Eli Balderas, M.Sc.

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RESEARCH INTERESTS:

Conserving plants and lichens by understanding the distribution and abundance of rare and threatened species, as well as expanding public awareness of the threats that they face. In addition to this understanding, I am interested in restoration efforts, such as propagation of those species and recovery assessments, along with securing of federal and state Endangered Species Act protections for threatened species.

EDUCATION:

California Polytechnic State University-

Master of Science in Biological Sciences with Distinction - (December 2023)
GPA: 3.88

University of California Santa Barbara-

Bachelor of Science in Environmental Studies - (June 2019)
Minor in Feminist Studies
GPA: 3.53

EXPERIENCE:

Scientific Aide – (January 2023 – Present)
State of California Lahontan Regional Water Quality Control Board
Lichen Collector – (Intermittent)
Contractor for US Forest Service – Forest Inventory and Analysis Program
Biologist – (August 2020 – September 2022)
Althouse and Meade, Inc.
Teaching Assistant – (August 2020 – June 2021)
California Polytechnic State University Biological Sciences Department
Herbarium Curatorial Assistant - (June 2019 - July 2020)
Santa Barbara Botanic Garden
Plant Collector – (April 2019 - June 2019)
Cheadle Center for Biodiversity and Ecological Restoration

SKILLS:

Plant Identification-

Used *Jepson Manual* to key plants to the species level.
Used multiple lichen identification guides to key lichens to genus and species levels.

SKILLS: (continued)

R-

Morphometric analyses

Spatial data analyses

Field Work-

Performed avian fatality surveys.

Performed wetland restoration work including invasive plant removal and transplantation of native plants.

Collected 141 CA native plants and lichens.

Collected insects for pollinator study.

Herbarium Curation-

Familiar with data entry into relevant databases.

Mounted herbarium specimens.

Imaged specimens through a National Science Foundation funded grant.

Assisted in organization and integration of NPS specimens into the herbarium.

Filed specimens into the herbarium.

Teaching (undergraduate) –

Graduate Teaching Assistant for the following courses:

Introduction to Biology Lab, Cal Poly SLO (Winter & Spring 2021)

Introduction to Botany Lab, Cal Poly SLO (Fall 2020)

RESEARCH:

Balderas, E., J. Dart, R. R. Næsborg, and N. Rajakaruna. 2024. *Sulcaria isidiifera*: Status and conservation methods for a critically endangered lichen on the central coast of California [Manuscript submitted for publication].

Balderas, E., J. Dart, R. R. Næsborg, and N. Rajakaruna. 2023. An Ecological Assessment of an Endangered Lichen from the Central Coast of California: *Sulcaria isidiifera*, the Splitting Yarn Lichen. 2715. Master's thesis, California Polytechnic State University, San Luis Obispo. Digital Commons @ Cal Poly. https://digitalcommons.calpoly.edu/theses/2715/.

Balderas, E., K. Hasenstab-Lehman, C.M. Guilliams. Evaluating the circumscription of varieties of the seaside fiddleneck *Amsinckia spectabilis* (Boraginaceae) using morphometric analysis of fruit characters. Botany 2019, Tucson, AZ, July 27-31, 2019.

PRESENTATIONS:

Balderas, E., J. Dart, R. R. Naesborg, and N. Rajakaruna. Preliminary results of an ecological assessment of a rare and endangered lichen from central California: *Sulcaria isidiifera*, the splitting yarn lichen. Presentation via Zoom to the International Union for Conservation of Nature SSC Lichen Specialist Group, General Meeting, November 3, 2021.

PRESENTATIONS: (continued)

Balderas, E., J. Dart, R. R. Naesborg, and N. Rajakaruna. 2021. An ecological assessment of a rare and endangered lichen from central California: *Sulcaria isidiifera*, the splitting yarn lichen. Paper presented via Zoom at the California Botanical Society's 28th Graduate Student Symposium, California Polytechnic State University, San Luis Obispo, CA 93407, May 1, 2021.

Balderas, E., K. Hasenstab-Lehman, C.M. Guilliams. Evaluating the circumscription of varieties of the seaside fiddleneck *Amsinckia spectabilis* (Boraginaceae) using morphometric analysis of fruit characters. Botany 2019, Tucson, AZ, July 27-31, 2019.

HONORS & AWARDS:

Poster Session Co-Winner-

45th Annual Southern California Botanists Symposium (Oct. 5, 2019)

Scholarships and Grants-

David and Frieda Wertman Scholarship (2020)
IUCN Species Survival Commission Internal Grant (2020)
California Lichen Society Education Grant (2021)
Northern California Botanists Scholarship (2021)

WORKSHOPS & TRAINING:

Introduction to California Water History (Jan. 2024)
Introduction to Data Visualization (Mar. 2023)
Data Quality Assurance (March 2023)
Lichen Red Listing Workshop - (Jan. 2021)
Introduction to Lichen Identification and Ecology- (Feb. 2020)
NOLS Wilderness First Aid – (March 2020)

PROFESSIONAL AFFILIATIONS:

Member- IUCN Species Survival Commission Lichen Specialist Group (2023)
Member- The California Lichen Society (2020-2021)

MEDIA:

Robyn Kontra Tanner. "Ecology's Next Frontier: Student Researchers Hone in on Rare and Understudied Lichens." *Cal Poly News*, 4 August 2021. https://www.calpoly.edu/news/ecologys-next-frontier-student-researchers-hone-rare-and-understudied-lichens.