PATRICK HUBER, PH.D

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OBJECTIVE

Using emerging technologies and analytic approaches to bridge the science/policy divide while working at multiple spatial scales towards the development of resilient conservation networks.

AREAS OF INTEREST

Regional conservation planning, reserve design, landscape connectivity, conservation informatics, spatial scale, landscape ecology, reintroductions, compensatory mitigation

EDUCATION

- **Ph.D. in Geography**, 2008
  University of California Davis, Davis, CA
  Dissertation: "The Effects of Spatial and Temporal Scale on Conservation Planning and Ecological Networks in the Central Valley, California"

- **M.A. in Geography**, 2004
  University of California Davis, Davis, CA
  Master's by examination

- **B.A. in Philosophy**, 1993
  University of Chicago, Chicago, IL
  Graduated with General Honors

PROJECTS

UC DAVIS PROJECTS

ICICLE

- ICICLE (Intelligent CI with Computational Learning in the Environment) is a multi-institution collaboration founded to develop AI tools and cyberinfrastructure to support research in animal ecology, digital agriculture, and smart foodsheds. The overall goal of this work is to help support an emerging global Internet of Conservation.
- Role: Site PI, Project Lead, Leadership Committee. I led the smart foodsheds team that developed tools and CI to link land use databases, visualize the data networks, and enable users to query the data.
- Funder: National Science Foundation
- Funding: $20,000,000 ($625,000 at UC Davis)
- Duration: 2021-2025 (3 years)

Growing GRASS

- Growing GRASS (Generalized Regenerative Agriculture Sourcing Specification) is national effort to aid beef and bison growers transition to regenerative production practices. An important component is the development of methods to track practices and outcomes that contribute to biodiversity, carbon, water, and other sustainability goals.
- Role: Site PI, Research Team Lead
- Funder: U.S. Department of Agriculture
- Funding: $35,000,000 ($1,500,000 at UC Davis)
- Duration: 2023-2025 (2 years, DOGE terminated contract early)

Smart & Connected Communities-Research Coordination Network: Developing an Informational Infrastructure for Building Smart Regional Foodsheds

- The goals of the project are to address food system failures, inequities, and other challenges by characterizing the food system within two specific foodsheds: a 6-county Sacramento, California foodshed, and a 7-county Columbus, Ohio foodshed. The primary aims of the RCN are: 1) to better understand the interrelated components and players in the food system; 2) to develop information technologies to capture these relationships and enable information sharing; and 3) to bring food system stakeholders together in two key agricultural regions of

the U.S. to determine ways this information can be used to strengthen regional food systems and provide a blueprint for responding to informatics needs of other communities.
- Role: Co-PI
- Funder: National Science Foundation
- Funding: $666,496
- Duration: 2018-2022 (4 years)

Data Development for SoCal Greenprint
- Worked with The Nature Conservancy to develop and integrate data in support of the "SoCal Greenprint" assessment being conducted for the Southern California Association of Governments (SCAG). The primary focus of this work was the identification and collation of existing conservation priority assessments and habitat models for species that typically require mitigation for impacts. I aided in outreach to the many organizations and diverse stakeholders involved in conservation planning in the SCAG region.
- Role: PI
- Funder: The Nature Conservancy
- Funding: $40,000
- Duration: 2021-2022 (1 year)

Assessment of the Meat Supply Chain in California
- Working with a variety of stakeholders across California's meat supply chain, we assessed the challenges faced by small and medium-scale meat producers and identified opportunities for improvements. We conducted interviews and analyzed their outputs for this process. We developed a set of recommended actions to bring to the California Department of Food and Agriculture and other organizations.
- Role: Key Personnel
- Funder: TomKat Foundation
- Duration: 2020-2021 (1 year)

SGC Project with Department of Water Resources
- This project developed a support and assessment tool to advise the development and evaluation of the San Joaquin Fish Population Enhancement Program and the Urban Streams Restoration Program projects that could be funded by the California Department of Water Resources (DWR). The team provided technical support to scope, design, identify data, evaluate, create the assessment tool, and provide project management for this DWR project. As part of the State of California's work to advance its regional planning support, we coordinated the implementation of this work with DWR, other partners, and contractors.
- Role: PI
- Funder: California Strategic Growth Council
- Funding: $49,900
- Duration: 2019-2020 (13 months)

Bay Area Mitigation Wizard
- This project developed a "Mitigation Wizard" to help transportation agencies assess potential mitigation needs ahead of infrastructure projects and identify areas where these needs might be met most effectively. I worked with The Nature Conservancy and GreenInfo Network to develop inputs and outputs to the tool, updated data for inputs, and developed a potential restoration assessment for the nine-county San Francisco Bay area.
- Role: PI
- Funder: The Nature Conservancy
- Funding: $29,555
- Duration: 2020 (10 months)

