Eben Goodale

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Biographical Narrative:

Eben Goodale is Professor of Animal Ecology in the Department of Health and Environmental, Xi'an Jiaotong-Liverpool University. He is interested in the connection between three fields of ecology: behavioral ecology, community ecology and conservation biology. His research focuses on how behavior, particularly communication, affects the interactions between species, and how knowledge about such interactions can be integrated into conservation and management plans. He received his bachelor's from Harvard College (1997), his Ph.D. from the University of Massachusetts, Amherst (2005), and held postdoctoral fellowships at the Massachusetts Institute for Technology, the National Science Foundation (USA) and the University of California, San Diego / University of San Diego. Much of his work has been done on birds and in Sri Lanka, but he has also conducted bird research in India, Papua New Guinea (PNG), and now China, and has also worked on communication in bees. He is the author of more than 120 articles in peer-reviewed journals and the first author of "Mixed-species Animal Groups" (Academic Press, 2017), the only book on this topic. He has published in general biological science journals, such as *Science*, Nature Ecology and Evolution, Biological Reviews and Proceedings of the Royal Society B. animal behavior journals, such as **Behavioral Ecology** and **Animal Behaviour**, ecological journals, such as *Trends in Ecology and Evolution*, *Ecology* and *Ecography*, and conservation or environmental journals, such as Ambio, Biological Conservation, *Environmental Pollution* and *Journal of Applied Ecology*. He has taught undergraduate and graduate courses in introductory biology, biodiversity, ecology, and experimental design and statistics in the United States, Sri Lanka, PNG and China. He lives with his wife, the ecologist Uromi Manage Goodale, and his son David in Suzhou, China.

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. Kroodsma. 4.0 GPA.

• Harvard College (1997), B.A., magna cum laude in Biology.

Teaching and Research Positions:

• Professor, Department of Health and Environmental Science, Xi'an Jiaotong-Liverpool University (XJTLU, 8/22-present).

- Professor, College of Forestry, **Guangxi University** (10/14-7/22). Principal Investigator of the Behavioral & Community Ecology, Conservation Biology Group.
- Associate Professor, Xishuangbanna Tropical Botanical Garden (XTBG), Chinese Academy of Sciences (9/12-9/14). Associated with the Ecology and Evolution of Plant-Animal Interactions Group.
- Visiting Scholar, **University of California, San Diego** (1/10-7/12; Research Associate, **University of San Diego** (2/10-6/12). Studied interspecific information transfer among pollinating insects in James Nieh's lab.
- Lecturer and Senior Seminar Mentor, **University of San Diego** (1/10-6/12). 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, 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).
- Postdoctoral Fellow, **National Science Foundation USA** (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.
- 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.
- 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**. 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 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).

Academic Service (To Institutions or Professional Organizations):

- XJTLU Research Ethics Review Committee (2022-2023)
- XJTLU School of Science Research Committee (2022-2023)
- XJTLU Department of Health and Environmental Science, Executive Committee (2022-2023)
- Association for Tropical Biology and Conservation, Asian Pacific Chapter, Scientific Committee for 2019 Annual Meeting
- Vice-Director, Guangxi Key Laboratory of Forest Ecology and Conservation (11/16-7/22).

Scholarships, Fellowships, Honors:

- Elected Member, American Ornithological Society. Awarded 8/20.
- Invited Workshop Participant, **Wissenschaftskolleg zu Berlin**, in workshop on "Finding common ground across the species border: Integrating intraspecific and interspecific cooperation research". The workshop was cancelled due to the pandemic, although the organizers hope to reschedule. Invited 12/20.
- Eramus + Inter-institutional Program Mobility Award from the European Union. Funding for an exchange program with Indikis Krams of Daugavpils University, Latvia. Cancelled due to the pandemic. Awarded 9/20.
- **1000 Plan Recruitment Program of Global Experts.** A national level Chinese grant for recruiting international scientists (awarded 3/13).
- NSF 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.
- NSF Graduate Fellowship (awarded 4/00, for three years).
- Fulbright Junior Scholarship (awarded 9/97, for one year).

Grants:

- **XJTLU Research Development Fund** (PI; \$14,500 in research funds for project on species diversity and information, awarded 3/23).
- XJTLU Postgraduate Research Funds (PI; \$69,900 to cover stipend for two PhD students, awarded 8/22).
- Conservation, Food & Health Organization (participant; \$23,500 awarded to FOGSL 9/18) to study the movements of birds through disturbed land-types of Sri Lanka.
- National Natural Science Foundation of China (NSFC) General Project 31770424 (PI; \$82,000 in research funds, for investigating the vocalizations of group-living birds, awarded 08/17).
- NSF Conference Symposium Support Grant (participant; \$13,000 to support 'Mixed-species animal groups' symposium at Ecosummit, awarded 4/16).
- NSFC Regional Project 31560119 (PI; \$64,500 in research funds, for sampling mixed-species flocks in Guangxi and Yunnan, awarded 8/15).
- University of Guangxi, Special Talent Recruitment Program (PI; \$682,000 in start-up funds, awarded 6/14).
- **1000 Plan Recruitment Program of Global Experts** (PI; \$327,000 in research funds, awarded 3/13)

- San Diego Foundation Blasker Science and Technology Grant (PI; \$35,916 awarded 5/11)
- Conservation, Food & Health Organization (PI; \$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.
- NSF International Research Postdoctoral Fellowship (PI; \$48,100 in research funds, awarded 8/6/06).
- NSF Doctoral Dissertation Improvement Grant (co-PI; \$9,684 awarded 7/03).
- American Ornithologists Union, Student Research Grant (PI; \$2,500 awarded 6/03).
- Sigma-Xi Grant-in-Aid-of-Research (PI; \$1000 awarded 6/03 and \$500 12/01).
- Woods Hole Scholarship for Field Research (PI; \$3,200 awarded 3/02).

• American Ornithologists Union, Maria Brady Tucker Travel Award (PI; \$1,200 awarded 6/02).

Books:

- Goodale, E., Beauchamp, G. and Ruxton, G. D. 2017. Mixed-species animal groups: Behavior, community structure and conservation. Academic Press. ISBN: 9780128053553.
- 2) Kotagama, S. W. and Goodale, E. 2006. Bird flocks of Sinharaja. Field Ornithology Group of Sri Lanka. ISBN: 9558576212.
- 1) Goodale, E., Caldera, P., and Jayarathna, A. 2004. The sounds of Sinharaja (Audio CD). Field Ornithology Group of Sri Lanka. ISBN: 9558676166.

Book Chapters:

- Goodale, E. and Ruxton, G. D. 2019. Antipredator benefits from heterospecifics. In: Encyclopedia of Animal Behavior, second edition (Choe, J.C., editor). Volume 4, pp. 400-406. Academic Press.
- Goodale, E. and Ruxton, G. D. 2010. Antipredator benefits from heterospecifics. In: Encyclopedia of Animal Behavior (Breed, M and Moore, J., editors). Pp. 94-99. Academic Press, Oxford.

