

KENNETH J FEELEY

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Fairchild Tropical Botanic Garden
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Coral Gables, FL 33156

RESEARCH INTERESTS

Tropical Community Ecology, Global Change Biology, Biogeography, Macroecology, Conservation Biology, Forest Dynamics, Plant-Animal-Ecosystem Interactions

EDUCATION

Ph.D. Biology, Duke University (2005)

- * Emphasis in tropical ecology and conservation
- * Committee: John Terborgh (chair), Jim Clark, Bill Morris, Stuart Pimm, Miles Silman
- * Dissertation: The effects of habitat fragmentation on tropical floral and faunal communities as mediated through trophic interactions

B.S. Biology, Wake Forest University (1998)

- * Summa Cum Laude
- * Phi Beta Kappa

Study Abroad, Council for International Education and Exchange, Costa Rica (1997)

- * Tropical Ecology and Conservation Biology

PROFESSIONAL EXPERIENCE

Assistant Professor of Plant Conservation Biology, Department of Biological Sciences, Florida International University (2009-present)

Research Associate, Center for Tropical Plant Conservation, Fairchild Tropical Botanic Garden (2009-present)

Postdoctoral Research Fellow, Andes Biodiversity and Ecosystem Research Group (2007-present)

- * Project: Effects of global change on tropical montane plant distributions
- * Location: Kosnipata, Peru

Postdoctoral Research Fellow, Center for Tropical Forest Science, Harvard University (2005-2007)

- * Project: Changes in tropical forest dynamics in response to global change
- * Location: Malaysia, Thailand, Panama

Doctoral Candidate, Duke University, Department of Biology (2000-2005)

* Dissertation: The effects of habitat fragmentation on tropical floral and faunal communities

* Location: Lago Guri, Venezuela

Researcher (2001-2003)

* Project: The effects of treefall gap size and orientation on pioneer plant communities

* Location: Cocha Cashu Biological Station, Manu Peru

Research Assistant (1996-1998)

* Project: Reproductive behavior and breeding ecology of *Sula dactylatra*

* Location: Galapagos, Ecuador

* Project: Influence of drainage complexity on salt marsh faunal communities

* Location: Sapelo Island GA USA

* Project: Long-term vegetation dynamics of old growth forests

* Location: Great Smokey Mountains National Park TN/NC USA

COURSES TAUGHT at FIU

Ecology PCB3043 and Ecology Lab PCB3043L

Plant Conservation Biology BOT4401

Advanced Plant Conservation Biology PCB5046

PUBLICATIONS

In Press or Print

Feeley K.J., Davies S.J., Perez P., Hubbell S., Foster R. COVER: Directional changes in the species composition of a tropical forest. *Ecology*. In press.

Feeley K.J. and Silman M.R, Bush M., Farfan W., Garcia Cabrera K., Malhi Y., Meir P., Salinas Revilla N., Raurau Quisiyupanqui M.N., Saatchi S. Upward migration of Andean trees. *Journal of Biogeography*. In press.

Feeley K.J. and Silman M.R. The data void in modeling current and future distributions of tropical species. *Global Change Biology*. In press.

Feeley K.J. 2010. The conservation value of secondary forests for tropical nocturnal bird species. *Animal Conservation* 13: 16-18.

Feeley K.J. and Silman M.R. 2010. Land-use and climate change effects on population size and extinction risk of Andean plants. *Global Change Biology*. 16: 3215-3222.

Feeley K.J. and Silman M.R. 2010. Biotic attrition from tropical forests correcting for truncated temperature niches. *Global Change Biology* 16: 1830-1836.

Girardin C.A.J., Malhi Y., Aragao L.E.O.C., Mamani M., Huaraca W., Durand L., **Feeley K.J.**, Rapp J., Silva-Espejo J.E., Silman M., Salinas N., Whittaker R.J. 2010 Net primary productivity allocation and cycling of carbon along a tropical forest elevational transect in the Peruvian Andes. *Global Change Biology*. 16: 3176-3192.

Li P., Ding P., **Feeley K.J.**, Zhang J., and Jiang P. 2010. Patterns of species diversity and functional diversity of breeding birds in Hangzhou across an urbanization gradient. *Chinese Birds* 1:1–8.

Peres C.A., Gardner T.A., Barlow J., Zuanon J., Michalski F., Lees A.C., Vieira I.C., Moreira F.M.S., and **Feeley K.J.** 2010. Biodiversity conservation in human-modified Amazonian forest landscapes. *Biological Conservation*. 143: 2314-2327.

Terborgh J.W. and **K.J. Feeley**. 2010. Propagation of trophic cascades via multiple pathways in tropical forests. In: Terborgh J. W. and J. A. Estes (eds.). Pp. 125-140 in *Trophic cascades: Predators, prey, and the changing dynamics of nature*. Island Press, Washington, DC.