South Sacramento and SACOG Region Ecosystem Services Modeling
- There were several goals of these linked projects. One was to provide a systematic assessment of the proposed South Sacramento Habitat Conservation Plan using Marxan software. This would identify "optimal" land use patterns under several scenarios to better understand how an implemented HCP could provide secondary ecosystem service benefits to Sacramento County. Further, we developed a geospatial framework for the full 6-county SACOG region to serve as a foundation for future assessment efforts. Specific sustainability issues and indicators to use in the project were determined in part through collaboration with

regional stakeholders. In addition, we incorporated human health outcomes in the natural resource assessment.
- Role: PI; PI
- Funder: U.S. Environmental Protection Agency, Sacramento Area Council of Governments
- Funding: $593,348; $159,992
- Duration: 2017-2020 (3 years); 2015-2016 (1.5 years)

IRCAD Regional Conservation Assessment Project –
- Worked with the Strategic Growth Council (SGC) and the Conservation Biology Institute (CBI) to develop and test Regional Conservation Assessment methods along with an online platform to be used by public agencies and other organizations to apply these methods in setting regional conservation priorities. These methods and associated support platform combined multiple datasets using an internal framework as well as user-selected weightings to produce spatially-explicit outputs. Two ecoregions (Mojave Desert and Modoc Plateau) served as demonstration pilots for this RCA process and support platform. Conservation priority outputs were produced along with a strategy to apply these tools across all ecoregions in California.
- Role: PI
- Funder: California Strategic Growth Council
- Funding: $30,560
- Duration: 2017-2018 (1 year)

Bay Area Regional Advance Mitigation Planning
- This project was an effort in the 9-county San Francisco Bay Area region to bring planned transportation projects into a regional advance mitigation framework. To develop this program, The Nature Conservancy (TNC) instigated a Technical Advisory Committee (TAC) to work with the Metropolitan Transportation Commission (MTC) and the Congestion Management Agencies from each of the counties. Two pilot projects were launched to develop Regional Conservation Frameworks in Santa Clara County and east Contra Costa and Alameda counties to establish the methods that can be used across the region. I developed estimated impacts from future transportation projects, developed habitat models for mitigation species, and identified potential areas in which to undertake mitigation activities.
- Role: PI
- Funder: The Nature Conservancy
- Funding: $72,745
- Duration: 2016-2019 (3 years)

Banana Sustainability in Ecuador
- Our team worked with a wide group of stakeholders in Ecuador to help assess the current sustainability of banana production and export in the country and develop strategies for future sustainability efforts. We documented important issues and potential sustainability indicators through interviews and literature reviews. We also collected existing data and documented important data gaps.
- Role: Key personnel
- Funder: AGROBAN
- Duration: 2018-2021 (3 years)

SHRP2: Cross-testing Transferability of National Mitigation Planning Tools
- This project is one of three national pilot projects that tested a national mitigation planning tool being developed by ICF. As part of the Eco-Logical program, this project was designed to incorporate ecological needs in the transportation planning process. We evaluated the full suite of road projects in California's U.S. Highway 101 corridor from Santa Barbara and Mendocino counties. We assessed likely mitigation needs using methods previously developed in our work with the RAMP program and compared these with outputs from the national tool. Results both informed national tool development and Caltrans transportation planning in the region.
- Role: Key personnel
- Funder: Transportation Research Board
- Duration: 2013-2014 (18 months)

SR 241 Wildlife Connectivity Assessment
- This project assessed wildlife connectivity across, and the impacts of, a toll road in Orange County, California. Mountain lion GPS-collar data and roadkill data for four large species of mammal were used to assess the impacts of the toll road. Connectivity modeling combined with camera stations and new GPS data modeled wildlife movement in this portion of

southern California. Results have been used to prioritize mitigation actions by the toll road agency and guide their planning for new road projects.
- Role: Key personnel
- Funder: Orange County Transportation Corridor Agencies
- Duration: 2011-2016 (5 years)

Sustainable sourcing for Mars Corp.
- This effort developed a framework for the sustainable sourcing of ingredients in Mars Corp. products. We identified a suite of environmental and social indicators that could be applied globally to various levels in the company's supply chain. We developed a sustainable indicator selection tool using optimization algorithms and an ontology that linked several kinds of data. The tool includes several thousand possible indicators culled from multiple global sustainability assessments.
- Role: Key personnel
- Funder: Mars Corp.
- Duration: 2012-2016 (4 years)

Regional wildlife corridor and habitat connectivity plan
- This project assessed efforts to analyze wildlife connectivity in Caltrans District 5 (the Central Coast region). We compiled existing datasets, identified data gaps, and modeled connectivity as needed. A Marxan land use optimization assessment was undertaken to coalesce multiple regional conservation priorities into a cohesive conservation portfolio. The results have been used by Caltrans in project siting and design to preserve and/or enhance wildlife connectivity in California's Central Coast ecoregion.
- Role: Key personnel
- Funder: Caltrans District 5
- Duration: 2011-2014 (3 years)

Sequoia-Kings Canyon National Parks assessment
- We developed a spatial prioritization framework for the National Park Service to evaluate future management options under climate change. Using a suite of sensitive biological and cultural resources, we conducted an optimization assessment to help identify important areas for management actions, such as prescribed burns. We used models of future climate scenarios to assess potential threats to these identified areas.
- Role: Key personnel
- Funder: National Park Service
- Duration: 2014-2015 (6 months)