Peer-Reviewed Journal Articles: (* = Corresponding Author, ⁺ = Advised Graduate Student, ^o Undergraduate Student; [#] = Equal contribution). As of 9/15/23: 3966 citations; h-index = 31 (Google Scholar)

- 121) Hua, F.*, Wang, W., Nakagawa, S. ... Goodale, E. (18 of 47 authors) ... and Elsen, P. R. In press. Ecological filtering shapes the impacts of agricultural deforestation on biodiversity. Nature Ecology and Evolution.
- 120) He, R.-C., Wang, L., Goodale, E., Li, K., and Quan, R.-C*. In press. The extremely small body size of Williamson's mouse deer (*Tragulus williamsoni*) allows coexistence with sympatric larger ungulates through temporal avoidance. Frontiers in Ecology and Evolution. <u>https://doi.org/10.3389/fevo.2023.1125840</u>
- 119) Weerakkody, S., Goodale, E., Gunasekara, V. R., Liu, Y., Karanth, P., and Seneviratne, S. S.* 2023. Plumage assisted divergence in a vocally complex island endemic: the *Dicrurus paradiseus* species complex in Sri Lanka. **Avian Research** <u>https://doi.org/10.1016/j.avrs.2023.100132</u>

- 118) Chen, S.⁺, Liu, Y., Patrick, S. C., Goodale, E., Safran, R. J., and Pagani-Núñez, E.*
 2023. A multidimensional framework to quantify the effects of urbanization on avian breeding fitness. Ecology and Evolution 13: e10259
- 117) Deng, Y.⁺, Goodale, E., Dong, A., Jiang, D., Jiang, A.*, Zhang, Z.* and Mammides, C. 2023. Projecting shifts in the distributions of Chinese endemic vertebrate species under climate and land-use change. Frontiers in Ecology and Evolution. <u>https://doi.org/10.3389/fevo.2023.1174495</u>
- 116) Jiang, D., Hua, F. and Goodale, E.* 2023. Functional traits including interspecific sociality affect mobbing behaviour in a bird community of southern China.
 Behaviour. <u>https://doi.org/10.1163/1568539X-bja10220</u>
- 115) Mtemi, W. M., Liu, S., Liu, K., Wei, L., Wang, X., Jiang, A.*, and Goodale, E. 2023. Concentrations and biomagnification of multiple metals/metalloids are higher in rice than in sugarcane agroecosystems of southern China. Ecological Indicators 150: 110266.
- 114) Priyadarshana, T.*, Lee, M.-B., Slade, E. and Goodale, E.* 2023. Crop compositional heterogeneity suppresses the abundance of *Pieris canidia*, a major pest of cruciferous vegetables. **Basic and Applied Ecology** 69: 39-48.
- 113) Martínez, A, Si, X.*, Zhou, L., Zeng, D., Ding, P. and Goodale, E.* 2023. Interspecific sociality alters the colonization and extinction rates of island birds. Philosophical Transactions of the Royal Society B 378: 20220096.
- 112) Kimball, R.*, Braun, E., Liu, Y., Zhou, L., Goodale, E., Zhou, W., and Robinson, S. K. 2023. Can convergence in mixed-species flocks lead to evolutionary divergence? Evidence for and methods to test this hypothesis. Philosophical Transactions of the Royal Society B 378: 20220112.
- 111) Meaux, E⁺., He,, C., Zeng, X., He, R., Jiang, A. and Goodale, E.* 2023. Audience effects in a group-living bird: How contact call rate is affected by vegetation, and group size and composition. **Ecology and Evolution** 13:e9909.
- 109) Mtemi, W. M., Xu, X., Liu, S., Qiu, G., Goodale, E., and Jiang, A. 2023. Metal and metalloid sources apportionment in soil of two major agroecosystems of southern China. **Environmental Monitoring and Assessment** 195:311.
- 108) Shen, Y., Holyoak, M., Goodale, E., Mammides, C., Zou, F., Chen, Y., Zhang, C., Quan, Q., and Zhang, Q.* 2022. Mixed-species bird flocks re-assemble interspecific associations across an elevational gradient. Proceedings of the Royal Society B, Biological Sciences. 289: 20221840.
- 107) Zhou, L.*, Mammides, C., Chen, Y.⁺, Zhou, W., Dai, W., Braun, E., Kimball, R., Liu, Y., Robinson, S., and Goodale, E.* 2022. High association strengths are linked to phenotypic similarity, including plumage color and patterns, of participants in mixed-species bird flocks of southwestern China. **Current Zoology** 2022: zoac096.
- 106) Dong, A.⁺, He, X., Deng, Y.⁺, Lin, L., and Goodale, E.* 2022. Passive acoustic surveys reveal interactions between frugivorous birds and fruiting trees on a large forest dynamics plot. **Remote Sensing in Ecology and Conservation** 9: 284-295.
- 105) Liu, S., Xie, Q., Jiang, A.* and Goodale, E. 2022. Investigating how different classes of nest predators respond to the playback of the begging calls of nestling birds. **Avian Research** 13: 100044.
- 104) Tan, X., Liu, S., Goodale, E., and Jiang, A*. 2022. Does bird photography affect nest predation and feeding frequency? **Avian Research** 13: 100036.

- 103) He, R.⁺, Pagani-Núñez, E., Goodale, E.*, and Barnett, C.R.A*. 2022. Avian predators taste reject mimetic prey in relation to signal reliability. **Scientific Reports** 12: 2334.
- 102) Pagani-Núñez, E. [#]*, Liang, D. [#], He, C., Liu, Y., Luo, X., and Goodale, E. 2022. Dynamic trait-niche relationships shape niche partitioning across habitat transformation gradients. **Basic and Applied Ecology** 59: 59-69.
- 101) Goodale, E., Mammides, C., Mtemi, W., Chen, Y-.F.⁺, Barthakur, R., Goodale, U. M., Jiang, A., Liu, J., Malhotra, S., Meegaskumbura, M., Pandit, M. K., Qiu, G., Xu, J., Cao, K.-F.^{*}, and Bawa, K. S. 2021. Increasing collaboration between China and India in the environmental sciences to foster global sustainability. Ambio 51: 1474-1484.
- 100) Mammides, C.*, Goodale, E.*, Elleason, M.⁺, Corlett, R. T. 2021. Designing an ecologically representative global network of protected areas requires transboundary coordination between countries. **Environmental Research Letters** 16: 121001.
- 99) Gosai, K. R. and Goodale, E.* 2021. The composition of mixed-species flocks of birds in and around Chitwan National Park, Nepal. Avian Research 12: 56.
- 98) Dayananda, S.K.⁺, Mammides, C., Liang, D., Kotagama, S.W., Goodale, E.* 2021. A review of avian experimental translocations that measure movement through human-modified landscapes. **Global Ecology and Conservation** 31: e01876.
- 97) Priyadarshana, T. S.⁺, Lee, M.-B., Ascher, J. S., Qiu, L., and Goodale, E*. 2021. Crop heterogeneity is positively associated with beneficial insect diversity in subtropical farmlands. Journal of Applied Ecology. DOI: 10.1111/1365-2664.14005
- 96) Meaux, E.⁺, He, C.⁺, Qiu, L.^o and Goodale, E.* 2021. The cessation of contact calls does not provoke or modulate alarm behaviour in a social passerine. **Behaviour.** DOI: 10.1163/1568539X-bja10117
- 95) Zhou, L., Peabotuwage, I., Luo, K., Quan, R.-C.*, Goodale, E.* 2021. Using playback to test leadership in mixed-species flocks, and compare flocking with mobbing. **Animal Behaviour** 180: 151-166.
- 94) Chen, Y.-C.⁺, Luo, Y., Mammides, C., Cao, K.-F., Zhu, S., and Goodale, E.* 2021. The relationship between acoustic indices, elevation, and vegetation, in a forest plot network of southern China. **Ecological Indicators** 129: 107942.
- 93) Guan, Z., Elleason, M.⁺, Goodale, E., and Mammides, C.* 2021. Global patterns and drivers of human settlements within protected areas. Environmental Research Letters 16: 064085.
- 92) Sreekar, R.*, Si, X., Sam, K., Liu, J., Dayananda, S.⁺, Goodale, U. M., Kotagama, S. W., Goodale, E. 2021. Land-use and elevation interact to shape bird functional and phylogenetic diversity and structure: Implications for designing optimal agriculture landscapes. Journal of Applied Ecology. DOI: 10.1111/1365-2664.13927.
- 91) Su, T., He, C.⁺, Jiang, A., Xu, Z., Goodale, E.* and Qiu, G. 2021. Passerine bird reproduction does not decline in a highly-contaminated mercury mining area. **Environmental Pollution** 286: 117440.
- 90) Li, C.⁺, Chen, X.*, Jiang, A., Lee, M.-B., Mammides, C., and Goodale, E.*. 2021. Socioeconomic determinants of crop diversity, and its effect on farmer income in Guangxi, southern China. **Agriculture** 2021 (11): 336.
- 89) Mammides, C.*, Goodale, E., Dayananda, S.+, Luo, K., and Chen, J. 2021. On the use of the acoustic evenness index to monitor biodiversity: A comment on "Rapid

assessment of avian species richness and abundance using acoustic indices" by Bradfer-Lawrence et al. (2020) [Ecological Indicators, 115, 106400]. **Ecological Indicators** 126: 107626

