

## Daniel S. Karp

Wildlife, Fish, and Conservation Biology  
University of California, Davis  
1071 Academic Surge  
One Shields Ave  
Davis, CA 95616-8627

office: (530) 752-2108 • cell: (530) 219-9868

email: [dkarp@ucdavis.edu](mailto:dkarp@ucdavis.edu) • website: <http://karp.ucdavis.edu> • twitter: @dskarp

### **CURRENT POSITION**

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2017-present Assistant Professor, University of California Davis  
Department of Wildlife, Fish, & Conservation Biology

### **PREVIOUS POSITION**

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2015-2016 Killam Postdoctoral Fellow, The University of British Columbia  
Institute for Resources, Environment, and Sustainability  
Advisor: Kai Chan

2013-2015 NatureNet Science Fellow, The Nature Conservancy & UC Berkeley  
Department of Environmental Science, Policy, and Management  
Advisors: Claire Kremen, Mary Ruckelshaus, and Peter Kareiva

### **EDUCATION**

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2009-2013 PhD, Biology- Ecology and Evolution, Stanford University  
Advisor: Gretchen Daily

2005-2009 BS, Biology- Ecology and Evolution Track, Stanford University  
BS, Earth Systems- Biosphere Concentration, Stanford University  
Advisors: Terry Root and Rodolfo Dirzo

### **CURRENT RESEARCH**

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Earth is experiencing more rapid changes now than at any time in the past ten thousand years. I am investigating the resulting trajectories of change in biodiversity and Earth's life-support systems. Looking forward, a key challenge for humanity is to increase food production, while at the same time securing other vital societal benefits from rural landscapes. Meeting this challenge requires improved understanding of how agricultural practices affect yields, biodiversity, and ecosystem services. My research thus focuses on developing methods for reconciling conservation activities with food production practices. My research program has four aspects. First, I develop and apply ecological theory to understanding and managing biodiversity in working landscapes. Second, I quantify the effects of alternative agricultural practices on biodiversity-mediated ecosystem services. Third, I investigate how identifying tradeoffs among biodiversity and ecosystem services can inform development of multifunctional landscapes. Finally, I work with international experts to synthesize science and guide policy.

### **TEACHING EXPERIENCE**

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2018-present Instructor, Tropical Ecology and Conservation (WFC 125).

2017-present Instructor, Conservation Biology (WFC 154).

2017 Co-instructor, BioControl: Ecology & Applications (ECL 290, graduate seminar).

2010 Teaching Assistant, Human Evolution and the Environment (Bio 1).

- 2010 Teaching Assistant, Core Experimental Biological Laboratory (Bio 44Y).  
2010 Teaching Assistant, Conservation Biology (Bio 144).  
2009 Teaching Assistant, Biology of Birds (Bio 139).

## **MENTORING EXPERIENCE**

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### *Postdocs*

- 2021-present Mahdieh Tourani, Postdoctoral Researcher  
2020-present Jason Riggio, Postdoctoral Researcher  
2019-present Naresh Devarajan, Postdoctoral Researcher  
2019-2021 Daniel Paredes, Postdoctoral Researcher  
2017-2020 Elissa Olimpi, Postdoctoral Researcher

### *Graduate Students*

- 2019-present Katherine Lauck, PhD student (supervisor).  
2017-present Alison Ke, PhD student (supervisor).

### *Graduate Student Committees*

- 2021 Michael Ellis (external qualifying exam committee member)  
2020-present Maria Ospina (qualifying exam and dissertation committee)  
2020 Breanna Martinico (qualifying exam committee)  
2020 Aviv Karasov-Olson (qualifying exam committee)  
2017-present Emelie Graves (qualifying and dissertation exam committees)  
2017-present Daniel Rocha (guidance, qualifying, and dissertation exam committees)  
2015-2019 Alejandra Echeverri Ochoa (qualifying and dissertation exam committees)  
2017-2019 Mickey Agha (qualifying and dissertation exam committees)  
2019 Valerie Linden (external evaluator; dissertation exam committee)  
2019 Meredith Lutz (qualifying exam committee)  
2018 Allie Essert (qualifying exam committee)  
2017 Michael Culshaw-Maurer (qualifying exam committee)

### *Undergraduates*

- 2020-2021 Thomas Phillips, Kees Hood, Katia Goldberg  
2019-2020 Alice Mathew, Kathleen Mendez, Sophie Borison, Thomas Phillips  
2018-2019 Janie Paz, Kathleen Cotti, Kimberly Luke, Adam Humphrey, Sophie Borison  
2017-2018 Hallie Daly, Delayni Miller, Victoria Glynn, Eavan Barbieux  
2015-2016 William Ou  
2013-2014 Mia Waters, Sara Winesemias  
2012-2013 Sarah Kaewert  
2011-2012 Florence Rutsch, Maesen Churchill, Seth Judson, Zoe Dubrow  
2010-2011 Steve Scheele