Santa Clara River Watershed and Region 5's Socio-Economic Vulnerability Assessment (SEVA)
- This project was launched to develop a framework for assessing the wide array of ecosystem services and threats to the four National Forests in southern California. One portion of the effort identified high priority biodiversity areas within the study area and assessed likely future threats due to fire and climate change. We took a Marxan approach to identify the sites and then applied fire and down-scaled climate models to assess the likely vulnerabilities of these sites in the future.
- Role: Key personnel
- Funder: U.S. Forest Service
- Duration: 2015-2016 (18 months)

Decision Support System Training to Support Improved Conservation in the Face of Climate Change
- This was a Landscape Conservation Cooperative project. We designed habitat modeling and reserve design curricula for both land managers and analysts to aid conservation decision making under climate change. We trained agency staff in the use of this planning software.
- Role: Key personnel. Led development of Marxan component and connectivity modeling.
- Funder: U.S. Fish and Wildlife Service
- Duration: 2013-2014 (1 year)

Tule elk restoration feasibility study
- This project, funded by the U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Rocky Mountain Elk Foundation, was an assessment of and design for the reintroduction of tule elk (*Cervus elaphus nannodes*), an endemic subspecies, to a portion of central Merced County, California. The Year One feasibility study consisted of a habitat suitability analysis to determine high quality elk habitat and potential carrying capacity. The

second part of the study addressed various elk release alternatives. We used a new spatially explicit population model (HexSim) to model potential herd population growth and movement under these release scenarios. The third part of the project assessed the Central Valley for potential tule elk habitat and possible future release sites.
- Role: Key personnel. Designed and implemented the GIS model used in the study and was a primary co-author on the reports.
- Funder: U.S. Fish and Wildlife Service, CA Dept. of Fish and Wildlife, Rocky Mountain Elk Foundation
- Duration: 2007-2011 (5 years)

Regional conservation planning for American Land Conservancy
- This project assessed the Blue Ridge-Berryessa Natural Area for inclusion in a CDFW Conceptual Area Protection Plan. A suite of biodiversity, land use, and recreational factors were combined and weighed using Marxan reserve selection software. This prioritization process shaped the proposed conservation area for the region that was delivered to CDFW for future conservation actions.
- Role: Key personnel
- Funder: American Land Conservancy
- Duration: 2011-2012 (1 year)

Highway 101 wildlife permeability study
- This project combined landscape-scale wildlife connectivity modeling with empirical data collected through trackplates, roadkill data collection, and baited camera stations (implemented by Dr. John Perrine of California Polytechnic State University). It informed Caltrans in future road projects along a roughly 20-mile stretch of Highway 101 in San Luis Obispo County, California.
- Role: Key personnel. Focused on running GIS-based connectivity modeling using both landscape datasets and the collected wildlife data.
- Funder: Caltrans
- Duration: 2010-2011 (1 year)

PROJECTS (ICON – Independent Consulting)

San Joaquin Valley RCIS
- This Regional Conservation Investment Strategy focuses on the low elevation portions of the Central Valley surrounding the San Joaquin River. Helped guide the development of the RCIS planning document, specifically providing input on the ecological features and conservation strategies that were included in the RCIS.
- Role: Steering Committee
- Funder: River Partners
- Funding: $7,500
- Duration: 2023-2025 (2 years)

High Speed Rail and Grasslands Water District
- HSR and GWD settled litigation concerning future impacts in the Merced region, which included HSR conserving 10,000 acres of land in the GWD region. Worked with conservation stakeholders to identify critical features and led a process to identify the most effective locations to meet those goals.
- Role: Analyst/Facilitator
- Funder: California High Speed Rail
- Funding: $10,000
- Duration: 2020-2022 (2 years)

Mitigation Wizard
- This project developed a “Mitigation Wizard” to help transportation agencies assess potential mitigation needs ahead of infrastructure projects and to identify areas where these needs might be met most effectively. Worked with The Nature Conservancy and GreenInfo Network to develop inputs and outputs to the tool, updated data for inputs, and developed a potential restoration assessment for the 9-county San Francisco Bay area.
- Role: Analyst
- Funder: The Nature Conservancy
- Funding: $20,000
- Duration: 2021 (1 year)

PUBLICATIONS AND PAPERS

Benard, M., **P.R. Huber**, V. Nelson. 2005. Quail Ridge Reserve reptiles and amphibians. On-line guide to Quail Ridge UC Reserve natural history, http://nrs.ucdavis.edu/quail/Natural/Natural.htm.

Buschke, F.T., C. Capitani, E.H. Sow, **P.R. Huber**, et al. 2023. Make global biodiversity information useful to national decision-makers. *Nature Ecology & Evolution,* 7:1953–1956. https://doi.org/10.1038/s41559-023-02226-2.

