

## **Eben Goodale**

Lecturer and Visiting Scholar, The University of California, San Diego

Lecturer and Research Associate, The University of San Diego

E-mail: [egoodale@ucsd.edu](mailto:egoodale@ucsd.edu), [eben.goodale@gmail.com](mailto:eben.goodale@gmail.com) Web:

<http://sites.google.com/site/ebengoodale/>

### Education:

- **University of Massachusetts, Amherst** (2005), Ph.D.  
Thesis title: “Interspecific communication in mixed-species bird flocks of a Sri Lankan rainforest.” Major advisors: Bruce E. Byers and Donald E. Kroodsmma. 4.0 GPA.
- **Harvard College** (1997), B.A., magna cum laude in Biology.

### Research Positions:

- Visiting Scholar, **University of California, San Diego** (1/10-present); Research Associate, **University of San Diego** (2/10-present). Studying interspecific information transfer among pollinating insects in James Nieh’s lab.
- Postdoctoral Fellow, **National Science Foundation** (NSF) International Research Fellowship Program (1/07-4/07; 8/07-8/08; 1/09-4/09; 9/09-12/09). Studied developmental, cognitive and functional aspects of vocal mimicry in mixed-species bird flocks of Sri Lanka and Papua New Guinea.
- Research Associate, **University of Massachusetts, Amherst** (1/09-12/09). Affiliated with Jeffrey Podos’ lab; studied cultural evolution in the songs of Darwin’s finches.
- Postdoctoral Fellow, **MIT Media Lab** (8/06–11/06; 5/07-7/07)  
Worked with Dale Joachim on a NSF-sponsored program using cell phone technology to remotely conduct playback experiments
- Consultant, **Yale School Forests** (9/05–7/07).  
Designed and conducted the first bird survey of the actively managed Yale Myers Forest.
- Research Associate, **Field Ornithology Group of Sri Lanka** (FOGSL; 5/05–present).  
Responsible for planning research agenda, finding funding, and supervising students.

### Teaching Positions:

- Lecturer and Senior Seminar Mentor, **University of San Diego** (1/10-present). Have taught a survey course on the biology of organisms (BIOL 221, lecture and lab), a course in the principles of environmental science (BIOL 102), and a lab in cellular biology (BIOL 225). Also have mentored students on their independent research project (BIOL 495).
- Lecturer, **University of San Diego, California** (10/10-12/10; 10/11-12/11). Taught two semesters of UCSD’s introductory course in ecology, behavior and evolution (BILD 3).
- Adjunct Faculty, **University of New Haven** (8/08-12/08). Taught an undergraduate course (BIO 320) and a graduate course (ENV 601) in the principles of ecology, with laboratory.
- Lecturer, **University of Massachusetts, Amherst** (8/08-12/08). Presented 13 lectures on evolution for the large introductory lecture class for non-majors, “Social Issues in Biology” (BIO 105).

- Visiting Lecturer, **University of Colombo** (1/07-3/07; 3/08-5/08). Taught 10 hours of lectures on experimental design and statistical analysis and an additional five hours of lectures on behavioral ecology.
- Instructor, **Yale School for Forestry and Environmental Sciences** (8/07). Designed and conducted lab demonstration on freshwater ecology and biodiversity for their Masters orientation program.
- Teaching Assistant, **University of Massachusetts, Amherst** (1/05–5/05; 9/02–5/03). Designed and taught laboratory curriculum for ornithology (BIO 544) and introductory biology labs (BIO 100 & 101).

#### Scholarships and Fellowships:

- **National Science Foundation**, International Research Postdoctoral Fellowship (awarded 8/06, for two years).
- **American Institute of Indian Studies**, Senior Fellowship (awarded 10/05, for four months), to study the effect of land-use on mixed-species flocks of India.
- **National Science Foundation**, Graduate Fellowship (awarded 4/00, for three years).
- **Fulbright Junior Scholarship** (awarded 9/97, for one year).

