

Kristen E. Dybala











EDUCATION

- 2012 Ph.D. Ecology, University of California, Davis
2001 B.A. Biology and Anthropology, Rice University

APPOINTMENTS

- 2018- Principal Ecologist, Point Blue Conservation Science
2015-18 Senior Research Ecologist, Point Blue Conservation Science
2014-15 Postdoctoral Researcher, Point Blue Conservation Science
2012-14 Postdoctoral Scholar, University of California, Davis, Museum of Wildlife and Fish Biology

PUBLICATIONS

- Null S, Zeff H, Mount J, Gray B, Sturrock A, Sencan G, [Dybala K](#), Thompson B, et al. (*In review*) Storing and Managing Water for the Environment is More Efficient than Mimicking Natural Flows.
- Peterson CA, Davis KF, [Dybala KE](#), Fernández FJ, Ghimire R, Nidumolo U, Roche R. (*In press*) The Future of Water-Limited Agricultural Landscapes. *Environmental Research Letters*.
- 2023 [Dybala KE](#), Sesser K, Reiter ME, Shuford WD, Golet GH, Hickey C, Gardali T (2023) Priority Bird Conservation Areas in California's Sacramento–San Joaquin Delta. *San Francisco Estuary and Watershed Science*. 21(3). DOI: 10.15447/sfews.2023v21iss3art4
 
- 2022 [22] Golet GH, [Dybala KE](#), Reiter ME, Sesser KA, Reynolds M, Kelsey R (2022) Shorebird food energy shortfalls and the effectiveness of habitat incentive programs in record wet, dry and warm years. *Ecological Monographs* 92(4):e1541. DOI: 10.1002/ecm.1541
   Best Monograph 2023, The Wildlife Society
- 2021 [21] Dettling M, [Dybala KE](#), Humple D, Gardali T (2021) Protected areas safeguard landbird populations in central coastal California: Evidence from long-term population trends. *Ornithological Applications* 123(4):duab035. DOI: 10.1093/ornithapp/duab035
   Editor's choice
- [20] Gardali T, [Dybala KE](#), Seavy NE (2021) Multiple-Benefit Conservation defined. *Conservation Science and Practice* 3(6):e420. DOI: 10.1111/csp2.420
 
- 2020 [19] [Dybala KE](#), Gardali T, Melcer RE (2020) Getting our heads above water: Integrating bird conservation in planning, science, and restoration for a more resilient Sacramento–San

Joaquin Delta. *San Francisco Estuary and Watershed Science* 18(4). DOI: 10.15447/sfew.2020v18iss4art2



[18] Humple D, Cormier RL, Burnett RD, Seavy NE, Dybala KE, Gardali T (2020) Migration tracking reveals geographic variation in the vulnerability of a Nearctic-Neotropical migrant bird. *Scientific Reports* 10:5483. DOI: 10.1038/s41598-020-62132-6



2019 [17] Dybala KE, Steger K, Walsh RG, Smart DR, Gardali T, Seavy NE (2019) Optimizing carbon storage and biodiversity co-benefits in reforested riparian zones. *Journal of Applied Ecology* 56:343-353. DOI: 10.1111/1365-2664.13272



[16] Dybala KE, Matzek V, Gardali T, Seavy NE (2019) Carbon sequestration in riparian forests: a global synthesis and meta-analysis. *Global Change Biology* 25:57-67. DOI: 10.1111/gcb.14475



2018 [15] Dybala KE, Engilis A, Trochet JA, Engilis IE, Truan ML (2018) Evaluating riparian restoration success: Long-term, large-scale responses of the breeding bird community in California's lower Putah Creek watershed. *Ecological Restoration* 36:76-85. DOI: 10.3368/er.36.1.76



2017 [14] Dybala KE, Clipperton N, Gardali T, Golet GH, Kelsey R, Lorenzato S, Melcer R, Seavy NE, Silveira JG, Yarris GS (2017) A general framework for setting long-term population objectives. *San Francisco Estuary and Watershed Science* 15. DOI: 10.15447/sfew.2017v15iss1art8



