

David M. Logue

Universidad de Puerto Rico, Mayagüez

Departamento de Biología

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Academic Positions

Assistant Professor 2009 – present

Departamento de Biología , Universidad de Puerto Rico, Mayagüez.

Postdoctoral Fellow 2005 – 2009

Department of Biological Sciences, University of Lethbridge, Alberta. Supervisor: William H. Cade, President.

Visiting Professor 2005

Department of Biology, Colorado State University, Fort Collins, Colorado.

Education

Ph.D. 2004

Zoology, Colorado State University. Dissertation title: Duet structure and the adaptive significance of coordinated singing in the black-bellied wren.

Bachelor of Science 1999

Biology: Ecology, Behavior, and Evolution, University of California San Diego.
“Outstanding Achievement Award” for highest GPA in major

Research Interests

The evolution of acoustic signals

Avian duets

Individual differences in behavior

Bioacoustics, especially the analysis and manipulation of natural sounds

Peer Reviewed Publications

Undergraduate collaborators are underlined

Mather, J. & **Logue, D.M.** (in press). The bold and the spineless: Invertebrate personalities. In: *Animal Personalities: Behavior, Physiology, and Evolution* (Ed. by C. Carere & D. Maestripieri). Chicago: University of Chicago Press.

Oleksyk, T.K., Pombert, J.F., Guiblet, W., Ramos, B., Mazo, A., Ruiz-Rodriguez, C.T., Nickerson, M.L., Winkler, C.A., Siu, D., Valentin, R., Figueroa, L., Dean, M., **Logue, D.**, & Martinez-Cruzado, J.C. (2011). A Draft Sequence of the Puerto Rican Parrot Genome (*Amazona vittata*) – a Genome Project funded by a Local Community Effort. *Nature Precedings* : doi:10.1038.

Mishra, S., **Logue, D.M.**, Abiola, I., & Cade, W.H. (2011) Developmental environment affects risk-acceptance in the hissing cockroach *Gromphadorhina portentosa*. *Journal of Comparative Psychology*. 125:40-47.

Logue, D.M., Takahashi, A., & Cade, W.H. (2011) Aggressiveness and size: A model and two tests. *The American Naturalist*. 177:202-210.

Logue, D.M., Abiola, I., Raines, D., Bailey, N., Zuk, M., & Cade, W.H. (2010). Does signaling mitigate the cost of agonistic interactions? A test in a cricket that has lost its song. *Proceedings of the Royal Society of London, Series B*. 277:2571-2575.

Logue, D.M., Mishra, S., McCaffrey, D., Ball, D., & Cade, W.H. (2009). A behavioral syndrome linking courtship toward males and females predicts reproductive success from a single mating in the hissing cockroach, *Gromphadorhina portentosa*. *Behavioral Ecology*. 20:781-788.

Logue, D.M. (2009) The Black-bellied Wren (*Thryothorus fasciatoventris*), Neotropical Birds Online (T.S. Schulenberg, Ed.). <http://neotropical.birds.cornell.edu/portal/613>. Ithaca: Cornell Lab of Ornithology.

- Logue, D.M.** & Forstmeier, W. (2008). Constrained performance in a communication network: Implications for the function of song-type matching and the evolution of multiple ornaments. *The American Naturalist*. 172:34-41.
- Logue, D.M., Chalmers, C. & Gowland, A.H.** (2008). The behavioural mechanisms underlying temporal coordination in black-bellied wren duets. *Animal Behaviour*. 75: 1803-1808.
- Logue, D.M.** (2007). Duetting in space: A radio-telemetry study of the black-bellied wren. *Proceedings of the Royal Society of London, Series B*. 274:3005-3010.
- Baker, M.C. & **Logue, D.M.** (2007). A comparison of three noise reduction procedures applied to bird vocal signals. *Journal of Field Ornithology* 78:240-253.
- Logue, D.M.** (2007). A male Greater Ani (*Crotophaga major*) gives a nuptial gift during copulation. *Ornitología Neotropical* 18:311-312.
- Logue, D.M., Droessler, E., Roscoe, D., Vokey, J., Rendall, D., & Kunimoto, R.** (2007). Sexually antithetical song structure in a duet singing wren. *Behaviour* 144:331-350.
- Auer, S.K, **Logue, D.M.**, Bassar, R.D. & Gammon, D.G. (2007). Nesting biology of the Black-bellied wren in central Panama. *Wilson Journal of Ornithology* 119:71-76.
- Logue, D.M.** (2007). How do they duet? Sexually dimorphic behavioural mechanisms structure duet songs in the black-bellied wren. *Animal Behaviour* 73:105-113.
- Logue, D.M.** (2006). The duet code of the female black-bellied wren. *The Condor* 108:327-336.
- Logue, D.M.** (2005). Cooperative defence in duet singing birds. *Cognition, Brain, Behavior* 9:497-510.
- Logue, D.M., Gammon, D.E. & Baker, M.C.** (2005). MiniDisc recorders versus audiocassette recorders: A performance comparison. *Bioacoustics* 15:15-33.
- Logue, D.M. & Gammon, D.E.** (2004). Duet song and sex roles during territory defence in a tropical bird: the black-bellied wren, *Thryothorus fasciatoventris*. *Animal Behaviour* 68: 521-531.