- 88) Meaux, E.^{#+}, Diana Castillo-Díaz, D.[#], Pradhan, N., Dayananda, S. K.⁺, Balboa, C., Goodale, E.*, Mammides, C., Primack, R. B., Goodale, U. M.* 2021. Transparency about human diversity in transnational environmental NGOs. **Biological Conservation** 256: 109027.
- 87) Meaux, E.⁺, Peabotuwage, I., Mammides, C., Malykhina, K.°, Quan, R.-C., Goodale, E*. 2021. Behavioural variables influence contact call rate more than characteristics of the vegetation in a group-living passerine species. Behavioural Processes 185: 104345.
- 86) Dai, W., Goodale, E., He, R., Mammides, C., Liu, S., Zhou, L., Tang, S., Su, B., Lao, X., Jiang, A.* 2021. An eco-compensation policy increases shorebird diversity during the non-farming period for aquaculture. Wetlands 41: 4.
- 85) Sreekar, R.*, Sam, K., Dayananda, S. K.⁺, Goodale, U. M., Kotagama, S. W., and Goodale, E. 2021. Endemicity and land-use type influence the abundance–range size relationship of birds on a tropical island. **Journal of Animal Ecology** 90: 460-470.
- 84) Liang, D.[#], Yang, S.[#], Pagani-Núñez, E.*, He, C., Liu, Y., Goodale, E., Liao, W., Hu, J.* 2020. How to become a generalist species? Individual niche variation across habitat transformation gradients. Frontiers in Ecology and Evolution 8: 597450.
- 83) Elleason, M., Guan, Z., Deng, Y., Jiang, A., Goodale, E., and Mammides, C.* 2020. Strictly protected areas are not necessarily more effective than areas in which multiple human uses are permitted. Ambio 50: 1058-1073.
- 82) Zhang, Q., Holyoak, M., Goodale, E., Liu, Z., Shen, Y., Liu, J., Zhang, M., Dong, A., Zou, F*. 2020. Trait-environment relationships differ between mixed-species flocking and non-flocking bird assemblages. **Ecology** 101: e03124.
- 81) Sreekar, R.*, Koh, L. P., Mammides, C., Corlett, R. T., Dayananda, S.⁺, Goodale, U. M., Kotagama, S. W., Goodale, E. 2020. Drivers of bird beta diversity in the Western Ghats–Sri Lanka biodiversity hotspot are scale dependent: Roles of land use, climate, and distance. **Oecologia** 193: 801–809.
- 80) Jiang, D.⁺, Sieving, K. E., Meaux, E.⁺ and Goodale, E.* 2020. Seasonal changes in mixed-species bird flocks and anti-predator information. **Ecology and Evolution** 10: 5368-5382.
- 79) Goodale, E.[#], Sridhar, H.[#], Sieving, K.*, Bangal, P., Colorado, G., Farine, D., Heymann, E. W., Jones, H., Krams, I., Martínez, A. E., Montaño-Centellas, F., Muñoz, J., Srinivasan, U., Theo, A., Shanker, K*. 2020. Mixed company: A framework for understanding the composition and organization of mixed-species animal groups. **Biological Reviews** 95: 889-910.
- 78) Krams, I. A.*, Luoto, S., Krama, T., Krams, R., Sieving, K., Trakimash, G., Elfertsi, D., Rantalaj, M. J. and Goodale, E. 2020. Egalitarian mixed-species bird groups enhance winter survival of subordinate group members but only in high-quality forest. Scientific Reports 10: 4005.
- 77) Su, T.^{#,} Lin, X.[#], Huang, Q., Jiang, D.⁺, Zhang, C., Zhang, X., Dingle, C., Goodale, E., Que, P., Wang, R.*, and Liu, Y*. 2020. Concentrations of mercury in sedentary and migratory *Charadrius* plovers distributed widely across China. Environmental Science and Pollution Research 27: 4236-4245.

- 76) He, C.⁺, Su, T., Liu, S., Jiang, A.*, Goodale, E.*, and Qiu, G. 2020. Heavy metal, arsenic and selenium concentrations in bird feathers from a region in southern China impacted by intensive mining of non-ferrous metals. Environmental Toxicology and Chemistry 39: 371-380.
- 75) Jiang, D.⁺, Goodale, E., Yang, G., Yu, L., Jiang, A.*, and Luo, X*. 2020. Modeling the distribution of Nonggang Babbler (*Stachyris nonggangensis*), a threatened bird of limestone forests of the Sino-Vietnam border, and implications for its conservation. Bird Conservation International 30: 75-86.
- 74)Lee, M.-B.*, Peabotuwage, I., Gu, H., Zhou, W.⁺, and Goodale, E. 2019. Factors affecting avian species richness and occupancy in a tropical city in southern China: Importance of human disturbance and open green space. Basic and Applied Ecology 39: 48-56
- 73) Zhou, L.⁺, Peabotuwage, I., Gu, H., Jiang, D.⁺, Jiang, A., Zhang, M., Quan, R.*, and Goodale, E.* 2019. The response of mixed-species flocks to anthropogenic disturbance and elevational variation in southwest China. **Condor** 121: 1-13.
- 72) Li, H., Goodale, E.*, and Quan, R.* 2019. Nest predation on an abundant generalist bird in tropical China. **Wilson Journal of Ornithology** 131: 514-523.
- 71) Goodale, E.*, Ruxton, G. D., Beauchamp, G. 2019. Predatory eavesdropping in a mixed-species environment: How prey species may use grouping, confusion, and the cocktail party problem to reduce predator detection. Frontiers in Ecology and Evolution 7:141.
- 70) Pagani-Núñez, E., Liang, D., He, C.°, Zhou, X., Luo, X., Liu, Y., and Goodale, E.* 2019. Niches in the Anthropocene: Passerine assemblages show niche expansion from natural to urban habitats. **Ecography** 42: 1360-1369.
- 69) Peabotuwage, I., Goodale, U. M.*, and Goodale E*. 2019. Is the keystone role of figs maintained across a gradient of increasing human disturbance? Biotropica 51: 300-303.
- 68) Qiu, G.*, Abeysinghe, K. S⁺., Yang, X., Xu, Z., Xu, X., Luo, K., and Goodale, E. 2019. Effects of selenium on mercury bioaccumulation in a terrestrial food chain from an abandoned mercury mining region. Bulletin of Environmental Contamination and Toxicology 102: 329-334.
- 67) Liang, D., He, C.°, Luo, X., Liu, Y.*, Goodale, E., and Pagani-Núñez, E*. 2018. Breath rate of passerines across an urbanization gradient supports the pace-of-life hypothesis and suggests diet-mediated responses to handling stress. **Ecology and Evolution** 8: 9526-9535.
- 66) Lee, M.-B.* and Goodale, E. 2018. Crop heterogeneity and non-crop habitat features can enhance avian diversity in a tropical agricultural landscape in southern China. Agriculture, Ecosystems and Environment 265: 254-263.
- 65) Mammides, C.*, Chen, J., Goodale, U. M., Kotagama, S. W., and Goodale, E. 2018. Measurement of species associations in mixed-species bird flocks across environmental and human disturbance gradients. **Ecosphere 9:** e02324.
- 64) Zou, F.*, Jones, H., Colorado Z., G. J., Jiang, D.⁺, Lee, T.-M., Martínez, A., Sieving, K., Zhang, M., Zhang, Q., and Goodale, E.* 2018. The conservation implications of mixed-species flocking in terrestrial birds, a globally-distributed species interaction network. Biological Conservation 224: 267-276.

