

CURRICULUM VITAE

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ACADEMIC POSITIONS

- 2021-present** Professor, Environmental Studies and Sciences
Santa Clara University
- 2016-2021** Associate Professor, Environmental Studies and Sciences
Santa Clara University
- 2011-2016** Assistant Professor, Environmental Studies and Sciences
Santa Clara University
- 2007-2011** Assistant Professor, Environmental Studies
California State University, Sacramento
- 2005-2007** Lecturer and Director of Campus & Community Programs
Santa Clara University

EDUCATION

- 2006** Ph.D. in Biology, Stanford University
Adviser: Peter Vitousek
- 1999** M.S. in Environmental Science, Policy, & Management, UC Berkeley
Adviser: Ron Amundson
- 1992** B.A. in Political Science, UC Berkeley

HONORS & AWARDS

- 2019** Joseph Bayma, SJ Award for Scholarship, SCU
- 2010** Faculty Woman of Influence, CSUS
- 2005** Walter J. Gores Award for Excellence in Teaching, Stanford
- 2003** Centennial TA Award, Stanford
- 2001** Excellence in Teaching Award, Stanford
- 1999** Teaching Effectiveness Award, UC Berkeley
- 1998** Outstanding Graduate Student Instructor, UC Berkeley

EXTRAMURAL RESEARCH FUNDING

\$25, 894	River Partners 2023-2024 “Carbon storage-water use tradeoffs in riparian plantings on agricultural floodplains”
\$150,876	Delta Stewardship Council 2021-2024 "Integrated pest management of invasive <i>Phragmites australis</i> in Suisun Marsh" (subaward; full grant \$1,014,506)
\$236,377	Delta Stewardship Council 2019-2021 "Recreational hunting as an ecosystem service of ecological restoration in the San Francisco Bay-Delta watershed"
\$88,498	California Department of Conservation 2018 “Carbon quantification in oak woodlands on rangeland”
\$42,728	Mid-Peninsula Open Space District 2016-2019 “Non-herbicidal methods of control of <i>Brachypodium sylvaticum</i> , slender false brome"
\$76,858	California Department of Conservation 2016-2017 "Strategic climate investments in riparian forest carbon”
€10,000	Institut Écologie et Environnement, Observatoires Hommes-Milieus VDR 2015-2016 Carbon sequestration related to management strategies in the riparian forests of the old Rhône River (subaward)
\$39,643	National Science Foundation 2014-2015 Social dimensions of ecosystem service provision from ecological restoration projects
\$146,106	US Department of Agriculture 2012-2014 Riparian forests as ecological and economic buffers against climate vulnerability in flood-prone agricultural systems
\$60,671	The Nature Conservancy

2012-2014

Using citizen science to map carbon sequestration and ecosystem services in the urban forest

\$42,070

The Nature Conservancy

2011-2012

“Do sustainability certifications and green practices deliver conservation benefits?”

PEER-REVIEWED ARTICLES (undergraduate co-authors underlined)

Matzek, V., and K.A. Wilson. 2021. Public support for restoration: Does including ecosystem services as a goal engage a different set of values and attitudes than biodiversity protection alone? *PLoS One* 16(1): e0245074. [pdf https://doi.org/10.1371/journal.pone.0245074](https://doi.org/10.1371/journal.pone.0245074).

Funk, J.L.; Parker, I.M.; **Matzek, V.**; Flory, S.L.; Aschehoug, E.T.; D'Antonio, C.M.; Dawson, W; Thomson, D.M.; Valliere, J. 2020. Keys to enhancing the value of invasion ecology research for management. *Biological Invasions* 22: 2431-2445. [pdf https://doi.org/10.1007/s10530-020-02267-9](https://doi.org/10.1007/s10530-020-02267-9)