#### Grants:

- \* **US Forest Service** (\$30,000 awarded to FOGSL 12/11), to study the Central Asian migratory pathway in Sri Lanka.
- \* **San Diego Foundation Blasker Science and Technology Grant** (\$35,916 awarded 5/11)
- **Conservation, Food & Health Organization** (\$12,935 originally awarded to FOGSL 6/06, for twelve months; \$12,022 funded for a second year 11/07), to study the effect of land-use on flocks of Sri Lanka.
- **National Science Foundation**, International Research Postdoctoral Fellowship (\$48,100 in research funds, awarded 8/6/06).
- **National Science Foundation**, Doctoral Dissertation Improvement Grant (\$11,500 awarded 7/03).
- **American Ornithologists Union**, Student Research Grant (\$2500 awarded 6/03).
- **Sigma-Xi Grant-in-Aid-of-Research** (\$1000 awarded 6/03 and \$500 12/01).
- **Woods Hole Scholarship for Field Research** (\$3200 awarded 3/02).
- **American Ornithologists Union**, Maria Brady Tucker Travel Award (\$1200 awarded 6/02).

#### Peer-Reviewed Scientific Publications:

- 22) Goodale, E., Goodale, U. and Mana, R. 2012. The role of toxic pitohuis in mixed-species flocks of lowland forest in Papua New Guinea. **Emu – Austral Ornithology**.
- 21) Beauchamp, G. and Goodale, E. 2011. Plumage mimicry in avian mixed-species flocks: more or less than meet the eye? **Auk** 128: 487-496.
- 20) Sidhu, S., Raman, T. R. S. & Goodale, E. 2011. Effects of plantations and home-gardens on tropical forest bird communities and mixed-species bird flocks in the southern Western Ghats. **Journal of the Bombay Natural History Society** 107: 91-108
- 19) Goodale, E. & Ruxton, G. D. 2010. Antipredator benefits from heterospecifics. In: **Encyclopedia of Animal Behavior** (Breed, M and Moore, J., editors). Academic Press, Oxford.

