

Drew E. Terasaki Hart

CSIRO Environment, Brisbane, Queensland, Australia

Tel: +61 0484 308 844 | +1 (415) 800-2030 Email: drew.terasaki.hart@gmail.com

[LinkedIn](#) | [GitHub](#) | [Google Scholar](#) | [ORCID](#)

Education:

Ph.D. Environmental Science, Policy, and Management

University of California, Berkeley; December, 2022

Dissertation: [Landscape Genetics, in 4D: Exploring The Influence of Spatiotemporal Phenomena on Microevolutionary Dynamics](#) (Advisor: Ian J. Wang)

M.S. Sustainable Development and Conservation Biology

University of Maryland, College Park; May, 2015

B.S. Ecology and Natural Resources

Rutgers University; December, 2011; *summa cum laude*

Research appointments:

Ecologist and Data Analyst (October 2023 – present)

Commonwealth Scientific & Industrial Research Organization (CSIRO), Brisbane, Australia
Monitoring of koala and feral buffalo; Nature Repair Market; big-data biodiversity modeling

Computational Ecologist (formerly, Postdoctoral Researcher) (January 2021 – August 2023)

The Nature Conservancy (TNC), Arlington, VA, USA
Agroforestry, deforestation, and reforestation as natural climate solutions

Senior Data Science Fellow (January 2016 – December 2020)

Data Laboratory for the Social Sciences (D-Lab), Berkeley, CA, USA
Statistical consulting and computational training, across all academic levels and departments

Research Assistant (December 2014 – July 2015)

Center for Bioinformatics & Computational Biology, College Park, MD, USA
Bioinformatic pipeline development for SNP calling and annotation in diamondback terrapin

Graduate Research Assistant (January 2014 – August 2015)

National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, USA
Statistical analysis and geospatial databasing for environmental and human health research.

Research Intern (October 2013 – May 2014)

Smithsonian Conservation Biology Institute (SCBI), Washington, DC, USA
Computational tool development for high-throughput processing of camera-trap imagery.

Peer-reviewed publications:

Terasaki Hart, D. E., Büi, T. N., Di Maggio, L., & Wang, I. J. (2025). Global phenology maps reveal the drivers and effects of seasonal asynchrony. *Nature*, 1-8. [Cover article]

Pappo, E., Cook-Patton, S., Beillouin, D., Cardinael, R., Cesario, F., Culbertson, K., Griffey, V., Hall, J., Sprenkle-Hyppolite, S., Lovdal, A., Melikov, C., Rosenstock, T. S., Steward, P.,

Terasaki Hart, D. E., & Bennett, R. (2025). Carbon payment strategies in coffee agroforests shape climate and biodiversity outcomes. *Communications Earth & Environment*, 6(1), 661.

- Fesenmyer, K. A., Poor, E. E., **Terasaki Hart, D. E.**, Veldman, J. W., Fleischman, F., Choksi, P., Archibald, S., Armani, M., Fagan, M. E., Fricke, E. C., Terrier, C., Hasler, N., Williams, C. A., Ellis, P. W., & Cook-Patton, S. C. (2025). Addressing critiques refines global estimates of reforestation potential for climate change mitigation. *Nature communications*, 16(1), 4572.
- Bishop, A. P., **Terasaki Hart, D. E.**, & Wang, I. J. (2025). Optimising Sampling Design for Landscape Genomics. *Molecular Ecology Resources*, 25(3), e14052.
- Oakleaf, J., Kennedy, C., Wolff, N. H., **Terasaki Hart, D. E.**, Ellis, P.W., Theobald, D. M., Fariss, B., Burkart, K., & Kiesecker, J. (2024). Mapping global land conversion pressure to support conservation planning. *Scientific Data*, 11(1), 830.
- Terasaki Hart, D. E.** & Wang, I. J. (2024). Genomic architecture controls multivariate adaptation to climate change. *Global Change Biology*, 30(2), e17179.
- Hasler, N., Williams, C. A., Denney, V. C., Ellis, P. W., Shrestha, S., **Terasaki Hart, D. E.**, Wolff, N. H., Yeo, S., Crowther, T. W., Werden, L. K., & Cook-Patton, S. C. (2024). Accounting for albedo change to identify climate-positive tree cover restoration. *Nature Communications*, 15(1), 2275.
- Tang, Q., Fung, T., **Terasaki Hart, D. E.**, & Rheindt, F. E. (2024). Rate and extent of genetic diversity loss under non-equilibrium scenarios of habitat loss. *Biological Conservation*, 289, 110381.
- Terasaki Hart, D. E.**, Yeo, S., Almaraz, M., Beillouin, D., Cardinael, R., Garcia, E., Kay, S., Taylor Lovell, S., Rosenstock, T. S., Sprenkle-Hypolite, S., Stolle, F., Suber, M., Thapa, B., Wood, S., & Cook-Patton, S. C. (2023). Priority science can accelerate agroforestry as a natural climate solution. *Nature Climate Change*, 13(11), 1179-1190.
- Terasaki Hart, D. E.**, Bishop, A. P., & Wang, I. J. (2021). Geonomics: forward-time, spatially explicit, and arbitrarily complex landscape genomic simulations. *Molecular Biology and Evolution*, 38(10), 4634-4646.
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- Publications in review and in preparation** (available on request):
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- Williams, C. A., Ellis, P. W., Andersen, J., Hasler, N., **Terasaki Hart, D. E.**, et al. (in review). Global climate mitigation potential of avoided forest conversion after accounting for albedo.
- Williams, C. A., Shrestha, S., Cook-Patton, S. C., Hasler, N., **Terasaki Hart, D. E.**, and Yeo, S. (in review). The timing of reforestation-driven albedo declines.
- Foster, S., Yang, W.-H., McEvoy, J., Uribe-Rivera, D., **Terasaki Hart, D.E.**, et al. (in prep). Data-driven estimates of koala distribution and abundance.
- Terasaki Hart, D. E.**, et al. (in prep). Deriving management insight from range-wide mapping of koala habitat suitability.
- Cook-Patton, S. C., Wiltshire, S., Atwood, L. W., Beillouin, D., Briggs, R., Bukoski, J. J., Cesario, F., Culbertson, K., DeStefano, A., Fargione, J., Garcia, E., Griffey, V., **Terasaki Hart, D. E.**, et al. (in prep). Mapping global variation in agroforestry for natural climate solutions.