Matzek, V.; Lewis, D.L.; O'Geen, A.T.; Lennox, M.; Hogan, S.D.; Feirer, S.T.; Eviner, V.; Tate, K.W. 2020. Increases in soil and biomass carbon stocks as a result of rangeland riparian erosion control. *Carbon Balance and Management* 15: 16. [pdf https://link.springer.com/article/10.1186/s13021-020-00150-7](https://link.springer.com/article/10.1186/s13021-020-00150-7)

Matzek, V., K.A. Wilson, and M. Kragt. 2018. Mainstreaming of ecosystem services as a rationale for ecological restoration in Australia. *Ecosystem Services* <https://doi.org/10.1016/j.ecoser.2018.11.005>

Wilson, K.A., K. Davis, **V. Matzek**, and M. Kragt. 2018. Concern about threatened species and ecosystem disservices underpin public willingness to pay for ecological restoration. *Restoration Ecology*, <https://doi.org/10.1111/rec.12895>

Matzek, V., J. Stella, and P. Ropion. 2018. Development of a carbon calculator tool for riparian forest restoration. *Applied Vegetation Science*, <https://doi.org/10.1111/avsc.12400>

Dybala, K., **V. Matzek**, T. Gardali, and N. Seavy. 2018. Carbon sequestration in riparian forests: a global synthesis and meta-analysis. *Global Change Biology*, <https://doi.org/10.1111/gcb.14475>

Matzek, V. 2018. Turning delivery of ecosystem services into a deliverable of ecosystem restoration. *Restoration Ecology*, <https://doi.org/10.1111/rec.12872>

- Matzek, V.**, E. Gornish, and K. Hulvey. 2017. Emerging approaches to successful ecological restoration: five imperatives to guide innovation. *Restoration Ecology* 25:S110-S113.
- Guerrero, A., L. Shoo, G. Iacona, R.J. Standish, C.P. Catterall, L.Rumpff, K. DeBie, **V. Matzek**, and K. Wilson. 2017. Using structured decision-making to set restoration objectives when multiple values and preferences exist. *Restoration Ecology*, doi/10.1111/rec.12591
- Nelson, E. and **V. Matzek**. 2016. Carbon credits compete poorly with agricultural commodities in an optimized model of land use in Northern California. *Climate Change Economics* DOI: <http://dx.doi.org/10.1142/S2010007816500093>
- Matzek, V.**, S. Warren, and C. Fisher. 2016. Incomplete recovery of ecosystem processes after two decades of riparian forest restoration. *Restoration Ecology*, doi/10.1111/rec.12361.
- Matzek, V.**, C. Puleston, and J. Gunn. 2015. Can carbon credits fund riparian forest restoration? *Restoration Ecology* 23: 7-14.
- Funk, J.L., M.K. Hoffacker, and **V. Matzek**. 2015. Summer irrigation, grazing and seed addition differentially influence community composition in an invaded serpentine grassland. *Restoration Ecology* 23:122-130.
- Matzek, V.**, M. Pujalet, and S. Cresci. 2014. What managers want from invasive species research versus what they get. *Conservation Letters* 8:33-40.
- Oliveira, M.T., **V. Matzek**, C.D. Medeiros, R. Rivas, H. M. Falcão, and M.G. Santos. 2014. Stress tolerance and ecophysiological ability of an invader and a native species in a seasonally dry tropical forest. *PLOS One*, doi:101371/journal.pone.0105514
- Funk, J.L., **V. Matzek**, M. Bernhardt, D. Johnson. 2014. Broadening the case for invasive species management to include impacts on ecosystem services. *Bioscience* 64(1): 58-63.
- Nelson, E., P. Kareiva, M. Ruckelshaus, K. Arkema, G. Geller, E. Girvetz, D. Goodrich, **V. Matzek**, M. Pinsky, W. Reid, M. Saunders, D. Semmens, and H. Tallis. 2013. Climate change's impacts on key ecosystem services and the human well-being they support in the US. *Frontiers in Ecology and the Environment* 11(9): 483-493.
- Matzek, V.**, J. Covino, J. L. Funk, and M. Saunders. 2013. Closing the knowing-doing gap in invasive plant management: accessibility and interdisciplinarity of research results. *Conservation Letters* doi: 10.1111/conl.12042.
- Matzek, V.** 2012. Trait values, not trait plasticity, best explain invasive species' performance in a changing environment. *PLoSOne* 7(10):e48821. (NB: Paper has an

annotation to fix the journal's misprint of 2 tables, at DOI: 10.1371/annotation/0ed08a64-3742-4f95-9695-88b42d216d18.)

