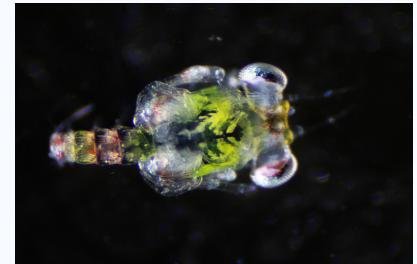


# DR. SAM BASHEVKIN

I am an environmental data scientist who excels at applying data science and statistical techniques to answer pressing ecological and management questions. Using open science practices, I create tested, time-saving tools for the community with every research question I address. I am passionate about applying my skills toward solving complex problems, and making the work of our partners easier while doing so.



## EDUCATION

2019  
|  
2014

- **Ph.D., Ecology**

University of California, Davis

📍 Davis, CA

- Dissertation: The Adaptive Arsenal of Crustacean Larvae Against Predatory and Environmental Stresses of the Plankton
- National Defense Science and Engineering Graduate Fellow
- Advisor: Steven Morgan

2017  
|  
2014

- **M.S., Ecology**

University of California, Davis

📍 Davis, CA

2014  
|  
2010

- **B.S., Biology**

Tufts University

📍 Medford, MA

- Thesis: Latent effects from low salinity stress and the interactive influence of temperature and salinity on larval and juvenile growth in the marine gastropod *Crepidula fornicata*.
- Summa Cum Laude, with Highest Thesis Honors

## GOVERNMENT EXPERIENCE

2022  
|  
2019

- **Senior Environmental Scientist (Specialist)**

Delta Science Program, Delta Stewardship Council

📍 Sacramento, CA

- Lead synthesis, data science, and data publication projects with interagency teams to increase our understanding of Delta ecology through transparent data practices and lend expertise to interagency colleagues.
- Develop strategic plan for advancing the synthesis capacity of the Delta Science Program and lead cloud computing initiatives
- Develop R packages, automated R markdown reports, and interactive R shiny applications.

## CONTACT

✉️ [sbashevkin@gmail.com](mailto:sbashevkin@gmail.com)  
🐦 [SamBashevkin](#)  
👤 [sbashevkin](#)  
linkedin [sam-bashevkin](#)

## LANGUAGE SKILLS



Made with [{pagedown}](#).

Code at  
[github.com/sbashevkin/cv](https://github.com/sbashevkin/cv)

Last updated on 2022-08-08.

2019  
|  
2014

## RESEARCH EXPERIENCE

2016  
|  
2015

- **Graduate Student Researcher**  
Bodega Marine Laboratory 📍 University of California, Davis
  - Researched crab larval development and morphology in relation to environmental drivers.
  - Led synthesis project on the predicted impacts of climate change on marine dispersal.
  - Responsible for managing >25 technicians and volunteers.
  
- **Graduate Research Fellow**  
Galeta Marine Laboratory 📍 Smithsonian Tropical Research Institute
  - Led international expedition to research the countervailing influences of visual fish predation and ultraviolet radiation on the coloration of crab larvae
  
- **Undergraduate Researcher**  
Pechenik Laboratory 📍 Tufts University
  - Led research on the desiccation, salinity, and temperature tolerance of juvenile and embryonic marine snails of the species *Crepidula fornicata* and *Crepidatella fecunda*.
  
- **NSF REU Undergraduate Researcher**  
Friday Harbor Marine Laboratory 📍 University of Washington
  - Researched the effects of low salinity on the swimming behavior and protein expression of larval sand dollars (*Dendraster excentricus*) and sea stars (*Pisaster ochraceus*).

2014  
|  
2011

## JOURNAL ARTICLES

2022

- **Long-term trends in seasonality and abundance of three key zooplankters in the upper San Francisco Estuary**  
in revision
  - Bashevkin SM, Burdi CE, Hartman R, Barros A
  
- **Improving settlement success in abalone aquaculture: KCl induces stronger settlement than GABA or crustose coralline algae for red (*Haliotis rufescens*) and white (*H. sorenseni*) abalone**  
in review
  - Bashevkin SM, Frederick A, Hubbard EZ, Vines CA, Magaña K, Hutton SJ, Cherr GN, Aquilino KM

## R packages

- [deltafish](#): Access to an integrated fish database
- [deltafish](#): Back-end integrated fish database
- [discretewq](#): Integrated discrete water quality database
- [zooper](#): Integrated zooplankton database
- [spacetools](#): Easy spatial tools
- [deltamapr](#): Spatial data for the Bay-Delta
- [deltareportr](#): Automated reporting for the Bay-Delta

I have peer-reviewed manuscripts for journals including Aquatic Invasions, Marine Ecology Progress Series, Journal of Crustacean Biology, Journal of Experimental Marine Biology and Ecology, Diversity and Distributions, Marine and Freshwater Behavior and Physiology, and Climate Change Ecology.