- 63) Zhou, W.⁺, Lee, M.-B.*, and Goodale, E*. 2018. The relationship between the diversity of herbaceous plants and the extent and heterogeneity of croplands in noncrop vegetation in an agricultural landscape of south China. **Global Ecology and Conservation** 14: e000399.
- 62) Pagani-Núñez, E.[#], Xia, X.[#], Beauchamp, G., He, R.⁺, Husson, J. H. D. °, Liang, D., and Goodale, E.* 2018. Are vocal characteristics related to leadership patterns in mixed-species bird flocks? **Journal of Avian Biology** 2018: e01674.
- 61) Xing, S., Cheng, W., Nakamura, A., Tang, C. C., Pickett, E., Huang, S., Odell, E., Goodale, E., Goodale, U. M., and Bonebrake, T.* 2018. Elevational clines in morphological traits of subtropical and tropical butterfly assemblages. Biological Journal of the Linnean Society 123: 506-517.
- 60) Jiang, A.*, Jiang, D.⁺, Zhou, F., and Goodale, E.* 2017. Nest-site selection and breeding ecology of Streaked Wren-Babbler (*Napothera brevicaudata*) in a tropical limestone forest of southern China. **Avian Research** 8: 28.
- 59) Dayananda, S. K.⁺, Mammides, C., Lee, M.-B., Liu, J.-J., Pasion, B. O., Sreekar, R., Yasuda, M., Quan, R.-C.*, Slik, J. W. F., Tomlinson, K. W. and Goodale, E.* 2017. Topography and soil type are critical to understanding how bird and herpetofaunal communities persist in forest fragments of tropical China. **Biological Conservation** 215: 107-115.
- 58) Souter, N. J.*, Hughes, A. C., Savini, T., Rao, M., Goodale, E., Van Nice, A., Huang, N., Liu, J.-X., Hunt, M. P., O'Connor, D. A., Hueng-Lam, A. L., Gnuen, G., Sun, Y., and Silva, I. 2017. Building capacity for conservation in Southeast Asia: outcomes of the ATBC 2015 Asia-Pacific Chapter meeting conservation education symposium. Applied Environmental Education and Communication 16: 149-156.
- 57) Mammides, C., Goodale, E., Dayananda, S. K.⁺, Kang, L. and Chen, J.* 2017. Do acoustic indices correlate with bird diversity? Insights from two biodiverse areas in Yunnan Province, south China. Ecological Indicators 82: 470-477.
- 56) Abeysinghe, K.⁺, Qiu, G.*, Goodale, E.*, Anderson, C. W. N., Bishop, K., Du, B., Evers, D. C., Goodale, M. W., Hintelmann, H., Li, P., Liu, S., Mammides, C., Quan, R.-C, Wang, J., Wu, P., Xu, X.-H., Yang, X.-D., Xiong, M. and Feng, X. 2017. Mercury flow through an Asian rice-based food web. Environmental Pollution 229: 219-228.
- 55) Pagani-Núñez, E.*, He, C.°, Wu, Y. W.°, Peabotuwage, I., and Goodale, E*. 2017. Foraging in the tropics: relationships between species' abundances, niche asymmetries and body condition in an urban avian assemblage. Urban Ecosystems 20: 1301-1310.
- 54) Sreekar, R.*, Corlett, R., Dayananda, S.⁺, Goodale, U. M., Kilpatrick, A., Kotagama, S. W., Koh, L. P., and Goodale, E. 2017. Horizontal and vertical species turnover in tropical birds in habitats with differing land use. Biology Letters 13: 20170186.
- 53) Gu, H.⁺, Chen, J., Ewing, H.°, Liu, X., Zhao, J., and Goodale, E.* 2017. Heterospecific attraction to the vocalizations of birds in mass fruiting trees.
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- 52) Jiang, A.*, Jiang, D., Wen, Y. and Goodale, E.* 2017. Nest predation on birds that nest in rock cavities in a tropical limestone forest of southern China. **Global Ecology and Conservation** 10: 154-158.

- 51) Abeysinghe, K.⁺, Yang, X.-D.*, Goodale, E., Anderson, C. W. N., Bishop, K., Cao, A., Feng, X., Liu, S., Mammides, C., Meng, B., Quan, R.-C, Sun, J., and Qiu, G.* 2017. Total and methyl mercury concentrations over a gradient of contamination in earthworms living in rice paddy soil. Environmental Toxicology and Chemistry 36: 1202-1210.
- 50) Perera, M. P.°, Kotagama, S. W., Goodale, E., and Kathriarachchi, H. S. 2016. What happens when the nuclear species is absent?: Observations of mixed-species bird flocks in the Hiyare Forest Reserve in Sri Lanka. **Forktail** 32: 96-97.
- 49) Jiang, A., Jiang, D.⁺, Goodale, E., Zhou, F., and Wen, H. 2016. Olive-backed Sunbird *Cinnyris jugularis* assisting Crested Bunting *Melophus lathami* at the nest: substantiated evidence for interspecific feeding, Guangxi, south-west China. Forktail 32: 93-96.
- 48) Duguid, M.*, Morrell, E. H., Goodale, E., and Ashton, M. S. 2016. Changes in breeding bird abundance and species composition over a 20 year chronosequence following shelterwood harvests in oak-hardwood forests. Forest Ecology and Management 376: 221-230.
- 47) Pagani-Nuñéz, E.*, Barnett, C. A., Gu, H. and Goodale, E.* 2016. The need for new categorizations of dietary specialism incorporating spatio-temporal variability of individual diet specialization. **Journal of Zoology** 300: 1-7.
- 46) Dayananda, S. K.⁺, Goodale, E.*, Liu, J.-J., Mammides, C., Pasion, B., Quan, R.-C.*, Slik, J. W. F., Sreekar, R.⁺, Tomlinson, K. W., and Yasuda, M. 2016. Effects of forest fragmentation on nocturnal Asian birds: a case study from Xishuangbanna, China. Zoological Research 37: 151-158.
- 45) Pagani-Nuñéz, E.*, Chao, H.°, Li, B.°, Li, M.°, He, R.⁺, Jiang, A., and Goodale, E.
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- 44) Abeysinghe, K.⁺, Ao, M., Goodale, E., Yang, X.-D., Xu, X.-H., Xu, Z.-D., and Qiu, G.-L.* 2016. Mercury and selenium in arthropods and their bioaccumulation across food webs. Chinese Journal of Ecology 35: 1031-1037.
- 43) Mammides, C., Goodale, U. M., Corlett, R. T., Chen, J., Bawa, K. S., Hariya, H., Jarrad, F., Primack, R. B., Ewing, H.°, Xia, X. and Goodale, E*. 2016. Increasing geographic diversity in the international conservation literature: a stalled process? Biological Conservation 198: 78-83.
- 42) Sreekar, R. **, Huang, G., Yasuda, M., Quan, R.-C., Goodale, E., Corlett, R. T. and Tomlinson, K. W. 2016. Effects of forests, roads and mistletoe on bird diversity in monoculture rubber plantations. **Scientific Reports** 6: 21822.
- 41) Mammides, C.*, Kounnamas, C., Goodale, E., and Kadis, K. 2016. Do unpaved, low-traffic roads affect bird communities? Acta Oecologica 71: 14-21.
- 40) Quan, R.-C.*, Li, H., Wang, B. and Goodale, E.* 2015. The relationship between defecation and feeding in nestling birds: observational and experimental evidence. Frontiers in Zoology 12:21.
- 39) Yang, H., Harrison, R., Yi, Z.-F., Goodale, E., Zhao, M.-X., and Xu, J.-C.* 2015. Changing perceptions of forest value and attitudes toward management of a recently established nature reserve: a case study in southwest China. **Forests** 6: 3136-3164.