Matzek, V. and S. Hill, 2012. Response of biomass and seedbanks of rangeland functional groups to mechanical control of yellow starthistle. *Rangeland Ecology and Management* 65:96-100.

Matzek, V. 2011. Superior performance and nutrient-use efficiency of invasive plants over non-invasive congeners in a resource-limited environment. *Biological Invasions* 13:3005-3014.

Matzek, V. 2010. A lesson in sustainability from Cuba. *Frontiers in Ecology and the Environment* 8: 59-59.

Matzek, V. and P.M. Vitousek. 2009. N:P stoichiometry and protein:RNA ratios in vascular plants: an evaluation of the growth-rate hypothesis. *Ecology Letters* 12:765-771.

Matzek, V., and P. Kareiva. 2008. Casualties of climate change: identity and livelihood in California's Central Valley. *Places* 20: 42-45.

Frost, P.C., M.A. Evans-White, Z.V. Finkel, T.C. Jensen, and **V. Matzek**. 2005. Are you what you eat? Physiological constraints on organismal stoichiometry in an elementally imbalanced world. *Oikos* 109:18-28.

Silver, W.L., L.M. Kueppers, A.E. Lugo, R. Ostertag, and **V. Matzek**. 2004. Carbon sequestration and plant community dynamics with reforestation of tropical pasture. *Ecological Applications* 14: 1115-1127.

Matzek, V. and P. Vitousek. 2003. Nitrogen fixation in bryophytes, lichens, and decaying wood along a soil-age gradient in Hawaiian montane rainforest. *Biotropica* 35(1):12-19.

SELECTED INVITED TALKS

California Wildfire Resilience Task Force
May 11, 2023
The ecosystem mosaic of the Central Coast

Delta Stewardship Council Slough-side Chats
October 28, 2022
Hunters as stakeholders of riparian and tidal marsh restoration

Northwest Indian Fisheries Commission, Quarterly meeting, (by videoconference)
March 3, 2020
Calculating carbon sequestration in riparian areas

University of Wyoming, Ecosystem Restoration seminar, Laramie, WY
April 19, 2019

Carbon credits as an incentive for habitat restoration: How do we get the most habitat bang for our carbon buck?

University of Arizona, School of Natural Resources & Environment, Tucson, AZ
March 28, 2018

Carbon credits as an incentive for habitat restoration: How do we get the most habitat bang for our carbon buck?

UC Santa Cruz, Santa Cruz, CA
January 29, 2018

Carbon credits as an incentive for habitat restoration: How do we get the most habitat bang for our carbon buck?

University of San Francisco, San Francisco, CA
November 14, 2017

Carbon credits as an incentive for habitat restoration: How do we get the most habitat bang for our carbon buck?

SUNY-ESF, Syracuse, New York
October 12, 2017

Carbon credits as an incentive for habitat restoration: How do we get the most habitat bang for our carbon buck?

California Academy of Sciences, San Francisco, CA
March 30, 2017

Carbon credits as an incentive for habitat restoration

Central Coast Invasive Weed Symposium, Monterey, CA (keynote address)
November 5, 2015

The landscape is changing: Can we look at it differently?

