Emily Chen emily-chen@berkeley.edu

Education

University of California, Berkeley, Ph.D. (expected May 2024) 2019-Present Environmental Science, Policy, and Management, GPA: 4.0

California Polytechnic University, Humboldt, M.S. 2019

Natural Resources, Fisheries, GPA: 4.0

University of California, Los Angeles, B.S. 2017

Biology, GPA: 3.84 (*Magna cum laude* & Departmental Honors)

Research Positions

Graduate Researcher, University of California, Berkeley 2019-Present

* Evaluates hatchery influence and develops population models for winter-run Chinook salmon for conservation and fisheries management in the Central Valley, CA
* Mentor: Dr. Stephanie Carlson

Graduate Researcher, California Polytechnic University, Humboldt 2017-2019

* Designed a life cycle model for Chinook salmon in Redwood Creek, CA evaluating survival at various life stages and restoration scenarios.
* Mentor: Dr. Mark Henderson

Undergraduate/Graduate Researcher, University of California, Los Angeles 2017-2018

* Assessed longitudinal trends in frugivore abundance in the Dja Reserve, Cameroon
* Spearheaded the reestablishment of surveys that employ indigenous and local people in Central Africa
* Mentors: Dr. Thomas Smith and Dr. Gregory Grether

Undergraduate Researcher, University of California, Los Angeles 2016-2017

* Studied rays and investigated for potential undetermined species of numbfish and butterfly rays through morphometrics
* Keyed out and identified fish for collections
* Mentor: Dr. Donald Buth

Arachnid Collections Manager & Undergraduate Researcher, University of California, Los Angeles 2014-2017

* Studied maternal investment and reproductive trade-offs in whip spiders
* Mentors: Dr. Kenneth Chapin & Dr. Peter Nonacs

Awards and Fellowships

Cal-Neva Chapter of the American Fisheries Society Travel Award ($500) 2023

NMFS-Sea Grant Population and Ecosystem Dynamics Fellowship ($108,000) 2022

* “Incorporating age structure into pre- and post-season assessments of California’s salmon fishery”
* Agency mentors: Dr. Will Satterthwaite, Dr. Michael O’Farrell

Western Division, American Fisheries Society Travel Award ($625) 2022

Edward A. Colman Fellowship in Watershed Management ($25,000) 2022

Loker Foundation Graduate Award (Marine Sustainability) ($3,500) 2022

Western Division, American Fisheries Society Small Projects Grant ($490) 2022  
Salmon Restoration Federation Scholarship ($1,500) 2021

Oliver Lyman Grant (Wildlife and Fisheries) ($2,250) 2021

R. Jan F. Smith Conservation Award, Ecological and Evolutionary Ethology of Fishes 2021

* Poster – “Recent sighting of pink and chum salmon in California”

Outstanding Graduate Student Instructor, University of California, Berkeley 2021

Cal-Neva Chapter of the American Fisheries Society 55th Annual Meeting ($50) 2021

* 3rd place- “Hatchery versus wild maturation schedules and implications for the ocean salmon fishery”

Oliver Lyman Grant (Wildlife and Fisheries) ($2,500) 2020

California Sea Grant Graduate Research Fellowship ($80,000) 2020

* “Are hatchery fish good surrogates for wild fish? A case study focused on winter-run Chinook salmon”
* Agency mentors: Dr. Will Satterthwaite, Dr. Rachel Johnson, Dr. Corey Phillis

American Fisheries Society Estuary Section Travel Award ($400) 2019

Humboldt Marine and Coastal Science Institute Grant ($800) 2019

Barbara Bania Award ($2,500) 2019

Danielle Plum Zumbrun Memorial Scholarship ($2,000) 2018

International Women’s Fishing Association Scholarship ($2,000) 2018

Undergraduate Research Award, University of California, Los Angeles ($100) 2017

* Undergraduate Researcher of the Year, Department of Ecology and Evolutionary Biology

Whitcome Fellowship, University of California, Los Angeles ($3000) 2016

* Investigation of an undetermined specimen of butterfly ray in the Eastern Pacific using morphometric data

19th Annual Biology Research Symposium, University of California, Los Angeles ($100) 2016

* 3rd Place- “Optimal egg size and tradeoffs between offspring number and quality in an Amblypygid”

Publications

Burton, T. and **E. K. Chen.** *in review.* Presence of microplastics within lagoon and *in review*

open-ocean fishes in Mo'orea, French Polynesia. Marine Pollution Bulletin.

