Mei-Ling Emily Feng

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EDUCATION

University of Vermont, Burlington, VT   **2013-2017**
Bachelor of Science Degrees: Wildlife Biology, Natural Resource Ecology
Cumulative GPA: 3.7/4.0

RELEVANT COURSEWORK

Natural History and Field Ecology ● Fundamentals of Calculus ● Natural Resource Ecology and Assessment ● Introduction to GIS ● Applied Environmental Statistics ● Ecosystem Management: Integrating Science, Society, and Policy ● Environmental Problem-Solving and Impact Assessment ● Wildlife Habitat and Population Measurement ● Ornithology ● Mammalogy

SKILLS

Field	Small mammal and bird surveying (Point count, mist netting, camera traps, Sherman live traps) ● Museum specimen preparation ● Soil sampling ● Compass/GPS navigation ● Forest measurement ● Habitat Surveys ● Water quality monitoring ● Benthic macroinvertebrate surveys ● Dichotomous key identification (Plants and macroinvertebrates) ● Invasive species removal
Analysis	Programs/Platforms: ArcGIS, R, SAS, Maxent, LaTex, Microsoft Office Suites, Github ● Species distribution/population modeling ● Multivariate statistics ● Mark-recapture ● Habitat monitoring protocol design ● Curation, cleaning, analysis of large datasets ● Nutrient and bacteria analysis of water samples ● Polymerase Chain Reaction and primer design ● DNA extraction
Communication	Volunteer recruitment and training ● Grant writing ● Peer-reviewed publications ● Science conference presentations

GRANTS, FELLOWSHIPS, AWARDS, SCHOLARSHIPS

$600.00	**Nevada County Fish and Wildlife Commission Grant** Nevada County Fish and Wildlife Commission	**2017**
---	**Wildlife and Fisheries Biology Achievement Award** University of Vermont	**2017**
---	**Rubenstein School Dean's List** University of Vermont	**2015-2017**
---	**UVM Merit Award** University of Vermont	**2014**
---	**Rubenstein School Aiken Scholar** University of Vermont	**2013**
---	**U.S. Presidential Scholar** U.S. Department of Education	**2013**

REPORTS AND PUBLICATIONS

Feng, M.-L.E., Owolabi, O.O., Schafer, L.J., Sengupta, S., Wang, L., Matteson, D.S., Che-Castaldo, J.P., and Sunter, D.A. 2021. Analysis of animal-related electric outages using species distribution models and community science data [Manuscript Submitted for Publication].	**Manuscript Submitted for Publication**
Feng, M-L.E. & Che-Castaldo, J. 2021. Comparing the reliability of relative bird abundance indices from standardized surveys and community science data at finer resolutions. PLOS ONE 16(9): e0257226. https://doi.org/10.1371/journal.pone.0257226.	**2021**
Feng, M-L. E., Schartel, T. E., South, E., et al. 2021. Effectiveness of Illinois' protected lands network at supporting SGCN and their habitats. Illinois Natural History Survey. Technical Report INHS 2021 (19). http://hdl.handle.net/2142/111671.	**2021**
Che-Castaldo, J. P., Cousin, R., Daryanto, S. et al. 2021. Critical Risk Indicators (CRIs) for the electric power grid: a survey and discussion of interconnected effects. Environ Syst Decis. https://doi.org/10.1007/s10669-021-09822-2. • Contributed to data collection and visualizations, and manuscript writing.	**2021**
Schartel, T. E., Cao, Y., Henning, B., et al. 2021. Modelling and predicting freshwater mussel distributions in the Midwestern USA. Aquatic Conservation: Marine and Freshwater Ecosystems. 10.1002/aqc.3720. • Contributed to study design and data collection and processing.	**2021**
Feng, M. E., Janes, K., Emanuelson, K., Loden, M., and Hild, J. 2017. Bear River Watershed Water Quality Monitoring Results: 2017. Sierra Streams Institute, Nevada City, CA.	**2017**
Che-Castaldo, J. P., Getmansky-Sherman, M., **Feng, M-L. E.,** et al. Novel biodiversity indicators using financial metrics.	**Manuscript in progress**

PRESENTATIONS

Feng, M.-L. E., Che-Castaldo, J. P., Getmansky Sherman, M., Che-Castlado, C., Schafer, T. L. J., and Matteson, D. (2021), Novel Indicators of Biodiversity Status Based on Financial Portfolio Metrics, [IN54B-01] presented at 2021 Fall Meeting, AGU, 13-17 Dec, [Online].	**2021**
Feng, M-L. E., Getmansky-Sherman, M., Schafer, T.L., et al. Novel biodiversity indicators using financial metrics. 2021. Poster session presented at Annual Meeting of the Ecological Society of America, [Online].	**2021**
Feng, M-L. E., Maitner, B. S., Merow, C., et al. 2020. Using trait-based biodiversity to identify critical risk indicators in ecology. E-lightning poster session presented at the American Geophysical Union Fall Meeting, [Online].	**2020**
Feng, M-L. E., Schartel, T. E., Henning, B., et al. 2019. Prioritizing Protection and Recovery Efforts using Statewide Conservation Targets. Poster session presented at the Natural Areas Conference, Pittsburgh, PA.	**2019**

