

Gretchen LeBuhn

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Education.

University of California, Santa Barbara, Ph.D. March 1998. Biology.

University of Connecticut, Storrs, M.S. June 1991. Botany.

Vanderbilt University, B. A. December 1984. European Studies.

Professional Experience

Fulbright Scholar. Mendoza, Argentina. February-June 2016.

San Francisco State University. Full professor. August 2012-present.

Stanford University. Visiting Scholar. August 2007-September 2008.

Editorial Board. Madrono. January 2009-2011.

Associate Editor. Proceedings of Life. 2009-2013.

San Francisco State University. Associate professor. August 2007-2012.

University of California -Berkeley, Visiting Scholar. August 2003-August 2004.

San Francisco State University. Assistant professor. January 2001-August 2007.

University of California-Berkeley. Postdoctoral associate. September 2000-2001.

Florida State University. Postdoctoral associate September 1998-2000.

Florida State University. Instructor. January-June 1998.

National Center for Ecological Analysis and Synthesis. Graduate intern. September 1997-1998.

University of California. Teaching assistant 1994-1996.

University of California. Technician 1992-1993.

University of Connecticut. Teaching assistant 1989-1992.

Other Recent Appointments and Service

Chair, University Research Council, SFSU, 2018-present.

Member, University Tenure and Promotion Committee, SFSU, 2017-2019.

Science advisor. UN-FAO. 2009-2015

Instructor. CONICET. Mendoza Argentina. Ciencia Ciudadana. June 2016.

Director. Great Sunflower Project (www.greatsunflower.org). 2007-present.

Board member. NatureBridge - Golden Gate campus. 2014-present.

Lead Author. Intergovernmental Panel on Biodiversity and Ecosystem Services. 2014-2016.

Panelist. PPSR for Northern California. Davis California March 2013.

Advisory committee, National Ecological Observatory Network Citizen Science Group. 2013-2015.

Instructor. Tabor Academy Summer Program. Summer 2012-2019.

Commissioner. Marin County Parks and Open Space. 2011-2014

Technical Advisor. GEF/UNEP/FAO: Conservation and Management of *Pollinators* for Sustainable Agriculture, through an Ecosystem Approach 2008-2015.

Director. Presidential Scholar's Program. 2011-2015.

Working group member. Public Participation in Science. Data Observation Network for Earth (DataONE). 2011-2014.

Director Training in Ecology and Evolution program for graduate students at SFSU. 2007-2012.

Member. USGS National Biological Information Infrastructure Bumble Bee Task Force. 2010-2011.

Publications. (* student author)

Journal articles and book chapters:

Accepted or Published.