University of Queensland/CSIRO joint seminar, Brisbane, Australia
November 7, 2014

Bringing managers' perspectives to bear on habitat restoration and ecosystem services in California and Australia

University of Auckland, School of Environment
September 30, 2014

Biodiversity and ecosystem services in restored riparian forests in California

University of Florida, PEERS seminar
January 10, 2014

Carbon pools and carbon credits in a chronosequence of restored riparian forest

USDA-NIFA Climate Change meetings

January 9, 2014

Translating science into actionable knowledge: the challenge for biophysical scientists

Society for Range Management, Sheridan, Wyoming

November 13, 2013

Talk: *Addressing the knowing-doing gap: linking science to management*

Panel Discussion: *How can we better integrate research and management?*

Climate-Smart Land Management Workshop, Lake Arrowhead, CA

October 2, 2013

Uncertainty: Making land management decisions in a time of rapid change

San Jose State University, Department of Environmental Studies grad seminar

September 5, 2013

What managers want from invasive species research, and what they actually get

San Jose State University, Biological Sciences departmental seminar

September 13, 2012

What do managers want? Closing the knowing-doing gap in invasion biology

Santa Clara University, Department of Environmental Studies and Sciences seminar

June 1, 2012

California plant invasions: bridging the gap between researchers and practitioners

University of Washington, School of Environmental and Forest Sciences

May 3, 2012

What do managers want? Bridging the gap between researchers and practitioners in invasion biology

SELECTED CONFERENCE PRESENTATIONS

Matzek, V. and Lupi, F. 2022. *Estimating the value of restored tidal marsh and riparian forests for recreational hunting*. Society for Ecological Restoration Europe, Alicante, Spain.

Matzek, V. 2022. *Carbon sequestration in California oak woodlands*. California Oak Symposium, San Luis Obispo, CA.

Matzek, V. 2019. *Making carbon payments work for ecological restoration: Experiences from California*. 8th World Conference on Ecological Restoration, Cape Town, SA.

Matzek, V. 2018. *Making carbon payments work for biodiverse habitat*. A Conference on Ecosystem Services (ACES 2018), Washington, D.C.

Matzek, V., K. Wilson, and M. Kragt. 2016. *Attitudes toward restoration of ecosystem services and biodiversity in Australia*. Ecological Society of America, Ft. Lauderdale, FL.

Matzek, V. 2016. *Of course I know how to do that! Stretching beyond your training at an undergraduate institution*. Ecological Society of America, Ft. Lauderdale, FL.

Matzek, V., M. Kragt, and K. Wilson. 2015. *Ecosystem services as a rationale for ecological restoration in Australia*. International Congress on Conservation Biology 2015 (Montpellier, France)

Matzek, V., M. Kragt, and K. Wilson. 2015. *Ecosystem services as a rationale for ecological restoration in Australia*. World Congress on Ecological Restoration 2015 (Manchester, UK).

Matzek, V., C. Puleston, and J. Gunn. 2015. *Carbon credits as a means of financing ecological restoration of riparian forest, Sacramento River, California, USA*. IS Rivers Conference, Lyon, France.

Matzek, V., H. Piégay, and J. Stella. 2015. *Le service écosystémique de séquestration de carbone lié aux stratégies de gestion de la ripisylve sur le vieux Rhône*. Séminaire Scientifique de l'OHM-VR, Lyon, France. Presented by Bianca Räßle in my absence.

Matzek, V., G. Carvalho, S. Huang, and T. Zhang. 2015. *Measuring urban forest benefits with a few swipes on a smartphone*. Citizen Science 2015 Conference, San Jose, CA.

Matzek, V. 2014. *Can carbon credits fund riparian restoration?* Ecological Society of America, Sacramento, CA.

Warren, S. and **V. Matzek**. 2014. *C and N mineralization in Sacramento River restored riparian forests*. Ecological Society of America, Sacramento, CA.

Fisher, C. and **V. Matzek**. 2014. *Nitrogen in fine roots and litterfall across differing ages of restored riparian forest*. Ecological Society of America, Sacramento, CA.

Matzek, V. 2013. *Carbon pools and carbon credits along a restoration chronosequence*. Middle Sacramento River Science Conference.

