

David W. Beilman

Curriculum Vitae – July 2025

Professor
Department of Geography and Environment
University of Hawai‘i at Mānoa
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Climate change and terrestrial ecosystems: carbon cycling and sequestration, wetlands, biogeography, long-term ecology, environmental reconstruction

Professional Appointments

- 2025-present **Department Chair**, Department of Geography and Environment, University of Hawai‘i at Mānoa, USA (start 1 August 2025)
- 2021-present **Professor**, Department of Geography and Environment, University of Hawai‘i at Mānoa, USA
- 2019-2023 **Undergraduate Chair**, Department of Geography and Environment, University of Hawai‘i at Mānoa, USA
- 2014-2021 **Associate Professor**, Department of Geography and Environment, University of Hawai‘i at Mānoa, USA
- 2009-2014 **Assistant Professor**, Department of Geography, University of Hawai‘i at Mānoa, USA
- 2007-2008 **Marie Curie Research Fellow**, ¹⁴CHRONO Centre for Climate, the Environment, and Chronology (¹⁴C-AMS), School of Geography, Archaeology, and Palaeoecology, Queen’s University Belfast, Belfast, U.K.
- 2006-2007 **Postdoctoral Researcher**, Departments of Ecology & Evolutionary Biology and Geography, University of California Los Angeles, Los Angeles, CA, USA

Education

- Postdoctoral: Queen’s University Belfast, U.K. (2007-2008). Marie Curie Research Fellow, ¹⁴CHRONO Centre for Accelerator Mass Spectrometry, School of Geography, Archaeology & Palaeoecology. Project: *European High Arctic Wetland Change*.
University of California Los Angeles, USA (2006-2007). Department of Ecology & Evolutionary Biology. Project: *Arctic Paleoclimate and mammoth extinction*.
- Ph.D. University of California Los Angeles, USA (2006). Geography. Dissertation: *Carbon accumulation and development of peatlands over the Holocene, West Siberia, Russia*.

- M.Sc. University of Alberta, Canada (2001). Environmental Biology & Ecology. Thesis: *Localized permafrost dynamics in boreal western Canada: plant communities.*
- B.Sc. University of Alberta (1996). Environmental Biology (Specialization).

Extramural competitive research grants

- 2025 National Science Foundation, Life and Environments Through Time (LET), Division of Earth Sciences (EAR), co-Principal Investigator. *Developing novel Holocene ENSO and hydroclimate records using lake sediment oxygen isotopes from the western Pacific warm pool.* Proposal 2503954. Beilman (co-PI) total: \$773,090.
- 2025 Department of Defense Installation Innovation Program, Strategic Environmental Research and Development Program (SERDP), co-Principal Investigator. *Understanding fire regime dynamics in the Northern Mariana Islands.* Proposal RC26-C1-0771. Pending. Total: \$248,250.
- 2025 National Science Foundation, Ecosystem Science Cluster, Division of Environmental Biology (DEB), co-Principal Investigator. *Collaborative Research: Long-term causes and consequences of changing fire regimes in the Hawaiian Islands.* Proposal 2534962. Pending. Second submission. Beilman (co-PI) total: \$766,279.
- 2021 National Science Foundation, Major Research Instrumentation (MRI), co-Principal Investigator. *MRI: Acquisition of a Hawaii Statewide Mesonet.* Award AGS-2117975 awarded 08/2021. Total: \$1,378,005.
- 2020 National Science Foundation, Antarctic Earth Sciences, Principal Investigator. *Collaborative Research: Reconstructing late Holocene ecosystem and climate shifts from peat records in the western Antarctic Peninsula.* Award 2041527. 9/2018-8/2024. Supplemental funding: Beilman (PI): \$63,198.
- 2020-24 FACE Foundation (French American Cultural Exchange) Thomas Jefferson Fund for Transatlantic Research, Principal Investigator. *Carbon Islands: long-term carbon and other geochemical cycles in Hawaii and La Reunion.* Total: \$20,000.
- 2018-24 National Science Foundation, Antarctic Earth Sciences, Principal Investigator. *Collaborative Research: Reconstructing late Holocene ecosystem and climate shifts from peat records in the western Antarctic Peninsula.* Award 1745082. 9/2018-8/2024. Collaborative total: \$858,145; Beilman (PI) total: \$318,910.
- 2017 PAGES (Past Global Changes) International Project Office, Bern, Switzerland, Principal Investigator. *Workshop support for TropPEAT: Low latitude peat-forming ecosystems: past, present, future* (June 2017). Beilman (PI) total: \$10,000 USD.
- 2015-19 National Science Foundation, Paleoclimate Perspectives of Climate Change, Principal Investigator. *Collaborative Research: Data-model comparison of Holocene Pacific hydroclimate variability on the Hawaiian Islands using geochemical records and SynTraCE-21 simulations.* Award 1502984. Collaborative total: \$599,200; Beilman (PI) total: \$359,200.

- 2013-15 National Science Foundation, Antarctic Organisms & Ecosystems, Principal Investigator. *Collaborative Research: Response of carbon accumulation in moss peatbanks to past warm climates in the Antarctic Peninsula*. Award 1246359. Collaborative total: \$425,214; Beilman (PI) total: \$186,545.
- 2011-14 National Science Foundation, Arctic System Science, Principal Investigator. *Collaborative Research:RUI: Sensitivity of circum-Arctic carbon to Holocene warm climates and climate seasonality*. Award 1108116. Collaborative total: \$1,240,559; Beilman (PI) total: \$439,235.
- 2011-14 United States Geological Survey National Institutes for Water Resources, Principal Investigator. *Long-term aspects of high-elevation rainfall and climate change in Hawaii*. Beilman (PI) total: \$25,084.
- 2007-09 European Commission, Marie Curie Actions Grant 40974, Principal Investigator. *European High Arctic Wetland Change (Svalbard)*. Beilman (PI) total: €220,000 (@1.41 mean exchange 2007-09 = \$310,200 USD)
- 2004-05 National Science Foundation Doctoral Dissertation Research Improvement Grant. Award 0425625. \$12,000.

Publications

Refereed articles

- Handley J, Fewster RE, Sim TG, Hodson S, Parker B, Crichton K, Charman D, Anderson K, Garneau M, Valiranta M, **Beilman DW**, Swindles GT, Aquino-Lopez M, Blaauw M, Comas X, Levesque E, Addis H, Amesbury M, Fortier D, Mleczko M, Gallego-Sala A. 2025. Pan-Arctic peatlands have expanded during recent warming. *Global Change Biology*, submitted 18 July 2025, MS#ae0db039-6c51-43dc-b2f4-121d22f93558.
- Groff DV and **Beilman DW**. 2025. Antarctic Peninsula moss and water isotopes influenced by high evaporative conditions and topography. *Antarctic Science*, submitted April 2025, ms-ID:AntSci-2025-1719.
- Groff DV, **Beilman DW**, Yu Z, Ford DJ, Xia X. 2023. Kill dates from re-exposed black mosses constrain past glacier advances along the western Antarctic Peninsula. *Geology*, doi:10.1130/G50314.1.
- Madson A, Dimson M, Fortini LB, Kawelo K, Ticktin T, Keir M, Dong C, Ma Z, **Beilman DW**, Kay K, Ocon J, Gallerani E, Pau S, Gillespie TW. 2022. A near four-decade time series shows the Hawaiian Islands have been browning since the 1980s. *Environmental Management*, doi:10.1007/s00267-022-01749-x.
- Luo Y, Taylor KJ, Potito AP, Molloy K, **Beilman DW**, Ya T. 2023. Ecological impacts of N-deposition in a remote, high-elevation lake in the Three River Headwaters Region, Qinghai-Tibetan Plateau. *Journal of Paleolimnology*, doi: 10.1007/s10933-022-00266-5.
- Wang Y, Prohaska A, Dong H, Alberti, A, Alsos IG, **Beilman DW**, Bjørk AA, Cao J, Cherezova AA, Coissac E, DeSanctis B, Denoeud F, Dockter C, Durbin R., Edwards ME, Edwards NR, Esdale J,

Fedorov GB, Fernandez-Guerra A, Froese DG, Gusarova G, Haile J, Holden PB, Kjeldsen KK, Kjær KH, Korneliussen TS, Lammers Y, Larsen NK, Macleod R, Mangerud J, McColl H, Merkel MKF, Money D, Möller P, Nogués-Bravo D, Orlando L, Owens HL, Pederson MW, Racino F, RAHbek C, Rasic JT, Rouillard A, Ruter AH, Skadhauge B, Svendsen JI, Tikhonov A, Vinner L, Wincker P, Xing Y, Zhang Y, Meltzer DJ, Willerslev E. 2022. Reply to: when did mammoths go extinct? *Nature*, doi:10.1038/s41586-022-05417-2.

