

STEPHANIE MAUNAIHELE‘IA
DUNBAR-CO

EDUCATION

University of Hawai‘i, Mānoa, HI

Ph.D. Botany; Ecology, Evolution, and Conservation Biology specialization

Dissertation: Island evolution: phylogeny, adaptive radiation, and biogeography of *Plantago* (Plantaginaceae) in the Hawaiian Islands

University of Hawai‘i, Mānoa, HI

M.S. Botany

Thesis: Evolutionary and biogeographic patterns in *Plantago* (Plantaginaceae) in the Hawaiian Islands

University of San Diego, San Diego, CA; School for Field Studies, Queensland, AUS

B.A. Biology; Honors Program

Seabury Hall, Makawao, HI

High School

RELATED WORK EXPERIENCE

CLIMATE AND PROTECTION MANAGER 2020 - Present

The Nature Conservancy of Hawai‘i and Palmyra

- Leading land acquisitions in Hawai‘i and Palmyra, including fee and easement monitoring
- Leading development of TNC’s climate program in Hawai‘i and Palmyra

EAST SLOPE PROJECT MANAGER 2014-2020

The Nature Conservancy, Moloka‘i Program

- Leading diverse conservation actions for the EMoWP’s East Slope management area including land acquisition, compliance and management planning, access negotiation, resource mapping, strategic implementation
- Managing engagement with a wide range of stakeholders including landowners, businesses, government officials, hunters, cultural practitioners, agencies, scientists, community groups, farmers, educators, TNC staff, and donors
- Representing EMoWP internally and externally
- Initiating and developing Hawai‘i’s first Alternative Watershed-Based Plan
- Assisting in private fund raising and public grant writing
- Hiring and supervising CLDP (year-long) Kupu members
- Participating in the One Conservancy Leadership Development Program, Leading Others

EAST SLOPE CONSULTANT 2011-2013

Hawai‘i Community Foundation Funded 2013

State of Hawai‘i DLNR/DOFAW Contractor 2011-2013

- Initiated, designed and developed the first landscape-level watershed management plan (10 yr.) for East Moloka‘i
- Engaged and collaborated with East Moloka‘i stakeholders and the EMoWP on project design, development, and implementation

- Wrote and managed grants (2; \$60,000)

BOTANICAL CONSULTANT 2005-2014
Dunbar & Co, Inc.

- Secured contracts
- Performed botanical surveys for EAs and EISs
- Conducted field work throughout the Main Hawaiian Islands
- Highly competent in identifying a broad list of plant species in the field

ALA PĀLA‘AU PROJECT PLANNER 2009-2011
Ke ‘Aupuni Lōkahi, Inc.

- Worked with federal, state and county to design trail and native plant restoration project at Pāla‘au State Park, Moloka‘i, HI.
- Led community outreach
- Wrote EA and 5-year management plan

FIELD BOTANIST 2004-2005
Plant Extinction Prevention Program, DLNR/USFWS

- Surveyed areas on O‘ahu for endangered plant species
- Monitored populations of endangered plant species in remote locations
- Collected material for *ex situ* propagation
- Provided input into program development and direction
- Highly competent in identifying endangered plant species in the field

RELATED VOLUNTEER EXPERIENCE

BOARD MEMBER (State Appointment) 2017-2022
State of Hawai‘i Environmental Council

- Attending monthly meetings at the Office of Environmental Quality Control
- Serving as Vice chair of the Annual Report committee
- Monitoring the progress of agencies in achieving the State’s environmental goals and policies
- Revised and currently overseeing new Chapter 11-200 Environmental Impact Statement Rules

OWNER 2008-Present
Kainalu Ranch

- Leading strategic planning for 1,200 acre Kainalu Ranch, for which I’m a fifth-generation owner
- Assisting with the development and management of two conservation easements (Federal FRPP, closed 2007; State Forest Legacy, declined 2014)
- Implementing innovative funding opportunities including carbon offsets, grasslands protection, leases and easements.
- Leading conservation initiatives including grant management, reporting, plant acquisition, site preparation, planting, monitoring
- Assisting with pasture revitalization and rotational grazing program
- Engaging with East Moloka‘i stakeholders and business partners

TEACHER May 2007
Kamehameha Schools

- Taught high school freshman about plant species and communities in Kawainui Marsh, O‘ahu