1. Hill, R., Nates-Parra, G., Quezada-Euán, J. J., Buchori, D., **LeBuhn, G.**, Maués, M., Pert, Petina, Kwapong, P., Saeed, S., Breslow, S., Carneiro da Cunha, M., Dicks, L., Galetto, L., Gikungu, M., Howlett, B., Imperatriz-Fonseca, V., Martín-López, B., Oteros-Rozas, E., Lyver, P., Potts, S. G. and Roué, M. 2019 Biocultural approaches to pollinator conservation. *Nature Sustainability*. Published online 11 Mar 2019.
2. Wiggins, A., Bonney, R., **LeBuhn, G.**, Parrish, J.K. and Weltzin, J.F., 2018. A Science Products Inventory for Citizen-Science Planning and Evaluation. *BioScience*.
3. Owens, M.T., Trujillo, G., Seidel, S.B., Harrison, C.D., Farrar, K.M., Benton, H.P., Blair, J.R., Boyer, K.E., Breckler, J.L., Burrus, L.W. Byrd, D.T and many others (including **LeBuhn**), 2018. Collectively Improving Our Teaching: Attempting Biology Department-wide Professional Development in Scientific Teaching. *CBE-Life Sciences Education*, 17(1), p.ar2.
4. Ryan, W.H., Gornish, E.S., Christenson, L., Halpern, S., Henderson, S., **LeBuhn, G.** and Miller, T.E., 2017. Initiating & Managing Long-Term Data with Amateur Scientists. *The American Biology Teacher*, 79(1), pp.28-34.
5. Hudson, L.N., Newbold, T., Contu, S., Hill, S.L., Lysenko, I., De Palma, A., Phillips, H.R., Alhusseini, T.I., Bedford, F.E., Bennett, D.J. and Booth, H., and many others (including **LeBuhn**). 2017. The database of the PREDICTS (Projecting Responses of Ecological Diversity In Changing Terrestrial Systems) project. *Ecology and Evolution*, 7(1), pp.145-188.
6. Krauel, J.J. and **LeBuhn, G.**, 2016. Patterns of Bat Distribution and Foraging Activity in a Highly Urbanized Temperate Environment. *PloS one*, 11(12), p.e0168927.
7. **LeBuhn, G.**, E. Connor, M. Brand, J. Coville, K. Devkota, R. Thapa, M. Kasina, R. Joshi, K. Aidoo, P. Kwapong, C. Annoh, P. Bosu, M. Rafique. 2016. Monitoring Pollinators Around the World. In "Pollination Services to Agriculture" ed. Barbara Gemmill-Herren. Routledge.
8. *Colloran, B. and **G. LeBuhn**. 2015. The Benefits of Meadow Restoration for Pollinators. In: T. Root and K. Hall. *Biodiversity in a Changing Climate: Linking Science and Management in Conservation*. Univ. of California Press. Berkeley.
9. *Potter, A., and **LeBuhn, G.** 2015. Pollination service to urban agriculture in San Francisco, CA. *Urban Ecosystems* 1-9.
10. *Derugin, V. V., Silveira, J. G., Golet, G. H. and **LeBuhn, G.** 2015. Response of medium- and large-sized terrestrial fauna to corridor restoration along the middle Sacramento River. *Restoration Ecology*. doi: 10.1111/rec.12286

11. **LeBuhn, G.**, Sam Droege, Edward F. Connor, Barbara Gemmill-Herren, Simon G. Potts, Robert L. Minckley, Robert P. Jean et al. 2015. Evidence-based conservation: reply to Tepedino et al. *Conservation Biology* 29:283-285.
12. **LeBuhn, G.** 2014. Conservation Biology and More. *Ecology* 95:582-58. (Book Review).
13. Hudson, L. and many others including **LeBuhn**. 2014. The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts." *Ecology and evolution* 4.24:47014735.
14. Wiggins, A., Bonney, R., Graham, E., Henderson, S., Kelling, S., Littauer, R., **LeBuhn, G.**, Lotts, K., Michener, W., Newman, G., Russell, E., Stevenson, R. & Weltzin, J. 2013. Data Management Guide for Public Participation in Scientific Research. DataONE: Albuquerque, NM.
15. **LeBuhn, G.**, S. Droege, E. Connor and many others. 2013. Detecting insect pollinator declines on regional and global scales. *Conservation Biology* 1:113-120.
16. *Goodman, R. **G. LeBuhn**, N. Seavy, T. Gardali and J. Bluso-Demers. 2012. Avian body size changes and climate change: warming or increasing variability? *Global Change Biology* 1:63-73.
17. Oberhauser, K. and **G. LeBuhn**. 2012. Insects and Plants: Engaging Undergraduates in Authentic Research via Citizen Science. *Frontiers in Ecology and the Environment*. 2012;10:318-320.
18. *Zhang, H. M. *Korayern, D.J. Crandall, and **G. LeBuhn**. 2012. Mining photo-sharing websites to study ecological phenomena. Abstract submitted to 2012 ACM WSDM Conference Seattle, Washington, USA.
19. Droege, S. V. Tepedino, **G. LeBuhn**, W. Link, R. L. Minckley, Q. Chen, C. Conrad. 2010. North American Bowl Trap Evaluation 1. Spatial Patterns of Captures of Bees. *Journal of Insect Conservation and Diversity*. 3:15-23.
20. Krauel, J.J. & **LeBuhn, G.**, 2009. *Foraging Ecology of Bats in San Francisco, California*. *Bat Research News* 50 (4):117A.
21. Winfree, R. R. Aguilar*, D. Vazquez, **G. LeBuhn** and M. Aizen. 2009. A meta- analysis of bees' responses to anthropogenic disturbance. *Ecology* 90: 2068-2076.
22. Krauel, J.J., and **LeBuhn, G.**, 2008. *San Francisco's Other Dining Scene: Foraging Ecology of Urban Bats*. *Bat Research News* 49:136A.
23. **LeBuhn, G.** and C. Fenter*. 2008. Landscape context influences bumble bee communities in oak woodland habitats. Pages 301-306 in A. Merenlender, D. McCreary, and K. Purcell, technical coordinators. Proceedings of the 6th California oak symposium: today's challenges, tomorrow's opportunities. 9-12 October 2006; Rohnert Park, CA. Gen. Tech. Rep. PSW-GTR. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.
24. Reynolds, M. , T. Gardali, M. Merrifield*, R. Hirsch-Jacobsen*, A. Armstrong, D. Wood, J. Smith, E. Heaton*, and **G. LeBuhn**. 2008. Reproductive Success of Oak Woodland Birds in Sonoma and Napa Counties, California Pages 433-436. in A. Merenlender, D. McCreary, and K. Purcell, technical coordinators. Proceedings of the 6th California oak symposium: today's challenges, tomorrow's opportunities. 9-12 October 2006; Rohnert Park, CA. Gen. Tech. Rep. PSW-GTR. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.
25. *Chess, S., R. Raguso and **G. LeBuhn**. 2008. Divergence in floral scent and morphology of *Linanthus dichotomus*. *American Journal of Botany* 95:1652-1659.

