

**Emília P. Martins**

Department of Biology, Indiana University, Bloomington, IN 47405 USA  
[emartins@indiana.edu](mailto:emartins@indiana.edu); 812-856-5840; <http://www.indiana.edu/~martins/>

**Positions held:**

2007 - now	Full Professor, Department of Biology, Indiana University, Bloomington
2009 - 2012	Director (2009-12) of NSF-funded summer program for undergraduate research in animal behavior (Co-Director in 2004-09 and 2012-now)
2006 - 2009	Associate Dean for Graduate Education, College of Arts & Sciences, Indiana University
2005 - 2006	Associate Dean for Student Diversity, University Graduate School, Indiana University
2002 - 2008	Director, Center for the Integrative Study of Animal Behavior, Indiana University
2001 - 2007	Associate Professor, Department of Biology, Indiana University
2000 - 2001	Associate Professor, Department of Biology, University of Oregon
1994 - 2000	Assistant Professor, Department of Biology, University of Oregon

**Honors:**

2013-2018	President (2 <sup>nd</sup> pres-elect, pres-elect, pres, past-pres), Animal Behavior Society (elected)
2013	Exemplar, Center for the Integrative Study of Animal Behavior (IUB)
2011	Fellow, Animal Behavior Society
2011	Roger E. Carpenter lecturer in Comparative Biology, San Diego State University
2001-2003	Councilor, Society for the Study of Evolution (elected)
1998-2001	Program Officer, Animal Behavior Society (elected)
1987-1998	NSF Career Award, Postdoctoral & Predoctoral fellowships

**Education:**

1992-94	postdoctoral work, Univ. of Washington, Seattle (adviser: Joe Felsenstein) and Univ. of Oregon, Eugene (adviser: Mike Lynch)
1987-92	Ph.D., Zoology, University of Wisconsin, Madison (adviser: Jeff Baylis)
1987-91	M.S., Biometry, University of Wisconsin, Madison (adviser: Rick Nordheim)
1983-87	B.A., Zoology and Psychology, University of California, Berkeley

**Selected Publications:** (from 100+ articles, books, and computer programs. Authors in italics were students in the Martins lab at the time the work was done. \* marks undergraduate authors.)

1. Martins EP, *Bhat A*. 2014. Population-level personalities in zebrafish: aggression-boldness across but not within populations. *Behavioral Ecology* 25: 368-373.
2. *Ossip-Klein AG, Fuentes JA, Hews DK, Martins EP*. 2013. Information content is more important than sensory system or physical distance in guiding the long-term evolutionary relationships between signaling modalities in *Sceloporus* lizards. *Behavioral Ecology & Sociobiology* 67: 1513-1522.
3. *Vital C, Martins EP*. 2013. Socially-central zebrafish influence group behavior more than those on the social periphery. *PLOSOne* 8: e55503.
4. *Whiteley AR, Bhat A, Martins EP, Mayden RL, Arunachalam M, Uusi-Heikkila S, Ahmed ATA, Shrestha J, Clark M, Stemple D, Bernatchez L*. 2011. Population genomics of wild and laboratory zebrafish (*Danio rerio*). *Molecular Ecology* 20:4269-4276.
5. *Vital C, Martins EP*. 2011. Strain differences in zebrafish social roles and their impact on group task performance. *Journal Comparative Psychology* 125:278-285.
6. *Ruiz M, French SS, Demas GE, Martins EP*. 2010. Food supplementation and testosterone interact to influence reproductive behavior and immune function in *Sceloporus graciosus*. *Hormones and Behavior* 57:134-139.
7. *Nava S, \*Conway M, Martins EP*. 2009. Sex-specific visual performance: female lizards outperform males in motion detection. *Biology Letters* 5:732-734.
8. *Vital C, Martins EP*. 2009. Using graph theory metrics to infer information flow through animal social groups: a computer simulation analysis. *Ethology* 115: 347-355.
9. *Nava SS, \*Conway M, Martins EP*. 2009. Divergence of visual motion detection in diurnal geckos that inhabit bright and dark habitats. *Functional Ecology*, 23: 794-799.
10. *Ruiz M, \*Davis E, Martins EP*. 2008. Courtship attention in Sagebrush lizards varies with male identity and female reproductive state. *Behavioral Ecology* 19: 1326-1332.