Farfan W. and **K.J. Feeley**. 2009. Deforestacion y el mercado de carbono en los bosques tropicales. *Xilema* 26: 11-16.

Feeley K.J. and Silman M.R. 2009. Extinction risks of Amazonian plant species. *Proceedings of the National Academy of Sciences* 106, 12382-12387.

Feeley K.J. and Silman M.R. 2009. Modelling Andean and Amazonian plant species responses to climate change: the effects of geo-referencing errors and the importance of data filtering. *Journal of Biogeography* 37: 733-740.

Feeley K.J. 2009. “Relaxation [sensu the process of species loss from islands or fragments]” in *Encyclopedia of Islands* (R. Gillespie and D. Clague, eds.). University of California Press. Pp 787-788.

Wang Y., Zhang J., **Feeley K.J.**, Jiang P., Ding P. 2009. Life-history traits associated with fragmentation vulnerability of lizards in the Thousand Island Lake, China. *Animal Conservation* 12: 329-337.

Zimmermann M., Meir P., Silman M., Fedders A., Gibbon A., Malhi Y., Urrego D., Bush M., **Feeley K.**, Garcia K., Dargie G., Farfan W., Goetz B., Johnson W., Kline K., Modi A., Rurau N., Staudt B., and Zamora F. 2009. No Differences in Soil Carbon Stocks Across the Tree Line in the Peruvian Andes. *Ecosystems* 13: 62-74.

Chave J., Condit R., Muller-Landau H.C., Thomas S.C., Ashton P.S., Bunyavejchewin S., Co L.L., Dattaraja H.S., Davies S.J., Esufali S., Ewango C.E.N., **Feeley K.J.**, Foster R.B., Gunatilleke N., Gunatilleke S., Hall P., Hart T.B., Hernandez C., Hubbell S.P., Itoh A., Kiratiprayoon S., LaFrankie J.V., Loo de Lao S., Makana J-R., Noor M.N.S., Kassim A.R., Samper C., Sukumar R., Suresh H.S., Tan S., Thompson J., Tongco M.D.C., Valencia R., Vallejo M., Villa G., Yamakura T., Zimmerman J.K., and Losos E.C. (2008) Assessing Evidence for a Pervasive Alteration in Tropical Tree Communities. *Plos Biology* 6: e45.

Feeley K.J. and Silman M.R. 2008. Letter: Unrealistic assumptions invalidate extinction estimates. *Proceedings of the National Academy of Sciences* USA106: e121.

Feeley K.J. and Terborgh J.W. 2008 Direct vs. indirect effects of habitat reduction on the loss of avian species from tropical forest fragments. *Animal Conservation* 11: 353-360.

Feeley K.J. and Terborgh J.W. 2008 Response: Trophic drivers of species loss from fragments. *Animal Conservation* 11: 366-368.

Terborgh J.W. and **Feeley K.J.** 2008. “Ecosystem decay in closed forest fragments” in *Tropical Forest Community Ecology* (W.P. Carson and S.A. Schnitzer, eds.). Blackwell Publishing. pp 308-321.

Feeley K.J., Wright S.J., Davies S., Noor M.N.S., and Kassim A.R. 2007. Decelerating growth in tropical forest trees. *Ecology Letters* 10: 461-469.

Feeley K.J., Davies S.J., Ashton P.S., Bunyavejchewin S., Noor M.N.S., Kassim A.R., Tan S., and Chave J. 2007 The role of gap-phase processes in the biomass dynamics of tropical forests. *Proceedings of the Royal Society of London B*. 274: 2857-2864.

Feeley K.J., Gillespie T.W., Lebbin D.J., and Hart H.S. 2007 Species characteristics associated with extinction vulnerability and nestedness rankings of birds in tropical forest fragments. *Animal Conservation* 10: 493-501.

Feeley K.J., Davies S., Noor M.N.S., Kassim A.R., and Tan S.. 2007. Do current stem size distributions predict future population changes? An empirical test of intraspecific patterns in tropical trees across two spatial scales. *Journal of Tropical Ecology* 23: 191-198.

Feeley K.J. and Terborgh J.W. 2006 Habitat fragmentation and the effects of herbivore (red howler monkey) abundances on bird diversity. *Ecology* 87: 144-150.

Ibanez I, Clark J., Dietze M.C., **Feeley K.J.**, Hersh M., LaDeau S., McBride A., Welch N.E., and Wolosin M.S.. 2006. Predicting biodiversity change: outside the climate envelope, beyond the species-area curve. *Ecology* 87: 1896-1906.