Presentations:

- 2025 Global phenology maps reveal the drivers and effects of seasonal asynchrony. *Ecological Society of Australia*, Adelaide, Australia.
- 2025 Global phenology maps reveal the diversity, convergence, and asynchrony of ecosystem function. *Phenology 2025: Towards a Global Phenology Science*, São Pedro, Brazil.
- 2025 Simulating and sampling species assemblages across environmental gradients. *TERN Science Symposium*, Brisbane, Australia.
- 2021 Geonomics: forward-time, spatially explicit, and arbitrarily complex landscape genomic simulation in Python. *Evolution*, virtual only (COVID).

Media attention and outreach:

- 2025 *Authored article*. See Earth's seasons in all their complexity in a new animated map. [The Conversation](#).
- 2025 *Press release*. See Earth's seasons in all their complexity in a new animated map. [CSIRO](#).
- 2025 *Interviewed article*. Scientists pinpoint locations where Earth's seasons are mysteriously out-of-sync. [USA Today](#).
- 2025 *Television interview*. ABC Morning News, Australia. Interviewed about *Nature* “Global phenology maps...” study.
- 2023 *Press release*. It’s Time to Embrace the Potential of Agroforestry as a Climate Solution. [The Nature Conservancy](#).

Research grants and fellowships:

- 2017 Organization for Tropical Studies, Emerging Challenges in Tropical Science Graduate Fellowship (\$4571)
- 2017 UC Berkeley Center for Latin American Studies, Tinker Summer Field Research Grant (\$900)
- 2017 IDEA WILD, Research Equipment Grant (\$680)
- 2015 University of California, Berkeley, Berkeley Fellowship for Graduate Study (\$278,000)

Teaching:

- 2016-2020 Statistical and computational training and consulting, UC Berkeley D-Lab (undergraduate, graduate, staff, and faculty)
- 2019 *Landscape Ecology*, University of California, Berkeley (undergraduate)
- 2019 *Design and Analysis of Ecological Research*, University of California, Berkeley (undergraduate and graduate)
- 2018 *Landscape Ecology*, University of California, Berkeley (undergraduate)
- 2018 *Climate Change and the Future of California*, University of California, Berkeley (undergraduate)
- 2015 *Molecular and Cellular Biology*, University of Maryland, College Park (undergraduate)

Awards:

2019 Outstanding Graduate Student Instructor Award, Graduate Division, University of California, Berkeley (*top 9% of graduate student instructors*)

Service:

Mentor for Undergraduate Researchers (September 2016 – present)

University of California, Berkeley, CA, USA

Advise undergraduate students through my PhD research and publications

Mentor and Outdoor Leadership Trainer (January 2016 – May 2021)

East Bay Spanish Speaking Citizens' Foundation, Oakland, CA, USA

Weekly tutoring, academic advising, and outdoor training for Latino and newcomer youth

Coordinator of Community-Based Conservation Tourism (February 2012 – August 2013)

Sea Turtle Conservancy (STC), Bocas del Toro, Panamá

Establish coalition with the Ngäbe indigenous community, STC, Smithsonian, local NGOs, and local government, to formalize conservation tourism rights at Playa Bluff nesting beach

Voorhees Fellow in Public Service (September 2009 – May 2010)

Bloustein School, Rutgers University, New Brunswick, NJ, USA

Work with elementary teachers to establish school garden and associated science curriculum

Participant, Supervisor, & Associate Project Director (May 2004 – August 2011, intermittent)

Amigos de las Américas, Paraguay, Nicaragua, México, Costa Rica

Community development collaborations with local youth leaders, NGOs, and government.