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- 37) Mammides, C., Chen, J., Goodale, U. M., Kotagama, S. W., Sidhu, S. and Goodale, E.* 2015. Does mixed-species flocking influence how birds respond to a gradient of land-use intensity? **Proceedings of the Royal Society B, Biological Sciences** 282: 20151118.
- 36) Sreekar, R.^{+*}, Goodale, E., and Harrison, R. D. 2015. The use of flight initiation distance as index of hunting pressure: a case study in Xishuangbanna, southwest China. Tropical Conservation Science 8: 505-512.
- 35) Sreekar, R.⁺, Srinivasan, U., Mammides, C., Chen, J., Goodale, U.M., Kotagama, S. W., Sidhu, S. and Goodale, E.* 2015. The effect of land-use on the diversity and mass-abundance relationships of understory avian insectivores in Sri Lanka and southern India. Scientific Reports 5: 11569.
- 34) Gu, H.⁺, Goodale, E., and Chen, J.* 2015. Emerging directions in the study of the ecology and evolution of plant-animal mutualistic networks: a review. **Zoological Research** 36: 65-71.
- 33) Gu, H.⁺, Goodale, E., and Chen, J.* 2015. Does the role that frugivorous bird species play in seed dispersal networks influence their rate of evolutionary divergence? Global Ecology and Conservation 3: 121-128.
- 32) Sreekar, R.⁺*, Huang, G., Zhao, J.- B., Pasion, B. O., Yasuda, M., Zhang, K., Peabotuwage, I., Wang, X., Quan, R.- C., Slik, F., Corlett, R. T., Goodale, E., and Harrison, R. D. 2015. The use of species-area relationships to partition the effects of hunting and deforestation on bird extirpations in a fragmented landscape. Diversity and Distributions 21: 441-450.
- 31) Duan, Q., Goodale, E., and Quan R.-C.* 2014. Bird fruit preferences reflect the frequency of fruit colours in tropical Asia. **Scientific Reports** 4: 5627.
- 30) Zhang, W., Goodale, E., and Chen, J.* 2014. How contact with nature affects children's biophilia, biophobia and conservation attitude in China. Biological Conservation 177: 109-116.
- 29) Goodale, E., Kim, E., Nabors, A.°, Henrichon, S. and Nieh, J. C.* 2014. The innate responses of bumble bees to flower patterns: separating the nectar guide from the nectary changes bee movements and search time. Naturwissenschaften 101: 523-526.
- 28) Zhang K.°, Woan, T. S., Jie, L., Goodale, E., Kitajima, K., and Harrison, R. D.* 2014. Shifting baselines on a tropical forest frontier: Extirpations drive declines in local ecological knowledge. PLoS ONE 9: e86598.
- 27) Goodale, E.*, Ratnayake, C. P., and Kotagama, S. W. 2014. Vocal mimicry of alarmassociated sounds by a drongo elicits flee and mobbing responses from other species that participate in mixed-species bird flocks. **Ethology** 120: 266-274.
- 26) Goodale, E.*, Ratnayake, C. P., and Kotagama, S. W. 2014. The frequency of vocal mimicry varies due to proximity to nest and nesting stage in a passerine bird. Behaviour 151: 73-88.
- 25) Goodale, E.*, Kotagama, S. W., Raman, T. R. S., Sidhu, S., Goodale, U. M., Parker, S., and Chen, J. 2014. The response of birds and mixed-species bird flocks to human-

modified landscapes in Sri Lanka and southern India. Forest Ecology and Management 329: 384-392.

- 24) Jayarathna, A., Kotagama, S. W. & Goodale, E. 2013. The seasonality of mixedspecies flocking in a Sri Lankan rainforest, in relation to the breeding of the nuclear species, the Orange-billed Babbler *Turdoides rufescens*. Forktail 29: 138-139.
- 23) Goodale, E.* and Nieh, J. C. 2012. Public use of olfactory information associated with predation in two species of social bees. **Animal Behaviour** 84: 919-924.
- 22) Sridhar, H., Srinivasan, U., Askins, R. A., Canales Delgadillo, J. C., Chen, C.-C., Ewert, D. N., Gale, G. A., Goodale, E., Gram, W. K., Hart, P. J., Hobson, K. A., Hutto, R. L., Kotagama, S. W., Knowlton, J., Lee, T. M., Munn, C. A., Nimnuan, S., Nizam, B. Z., Péron, G., Robin, V. V., Rodewald, A. D., Rodewald, P. G., Thomson, R. L., Trivedi, P., Van Wilgenburg, S. L., and Shanker, K*. 2012. Positive relationships between association strength and phenotypic similarity characterize the assembly of mixed-species bird flocks globally. American Naturalist 180: 777-790.
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- 20) Beauchamp, G.*, and Goodale, E. 2011. Plumage mimicry in avian mixed-species flocks: more or less than meet the eye? **Auk** 128: 487-496.
- 19) Sidhu, S., Raman, T. R. S. & Goodale, E. 2010. Effects of plantations and homegardens 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.
- 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., and Ruxton, G. D. 2010. Interspecific information transfer influences animal community structure. Trends in Ecology and Evolution 25: 354-361.
- 16) Satischandra, S. H. K. [#], Kodituwakku, P., Kotagama, S. W., and 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.*, and 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.*, and 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., and 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., and Ashton, P. M. S. 2009. The relationship between shelterwood cuts and crown thinnings and the abundance and distribution of birds in a southern New England forest. **Forest Ecology and**

Management 258: 314-322.

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- 9) Joachim, D.*, and 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., and 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.*, and 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.*, and Kotagama, S.W. 2006. Context-dependent mimicry by a passerine bird. **Proceedings of the Royal Society B, Biological Sciences** 273: 875–880.
- 5) Goodale, E.*, and Kotagama, S.W. 2005. Alarm calling in Sri Lankan mixed-species bird flocks. **Auk** 122: 108–120.
- Goodale, E.*, and Kotagama, S.W. 2005. Testing the roles of species in mixedspecies bird flocks of a Sri Lankan rainforest. Journal of Tropical Ecology 21: 669– 676.
- Jayarathna, A., Caldera, P., and 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., and Goodale, E. 2004. The composition and spatial organization of mixed-species flocks in a Sri Lankan rainforest. **Forktail** 20: 63–70.
- Kroodsma, D.E.*, Byers, B.E., Goodale, E., Johnson, S., and Liu, W. 2001. Pseudoreplication in playback experiments, revisited a decade later. Animal Behaviour 61: 1029–1033.