11. Thompson JT, Bissell AN, Martins EP. 2008. Inhibitory interactions between multimodal behavioral responses may influence the evolution of complex signals. *Animal Behaviour* 76: 113-121.
12. Kelso EC, Martins EP. 2008. The effects of two courtship display components on female reproductive behaviour and physiology in the sagebrush lizard. *Animal Behaviour* 75: 639-646.
13. Moretz JA, Martins EP, Robison BD. 2007. Behavioral syndromes and the evolution of correlated behavior in zebrafish. *Behavioral Ecology* 18:556-562.
14. Moretz JA, Martins EP, Robison BD. 2007. The effects of early and adult social environment on boldness and aggression in zebrafish (*Danio rerio*). *Environmental Biology of Fishes* 80:91-101.
15. Bissell AN, Martins EP. 2006. Male choice and female avoidance as mechanisms of population discrimination in lizards. *Behavioral Ecology & Sociobiology*, 60: 655-662.
16. Ord TJ, Martins EP. 2006. Tracing the origins of signal diversity in anole lizards: phylogenetic approaches to inferring the evolution of complex behaviour. *Animal Behaviour*, 71: 1411-1429.
17. Martins EP, Ord TJ, Slaven J, \*Wright JL, Housworth EA. 2006. Individual, sex, seasonal and temporal variation in the amount of Sagebrush lizard scent-marks. *Journal of Chemical Ecology*, 32: 881-893.
18. Martins EP, Ord TJ, \*Davenport S. 2005. Combining motions into complex displays: playbacks with a robotic lizard: Playbacks with a robotic lizard. *Behavioral Ecology and Sociobiology*, 58: 351-360.
19. Ord TJ, Martins EP, Thakur S, \*Kane K, Börner K. 2005. Ethoinformatics: mining library databases to identify trends in animal behaviour research (1968-2002). *Animal Behaviour*, 69: 1399-1413.
20. Martins EP. 2004. COMPARE 4.6: statistical analysis of comparative data. Computer programs distributed by the author (<http://compare.bio.indiana.edu>).
21. Alberts A, Carter RL, Hayes W, Martins EP, editors. 2004. *Iguanas: Biology and Conservation*. UC Press.
22. Martins EP, Labra A, Halloy MP, J. T. Thompson. 2004. Large scale patterns of signal evolution: An interspecific study of *Liolaemus* lizard headbob displays. *Animal Behaviour* 68: 453-463.
23. †Martins EP. 2004. EthoSource: a new initiative for storing, sharing and combining behavioral data. *BioScience*, 54: 886-887.
24. Housworth EA, Martins EP, Lynch M. 2004. The phylogenetic mixed model, *Am. Nat.* 163: 84-96.
25. Lacy KE, Martins EP. 2003. The effects of anthropogenic habitat usage on the social behaviour of a vulnerable species, *Cyclura nubila*. *Animal Conservation*, 6:3-9. (Journal cover.)
26. Martins EP, Housworth EA. 2002. Phylogeny shape and the phylogenetic comparative method. *Systematic Biology*, 51: 873-880.
27. Martins EP, Diniz-Filho JA, Housworth EA. 2002. Adaptation and the phylogenetic comparative method. *Evolution* 56: 1-13.
28. Housworth EA, Martins EP. 2001. Random sampling of constrained phylogenies: Conducting phylogenetic analysis when the phylogeny is partially known. *Systematic Biology* 50: 628-639.
29. Martins EP 2000. Adaptation and the comparative method. *Trends in Ecology & Evolution* 15: 295-299.
30. Martins EP 1999. Estimation of ancestral states of continuous characters: a computer simulation study. *Systematic Biology* 48: 642-650.
31. Martins EP, Lamont J. 1998. Estimating ancestral states of a communicative display: a comparative study of *Cyclura* rock iguanas. *Animal Behaviour* 55: 1685-1706.
32. Martins EP, Hansen TF. 1997. Phylogenies and the comparative method: A general approach to incorporating phylogenetic information into analysis of interspecific data. *American Naturalist* 149: 646-667; err 153: 448.
33. Martins EP 1996. Phylogenies, spatial autoregression, and the comparative method: A computer simulation test. *Evolution* 50: 1750-1765.
34. Martins EP 1996. Conducting phylogenetic comparative analyses when the phylogeny is not known. *Evolution* 50: 12-22.
35. Martins EP, editor. 1996. *Phylogenies and the Comparative Method in Animal Behavior*. Oxford Univ. Press.
36. Hansen TF, Martins EP. 1996. Translating between microevolutionary process and macroevolutionary patterns: the correlation structure of interspecific data. *Evolution* 50: 1404-1417.
37. Martins EP . 1993. A comparative study of the evolution of *Sceloporus* push-up displays. *American Naturalist* 142: 994-1018.
38. Martins EP . 1993. Contextual use of the push-up display by the Sagebrush Lizard, *Sceloporus graciosus*. *Animal Behaviour* 45: 25-36.
39. Martins EP, Garland, T. Jr. 1991. Phylogenetic analyses of the correlated evolution of continuous characters: a simulation study. *Evolution* 45: 534-557.