## **SYNERGISTIC ACTIVITIES**

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- 2018-present **Review Editor**, Frontiers in Sustainable Food Systems.  
2018-present **Science Advisory Team**, Wildlife Insights. Joined a collaborative effort to compile global camera trap data into one database to inform biodiversity monitoring. Working with colleagues to use these data to track changes in mammal/bird diversity in tropical protected areas. Also, recruited and now co-advise a postdoctoral scholar tasked with analyzing global camera trap data and producing occupancy analytics for the Wildlife Insights Platform.  
2017-present **Co-Chair of Wildlife, Fish, and Conservation Biology Seminar Series**, UC Davis. With Pernille Boving, created a bi-weekly seminar series for the

- department of Wildlife, Fish, and Conservation Biology. Engaged students, postdocs, and faculty to build community and enhance WFCB visibility.
- 2017-present **Student Blog Curator**, UC Davis. Created and now curates an outward facing blog— The Student Conservation Corner ([www.medium.com/student-conservation-corner](http://www.medium.com/student-conservation-corner))— where undergraduate students communicate conservation literature to the public.
- 2017-present **Outreach and workshops**. Helped organize or present at >10 workshops in Costa Rica and California for farmers, conservationists, and industry officials, reaching >900 stakeholders.
- 2017-2020 **Faculty Advisor of the Graduate Group of Ecology's Diversity Committee**, UC Davis. One of two faculty members of a committee charged with fostering diversity and promoting inclusivity in the UC Davis ecology community.
- 2010-present **Ecosystem Services Working Group Member**, Group on Earth Observations— Biodiversity Observation Network (GEO BON). Member of a working group designed to monitor and report changes in ecosystem services from local to global scales. Helped write manuscripts and designed research aimed at reporting ecosystem services at national scales.
- 2018 **Symposium Organizer**, American Ornithological Society. Organized a symposium focused on avian responses to environmental gradients in the tropics at the annual American Ornithological Society conference.
- 2014-2017 **Pest Control Working Group Co-Lead**, National Socio-Environmental Synthesis Center (SESYNC). With Rebecca Chaplin-Kramer, organized international working group of ecologists, entomologists, economists, and sociologists to develop a general, spatial model for biological control. Responsible for all team leadership activities, including securing funding and coordinating bi-annual meetings, research activities, syntheses of pest control data, dissemination of findings, and outreach.
- 2010-present **Peer reviewer**. Contributed peer reviews to >65 grants and academic articles for journals including *Nature*, *Ecology Letters*, *PNAS*, and others.
- 2016-2018 **Science Advisory Board**, The Nature Conservancy's Working Lands Program. Member of an advisory board tasked with reviewing the evidence that a variety of agricultural practices increase biodiversity, ecosystem services, and/or crop yields in Mediterranean ecosystems.
- 2012-2013 **Rising Environmental Leaders Program**, Woods Institute for the Environment. Trained in environmental leadership including crafting policy-informative research, communication skills, and strategies for integrating research into policy with a cohort of 24 students. Attended meetings in California and in Washington, DC.

## **COMMITTEES**

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- 2020-present Admissions Committee (*Graduate Group in Ecology*), vice-chair
- 2020-present Executive Committee (*Graduate Group in Ecology*), member
- 2017-present Admissions Committee (*Graduate Group in Ecology*), member
- 2017-present Seminar Committee (*department*), chair
- 2019-present Library Representative (*department*), chair
- 2018-present Endowment and Scholarship Committee (*department*), member
- 2017-present Wildlife Society Student Chapter (*department*), member
- 2018-2019 Swift Award Committee (*department*), member
- 2020 Visioning Committee for Agriculture Sustainability Institute (college), member
- 2017-2020 Diversity Committee (*Graduate Group in Ecology*), faculty mentor
- 2019 Faculty Search Committee- Professor of Wildlife Teaching (*department*), member
- 2018 Space Committee (*department*), member

2018 Curriculum Committee (*department*), member  
 2018 Faculty Search Committee- Wildlife Habitat Ecologist (*department*), member  
 2017 Strategic Vision Committee (*department*), member