Choe, H., J.H. Thorne, **P.R. Huber**, D. Lee, J.F. Quinn. 2018. Assessing shortfalls and complementary conservation areas for national plant biodiversity in South Korea. PLoS One, 13(2): e0190754. https://doi.org/10.1371/journal.pone.0190754.

Dimock, M.R., C. Riggle, A. Hollander, **P. Huber**, T. Tomich. 2021. *A new era for meat processing in California? Challenges and opportunities to enhance resilience*. Report to the TomKat Foundation.

Greco, S.E., **P.R. Huber**, J. Hobbs, J. Garcia, K. Stromayer, R. Parris. 2009. *Grasslands Ecological Area tule elk reintroduction feasibility study (Year 1 final report)*. Rocky Mountain Elk Foundation, Missoula, MT.

Greco, S.E., **P.R. Huber**, J. Hobbs, J. Garcia, K. Stromayer, R. Parris. 2011. *Grasslands Ecological Area tule elk reintroduction feasibility study: implementation alternatives & management guidelines (Year 2 final report)*. Rocky Mountain Elk Foundation, Missoula, MT.

Greco, S.E., **P.R. Huber**, R.C. Roberts. 2023. *Informing Reforestation Strategy for the Mendocino National Forest: Integrating climate change into management planning of the North Shore Restoration Project (NSRP)*. Report prepared for Clear Lake Environmental Research Center.

Hahn, I., B. Dyson, A, Neale, R. Gould, **P. Huber**, K. Biedenweg, J. Hochard, A. Geller. 2021. Review of ESA 2019 SYMP 8: Integrating Human Health with Ecosystem Services—Research to Provide Practical Tools for Healthier and More Resilient Communities. *Bulletin of the Ecological Society of America*, 102(1): e01786. https://doi.org/10.1002/bes2.1786.

Hill, R., **P.R. Huber**, S.E. Greco. 2014. *Plant palette selection analysis using Marxan for the American River Parkway RM 0.5 Project* (Sacramento Area Flood Control Agency report). Sacramento, CA.

Huber, P.R. 2008. *The Effects of Spatial and Temporal Scale on Conservation Planning and Ecological Networks in the Central Valley, California*. Dissertation, University of California, Davis.

Huber, P.R. 2016. *Santa Clara River Watershed and Region 5's Socio-Economic Vulnerability Assessment: biodiversity ecosystem services analysis*. Report for U.S. Forest Service, Vallejo, CA.

Huber, P., M. Baker, A. Hollander, M. Lange, D. Miller, J. Quinn, C. Riggle, L. Srirastava, T. Tomich. 2020. *Human health, ecosystem services, and their economic value as part of a sustainability assessment for the Sacramento region*. Report to the U.S. Environmental Protection Agency.

Huber, P.R., M. Baker, A.D. Hollander, M. Lange, D. Miller, J.F. Quinn, C. Riggle, T.P. Tomich. 2023. Linking biodiversity and human wellbeing in systematic conservation assessments of working landscapes. *Sustainability,* 15, no. 13:9912. https://doi.org/10.3390/su15139912.

Huber, P.R., D.R. Cameron, J.H. Thorne, T.M. Frink. 2009. *Regional advance mitigation planning: a pilot study integrating multi-agency mitigation needs and actions within a comprehensive ecological framework*. Technical paper for ICOET Conference, Duluth, MN.

Huber, P.R., E.H. Girvetz, J.H. Thorne, A. Hollander, J.F. Quinn, M.C. McCoy. 2008. *Early biological mitigation needs assessment: Pleasant Grove pilot project* (Caltrans report). California Department of Transportation, Sacramento, CA.

Huber, P.R., S.E. Greco. 2012. *Year 3 final report: an assessment of the Central Valley ecoregion for potential tule elk habitat and reintroduction*. U.S. Fish and Wildlife Service, Los Banos, CA.

Huber, P.R., S.E. Greco, J. Hobbs. 2011. Assessment of habitat for the potential reintroduction of tule elk to the San Joaquin Valley, California. *California Fish and Game*, 97(3):117-129.

Huber, P.R., S.E. Greco, N.H. Schumaker, J. Hobbs. 2014. A priori assessment of reintroduction strategies for a native ungulate: using HexSim to guide release site selection. *Landscape Ecology*, 29:689-701.

Huber, P.R., S.E. Greco, J.H. Thorne. 2010. Boundaries and baselines make a difference: The effects of spatial and temporal parameters on conservation planning. *Professional Geographer*, 62(3):1-17.

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Huber, P.R., R. Hill, S.E. Greco. 2014. *Safe Passages: local and regional wildlife habitat connectivity planning*. Report for California Department of Fish and Wildlife, Sacramento.

Huber, P.R., M.W. Schwartz. 2015. *A spatial prioritization assessment of natural resource vulnerabilities for Sequoia and Kings Canyon National Parks*. Report to the National Park Service, Three Rivers, CA.

Huber, P.R., F.M. Shilling, J.H. Thorne, S.E. Greco. 2012. Municipal and regional habitat connectivity planning. *Landscape and Urban Planning*, 105:15-26.