Wang Y, Pedersen MW, Alsos, IG, De Sanctis B, Racimo F, Coissac E, Owens HL, Merkel MKF, Fernandez-Guerra A, Rouillard A, Lammers Y, Alberti A, Denoeud, F, Money D, Prohaska A, Rutter AH, McColl H, Larsen NK, Edwards ME, Haile J, Orlando L, Vinner L, Korneliussen TS, **Beilman DW**, Bjørk AA, Cao J, Dockter C, Esdale J, Gusarova G, Kjeldsen KK, Mangerud J, Rasic JT, Skadhauge B, Svendsen J-I, Tikhonov A., Winker P, Xing Y, Zhang Y, Froese DG, Rahbek C, Nogués DB, Durbin R, Mann DH, Meltzer DJ, Kjær KH, Möller P, Willerslev E. 2021. Late Quaternary dynamics of Arctic biota revealed by ancient environmental metagenomics. *Nature*, doi: 10.1038/s41586-021-04016-x.

Sim TG, Swindles GT, Morris PJ, Baird AJ, Charman DJ, Amesbury MJ, **Beilman DW**, Channon A, Gallego-Sala AV. Ecology of peatland testate amoebae in Svalbard and the development of transfer functions for reconstructing past water-table depth and pH. 2021. *Ecological Indicators* 13. doi:10.1016/j.ecolind.2021/108122.

Massa C, **Beilman DW**, Nichols JE, Elison Timm O. 2021. Central Pacific hydroclimate variability over the last 45,000 years: molecular-isotopic evidence from leaf wax biomarkers in a Hawaii peatland. *Quaternary Science Reviews*, 253, doi:10.1016/j.quascirev.2020.106744.

Loisel J, Gallego-Sala AV, Amesbury MJ, Magnan G, Anshari G, **Beilman DW**, Benavides JC, Blewett J, Camill P, Charman DJ, Chawchai S, Hedgpeth A, Kleinen T, Korhola A, Large D, Mansilla CA, Müller J, van Bellen S, West JB, Yu Z, Bubier J, Garneau M, Moore T, Sannel ABK, Page S, Välranta M, Bechtold M, Brovkin V, Cole LES, Chanton JP, Christensen TR, Davies MA, De Vleeschouwer F, Finkelstein SA, Frolking S, Galka M, Gandois L, Girkin N, Harris L, Heinemeyer A, Hoyt AM, Jones MC, Joos F, Juutinen S, Kaiser K, Lacourse T, Lamentowicz M, Larmola T, Leiffield J, Lohila A, Milner A, Minkinen K, Morris P, Moss P, Naafs BDA, Nichols J, O'Donnell J, Payne R, Philben M, Quillet A, Ratnayake AS, Roland T, Sjögersten S, Sonnentag O, Swindles GT, Swinnen W, Talbot J, Treat C, Valach AC, Wu J, Piilo S. 2021. Future vulnerability of the global peatland carbon sink. *Nature Climate Change* 11, 70-77. doi:10.1038/s41558-020-00944-0.

Elison Timm O, Li S, Liu J, **Beilman DW**. 2020. On the changing relationship between North Pacific climate variability and synoptic activity over the Hawaiian Islands. *International Journal of Climatology*, doi:10.1002/joc6789.

Allen K, Reimer P, **Beilman DW**, Crow S. 2019. An investigation into 14C offsets in modern mollusk shell and flesh from Irish coasts show no significant differences in areas of carbonate geology. *Radiocarbon*. doi:10.1017/RDC.2019.119.

Beilman DW, Massa C, Nichols JE, Elison Timm O, Kallstrom R, Dunbar-Co S. 2019. Dynamic Holocene vegetation and North Pacific hydroclimate recorded in a mountain peatland, Moloka'i, Hawai'i. *Frontiers in Earth Science* 7: 188, doi: 10.3389/feart.2019.00188.

Westerband A, Barton K, Kagawa-Viviana A, Bogner K, **Beilman DW**, Knight T. 2019. Seedling drought tolerance and functional traits vary in response to the timing of water availability in a keystone Hawaiian tree species. *Plant Ecology* 220 (3): 321-344. doi:10.1007/s11258-019-00917-0.

- Gallego-Sala A, Charman DJ, Brewer S, Page S, Prentice C, Friedlstein P, Amesbury M, **Beilman DW**, Björck S, Blyakharchuk T, Bochicchio C, Booth RK, Camill C, Carless D, Chimmer RA, Clifford M, Cressey E, Courtney-Mustaphi C, Fialkiawicz-Koziel B, Finkelstein S, Garneau M, Githumbi E, Hribljan J, Holmquist J, Hughes PDM, Ireland A, Jones C, Jones M, de Jong R, Karofeld E, Klein E, Korhola A, Lacourse T, Lamarre A, Lamentowicz M, Large D, Loisel J, Mackay H, MacDonald GM, Makila M, Magnan G, Marchant R, Marcisz K, Martínez Cortizas A, Massa C, Mathijssen P, Mauquoy D, Mighall T, Mitchell F, Moreton S, Moss P, Nichols J, Orme L, Packalen M, Robinson S, Roland T, Sanderson N, Sannel B, Silva Sánchez N, Steinberg N, Swindles GT, Turner E, Uglow J, Valiranta M, Van Bellen S, Van Geel B, Wang G, Yu Z, Zaragoza-Castells J, Zhao Y. 2018. Latitudinal limits to the predicted increase of the peatland carbon sink with warming. *Nature Climate Change* doi:10.1038/s41558-018-0271-1.
- Stelling JM, Yu Z, Loisel J, **Beilman DW**. 2018. Peatbank response to late Holocene temperature and hydroclimate change in the western Antarctic Peninsula. *Quaternary Science Reviews* 188: 77-89. doi:10.1016/j.quascirev.2017.10.033.
- Taylor KJ, McGinley S, Potito AP, Molloy K, **Beilman DW**. 2018. A mid to late Holocene chironomid-inferred temperature record from northwest Ireland. *Palaeogeography, Palaeoclimatology, Palaeoecology* 505: 274-286. doi: 10.1016/j.palaeo.2018.06.006.
- Loisel, J, Yu Z, **Beilman DW**, Kaiser K, Parnikoza I. 2017. Peatland ecosystem processes in the Maritime Antarctic during warm climates. *Scientific Reports* 7, 12344, doi: 10.1038/s41598-017-12479.
- Taylor KJ, Potito AP, **Beilman DW**, Ghilardi B, O'Connell M. 2017. Impact of early farming on chironomid communities in northwest Ireland. *Journal of Paleolimnology* 57: 227-244. doi: 10.1007/s10933-017-9942-6.
- Yu Z, **Beilman DW**, Loisel J. 2016. Transformations of landscape and peat-forming ecosystems in response to late Holocene climate change in the western Antarctic Peninsula. *Geophysical Research Letters* 43, doi:10.1002/2016GL069380.
- Taylor KJ, Stolze S, **Beilman DW**, Potito AP. 2016. Response of chironomids to Neolithic land-use change in northwest Ireland. *The Holocene*. doi:10.1177/0959683616675935.
- Willis K, **Beilman DW**, Booth R, Amesbury M, Holmquist J, MacDonald GM. 2015. Peatland paleohydrology in the southern West Siberian Lowlands: comparison of multiple testate amoebae transfer functions, sites, and *Sphagnum* $\delta^{13}\text{C}$ values. *The Holocene* 25: 1425-1436. doi: 10.1177/0959683615585833.
- Potito AP, Woodward CA, McKeown M, **Beilman DW**. 2014. Modern influences on chironomid distribution in western Ireland lakes: potential for palaeoenvironmental reconstruction. *Journal of Paleolimnology* 52: 385-404. doi:10.1007/s10933-01409800-8.
- Molak M, Suchard MA, Ho SYW, **Beilman DW**, Shapiro B. 2014. Empirical calibrated radiocarbon sampler: a tool for incorporating radiocarbon-date and calibration error into Bayesian phylogenetic analyses of ancient DNA. *Molecular Ecology Resources*. doi:10.1111/1755-0998.12295.
- Yu Z, Loisel J, Charman DJ, **Beilman DW** and Camill P. 2014. Holocene peatland carbon dynamics in the circum-Arctic region: an introduction. *The Holocene* 24: 1021-1028.