[13] Dybala KE, Clipperton N, Gardali T, Golet GH, Kelsey R, Lorenzato S, Melcer R, Seavy NE, Silveira JG, Yarris GS (2017) Population and habitat objectives for avian conservation in California's Central Valley riparian ecosystems. *San Francisco Estuary and Watershed Science* 15. DOI: 10.15447/sfew.2017v15iss1art5





















[12] Dybala KE, Reiter ME, Hickey C, Shuford WD, Strum KM, Yarris GS (2017) A bioenergetics approach to setting conservation objectives for non-breeding shorebirds in California's Central Valley. *San Francisco Estuary and Watershed Science* 15. DOI: 10.15447/sfew.2017v15iss1art2




[11] DiGaudio RT, Dybala KE, Seavy NE, Gardali T (2017) Population and habitat objectives for avian conservation in California's Central Valley grassland-oak savannah ecosystems. *San Francisco Estuary and Watershed Science* 15. DOI: 10.15447/sfew.2017v15iss1art6



- [10] Shuford WD, [Dybala KE](#) (2017) Conservation objectives for wintering and breeding waterbirds in California's Central Valley. *San Francisco Estuary and Watershed Science* 15. DOI: 10.15447/sfews.2017v15iss1art4
 
- [9] Strum KM, [Dybala KE](#), Iglecia MN, Shuford WD (2017) Population and habitat objectives for breeding shorebirds in California's Central Valley. *San Francisco Estuary and Watershed Science* 15. DOI: 10.15447/sfews.2017v15iss1art3
 
- [8] Trochet JA, Engilis A, Truan ML, Engilis IE, [Dybala KE](#), Walsh RG, Whisler E (2017) New and extralimital records of breeding birds for Putah Creek, California. *Western Birds* 48:154-172. DOI: 10.21199/WB48.3.1
 
- 2015 [7] [Dybala KE](#), Truan ML, Engilis A (2015) Summer vs. winter: Examining the temporal distribution of avian biodiversity to inform conservation. *Condor* 117:560-576. DOI: 10.1650/CONDOR-15-41.1
 
- [6] Schmidt AE, [Dybala KE](#), Botsford LW, Eadie JM, Bradley RW, Jahncke J (2015) Shifting effects of ocean conditions on survival and breeding probability of a long-lived seabird. *PLOS One* 10:e0132372. DOI: 10.1371/journal.pone.0132372
 
- 2014 [5] [Dybala KE](#), Seavy NE, Dettling MD, Gilbert M, Melcer R, Gardali T (2014) Does restored riparian habitat create ecological traps for riparian birds through increased Brown-headed Cowbird nest parasitism? *Ecological Restoration* 32:239-248. DOI: 10.3368/er.32.3.239
 
- 2013 [4] [Dybala KE](#), Gardali T, Eadie JM (2013) Dependent vs. independent juvenile survival: Contrasting drivers of variation and the buffering effect of parental care. *Ecology* 94:1584-1593. DOI: 10.1890/12-1443.1
 
- [3] [Dybala KE](#), Eadie JM, Gardali T, Seavy NE, Herzog MP (2013) Projecting demographic responses to climate change: Adult and juvenile survival respond differently to direct and indirect effects of weather in a passerine population. *Global Change Biology* 9:2688-2697. DOI: 10.1111/gcb.12228
 
- 2011 [2] Porzig E, [Dybala KE](#), Gardali T, Ballard G, Geupel GR, Wiens JA (2011) Forty-five years and counting: Reflections from the Palomarin Field Station on the contribution of long-term monitoring and recommendations for the future. *Condor* 113:713-723. DOI: 10.1525/cond.2011.100214
 
- 2008 [1] Seavy NE, [Dybala KE](#), Snyder MA (2008) Climate models and ornithology. *Auk* 125:1-10. DOI: 10.1525/auk.2008.125.1.1