- 18) Goodale, E. and Podos, J. 2010. Persistence of song types in Darwin's finches, *Geospiza fortis*, over four decades. **Biology Letters** 6: 589-592.
- 17) Goodale, E., Beauchamp, G., Magrath, R. D., Nieh, J. C. & Ruxton, G. D. 2010. Interspecific information transfer influences animal community structure. **Trends in Ecology and Evolution** 25: 354-361.
- 16) Sathischandra, S. H. K., Kodituwakku, P., Kotagama, S. W. & Goodale, E. 2010. Assessing "false" alarm calls by a drongo (*Dicrurus paradiseus*) in mixed-species bird flocks. **Behavioral Ecology** 21: 396-403.
- 15) Goodale, E & Beauchamp, G. 2010. The relationship between leadership and gregariousness in mixed-species bird flocks. **Journal of Avian Biology** 41: 99-103.
- 14) Ratnayake, C. P., Goodale, E. & Kotagama, S. W. 2010. Two sympatric species of passerine birds imitate the same raptor calls in alarm contexts. **Naturwissenschaften** 97: 103-108.
- 13) Goodale, E., Nizam, B. Z., Robin, V. V., Sridhar, H., Trivedi, P., Kotagama, S. W., Padmalal, U. K. G. K., Perera, R., Pramod, P. & Vijayan, L. 2009. Regional variation in structure and composition of mixed-species bird flocks of the Western Ghats and Sri Lanka: a review. **Current Science** 97: 648-663.
- 12) Goodale, E., Lalbhai, P., Goodale, U. M., & Ashton, P. M. S. 2009. The effect of shelterwood cuts and crown thinnings on the abundance and distribution of birds in a southern New England forest. **Forest Ecology and Management** 258: 314-322.
- 11) Goodale, E. & Kotagama, S.W. 2008. Responses to conspecific and heterospecific alarm calls in mixed-species bird flocks of a Sri Lanka rainforest. **Behavioral Ecology** 19: 887-894.
- 10) Goodale, E. & Kotagama, S.W. 2007. Some observations on the geographic variation of mixed-species bird flocks in Sri Lanka. **Journal of the Bombay Natural History Society** 104: 96-98.
- 9) Joachim, D. & Goodale, E. 2007. On the use of cellular telephony for audio interaction with animals. **Biology Letters** 3: 603-606.
- 8) Sathischandra, S.H.K., Kudavidanage, E.P., Kotagama, S.W. & Goodale, E. 2007. The benefits of joining mixed-species flocks for a sentinel nuclear species, the Greater Racket-tailed Drongo *Dicrurus paradiseus*. **Forktail** 23: 145-148.
- 7) Goodale, E. & Kotagama, S.W. 2006. Vocal mimicry by a passerine bird attracts other species involved in mixed-species flocks. **Animal Behaviour** 72: 471-477.
- 6) Goodale, E. & Kotagama, S.W. 2006. Context-dependent mimicry by a passerine bird. **Proceedings of the Royal Society London B, Biological Sciences** 273: 875-880.
- 5) Goodale, E. & Kotagama, S.W. 2005. Alarm calling in Sri Lankan mixed-species bird flocks. **Auk** 122: 108-120.
- 4) Goodale, E. & Kotagama, S.W. 2005. Testing the roles of species in mixed-species bird flocks of a Sri Lankan rainforest. **Journal of Tropical Ecology** 21: 669-676.
- 3) Jayarathna, A., Caldera, P. & Goodale, E. 2005. Observations on the nesting and parental behaviour of the Ashy-headed Laughing Thrush (*Garrulax cinereifrons*). **Forktail** 21: 163-164.
- 2) Kotagama, S.W. & Goodale, E. 2004. The composition and spatial organization of mixed-species flocks in a Sri Lankan rainforest. **Forktail** 20: 63-70.
- 1) Kroodsma, D.E., Byers, B.E., Goodale, E., Johnson, S. & Liu, W. 2001. Pseudoreplication in playback experiments, revisited a decade later. **Animal Behaviour** 61: 1029-1033.

### Scientific Publications in Press and Review

- Goodale, E., Silverman, E. D. & Kotagama, S. W. In press. The effects of land-use on mixed-species bird flocks of Sri Lanka: a preliminary report. **The Sri Lankan Forester**
- Goodale, E., Ratnayake, C. and Kotagama, S. W. In revision. Conspecific and heterospecific audiences for context-dependent vocal mimicry in a passerine bird. **Behavioral Ecology and Sociobiology**.

### Scientific Publications in Preparation:

- Goodale, E., Kotagama, S. W., Raman, T. R. S., Sidhu, S. and Silverman, E. D. In prep. The effect of land use on mixed-species bird flocks of Sri Lanka and southern India: should social behaviors between species be considered in conservation plans? Prepared for **Conservation Biology**.
- Goodale, E. and Nieh, J. C. In prep. Asymmetry in heterospecific responses to olfactory information about predation between honey bees and bumble bees. Prepared for **Animal Behaviour**.

### Selected Popular Publications:

- Robinson, J. W., Nieh, J. C. and Goodale, E. In press. Testing honey bee avoidance of predators: teaching the scientific process through an engaging field experiment. **American Biology Teacher**.
- Goodale, E. and Sridhar, H. 2010. Mixed-species bird flocks: a bibliography. Internet database at <https://sites.google.com/site/mixedspeciesbirdflocks/>.
- Goodale, E., Salgado, A. & Kotagama, S. W. 2008. Birds of a different feather. **Natural History** 117: 24-28.
- Goodale, E., Caldera, P. & Kotagama, S. W. 2006. Twenty-five years of research on the mixed-species bird flocks of Sri Lanka. **Siyoth** 1: 22-28.
- Goodale, E., Caldera, P. & Jayarathna, A. 2004. The sounds of Sinharaja. Audio CD. **Field Ornithology Group of Sri Lanka**, Colombo, Sri Lanka.
- Goodale, E. 2002. A journey by bus. Pp. 207–210 in: Excursions and explorations, cultural encounters between Sri Lanka and the United States (Jayatilaka, T., ed.). **The United States – Sri Lanka Fulbright Commission**, Colombo, Sri Lanka.