Huber, P.R., F.M. Shilling, J.H. Thorne, S.E. Greco, N.E. Roth. 2010. *Safe Passages and the City of Riverbank: wildlife connectivity in the San Joaquin Valley, California (final report)*. Wildlife Conservation Society, New York.

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Huber, P.R., J. Thorne, J. Bjorkman. 2016. *Bay Area conservation mitigation assessment*. Report for The Nature Conservancy, San Francisco, CA.

Huber, P.R., J.H. Thorne, J. Bjorkman, R.M. Boynton. 2014. *Regional wildlife corridor and habitat connectivity plan*. Report for California Department of Transportation, District 5, San Luis Obispo.

Huber, P.R., J.H. Thorne, M.E. Madison. 2010. *Marxan analysis for the Elkhorn Slough watershed: mitigation planning and "ideal" reserves* (Caltrans report). California Department of Transportation, Sacramento, CA.

Huber, P.R., J.H. Thorne, N.E. Roth, M.C. McCoy. 2011. Assessing ecological condition, vulnerability, and restorability of a conservation network under alternative urban growth policies. *Natural Areas Journal*, 31(3):234-245.

Huber, P.R., J.H. Thorne, N. Siepel. 2013. *Convergence of green- and blueprints: integrating long-range transportation planning and landscape connectivity*. Technical paper for ICOET Conference, Scottsdale, AZ.

Huber, P.R., J.H. Thorne, A. Williams, R. Loeffler, M.C. McCoy, G. Erickson, N.E. Roth, A.J. Holguin, R.M. Boynton, N.T. Le. 2011. *A statewide Caltrans mitigation needs assessment in support of the Statewide Advance Mitigation Initiative (SAMI)*. Technical paper for ICOET Conference, Seattle, WA.

Hyder, A., A. Blatt, A.D. Hollander, C. Hoy, **P.R. Huber**, M.C. Lange, J.F. Quinn, C.M. Riggle, R. Sloan, T.P. Tomich. 2022. Design and implementation of a workshop for evaluation of the role of power in shaping and solving challenges in a smart foodshed. *Sustainability*, 14(5): 2642. https://doi.org/10.3390/su14052642.

Keeley, A.T.H., B.A. Barbaree, S.M. Bashevkin, E.E. Bush, D. Colombano, T.E. Dilts, A.K. Fremier, J.A. Gallo, P.A.L. Goertler, M. Gogol-Prokurat, J.L. Grenier, **P.R. Huber**, M. Kondolf, A. Laws, A.T. Stahl, A.M. Sturrock. In review. Governing ecological connectivity in cross-scale dependent systems. *BioScience*. Submitted June 2021.

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Qu, Y., J. Rao, S. Gao, Q. Zhang, W.-L. Chao, Y. Su, M. Miller, A. Morales, **P.R Huber**. 2023. FLEE-GNN: A Federated Learning System for Edge-Enhanced Graph Neural Network in Analyzing Geospatial Resilience of Multicommodity Food Flows. Proceedings of the 6th ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery, pp.63-72, https://doi.org/10.1145/3615886.3627742

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Thorne, J.H., J.H. Bjorkman, **P.R. Huber**. 2015. *A Review of Lessons Learned through the RAMP Working Group, an Addendum to the Draft Statewide Framework* (Caltrans report). California Department of Transportation, Sacramento, CA.

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Thorne, J.H., J.H. Bjorkman, **P.R. Huber**. 2015. *2015 Mitigation Needs Assessment for Transportation Projects for the Sacramento Valley Pilot Project for Regional Advance Mitigation Planning* (Caltrans report). California Department of Transportation, Sacramento, CA.

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CONFERENCE PRESENTATIONS

Huber, P.R. 2025. "California wildlife connectivity and information needs", oral presentation, *Wildlife Corridor Working Group Summit*, Sacramento, CA.

Huber, P.R. 2025. "California wildlife connectivity and information needs", oral presentation, *International Conference on Ecology and Transportation*, Denver, CO.

Huber, P.R., A. Hollander, M. Lange. 2024. "Integrated Knowledge and Learning Environment: harnessing new technologies to expand the diversity of conservation participants", oral presentation, *2024 North America Congress for Conservation Biology*, Vancouver, Canada.

Huber, P.R., et al. 2023. "The future of information is now: visualizing PPOD networks and the Internet of Conservation", oral presentation, *30th International Congress for Conservation Biology*, Kigali, Rwanda.

Huber, P.R., et al. 2022. "Towards a California conservation planning knowledge graph: building connections across the state", oral presentation, *2022 North America Congress for Conservation Biology*, Reno, NV.

Huber, P.R., et al. 2019. "Human health, ecosystem services, and their economic value as part of sustainability assessment for the Sacramento region", oral presentation, *Ecological Society of America Conference*, Louisville, KY.

Huber, P.R., D. Grossman, D. Pearce, J. Strittholt, and S. Flint. 2018. "Regional Conservation Assessments: a new planning tool for California's working landscapes", oral presentation, *2018 North America Congress for Conservation Biology*, Toronto, Canada.