26. *Clarke, K., B. Fisher, and **G. LeBuhn**. 2008. The influence of urban park characteristics on ant (Hymenoptera, Formicidae) communities. *Urban ecosystems* 11:317-334.
27. Krauel, J.J., G. Reyes, and **G. LeBuhn**. 2007. *Influence of waterproof casings on Pettersson D240X acoustic bat monitoring performance*. *Bat Research News* 44 (4):246A.
28. Packer, L., Gravel, A-I*., and **G. LeBuhn**. 2007. Phenology and Sociobiology of *Halictus tripartitus* (*Seladonia*). *J. Hym. Res.*16:281-292.
29. *Hatfield, R. and **G. LeBuhn**. 2007. Patch and landscape factors shape community assemblage of bumble bees, *Bombus* spp. (Hymenoptera: Apidae), in montane meadows. *Biological Conservation* 139:150-158.
30. Weller, S. G., C. A. Dominguez, F. E. Molina-Freaner, J. Fornoni, and **G. LeBuhn**. 2007. The Evolution of Heterostyly in Populations of *Oxalis alpine* in the Sky Islands of the Sonoran Desert. *American Journal of Botany*. 94: 972-985.
31. *Chaves, J., J. Pollinger, T. B. Smith and **G. LeBuhn**. 2007. The role of geography and ecology in shaping the phylogeography of the speckled hummingbird (*Adelomyia melanogenys*) in Ecuador. *Molecular Phylogenetics and Evolution* 43:795-807.
32. Kremen, C., N. Williams, M. A. Aizen, B. Gemmill-Herren, **G. LeBuhn**, R. Minckley, L. Packer, S. G. Potts, T. Roulston, I. Steffan-Dewenter, D. Vazquez, R. Winfree, L. Adams, E. E. Crone, S. S. Greenleaf, T. H. Keitt, A. Klein, J. Regetz, T. Ricketts. 2007. Pollination in agricultural ecosystems. *Ecology Letters*. 6: 1077-1083.
33. **LeBuhn, G.** and M. Reynolds 2006. The little things that run the world. *Ecology* 87:531-532 (book review).
34. *McFrederick, Q. and **G. LeBuhn**. 2006. Are urban parks refuges for bumble bees, *Bombus* spp. (Hymenoptera: Apidae). *Biological Conservation* 129:372-382.
35. **LeBuhn, G.**, S. Droege, and M. Carboni*. 2006. Monitoring methods for solitary bee species in North America. State of the Worlds' Pollinators Report. UN- FAO. Available at <http://www.fao.org/AG/agp/agps/C-CAB/Castudies/pdf/1-007.pdf>
36. Smith, J. I., M. D. Reynolds, and **G. LeBuhn**. 2005. Warbling Vireo Productivity and Key Nest-site Characteristics in the Northern Sierra. *Journal of Field Ornithology* 76:383-389.
37. Weis, A.E., J. Winterer, T.A. Kossler*, C.Y. Young, C. Vacher and **G. LeBuhn**. 2004. Phenological assortative mating in plants: causes and consequences of its inherent frequency-dependence. *Evolutionary Ecology Research* 7:161-181.
38. Smith, J. I., M. D. Reynolds, and **G. LeBuhn**. 2004. Warbling Vireo Nesting Ecology in the Northern Sierra Nevada. *Western Birds* 35:32-41.
39. **LeBuhn, G.** Bees in a vineyard landscape. 2004. *Oaks and Folks* 18:7. (available online at: <http://danr.ucop.edu/ihrmp/oak127.htm>).
40. **LeBuhn, G.** 2004. Seasonal variation in reproductive traits in *Ipomopsis longiflora* (Polemoniaceae), a desert annual. *Canadian Journal of Botany* 82:401-408.
41. Harding, E.E., B.D. Elder, J. Hoekstra, A. McKerrow, J. Perrin, J. Regetz, L. Rissler, A. Stanley, E. Walters, and NCEAS HCP Working Group (including **LeBuhn**). (2001). The scientific foundations of habitat conservation plans: a quantitative assessment. *Conservation Biology* 15: 488-500.
42. **LeBuhn, G.** and T. E. Miller. 2001. Population viability. In: McGraw-Hill Encyclopedia of Science and Technology. McGraw Hill Publishing. New York.
43. Mazer, S. J. and **G. LeBuhn**. 1999. Genetic variation in life history traits: Evidence within and among populations and lessons learned. In: *Life history evolution in plants* (Vuorisalo, T. and P. Mutikainen. Es.) Kluwer Academic Dordrecht. The Netherlands.
44. Kareiva, P. and many others (including **LeBuhn**). 1999. The scientific basis of Habitat