- Loisel J, Yu Z, **Beilman DW**, Camill P, Alm J, Anderson D, Andersson S, Fialkiewicz-Koziel B, Barber K, Belya LR, Bunbury J, Chambers FM, Charman DJ, De Vleeschouwer F, Finkelstein SA, Garneau M, Hammarlund D, Holmquist J, Hughes P, Jones MC, Klein ES, Kokfelt U, Korhola A, Kurhy P, Lamarre A, Lamentowicz M, Large D, Lavoie M, MacDonald GM, Magnan G, Galka M, Mathijssen P, Mauquoy D, McCarroll J, Moore TR, Nichols J, O'Reilly B, Oksanen P, Peteet D, Richard PJH, Robinson S, Ronkanien T, Rundgren M, Sannel B, Thom T, Tuittila E-S, Turetsky M, Valiranta M, van der Linden M, van Geel B, van Bellen S, Vitt DH, Zhao Y, Zhou W. 2014. A database and synthesis of northern peatland soil properties and Holocene carbon and nitrogen accumulation. *The Holocene* 24:1028-1043.
- Preston CM, Norris CE, Bernard GM, **Beilman DW**, Quideau SA, Wasylishen RE. 2014. Carbon and nitrogen in the silt-sized fraction and its HCl-hydrolysis residue from Canadian boreal forest soils. *Canadian Journal of Soil Science* 94: 157-168. doi: 10.4141/CJSS2013-082.
- Guo X, Potito AP, Luo L, and **Beilman DW**. 2013. Impacts of climate warming on a large mountain lake in southwest China, *Hydrobiologia*. doi:10.1007/s10750-013-1615-5.
- Taylor KJ, Potito AP, **Beilman DW**, Ghilardi B, O'Connell M. Paleolimnological impacts of early prehistoric farming at Lough Dangan, County Sligo, Ireland. 2013. *Journal of Archaeological Science* 40: 3212-3221. doi:10.1016/j.jas.2013.04.002.
- Charman DJ, **Beilman DW**, Blaauw M, Booth RK, Brewer S, Chambers FM, Christen JA, Gallego-Sala A, Harrison SP, Hughes PDM, Jackson ST, Korhola A, Mauquoy D, Mitchell FJG, Prentice IC, van der Linden M, De Vleeschouwer F, Yu ZC, Alm J, Bauer IE, Corish YMC, Garneau M, Hohl V, Huang Y, Karofeld E, Le Roux G, Loisel J, Moschen R, Nichols JE, Nieminen T, MacDonald GM, Phadtare NR, Rausch N, Sillasoo U, Swindles GT, Tuittila E-S, Ukonmaanaho L, Valiranta M, van Bellen S, van Geel B, Vitt DH, and Zhao Y. 2013. Climate-driven changes in northern peatland carbon accumulation during the last millennium. *Biogeosciences*, 10: 929-944. doi:10.5194/bg-10-929-2013.
- MacDonald GM, **Beilman DW**, Kuzmin YV, Orlova LA, Kremenetski KV, Shapiro B, Wayne RK, and Van Valkenburg B. 2012. Pattern of extinction of the woolly mammoth in Beringia. *Nature Communications*. doi:10.1038/ncomms1881.
- Smith, LC, **Beilman DW**, Kremenetski KV, Sheng Y, MacDonald GM, Lammers RB, and Shiklomanov AI. 2012. Landscape water storage in West Siberian Lowland peatlands: Influence of permafrost revealed in a new database of soil properties. *Permafrost and Periglacial Processes* 23: 69-79. doi:10.1002/ppp.735.
- Chambers FM, Beilman DW, Yu Z. 2011. Methods for determining peat humification and for quantifying peat bulk density, organic matter and carbon content for paleostudies of climate and peatland carbon dynamics. *Mires and Peat*, 7 Article 7: 1-10.
- Woodward, CA, Potito, AP, and **Beilman DW**. 2011. Carbon and nitrogen isotope ratios of lake surface sediments from western Irish lakes: implications for the inference of past lake productivity, nitrogen sources and loading. *Journal of Paleolimnology* 47: 167-184. doi:10.1007/s10933-11-9568-z.
- Yu Z, **Beilman DW**, Frothingham S, MacDonald GM, Roulet NT, Camill P, Charman DJ. 2011. Peatlands and their Role in the Global Carbon Cycle. *EOS Transactions*, American Geophysical Union. Volume 19 Issue 12 Page 97. doi:10.1029/2011EO120001.

- Yu Z, Loisel J, Brosseau DP, **Beilman DW**, and Hunt SJ. 2010. Global peatland dynamics since the Last Glacial Maximum. *Geophysical Research Letters* 37, doi:10.1029/2010GL043584.
- Moroni M, Hagemann U, and **Beilman DW**. 2010. Dead wood is buried and preserved in a Labrador boreal forest. *Ecosystems*. 13: 452-458. doi:10.1007/s10021-010-9331-8.
- Beilman DW**, MacDonald GM, Smith LC, and Reimer PJ. 2009. Carbon accumulation in peatlands of West Siberia over the last 2000 years. *Global Biogeochemical Cycles*, doi:10.1029/2007GB003112.
- Yu Z, **Beilman DW**, and Jones MC. 2009. Sensitivity of northern peatland carbon dynamics to Holocene climate change. Chapter in AGU Monograph Carbon Cycling in *Northern Peatlands*, Baird A, Belyea L, Comas X, Reeve A, and Slater L (eds), doi:10.1029/2008GM000822.
- Beilman DW**, Vitt DH, Bhatti JS, and Forest S. 2008. Peat carbon stocks in the southern Mackenzie River Basin: uncertainties revealed in a high-resolution case study. *Global Change Biology* 14: 1221-1232. doi:10.1111/j.1365-2486.2008.01565.
- MacDonald GM, Kremenetski KV, and **Beilman DW**. 2008. Climate change and the northern Eurasian treeline zone. *Proceedings of the Royal Society B: Biological Sciences*, 363, 2285-2299.
- Thormann MN, Rice A, and **Beilman DW**. 2007. Yeasts in peatlands: a review of richness and roles in peat decomposition. *Wetlands* 27: 761-773.
- MacDonald GM, **Beilman DW**, Kremenetski KV, Sheng Y, Smith LC, and Velichko AA. 2006. Rapid early development of circumarctic peatlands and atmospheric CH₄ and CO₂ variations. *Science* 314:285-288.
- Smith LC, MacDonald GM, Velichko AA, **Beilman DW**, Borisova OK, Frey KE, Kremenetski KV, and Sheng Y. 2004. Siberian peatlands a net carbon sink and global methane source since the early Holocene. *Science* 303: 353-356.
- Sheng Y, Smith LC, MacDonald GM, Kremenetski KV, Frey KE, Velichko AA, Lee M, **Beilman DW**, and Dubinin P. 2004. A high-resolution GIS-based inventory of the West Siberian peat carbon pool. *Global Biogeochemical Cycles* 18, GB3004, doi: 10.1029/2003GB002190.
- Beilman DW** and Robinson SD. 2003. Peatland permafrost thaw and landform type along a climatic gradient. *Proceedings of the 8th International Conference on Permafrost*, Zurich, Switzerland, Balkema Publishers, Vol. 1, p. 61-65.
- Nobel PS, De la Barrera E, **Beilman DW**, Doherty JH, and Zutta BR. 2002. Temperature limitations on cultivating edible cacti in California. *Madroño* 49(4): 228-236.
- Beilman DW**. 2001. Plant community and diversity change due to localized permafrost dynamics in bogs of western Canada. *Canadian Journal of Botany* 79: 983-993.
- Beilman DW**, Vitt DH, and Halsey LA. 2001. Localized permafrost peatlands in western Canada: definition, distributions and degradation. *Arctic, Antarctic, and Alpine Research* 33: 70-77.