Popular or Non Peer-Reviewed Publications:

- Carlson, N. C., Freeberg, T. M., Goodale, E.* and Theo, A. H. 2023. An introduction to "Mixed-species groups and aggregations: Shaping ecological and behavioural patterns and processes" (Special Issue Introduction). **Philosophical Transactions of the Royal Society** 378: 20220093.
- Pagani-Núñez, E., Barnett, C. R. A., Dingle, C., Goodale, E., Hu, J., Li, Y., Liu, Y., Wu, N., Zou, Yi. 2021. Impacts of habitat transformation on species, biodiversity and ecosystems in Asia (Special Issue Introduction). Frontiers in Ecology and Evolution 9: 777175.
- Goodale, E., Bangal, P. and Sridhar, H. 2010-2020. Mixed-species bird flocks: A bibliography. Available at: <u>https://www.researchgate.net/publication/344395792_A_bibliography_of_mixed-species_animal_groups</u>
- Bawa, K. S., Goodale, E.*, Mtemi, W., Chen, Y., Barthakur, R., Goodale, U. M., Jiang, A., Liu, J., Mammides, C., Meegaskumbura, M., Pandit, M., Cao, K. 2020. China and India: Toward a sustainable world (Letter to the Editor). **Science** 369: 515.

- Goodale, E. 2017. Who does conservation science and why that matters: A personal perspective. **Current Conservation** 11:11-14.
- Goodale, E. 2017. Professor Kotagama's research culture and its significance to Sri Lanka and conservation. Contributed chapter to the book "Kota's Nature: Biography of Professor Sarath W. Kotagama and his Contribution to Ornithology and Conservation in Sri Lanka". Field Ornithology Group of Sri Lanka, Colombo.
- Sreekar, R., Dayananda, S. K., Zhao, J.-B., Gu, B., Li, Q., Wang, X., and Goodale, E. 2014. First record of Pin-tailed Parrotfinch *Erythrura prasina* from China. BirdingASIA 22:116-117.
- Goodale, E. 2013. Birds of South Asia (Book Review). **Emu Austral Ornithology** 113: 397-398.
- Ratnayake, C. P., Goodale, E., and Kotagama, S. W. 2013. Differential 'crack' calls in a tropical magpie: Sri Lanka magpie (*Urocissa ornata*). Siyoth 3: 41-49.
- Robinson, J. W., Nieh, J. C., and Goodale, E. 2012. Testing honey bee avoidance of predators: Teaching the scientific process through an engaging field experiment. **American Biology Teacher** 74: 452-457.
- Goodale, E., Salgado, A., and Kotagama, S. W. 2008. Birds of a different feather. Natural History 117: 24-28.
- Goodale, E., Caldera, P., and Kotagama, S. W. 2006. Twenty-five years of research on the mixed-species bird flocks of Sri Lanka. **Siyoth** 1: 22-28.
- 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:

- American Ornithological Society (2019) "Seeking mixed-species flocks in China's misty mountains". <u>https://americanornithology.org/seeking-mixed-species-flocks-in-chinas-misty-mountains/</u>
- Quarterly Review of Biology (2018) Book Review of "Mixed-species Animal Groups" by Dan Blumstein. https://www.journals.uchicago.edu/doi/abs/10.1086/696751
- New York Times (2010): "For some birds it's not always the same old song". <u>http://www.nytimes.com/2010/04/20/science/20obsong.html</u>
- **Conservation Magazine** (2008): "Collect calls: cell phones eavesdrop on birds". <u>http://www.conservationmagazine.org/2008/07/collect-calls/</u>
- American Scientist (2006): "Bird mimics other species in the Sri Lankan rainforest". <u>http://www.sigmaxi.org/about/news/archive.71.shtml</u> (also published as American Scientist, 94: 289).

Presentations at Scientific Meetings:

Plenary or keynote talks, or invited speaker:

- The 14th National Symposium on Biodiversity Science and Conservation (invited speaker for 2022 conference in Shanghai, China, and online)
- International Conference on Zoology: Himalayan Biodiversity in the Face of Global Change (invited speaker for 2021 conference in Kathmandu, Nepal, and online)

- Asian Ornithological Conference (invited speaker for 2021 conference in Beijing, China, and online)
- Workshop on Coastal Wetland Bird Conservation in Asia-Pacific Region (invited speaker for 2020 conference in Shanghai, China, and online)
- Chinese Ornithological Conference (plenary speaker for 2019 conference in Shenyang, China)
- Guangxi Zoological Society (plenary speaker for 2019 conference in Nanning, China)
- Fifth Symposium on Tropical Forest Ecology (keynote speaker for 2013 conference held in Haikou, China)
- Environmental Leadership and Training Initiative (invited speaker and moderator for 2012 conference held in Peradeniya, Sri Lanka)
- Allee Student Award competition participant (Animal Behavior Society, 2004 conference in Oaxaca, Mexico)

Organizer of conferences/symposium/workshops:

- Mixed-species Animal Groups Conference (co-organized 2021 online conference from Nanning, China)
- Association for Tropical Biology and Conservation, Asian Chapter (co-organized 2019 symposium on 'Community Ecology' in Thulhiriya, Sri Lanka)
- Ecosummit (co-organized 2016 symposium on 'Mixed-species Animal Groups' and gave the keynote talk in Montpellier, France)
- International Conference on Mercury as a Global Pollutant (co-organized 2015 workshop on biomonitoring with wildlife in Jeju Island, South Korea)
- Mixed-species Bird flocks Conference (co-organized 2011 conference in Colombo, Sri Lanka, conducted by the Field Ornithology Group of Sri Lanka)

Other talks at conferences:

American Ornithological Union (3 talks, moderator once, 1 poster) • Animal Behavior Society (2 posters) • Association for Tropical Biology and Conservation (ATBC), Asian Chapter (2 talks) or full ATBC worldwide meeting (1 talk) • Botanical Society of America (1 talk) • Center for Tropical Forest Science (1 talk) • Chinese Ornithological Conference (2 talks) • International Conference on Mercury as a Global Pollutant (1 talk) • International Union of Forest Research Organizations (1 talk) • Intercol (1 talk) • International Society for Behavioral Ecology (2 talks, moderator once, 1 poster) • Rockefeller University Bird Song Workshop (2 talks) • Society for Conservation Biology (1 talk) • Society for Integrative and Comparative Biology (1 talk) •

Other invited talks:

Barnard College (2006) • Central Connecticut State Univ. (2009) • East China Normal University (2019) • Florida International University (2016) • Indian Institute of Science (2007) • National Centre for Biological Sciences (India, 2007) • National University of Singapore (2008) • National Forestry Symposium (Sri Lanka, 2009) • Nature Conservation Foundation (India, 2008) • San Diego State University (2011) • University of Michigan (2006) • Shanghai Natural History Museum (2019) • Sun Yat-sen University (2013) • Texas Tech University (2010) • University of California, San Diego (2010) • University of Florida, Gainesville (2016) • University of San Diego (2010) • University of New England (2006) • Xi'an Jiaotong-Liverpool University (2020, 2021) • Xishuangbanna Tropical Botanical Garden (2012) • Yale Forest Lecture Series (2005, 2006)

Membership in Scientific Organizations:

American Ornithologists Union (2000-2014; 2019-) • Association for Tropical Biology and Conservation (2013-) • Field Ornithology Group of Sri Lanka (life member, 1996-) • International Society for Behavioral Ecology (2014-2015; 2017-2018) • Oriental Bird Club (2004-2018) • Ecological Soc. of America (2010-2012) • Soc. of Conservation Biology (2008-2012) • Sigma-Xi (2003-2014) • Animal Behavior Soc. (2000-2012)

Reviews for and Service to Journals:

- Guest Associate Co-Editor, Special Issue on "Mixed-species groups and aggregations: shaping ecological and behavioural patterns and processes" at **Philosophical Transactions of the Royal Society** (3/22- present; guiding review process for 4 manuscripts).
- Editorial Board Member, Biological Conservation (4/21-present)
- Consulting Editor, **Animal Behaviour** (1/21-present; three-year term; have evaluated 5 manuscripts)
- Editorial Board Member, **Avian Research** (journal associated with Chinese Ornithological Council, 7/18-present; have guided review process for 9 manuscripts)
- Guest Associate Co-Editor, Special Issue on "Impacts of Habitat Transformation on Species, Biodiversity and Ecosystems in Asia" at **Frontiers in Ecology and Evolution**, 8/20-4/21 (guided review process for 2 manuscripts).
- Associate Editor, Condor: Ornithological Applications (journal of the American
- Ornithological Society, 11/17-12/20; guided review process for 6 manuscripts)
- Advisory Board member, **Current Conservation** (non-technical magazine about conservation, based out of India; 12/16-present)
- Associate Editor, **Forktail** (journal of the Oriental Bird Club; 5/07–8/14; guided review process for 11 manuscripts).
- Journals reviewed for (# of reviews, not counting revisions): Acta Ethologica (1) American Naturalist (2) • Animal Behaviour (16) • Apidologie (1) • Auk (4) • Avian Ecology and Conservation (1) • Avian Research (3) • Behaviour (1) • Behavioral Ecology (8) • Behavioral Ecology and Sociobiology (7) • Bioacoustics (1) • Biodiversity and Conservation (1) • Biological Conservation (5) • Biological Reviews (1) • Biology Letters (3) • Biotropica (2) • BMC Biology (2) • Chemosphere (1) • Condor (3) • Conservation Biology (1) • Ecography (2) • Ecology (4) • Ecology and Evolution (3) • Ecology Letters (1) • Ecosphere (1) • Emu – Austral Ornithology (1) • Environmental International (1) • Ethology (3) • Florida Field Naturalist (1) • Forest Ecology and Management (2) • Forktail (5) • Frontiers in Ecology and the Environment (1) • Global Ecology and Conservation (3) • Ibis (1) • J. of Animal Ecology (2) • J. of Applied Ecology (1) • J. of Avian Biology (2) • J. of Comparative Psychology (1) • J. of Field Ornithology (5) • J. of Fish Biology (1) • J.

of Ornithology (2) • J. of Sustainable Forestry (4) • J. of Tropical Ecology (2) • Land Use Policy (1) • Mammalia (1) • Naturwissenschaften (1) • Ornis Fennica (1) • Proceedings of the Royal Society (3) • Raffles Bulletin of Zoology (1) • Trends in Ecology and Evolution (2) • J. of Wildlife and Biodiversity (1) • Wilson J. of Ornithology (1) • Zoological Research (1)

• Grants reviewed for (# of reviews): Human Frontier Science Program (1), National Science Foundation International Research Postdoctoral Program (1), Polish National Science Foundation (1).

• Other kinds of reviews: IUCN World Heritage Nominations (1)

Advice on Post-Graduate Education and Student Theses:

- Postdoctoral Fellows at GXU:
 - 1) Emilio Pagani-Núñez (3/15-10/16). Worked on how birds foraging niches are affected by urbanization. Currently Lecturer, Edinburgh Napier University.
 - 2) Myung-Bok Lee (6/15-6/18). Worked on the relationship between crop diversity and biodiversity in agricultural landscapes. Currently Research Associate at Guangdong Academy of Sciences.
 - Ari Martínez (1/17-7/17). Worked on how mixed-species flocking may influence species' colonization of islands and subsequent extinction. Currently Assistant Professor at California State University Long Beach.
 - 4) Tongping Su (8/17-8/19). Worked on the effect of mercury on birds' reproductive biology. Currently Associate Professor, Nanning Normal University.
 - 5) Liping Zhou (1/20-1/22). Worked on plumage convergence in mixed-species flocks. Currently Assistant Professor, Kunming Natural History Museum, Kunming Institute of Zoology.
- Postdoctoral Fellows at XTBG:
 - Christos Mammides (1/14-12/15; co-supervised with Prof. Chen Jin). Worked on elucidating species-interactions in mixed-species flocks of birds. Currently Adjunct Faculty Member at Fredericks University.
- PhD students at GXU:
 - 1) Demeng Jiang (9/16-6/20). "Social information about predators in two mixedspecies bird flock systems". Currently a Postdoctoral Fellow at Peking University.
 - Estelle Meaux (9/17- 6/22). "Environmental and social influences on contact call rate: A behavioural study of vocal communication in a group-living bird". Currently a Postdoctoral Fellow at Hong Kong University..
 - Salindra Dayananda (9/17-12/22). "Investigation of experimental translocations in birds and application to measure the permeability of rubber plantations in Sri Lanka". Currently a Postdoctoral Fellow at Tsinghua Shenzhen University.
 - 4) Kamal Raj Gosai (9/18-12/22). "Investigating mixed-species bird flocks of Nepal and plumage mimicry in Asian flock systems." Currently Assistant Professor at Tribhuvan University (Nepal).
- Masters Students at GXU:
 - 1) Ruchuan He (9/15-6/18) "Effect of mimic frequency on predation in a Batesian mimicry system" (with external supervision from Prof. Craig Barnett). Currently a PhD student at XTBG.

- 2) Wenjing Zhou (9/15-6/18) "Investigating the diversity of herbaceous plants in agricultural landscapes of Nanning, Guangxi." Currently working in the translation industry.
- 3) Chao He (9/16-6/19) "Levels of heavy metals in a zinc and lead mining region of southern China: Levels of target and nontarget metals (mercury and cadmium) across trophic levels." Currently a PhD student at Zhejiang University.
- 4) Tharaka Priyadarshana (9/16-6/19). "The effects of farmland heterogeneity on the biodiversity and functional diversity of above-ground insects." Currently a PhD student at Nanyang Technological University.
- 5) Cheng Li (9/18-7/21). "Socioeconomic determinants of crop diversity and its effect on farmer profit: A case study from Nanning, Guangxi Zhuang Autonomous Region." Currently working in the banking industry.
- 6) Youfang Chen (9/18-12/21). "The relationship between acoustic indices, elevation, and vegetation, in a forest plot network of Guangxi Zhuang Autonomous Region." Currently a PhD student at the Institute for Botany, Chinese Academy of Sciences, Beijing.
- 7) Moses Elleason (9/19-6/22). "A global analysis of the effectiveness of the IUCN categories of protected areas, and the factors driving human population densities inside them" (co-supervised with Dr. Christos Mammides). Currently a PhD student at the State University of New York, Stonybrook.
- 8) Anran Dong (9/19-12/22). "Passive acoustic surveys reveal interactions between frugivorous birds and fruiting trees on a large forest dynamics plot." Currently looking for a PhD position.
- 9) Yiming Deng (9/19-9/23). "The distribution of Chinese endemic terrestrial vertebrates using an optimized species distribution model, and the effectiveness of nature reserves" (co-supervised with Dr. Christos Mammides and Dr. Aiwu Jiang). Currently looking for a PhD position.
- Masters Students at XTBG:
 - 1) Hao Gu (11/12-12/14) "A network perspective: Do super-generalists speciate less than generalists and specialists?" (co-supervised with Prof. Chen Jin). Currently a PhD student at University of St. Andrews.
 - Salindra Dayananda (9/13-6/16) "Understanding how the spatial distribution of forest fragments influences birds and amphibians in a deforested landscape of southern tropical China" (co-supervised with Prof. Quan Ruichang). Currently a PhD student at Guangxi University.
 - Kasun Abeysinghe (9/13-12/16) "Mercury toxicity in a contaminated terrestrial landscape of inland China" (co-supervised with Prof. Yang Xiaodong and Prof. Qiu Guangle of the Institute of Geochemistry, CAS).
- Undergraduate theses advised at GXU:
 - 1) Luying Qin (graduated 7/20) "Using playback to test species recognition between two bird species that have highly plastic vocalizations."
 - 2) Shuaiqian Qi (graduated 7/21) "A comparative acoustical analysis of the vocalizations of the drongos (Dicruridae)."
 - 3) Xiaolei Zeng (graduated 7/21) "Do the contact calls of white-eyes differ among individuals?"