- 2022 ● **State of Bay-Delta Science: Introduction: Ecosystem services and disservices of Bay-Delta primary producers: how plant and algae affect ecosystems and respond to management of the estuary and watershed**  
in revision  
• Larsen LG, Bashevkin SM, Christman M, Conrad JL, Dahm CN, Thompson J
- 2022 ● **A framework for evaluating the effects of reduced spatial or temporal monitoring effort**  
San Francisco Estuary and Watershed Sciences (accepted)  
• Bashevkin SM
- 2022 ● **Escape From the Heat: Thermal Stratification in a Well-Mixed Estuary and Implications for Fish Species Facing a Changing Climate**  
Hydrobiologia  doi: 10.1007/s10750-022-04886-w  
• Mahardja B, Bashevkin SM, Pien C, Nelson M, Davis B, Hartman R
- 2022 ● **Warming in the upper San Francisco Estuary: Patterns of water temperature change from 5 decades of data**  
Limnology and Oceanography  doi: 10.1002/lo.12057  
• Bashevkin SM, Mahardja B, Brown LR
- 2022 ● **Five decades (1972–2020) of zooplankton monitoring in the upper San Francisco Estuary**  
PLOS one  doi: 10.1371/journal.pone.0265402  
• Bashevkin, SM, Hartman R, Thomas M, Barros A, Burdi CE, Hennessy A, Tempel T, Kayfetz K
- 2022 ● **Seasonally variable relationships between surface water temperature and inflow in the upper San Francisco Estuary**  
Limnology and Oceanography  doi: 10.1002/lo.12027  
• Bashevkin SM, Mahardja B
- 2022 ● **Relative bias in catch among long-term fish monitoring surveys within the San Francisco Estuary**  
San Francisco Estuary and Watershed Sciences  doi: 10.15447/sfewss.2022v20iss1art3  
• Huntsman BM, Mahardja B, Bashevkin SM
- 2022 ● **Governing ecological connectivity in cross-scale dependent systems**  
BioScience  doi: 10.1093/biosci/biab140  
• Keeley ATH, Fremier AK, Goertler PAL, Huber PR, Sturrock AM, Bashevkin SM., Barbaree BA, Grenier JL, Dilts TE, Gogol-Prokurat M, Colombano D, Bush EE, Laws A, Gallo JA, Kondolf M, Stahl AT

- 2021 ● Does a complex life cycle promote or constrain adaptation to environmental change? Genome-informed approaches and insights for characterizing selection across stages of a life cycle  
Proceedings of the Royal Society B  doi: 10.1098/rspb.2021.2122  
• Albecker MA, Wilkins LGE, Krueger-Hadfield SA, Bashevkin SM, Hahn MW, Hare MP, Kindsvater HK, Sewell MA, Lotterhos KE, Reitzel AM
- 2021 ● Food for Thought: Connecting Zooplankton Science to Management in the San Francisco Estuary  
San Francisco Estuary and Watershed Sciences  doi: 10.15447/sfews.2021v19iss3art1  
• Hartman RK, Bashevkin SM, Barros A, Burdi CE, Patel C, and Sommer T
- 2020 ● Costs and compensation in zooplankton pigmentation  
Oecologia  doi: 10.1007/s00442-020-04648-2  
• Bashevkin SM, Christy JH, Morgan SG
- 2020 ● Larval dispersal in a changing ocean with an emphasis on upwelling regions  
Ecosphere  doi: 10.1002/ecs2.3015  
• Bashevkin SM, Dibble CD, Dunn RP, Hollarsmith JA, Ng G, Satterthwaite EV, Morgan SG
- 2020 ● Predation and Competition  
in Anger K, Harzsch S, Thiel M, editors. The Natural History of the Crustacea, Volume VII: Developmental Biology and Larval Ecology  Oxford University Press  
• Bashevkin SM, Morgan SG
- 2020 ● Adaptive specialization and constraint in morphological defences of planktonic larvae  
Functional Ecology  doi: 10.1111/1365-2435.13464  
• Bashevkin SM, Christy JH, Morgan SG
- 2019 ● Photoprotective Benefits of Pigmentation in the Transparent Plankton Community: A Comparative Species Experimental Test  
Ecology  doi: 10.1002/ecy.2680  
• Bashevkin SM, Christy JH, Morgan SG
- 2017 ● Growing safe: Acute size escape from desiccation in juvenile *Crepidatella peruviana* (Mollusca: Gastropoda)  
Biological Bulletin  doi: 10.1086/695539  
• Bashevkin SM, Chaparro OR, Mardones-Toledo DA, Cubillos VM, Pechenik JA