Baker, M. C. & **Logue, D. M.** (2003). Population differentiation in a complex bird sound: a comparison of three bioacoustical analysis procedures. *Ethology* 109: 225-244.

Manuscripts in Preparation and in Review

Logue, D.M., & Stivers, T. (in preparation). Squawk-in-interaction: How Conversation Analysis can inform bird song research.

Logue, D.M., & Hall, M.L. (in preparation). The evolution of duet singing in songbirds.

Judge, K.A., **Logue, D.M.**, Abiola, I.O., & Cade, W.H. (in preparation). Aggression, weapon size, and dominance.

Grants, Fellowships, and Internships

Grant from the Fideicomiso de Ciencia, Tecnología e Investigación de Puerto Rico for the Undergraduate Research Symposium, Co-PI with Luis Rios, 2011 (\$2,500)

UPRM Competitive Seed Fund, 2010 (\$3,500)

Postdoctoral Fellowship, University of Lethbridge, 2005-2009

Frank Chapman Memorial Grant, American Museum of Natural History, 2004 (\$2,000)

Smithsonian Tropical Research Institute Short Term Fellowship, 2004 (\$2,320)

Smithsonian Internship, 2003 (\$9,200)

Smithsonian Tropical Research Institute Short Term Fellowship, 2002 (\$4,700)

Grinnell Award, Cooper Ornithological Society, 2002 (\$1000)

Smithsonian Internship, 2001 (\$4,200)

Teaching

Teaching Priorities

The scientific process

Evolutionary logic

Communication

Research experience

Courses Taught

Evolución, Universidad de Puerto Rico, Mayagüez

Comportamiento Animal, Universidad de Puerto Rico, Mayagüez

Seminario, Universidad de Puerto Rico, Mayagüez

Ecología de Conducto, Universidad de Puerto Rico, Mayagüez

Behavioral Ecology, University of Lethbridge
Tropical Ecology and Conservation, University of Lethbridge
Animal Behavior, Colorado State University
Ornithology, Colorado State University

Special courses

AForMAR lectures for middle school and high school teacher development (2011)
STRI and Universidad de Panamá Field Course in Tropical Ecology (2002, 2004)