## GRANTS

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2020-present USDA Food and Agriculture Cyberinformatics and Tools Initiation (co-PI; \$282,648 to UC Davis; \$877,990 for full award)  
 2020-present Conservation International Wildlife Insights Program (PI; \$68,688)  
 2020-present National Geographic Committee for Research and Exploration (PI; \$17,100)  
 2019-present UC Davis Academic Senate (PI: \$24,984)  
 2019-present NSF and the Belmont Forum (Co-PI: \$179,542)  
 2018-present NSF Coupled Human Natural Systems (Co-PI; \$140,081 to UC Davis; \$1,301,737 for the full award)  
 2018-present USDA Agricultural Research Service (PI; \$222,053)  
 2019-2021 Center for Produce Safety (PI; \$290,678)  
 2017-2021 USDA Bioenergy, Natural Resources, and Environment Program (PI; \$500,000)  
 2017-2019 National Geographic Committee for Research and Exploration (PI; \$20,850)  
 2015-2016 Killam Postdoctoral Research Fellowship (\$100,000)  
 2013-2014 NatureNet Science Fellow, The Nature Conservancy (\$200,000)  
 2013 Stanford BioSciences Travel Grant (\$500)  
 2013 Stanford Biology Department Travel Grant (\$600)  
 2012 NSF Doctoral Dissertation Improvement Grant (\$15,000)  
 2012 Stanford Biology Department Travel Grant (\$750)  
 2012 Organization for Tropical Studies Research Fellowship Program (\$3,650)  
 2012 Bat Conservation International Student Scholarship (\$3,600)  
 2012 SciFund Challenge (\$1,100)  
 2011-2013 NSF Graduate Research Fellowship (\$180,000)  
 2011 Vice Provost of Graduate Education SCORE grant (\$2,000)  
 2008 Tambopata Experienced Researcher Fellowship (\$5,000)  
 2008 Stanford University Major Grant (\$5,200)  
 2007 Tambopata Research Fellowship (\$5,000)  
 2007 Monica Miller Walsh Internship Grant (\$2,150)  
 2007 Stanford University Quarterly Grant (\$1,500)

## HONORS AND FELLOWSHIPS

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2018 Nominated by UC Davis for Packard Early Career Fellowship.  
 2015 Killam Postdoctoral Research Fellowship, Killam Trusts Office.  
 2014 Hann Endowed Lecture of Ornithology, University of Michigan.  
 2014 Faculty of 1000, Nomination of 2012 Ecology Letters paper.  
 2014 Early Career Scientist Symposium, University of Michigan.  
 2013 Davidson-Cristoph Award, Organization for Tropical Studies  
 2013 NatureNet Science Fellowship, Inaugural class  
 2012 Best Talk Award, North American Congress for Conservation Biology  
 2010 Graduate Research Fellowship, NSF  
 2010 Excellence in Teaching Award, Biology Department-Stanford University  
 2009 JE Sterling Award for Scholastic Achievement, Stanford University  
 2009 Firestone Medal for Undergraduate Research, Stanford University  
 2009 Miller-Marsden Prize for Environmental Research, Stanford University  
 2009 Dean's Award for Academic Achievement, School of Earth Sciences  
 2009 Honorable Mention Graduate Research Fellowship, NSF  
 2007 Award for Excellence in Biological Laboratory, Stanford University

2006 President's Award for Academic Excellence, Stanford University

**PUBLICATIONS (\* = shared first authorship)**

- Samaddar, S., **D.S. Karp**, R. Schmidt, N. Devarajan, J.A. McGarvey, A. Pires, and K. Scow. (In Press) Role of soil in the regulation of human and plant pathogens: soils' contributions to People. *Philosophical Transactions of the Royal Society B*.
- Devarajan, N., J. McGarvey, K.M. Scow, M.S. Jones, S. Lee, S. Samaddar, R. Schmidt, T. Tran, and **D.S. Karp** (In Press) Cascading effects of composts and cover crops on soil chemistry, bacterial communities, and the survival of foodborne pathogens. *Journal of Applied Microbiology*.
- Echeverri\*, A., **D.S. Karp\***, L.O. Frishkoff, J. Krishnan, R. Naidoo, J. Zhao, and K.M.A. Chan (2021) Avian cultural services peak in tropical wet forests. *Conservation Letters* **14**: e12763.
- Bay, R.A., **D.S. Karp**, J.F. Saracco, W.R.L. Anderegg, L. Frishkoff, D. Wiedenfeld, T.B. Smith, and K. Rugg. (2021) Genetic variation reveals individual-level climate tracking across the full annual cycle of a migratory bird. *Ecology Letters* **24**: 819-828.
- D. Paredes, J.A. Rosenheim, R. Chaplin-Kramer, S. Winter, and **D.S. Karp** (2021). Landscape simplification increases vineyard pest outbreaks and insecticide use. *Ecology Letters* **14**: 73-83.
- Tamburini, G., G. Santoiemma, M. O'Rourke, R. Bommarco, R. Chaplin-Kramer, M. Dainese, **D.S. Karp**, T.N. Kim, E.A. Martin, M. Peterson, and L. Marini (2020) Species traits elucidate crop pest response to landscape composition: a global analysis. *Proceedings of the Royal Society: B* **287**: 20202116.
- Garcia, K., E.M. Olimpi, **D.S. Karp**, and D.J. Gonthier (2020) The good the bad and the risky: can birds be incorporated as biological control agents into integrated pest management programs. *Journal of Integrated Pest Management* **11**: 1-11.
- Olimpi, E.M., K. Garcia, D. Gonthier, K.T. De Master, A. Echeverri, C. Kremen, A.R. Sciligo, W.E. Snyder, E. Wilson-Rankin, and **D.S. Karp** (2020) Shifts in species interactions and farming contexts mediate net effects of birds in agroecosystems. *Ecological Applications* **30**: e02115.
- Echeverri, A., **D.S. Karp**, R. Naidoo, J.A. Tobias, J. Zhao, and K. Chan (2020) Can avian functional traits predict cultural ecosystem services? *People and Nature* **2**: 138-151.
- González-Chang, M., S.D. Wratten, M.W. Shields, R. Costanza, M. Dainese, G.M. Gurr, J. Johnson, **D.S. Karp**, J.W. Ketelaar, J. Nboyine, J. Pretty, R. Rayl, H. Sandhu, M. Walker, and W. Zhou (2020) Understanding the pathways from biodiversity to agro-ecological outcomes: a new, interactive approach. *Agriculture, Ecosystems, and the Environment* **301**: 107053.
- Olimpi, E.M., P. Baur, D. Gonthier, **D.S. Karp**, C. Kremen, A. Sciligo, and K.T. De Master (2019) Evolving food safety pressures in California's Central Coast region. *Frontiers in Sustainable Food Systems* **3**:102.
- Dainese, M., E.A. Martin, M.A. Aizen, M. Albrecht, I. Bartomeus, R. Bommarco, L.G.