- 4) Caiyun Li (graduated 6/22) "Studying the vocal repertoire of David's Fulvetta (*Alcippe davidi*), and audience effects on its vocal production"
- 5) Feifei Fan (graduated 6/22) "The vocalizations of the family Dicruridae: Comparison across species of an avian group known for mimicry"
- 6) Jijun Yao (graduated 6/23) "The ecoacoustics of different types of eucalyptus forests"
- 7) Xueyu Meng (graduated 6/23) "Understanding how *Zosterops simplex* use contact calls when they find food resources"
- Undergraduate theses advised at XJTLU:
 - 1) Jing Gan (graduated 6/23) "Mercury research in China: Identification of locations and pollution sources for long term mercury monitoring"
 - 2) Yihan Wang (graduated 6/23) "Identifying the Function of Vocal Mimicry for Long-tailed Shrikes in Suzhou"
- Significant external advisor of other students' theses:
 - Punit Lalbhai (MSc, Yale School of Forestry and Environmental Science, 9/05-9/07). Worked on how logging treatments affect birds at the Yale-Myers experimental forest.
 - 2) S. Harsha Satischandra (BS, University of Sabaragamuwa, 9/02-6/06). Worked on the foraging ecology of the Greater Racket-tailed Drongo.
 - 3) S. Harsha Satischandra (MSc, University of Sabaragamuwa, 9/07-6/09; EG official external advisor). "Evaluating false alarm calls in the Greater Racket-tailed Drongo (*Dicrurus paradiseus*)."
 - 4).Chaminda Ratnayake (PhD, University of Colombo, 9/03-6/10). Worked on the ecology and behavior of the Sri Lanka Blue Magpie.
 - 5) Annika Nabors (BA, University of San Diego, California, 9/08-6/12). Worked on how flower nectar guides influence bee behavior.
 - 6) Sreekar Rachakonda (MSc, XTBG, 9/12-6/15). Worked on hunting and fragmentation in the rubber dominated landscape of Xishuangbanna, Yunnan, China. Went on to a PhD at the University of Adelaide, and currently a Postdoctoral Fellow at the National University of Singapore.
 - 7) Liping Zhou (PhD, XTBG, 9/16-12/19). Worked on understanding the effects of land-use and elevation on mixed-species flocks of southwestern China. Currently Assistant Professor at Kunming Natural History Musuem, Kunming Institute of Zoology.
 - 8) Wambura Mtemi (PhD, GXU, 9/19-present). Working on ecotoxicology of heavy metals in rice and sugarcane ecosystems. I serve as external advisor (internal advisor: Prof. Aiwu Jiang).
 - 9) Sihao Chen (PhD, XJTLU, 9/20-present). Working on urban ecology and reproductive fitness of birds. I serve as internal advisor, with Dr. Emilio Pagani-Núñez, now at Edinburgh Napier University, continuing as intellectual advisor.
- External reviewer of student's written theses:
 - 6) G. Kandasamy (Ph.D., University of Colombo; Devaka Weerakoon, advisor) 12/21.
 - 5) Sabah Pushwal (Ph.D., University of Science and Technology [China]; Fanglin Liu, advisor). 10/21.
 - 4) Kai Paijmans (Ph.D., University of Wollongong; Marian Wong, advisor). 8/20.

- Sneha Vijayakumar (Ph.D., Indian Institute of Science; Kartik Shanker, advisor). 3/15.
- 2) Tuomo Jaakkonen (Ph.D., University of Oulu; Jukka Forsman, advisor). 4/14.
- 1) Bransilav Igic (Ph.D., Australian National University; Robert Magrath, advisor). 10/13.
- I have also participated in the oral defenses of 1 postdoctoral fellow, 2 PhD and 2 MSc while at XTBG and GXU.

Courses Taught at University Level:

At Xi'an Jiaotong-Liverpool University:

- Introduction to Ecology, Evolution and Earth Systems (undergraduate; Fall 2022, Fall 2023)
- Quantitative Field Skills, Data Collection and Analysis for Environmental Scientists (undergraduate; Spring 2023)

At Guangxi University:

- Principles of Ecology (undergraduate; Summer 2021; Spring 2018, Spring 2017, Spring 2015)
- Advances in Ecology and Conservation (undergraduate; Fall 2021, Fall 2020 [co-taught for this and earlier years], Fall 2019, Fall 2018, Fall 2015, Fall 2014)
- Principles of Ecology (graduate international; Fall 2021, Fall 2019, Fall 2018, Spring 2018, Spring 2017)
- Animal Ecology (graduate domestic; Fall 2020, Fall 2019, Fall 2018)
- Seminar in Statistics and Experimental Design (graduate international; Fall 2019, Fall 2018, Fall 2017, Fall 2016)
- Advanced Statistics (co-taught; graduate domestic; Spring 2016)
- Spatial Distribution Analysis (GIS and SDM modeling; graduate international, Spring 2022).
- Seminar in Behavioral Ecology (8-week seminar class for graduate students, informally arranged; Spring 2021).

At the University of San Diego:

- Environmental Biology (Spring 2012; undergraduate)
- The Biology of Organisms (Fall 2010; undergraduate)
- Senior Seminar (Fall 2009; undergraduate thesis students)

At the University of California, San Diego:

• Introduction to Organismic and Evolutionary Biology (Fall 2010, Fall 2011; undergraduate)

At the University of New Haven:

- Ecology with Laboratory (Fall 2008; undergraduate and graduate tracks)
- At the University of Massachusetts, Amherst
 - Biology of Social Issues (Fall 2008; undergraduate; co-taught)

Faculty Experience in Fieldcourses:

• Advanced Course in Ecology and Conservation at Xishuangbanna Tropical Botanical Garden (participated in 1.5 month course in 2012, 2013, 2014, giving lectures in bird ecology and statistics).

Voluntary Educational Activities:

- Speaker, Academic Literacy Series Talk, XJTLU (11/22). Was one of two speakers for an hour-long discussion about how to search and read primary scientific articles.
- Participant (11/16-12/16; 11/17-12/17), international career development for Guangxi University staff. Participated in workshop that meets five times over a period of two months to help young professionals polish their CVs and initiate international collaborations.
- Project leader (8/11-12/11), high school outreach program, entitled "Pollinators and predators" funded by the San Diego Foundation. Introduced 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; 9/98).

Technical Skills:

- Bird identification / banding. Three years of experience using mist nets in Sri Lanka with over 150 birds captured. Twenty five years experience with bird identification in the field.
- Sound recording. Twenty five years of using shotgun and parabolic microphones, and mono and stereo tape recorders, both analog and digital.
- Sound analysis. Extensive experience using Raven, Avisoft.
- Radio-telemetry. Tracked five Greater Racket-tailed Drongos (*Dicrurus paradiseus*) over a period of four months in the Sinharaja World Heritage Reserve, Sri Lanka, supervised telemetry PhD project, and have supervised a PhD thesis using telemetry.
- Statistics. Two semesters of 500 level classes in the Department of Statistics, University of Massachusetts, Amherst. Extensive experience using R, and limited experience with SAS and SYSTAT.
- Experience with other computer programs. Moderate experience with ArcView GIS software and C++ programming.

- Experience with teaching technology: Experience with WebCT / Blackboard web technology, and Learning Mall software for the delivery on on-line education. Also experience using clickers (specifically, iclickers) for large classes.
- Languages. Fluent in English; conversant in Sinhala; functional in Mandarin; languages learned in high-school were French and Latin.