TEACHER Spring 2007
DNA Kids, UH CTHAR

- Taught elementary school students aspects of basic molecular biology

ALIEN ALGAE CLEAN-UP VOLUNTEER 2003-2008
The Nature Conservancy

- Assisted in the removal of alien algae from O‘ahu’s reefs and beaches
- Competent in identifying native and alien algae species

TEACHER Summer 2003
NSF GK-12 Graduate Fellowship

- Taught high school seniors aspects of botany and conservation biology related to invasive species, nutrient cycling and *Pisonia grandis* mortality on Palmyra Atoll

FIELD BOTANIST Summer 2002
National Tropical Botanical Garden

- Surveyed *Pisonia grandis* forests on Ta‘u for National Park of American Samoa
- Provided habitat descriptions, species lists, and voucher specimens

PROFESSIONAL INTERESTS

To build on the vision – strategically and scientifically - of a healthy network of intact, native landscapes statewide and across political boundaries; ahupua‘a land management; land acquisition and protection; carbon sequestration and climate change mitigation; evolution and conservation of island floras; Hawaiian language; sustainable agriculture

SKILLS

- Computer literate in Word, Excel, PowerPoint, Keynote, various email software programs
- Effective communication skills including public speaking, leading meetings, and writing proposals, management plans, and scientific publications
- Proficient in database management
- Extensive field skills including plant identification, resource monitoring, specimen collection, remote helicopter operations, GPS navigation and tracking, wilderness first aid, 4x4 driving

PAST MAJOR SCHOLARSHIPS AND AWARDS

University of Hawai‘i Graduate Division’s ‘Ōiwi Ake Akamai Doctoral Completion Fellow (Ph.D. degree; \$45,000)	2008
Environmental Protection Agency STAR: GRO Graduate Fellow (Ph.D. degree; \$75,000)	2004-2007
DLNR/DOFAW Safe Harbor Agreement Grant for <i>Pritchardia munroi</i> restoration on private lands (\$20,000)	2006
Kamehameha Schools Pauahi Foundation Scholar (M.S. and Ph.D. degrees; \$40,000)	2002-2006
Environmental Protection Agency STAR: MAI Graduate Fellow (M.S. degree; \$20,000)	2003-2004
Honors Program Graduate, University of San Diego	2001
Departmental Honors in Biology, University of San Diego	2001
Presidential Scholar and Dean’s List, University of San Diego (B.A. degree; \$34,000)	1997-2001
‘Aha ‘Ōpio Youth Leadership Participant, Nā Pua No‘eau	1996

(Wrote and introduced legislation to consolidate permitting for fishpond restoration)

PUBLICATIONS

- Beilman, D., C. Massa, J. Nichols, O.E. Timm, R. Kallstrom, and S. Dunbar-Co. 2019. Dynamic Holocene vegetation and North Pacific hydroclimate recorded in a mountain peatland, Moloka'i, Hawai'i. *Frontiers in Earth Science* 7: 188
- Iwanycki Ahlstrand, N.E., B. Verstraete, G. Hassemer, S. Dunbar-Co, R. Hoggard, H.M. Meudt, N. Rønsted. 2019. Ancestral range reconstruction of remote oceanic island species of *Plantago* (Plantaginaceae) reveals differing scales and modes of dispersal. *Journal of Biogeography* 46(4): 706-722
- Dunbar-Co, S. and A.M. Wiczorek. 2011. Genetic structure among populations in the endemic Hawaiian *Plantago* lineage (Plantaginaceae): insights from microsatellite variation. *Plant Species Biology* 26(1): 134-144.
- Dunbar-Co, S., L. Sack, and Margaret Sporck. 2009. Leaf trait diversification and design in seven rare taxa of the Hawaiian *Plantago* radiation. *International Journal of Plant Sciences* 170(1): 61-75.
- K. Wolff and S. Dunbar-Co. 2009. Cross species amplification of primers developed from *Plantago major* and *P. intermedia* in two Hawaiian *Plantago* species from the section *Plantago*. *Molecular Ecology Resources* 981-984.
- Dunbar-Co, S., A.M. Wiczorek, and C.W. Morden. 2008. Molecular phylogeny and adaptive radiation of the endemic Hawaiian *Plantago* species (Plantaginaceae). *American Journal of Botany* 95(9): 1177-1188.
- Dunbar, S. 2006. Phylogeny and evolution of *Plantago* (Plantaginaceae) in the Hawaiian Islands. *Pacific Science* 60(2): 305-314.
- Hoggard, R.K., N. Rønsted, S. Dunbar, P.J. Kores, and W.J. Nilsen. 2003. The origin and biogeography of the Hawaiian and South Pacific Ocean island endemic species of *Plantago* section *Plantago*. *Botany 2003 Abstracts, Botanical Society of America*.
- Akutagawa, M., S. Dunbar-Co, H. Williams. (in prep.). Indigenous, ancestral knowledge in natural and cultural resource management in Mana'e, East Moloka'i.
- Dunbar-Co, S., D.L. Lorence, and C.W. Morden (in prep.). A revision of the Hawaiian *Plantago* (Plantaginaceae) radiation.