- Carvalho, R. Chaplin-Kramer, V. Gagic, L.A. Garibaldi, J. Ghazoul, H. Grab, Mattias Jonsson, **D.S. Karp**, C.M. Kennedy, D. Kleijn, C. Kremen, D.A. Landis, D.K. Letourneau, L. Marini, K. Poveda, R. Rader, H.G. Smith, T. Tschardtke, G.K.S. Andersson, I. Badenhauer, S. Baensch, A.D.M. Bezerra, F.J.J.A. Bianchi, V. Boreux, V. Bretagnolle, B. Caballero-Lopez, P. Cavigliasso, A. Ćetković, N.P. Chacoff, A. Classen, S. Cusser, F.D. da Silva e Silva, G.A. de Groot, J. H. Dudenhöffer, J. Ekroos, T. Fijen, P. Franck, B.M. Freitas, M.P.D. Garratt, C. Gratton, J. Hipólito, A. Holzschuh, L. Hunt, A.L. Iverson, S. Jha, T. Keasar, T.N. Kim, M. Kishinevsky, B.K. Klatt, A.-M. Klein, K.M. Krewenka, S. Krishnan, A.E. Larsen, C. Lavigne, H. Liere, B. Maas, R.E. Mallinger, E.M. Pachon, A. Martínez-Salinas, T.D. Meehan, M.G.E. Mitchell, G.A.R. Molina, M. Nesper, L. Nilsson, M.E. O'Rourke, M.K. Peters, M. Plečaš, S.G. Potts, D.L. Ramos, J.A. Rosenheim, M. Rundlöf, A. Rusch, A. Sáez, J. Scheper, M. Schleuning, J. Schmack, A.R. Sciligo, C. Seymour, D.A. Stanley, R. Stewart, J.C. Stout, L. Sutter, M.B. Takada, H. Taki, G. Tamburini, M. Tschumi, B.F. Viana, C. Westphal, B.K. Willcox, S.D. Wratten, A. Yoshioka, C. Zaragoza-Trello, W. Zhang, Y. Zou, and I. Steffan-Dewenter (2019) A global synthesis reveals biodiversity-mediated benefits for crop production. *Science Advances* **5**: eaax0121.
- Mastrángelo, M.E., N. Perez-Harguindeguy, L. Enrico, E. Bennett, S. Lavorel, G.S. Cumming, D. Abeygunawardane, L.D. Amarilla, B. Burkhard, B.N. Egoh, L.O. Frishkoff, L. Galetto, S. Huber, **D.S. Karp**, A. Ke, E. Kowaljow, A. Kronenburg-García, B. Locatelli, B. Martín-López, P. Meyfroidt, T.H. Mwampamba, J. Nel, K.A. Nicholas, C. Nicholson, E. Oteros-Rozas, S.J. Rahlao, C. Raudsepp-Hearne, T. Ricketts, U.B. Shrestha, C. Torres, K.J. Winkler, and K. Zoeller (2019) Key knowledge gaps to achieve global sustainability goals. *Nature Sustainability* **2**: 1115-1121.
- Shackelford, G., R. Kelsey, W. Sutherland, C.M. Kennedy, S. Wood, S. Gennet, **D.S. Karp**, C. Kremen, N. Seavy, J. Jedlicka, K. Gravuer, S. Kross, D. Bossio, A. Muñoz-Sáez, D. Griffin, K. Garbach, L. Ford, M. Felice, M. Reynolds, D. Rao, K. Boomer, G. LeBuhn, and L. Dicks (2019) Evidence synthesis as the basis for decision analyses: a method of selecting the best agricultural practices for multiple ecosystem services. *Frontiers in Sustainable Food Systems*. **3**: 83.
- Chaplin-Kramer, R., M. O'Rourke, N. Schellhorn, W. Zhang, B. Robinson, C. Gratton, J.A. Rosenheim, T. Tschardtke, and **D.S. Karp** (2019) Measuring what matters: actionable information for conservation biocontrol in multifunctional landscapes. *Frontiers in Sustainable Food Systems*. **3**: 60.
- Echeverri, A., L.O. Frishkoff, J.P. Gomez, J.R. Zook, P. Juárez, R. Naidoo, K.M.A. Chan, and **D.S. Karp** (2019) Precipitation and tree cover gradients structure avian alpha-diversity in Northwestern Costa Rica. *Diversity and Distributions*. **25**: 1222-1233.
- Gonthier, D., A. Sciligo, **D.S. Karp**, A. Lu, K. Garcia, G. Juarez, T. Chiba, and C. Kremen (2019) Bird services and disservices to strawberry farming in Californian agricultural systems. *Journal of Applied Ecology*. **56**: 1948-1959.
- Karp, D.S.**, A. Echeverri, J. Zook, P. Juárez, A. Ke, J. Krishnan, K.M.A. Chan, and L.O. Frishkoff (2019) Remnant forest on private land fosters Neotropical bird communities that are indistinguishable from formal reserves. *Journal of Applied Ecology*. **56**: 1839-1849.
- Frishkoff, L.O. and **D.S. Karp** (2019) Species-specific responses to habitat conversion across scales synergistically restructure Neotropical bird communities. *Ecological Applications* **29**: e01910.