Research reports

- Beilman DW**, Yu Z, and MacDonald GM. 2010. The northern peatland carbon pool and the Holocene carbon cycle. *PAGES News* Vol. 18, No. 1, April 2010. Newsletter of the Past Global Changes program of the International Geosphere Biosphere Program. www.pagesigbp.org
- Beilman DW**, Crow S, Spears J, Lajtha K. 2004. *Soil Nutrient Status of a Disturbed Desert Ecosystem*. Marine Corps Air Ground Combat Center, Twentynine Palms, California. Report for US Army Corps of Engineers – CERL.
- Halsey LA, Vitt DH, **Beilman DW**, Crow S, Mihelcic S, and Wells R. 2003. *Alberta Wetland Inventory Standards Version 2.0*. Alberta Sustainable Resource Development, Resource Data Branch, Edmonton, AB. Pub. No. T/031.

Professional Presentations at National and International Meetings

- Beilman DW**. 2024. Lessons learned from peat carbon worldwide (invited keynote speaker). Irish Quaternary Association, Dublin, Ireland, November 2024.
- Beilman DW**, Setter R, Webster, K. 2024. Tropical montane wetlands in the Pacific and Hawaii are carbon hotspots with an uncertain trajectory. American Association of Geographers Annual Meeting, Honolulu, HI, AAG-30084.
- Pompeani D and **Beilman DW**. 2024. Long causes and consequences of changing fire regimes in the Hawaiian Islands. American Association of Geographers Annual Meeting, Honolulu, HI, AAG-32935.
- Wahl D, Jones M, Fraioli K, Goodale K, **Beilman DW**, Huber M, Chi Soe A. 2023. A late-glacial and Holocene environmental reconstruction from Punamano, Oahu, Hawaii. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2023-B13L-2076.
- Beilman DW** and Groff DV. 2023. Antarctic Peninsula peatbank oxygen isotope values during the warmest summer and in the oldest continental profile. International Quaternary Association Congress, Rome, Italy. July 2023.
- Sim T, Charman D, Amesbury M, Handley J, Hodson S, Chrichton K, Anderson K, **Beilman DW**, Comas X, Fortier D, Garneau M, Levesque E, Piilo S, Swindles G, Valiranta M, Gallego-Sala, A. 2023. Arctic peatland carbon dynamics and extent with climate change. International Quaternary Association Congress, Rome, Italy. July 2023.
- Jones DJ, Groff DV, and **Beilman DW**. 2023. The influence of high evaporative conditions on peat-forming mosses in the Antarctic Peninsula. European Geophysical Union, April 2023.
- McKeown M, **Beilman DW**, Prebble M, Tuiwawa M, Meyer J-Y. 2023. Developing a hydrological transfer function for montane peatlands in the tropical South Pacific. International Quaternary Association Congress, Rome, Italy. INQUA2023-
- Jones D, Groff DV, and **Beilman DW**. 2023. The influence of high evaporative conditions on peat-forming mosses in the Antarctic Peninsula. European Geosciences Union, Vienna, Austria, EGU23-10139.

- Groff DV, **Beilman DW**, Yu Z, Ford D. 2022. Kill dates from re-exposed black mosses constrain past glacier advances along the western Antarctic Peninsula. European Geosciences Union, Vienna, Austria, EGU22-10758.
- Beilman DW**, Ford DJ, Groff DV. 2021. Controls on land surface temperature of moss banks in the Land surface temperature mapping of moss beds on the western Antarctic Peninsula using a multi-sensor UAV.US Antarctic Science Meeting, United States Scientific Committee on Antarctic Research. On line.
- Ford DJ, **Beilman DW**, Groff DV. 2020. Land surface temperature mapping of moss beds on the western Antarctic Peninsula using a multi-sensor UAV. American Geophysical Union Fall Meeting, San Francisco, CA, USA. ID#774505.
- Nichols JE, Heusser LE, **Beilman DW**, Massa C, Moy CM, Peteet DM, Vandergoes M. 2019. California drought in spatial and temporal context. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2019-PP31D-1658.
- Beilman DW**, Yu Z, Parnikoza I, Loisel J. 2019. Recent plant growth conditions in the Antarctic Peninsula in the context of the last 2000 years. European Geophysical Union General Assembly, Vienna, Austria. EGU2019-16671.
- Beilman DW**, Elison Timm O, Massa C, Nichols J. 2019. Dynamic Holocene vegetation and North Pacific hydroclimate reconstructed from a mountain peatland, Molokai, Hawaii. International Quaternary Association Congress, Dublin, Ireland. INQUA2019-P-2864.
- Beilman DW**, Massa C. 2019 Mountain peatlands in Hawaii show dynamic vegetation and North Pacific Hydroclimate over the Holocene. Association of American Geographers Annual Meeting, Washington D.C, USA. AAG2019-90023252
- Marohnic O, **Beilman DW**, Juvik J. 2019. Holocene hydroclimatic changes at three windward montane wetland sites on the Island of Hawaii. Association of American Geographers Annual Meeting, Washington D.C, USA. AAG2019-90108275.
- Tseng H, Giambelluca TW, Griswold JDS, Freitag S, Howell SG, Nugent A, **Beilman DW**, Winchester C, DeLay JK. 2018. Testing alternative ground-based cloud liquid water content measurement methods for estimating cloud water interception in tropical montane cloud forests. AGU2018-H43B-30.
- Beilman DW**. 2018. Pitfalls and opportunities in radiocarbon applications in the Antarctic Peninsula region. Paleochronology Building Workshop, Campeche, Mexico
- Beilman DW** and Massa C. 2017. Holocene hydroclimate change evidence from the North Central Pacific. Geological Society of America Annual Meeting, Seattle, WA, USA. GSA2019-196-10.
- Beilman DW**. 2017. Introduction to the TropPEAT workshop on tropical lowland and mountain carbon: Aloha and welcome. Honolulu, HI, USA. Organizer, funder, convener, and host.
- Von Ness K, Loisel J, **Beilman DW**, Kaiser K. 2017. A Holocene history of permafrost dynamics, carbon sequestration, and hydrological changes at Beretta Bog, Mackenzie River Basin. American Geophysical Union Fall Meeting, New Orleans, LA, USA. AGU2017-B43G-2211.