- 2016
- **Prior exposure to low salinity affects the vertical distribution of *Pisaster ochraceus* (Echinodermata: Asteroidea) larvae in haloclines.**  
Marine Ecology Progress Series  doi: 10.3354/meps11563
    - Bashevkin SM, Lee D, Driver P, Carrington E, George S
- 2015
- **The interactive influence of temperature and salinity on larval and juvenile growth in the marine gastropod *Crepidula fornicata* (L)**  
Journal of Experimental Marine Biology and Ecology  doi: 10.1016/j.jembe.2015.05.004
    - Bashevkin SM, Pechenik JA
- 2015
- **Desiccation tolerance and lifting behavior of adult and juvenile *Crepidula fornicata* (Gastropoda) from intertidal and subtidal populations.**  
Marine Ecology Progress Series  doi: 10.3354/meps11284
    - Diederich CM, Bashevkin SM, Chaparro OR, Pechenik JA

## OTHER PUBLICATIONS

- 2022
- **Fish abundance in the San Francisco Estuary (1959–2021), an integration of 9 monitoring surveys**  
Environmental Data Initiative  doi: 10.6073/PASTA/0CDF7E5E954BE1798AB9BF4F23816E83
    - Bashevkin SM, Gaeta JW, Nguyen TX, Mitchell L, Khanna S. 2022
- 2022
- **Six decades (1959–2020) of water quality in the upper San Francisco Estuary: an integrated database of 11 discrete monitoring surveys in the Sacramento San Joaquin Delta, Suisun Bay, and Suisun Marsh**  
Environmental Data Initiative  doi: 10.6073/pasta/c9b3da65a8c89cbfa6fc28d26f938c22
    - Bashevkin SM, Perry SE, Stumpner EB
- 2022
- **Interagency Ecological Program: Zooplankton abundance in the Upper San Francisco Estuary from 1972–2020, an integration of 5 long-term monitoring programs**  
Environmental Data Initiative  doi: 10.6073/pasta/89dbadd9d9dbdfc804b160c81633db0d
    - Bashevkin SM, Hartman R, Thomas M, Barros A, Burdi CE, Hennessy A, Tempel T, Kayfetz K
- 2021
- **ESSAY: The Pilot Long-Term Monitoring Review Effort**  
Interagency Ecological Program Newsletter
    - Gaeta JW, Culberson S, Bashevkin S

*Shiny apps*

[Delta Science Program shiny apps homepage](#)  
[Integrated zooplankton dataset Shiny App](#)  
[San Francisco Estuary Monitoring Shiny App](#)  
[Discrete water temperature app](#)

- 2021
- [\*\*An Online Seasonal Monitoring Report for Major Interagency Ecological Program Surveys\*\*](#)  
Interagency Ecological Program Newsletter
    - Hartman R, Rasmussen N, Mitchell L, Koohafkan M, Bosworth D, Saraceno J, DuBois J, Bashevkin S, Conrad L

2021

    - [\*\*Interagency Ecological Program Long-term Monitoring Element Review: Pilot approach and methods development \(2020\)\*\*](#)  
Interagency Ecological Program Technical Report 96
      - IEP Long-term Survey Review Team

2020

      - [\*\*Zooplankton Integrated Dataset Metadata Report\*\*](#)  
Interagency Ecological Program Technical Report 93
        - Kayfetz K, Bashevkin SM, Thomas M, Hartman R, Burdi CE, Hennessy A, Tempel T, Barros A

## TEACHING EXPERIENCE

- 2018
- **Environmental Stress and Development in Marine Organisms**  
Bodega Marine Laboratory  Bodega Bay, CA
    - Served as TA for an upper-level undergraduate lab/field course in ecotoxicology.
    - Delivered lectures, prepared lab experiments, mentored students through independent research projects.

2017

    - **Wetland Ecology**  
University of California, Davis  Davis, CA
      - Served as TA for an upper-level undergraduate course in wetland ecology
      - Led discussion sections, facilitate student learning, and grade

2014  
—  
2012

    - **Introductory Biology Laboratory**  
Tufts University  Medford, MA
      - Prepare for and assist students in an introductory biology lab

## SELECTED PRESS (ABOUT)

- 2022
- [\*\*Science in Short: Daylighting Delta Data\*\*](#)  
Estuary News
    - Story of data science in San Francisco Estuary management, featuring an interview with me.