- Frishkoff, L.O., A. Ke, I. Martins, E. Olimpi, and **D.S. Karp** (2019) Countryside Biogeography: The controls of species distributions in human-dominated landscapes. *Current Landscape Ecology Reports* **4**: 15-30.
- Echeverri, E., R. Naidoo, **D.S. Karp**, K.M.A. Chan, and J. Zhao (2019) Iconic manakins and despicable grackles: comparing bird-related cultural ecosystem services across birdwatchers, farmers, and urbanites in Northwestern Costa Rica. *Ecological Indicators* **106**:105454.
- Dinat, D., A. Echeverri, M. Chapman, **D.S. Karp**, and T. Satterfield (2019) Eco-xenophobia among rural populations: the Great-tailed Grackle as a contested species in Guanacaste, Costa Rica. *Human Dimensions of Wildlife*. **24**: 332-348.
- Jones, M.S., Z. Fu, J.P. Reganold, **D.S. Karp**, T.E. Besser, J.M. Tylanakis, and W.E. Snyder (2019) Organic farming promotes biotic resistance to food-borne human pathogens. *Journal of Applied Ecology* **56**: 1117-1127.
- Paredes, D., **D.S. Karp**, R. Chaplin Kramer, E. Benítez, and M. Campos (2019) Natural habitat increases the economic value of natural pest control in olive groves. *Journal of Pest Science* **92**: 1111-1121.
- Maas, B., S. Heath, I. Grass, C. Cassano, A. Classen, D. Faria, P. Gras, K. Williams-Guillén, M. Johnson, **D. S. Karp**, V. Linden, A. Martínez-Salinas, J. Schmack, and Sara Kross (2019) Experimental field enclosure of birds and bats in agricultural systems - methodological insights, potential improvements, and cost-benefit trade-offs. *Basic and Applied Ecology* **35**: 1-12.
- Karp, D. S.**, R. Chaplin-Kramer, T. D. Meehan, E. A. Martin, F. DeClerck, H. Grab, C. Gratton, L. Hunt, A. E. Larsen, A. Martínez-Salinas, M. E. O'Rourke, A. Rusch, K. Poveda, M. Jonsson, J. A. Rosenheim, N. A. Schellhorn, T. Tschardtke, S. D. Wratten, W. Zhang, A. L. Iverson, L. S. Adler, M. Albrecht, A. Alignier, G. M. Angelella, M. Zubair Anjum, J. Avelino, P. Batáry, J. M. Baveco, F. J. J. A. Bianchi, K. Birkhofer, E. W. Bohnenblust, R. Bommarco, M. J. Brewer, B. Caballero-López, Y. Carrière, L. G. Carvalheiro, L. Cayuela, M. Centrella, A. Četković, D. C. Henri, A. Chabert, A. C. Costamagna, A. De la Mora, J. de Kraker, N. Desneux, E. Diehl, T. Diekötter, C. F. Dormann, J. O. Eckberg, M. H. Entling, D. Fiedler, P. Franck, F. J. Frank van Veen, T. Frank, V. Gagic, M. P. D. Garratt, A. Getachew, D. J. Gonthier, P. B. Goodell, I. Graziosi, R. L. Groves, G. M. Gurr, Z. Hajian-Forooshani, G. E. Heimpel, J. D. Herrmann, A. S. Huseeth, D. J. Inclán, A. J. Ingrao, P. Iv, K. Jacot, G. A. Johnson, L. Jones, M. Kaiser, J. M. Kaser, T. Keasar, T. N. Kim, M. Kishinevsky, D. A. Landis, B. Lavandero, C. Lavigne, A. Le Ralec, D. Lemessa, D. K. Letourneau, H. Liere, Y. Lu, Y. Lubin, T. Luttermoser, B. Maas, K. Mace, F. Madeira, V. Mader, A. M. Cortesero, L. Marini, E. Martinez, H. M. Martinson, P. Menozzi, M. G. E. Mitchell, T. Miyashita, G. A. R. Molina, M. A. Molina-Montenegro, M. E. O'Neal, I. Opatovsky, S. Ortiz-Martinez, M. Nash, Ö. Östman, A. Ouin, D. Pak, D. Paredes, S. Parsa, H. Parry, R. Perez-Alvarez, D. J. Perović, J. A. Peterson, S. Petit, S. M. Philpott, M. Plantegenest, M. Plečáň, T. Pluess, X. Pons, S. G. Potts, R. F. Pywell, D. W. Ragsdale, T. A. Rand, L. Raymond, B. Ricci, C. Sargent, J.-P. Sarthou, J. Saulais, J. Schäckermann, N. P. Schmidt, G. Schneider, C. Schüepp, F. S. Sivakoff, H. G. Smith, K. Stack Whitney, S. Stutz, Z. Szendrei, M. B. Takada, H. Taki, G. Tamburini, L. J. Thomson, Y. Tricault, N. Tsafack, M. Tschumi, M. Valantin-Morison, M. Van Trinh, W. van der Werf, K. T. Vierling, B. P. Werling, J. B. Wickens, V. J. Wickens, B. A. Woodcock, K. Wyckhuys, H. Xiao, M.