### Publicity in Popular Press about Research:

- **New York Times** (2010): “For some birds it’s not always the same old song”. <http://www.nytimes.com/2010/04/20/science/20obsong.html>
- **Conservation Magazine** (2008): “Collect calls: cell phones eavesdrop on birds”. <http://www.conservationmagazine.org/2008/07/collect-calls/>
- **American Scientist** (2006): “Bird mimics other species in the Sri Lankan rainforest”. <http://www.sigmaxi.org/about/news/archive.71.shtml> (also published as *American Scientist*, 94: 289).

### Presentations at Scientific Meetings:

From 2006-2011, 15 invited talks at the following venues:

- Barnard College
- Central Connecticut State Univ.
- Indian Inst. of Science
- Natl. Centre for Biol. Sciences (India)
- Natl. Univ. of Singapore
- Natl. Forestry Symposium (Sri Lanka)
- Nature Conservation Fnd. (India)
- San Diego State Univ.
- School of Natural Resources

and Environment, Univ. of Michigan • Texas Tech Univ. • Univ. of California, San Diego • Univ. of San Diego • Univ. of New England • Yale Forest Lecture Series (2 talks)

From 1998-2011, 10 presentations and 3 posters at the following meetings:

American Ornithological Union (3 talks, 1 poster) • Animal Behavior Soc. (1 talk, 1 poster) • Center for Tropical Forest Science • International Soc. for Behavioral Ecology (1 talk, 1 poster) • Rockefeller Univ. Bird Song Workshop (2 talks) • Soc. for Conservation Biology • Soc. for Integrative and Comparative Biology

#### Membership in Scientific Organizations:

Ecological Soc. of America (since 2010) • Soc. of Conservation Biology (since 2008) • Oriental Bird Club (since 2004) • Sigma-Xi (since 2003) • American Ornithologists Union (since 2000) • Animal Behavior Soc. (since 2000) • FOGSL (life member, since 1996)

#### Reviews for and Service to Journals:

- Associate Editor, Forktail (5/07 – present).
- Journals reviewed for (# of reviews): Acta Ethologica (1) • Animal Behaviour (8) • Auk (1) • Behaviour (1) • Behavioral Ecology (5) • Behavioral Ecology and Sociobiology (4) • Bioacoustics (1) • Biology Letters (2) • Condor (2) • Ecology (2) • Emu – Austral Ornithology (1) • Ethology (2) • Florida Field Naturalist (1) • Forktail (4) • J. of Animal Ecology (2) • J. of Avian Biology (1) • J. of Comparative Psychology (1) • J. of Field Ornithology (3) • J. of Ornithology (1) • J. of Sustainable Forestry (1) • J. of Tropical Ecology (2) • Naturwissenschaften (1) • Ornis Fennica (1) • Proceedings of the Royal Society (2) • Wilson J. of Ornithology (1)
- Grants reviewed for (# of reviews): National Science Foundation International Research Postdoctoral Program (1).

