elected, along with Bob Sterner, as co-chairs for 2008. The workload was episodic, and included soliciting possible speakers and topics, with many emails and conversations between Bob and myself coalescing the information. Since GRC provides only a fraction of the funds necessary, this also meant looking for money to support bringing in both invited speakers and as many students as possible. Toward that end, I wrote a successful NSF proposal which brought in \$46K, a large amount, we were told by GRC, for one of their conferences. Invitations, and subsequent management of speakers, fixing organizational snafus as the date approached, and running the five day meeting (which received strong

reviews) capped the commitment.

Teaching

Introduction to Zoology, Principles of Ecology, Community Ecology, The Art and Science of Biodiversity (Senior Capstone), Advanced Ecology and Evolutionary Biology, Geographical Ecology Workshop

Post Docs

Leeanne Alonso, Vice President, Center for Applied Diversity Science Rapid Assessment Program

Stephen Yanoviak, Asst. Professor, University of Louisville

Michael Weiser, currently at OU

Graduate Students

Michael Weiser, M.S., Ph. D. from University of Arizona, Post Doc Univ. Oklahoma

Mary Johnston, M.S., Ph. D. from University of Texas, Asst. Prof. Concordia College

Jon Shik, Ph. D. Madame Curie Postdoc and Smithsonian Tropical Res. Institute Post Doc

David Donoso, Professor Universidad Tecnica Particular de Loja, Ecuador

Natalie Clay, Ph. D. candidate

Jelena Bujan, Ph. D. candidate

Jackson Helms, Ph. D. candidate

Karl Roeder, Ph. D. candidate

Jane Lucas, Ph. D. candidate

Honors

- "Most Inspiring Faculty 1999-2000", as awarded by student athletes of the University of Oklahoma.
- "Featured Scientist" JASON XV: Panama Forests at the Crossroads. JASON is a nonprofit organization that develops yearly curricula for 1.7 million students in 4-9th grade science classrooms. It culminates in a live broadcast "expedition" (two weeks and 55 1-hour broadcasts). It allowed me to teach the ecology and evolutionary biology of the tropical forest from the litter of Barro Colorado Island in Panama.
- "Presidential Professor" University of Oklahoma
- "George Lynn Cross Research Professor" University of Oklahoma

public correspondence and publicity

- OU Spotlight on Teaching Spring 1999—*Teaching science's relevance and beauty*
- NPR 16 May 2002—*Calling Evolution Evolution*.
<http://discover.npr.org/features/feature.jhtml?wfid=1143470>
- Discoverychannel.com *Ants skydive to escape predators*.
<http://dsc.discovery.com/news/briefs/20050207/flyingant.html>
- Science News Week of Feb 12 (2005) *Life on the scales*.
<http://www.sciencenews.org/articles/20050212/bob9.asp>
- CBC's Quirks and Quarks Feb 19 (2005) *Flying ants* (scroll halfway down)
<http://www.cbc.ca/quirks/archives/04-05/feb19.html>

- New Scientist Week of March 19 (2005) *Global warming and ant invasions*
<http://www.newscientist.com/article.ns?id=dn7170>
- The Oklahoman (2007). *Ant-astic World. Fascination draws biologist to track trail of worker ants.*
- MSNBC (2008)—Ants prefer salty snacks to sweet stuff.
<http://www.msnbc.msn.com/id/27421820/>
- National Geographic Online (2009): Amazon’s low salt content keeps carbon emissions at bay.
<http://news.nationalgeographic.com/news/2009/11/091104-amazon-salt.html>
- US News and World Report: Study suggests theory for insect colonies as ‘Superorganisms’
<http://www.usnews.com/science/articles/2010/01/20/study-suggests-theory-for-insect-colonies-as-superorganisms.html>
Smithsonian online (Sept 2010): on Road salt and ant health
<http://smithsonianscience.org/2010/08/study-reveals-road-salt-may-promote-health-and-well-being-of-roadside-ant-colonies/>
- Ants—Rescuers by Nature. Copa Airline Magazine
- Featured in “The habits of successful ecologists” in the Bulletin of the Royal Society of Ecology 2012
- Quoted in New York Times “Feathered Freeloaders at the Ant Parade”, 24 September 2012
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referee

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U.S.: DOE, NSF, USDA, NASA, and EPSCoR Louisiana NSF Panel 2005, 2010, 2012; **UK:** NERC

selected service

Subject Editor: *Ecography*

Director and co-founder: Ecology and Evolutionary Biology Graduate Program at OU
Executive Committee—Biodiversity Science and Education Initiative

Lead OU representative to “Central Grasslands NEON” for NEON proposal 2001

Lead EEB representative for Undergraduate Curriculum Revision at OU—1997-2000

web sites

- Getting Things Done in Academia
<http://eebatou.wordpress.com>
- The BugBook
<http://thebugbook.org>