- Yasuda, A. Yoshioka, and Y. Zou. (2018) Crop pests and predators exhibit inconsistent responses to surrounding landscape composition. *Proceedings of the National Academy of Sciences* **115**: E7863-E7870. **Cover Article.**
- Anderegg, W.R.L., A.G. Konings, A.T. Trugman, K. Yu, D.R. Bowling, **D.S. Karp**, S. Pacala, J.S. Sperry, and B. Sulman (2018) Hydraulic diversity of forests regulates ecosystem resilience during drought. *Nature* **561**: 538-541.
- Frishkoff, L.O., A. Echeverri, K.M.A. Chan, and **D.S. Karp** (2018) Do correlated responses to multiple environmental changes exacerbate or mitigate species loss? *Oikos* **127**: 1724-1734. **Cover Article.**
- Echeverri, A., **D. S. Karp**, R. Naidoo, J. Zhao, and K.M.A. Chan (2018) Approaching human-animal relationships from multiple angles: a synthetic perspective. *Biological Conservation*: **224**: 50-62.
- Karp, D.S.**, L.O. Frishkoff, A. Echeverri, J. Zook, P. Juárez, and K.M.A. Chan (2018) Agriculture erases climate-driven  $\beta$ -diversity in Neotropical bird communities. *Global Change Biology* **24**: 338-349.
- Stegner, M.A., **D.S. Karp**, A.J. Rominger, and E.A. Hadly (2017) Can protected areas really maintain mammalian diversity? Insights from a nestedness analysis of the Colorado Plateau. *Biological Conservation* **209**: 546-553.
- Turcotte, M.M., Araki, H., **Karp, D.S.**, Poveda, K., and Whitehead, S.R. The eco-evolutionary impacts of domestication and agricultural practices on wild species. (2017) *Philosophical Transactions of the Royal Society B* **372**: 20160033.
- Tscharntke, T., **D.S. Karp**, R. Chaplin-Kramer, P. Bártary, F. DeClerk, C. Gratton, L. Hunt, A. Ives, M. Jonsson, A. Larsen, E.A. Martin, A. Martínez-Salinas, T.D. Meehan, M. O'Rourke, K. Poveda, J.A. Rosenheim, A. Rusch, N. Schellhorn, T.C. Wanger, S. Wratten, and W. Zhang (2016) When natural habitat fails to enhance biological pest control- five hypotheses. *Biological Conservation* **204**: 449-458.
- Karp, DS**, R. Moses, S. Gennet, M. Jones, S. Joseph, L.K. M'Gonigle, L.C. Ponisio, W.E. Snyder, and C. Kremen. (2016) Agricultural practices for food safety threaten pest-control services to fresh produce. *Journal of Applied Ecology* **53**: 1402-1412.
- Balvanera, P., S. Quijas, **D.S. Karp**, N. Ash, E. Bennett, R. Boumans, C. Brown, K. Chan, R. Chaplin-Kramer, B.S. Halpern, J. Honey-Roses, C.K. Kim, W. Cramer, M.J. Martínez-Harms, H. Mooney, T. Mwampamba, J. Nel, S. Polasky, B. Reyers, J. Roman, W. Turner, R.J. Scholes, H. Tallis, K. Thonicke, F. Villa, M. Walpole, and A. Walz. (2016) Ecosystem Services. In: GEO Handbook on Biodiversity Observation Networks. Springer pp. 39-78.
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### **PUBLICATIONS IN REVIEW**