Selected White Papers & Reports

- 2023 Dybala KE, Sesser K, Reiter M, Hickey C, Gardali T (2023) *Final Project Report: Trade-offs and Co-benefits of Landscape Change Scenarios on Bird Communities and Ecosystem Services in the Sacramento-San Joaquin River Delta*. Point Blue Conservation Science, Petaluma, CA
 
- Conlisk E, Chamberlain E, Vernon M, Dybala K (2023) *Evidence for the Multiple Benefits of Wetland Conservation in North America: Carbon, Biodiversity, and Beyond*. Point Blue Conservation Science, Petaluma, CA

- 2022 Null S, Mount J, Gray B, Dybala K, Sencan G, Sturrock A, Thompson B, Zeff H (2022) *Storing Water for the Environment: Operating Reservoirs to Improve California's Freshwater Ecosystems*. Public Policy Institute of California

- Roberts LJ, Burnett R, Loffland H, Campos B, Gardali T, Dybala K (2022) *Foothills to Summit: Conservation Objectives for Birds in California's Sierra Meadows*. Point Blue Conservation Science, Petaluma, CA

- Dybala KE, Thalmayer I, Gardali T, Carey CJ (2022) *Inoculant-Supported Restoration: A Technical Report*. Point Blue Conservation Science, Petaluma, CA

- 2020 Peterson CA, Marvinney E, Dybala KE (2020) *Technical Report: Multiple Benefits from Agricultural and Natural Land Covers in California's Central Valley*. Migratory Bird Conservation Partnership, Sacramento, CA.
 
- Central Valley Joint Venture (2020) *Central Valley Joint Venture 2020 Implementation Plan*. U.S. Fish and Wildlife Service, Sacramento, CA


RESEARCH GRANTS


- 2022-26 PI, California Department of Fish and Wildlife Proposition 1 Delta Water Quality and Ecosystem Restoration Grant Program, Fiscal Year 2021-22. "Trade-offs and Co-benefits of Landscape Change in the Sacramento-San Joaquin River Delta: Phase II Tidal Wetlands and Restoration"
- 2020-24 Co-PI, U.S. Bureau of Reclamation WaterSmart Program. "Central Valley wetlands and groundwater management: Tools to guide effective use of water resources" (\$150k)

- 2021-23 Co-PI, Wildlife Conservation Board Climate Adaptation and Resilience Program. “Building climate resiliency in Central Valley wetlands: Expanding long-term impact” (\$170k)
- 2019-23 PI, California Department of Fish and Wildlife Proposition 1 Delta Water Quality and Ecosystem Restoration Grant Program, Fiscal Year 2019-20. “Trade-offs and Co-benefits of Landscape Change Scenarios on Bird Communities and Ecosystem Services in the Sacramento-San Joaquin River Delta” (\$248k)
- 2019-22 Co-PI, Wildlife Conservation Society Climate Adaptation Fund. “Inoculant-Supported Restoration of California’s Rangeland Riparian Corridors” (\$168k)

FELLOWSHIPS, AWARDS & HONORS

- 2020 Central Valley Joint Venture Science Excellence Award
- 2012 Student presentation award, North American Ornithological Conference
- 2011 Best student conservation presentation, American Ornithologists’ Union
University of California Graduate Fellowship
- 2010 National Park Service GM Wright Climate Change Fellowship
American Ornithologists’ Union Research Award
- 2009 Ernest E. Hill Fellowship, UC Davis
- 2008-11 ARCS Foundation Fellowships (annual)
UC Davis Jastro-Shields Research Scholarship Awards (annual)
- 2008-10 UC Davis Selma Herr Fund for Ornithological Research (annual)
- 2008 American Museum of Natural History FM Chapman Memorial Fund Research Grant
- 2006-10 UC Davis Graduate Group in Ecology Block Grant Awards (annual)
- 2006 Western Bird Banding Association Research Award