Conservation Planning under the Endangered Species Act. Available at:
<http://www.nceas.ucsb.edu>.

45. Miller, T. E. and **G. LeBuhn**. 1998. The ecological detective – Confronting models with data. *Science* 281:788. (book review).
46. **LeBuhn G.** and K. Holsinger. 1998. A sensitivity analysis of pollen dispensing schedules. *Evolutionary Ecology*. 12:111-121.
47. **LeBuhn, G.** 1996. Timing is everything new directions in floral phenology. *Trends in Ecology and Evolution* 12: 1-3.
48. **LeBuhn, G.** 1995. Ecology and Evolution of Plant reproduction: New approaches, *Plant Genetics Newsletter* 10: 31. (book review).
49. **LeBuhn, G. and G. J. Anderson.** 1994. Anther tripping and pollen dispensing in *Berberis thunbergii*. *American Midland Naturalist* 131:257-265.

Books:

1. Frey, K. and **G. LeBuhn**. 2016. *The Bee Friendly Garden*. Ten Speed Press. Berkeley.
2. **LeBuhn, G.** and N. Pugh. 2013. *A field guide to the Common Bees of California*. UC Press. Berkeley.
3. E. Mader, M. Vaughan, M. Shepherd, S. Black and **G. LeBuhn**. 2011. *Attracting Native Pollinators: The Xerces Society Guide to Conserving North American Bees and Butterflies and Their Habitat*. Storey Press.

Field Manual:

LeBuhn, G., S. Droege, E. Connor, B. Gemmill-Herren, N. Azzu and the contributors to the Handy Bee Manual. 2015. *Protocol to Detect and Monitor Pollinator Communities: Guidance for Practitioners*. UN: Food and Agriculture Organization. Rome, Italy.