PRESENTATIONS

- Dunbar-Co, S. Project Development. Hawai'i Association of Watershed Partnerships Forum at the Hawai'i Conservation Conference. Honolulu, HI. July 11, 2019.
- Dunbar-Co, S. Paku'i Update. East Moloka'i Watershed Partnership Annual Partners Meeting. Moloka'i, HI. August 3, 2018.
- Dunbar-Co, S. The East Moloka'i Watershed Partnership. Maui County Council, Committee on Water Resources. Maui, HI. March 8, 2017.
- Dunbar-Co, S. The East Slope Update. East Moloka'i Watershed Partnership Annual Partners Meeting. Moloka'i, HI. August 8, 2016.
- Dunbar-Co, S. Bridging agriculture and conservation on private land. Hawai'i Conservation Conference. Honolulu, HI. July 16, 2014.

- Dunbar-Co, S. The East Slope: the proposed expansion of the East Moloka'i Watershed Partnership. 'Aha Kiole Community Meeting. Moloka'i, HI. September 20, 2013.
- Dunbar-Co, S. and E. Co. Kainalu Ranch: making a living out of a way of life. Kamehameha School Land Assets Division, Hawai'i Investment Ready Incubator Program. Honolulu, HI. August 23, 2013.
- Dunbar-Co, S. The East Slope. East Moloka'i Watershed Partnership Annual Partners Meeting. Moloka'i, HI. August 9, 2013.
- Dunbar-Co, S. The East Slope: the proposed expansion of the East Moloka'i Watershed Partnership. 'Aha Kiole Council Meeting. Moloka'i, HI. April 2, 2013.
- Dunbar-Co, S. Management planning for additional lands to the East Moloka'i Watershed Partnership. East Moloka'i Watershed Partnership Annual Partners Meeting. Moloka'i, HI. August 10, 2012.
- Dunbar-Co, S. Rare plant restoration on private land: a landowner's perspective. Hawai'i Conservation Conference. Honolulu, HI. August 2-5, 2011.
- Dunbar-Co, S. and A.M. Wieczorek. The role of molecular systematics in the conservation of rare species: a case study of *P. princeps* var. *princeps* on O'ahu. Hawai'i Conservation Conference. Honolulu, HI. July 26, 2007.
- Dunbar-Co, S., A.M. Wieczorek, and C.W. Morden. New islands, new species: a case study of *Plantago* (Plantaginaceae) in the Hawaiian Islands. Evolution Meetings. Christchurch, NZ. June 18-21, 2007.
- Dunbar-Co, S., L. Sack, and M. Sporck. Leaf trait diversification and design in seven Hawaiian *Plantago* taxa radiated across habitats. University of Hawai'i Botany Seminar Series. Honolulu, HI. April 28, 2007.
- Dunbar-Co, S., A.M. Wieczorek, and C.W. Morden. The importance of taxonomy in representing biodiversity: one *Plantago*, two *Plantago*, three *Plantago*, more? Hawai'i Conservation Conference. Honolulu, HI. July 26-28, 2006.
- Dunbar, S. and C.W. Morden. A DNA library of Hawaiian plants for taxonomic and natural products research. XVII International Botanical Congress. Vienna, Austria. July 17-23, 2005.
- Dunbar, S. Phylogeny and evolution of *Plantago* (Plantaginaceae) in the Hawaiian Islands. 30th Annual Albert L. Tester Memorial Symposium. Honolulu, HI. March 16-18, 2005.
- Dunbar, S. Island evolution: Speciation and phylogeny of *Plantago* (Plantaginaceae) in the Hawaiian Islands. Environmental Protection Agency STAR Graduate Fellowship Conference. Washington D.C. October 14-16, 2004.

PERSONAL INTERESTS

Family, sustainable farming and ranching, lei-making, surfing, diving for he'e, coaching my children's soccer teams, camping, cooking and growing our own food, traveling with my family, making time to learn 'olelo Hawai'i