

Elizabeth H.T. Hiroyasu

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EDUCATION

PhD of Environmental Science and Management, 2014-2020

Bren School of Environmental Science & Management, University of California, Santa Barbara

Dissertation title: *The Social and Ecological Dimension of Vertebrate Management: Reintroductions And Invasions*

Environmental Science and Management, 2014

Bren School of Environmental Science & Management, University of California, Santa Barbara

Conservation Planning and Water Resource Management specializations

Thesis title: *Developing a Feral Pig Management Plan for Tejon Ranch Conservancy*

Bachelor of Science in Biology, 2011

University of California, Los Angeles

Major Field of Study: Conservation Biology and Ecology

Minor Degree: Art History

FELLOWSHIPS AND FUNDING

NSF Doctoral Dissertation Research Improvement Grant (DDRIG) | \$16, 885

H. William Kuni Bren Fellows Award 2016 | \$6,700

Sigma Xi Grants in Aid of Research Program, 2016 | \$992

Vertebrate Pest Control Research Advisory Council, 2016 | \$75,000 (retracted)

Renewable Resources Extension Act Grant Program, 2015 | \$15,000

Michael J. Connell Memorial Fellowship, 2014-2019

CURRENT AND RELATED RESEARCH

DISASTER RESILIENCE

Managed retreat and sea level rise

Using social science methods and innovative tools to understand how to facilitate productive conversations with communities at risk of catastrophic flooding from sea level rise. The team is using virtual reality (VR) experiences and partnering with trusted community organizations to visualize different adaptation strategies for communities.

Wildfire risk management

Team of TNC staff working to develop and socialize nature-based and hybrid solutions to help reduce the risk of wildfires to communities. Collaborating with other partners, TNC is exploring innovative strategies to protect nature and people from catastrophic wildfire events.

SUSTAINABLE DEVELOPMENT

Southern California Greenprint

In partnership with the Southern California Association of Governments (SCAG), TNC is developing a regionwide “greenprint” for the Southern California Region. The SoCal Greenprint is a map-based conservation planning tool designed to help conservation practitioners, infrastructure agencies, community-

based organization, developers, and planners understand the environmental resources in potential project areas.

CALIFORNIA GRIZZLY RESEARCH GROUP

Assessing the past, present, and future of the California Grizzly (*Ursus arctos californicus*)

Interdisciplinary working group examining the history of the California grizzly, the current status of brown bears across the Southwest, and the potential for grizzly bear reintroduction in California. The group will be informed by a variety of disciplines to participate in an informed public conversation about the future and role of California Grizzly bears across the state.

WRITTEN PUBLICATIONS & REPORTS

Hiroyasu, Elizabeth HT, SM Kross, RA Baldwin, BE Kendall. *In review*. Multiple stable states when employing a generalist predator biocontrol for vertebrate pests.

Forbes E.S., Adams A.J., Brown K.C., Colby J.C., Denny S.M., Hardesty-Moore M., Heilmayr R., **Hiroyasu E.H.T.**, Martin J., Miljanich C., Tyrrell B.P., Welch Z., Anderson S.E., Cooper S.D., Kendall B.E., Alagona P.S. Analogies in a no-analog world: Reintroducing lost species in the Anthropocene. *Trends in Ecology and Evolution: Science and Society*. doi.org/10.1016/j.tree.2020.04.005

DeGolia, Alexander H., **EHT Hiroyasu**, SE Anderson. 2019. Ecological losses or Economic Gains? Using prospect theory to guide environmental management. *PLoS ONE* 14(7): e0220320. <https://doi.org/10.1371/journal.pone.0220320>.

Hiroyasu, Elizabeth HT, C. Miljanich, SE Anderson. 2019. Attitudes and Grizzly bear reintroduction in California. *Human Dimensions of Wildlife*, 24(5). <https://doi.org/10.1080/10871209.2019.1622055>.

Hiroyasu, EHT and JJ Hellmann. 2019. Invasive species and Climate Change. *Biodiversity and Climate Change: Transforming the Biosphere*. Thomas E. Lovejoy and Lee Hannah (Eds.). New Haven, CT: Yale University Press.

Imbach, Pablo, P. Serra-Diaz, L. Hannah, E. Fung, and **EHT Hiroyasu**. 2019. Modeling species and vegetation distribution under climate change. In *Biodiversity and Climate Change: Transforming the Biosphere*. Thomas E. Lovejoy and Lee Hannah (Eds.). New Haven, CT: Yale University Press.

Kross, SM, **EHT Hiroyasu**, BE Kendall, RA Baldwin. 2017. Encouraging owl predation of rodents by erecting owl boxes: myth or potential management strategy? Report for the Vertebrate Pest Control Research Advisory Committee.

Palazzo, J., OR Liu, T Stillinger, R Song, Y Wang, **EHT Hiroyasu**, J. Zenteno, SE Anderson, and C. Tague. 2017. Urban responses to restrictive conservation policy during drought, *Water Resources Research*, 53. <https://doi.org/10.1002/2016WR020136>.

Palanca, Ana Marie S, SL Lee, LE Yee, C Joe-Wong, A. Trinh le, **EHT Hiroyasu**, M. Husain, SE Fraser, M. Pellegrini, A. Sagasti. 2013. New transgenic reporters identify somatosensory neuron subtypes in larval zebrafish. *Developmental Neurobiology* 73(2): 152-167.