Grants (since arriving at SFSU)

Presidio Trust. 2017-2019 Status and Trends of Bee Pollinators in the Presidio. \$15,928.
Presidio Trust 2017-2019 Diversity of Herbivorous and Pollinating Insects on Native and non-native plants. \$31,888
Marin Municipal Water District. 2017-2019 Pollinators of Mt. Tamalpais. \$29,537,
Marin County Parks. 2017-2019 The role of Scotch and French broom mediating pollinator communities. (2 grants) 2 awards of \$10,000.

Marin County Parks 2018-2019 The influence of urbanization on pollinators in Marin County Parks to Mt. Tamalpais communities. \$20,000.
USDA Forest Service. 2017-2022 Sierra Nevada Bird Monitoring \$17,000.
Golden Gate Parks Conservancy 2017-2019. Pollinators on coastal prairie. \$10,097
The Nature Conservancy. 2016-2019. Montane meadow bird communities. 2 annual awards of \$10,000. 1 award of \$12,000
Fulbright U.S. Scholar – Argentina 2015-2016.
Panta Rhea Foundation: Citizen science and Museums \$10,000. 2014. Developing a curriculum for museums for the Great Sunflower Project.
Panta Rhea Foundation: Developing a curriculum for K-5 students for the Great Sunflower Project. \$15,000. 2013.

Springcreek Foundation: Great Sunflower Project. \$2000. 2014.

Springcreek Foundation: Habitat assessment and the Great Sunflower Project. \$2000. 2012.

SFSU: Speciation in *Linanthus dichotomus*. \$15,000. 2011.

Center for Science and Math Education at SFSU. Assessment of a citizen science project. \$5,000. 2009.

UN-FAO: Monitoring Status and Trends of Pollinators. \$19,995. 2009.

NSF: Teaching and Research in Ecology and Evolution. S-STEM program. \$599,000. 2007-2010.

NPS: Survey of bats in various habitats of the Presidio. \$12,000. Fall 2008.

Biological Impacts of Climate Change Program. (with Brendan Colloran) The effects of change in the pattern of snowmelt on bumble bee communities in the Sierra Nevada. \$45,609. 2007-2008.

NPS: Methods for statistically valid monitoring. II. \$12,000 Fall 2007.

USDA: Pollination Ecological Information for Land Conservation. III. \$40,000. Fall 2007

NPS: Methods for statistically valid monitoring. \$17,000. Fall 2006.

USDA: Pollination Ecological Information for Land Conservation. II. \$40,000 Fall 2006.

USDA: Pollination Ecological Information for Land Conservation. \$10,000. Fall 2005.

Stanford Alumni Consulting Team. Strategic Planning for SFSU's Ecology and Evolution Group. One year of Pro-bono work by 4 Stanford Business School alumni. January 2005.

National Center for Ecological Analysis and Synthesis Working Group. Participant, not PI. Restoring an ecosystem service to degraded landscapes: native bees and crop pollination. \$67,000. Fall 2004.

The Nature Conservancy. Avian monitoring in the Northern Sierras. \$24,000. Fall 2004.

SFSU Presidential Award for Probationary Faculty. \$30,000. Fall 2003.

United States Geological Survey. Testing methods for sampling solitary bees \$25,000 Fall 2002.

Collaborative Ecosystem Studies Unit. (multiple authored proposal) A proposal to establish a cooperative ecosystem studies unit in California with the University of California as the host institution.

North American Pollinator Protection Campaign. \$2,000. Summer 2002. SFSU Affirmative Action Award. \$5,000. Spring 2002.

NSF Undergraduate Mentoring Environmental Biology. Integrating inquiry based and cooperative learning with expanded career horizons for environmental biology. \$400,000. Spring 2002.

CSU Mini-grant program. Methods for mitigating the loss of habitat in native bee species. \$5,000. Spring 2001.

Integrated Hardwoods Range Management Program. The effect of landscape changes on native bee fauna and pollination of native plants in Napa and Sonoma Counties. Spring 2001. \$90,000