ORGANIZED SYMPOSIA

- 2022 Littlefield C, Dybala KE, Graves R, Ontl T (2022) Carbon and Critters: Ensuring Natural Climate Solutions in Forests and Woodlands account for Wildlife Habitat Needs. Interactive session at the North American Congress for Conservation Biology meeting, Jul 16-21, Reno, NV
- 2021 Dybala K, Arthur S, Castaneda X (2021) Workshop on Wetland Water Needs & SGMA. Workshop hosted by the Migratory Bird Conservation Partnership, Oct 22, Virtual 
- 2019 Gardali T, Seavy NE, Dybala KE (2019) Birds with benefits: evidence and trade-offs of multiple-benefit conservation focused on birds. Symposium at the American Ornithological Society meeting, Jun 24-28, Anchorage AK

- 2018 [Dybala KE](#), Clark B, Arthur S (2018) Development of a wetland water budget tool. Workshop for the Migratory Bird Conservation Partnership and partners, Nov 29, Sacramento CA
- 2017 [Dybala KE](#), Seavy NE, Gardali T, Kelsey R (2017) Making multiple benefits real: Opportunities and barriers to increasing the pace and scale of riparian restoration in California. Symposium at the Riparian Summit, Oct 17-19, Davis CA
- [Dybala KE](#) (2017) Understanding groundwater recharge as a co-benefit of migratory bird habitat in California's Central Valley. Migratory Bird Conservation Partnership workshop, Sept 22, Sacramento CA

INVITED PRESENTATIONS

- 2023 [Dybala KE](#) (2023) Multiple-Benefit Conservation in the Delta: Quantifying multidimensional impacts of landscape change. Conservation Lecture Series, hosted by the California Department of Fish and Wildlife. Mar 13, Virtual
 
- 2022 [Dybala KE](#) (2022) Multiple-Benefit Conservation in the Sacramento-San Joaquin Delta. Slough-Side Chat seminar series, hosted by the Delta Science Program. Nov 4, Virtual
- [Dybala KE](#) (2022) Multiple-Benefit Conservation. Creek Speak seminar series, hosted by the Putah Creek Council. Sep 15, Virtual
- [Dybala KE](#) (2022) Riparian zones with benefits: biodiversity, carbon, and beyond. Community meeting hosted by the Mid-Coast Watershed Council. May 5, Virtual
- 2021 [Dybala KE](#) (2021) Multiple-Benefit Conservation: a pathway for collaborative, inclusive, and effective conservation. Pacific Wildlife Research Centre seminar series, hosted by Environment and Climate Change Canada. Nov 2, Virtual
- [Dybala KE](#) (2021) Buffers with benefits: carbon, biodiversity, partnerships. 2021 Buffer Summit, hosted by the Upper & Middle James Riparian Consortium. Oct 27, Virtual



CONFERENCE PRESENTATIONS


- 2022 [Dybala KE](#) (2022) Multiple-Benefit Conservation in Practice: Quantifying Multi-dimensional Impacts of Landscape Change in the Sacramento-San Joaquin Delta of California. North American Congress for Conservation Biology, Jul 16-21, Reno, NV
- 2021 [Dybala KE](#), Sesser K, Reiter M (2021) Identifying high priority areas for bird conservation in the Delta. Bay-Delta Science Conference, Apr 6-9, Virtual
- 2020 [Dybala KE](#), Humple DL, Allen HA, Cormier RL, Dettling MD (2020) Palomarin Field Station Data Explorer: Communicating the value of a long-term field station. North American Ornithological Congress, Aug 10-15, Virtual