- Stelling J, Yu Z, **Beilman DW**, Loisel J. 2017. Are signals of westerly wind strength and hydroclimate change during the late Holocene preserved in Antarctic peatbanks? American Geophysical Union Fall Meeting, New Orleans, LA, USA. AGU2017-PP43B-2372
- Beilman DW**. 2016. Polar change: IUCN WCC Arctic Session. International Union for the Conservation of Nature World Conservation Congress Hawaii 2016. Honolulu, HI, USA. Invited talk and panel discussant.
- Beilman DW**, Kallstrom R, Elison Timm O, Nichols J, Massa C. 2016. A multi-proxy record of Holocene hydroclimate change from a windward montane wetland. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2016-PP21C-2303.
- Elison Timm O, Flamholtz W, Li S, **Beilman DW**, Massa C. 2016. Testing the reconstruction potential for North Pacific Circulation Anomalies inside the TraCE-21ka paleoclimate simulation. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2016-PP54A-02.
- Massa C, **Beilman DW**, Nichols JE, Elison Timm O. 2016. Investigation of n-Alkane Distributions in Modern Plant Litter from Hawaii wetlands: a potential proxy for past vegetation and hydroclimate changes? AGU2016-PP21C-2300.
- Stelling J, Yu Z, **Beilman DW**. 2016. Dynamic response of peatbank moss communities to hydroclimate over the last 2000 years in the western Antarctic Peninsula. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2016-PP11C-2033.
- Loisel J, Nichols JE, Kaiser K, **Beilman DW**. 2016. Cellulose and Lignin Carbon Isotope Signatures in Sphagnum Moss Reveal Complementary Environmental Properties. American Geophysical Union Fall Meeting, San Francisco, CA, USA AGU2016-PP33B-2357.
- Yumol LM, **Beilman DW**, Yu Z, Parnikoza I. 2016. Bryophyte Tissue-specific Carbon Isotope Record from Galindez Island, Argentine Islands, Western Antarctic Peninsula. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2016-PP11C-2035.
- Hedgpeth A, **Beilman DW**, Crow S. 2015. Resilience of Arctic Permafrost Carbon in Mackenzie River Basin: An incubation experiment to observe priming potentials and biodegradability of arctic permafrost peatlands. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2016-B31D-0605
- Loisel J, Yu Z, **Beilman DW**. 2014. Developmental History of an Intriguing Peat-Forming Community Along the West Antarctic Peninsula. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2014-B41E-0107.
- Bochicchio CJ, Loisel J, Yu Z, **Beilman DW**, Dirksen V, Dirksen O, Nichols JE. 2014. New Paleoclimate Records from the Russian Far East: Carbon Accumulation Rates and Ecological Change Over the Last 13,000 Years from Western and Central Kamchatka. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2014-PP21B-1332.
- Tardona M, **Beilman DW**, Yu Z, Loisel J. 2014. Response of Peat-forming Ecosystems of the Western Antarctic Peninsula to Recent Climate Change. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2014- B31J-04.

- Schubert O, **Beilman DW**. 2014. An 8000-yr Record of Vegetation and Sedimentation Change from Kaau Crater, Hawaii Shows Mid-Holocene Climate Variability in the Pacific. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2014-PP11A-1317.
- Yu Z, Loisel J, **Beilman DW**, Cleary K. 2014. Transformation of Peat-Forming Ecosystems in a Changing Climate and Landscape on the Western Antarctic Peninsula. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2014-B41E-0104.
- Hedgpeth A, **Beilman DW**, Crow S. 2014. Sensitivity of Arctic Permafrost Carbon in the Mackenzie River Basin: A substrate addition and incubation experiment. American Geophysical Union Fall Meeting, San Francisco, CA, USA. AGU2014-B31G-0116.
- Beilman DW**. 2014. Long-term carbon dynamics of peatbank ecosystems in the western Antarctic Peninsula. Antarctica Ecosystems Workshop, Dartington Hall, U.K. Invited workshop participant.
- Porinchu DF, Potito AP, Soltesz P, **Beilman DW**, and Brady V. 2012. Multi-proxy paleolimnological analyses provides evidence of early to mid-Holocene aridity in the Midwestern United States. 2012. International Paleolimnology Symposium, IPS2012, Glasgow, Scotland, U.K.
- Potito AP, Guo X, Luo L, and **Beilman DW**. 2012. Impacts of climate warming on a large mountain lake in Southwest China. Annual Meeting of the American Association of Geographers, New York, NY, USA.
- Taylor KH, Potito AP, Ghilardi B, O'Connell M, **Beilman DW**. 2012. Ecological impacts of early farming in western Ireland: a paleolimnological approach. Annual Meeting of the American Association of Geographers. New York, NY, USA.
- Beilman DW**, Charman DJ, Blaauw M, Brewer S, Gallego-Sala, Harrison S, Jackson ST, Prentice IC, Yu Z. 2011. Climate and carbon accumulation in northern peatlands during the last 1000 years. American Geophysical Union, San Francisco, CA, USA
- Beilman DW**. 2011. Holocene climate and ecosystem response evident in Hawaii mountain peat swamp sediments. Holocene Paleoclimate in the Hawaiian Islands, Big Island, HI, USA
- Street JH, **Beilman DW**, Timmermann A, Gaidos E, Paytan A. 2010. Holocene climate variability in the central North Pacific: an organic geochemical record from Kaau Crater swamp, Oahu, Hawaii. American Geophysical Union, San Francisco, CA, USA
- Beilman DW** and MacDonald GMM. 2009. A carbon accumulation maximum during the medieval climate anomaly in the world's biggest bog. Paper B41A-0288. American Geophysical Union, San Francisco, CA, USA
- Beilman DW**. 2009. Analysis and synthesis of hemispheric data. CAMILA Project meeting, Dartington Hall, Totnes, UK (Inv. Participant)
- Beilman DW**, Vitt DH. 2009. Geographic Importance of carbon in peatlands: aspects of peatland size and trajectories of regional climate. Role and Importance of Wetlands in Global Carbon, Prague (Inv. Session Chair)

Beilman DW. 2009. Recent carbon accumulation dynamics in peatlands of Eurasia. Peatland Archives of Holocene Climate Variability, Estonia (Inv. Participant)

Beilman DW, Reimer PJ, Hormes A, Blaauw M. 2009. Carbon accumulation dynamics in Svalbard mires over recent millennia. European Geosciences Union, Vienna, Austria

PRESENTATIONS BEFORE 2009

(as primary author only)

Dec 2008 American Geophysical Union, San Francisco, CA, USA
Apr 2008 American Association of Geographers, Boston, MA, USA (Session Organizer)
Mar 2008 Invited participant - PeatNet Intl. Workshop, Philadelphia, PA, USA
Apr 2007 American Association of Geographers, San Francisco, CA, USA
Dec 2006 American Geophysical Union, San Francisco, CA, USA
Mar 2006 American Association of Geographers, Chicago, IL, USA
Nov 2005 Bayesian Statistics and Age-modeling Workshop, Guanajuato, Mexico
Dec 2004 American Geophysical Union, San Francisco, CA, USA
Jul 2004 The Science of Changing Climates, Edmonton, AB, Canada
Jul 2003 International Quaternary Association, Reno, NV, USA
Mar 2002 Int'l Workshop on Northern Peatlands II: Permafrost, Montreal, PQ, Canada
Aug. 2001 Western Siberian Peatlands and the Carbon Cycle, Noyabrsk, Russia
May 2001 Society of Wetland Scientists, 22nd Annual Meeting, Chicago, IL, USA
Mar 2001 Int'l Workshop on Northern Peatlands I: Modelling, Edmonton, AB, Canada
Feb 2001 Partners in Conservation, Alberta Conservation Association, Nisku, AB, Canada
Aug 2000 Millennium Wetland Event, Quebec City, PQ, Canada
Feb 2000 Circumpolar Ecosystems 4, Churchill, MB, Canada
Aug 1999 Ecological Society of America, Spokane, WA, USA

Teaching

Awards

2023 Nominated – University of Hawai‘i, Faculty Award for Excellence in Mentoring Undergraduate Research
2012 University of Hawai‘i, College of Social Sciences, Excellence in Teaching Award

Teaching resource development

2022 Strategic Investment Initiative: Keala: Native Hawaiian and Pacific Islander Educational Career Pathways. UH Manoa Provost Strategic Investment Initiative. Paid internships for training of Native Hawaiians in Geospatial Information Science. \$273,550. Awarded July 2022.
2022 Open Educational Resource (OER) project for ‘*Fundamentals of Biophysical Geography – Global Systems and Processes*’ textbook for GEO 101 The Natural Environment. This new project to develop an open-resource textbook for introductory courses in Physical Geography. See Grants and Awards, Internal competitive grants.

Courses taught - University of Hawai‘i at Mānoa

The Natural Environment, **GEO 101**. Instructor. Overview of Earth System components, including the role of humans. High-enrollment service class serving mainly non-science majors. Often this is one of the only science classes taken by many majors, and continues to play an important role in environmental literacy for University of Hawaii graduates. Includes a companion laboratory section GEOG 101L. S09 (Spring 2009), F09 (Fall 2009), S10, F10, S11, F11, F12, S13, S15, S16, S17, S18, S22, F23.

Global Environmental Issues, **GEO 302** 'Climate Change: London'. Instructor. Developed and instructed as the core component of the SP2019 University of Hawaii at Manoa Study Abroad Center London Program. Resident Director, S19, F24.