**Grants (last 5 years only):**

- 2013-2017 NSF IOS-1257562, "Evolution of integrated behavior (US-India collaboration)"; \$936,000 + \$30,000 in supplements to study the behavior of wild zebrafish and predict evolutionary change
- 2011-2015 NSF IOS-1050274, "Collaborative Research: Causes and Consequences of Signal Evolution"; \$401,000 + \$12,000 in supplements to study the evolution of visual signals in *Sceloporus* lizards (with co-PI Diana Hews)
- 2002-2013 Four NSF grants supporting Turner Program (IOB-0930509, IOB-0735035, IOB-0621383, IBN-0205180). The Turner program promotes undergraduate student participation at the Animal Behavior Society meetings. Martins is PI, with co-PIs Peggy Hill & Zuleyma Tang-Martinez.
- 2009-2014 Two NSF grants supporting the REU site program in Animal Behavior (DBI-0453403, IOB-0851607). Martins is PI, with co-PIs Bill Timberlake, Greg Demas, and Laura Hurley
- 2006-2009 National Eye Institute, National Institutes of Health Ruth Kirschstein National Research Service predoctoral fellowship for Saúl Nava.

**Recent Teaching Experiences:***Courses:*

- 2013 Evolution, Honors (s318, undergrad lab course with intensive writing), Indiana University (taught 4 times in F10, Sp12, F12, F13)
- 2008 Phylogenies and the Comparative Method (Z620, grad seminar course), Indiana University (Fall 08)
- 2008 Evolution of Sexual Dimorphism (Z620, grad seminar course), Indiana University (Spring 08)

*Graduate Students & Postdocs (and current position):*

- **Current:** Stephanie M. Campos (Ph.D. exp 2017), Delawrence Sykes (Ph.D. exp 2016), Delia Shelton (Ph.D. exp 2015, co-advised by J. Alberts), Jesualdo A. Fuentes (Ph.D. exp 2016), Alison Ossip-Klein (Ph.D. exp 2015), Piyumika Suriyampola (postdoc)
- **Past PhD students** (8): A. Michelle Lawing (prof Texas A & M), Mayté Ruiz (postdoc U Puerto Rico), Cuauhcihuatl Vital (prof U Ciudad Juarez, Mexico), Saúl Nava (prof MassArt & Harvard), Erin Kelso, Julie T. Thompson (prof at Am Publ U), Ahrash N. Bissell (education project manager), Pete A. Zani (prof U Wisc, Stephens Point)
- **Past MS students:** Kathryn E. Lacy (community college instructor and wildlife rehabilitator), Lea A. Sheldahl (veterinarian), Jenny Lamont (scientific manuscript editor)
- **Some former postdocs & techs:** Anuradha Bhat (prof IISER Kolkata India), Jason Moretz (environ. consultant), Terry Ord (prof U New South Wales, Australia), Marguerite Butler (prof U Hawaii Manoa), Eduardo Morales (government researcher, Mexico), Thomas Hansen (prof U Oslo, Norway)

**Other Experiences:**

- Mentoring of 150+ undergraduate researchers, including 22 from the most recent 5 years who completed senior theses or full-time, paid, summer internships through any one of several programs
- Mentoring of 8 K-12 teachers on 2-8 week summer research programs, including 3 on summer-long internships paid by NSF supplements to my own research grants
- Mentoring of 10 high school students on 2 - 15 week research experiences
- Co-Director of Charles H. Turner program that uses NSF and ABS funds to take 10 undergraduates each year to the annual meeting of the Animal Behavior Society and to run a pre-meeting workshop (2002-2014)
- Director of Animal Behavior REU program, an NSF-supported summer internship for undergraduates at Indiana University (2009-2012). Co-director from 2004-2009 and 2013-14.
- Core Member (2005- now), NIH Training Grant in "Common Themes in Reproductive Diversity" (Ellen Ketterson, PI; Co-director Dale Sengelaub)
- Primary host of two international conferences: the 2002 annual meetings of the Animal Behavior Society (ABS) and *Behavior 2011*, the joint meeting of the ABS and the International Ethological Conference
- Service as a reviewer on 14 NSF panels and for more than 50 journals and funding agencies