- 2019 Dybala KE, Steger K, Walsh RG, Smart DR, Gardali T, Seavy NE (2019) Optimizing carbon storage and biodiversity conservation co-benefits in reforested riparian zones. American Ornithologists Society, Jun 24-28, Anchorage AK
- 2019 Dybala KE, Cormier R, Allen H, Seavy NE, Gardali T (2019) Multiple benefits of riparian restorations in California: documenting, communicating, optimizing. California Society for Ecological Restoration (SERCAL), Apr 10-12, Santa Barbara CA
- 2018 Dybala KE, Matzek V, Gardali T, Seavy NE (2018) Carbon sequestration in riparian forests: a global meta-analysis. I.S. Rivers, 3rd international conference on integrative sciences and sustainable development of large rivers, Jun 4-8, Lyon France
- 2017 Dybala KE, Gardali T, Grossman J, Kelsey R, Seavy NE (2017) Riparian bird responses to a large-scale restoration experiment. Riparian Summit, Oct 17-19, Davis CA
- Dybala KE, Steger K, Walsh RG, Smart DR, Gardali T, Seavy NE (2017) Multiple metrics of riparian restoration success: comparing soil, vegetation, and birds. Riparian Summit, Oct 17-19, Davis CA
- 2016 Dybala KE, Seavy NE, Gardali T (2016) Carbon sequestration in riparian zones: a global meta-analysis. Natural Areas Conference, Oct 18-21, Davis CA
- Dybala KE, Seavy NE, Gardali T (2016) Measuring restoration success using Central Valley Joint Venture objectives. California Society for Ecological Restoration (SERCAL), May 11-12, North Lake Tahoe CA
- 2015 Dybala KE, Rayburn A, Rentner J, Seavy NE, Gardali T (2015) Measuring restoration success: Applying the Central Valley Joint Venture population objectives for riparian birds. San Joaquin River Restoration Program Science Meeting, Jun 11-12, Los Banos CA
- Dybala KE, Seavy NE, Gilbert M, Gardali T (2015) A science-based framework for setting riparian landbird population objectives in California's Central Valley. The Wildlife Society Western Section Annual Meeting, Jan 28-30, Sacramento CA
- 2014 Dybala KE, Truan ML, Engilis A (2014) Summer vs. winter: Examining the temporal distribution of avian biodiversity to inform conservation. Bay-Delta Science Conference, Oct 28-30, Davis CA
- Dybala KE, Engilis A, Trochet JA, Engilis IE, Truan ML (2014) Quantifying long-term changes in ecosystem function and resilience to guide conservation in a novel riparian ecosystem. Joint Meeting of the American Ornithologists' Union, Cooper Ornithological Society, and Society for Canadian Ornithologists, Sept 23-27, Estes Park CO
- Dybala KE, Engilis A, Trochet JA, Engilis IE, Truan ML (2014) Assessing the health of a novel riparian ecosystem: Long-term, watershed-scale changes in the breeding bird community. Ecological Society of America Annual Meeting, Aug 11-15, Sacramento CA
- 2012 Dybala KE, Gardali T, Eadie JM (2012) Dependent vs. independent juvenile survival: Effects of weather and the role of parental care. North American Ornithological Conference, Aug 14-18, Vancouver BC