Introduction to Biogeography, **GEO 309**. Instructor. Basic theory in biogeography and ecology taught using examples from the literature including observational and experimental studies. Designed for departmental majors, but consistently sees enrollment from programs across campus. F10, F12, S25.

Past Global Change & the Human Era, **GEO 411. SUST 413**. Instructor. A brand-new class developed in 2012 to fill a need in departmental curriculum for a long-term biogeography class. Now one of the required courses in the Global Environmental Science Program in the School of Ocean and Earth Science and Technology. S10, S11, F12, F13, F14, F15, F16, F18, S19, F19, F20, F21, F22, F23, F24.

Practicum in Geography, **GEO 492**. Instructor. Developed as a way for undergraduate students to gain experience in laboratory and field methodology and skills, including proposal development and presentation skills. S10, F10, S13, S15, S20, F20, S21, F21, S22, F22, S23, F23. F24.

Capstone Undergraduate Seminar, **GEO 493**. Instructor. A required course to finish out the undergraduate experience of Geography & Environment Majors based on discipline history, refining communication skills, and CV development. Focus on field research and experiential learning during multi-day trips to Hawaiian Islands. S21, S22, S23.

Research Design and Methods in Geography, **GEO 696**. Instructor. Further development and refinement of this course re-envisioned in 2016 to better serve incoming graduate students particularly at the Master's level to build general writing skills and particularly proposal development. S18.

Directed Research, **GEO 699**. *Thesis Research*, **GEO 700**. *Directed Reading*, **OCN 399**. *Undergraduate Thesis*, **OCN 499**. Instructor/Mentor. Various thesis and directed research courses across campus.

Research Seminar in Biogeography, **GEO 750**. Instructor. Developed to provide specific research skills in hypothesis generation, and field methods. Expanded in 2014 to include laboratory and instrumentation training. F11, F14, F20.

Guest lectures in University of Hawai'i Classes

BOT 100 Freshman Seminar, F21, F22.

ERTH 710 Archaeology meets the Earth and Space Sciences. *Radiocarbon methods*. S19.

GEO 309 Introduction to Biogeography. *Biogeography and the global carbon cycle*. F15. F16.

GEO 401 Climate Change. *Long-term aspects of the global carbon cycle*. S15.

GEO 401 Climate Change. *Paleoclimate*. S16, S17, S18.

GEO 325 Geography, Environment and Society. *Carbon dioxide and carbon solutions*. S18

GEO 692 Faculty Seminar Series. F09, F10, F11, F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24.

GEO 695 Concepts and Theory in Geography. *History and future of Physical Geography*. F10, F11, 16, F18, F19, F23.

OCN 100 Global Environmental Science Seminar. *Past warm climates and future carbon cycling*. F13.

BOT 202 Plant Ecology. *Why study plant ecology?* F13.

GEO 600 *Global carbon cycle and climate*. S10, F11.

Courses taught - University of California at Los Angeles

Earth's Physical Environment, **GEOG 1**. Graduate TA laboratory instructor and guest lecturer. Study of Earth's physical environment, with particular reference to nature and distribution of landforms and climate and their significance to people. 2002-2004.

Biodiversity in a Changing World, **GEOG 5**. Graduate TA laboratory instructor and guest lecturer. Biogeographic exploration of plant and animal diversity and conservation issues on continents and islands around world. 2002-2004. Instructor, Summer 2005.

Courses taught - University of Alberta, Canada

Introductory Biological Diversity, **BIOL 107**. Graduate TA laboratory instructor. Overview of evolutionary principles and classification, the history of life, and the key adaptations of prokaryotes, protists, fungi, plants, and animals. 1998-2000.

Principles of Ecology, **BIOL 208**. Graduate TA laboratory instructor. Scientific study of interactions between organisms and their environment in a hierarchy of levels of organization: individuals, populations, communities, and ecosystems. 1998-2000.

Plant Anatomy, **BOT 308**. Graduate TA laboratory instructor. Seed plant structure and development with particular emphasis on flowering plants. 1998-2000.

Student and Postdoctoral Mentoring and Training

Graduate and Postdoctoral

2025-present, Graduate Committee Chair (advisor), Alexa Buskirk, M.A. student, Geography & Environment, University of Hawai'i at Mānoa, expected 2027.

2025-present, Graduate Committee Chair (advisor), Sabrina Bruns, M.A. student, Geography & Environment, University of Hawai'i at Mānoa, expected 2027.

2025. Host, Visiting International Ph.D. candidate, semester-long stay, Leanne O'Donoghue, University College Cork, Cork, Ireland.

2024-present, Graduate Committee Chair (advisor), Jacqueline Hernandez, M.A. student, Geography & Environment, University of Hawai'i at Mānoa, expected 2026.

- 2024-2025 Graduate Committee Member, Korey Weatherell, M.A. (2025), Geography & Environment, University of Hawai‘i at Mānoa. Thesis: “Pollinating futures: relational conservation and the biocultural life of *Hyalaeus* bees in Kaena Oahu”.
- 2023-2024, Graduate Committee Member, Amanda Lambert, M.A. (2024), Geography & Environment, University of Hawai‘i at Mānoa. Thesis: “Tracking wetland dynamics: remote sensing and deep learning for coastal wetland classification in the Hawaiian Islands”.
- 2023-present, Graduate Committee Member, Andrew Lewis, Ph.D student, Geography & Environment, University of Hawai‘i at Mānoa, expected 2027.
- 2023-2024, Graduate Committee Member and University Representative, Carla Gimpel Munoz, Ph.D. (2024) Marine Biology, University of Hawai‘i at Mānoa. Dissertation: “Winter picoplankton distributions and diversity over a three-year study off the northwestern Antarctic Peninsula”.
- 2022-present, Graduate Committee Member and University Representative, Shannon McClish, Ph.D. student, Oceanography, University of Hawai‘i at Mānoa, expected Fall 2025.
- 2022-2025. Host and Committee Member, and Visiting International Ph.D. (2025), semester-long stay (2022), Henar Margenat, Laboratoire Ecologie Fonctionnelle et Environnement, Campus ENSAT, Toulouse, France. Dissertation: “Atmospheric spatial variability of microplastic deposition in mountain environments”.
2022. Host, Visiting International Ph.D. candidate, semester-long stay, Charlotte Hipkiss, University of Southampton, England. Dissertation: “Stress in paradise: reconstructing late Holocene hydroclimate to investigate the role of drought in the timing of human migration and colonization in the tropical South Pacific”.
- 2022-present, Graduate Committee Member, Hannah Von Hammerstein, Ph.D. Candidate, Geography & Environment, University of Hawai‘i at Mānoa, expected 2026.
- 2021-2025, Graduate Committee Member and University Representative, Kevin Faccenda, Ph.D. (2025) Botany, University of Hawai‘i at Mānoa. Dissertation: “Plant invasions in Hawaii: fire risks and grass invasion patterns”.
- 2020-present, Graduate Committee Chair (advisor), Yuko Stender, Ph.D. Candidate, Geography & Environment, University of Hawai‘i at Mānoa, expected 2026.
- 2020-2023, Graduate Committee Member, Gina McGuire, Ph.D. (2023), Geography & Environment, University of Hawai‘i at Mānoa. Dissertation: “Indigenous ecology of Kalapana Hawaii”.
- 2020-present, Graduate Committee Member and University Representative, Xinyi Yi, Ph.D. student, Atmospheric Sciences, University of Hawai‘i at Mānoa, expected 2025.
- 2020-2023, Graduate Committee Chair (advisor), Taylor Warner, M.A. (2023), Geography & Environment, University of Hawai‘i at Mānoa. Thesis: “Success of post-fire broadcast seeding as a tool for restoration of a Hawaii dry forest”.
2019. Host, Visiting Postdoctoral Fellow, Dr. Dulcinea Groff (Lehigh University). Project: “Reconstructing late Holocene ecosystem and climate shifts from peat records in the western Antarctic Peninsula.”