Undergraduate Research Supervisor

42. Noelia Nieves
41. Wildeby Borges
40. Jorge Illanas
39. Fabio Tarazona
38. Ricardo Liquez Gonzalez 2011- 2012. Behavioral compatibility in a parrot.
37. Isamarie Acosta Morales 2011 - 2012. Performance in warbler songs.
36. Jaitza Rivera Ramirez 2011. A comparative study of avian duetting.
35. Hannes Schraft 2011. Vocal communication in Adelaide's warbler.
Outstanding Presentation in Ecology, Undergraduate Research Symposium
34. Nardia Sierra Montalvo 2010-2011. A comparative study of avian duetting.
33. Maria E. Cruz Muñoz 2010. A comparative study of avian duetting.
32. Gerardo Gonzales Quintero. Performance constraints in a warbler's song.
Outstanding Presentation in Ecology, Undergraduate Research Symposium
31. Beatriz Romero Cordero 2010. Duetting in the endangered Puerto Rican Parrot.
30. Hans Cancel Villamil 2010. A comparative study of avian duetting.
29. Crisanta Serrano Collazo 2010. A comparative study of avian duetting.
28. Cristina Garcia Ruiz 2010. A comparative study of avian duetting.
27. Alan Nielson 2009. Do hissing cockroaches recognize individuals by chemical cues?
Awarded inaugural Luke Stebbins Prize for Undergraduate Research Achievement
26. Ryan Pederson 2009. Aggressiveness and dominance in male hissing cockroaches
25. Rachel Shields 2009. Aggressiveness and dominance in male hissing cockroaches
24. April Takahashi 2008-09. Does aggression influence resource holding potential?
23. Malysa Hornbeck 2008-09. A new assay to measure 'libido' in a hissing cockroach
22. Kristen Reti 2008. Can risk sensitivity explain behavioral syndromes?
21. Ashley Marchuk 2008. Does noise influence song frequency in black-bellied wrens?
20. Ife Abiola 2008-09. The function of acoustic agonistic signals in a field cricket
19. Derek Raines 2007-08. The function of acoustic agonistic signals in a field cricket
18. Jennifer Sundsten 2007-08. Can risk sensitivity explain behavioral syndromes?
17. Fauve Martens 2007. 'Courtship hissing' and female choice in a cockroach
16. David McCaffrey 2007-08. Behavioral syndromes in a cockroach: Social effects
15. Kelly Dick 2007. Behavioral syndromes in a cockroach: Aggression syndromes
14. Drew Andreachuck 2007-08. Behavioral syndromes in a cockroach: Social effects

13. Heather Gowland 2007. Timing of replies in naturally occurring wren duets
12. Deborah Ball 2007. Behavioral syndromes in a cockroach: Sexual syndromes
11. Carli Chalmers 2006. Timing of replies in experimentally generated wren duets
10. David Roscoe 2006. Sexually antithetical bird song: Multi-taper spectral analysis
9. Carly Cheung 2006. Acoustic energy indicates size in hissing cockroaches
8. Elizabeth Lounds 2006. Size constraints on disturbance and courtship signals
7. Erika Droessler 2005. Sexually antithetical bird song: Frequency characteristics
6. Robyn Kunimoto 2005. Sexually antithetical bird song: Temporal characteristics
5. John Keyes 2005. Acoustic communication in crickets and cockroaches
4. Mikaela Vettors 2004. Snowshoe hare populations in the Rocky Mountains
3. Jodi Hoppes 2004. Territory use by male and female black-bellied wrens
2. Bradley Bisbee 2002-2003. Duet function in black-bellied wrens
1. Samantha Sasman 2001. Comparing two acoustic analysis procedures

Ph.D. Comprehensive Requirements Supervisor

Sandeep Mishra 2008-09. Department of Psychology. University of Lethbridge.

Master's Committee Member

Chris Flores Nieves

Christian Cely

Shakira Quiñones (UPR Rio Piedras)

Lourdes Gonzalez Caraballo (UPR Rio Piedras)

Master's Student Supervisor

Brian Ramos

Daniel Pereira

Orlando Medina

Professional Activities

Professional Society Memberships

Animal Behavior Society

Society for the Conservation and Study of Caribbean Birds

Licensed master bird-bander

Referee

American Midland Naturalist

Animal Behaviour

Auk

Australian Journal of Zoology

Behavioral Ecology

Behavioral Ecology and Sociobiology

Behaviour

Behavioural Processes

Bioacoustics

Biological J. of the Linnean Society

The Condor
Ecological Research
Endangered Species Research
Ethology
Evolution
Journal of Avian Biology
Journal of Field Ornithology
Journal of Natural History

Journal of Ornithology
National Science Foundation
Ornitología Neotropical
Proceedings of the Royal Society of
London, Series B
Science
Wilson Journal of Ornithology

Member

2009-Present. Bioinformatics Committee
2009-Present. Toro Negro Research Station Committee
2009-Present. Ecology Committee (group leader)
2011-Present. Undergraduate Research Symposium (group leader)

Founder

UPRM Undergraduate Research Symposium in Biology
Aggression and Courtship reading group
Acoustic Communication and Sexual Selection Reading Group
Behavioral Syndromes Reading Group
The “Biologists’ Breakfast Club” Working Group
Classic Papers in Animal Behavior Seminar
Classic Papers in Ecology Seminar

Popular Press Coverage

Menino, H. (in prep). *Calls Beyond Our Hearing: Unlocking the Secrets of Animal Voices*. Scheduled for publication April 2012. St. Martin’s press.

