TARO KATAYAMA

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Authorized for Resource Assistant Internship Direct Hire Authority (DHA-RAI)

Education

Duke University, Durham, NC 27710   2023
Master of Environmental Management
Nicholas School of the Environment | Water Resource Management

Master's Project: 2023
Analyzing the Water Footprint of Electric Car Batteries – A Dive into the Water-Energy Nexus
- ♦ Partnered with RIVIAN Automotive to analyze water footprint of mined minerals in electric car batteries.
- ♦ Analysis performed included an ArcGIS Pro water scarcity map, as well as an ArcGIS online dashboard, which shows mines with high water usage and underlying water scarcity issues.

Colby College, Waterville, ME 04901   2019
Bachelor of Arts, Major: Environmental Science, Minor: Anthropology

Capstone Research Project: 2019
Urban Stream Syndrome in Waterville Streams
- ♦ Studied the effects of urbanization on Waterville, ME streams.
- ♦ Sampled stream discharge during various weather conditions.
- ♦ Analyzed discharge and nutrient content of streams during storm events using time-series analysis and FIA Lachat QuikChem instrument.

University of Canterbury, Christchurch, NZ   2018
Program: Earth System Science: Concentration in Environmental Science

Summary of Qualifications

Data management, Analysis, and Visualization
- ♦ Compelling data formatting, tidying and visualization using R tidyverse.
- ♦ Proficient at creating clean, effective, reproducible maps on ArcGIS Pro & ArcGIS Online
- ♦ Reproducible data and script production and management using GitHub.

Science Communication Skills
- ♦ Effective communicator of science catered to variety of audiences (Department of Interior staff, Cabrillo National Monument, Pacific West Regional Office NPS, Waterville High School, Duke Nicholas School of the Environment, Colby Undergraduate Summer Research Retreat, University of Canterbury).
- ♦ Bridging academic researchers and resource managers in identifying questions, conducting field studies, and presenting results.

Interpersonal Skills
- ♦ Excellent writing skills for various documents (emails, letters, reports).
- ♦ Ability to successfully engage in teamwork in a dynamic team.

Professional Experience

Science Communication Fellow | 40h/week   June 2023- Present
National Park Service | Pacific West Regional Office, REMOTE
Supervisors: Lena Lee
External Energy & Minerals Specialist
Lena_Lee@nps.gov

- ♦ Crafting communication plans for large (>$400,000) Inflation Reduction Act and Bipartisan Infrastructure Law funded projected including the NPS ecosystem restoration project of sagebrush ecosystems.
- ♦ Established and leads science communication ambassador group aimed at increasing public outreach of crucial science being done in parks.
- ♦ Wrote a status and recommendation guide for University of California and NPS field station partnerships in California's National Parks.

Natural Resources Management Assistant | 40 h/week   May 2022- Aug. 2022
National Park Service | Cabrillo National Monument, SD, CA 92106
Supervisors: Dr. Linh Anh Cat   *Dr. Lauren Pandori*
Chief of Resources Management   *Resources Management Biologist*
(808) 658-0752, linhanh_cat@nps.gov   *(619) 204- 8719, lauren_pandori@nps.gov*

- ♦ Created and deployed a novel, self-sustaining fog monitoring program at Cabrillo National Monument (San Diego, CA).
- ♦ Set up a network of weather stations, cameras, and leaf wetness sensors to explore whether microclimates at the park promote vegetation survival in a drought-prone climate.
- ♦ Wrote a detailed 58-page SOP that details how to retrieve data, troubleshoot, and replicate study.
- ♦ Utilized ArcGIS Pro to identify ideal location for deployment of fog monitoring station using variables slope position, elevation gradient, land-cover/land use, and aspect.
- ♦ Created efficient, reproducible R scripts to clean and analyze the leaf wetness sensor data.
- ♦ Presented project findings at Department of Interior in Washington.
- ♦ Programmed Raspberry Pi computer to run as a datalogger for Davis Vantage Pro 2 weather station.
- ♦ Specific skills: ArcGIS Pro mapping, GIS data collection using Trimble PG 200 GNSS Receiver and FieldMaps, R programming, ClimaVue weather station setup and operation, Davis Vantage Pro 2 weather station setup and operation, Raspberry Pi programming, computer assembly and soldering.
- ♦ Effectively used $3,000 budget to add additional weather stations and cameras to fog monitoring stations.

Wetland Restoration Assistant | 8 h/week   Sept. 2021- May 2022
Duke University, Wetland Center – Durham, NC 27710
Supervisor: Paul Heine | Lab Technician | pheine@duke.edu (retired)

- ♦ Investigated the effectiveness of stream/wetland restoration in reestablishing ecosystem function in restored wetlands at the Duke University Wetland Center.
- ♦ Aided in water quality monitoring and ecological assessments of streams, wetlands, and peatlands in the Stream and Wetland Assessment Management Park located in Duke Forest.