Satterthwaite, W. H., **Chen, E. K.,** McReynolds, T. R., Dean, A. E., Allen, S. D., and2023

M. R. O’Farrell. 2023*.* Comparing fishery impacts and maturation schedules of hatchery- versus natural-origin fish from a threatened Chinook salmon stock. San Francisco Estuary and Watershed Science 21(4): Article 3. doi:15447/sfews.2023v21iss4art3

**Chen E. K.,** Satterthwaite, W. H., Kormos, B. J., Johnson, R. C., Phillis, C. C., and 2023

S. M. Carlson. 2023*.* Age structure of natural versus hatchery-origin endangered Chinook salmon and implications for fisheries management in California. Marine Ecology Progress Series 723:37-55. doi:.3354/meps14446.

**Chen E. K.,** Som N. A., Deibner-Hanson, J. D., Anderson, D. G., and M. J. 2023

Henderson. 2023*.* A life cycle model for evaluating estuary residency and restoration potential in Chinook salmon. Fisheries Research 257:106551. doi:10.1016/j.fishres.2022.106511.

**Chen E. K.**, Galvez, J. R., and S. M. Carlson. 2022*.* Towards building a more 2022

inclusive culture in the fisheries classroom. Fisheries 47(8):333-336. doi:10.1002/fsh.10814.

Pregler K. C., **Chen, E. K.**, and S.M. Carlson. 2021. Metapopulations in Inland Waters *in* 2021 Encyclopedia of Inland Waters 2nd Ed, L. Rudstam, editor. Elsevier, Inc. doi:[10.1016/B978-0-12-819166-8.00022-0](https://doi.org/10.1016/B978-0-12-819166-8.00022-0).

**Chen E.K.**, Henderson M.J. 2021. Reduced recruitment of Chinook salmon in a leveed 2021

bar-built estuary. Canadian Journal of Fisheries and Aquatic Sciences 78(7): 894-904. doi: [10.1139/cjfas-2020-0122](https://doi.org/10.1139/cjfas-2020-0122).

Chapin K.J., **Chen E.K.** 2018. Reproductive strategy of a cave-living arachnid with 2018 indeterminate growth *Phrynus longipes*. Journal of Arachnology 46(2):380-383. doi: [10.1636/JoA-17-062.1](https://doi.org/10.1636/JoA-17-062.1)

Conference Presentations

**Chen E. K.,** Satterthwaite, W. H., O’Farrell M. R., and S.M Carlson. Alternative forecast 2023

models for California Chinook salmon fisheries. NMFS-SG Fellowship Symposium, Silver Spring, MD.

**Chen E.K.**, Lumahan, K., Johnson, R.C., Phillis, C.C., Whitman, G., Satterthwaite W.H., 2023

and S.M. Carlson. Are hatchery fish good surrogates for wild fish? Differences and similarities in the downstream migration and juvenile life history of winter-run Chinook salmon. Cal-Neva Chapter of the American Fisheries Society 57th Annual Meeting, Long Beach, CA.

**Chen E.K.**, Satterthwaite W.H., Johnson, R.C., Phillis, C.C., Kormos, B., and 2022

S.M. Carlson. Hatchery versus wild Chinook salmon life history and implications for fisheries and water in California. American Fisheries Society 152th Annual Meeting, Spokane, WA.

**Chen E. K.,** Som N. A., Deibner-Hanson, J. D., Anderson, D. G., and M. J. Henderson.2022 Evaluating estuary residency and restoration potential for Chinook salmon in Redwood Creek via a life cycle model. Salmonid Restoration Federation, Santa Cruz, CA.

Adolfo C.R., **Chen E.K.**, Ryan R.E., and Carlson S.M. Trends of pink salmon occurrences 2022

in California. Salmonid Restoration Federation, Santa Cruz, CA.

**Chen E.K.**, Satterthwaite W.H., Johnson, R.C., Phillis, C.C., Kormos, B., and 2022

S.M. Carlson. Hatchery versus wild Chinook salmon life history and implications for fisheries and water in California. Canadian Conference for Fisheries Research, Vancouver, BC.

Kasch I.H., Adolfo C.R., **Chen E.K.**, Ryan R.E., and Carlson S.M. Recent sightings of 2021

pink and chum salmon in California. Ecological and Evolutionary Ethology of Fishes, virtual.