O'Donoghue, E., **P.R. Huber**. 2017. "Regional Conservation Investment Strategies: A new tool for conservation and mitigation investments", oral presentation, *International Conference on Ecology and Transportation*, Salt Lake City, UT.

Huber, P.R. 2016. "Sustainable land use planning in working landscapes", *IC-FOODS Conference*, Davis, CA.

Huber, P.R., E.C. Underwood, and A.D. Hollander. 2016. "Identifying and managing biodiversity hotspots for an uncertain future", oral presentation, *2016 Natural Areas Conference*, Davis, CA.

Huber, P.R. 2015. "Non-spatial uses of Marxan as a conservation planning tool", oral presentation, *27th International Congress for Conservation Biology*, Montpellier, France.

Organizer: Symposium, "Marxan at 15 years old: the past, present, and future of a conservation planning tool", *27th International Congress for Conservation Biology*, Montpellier, France.

Huber, P.R., et al. 2014. "Taking the long view: Mars Corp. as a business use case for a new sustainability indicators platform", oral presentation, *2014 Ecological Society of America Conference*, Sacramento, CA.

Hill, R., **P.R. Huber**, S.E. Greco. 2014. "Designing for resilience: spatial and temporal scale conservation planning for a working landscape", *2014 Ecological Society of America Conference*, Sacramento, CA.

Organizer: Symposium 10, "Sustainable sourcing of food products: social-ecological perspective of constraints and opportunities for sustainable food production strategies", *2014 Ecological Society of America Conference*, Sacramento, CA.

Organizer: Symposium 24, "Ecological design and planning for ecologists: applying earth stewardship", *2014 Ecological Society of America Conference*, Sacramento, CA.

Huber, P.R., J.H. Thorne, J. Bjorkman. 2014. "SHRP2 – C40B: Cross-testing transferability of national mitigation planning tools with California's Regional Advance Mitigation Planning (RAMP) framework on a new pilot region (450 miles of US101)", workshop, *GIS for Transportation Symposium*, Burlington, VT.

Huber, P.R., T.W. Vickers, W.M. Boyce. 2014. "Road impacts on mountain lions: using multiple data types to prioritize management actions", oral presentation, *11th Mountain Lion Workshop*, Cedar City, UT.

Garbach, K., **P. Huber**, N. Springer, C. Ingersoll, K. Guillozet, R. Musker, S. Brodt, J. Quinn, T. Tomich. 2013. "Identifying core themes in sustainability for sourcing raw agricultural goods: drawing on global assessments", oral presentation, 2nd *North America Congress for Conservation Biology,* Baltimore, MD.

Huber, P.R. 2013. "Greenprinting in California", oral presentation*, 2013 California Land Conservation Conference*, Sacramento, CA.

Huber, P.R., T.W. Vickers, W.M. Boyce. 2013. "Road impacts on mountain lions: using road kill, GPS collar data, and connectivity modeling to prioritize management actions", oral presentation, *2013 Western Section of the Wildlife Society Annual Meeting*, Sacramento, CA.

Huber, P.R., N.H. Schumaker, S.E. Greco, J. Hobbs. 2012. "Using HexSim to assess potential reintroduction sites for a native ungulate", oral presentation, *2012 Ecological Society of America Conference*, Portland, OR.

Organizer, "Injecting conservation science into California's mitigation planning and implementation", workshop, *1st North America Congress for Conservation Biology*, Oakland, CA.

Huber, P.R., J.H. Thorne, A. Williams, R. Loeffler, M.C. McCoy, G. Erickson, N.E. Roth, A.J. Holguin, R.M. Boynton, N.T. Le. 2011. "A statewide Caltrans mitigation needs assessment in support of the Statewide Advance Mitigation Initiative (SAMI)", oral presentation, *2011 International Conference on Ecology and Transportation*, Seattle, WA.

Huber, P.R., N.S. Schumaker, S.E. Greco, J. Hobbs. 2010. "Spatially explicit population modeling and the reintroduction of a native ungulate: using HexSim to evaluate release alternatives", oral presentation, *24th Annual International Congress for Conservation Biology*, Edmonton, Alberta, Canada.

Huber, P.R., F.M. Shilling, J.H. Thorne, S.E. Greco, J.F. Quinn, N.E. Roth, J.D. Hightower, L. Podolsky. 2010. "Incorporating landscape connectivity principles into planning at multiple spatial scales in an intensive agricultural region", oral presentation, 2010 *US-International Association for Landscape Ecology Symposium*, Athens, GA.

Huber, P.R., D.R. Cameron, J.T. Thorne, T.M. Frink. 2009. "Regional advance mitigation planning: a pilot study integrating multi-agency mitigation needs and actions within a comprehensive ecological framework", oral presentation, *2009 International Conference on Ecology and Transportation*, Duluth, MN.

Huber, P.R., S.E. Greco, J. Hobbs. 2009. "A feasibility study for reintroduction of a free-ranging herd of native elk to the San Joaquin Valley, California", oral presentation, *2009 US-International Association for Landscape Ecology Symposium*, Snowbird, UT.