CERTIFICATIONS AND TRAINING

Diversity, Equity, and Inclusion in the Workplace Certification, University of South Florida	**2021**
Wilderness first aid and CPR Certification, Sierra Rescue, Red Cross	**2020**
California Naturalist Certification, University of California Davis	**2018**
ArcGIS Essential Workflows, ESRI Trainings	**2018**
ArcGIS Preforming Analysis, ESRI Trainings	**2018**
Designing Maps with ArcGIS, ESRI Trainings	**2018**

RESEARCH EXPERIENCE

Senior Coordinator, Climate Science National Audubon Society New York, NY • Provide technical and research support to Audubon's Science Division on a variety of national and international, quantitative, spatial, and community science efforts. • Support dataset management, literature reviews, preparation of presentations, and writing of reports and scientific publications. • Perform statistical and spatial analyses using various processing packages in R, ArcGIS, and ArcPro. • Contribute to Equity, Diversity, Inclusion, and Belonging in Audubon's initiatives by supporting and strengthening these values in Audubon's internal and external culture and science.	**Jan 2022-Present**
Research Associate Alexander Center for Population Biology Lincoln Park Zoo, Chicago, IL • Led, developed, and designed interdisciplinary research projects measuring interconnected risks in human-natural systems. • Jointly analyzed spatiotemporal dynamics between ecosystems and broader human systems in R-statistical language. • Applied cross-disciplinary risk analysis frameworks to monitor ecosystem processes. • Used Github to facilitate research across nation-wide collaborations. • Wrote and published peer-reviewed papers and presented research at scientific conferences.	**Mar 2020-Dec 2021**
Research Assistant Adaptive Silviculture for Climate Change Project Dartmouth College, Second College Grant, New Hampshire • Collected baseline vegetation and soil forest inventory data on silviculture treatments to assess forest adaptation to climate change.	**Jun 2017-Aug 2017**

- Utilized DBH tapes, clinometers, DEM, and soil augers to collect forest measurements and samples.
- Followed extensive data collection protocol through adverse field conditions and regularly carried 70lbs of gear off trail.

Undergraduate Researcher   **Oct 2016-**
Plant Biology Department   **May 2017**
University of Vermont, Burlington, Vermont
- Research topic: Improving the resolution of genetic diversity of *Matteuccia struthiopteris* across its North American range through primer design of the *pgiC* gene.
- Practiced laboratory and equipment safety.
- Organized samples and herbarium specimens.
- Extracted DNA and performed PCR on fern and lycophyte samples.

CONSERVATION EXPERIENCE

Visiting Scientific Specialist-Conservation Biologist   **Sept 2018-**
Illinois Natural History Survey   **Mar 2020**
University of Illinois, Champaign, IL
- Prioritized species and habitat conservation and identified protection gaps using spatial and statistical analyses in R and ArcGIS.
- Updated sub-national conservation status assessments (sRanks) for Illinois species of greatest conservation need and natural community types.
- Presented findings at conferences.
- Held data-driven management workshops for regional conservation managers.
- Produced timely and professional reporting on project progress for funding sources.

River Scientist
Sierra Nevada AmeriCorps Partnership   **Oct 2017-**
Sierra Streams Institute**,** Nevada City, California   **Sept 2018**
- Digitized a 17-year water quality database with updated California data standards.
- Mapped restoration priorities and habitat suitability models in ArcGIS.
- Monitored water quality, tested water samples for nutrient and bacteria composition, and collected and collected and identified algae and benthic macroinvertebrates.
- Recruited, trained, and mentored interns and community science volunteers in watershed restoration and monitoring.
- Led workdays for forest fuels reduction, native species plantings, invasive species removal, and habitat surveys.
- Assisted with grant writing, fundraising events, and social media.
- Coordinated pre-implementation bird surveys on new restoration sites for CEQA and NEPA compliance.

Wildlife Biologist Intern   **Apr 2016-**
U.S. Fish and Wildlife Service, Essex Junction, Vermont   **Aug 2016**
- Conducted habitat restoration and monitoring of wetland, stream, and riparian habitat.

- Developed land management plans in collaboration with biologists and landowners.
- Used biological control of invasive plant species, stake plantings, backpack herbicide treatment, plant, fish, and bird surveys, culvert measurement, and archaeological surveys in various habitat restoration projects.
- Developed a habitat monitoring protocol for the Rusty patched bumblebee (*Bombus affinis*) at project sites.
- Maintained purple loosestrife plants and beetles in a nursery/greenhouse setting.

VOLUNTEER EXPERIENCE

Education and Animal Care Volunteer   **Jul 2015-**
ECHO Leahy Center for Lake Champlain, Burlington, Vermont   **Dec 2015**
- Cleaned tanks and arranged aquarium displays.
- Practiced reptile and amphibian husbandry.
- Tested water quality on aquarium tanks.
- Ran educational booths and displays on Vermont natural history and ecology.