- 2019-present, Graduate Committee Member, Kira Webster, Ph.D. student in Geography, University of Hawai‘i at Mānoa , expected 2025.
- 2018-2022, Graduate Committee Member, Liat Portner, M.A. (2022) Geography & Environment, University of Hawai‘i at Mānoa. Thesis: “Examining ecohydrological implications of plant invasion in the leeward Koolau mountains through transpiration”.
- 2017-2021, Graduate Committee Member, Qian Zhang, Ph.D. (2021), Geography, University of Hawai‘i at Mānoa. Dissertation: “Mapping aboveground forest aboveground biomass in the Brazilian Amazon using Airborne LiDAR, Landsat Imagery, and Deep Learning”.
- 2016-2021, Graduate Committee Member, Han Tseng, Ph.D. (2021) Geography, University of Hawai‘i at Mānoa. Dissertation: “Cloud water interception in Hawaii”.
- 2016-2020, Graduate Committee Member, Aurora Kagawa-Viviani, Ph.D. (2020) in Geography, University of Hawai‘i at Mānoa, Dissertation: “Ecohydrology of change: dynamics of climatological, hydrological, and ecological change across Hawaii’s landscapes”.
- 2015- 2020, Graduate Committee Chair (Advisor), Olivia Marohnic, M.A. (2020), University of Hawai‘i at Mānoa. Thesis: “Holocene hydroclimatic changes reconstructed from montane wetlands at three windward sites on the Island of Hawaii”.
- 2017-2019, Graduate Committee Member, External, John Stelling, Ph.D. (2019) in Earth & Environmental Sciences, Lehigh University. Dissertation: “Topographic and Climatic Influence on the Dynamics of Peat-Forming Ecosystems and Implications for Paleoenvironmental Reconstructions in the Antarctic Peninsula and Patagonia”.
- 2018-2019, Graduate Committee Member, Myles Ritchie, M.A. (2019) in Geography, University of Hawai‘i at Mānoa. Thesis: “Establishing consensus core criteria for the protection of heritage trees”.
- 2017- 2019, Graduate Committee Member and University Representative, Haunani Kane, Ph.D. (2019) in Geology & Geophysics, University of Hawai‘i at Mānoa. Dissertation: “Coastal Evolution of Pacific Islands in Response to Sea Level Change During the Mid-Holocene.
- 2015-2017, Mentor, Dr. Charly Massa, Postdoctoral Fellow, University of Hawai‘i at Mānoa. Project: “Data-model comparison of Holocene Pacific hydroclimate variability on the Hawaiian Islands using geochemical records and SynTraCE-21 simulations.”
- 2016-2017, Graduate Committee Member and University Representative, Nemanja Komar, Ph.D. (2017) in Oceanography, University of Hawai‘i at Mānoa. Dissertation: “Biogeochemical Responses of the Earth System to Massive Carbon Cycle Perturbations and the Cenozoic Long-Term Evolution of Climate: A Modeling Perspective”.
2017. External Thesis Examiner, Lennard Francis Martin, Ph.D. (2017) in Biological, Earth and Environmental Sciences, University of New South Wales, Australia. Dissertation: “Records of postglacial hydroclimatic variation from the peat-forming environments of the Sydney Region.
- 2015- 2017, Graduate Committee Chair (Advisor), Brandon Genco, M.A. (2017), University of Hawai‘i at Mānoa. Thesis: “Biogeographical Analysis of Abyssal Bottom Habitats: Using an Abiotic Province Scheme and Metazoan Occurrence Databases”.

2013-2016, Graduate Committee Chair (Advisor), Alexandra Hedgpeth, M.A. (2016), University of Hawai‘i at Mānoa, “Sensitivity of Arctic Permafrost Carbon in Mackenzie River Basin Peatlands: An Incubation Experiment to Observe the Priming Effect” NSF GRA.

2010-2012, Graduate Committee Chair (Advisor), Olivia Schubert, M.A. (2012), University of Hawai‘i at Mānoa, Thesis: ‘Paleoenvironmental change in Kaau Crater over the last 8000 years’, graduated Fall 2012. Awarded ‘best student poster’ at 2011 University of Hawai‘i at Mānoa, Tester Symposium.

2010-2014, Graduate Committee Chair (Advisor), Margaret McCain, M.A. (2014), University of Hawai‘i at Mānoa, Thesis: ‘Species distribution modeling of an endangered endemic tree in Hawaii, *Santalum freycinetianum*’. Awarded ‘Dai Ho Chun Fellowship’ University of Hawaii 2010.

2010-2014, Graduate Committee Member, Krista Jaspers, M.A. (2014), University of Hawai‘i at Mānoa, Thesis: ‘Spinner Dolphin Tourism: Codes of Conduct and the Success of Voluntary Guidelines in Hawaii’.

2010-2014, Graduate Committee Member, Wen Liu, Ph.D. (2014), University of Hawai‘i at Mānoa, Thesis: ‘Carbon and Water Dynamics of Rubber Plantations in Southeast Asia’.

2009-2012, Graduate Committee Member, John Cavanaugh, M.S. in Marine Science (2012), Hawaii Pacific University, Thesis: ‘Sedimentology and history of Kawainui Marsh, Oahu’.

2009-2012, Graduate Committee Member, Elizabeth McLeod, Ph.D. (2012) in Geography, University of Hawai‘i at Mānoa, Thesis: ‘Developing a vulnerability and adaptation assessment framework for application in tropical island communities’.

Undergraduate

2010-present, Employer. Rhys Ormond (summer 2011), Karl Hsu (Spring 2012-Fall 2014), Derek Ford (Fall 2012-Fall 2014), Olivia Marohnic (Fall 2014-Fall 2015), Lauren Yumol (Spring 2015-Summer 2016), Kevin O’Calahan (Spring 2015-Spring 2016), Lauren Mathews (Spring 2016-Fall 2017), Ariel Gazarian (Fall 2016-Fall 2018), Sebastian Sievert (Summer 2017), James Stevens (Fall 2018-Fall 2019), Tabatha Knudson (Fall 2018-Fall 2019), Cuyler Bleecker (Fall 2020 - Spring 2022), Tiana Hughes (Fall 2020 - Spring 2022), Kainoa Kester (Summer 2021), Sydney Cook (Fall 2022 – Spring 2024), Jade Gobin (Spring 2023 – Summer 2024), Tiana Beal (Summer 2025-present).

2025, Mentor, Tiana Beal, Global Environmental Science. Proposal submitted for support to the University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Summer Faculty Mentorship Grant, May 2021 (\$4957).

2023, summer, Mentor, Kolea Praywell, Geography, University of British Columbia. Summer intern participant, 2023 Pacific Islands Climate Adaptation Science Center (PI-CASC) Summer Undergraduate Research Fellowship (SURF).

2021, summer, Mentor, Kainoa Kester, Geography & Environment, hired as summer geospatial analyst with support from the University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Summer Faculty Mentorship Grant, May 2021 (\$4492).

2021-2022, Mentor, Tiana Hughes, Global Environmental Science, awarded University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Fellowship, May 2021 (\$4372).

2019-2022, Mentor, Cuyler Bleecker, Biology, awarded University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Fellowship (\$4444 award).

2014-2017, Mentor, Carl Thompson, Interdisciplinary Studies, awarded University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Fellowship (\$2500 award).

2014-2016, Mentor, Melissa Clark Johnson, Interdisciplinary Studies, Best Undergraduate Poster Honorable Mention, Tester Symposium, University of Hawaii.

2014-2016, Mentor, Satu Taari, Interdisciplinary Studies.

2015-2016, Mentor, Lauren Yumol, Global Environmental Science, awarded University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Fellowship (\$2500 award).

2013, Local Sponsor, Alexandra Bielski, Geography Department, Royal Holloway University of London. Independent research project, Hawaii microfossils in Big Island sediments.

2013, Mentor, Karl Hsu, awarded University of Hawaii at Mānoa Undergraduate Research Opportunities Program Fellowship (\$4000 award).

2011, Mentor, Laura Sheldon, awarded University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Fellowship (\$2500 award).

2010, Mentor, Neil Abranyi, awarded University of Hawai‘i at Mānoa Undergraduate Research Opportunities Program Fellowship (\$2500 award).