- Dybala KE, Gardali T, Eadie JM (2012) Dependent vs. independent juvenile survival: Effects of weather and the role of parental care. Ecological Society of America Annual Meeting, Aug 5-10, Portland OR
- Dybala KE, Gardali T, Eadie JM (2012) Parental care and juvenile survival: Effects of weather are stronger on independent juveniles. North American Congress for Conservation Biology, Jul 15-18, Oakland CA
- Dybala KE (2012) Estimating post-fledging survival in passerines: Insights from separate analysis of radio-telemetry and mark-recapture data. The Wildlife Society Western Section Annual Meeting, Feb 1-3, Sacramento CA
- 2011 Dybala KE, Eadie JM, Gardali T, Seavy NE, Herzog MP (2011) Age matters: Adult and juvenile survival rates will respond differently to a changing climate. International Congress for Conservation Biology, Dec 5-9, Auckland New Zealand
- Dybala KE, Eadie JM, Gardali T, Seavy NE, Herzog MP (2011) Demography matters: Adult and juvenile survival rates will respond differently to a changing climate. Ecological Society of America Annual Meeting, Aug 7-12, Austin TX
- Dybala KE, Eadie JM, Gardali T, Seavy NE, Herzog MP (2011) Age-structure matters: Adults and juveniles respond differently to climate change. American Ornithologists' Union Annual Meeting, Jul 24-29, Jackson FL
- Dybala KE (2011) Age matters: Adults and juveniles respond differently to a changing climate. George Wright Society Conference on Parks, Protected Areas, and Cultural Sites, Mar 14-18, New Orleans LA
- Dybala KE (2011) Effects of weather on survival rates in Song Sparrows. Bay Area Conservation Biology Symposium, Feb 12, Berkeley CA
- Dybala KE (2011) Effects of weather on survival rates in Song Sparrows. National Park Service San Francisco Bay Area Network Natural Resource and Science Symposium, Feb 8, San Francisco CA
- 2010 Dybala KE, Gardali T, Eadie JM. Seasonal variation in survival rates in a non-migratory passerine. Joint Meeting of the Cooper Ornithological Society, American Ornithologists' Union, and Society for Canadian Ornithologists, Feb 7-11
- 2009 Dybala KE (2009) A study of post-fledging survival in Song Sparrows using radio telemetry. Western Bird Banding Association Annual Meeting, Aug 29

SOFTWARE

- 2023 Dybala KE (2023) DeltaMultipleBenefits: Projecting the Multiple Benefits of Land Cover Change in the Sacramento-San Joaquin River Delta. *Zenodo*. DOI: 10.5281/zenodo.7718620

- 2018 Dybala KE (2018) bioenergmod: Bioenergetics modeling (Version 1.0.0). *Zenodo*. DOI: 10.5281/zenodo.1186370


2016 [Dybala KE \(2016\) pbdistance: R package for point count data analysis](#)


PROFESSIONAL SERVICE & LEADERSHIP

2018-21 Staff liaison, Point Blue Conservation Science Science Advisory Committee
2017-20 Chair, Migratory Bird Conservation Partnership Science Committee
2016-20 Associate Editor, Condor
2016-17 Steering Committee, Riparian Summit 2017
2008-09 President, Davis chapter, Society for Conservation Biology
2007-12 Founder and Director, UC Davis Graduate Student Symposium in Ecology
Referee *Global Change Biology, Ecology Letters, Ecology, American Naturalist, Frontiers in Ecology and Evolution, Biological Conservation, Oecologia, Biodiversity and Conservation, PLOS One, Condor, Journal of Animal Ecology, Ibis, Journal of Field Ornithology, Western Birds, Zoological Studies, Ecological Indicators, Conservation Science and Practice*

GRADUATE STUDENT MENTORSHIP

2021- Preston Duncan; Master's thesis committee, San Francisco State University, Department of Geography and Environment
2020- Sherilyn Reinhart; Master's thesis committee, San Jose State University, Department of Environmental Studies
2019-22 Autumn Iverson; Doctoral thesis committee and qualifying exam committee, University of California, Davis, Graduate Group in Ecology
2021-22 Andrew Meador; Master's thesis committee, University of California, Berkeley
2019-20 Britta Dosch, Master of Environmental Management; Capstone project advisor, Yale University, School of Forestry and Environmental Studies

TEACHING EXPERIENCE AND CURRICULUM DEVELOPMENT

2006-09 Laboratory in the Biology and Conservation of Wild Birds, University of California, Davis (2006, 2007, 2009)

PROFESSIONAL DEVELOPMENT

2019 Bayesian Modeling for Socio-Environmental Data. SESYNC, Annapolis, MD.
2014 Bay Area Postdocs: Workshop on Scientific Teaching, San Francisco, CA
2013 NCEAS Summer Institute for Early-Career Researchers, Santa Barbara, CA

PERMITS & CERTIFICATIONS

Certified Bander Trainer, Passerines and near passerines, North American Banding Council

Federal Bird Banding sub-permittee, Bird Banding Laboratory, U.S. Geological Survey
HAZWOPER