McCullough, IMM, E. Forbes, M. Hardesty-Moore, R. Heilmayr, **EHT Hiroyasu**, S. Denny, BE Kendall. *In prep*. The challenges of mapping habitat for long-extinct species: a case study of the California grizzly.

Hiroyasu, Elizabeth HT. *In prep.* Demography and abundance of native and invasive populations of a large vertebrate pest.

Hiroyasu, Elizabeth HT & SE Anderson. *In prep.* The role of introduction pathways and perceived consequences for invasive species management.

PRESENTATIONS & POSTERS

Hiroyasu, Elizabeth HT & SE Anderson. 2020. Message framing and public policy support for invasive species management in a changing world: The role of introduction pathways and perceived consequences. Presented at the Ecological Society of America Annual Meeting, 3 August 2020. Virtual meeting.

Hiroyasu, Elizabeth HT, SM Kross, RA Baldwin, BE Kendall. Pest control by generalist predators depends on prey density and predator effectiveness. Presented at the Vertebrate Pest Conference, 3 March 2020. Santa Barbara, CA.

Hiroyasu, Elizabeth HT & SE Anderson. 2019. Message framing and public policy support for invasive species management in a changing world: The role of introduction pathways and perceived consequences. Presented at the Species on the Move Conference, 24 July 2019. Kruger National Park, South Africa.

Hiroyasu, Elizabeth HT & AH DeGolia. 2018. Economic Losses or Ecological Gains? Using prospect theory to guide invasive species management. Presented at the Ecological Society of America Annual Meeting, 10 August 2018. New Orleans, LA.

Harper, John M., **EHT Hiroyasu**, RA Baldwin. 2018. California Wild Pig Survey & Mobile App. Presented at the California Rangeland Conservation Coalition Summit, 16 January 2018. Stockton, CA.

Baldwin, RA, SM Kross, **EHT Hiroyasu**, and BE Kendall. Encouraging owl predation of rodents by erecting owl boxes: myth or potential management strategy? 11 October, 2017. Vertebrate Pest Control Research Advisory Committee meeting, Merced, CA.

Hiroyasu, Elizabeth HT, C. Miljanich, SE Anderson. 2017. Rewilding California: How values, knowledge, and salience shape wildlife management. Presented at 2017 Pathways Conference on Human Wildlife Dimensions, 18-20 September 2018; Estes Park, CO.

Hiroyasu, Elizabeth HT. 2016. Fun facts about wild pigs and why you should care about them. University of California Santa Barbara Grad Slam. Santa Barbara, CA.

Christie, JC, E. DeMarco, **EHT Hiroyasu**, A. Kreger, M. Ludington. 2014. Developing a wild pig (*Sus scrofa*) management plan for the Tejon Ranch Conservancy. Presented at 2015 Western Section Meeting of the Wildlife Society, 27-30 January 2018; Santa Rosa, CA.

Christie, JC, E. DeMarco, **EHT Hiroyasu**, A. Kreger, M. Ludington. 2014. The status of wild pigs (*Sus scrofa*) in the state of California and on Tejon Ranch. Poster session presented at: International Wild Pig Management Conference, 13-15 April 2014; Montgomery, AL.

OTHER RESEARCH EXPERIENCE

Managing Editor for *Biodiversity and Climate Change: Transforming the Biosphere* 2013-present
University of California, Santa Barbara, Bren School of Environmental Science & Management
Primary Investigator: Thomas E. Lovejoy, PhD and Lee Hannah, PhD

Graduate Student Researcher, 2013-2014

Biogeography Laboratory, Macrosystem to Microclimate Project
University of California, Santa Barbara, Bren School of Environmental Science & Management
Primary Investigator: Frank Davis, PhD | Supervisor: Lynn Sweet, PhD

Scientific Aide, Coastal Pelagic Species Unit, 2011-2013

California Department of Fish and Wildlife (CDFW), Marine Region, Coastal Pelagic Species Unit
Supervisor: Mandy Lewis

WORKING GROUP AFFILIATIONS

ES 1: Introduction to Environmental Studies (Fall 2017, 2018)

TEACHING EXPERIENCE

ES 1: Introduction to Environmental Studies (Fall 2017, 2018)

ESM 211: Introduction to Population Modeling (Winter 2018)

ESM 201: Ecology of Managed Systems (Winter 2017)

EEMB 179/279: Ecological Models (Winter 2015, 2016)

EEMB 50: Ecology of noninfectious diseases (Summer 2014)

SKILLS & COMPETENCIES

- **Quantitative Skills:** Analysis in R and RStudio, Github, survey design and analysis (including MTurk and Qualtrics), ArcGIS, proficiency in R TidyVerse, familiarity with Jmp and html.
- **Communication:** Proficient in Microsoft Office, InDesign, Weebly, and InkScape; extensive experience in interdisciplinary collaboration.
- **Population Modeling:** Familiar with VORTEX and MARXAN; Population modeling in R.

AFFILIATIONS & SERVICE

Ecological Society of America, 2018-present

Japanese American Citizens League, Chapter Vice President, 2012-2017, Chapter President 2017-2018

Bren School of Environmental Science & Management PhD Program Committee, 2017-2018

Bren School of Environmental Science & Management Diversity Committee, 2015-2017

Bren Student of Environmental Science & Management Sustainability Commission, 2012-2014