Bhanoo, Sindya N. (2010). Not too large, not too small, but spoiling for a fight. *New York Times*. Dec 22.
<http://www.nytimes.com/2010/12/28/science/28obcockroach.html>

Borrell, B. (2010). Squawking duets of Puerto Rican Parrots. *Smithsonian.com*. Posted May 18, 2010: <http://blogs.smithsonianmag.com/science/2010/05/18/squawking-duets-of-puerto-rican-parrots>.

CBC radio (2010). Silent means deadly. *Quirks & Quarks*. Air date April 17, 2010: <http://www.cbc.ca/quirks/archives/09-10/qq-2010-04-17.html>.

- Milius, S. (2008). Bisexual cockroach dads. *Science News*. August 22:
http://www.sciencenews.org/view/generic/id/35763/title/Bisexual_cockroach_dads.
- McIlroy, A. (2008). Smokin' roaches. *The Globe and Mail*. August 16:
<http://www.theglobeandmail.com/servlet/story/RTGAM.20080816.wanne16/BNSStory/Front/home>.
- Wiebe, J. (2008). Less talented songbirds whistle a different tune. *The Lethbridge Herald*. June 7: A3. http://www.lethbridgeherald.com/article_11017.php.
- McIlroy, A. (2008). Songbirds do battle. *The Globe and Mail*. May 31.
<http://www.theglobeandmail.com/servlet/story/LAC.20080531.ANNE31//TPStory/Focus>.
- Choi, C.Q. (2008). Male songbirds' sly tricks can get them girls. *MSNBC*.
<http://www.msnbc.msn.com/id/24777088/>.
- Callaway, E. (2008). 'Poets' and 'jocks' can both win in songbird duels. *New Scientist*.
http://www.newscientist.com/channel/life/dn13943-poets-and-jocks-can-both-win-in-songbird-duels.html?feedId=online-news_rss20.
- Highfield, R. (2007). Love songs of wrens revealed. *Daily Telegraph Online*.
<http://www.telegraph.co.uk/earth/main.jhtml?view=details&grid=&xml=/earth/2007/09/28/eawren128.xml>.
- Casselman, A. (2007). Birds that sing together scare off invaders. *National Geographic News*. <http://news.nationalgeographic.com/news/2007/06/070605-birds-song.html>.
- Milius, S. (2006). Just Duet. *Science News*. 169:58-60.

Research Presentations

Presentations at Meetings

- Animal Behavior Society, Talk, July 2011
- Animal Behavior Society, Poster (presented by Brian Ramos), July 2011
- Dan Otte Symposium, Talk, June 2009
- Animal Behavior Society, Talk, August 2008
- Animal Behavior Society, Talk, July 2007
- Animal Behavior Society, Poster (presented by David McCaffrey), July 2007
- International Society for Behavioural Ecology, Invited Talk, July 2006
- International Society for Behavioural Ecology, Poster, July 2006

Canadian Society of Zoologists, Talk, May 2006
Animal Behavior Society, Talk, August 2005
Animal Behavior Society, Talk, August 2003
Front Range Student Ecology Symposium, Talk, April 2002
Monteverde Student Ecology Symposium, Talk, November 1998

Research Seminars

Department of Biology, The University of San Francisco, February 2009
Department of EEOB, The Ohio State University, January 2009
Department of Biological Sciences, University of Calgary, October 2008
Department of Biology, University of Puerto Rico, Mayagüez, May 2008
Department of Biology, Earlham College, Richmond, Indiana, January 2008
Department of Integrative Biology, University of Texas at Austin, September 2006
Department of Biology, University of North Carolina at Chapel Hill, April 2006
Department of Entomology, North Carolina State University, April 2006
Department of Biological Sciences, University of Lethbridge, January 2005
Smithsonian Tropical Research Institute, July 2004
Museum of Zoology, University of Michigan, March 2004
Smithsonian Tropical Research Institution, August 2002

Personal

Born: January 30, 1977
Citizenship: U.S.A.
Foreign language: Spanish (conversational)