**Chen E.K.**, Satterthwaite W.H., Johnson, R.C., Phillis, C.C., Kormos, B., and 2021

S.M. Carlson. Hatchery versus wild Chinook salmon maturation schedules and implications for the ocean salmon fishery. Western Division of the American Fisheries Society Annual Meeting, virtual.

**Chen E.K.**, Satterthwaite W.H., Johnson, R.C., Phillis, C.C., Kormos, B., and 2021

S.M. Carlson. Hatchery versus wild maturation schedules and implications for the ocean salmon fishery. Cal-Neva Chapter of the American Fisheries Society 55th Annual Meeting, virtual.

**Chen E.K.** Age truncation and age simplification in hatchery produced fish. Western 2020 Division of the American Fisheries Society Student Colloquium, virtual conference.

**Chen E. K.,** Henderson M.J. Barred from the ocean: consequences of a unique estuary 2019 phenomenon on recruitment of Chinook salmon. American Fisheries Society 149th Annual Meeting, Reno, CA.

**Chen E. K.,** Henderson M.J. Barred from the ocean: consequences of a unique estuary 2019 phenomenon on juvenile growth and population recruitment of Chinook salmon in Redwood Creek. 37th Annual Salmonid Restoration Conference, Santa Rosa, CA.

**Chen E. K.**, Henderson M.J. Contribution of estuarine rearing in a bar-built estuary to 2019 Chinook salmon using a hierarchical life cycle model. Oregon Chapter of the American Fisheries Society 55th Annual Meeting, Bend, OR.

**Chen E. K.**, Henderson M.J. Contribution of juvenile estuarine residency to Chinook 2018 salmon recruitment in Redwood Creek, California. Oregon Chapter of the American Fisheries Society 54nd Annual Meeting, Eugene, OR.

**Chen E. K.**, Henderson M.J. Contribution of juvenile estuarine residency to Chinook 2018 salmon recruitment in Redwood Creek, California. Cal-Neva Chapter of the American Fisheries Society 52nd Annual Meeting, San Luis Obispo, CA.

**Chen E.K.**, Chapin K.J., Nonacs P. When tradeoffs break down: increased parental 2016 investment in both offspring number and quality in an Amblypygid. Undergraduate Research Center Poster Day, Los Angeles, CA.

**Chen E.K.**, Chapin K.J., Nonacs P. Optimal egg size and tradeoffs between offspring 2016 number and quality in an Amblypygid. 19th Annual Biology Research Symposium, Los Angeles, CA.

Invited Presentations

Institute of Marine Affairs and Resource Management, National Taiwan Ocean University 2023

Institute of Ecology and Evolutionary Biology, National Taiwan University 2023

Institute of Fisheries Science, National Taiwan University 2023

Guest Lecturer, Biology and Geomorphology of Tropical Islands, UC Berkeley 2022, 2023

Central Library Seminar Series, National Oceanic and Atmospheric Administration 2023

Spring-run Chinook salmon Project Work Team, Interagency Ecological Program 2023

Guest Lecturer, Development Practice, University of California, Berkeley 2023

Department of Fisheries, Wildlife, and Conservation Sciences, Oregon State University 2022

Conservation Lecture Series, California Department of Fish and Wildlife 2022

Guest Lecturer, Fish Ecology, University of California, Berkeley 2021, 2022

Winter-run Chinook salmon Project Work Team, Interagency Ecological Program 2022

Guest Lecturer, Natural Resource Management, University of California, Berkeley 2021

Guest Lecturer, Fisheries Ecological Modeling, Cal Poly Humboldt 2021

Quantitative Seminar Series, SAFS, University of Washington 2020

Wildlife and Conservation Seminar Series, University of California, Berkeley 2019

Center for Watershed Sciences, University of California, Davis 2019

Brown Bag Lunch, Redwood National and State Parks, National Park Service 2019

Guest Lecturer, Marine Fish Ecology, Cal Poly Humboldt 2018

Congo Basin Institute Cabinet Meeting, Los Angeles, CA. 2017

Teaching Positions

Thesis Committee Member, Fisheries Biology, Cal Poly Humboldt 2023-present

Graduate Student Instructor, Biology and Geomorphology of Tropical Islands, UC Berkeley 2022

Graduate Student Instructor, Culture and Natural Resource Management, UC Berkeley 2022