Affiliations and memberships

Graduate Faculty, Level 3, University of Hawai‘i at Mānoa. Faculty, Global Environmental Science B.S. Degree Program, School of Ocean and Earth Science and Technology, University of Hawai‘i at Mānoa, American Geophysical Union, Member. Association of American Geographers, Member. Geological Society of America, Member.

Scholarly and Professional Activities

2024. **Invited Keynote Speaker**, Irish Quaternary Association, Dublin, Ireland, November 2024.

2024. **Resident Director**, London, England Program. Host institution: University of Roehampton. Study Abroad Center, University of Hawaii at Manoa. September to December 2024.

2024. Professeur des Universités invité (**Invited Visiting Professor**) de l’Université Toulouse III - Paul Sabatier (University of Toulouse). Summer 2024.

2022. **Resident Director**, Berlin, Germany Program. Host institution: Freie Universität Berlin. Study Abroad Center, University of Hawai‘i at Mānoa, June-July 2022.

2020. **Chief Scientist**, research cruise LMG20-02, R/V Laurence M Gould, Antarctic Peninsula and Palmer Station, 14 February to 21 March 2020.

2019. **Resident Director**, London, England Program. Host institution: University of Roehampton. Study Abroad Center, University of Hawaii at Manoa. January to May 2019.

Editorial and reviewer (last 5 years)

Nature Communications Earth & Environment, Geology, Nature Geoscience, Nature, Wetlands Ecology & Management, National Science Foundation (proposal reviewer; 4 proposals), Science Reports, Global Change Biology, Earth Science Reviews, Wetlands, The Holocene, Quaternary Science Reviews, Geophysical Research Letters, Global Biogeochemical Cycles, Journal of Geophysical Research, Biogeosciences, Proceedings of the National Academy of Sciences of the USA, Ecosystems, Quaternary Research, Boreas.

International Meeting Session Organization and Chairmanship

Field Trip (organizer and trip leader), Biogeography and history, Mount Ka'ala O'ahu, Association of American Geographers. Honolulu, HI (April 2024).

Carbon in Tropical Peatlands (meeting co-organizer), Bangkok, Thailand. Funded by Past Global Changes, Bern, Switzerland, and by the International Quaternary Association as an International Focus Group. (May 2020; cancelled owing to COVID-19).

Goldschmidt 2020 (Session Organizer and Co-Convenor) Atmospheric Deposition as a Driver of Biogeochemical Cycles in Terrestrial Environments (June 2020). Session and in-person meeting cancelled owing to COVID-19.

TropPEAT: Low latitude wetland carbon: past, present, future (organizer, convenor, host), Funded by the Past Global Changes, Bern, Switzerland, Honolulu, HI (June 2017). I secured \$10,000 of extramural funding for this workshop with 25 participants.

Peat Deposits During the Quaternary (Session Proposer and Convenor), International Quaternary Association Meeting, Session P31, Nagoya Japan (July 2015).

Sensitivity of past and future peatland carbon balance to climate change: interannual to Holocene timescales (Session Proposer, Convenor, and Chair) American Geophysical Union Fall Meeting 2013).

Peatlands as Archives for Understanding Environmental Changes and Ecosystem Processes, American Geophysical Union Fall Meeting 2012 (Dec 2012).

Geospatial Aspects of Carbon in Wetlands, Prague, CZ (Sept 2009).

Carbon and Water Cycles in the Changing Arctic: Past, Present, Future, American Association of Geographers Annual Meeting (April 2008).

Quaternary Environment of the Americas, Wetlands, American Association of Geographers Annual Meeting, April (2007).

Invited Speaker

Irish Quaternary Association, Dublin, Ireland (November 2024)
University of Bristol, Bristol UK (November 2024)
University of Southampton, UK (October 2024)
Centre de Recherche sur la Biodiversité et l'Environnement, Toulouse, France (July 2024)
Department of Botany, University of Hawai'i (Oct 2021; Sept 2022)
Department of Natural Resources and Environmental Management, University of Hawai'i (April 2020)
University of Bristol, Bristol, UK (July 2019)
University of Southampton, Southampton, UK (June 2019)
Texas A&M University (May 2018)
University of California Los Angeles (October 2017)
IUCN 2016, Honolulu Hawaii (October 2016)
Oahu Army Natural Resources Program (March 2016)
Bowdoin College, Maine (July 2015)
Department of Botany, University of Hawaii at Manoa, guest lecture (August 2013)
Oahu Army Natural Resources Program (May 2013)
Hawaii Academy of Science (January 2013)
Department of Botany, University of Hawaii Manoa (October 2009)
Department of Geology and Geophysics, University of Hawaii Manoa (Jan 2009)
Department of Geography, National University of Ireland Galway, Ireland (Nov 2007)
¹⁴CHRONO Centre, Queen's University Belfast, UK (Feb. 2007)
Purdue Climate Change Research Center (Oct. 2006)
Center for Accelerator Mass Spectroscopy, Lawrence Livermore National Lab (Sept. 2006)
Graduate Commencement Address, Department of Geography, UCLA (June 2006)

University Service

UHM Geography & Environment Department Chair (2025-present).

UHM Geography & Environment Hiring Committee 'Geographic Information Science' (2023-2024).
Hiring committee activities to advertise, long-list, short-list, interview, and selection.

UHM Geography & Environment Undergraduate Chair (2019-2023). Activities include advising all undergraduate majors and minors, promoting the program, curating and expanding the new GIS Certificate program, conducting the undergraduate program assessment and evaluation, overseeing GEO 492 Practicum in Geography, teaching GEO 493 undergraduate capstone.

UHM Geography & Environment Undergraduate Committee Chair (2019-2023). Activities include new design of the GIS Certificate, revisioning of the 2+2 agreements with the UH community colleges.

UHM College of Social Sciences Research Council Member (2019-2023). Council decisions on the allotment of Research and Training Revolving Funds. Review of applications for research seed-money awards and conference travel funding.

UHM Tenure and Promotion Review Committee (2022, 2023, 2024, 2025). Assigned by Assistant Vice Chancellor for Academic Personnel.

UHM Water Resources Research Center, Special Personnel Committee Member, Promotion evaluation in collaboration with Department of Civil and Environmental Engineering (2022).

UHM Geography & Environment, Hiring Committee, I-2 Faculty, Human Geography (2022)

UHM Geography & Environment Department Personnel Committee Chair (2020-2021). Activities include Adjunct Professor Promotion review, review of Adjunct, Affiliate, and Cooperating faculty members and their roles and potential expanded roles, revision and update of Department Policy and Procedures. Personnel Committee Member 2019-2020.

UHM Department of Geography & Environment Graduate Committee Member (2019-2020). Activities include review of all incoming graduate student applications and panel decision on awards, revisions to the Graduate Student Handbook, creation of the Bachelor's and Master's (BAM) Program for the department.

UHM Geography Departmental Personnel Committee Chair (2017-2018). Extensive revisions to our Procedures, Principles, and Criteria for Review and Evaluation of Faculty for Promotion and Tenure including two rounds of back-and-forth revisions with the Office of the Vice Chancellor for Academic Affairs and the University of Hawaii Professional Association (faculty union).

College of Social Sciences Excellence in Teaching Award Review Committee (2015). Review of all applications to the award call and decision on awardees. Invited participant based on having received the award in 2012.

UHM Geography Departmental Personnel Committee Member (2014-2017). Tenure and promotion case reviewed as co-Chair. Departmental Review activities related to 2015 review.

UHM Geography Hiring Committee 'Geographic Information Science' (2015-2016). Hiring committee activities to advertise, long-list, short-list, and interview more than one hundred applicants over two rounds of hiring.

UHM Geography Undergraduate Committee (2014-2018). Reconfiguration of the undergraduate major including changes in total credits, course numberings, required courses, accepted course substitutes, and expansion of the Geographic Information Science stream of study for Geography majors. First steps towards the GIS Certificate.

UHM Geography Graduate Admissions Committee (2010-2014)

UHM Geography Website development and departmental visibility committee (2009-2013)

UHM Geography Assessment Committee (2011-2012)

UHM Geography Hiring Committee 'Geospatial Information Science' (2017)

UHM Geography Hiring Committee 'Human Geography of Global Economic Change' (2010)