#### Voluntary Educational Activities:

- Project leader (8/11- present), high school outreach program, entitled “Pollinators and predators” funded by the San Diego Foundation. Introduces students to the scientific process through field trips, lectures, dissections and small experiments with bees.
- Workshop organizer, with Uromi M. Goodale, and lecturer for: two-session program introducing R (Divine Word University, 9/09), two-day program on the research process (the National Research Institute, Papua New Guinea, 9/09, and the Binatang Research Center, 12/09), two-day program on statistics (University of Colombo, 3/09), one-day program on career development (Port Moresby, PNG, 12/07), one-day program on proposal writing (University of Colombo, 9/07), and a four-day program on scientific analysis and writing (FOGSL, 1/07).
- Project leader and lecturer (12/06 – 1/09), for secondary school education program by the Field Ornithology Group of Sri Lanka, and funded by the Conservation, Food and Health Foundation, that visited 23 schools and took them on visits to nearby rainforests.
- Participant (1/08-3/08) in the project “Empowering Students in Ecology, Music, and Computer Science through Active Participation in an Elementary Bird Song Curriculum”, funded by the Lindbergh Foundation; prepared podcasts for elementary grade school children to get them interested in birds and animal behavior.

- Guest lectures given: FOGSL general meeting (3/07, 10/04), Sri Lanka Fulbright Commission (9/04), Biology 521 / Community Ecology, University of Massachusetts, Amherst (5/03); Undergraduate Ornithology, University of Colombo (3/07, 2/07, 8/02); Masters Program in Wildlife Ecology, University of Peradeniya (7/01 and 9/98).
- New Haven Science Fair Mentor, for two high-school students (10/05–5/06). The students won the first prize from the New Haven Bird Club and were Finalists and Medalists at the Connecticut Science Fair.
- Fieldtrip organizer and demonstrator of research activities on mixed-species bird flocks in the Sinharaja World Heritage Reserve: FOGSL (9/04, 8/03, and 7/03), Masters Program in Wildlife Ecology, University of Colombo (7/04 and 7/02), Undergraduate Ornithology, University of Colombo (8/03).

#### Advisor on Student Theses:

- External Advisor to S. Harsha K. Satischandra, University of Sabaragamuwa, Masters in Science program. Thesis title: “Evaluating false alarm calls in the Greater Racket-tailed Drongo (*Dicrurus paradiseus*).” Graduated 2009.
- Informal External Advisor to Chaminda P. Ratnayake, University of Colombo, Ph.D. program. Thesis title: “Ecology and behaviour of the Sri Lanka Blue Magpie (*Urocissa ornata*).” Graduated 2010.
- Informal External Advisor to Punit Lalbhai, Yale School of Forestry and Environmental Science. Thesis title: “The effect of shelterwood cuts and crown thinnings on the abundance and distribution of birds in a southern New England forest.” Graduated 2007.
- External Advisor to S. Harsha K. Satischandra, University of Sabaragamuwa, Undergraduate thesis. Thesis title: “The foraging ecology of the Greater Racket-tailed Drongo (*Dicrurus paradiseus*).” Graduated 2006.

#### Technical Skills:

- Bird identification / banding. Three years of experience using mist nets in Sri Lanka with over 150 birds captured. Twenty years experience with bird identification in the field.
- Sound recording. Eleven years of using shotgun and parabolic microphones, and mono and stereo tape recorders, both analog and digital.
- Sound analysis. Extensive experience using Signal, Avisoft and Raven.
- Radio-telemetry. Tracked five Greater Racket-tailed Drongos (*Dicrurus paradiseus*) over a period of four months in the Sinharaja World Heritage Reserve, Sri Lanka.
- Experience in a bee communication lab. Four semesters experience of running olfactory choice experiments with honeybees (*Apis mellifera*) and bumblebees (*Bombus impatiens*), in James Nieh’s lab at UCSD.
- Statistics. Two semesters of 500 level classes in the Department of Statistics, University of Massachusetts, Amherst. Extensive experience using R, SAS, and SYSTAT.
- Experience with other computer programs. Moderate experience with ArcView GIS software and C++ programming.
- Experience with teaching technology: Two semesters’ experience with WebCT / Blackboard web technology as well as with clickers (specifically, iclickers).
- Languages. Fluent in English; conversant in Sinhala and Tok Pisin. Limited experience in French, Italian, Tamil and Latin.