Huber, P.R., E. Girvetz, J. Thorne, A. Hollander, J. Quinn, M. McCoy. 2008. "Integrating advanced mitigation planning into a regional conservation network", oral presentation, *Society for Conservation Biology 22nd Annual Meeting*. Chattanooga, TN.

Huber, P.R., S. Greco. 2008. "The influence of scale effects on the identification of a potential conservation network", oral presentation, *Association of American Geographers 2008 Annual Meeting*. Boston, MA.

Huber, P.R., E. Girvetz, J. Thorne, A. Hollander, J. Quinn, M. McCoy. 2008. "Integrating advanced mitigation planning into two regional conservation networks in California", poster presentation, *2008 Bay Area Conservation Biology Symposium*. Davis, CA, University of California, Davis.

Huber, P.R., E. Girvetz, J. Thorne, J. Quinn, M. Madison, M. McCoy. 2008. "Advanced regional mitigation planning: two case studies", oral presentation, *Caltrans 2008 Road Ecology Meeting*. Pacific Grove, CA, Asilomar Conference Center.

Huber, P.R., N.E. Roth, K. Beardsley, J.H. Thorne, M.C. McCoy, R. Meade. 2007. "Potential impacts of urban growth on an ecological network in the San Joaquin Valley, California", oral presentation, *Association of American Geographers 2007 Annual Meeting*. San Francisco, CA.

Huber, P.R., N. Roth, M. McCoy, R. Meade. 2006. "San Joaquin Valley conservation opportunities: a collaborative regional planning effort in California", poster presentation, *Natural Areas Conference 2006*. Flagstaff, AZ, Northern Arizona University.

Huber, P.R., S. Greco. 2006. "Spatial and temporal considerations in ecoregional conservation planning efforts: the effect of boundary definitions and historical baselines", oral presentation, *Association of American Geographers 2006 Annual Meeting*. Chicago, IL.

Huber, P.R., E.H. Girvetz, S.E. Greco. 2005. "A regional scale conservation plan for a highly fragmented landscape in the Sacramento Valley, California, USA", poster presentation, *Society for Conservation Biology 19th Annual Meeting*. Brasilia, Brazil, Universidade de Brasília.

INVITED LECTURES

Marxan optimization software and its use in conservation planning in California. ECL 208, UC Davis, April 22, 2024.

Marxan optimization software and its use in conservation planning in California. ECL 208, UC Davis, May 10, 2023.

Democratizing food systems through an Internet of Food and an Internet of Conservation. FST 290, UC Davis, April 10, 2023.

Smart foodsheds and the Internet of Conservation. KnowFOOD podcast, Jan. 19, 2023.

Landscape connectivity: why it's important and the different forms it can take. Caltrans D3, Oct. 5, 2022.

Marxan optimization software and its use in conservation planning in California. ECL 208, UC Davis, May 2, 2022.

Marxan: a systematic conservation planning tool. ECL 208, UC Davis, May 5, 2021.

Marxan: a systematic conservation planning tool. ECL 208, UC Davis, May 13, 2020.

Marxan optimization software and its use in conservation planning in California. LDA 280, UC Davis, Mar. 3, 2020.

Terrestrial connectivity: an overview from across California. Estuarine Connectivity Symposium, Davis, CA, Feb. 18, 2020.

Measuring sustainability in banana production. Keynote Lecture of Sustainability, Global Banana Summit, Guayaquil, Apr. 9, 2019.

Landscape connectivity: why it's important and the different forms it can take. Wildlife Corridor Working Group Capitol Day, Sacramento, CA, Feb. 26, 2019.

Marxan optimization software and its use in conservation planning in California. California Department of Conservation, Sacramento, CA, June 12, 2018.

Marxan: a systematic conservation planning tool. ECL 290, UC Davis, Mar. 16, 2018.

Marxan: a systematic conservation planning tool. Society for Conservation GIS, Davis, CA, June 28, 2017.

Marxan: a systematic conservation planning tool. ECL 208, UC Davis, May 1, 2017.

Marxan applications. International Workshop, Seoul National University, Seoul, South Korea, Apr. 17, 2017.

Putah Creek and landscape level conservation. Putah Creek Council, Oct. 22, 2016.

Opportunities and threats for tule elk reintroduction in California's Central Valley. LDA 280, UC Davis, Feb. 12, 2016.

Moderator: Workshop on landscape approaches and multi-resource analysis for sustainable natural resource management. National Academy of Sciences, June 2, 2015.

Marxan software workshop, ECL 208, UC Davis, Spring 2015.

Mountain lions in the Santa Ana Mountains: a tale of connectivity and landscape fragmentation. De Anza College, Jan. 23, 2014.

Conservation and restoration of native pollinators in the Davis area. Putah Creek Council, Oct. 26, 2013.

Using Marxan: a collection of use cases in spatial (and non-spatial) optimization. GEO 297, UC Davis, Oct. 9, 2013.