- Alexandridis, N., E.A. Martin, G. Marion, R. Chaplin-Kramer, M. Dainese, J. Ekroos, H. Grab, M. Jonsson, **D.S. Karp**, C. Meyer, M. E. O'Rourke, M. Pontarp, K. Poveda, R. Seppelt, H.G. Smith, and Y. Clough (In Review) A review of models of natural pest control: toward predictions across agricultural landscapes. *Biological Control*.
- Balvanera, P., I.R. Geijzendorffer, A. Cord, E.G. Drakou, **D.S. Karp**, B. Martín-López, T.H. Mwampamba, K.A. Brauman, and M. Schröter (In Review) Essential ecosystem service variables for monitoring progress towards sustainability. *Current Opinion in Environmental Sustainability*.
- Smith, O., E.M. Olimpi, N. Navarro-Gonzalez, K. Cornell, L.O. Frishkoff, T.D. Northfield, T.M. Bowles, A. Edworthy, J. Eilers, Z. Fu, K. Garcia, D.J. Gonthier, M.S. Jones, C.M. Kennedy, C.E. Latimer, J.P. Owen, C. Sato, J.M. Taylor, E.E. Wilson-Rankin, W.E. Snyder, **D.S. Karp**. (In Review) A trait-based framework for predicting foodborne pathogen spillover from wild birds. *Ecological Applications*.

E.M. Olimpi, K. Garcia, D.J. Gonthier, C. Kremen, W.E. Snyder, E.E. Wilson-Rankin, and **D.S. Karp**. (In Review) Farmland diversification shapes tradeoffs and synergies in bird-mediated ecosystem services and disservices. *Science Advances*.

Chapman, M., S. Wiltshire, P. Baur, T.M. Bowles, L. Carlisle, F. Castillo, K. Eszquivel, A. Iles, D.S. Karp, C. Kremen, J.A. Liebert, E.M. Olimpi, J. Ory, M. Ryan, A.R. Sciligo, J. Thompson, H. Waterhouse, S. Gennet, and C. Boettiger. (In Review) Tipping points in diversified farming systems. *Proceedings of the National Academy of Sciences USA*.

Paredes, D., J.A. Rosenheim, and **D.S. Karp**. (In Review) The causes and consequences of pest population stability in agricultural landscapes. *Science*.

## **POPULAR PUBLICATIONS**

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Garcia, K., E.M. Olimpi, **D.S. Karp**, and D.J. Gonthier (2020) Birds, bugs, and agriculture: is it a sin to kill a mockingbird? *Entomology Today*. Entomological Society of America.

A. Echeverri, **D.S. Karp**, and J. Tobias (2020) Loved or loathed: Why are some Neotropical birds more popular than others. *Neotropical Birding*.

**D.S. Karp** and A. Echeverri. (2019) Forest patches in working landscapes offer surprising opportunities to conserve neotropical birds. *The Applied Ecologist*. Journal of Applied Ecology Blog. <https://appliedecologistsblog.com/2019/06/27/forest-patches-neotropical-birds/>

**D.S. Karp**, S. Gennet, and R. Kelsey (2014) Can we grow safe produce and conserve nature at the same time? *Cool Green Science*. The Nature Conservancy. <http://blog.nature.org/science/2014/12/15/safe-produce-conservation-nature-wildlife-ecoli-habitat-foodborne>

L.O. Frishkoff and **D.S. Karp** (2014) Preserving evolutionary history alongside tropical agriculture. *Landscapes Blog for People, Food, and Nature*. EcoAgricultural Partners. <http://peoplefoodandnature.org/blog/preserving-evolutionary-history-alongside-tropical-agriculture/>

**D.S. Karp** (2014) Discovering abundance in own backyard. *Field Notes*. Peninsula Open Space Trust. <http://blog.openspacetrust.org/2014/06/26/abundance-in-our-backyard/>