Lab Instructor, Fish Ecology, UC Berkeley 2020, 2021

Lab Instructor, Ecology/Evolution/Organismal Biology, UC Berkeley 2019

Supervisory Positions

Undergraduate Technicians, UC Berkeley 2023-present

* Coordinate two undergraduate students in data analysis and program development
* Mentor for Independent Study and Research

Undergraduate Technicians, UC Berkeley 2021-2023

* Supervised three undergraduate students in otolith analysis.
* Mentor for Undergraduate Research Apprenticeship Program

Undergraduate Researchers, UC Berkeley 2021-2023

* Mentored two undergraduate students through Sponsored Projects for Undergraduate Research, and Independent Study and Research

Undergraduate Technicians, Cal Poly Humboldt 2018

* Trained and coordinated three undergraduate students in fieldwork and otolith analysis.

Service

Chair, Diversity and Inclusion, Western Div. Amer. Fish. Soc. 2021-present

* Member since 2019
* Coordinates committee efforts in advocating for funding towards D&I initiatives, providing recommendations, and recognizing D&I service throughout the American Fisheries Society
* Leads quarterly meetings with Chapter presidents on developing procedures that foster diversity and inclusion, particularly on recruiting diverse leaders

Chair, Arts Committee, City of Albany 2023-present

* Lead committee efforts in allocating and executing funds for art in public places.
* Selects and coordinates with artists for the community center’s gallery and sculpture loan program.

Graduate Program Committee, UC Berkeley 2023-present

* Reviews graduate admissions and applications

Founder, Fisheries Posters for Classrooms 2021-present

* Designed and secured funding for posters illustrating concepts in fisheries and highlighting fisheries scientists from diverse backgrounds ([summary article](https://unitslargefs.s3.us-west-2.amazonaws.com/virtuallearn/wp-content/uploads/filebase/archive/newsletters/2022/Vol46No2.pdf#page=6)).
* Coordinated with local non-profit (Community Resources for Science) to distribute posters to classrooms throughout the San Francisco Bay Area.

Workshop Creator/Instructor, Introduction to R 2018-present

* Developed and hosted free two-day R workshops open to all designed to introduce natural resource students to basic programming in the R language
* Invited to deliver workshop to courses at Humboldt State University and UC Berkeley

Graduate Student Academic Advisor Hiring Committee, UC Berkeley 2022

Ecosystem Science Rep., Department Graduate Student Association, UC Berkeley 2021-2022

Student Representative, Western Division American Fisheries Society 2019-2021

* Represented students on the executive committee and contributed to annual meeting planning and judging awards
* Organized and executed the Western Division Student Colloquium 2019 ([summary](https://wdafs.org/download/archive/newsletters/2019/Vol43No4.pdf#page=5) article), a three-day event that gathered fisheries students from 4 states and 6 universities:
  + Mental wellness and stress management workshops
  + Field tours of hatchery and restoration sites
  + Student presentation sessions
* Organized and executed the Western Division Student Colloquium 2020 [(summary article](https://wdafs.org/download/archive/newsletters/2020/Vol44No4.pdf#page=8)) a two-day virtual event that gathered fisheries students from 11 states, 4 countries, and 15 universities:
  + Fisheries professionals panels on job networking and giving remote presentations
  + Student sub-unit officer forum
  + Student presentation sessions

Department Graduate Social Committee, UC Berkeley 2020-2021

Steering Committee, Ecological and Evolutionary Ethology of Fishes 2021

Ask an Expert: Sustainable Fisheries, Mira Monte High School 2021

Panelist, ESPM 201c, UC Berkeley 2020

Panelist, SCI 100, Humboldt State University 2018

Panelist, Rroulou'sik NSF REU, Humboldt State University 2018

Volunteer Tutor*,* Bruin Initiative 2013- 2014

* Tutored local high school students from diverse backgrounds in SAT.
* Mentored high school students in academic planning

Volunteer Interpreter*,* Dana Point Ocean Institute 2012- 2013

Other Job Experiences

*Aquascaper,* Lake Mission Viejo 2016-2017

* Operated power boat to remove biomass and survey wildlife.
* Maintained lake quality by collecting and analyzing water samples and conducting treatment.

*Peer Learning Facilitator*, Life Sciences, University of California, Los Angeles 2016

* Developed content for and led student discussion in ecology, evolution, and biodiversity.