Suisun Marsh, tule elk, and the restoration of a native ungulate. WFC 102, UC Davis, May 9, 2013.

Using biodiversity data to set conservation priorities. ECL 208, UC Davis, March 7, 2013.

Conservation and spatial scale: Central Valley planning. LDA 280, UC Davis, March 7, 2013.

A tale of two species: mountain lions and tule elk in California. De Anza College, Feb. 28, 2013.

Tule elk reintroduction in California's Central Valley. LDA 190, UC Davis, Jan. 18, 2013.

Native pollinators and the ecological/urban/agricultural nexus. LDA 180, UC Davis, March 6, 2012.

Conservation networks and wildlife connectivity in California. De Anza College, Feb. 23, 2012.

Conservation networks and wildlife connectivity in California. De Anza College, June 2, 2011.

Conservation science and planning: two case studies from the Central Valley, CA. ECL 208, University of California, Davis, March 1, 2011.

Tule elk and wildland networks in California. WFC 155, University of California, Davis, Feb. 24, 2011.

Conservation and spatial scale: Central Valley planning. LDA 280, University of California, Davis, Feb. 22, 2011.

Tule elk and wildland networks in California. De Anza College. Oct. 7, 2010.
Introduction to Marxan reserve selection tool. ECL 298, University of California, Davis, April 13, 2010.

Some approaches to systematic conservation planning: a California sampler. ECL 208, University of California, Davis, Feb. 11, 2010.

Landscape conservation planning in the Central Valley. LDA 190, University of California, Davis. Jan. 15, 2010.

The effects of spatial and temporal scale on conservation planning and ecological networks in the Central Valley, California. Geography Graduate Group yearly meeting, University of California Davis. May 15, 2009.

The effects of spatial and temporal scale on conservation planning and ecological networks in the Central Valley, California. Landscape Architecture seminar series, University of California, Berkeley. Feb. 18, 2009.

Central Valley potential conservation network. California Safe Passages Project Forum, Davis, CA. Nov. 17, 2008.

Threat analysis and scale effects in conservation planning in the Central Valley, California. GEO 200D, Davis, CA. May 19, 2008.

Conservation planning in the San Joaquin Valley, California. California State University – Stanislaus. May 13, 2008.

Conservation planning in the San Joaquin Valley, California. LDA 190, University of California, Davis. Feb. 1, 2008.

Regional connectivity and road effects mitigation. LDA 190, University of California, Davis. Jan. 8, 2008.

Ecological network design: case studies. LAEP 201, University of California, Berkeley. Sep. 10, 2007.

Landscape connectivity and conservation planning. LDA 150, University of California, Davis. Apr. 24, 2007.

Landscape connectivity and conservation planning. LDA 181, University of California, Davis. Jan. 24, 2007.

INVITED PEER REVIEWS

Journal – *Conservation Letters*
Journal – *Conservation Science and Practice*
Journal – *Biological Conservation*
Journal – *San Francisco Estuary and Watershed Science*
Journal – *Land Use Policy*
Journal – *Diversity and Distributions*
Journal – *Environmental Conservation*
Journal – *Journal of Environmental Policy and Planning*
Journal – *Landscape Ecology*
Journal – *Animal Conservation*

California Essential Habitat Connectivity Project

SCB 2010 Conference, presentation abstracts
ICOET 2011 Conference, presentation abstracts
2012 NACCB Conference, presentation abstracts
2012 NACCB Conference, student presentation judge
2015 ICOET Conference, presentation abstracts
2013 ICOET Conference, presentation abstracts
Minimum Standards for Conservation Design at Landscape Scales (Landscape Conservation Design): Recommendations from the Landscape Conservation Design Minimum Standards Working Group to the U.S. Fish and Wildlife Service – Office of Science Applications

Landscape Approaches and Multi-Resource Analysis for Natural Resource Management: Summary of a Workshop. National Academy of Sciences.

LETTERS TO THE EDITOR

Huber, P.R., and S.E. Greco. "Cities need plants and animals too." *Nature*, 11 November 2010, 468(7321):173.

PROFESSIONAL MEMBERSHIPS

- Association of American Geographers
- Society for Conservation Biology
- International Association for Landscape Ecology
- Ecological Society of America

COMMUNITY SERVICE AND LEADERSHIP

- City of Davis Open Space and Habitat Commission – member incl. Chair (2010-present)
- North Davis Channel Technical Advisory Committee (2013-2018)
- Lower Putah Creek Coordinating Committee – City of Davis representative incl. Chair (2014-present)
- Bay Area Greenprint – Science and Methods Advisory Committee (2015-present)
- Wildlife Corridor Working Group – Science Advisor (2016-present)
- Spatial Decision Support Consortium – Board Member (2021-present)
- Yolo Habitat Conservancy Implementation Advisory Committee – City of Davis representative (2021-present)
- Central Valley Landscape Conservation Project – Science Advisor (2016)
- High-Speed Rail Southern California Wildlife Connectivity Coordination Meeting (2016)
- San Joaquin Valley RCIS – Steering Committee (2023-2025)