Terborgh J.W, **Feeley K.J.**, Nuñez P., Balukjian B., and Silman M.R. 2006. Vegetation dynamics of predator-free land-bridge islands. *Journal of Ecology* 94: 253-263.

Feeley K.J. 2005. The role of clumped defecation in the spatial distribution of nutrients and the availability of nutrients for plant uptake. *Journal of Tropical Ecology* 21: 99-102.

Feeley K.J. and Terborgh J.W. 2005. The effects of herbivore density on soil nutrients and tree growth in tropical forest fragments. *Ecology* 86: 116-124.

Feeley K.J., Gillespie T.G., and Terborgh J.W. 2005. The utility of spectral indices from Landsat ETM+ for measuring the structure and composition of tropical dry forests. *Biotropica* 37: 508-519.

Feeley K.J. 2004. The effects of forest fragmentation and increased edge exposure on leaf litter accumulation. *Journal of Tropical Ecology* 20: 709-714.

Feeley K.J. Analysis of the avian communities of Lake Guri, Venezuela, using multiple assembly rule models. *Oecologia* 137: 104-113.

In Review

Feeley K.J. and Silman M.R. Accurate species distribution modeling requires more collections than previously thought due to temporally autocorrelated collection biases. *Diversity and Distributions*.

Feeley K.J. and Zelazowski, P. Novel climates and the potential for rapid biotic attrition form the Caribbean Islands Biodiversity Hotspot. *Journal of Biogeography*.

Girardin, C.A.J., Malhi, Y., Mamani, M., **Feeley, K.J.**, Rapp, J., Aragão, L.E.O.C., Silva-Espejo, J.E., Silman, M., Salinas, N., Metcalfe, D.B., and Rowland, L. Spatial and seasonal variation of above ground net primary productivity and its components in tropical forests along an elevation transect in the Peruvian Andes. *Journal of Ecology*.

Hu, G., **Feeley, K.J.**, Wu, J., Xu, G., Yu, M. Determinants of plant species richness and nestedness in fragmented landscapes: evidence from land-bridge islands. *Landscape Ecology*.

Maness T.J., Westbrock M.A., **Feeley K.J.**, and Anderson D.J., Offspring sex does not influence duration of post-fledging parental care in the sexually size dimorphic Nazca Booby (*Sula granti*). *The Condor*.

Yu, M., Y., Hu, G., **Feeley, K.J.**, Wu, J., and Ding, P. Richness and composition of plants and birds on land-bridge islands: effects of island attributes and differential responses of species functional groups. *Journal of Biogeography*.

Oleas, N.H., **Feeley, K.J.**, Gebelein, J., Meerow, A.W., and Francisco-Ortega, J., Muddy boots beget wisdom: A cautionary tale for species distribution modelsn endangered species. *Diversity and Distributions*.

POPULAR PUBLICATIONS (non-peer reviewed)

Machovina, B. and **Feeley, K.J.**, 2011. Eyes in the sky watching plants. *The Tropical Garden*.

Feeley K.J. 2010. Where will the tropical rainforest be in 100 years? *The Tropical Garden*. 66: 30-33.

Feeley K.J. 2009. "The effects of global change on tropical forests" in Encyclopedia of Life Science (K.E. Cullen, ed.). Facts on File Press.

Feeley K.J. 2009. The effect of CO2 on tropical forests. *The Tropical Garden*. 64: 42-45.

PRESENTATIONS

Conference Presentations

- * Annual Meeting of the Ecological Society of America (2001-2010)
- * Annual Meeting of the Association of Tropical Biology and Conservation (2002-2009)
- * Student Conference on Conservation Science (2005)

University Seminars

- * University of Miami, Department of Biology (2010)
- * University of Florida, TREC (2010)
- * Florida International University, Environmental Studies Program (2010)
- * Florida International University, Plant Talk Seminar Series (2010)
- * Florida International University, Department of Biology Marine Science Program (2009)
- * Zhejiang University China, Department of Biology (2009)
- * Zhejiang University China, Department of Biology (2009)
- * Fundacion Insitituto Botanico de Venezuela (2009)
- * Florida International University, Department of Biology (2009)
- * Portland State University, Department of Biology (2009)
- * Harvard University, Department of Organismal and Evolutionary Biology (2008)
- * University of California Davis, Department of Plant Sciences (2008)
- * University of California San Diego, Department of Biology (2008)
- * Florida Institute of Technology, Department of Biology (2008)
- * Wake Forest University, Department of Biology (2007)
- * Harvard University, Harvard University Herbarium (2007)
- * SUNY Stony Brook, Department of Ecology and Evolutionary Biology (2006)
- * University of California LA, Department of Ecology and Evolutionary Biology (2006)
- * University of Rhode Island, Department of Biological Sciences (2006)