Matzek, V., S. Cresci, and M. Pujale. 2013. *What managers want from invasive species research—and what they actually get*. Ecological Society of America, Minneapolis, Minnesota.

Matzek, V., M. Saunders, and P. Kareiva. 2012. *A meta-analysis of the effects of good and bad environmental actions on stock prices*. Society for Conservation Biology North American Congress, Oakland, CA.

Matzek, V. & Justin Covino. 2012. *What do managers want? Quantifying the knowing-doing gap in California plant invasions.* Ecological Society of America conference, Portland, OR.

Matzek, V. and Hill, S. 2011. *Mechanical control of yellow starthistle: impacts on target and non-target vegetation.* California Invasive Plant Council Symposium, Tahoe City, CA.

Matzek, V. 2010. *Non-herbicidal control of invasive yellow star thistle (*Centaurea solstitialis*) along seasonal streams in Mediterranean grassland.* Ecological Society of America conference, Pittsburgh, PA.

Matzek, V. 2009. *Differences between invasive and non-invasive pines in plasticity and traits related to efficiency and exploitation.* ESA conference Albuquerque, NM.

Matzek, V. 2008. *Double dipping: combining research and outreach in a sustainability service learning project.* Association for the Advancement of Sustainability in Higher Education (AASHE) conference, Raleigh, NC.

Matzek, V. and Vitousek, P.M. 2007. *Protein:RNA ratios and N:P stoichiometry of “pygmy” and normal pines: A test of the growth-rate hypothesis.* ESA, San Jose, CA.

Matzek, V. 2007. *Assessment of a multi-year restoration experiment as a tool for teaching and research at a primarily undergraduate institution.* ESA conference, San Jose.

PROFESSIONAL AFFILIATIONS

Society for Ecological Restoration, 2007 - present

Society for Conservation Biology, 2012 - present

Ecological Society of America, 2000 - present

Sempervirens Fund, Scientific Advisory Board, 2018- present

California Invasive Plant Council, Board of Directors, 2013-2014

PEER-REVIEW SERVICE

Coordinating Editor: Restoration Ecology, 2016- 2021

Journals:

- *Proceedings of the National Academy of Sciences*
- *Frontiers in Ecology and the Environment*
- *Global Environmental Change*
- *Conservation Letters*
- *Conservation Biology*
- *Biological Conservation*
- *Diversity and Distributions*

- *Ecology Letters*
- *Ecology*
- *Ecological Applications*
- *Oecologia*
- *Ecological Processes*
- *Functional Ecology*
- *Plant Ecology*
- *New Phytologist*
- *American Journal of Botany*
- *Plant Biology*
- *Functional Plant Biology*
- *Actae Physiologiae Plantarum*
- *Frontiers in Plant Nutrition*
- *Plant and Soil*
- *Forests*
- *Applied Vegetation Science*
- *Journal of Vegetation Science*
- *Agriculture, Ecosystems and Environment*
- *Invasive Plant Science and Management*
- *PLOS One*

Publishers:

- Island Press, Holl, *Primer of Restoration Ecology* (textbook)
- W.H. Freeman & Co., Whitlock and Schluter, *Analysis of Biological Data*, 2nd ed (textbook)
- Princeton University Press, *Princeton Guide to Environmental Studies* (book proposal)
- Roberts & Co, *One Earth* (textbook)

Grant and Fellowship Programs

- MJ Murdock Charitable Trust, Murdock College Research Program for Life Sciences (2013)
- USDA-NIFA, Agricultural and Food Research Initiative, Control of Weedy and Invasive Plants (2015)
- NSF, Graduate Research Fellowship Program (2016-17)
- USDA-SBIR (2018), US Department of Agriculture Small Business Innovation Research

Dissertation Committees

- SUNY-ESF (2018)
- UC Santa Cruz (2020-present)

Tenure and Promotion

- University of Washington-Bothell

- Creighton University