Keyes, S.M. and **D.S. Karp**. (2014) The Bard's Birds. *The Pacific Standard*. <http://www.psmag.com/navigation/nature-and-technology/shakespeare-fanatic-introduced-bards-birds-america-82279/>

**Karp, D.S.** (2012) Big farms, small farms, and biodiversity. *Landscapes Blog for People, Food, and Nature*. EcoAgricultural Partners. [http://blog.ecoagriculture.org/2012/09/19/ccb\\_birds/](http://blog.ecoagriculture.org/2012/09/19/ccb_birds/)

**Karp, D.S.** (2011) Birds, bats, and the berry borer: Conserving insectivores and pest control services in Costa Rican coffee plantations. *Amigos Newsletter N76*: 6-7.

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## **INVITED TALKS**

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2021 Kellogg Biological Station, Michigan State University  
 2021 Department of Wildlife, Fish, and Conservation Biology, University of California, Davis  
 2021 Project Director's Meeting, United States Department of Agriculture  
 2020 Beyond Environmental Science Series, Webinar  
 2020 UC Davis Environmental Law Symposium, University of California, Davis  
 2020 California District Attorneys Association, Long Beach, California  
 2019 Department of Evolution and Ecology, University of California, Davis  
 2019 Water Control Board, Watsonville, California  
 2019 SINAC and MINEAT, Hojancha, Costa Rica  
 2019 Taylor Farms, Watsonville, California  
 2019 Corredor Biológico Hojancha-Nandayure, Hojancha, Costa Rica  
 2019 Presentation to the Chinese Academy of Agricultural Sciences Delegation, University of California, Davis  
 2018 Project Director's Meeting, United States Department of Agriculture  
 2018 School of Forest Resources and Environmental Science, Michigan Technological University  
 2018 Department of Ecology and Evolutionary Biology, Tulane University  
 2018 Department of Entomology, University of California, Davis  
 2018 Dept. of Wildlife, Fish, & Conservation Biology, University of California, Davis  
 2018 Biological Control Modeling Workshop, Lund University  
 2018 Department of Ecology and Evolutionary Biology, University of Arizona  
 2018 Department of Ecology, Evolution, and Behavior, UT Austin  
 2018 Western Section Student Conclave, The Wildlife Society  
 2017 Project Director's Meeting, United States Department of Agriculture  
 2017 Wildlife, Fish, and Conservation Biology Seminar Series, UC Davis  
 2017 Wildlife Seminar Series, UC Berkeley  
 2016 Canada Wildlife Service, Environment and Climate Change Canada  
 2016 Institute for Resources, Environment, & Sustainability Seminar Series, University of British Columbia  
 2016 Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)  
 2016 Way Cool Seminar Series, Biodiversity Research Centre, University of British Columbia  
 2016 Department of Food Science, Cornell University  
 2015 Department of Wildlife, Fish, and Conservation Biology, UC Davis  
 2015 Department of Anthropology, UC Davis  
 2015 Department of Ecology and Evolutionary Biology, Princeton University  
 2014 Swedish University of Agricultural Sciences  
 2014 Center for Latin American Studies, Stanford University  
 2014 MARINE seminar series, Moss Landing Biological Labs  
 2014 Hann endowed lecture, University of Michigan, Biological Station  
 2014 Early Career Scientist Symposium, University of Michigan.  
 2014 Center for Tropical Research, University of California Los Angeles  
 2014 San Jose State University  
 2014 Essig Museum of Entomology, University of California Berkeley  
 2013 San Francisco State University  
 2009 Achauer Symposium, Stanford University

**CONFERENCE PRESENTATIONS (\* = invited)**

2020 Ecological Society of America  
 2020 Center for Produce Safety Research Symposium

2019 American Ornithological Society\*  
2018 American Ornithological Society\*  
2017 Ecological Society of America\*  
2017 Developing BONs in Latin America, Stanford University\*  
2017 Natural Capital Symposium, Stanford University\*  
2016 North American Ornithological Congress  
2016 Ecological Society of America  
2015 Natural Capital Symposium, Stanford University  
2014 Ecological Society of America  
2013 Association for Tropical Biodiversity and Conservation\*  
2013 All Science Meeting, The Nature Conservancy  
2012 Species Interactions Workshop, Stanford University/UC Santa Cruz  
2012 Ecological Society of America  
2012 North American Congress of the Society for Conservation Biology  
2012 Species Interactions Workshop, Stanford University/UC Santa Cruz  
2011 Ecological Society of America  
2011 Bay Area Conservation Biology Symposium

### **MEDIA AND OUTREACH**

I have worked with the UC Davis and Stanford University press offices to develop releases, and have been interviewed for print, online, television, and radio media. Outlets include Nature News, PBS, and NPR. Articles have been published in English, Spanish, Dutch, and German.