2022

    - [\*\*A review with a difference: Tips for peer reviewing data papers\*\*](#)  
Canadian Science Publishing blog
      - Advice for peer reviewing data papers, featuring quotes from an interview with me

## *Technical skills*

R package development  
 Unit testing  
 Development of automated reports and pipelines  
 Bayesian statistics  
 Non-linear modeling with generalized additive models  
 Spatial, temporal, and phylogenetic statistics  
 Mixed effects modeling  
 Developing creative solutions to complex data or statistical problems  
 Data management, metadata, QAQC, publication, and integration  
 Science communication and outreach to schools, adults, and funders in the USA and Panama  
 Literature review and synthesis

## 🎙 SELECTED PRESENTATIONS

- 2022
  - **Water temperature-inflow relationships in the upper San Francisco Estuary**  
Talk  Interagency Ecological Program Workshop
    - Bashevkin SM, Mahardja B
- 2022
  - **Bayesian regression**  
Talk  Interagency Ecological Program Workshop
    - Bashevkin SM
- 2021
  - **Climate Change Signals in Water Temperatures in the Upper San Francisco Estuary**  
Talk  Bay-Delta Science Conference
    - Bashevkin SM, Mahardja B, Brown LR
- 2020
  - **Building an Integrated Dataset of Zooplankton Monitoring in the San Francisco Estuary**  
Poster  Interagency Ecological Program Workshop
    - Bashevkin S, Kayfetz K, Thomas M, Hartman R, Burdi C, Tempel T, Hennessy A, Barros A
  - **Dataset integration: from water to zooplankton to fish**  
Talk  Interagency Ecological Program Workshop
    - Stompe D, Bashevkin S, Pien C, Kruger A, Thomas M, Davis B
- 2018
  - **How to eat your cake and have it too: Compensatory behavioral responses to ultraviolet radiation and fish cues in crab larvae.**  
Talk  Western Society of Naturalists, Tacoma, WA
    - Bashevkin SM, Armbrust AS, Howard G, Gao X, Morgan SG
- 2017
  - **Orphaned babies in a perilous ocean: How do marine larvae survive a dangerous migration**  
Invited talk  Science Uncorked outreach seminar, Gourmet au Bay, Bodega Bay, CA
    - Bashevkin SM
  - **Predatory costs, behavioral compensation, and evolutionary correlation in larval pigmentation**  
Talk  Western Society of Naturalists, Pasadena, CA
    - Bashevkin SM, Christy JH, Morgan SG

- 2017
- **Paradox of pigmentation in the plankton: Trade-offs in larval coloration vary with sunniness and exposure to ultraviolet radiation**  
Talk International Larval Biology Symposium, Honolulu, HI
    - Bashevkin SM, Christy JH, Morgan SG
- 2016
- **Pigmentation in the plankton: Trade-offs in coloration for marine larvae**  
Talk Western Society of Naturalists, Monterey, CA
    - Bashevkin SM, Christy JH, Morgan SG
- 2015
- **Interactive effects of temperature and salinity on larval and juvenile growth in the marine gastropod *Crepidula fornicata***  
Poster The Society of Integrative and Comparative Biology, West Palm Beach, FL
    - Bashevkin SM, Pechenik JA
- 2014
- **The effects of fluctuating salinity on protein profiles in echinoderm larvae of *Dendraster excentricus* and *Pisaster ochraceus***  
Poster The Society of Integrative and Comparative Biology, Austin, TX
    - Bashevkin S, Wessel G, George SB
- 2013
- **The ups and downs of life in a halocline: The behavior of *Pisaster ochraceus* larvae after prior exposure to low salinity**  
Poster The Society of Integrative and Comparative Biology, San Francisco, CA
    - Bashevkin S, George SB
- 2013
- **Is the upward migration of *Pisaster ochraceus* larvae motivated by the presence of food at the halocline or the salinity they are acclimated to?**  
Poster The Society of Integrative and Comparative Biology, San Francisco, CA
    - Bashevkin S, Driver P, George SB

## PROFESSIONAL TRAININGS

- 2019
- **Google Earth Engine Training**  
University of California, Merced Sacramento, CA
    - Dr. Erin Hestir
- 2019
- **Reproducible Research Techniques for Synthesis**  
National Center for Ecological Analysis and Synthesis Santa Barbara, CA
- 2018
- **Story Circles Science Communication Training**  
Bodega Marine Laboratory Bodega Bay, CA
    - Dr. Randy Olson

- 2018
- **Structural Equations Modeling Workshop**  
Bodega Marine Laboratory  
• Dr. Jarrett Byrnes
- 2016
- **Science Communications Short Course**  
Bodega Marine Laboratory  
• Dr. Tessa Hill