- * Duke University, Department of Biology, Program in Ecology (2005)
- * Wake Forest University, Department of Biology (2005)
- * Harvard University, Arnold Arboretum (2004)
- * Rice University, Department of Ecology and Evolutionary Biology (2004)

GRANTS and AWARDS

NSF Population and Community Ecology Cluster (submitted)

- * *Project: Factors influencing the location, dynamics, and stability of treeline in the tropical Andes*

National Geographic Society, Committee for Research and Exploration (submitted)

- * *Project: Changes in the distribution of Andean trees in response to recent climate change: patterns and implications.*

NSF Research Coordinated Networks, steering committee (submitted)

- * *Project: Tropical forest regeneration and restoration – from species to land-use.*

Fairchild Tropical Botanic Garden (2010)

- * *Project: Tropical Rainforest Ecology and Conservation*

Amazon Conservation Association's Seed Grant (2007 & 2008)

- * *Project: The impacts of climate change on distributions of Andean tree species*

Duke Conference Travel Award (2001-2005)

Foreign Language and Area Studies Award (2004)

Duke University International Research Grant (2003)

Duke Ecology Keever Award (2002)

Sally Hughes Schrader Research Grant (2002)

Cooper Ornithological Society Student Research Grant (2001)

David L. Boren Graduate Fellowship (2001)

Frank M. Chapman Memorial Fund Research Grant (2000 & 2001)

Latin American Studies Grant (2001)

H. Branch Howe, Jr. Research Grant (2000)

NSF International Travel Grant (2000)

National Science Foundation Graduate Fellowship (1999)

WORKSHOPS and ADDITIONAL TRAINING

Teaching

- * ESA Workshop on 'Innovative Teaching and Active Learning in the Biological Sciences' (2006)

Statistics

- * SAMSI workshop on Complex Computer Models (Terrestrial Ecology section) (2007)
- * ESA Workshop on 'Modeling Patterns and Dynamics of Species Occurrences' (2006)
- * Duke Summer Institute on 'Uncertainty and Variability in Ecological Inference' (2006)
- * CTFS Workshop on 'Advanced Analytical Techniques in R (Statistics)' (2005)
- * NSF SEEK Early Career Faculty and PostDoctoral Workshop on Ecoinformatics (2006)

GIS and Remote Sensing

- * Harvard Semester course on 'Introduction to GIS' (2007)
- * Harvard Workshop on 'Remote Sensing Technology and Applications' (2007)
- * Harvard Workshop on 'Introduction to GIS' (2006)

ADDITIONAL TEACHING and MENTORING EXPERIENCE

Instructor, Wake Forest University (2009)

- * Conservation Biology (including field component in Nicaragua)

Instructor, Organization for Tropical Studies (2008)

- * *Ecosistemas Amazónicos y Cambios Globales* (taught in Peru)

Co-instructor, Wake Forest University, Department of Biology (2008)

- * Tropical Field Ecology (taught in Peru)

Guest Lecturer (2000-2008)

- * Community Ecology, Wake Forest University (3x)
- * Tropical Ecology and Conservation, Duke University (2x)
- * Ecology and Evolution of Animal Behavior, Duke University (2x)
- * Global Change Ecology, Duke University
- * Introduction to Ecology, Salem College

Mentor, SEEDS Undergraduate Ecology Program (2006)

Mentor for Undergraduate Theses (2000-2007)

- * Andrew Collins, Wake Forest University, USA
- * Diana Escalans, Universidad Simon Bolivar, Venezuela
- * Mireya Natividad Raurau Quisiyupanqui, Universidad San Antoni Abad, Peru

Teaching Assistant, Duke University, Department of Biology (2000-2003)

- * Ecology and Evolution of Animal Behavior (2x)
- * General Ecology (2x)

Undergraduate Teaching Assistant, Wake Forest University (1997-1998)

- * Introduction to Biological Principles (2x)

SERVICE

Host and lead organizer of the 2013 conference of the International Biogeography Society.

Member, Organization for Tropical Studies' Assembly of Delegates (2011)

Member, Florida International University GIS Advisory Board (2009-2011)

Organizer and moderator of special session on "The effects of global warming on tropical montane systems" at the ESA conference (2010)

Founder and organizer of Harvard Ecology and Environmental Discussion Group (2006-2007)

Judge for Murray F. Buell Student Award (ESA conference) (2006-2007)

Duke University Biology Graduate Program Steering Committee (2002)

Member of the ESA, ATBC, AAAS, Sigma Xi, and SCB professional societies

Member of the Phi Beta Kappa Honor Society

Reviewer for: over 25 top journals and multiple NSF Grant proposals and Panel reviewer for NSF presidential initiative Climate Change Education Programs award (2010)

LANGUAGES

Native Fluency in English; Fluent in Spanish; Basic Quechua