Biological Technician Volunteer | 20 h/week   April 2021- June 2021
US Fish and Wildlife Services, Keālia Pond National Wildlife Refuge – Kihei, HI 96753

- ♦ Worked alongside U.S. Fish and Wildlife biologists at Keālia Pond National Wildlife Refuge to restore 705 acres of key coastal wetland habitat for the conservation of endangered species, Hawaiian stilts and Hawaiian coots.
- ♦ Conducted waterbird surveys to monitor populations of endemic species. Responsible for nesting surveys and collecting nest visit data for a collaborative reproductive success study throughout the Hawaiian and Pacific Island National Wildlife Refuge Complex.
- ♦ Manages the predator control program by opening, checking, and closing traps, deciding best trap/bait uses and locations/placements.

Assistant Supervisor of Salmon Restoration Crew | 40 h/week   Oct. 2019- Sept. 2020

Washington Conservation Corps | King Conservation District- Renton, WA 98057

Supervisor: Haly Rylko | Crew Supervisor | (206) 661-8956 | hcrylko@msn.com

- ♦ Collaborated as part of a 5-person crew to promote conservation of key salmon habitat through riparian zone enhancement projects.
- ♦ Coordinated with landowners and project managers to tailor each restoration site with site specific needs.
- ♦ Removed invasive species that inhibited natural ecological functions and planted native species that improved and preserved stream quality.
- ♦ Prepared and sold over 80,000 native bare-root plants during annual native plant-sale.
- ♦ Supervised and directed the crew when supervisor was offsite

Youth Educator | 40 h/week   Aug. 2019- Sept. 2019

Naturalists at Large – Ventura, CA

- ♦ Facilitated outdoor education programs in diverse environments such as Joshua Tree National Park and El Capitán State Beach.
- ♦ Instilled an appreciation of the natural environments through hands-on learning experiences such as spelunking, tide pool exploration, and stargazing.

Research Assistant to Prof. Bruesewitz | 40 h/week   Jul. 2018- Feb. 2019

Colby College | Dept. of Environmental Science – Waterville, ME

Supervisor: Denise Bruesewitz | Associate Professor of Environmental Studies | dabruese@colby.edu

- ♦ Researched nutrient limitation in Belgrade Lakes by analyzing lake sample for response to nutrient solutions.
- ♦ Presented research at the Colby Undergraduate Summer Research Retreat.

Researcher and Organizer of Beach Clean Up | 4 h/week   Feb. 2018- Jun. 2018

University of Christchurch, Dept. of Geology – Christchurch, NZ

- ♦ Located potential source of trash by analyzing trash data in combination with local current directions.
- ♦ Conducted beach cleanups at six different beaches in Banks Peninsula, New Zealand.

Teaching Assistant of Introduction to Ecology | 4 h/week   Sept. 2017- Dec. 2017

Colby College | Dept. of Environmental Science – Waterville, ME

- ♦ Supervised laboratory safety, assisted students with analytical techniques including R, instrument calibration, and microscope use.
- ♦ Assisted in species identification and data collection out in the field.
- ♦ Manages the predator control program by opening, checking, and closing traps, deciding best trap/bait uses and locations/placements.

Relevant Coursework

- Environmental Data Analytics | ENVIRON 872L-1 — 3 Credits
- Geospatial Data Analytics | ENVIRON 859 — 3 Credits
- Hydrology | EOS 723 — 3 Credits
- Environmental Decision Analysis | ENVIRON 832 — 3 Credits
- Time Series Analysis for Energy Data | ENVIRON 790 — 3 Credits
- Emerging/Rotating Topics in GIS | ENVIRON 790 — 1.5 Credits
- Wetland Ecology and Management | ENVIRON 812 — 3 Credits
- GIS for Land and Water Management | ENVIRON 761 — 4 Credits
- Water Resources Law | LAW 320 — 2 Credits
- Financial Foundations for Environmental Managers | ENVIRON 796 — 3 Credits
- Water Resources Finance | ENVIRON 741 — 1.5 Credits
- Water Quality and Health | EOS 524 — 3 Credits
- Landscape Ecology | ENVIRON 714 — 3 Credits
- Environment and Natural Resource Economics | EC 231 — 4 Credits
- Advanced and Applied Ecology | ES 352 — 4 Credits

Skills & Certifications

- Working proficiency with R
- Working proficiency with Microsoft Suites
- Working proficiency with ArcGIS Pro
- Basic proficiency with Python
- FEMA IS 100, IS 200, IS 700
- Fluent in conversational Japanese

Publications

- Standard Operating Procedure for Fog Monitoring Program at Cabrillo National Monument
- Assessing the Water Footprint of Electric Car Batteries – A Dive into the Water-Energy Nexus

Awards & Scholarships

- Virlis L. Fischer Award for Academic Achievement — 2023
- Nicholas School of the Environment Scholarship Fund, $18,000 — 2021-2023
- Nicholas Scholarship, $10,000 — 2021-2023
- Nicholas School Assistantship, $6,000 — 2021-2023
- Segal Americorps Education Award, $6,095 — 2020
- Colby College Dean's List — 2019