

# NEWSLETTER

Society for Freshwater Science California Chapter  
& Aquatic Bioassessment Workgroup



## Happy 25th Birthday to the California Bioassessment Working Group

The 25th Annual California Bioassessment Working Group (CABW) and 6th annual meeting of The California Chapter Society of Freshwater Sciences (Cal-SFS) was held at the UC Davis ARC Conference Center on October 23rd and 24th, 2018. This was a big year for the CABW because it turned 25!! That's right, for 25 years in a row the CABW has met and shared information about new and improved bioassessment tools, uses, resources, case studies, protocols, policy, and data in the Golden State—and beyond. This year's meeting was not only unique in that it remembered a quarter of a century of bioassessment efforts, but it surmised on the future of bioassessment in California, with the anticipated uncertainty of a changing climate, political swings, unknown economic futures, and a shifting workforce. This meeting encapsulated where we have been, where we are, and where we wish to go. Thanks to all those who have attended this year, previous years, and who will continue to attend well into the future.

There were over 230 attendees attending the 2-day CABW / Cal-SFS meeting. The workshop drew 29 participants and raised \$700 in donations going towards the student travel awards for the 2019 Salt Lake City SFS Meeting. The Cal-SFS mixer, held at The Graduate, raised \$100 also for the student travel awards. Thanks to all those who attended this event!



## Join Cal-SFS Today!!

Being a chapter member has many benefits like:

- Chapters allow for the option of attending smaller, more focused meetings that better serve regional needs.
- Chapters provide affordable options for students to attend a professional meeting, facilitating networking and professional growth.
- SFS members with various expertise can assist chapters with specific needs and provide mentoring and information exchange.
- Regional leadership becomes a stepping stone to society leadership.
- Direct input on local events and outreach opportunities.
- And many more benefits!

For more info and to become a member:

<http://www.freshwater-science.org/chapters/california-chapter.cfm>



*(Above) Passing of the Cal-SFS baton: Former Cal-SFS president Chair Jeanette Howard turned over presidential duties to the new president, Nick Macias. Cal-SFS new logo and banner in the background.*

Cal-SFS has new leadership and a new logo! Welcome to the new president elect Nicholas Macias. Nick is a PhD student in the Freshwater and Coastal Ecology Lab at UC Santa Cruz. You can connect with Nick via email at [niamacia@ucsc.edu](mailto:niamacia@ucsc.edu). John Olson remains our Secretary/Treasurer and he can be reached at [joolson@csumb.edu](mailto:joolson@csumb.edu) or Twitter [@JohnCSUMB](https://twitter.com/JohnCSUMB)

## Save the Date!

The 26th CABW / Cal-SFS Meeting will be held Oct 23rd & 24th, 2019 at UC Davis.



# Thank you

**CABW/SFS thanks our 2018 Sponsors and Supporters for their generosity!**

**SPONSORED BY:**

Aquatic Bioassay Consulting  
Wood Environment & Infrastructure Solutions  
EcoAnalysts, INC.

**SUPPORTERS:**

CDFW  
SWAMP  
SCCWRP  
UC Davis Extension  
Training Academy  
SFS  
OIMA  
SWAMP IQ

Thanks to everyone who helped make this happen!

# SALT LAKE CITY, UTAH, USA

## May 19-23, 2019



# SFS Annual Conference Important Dates !!

**Abstracts due January 28th, 2019**

**Registration opens January 7th, 2019** <https://sfsannualmeeting.org/Registration.cfm>

**Student Endowment Awards—Deadline January 31, 2019**

For this year there are 16 Endowment Awards and 10 undergraduate Awards available. The Board of Trustees of the SFS Endowment Fund encourages students to apply for this year's Endowment Awards! These awards recognize excellence among our student members and are designed to support student research in a variety of areas. The SFS Endowment Awards are based on research merit. For more info visit:

<https://freshwater-science.org/awards-programs/endowment-award-program>

**Graduate Conservation Research Award— Deadline Jan 31, 2019** <https://freshwater-science.org/awards-programs/conservation-research-award>

**Instars Mentoring Program**

Deadline for Instars Fellows (mentees): Feb. 1, 2019 <https://freshwater-science.org/awards-programs/instars-program>

Deadline for Instars Mentors: Feb 22, 2018 <https://freshwater-science.org/awards-programs/instars-program-mentoring>

**SFS Release Response to the New WOTUS Definition:** The US EPA has released a proposed rule redefining Water of the US (WOTUS) that would, among other things, remove intermittent and ephemeral headwater streams and non-adjacent wetlands from protection under the Clean Water Act, a change from protections proposed for these waters in 2015. The [Consortium of Aquatic Science Societies](#), of which SFS is a member society, released a statement that notes:

*More than a half century of scientific research has unequivocally demonstrated that the physical, chemical, and biological integrity of “traditionally navigable” waters fundamentally depend on ephemeral, intermittent, and perennial headwater streams, as well as the myriad associated lakes, wetlands, and off-channel habitats.*

The full statement can be read [here](#). The new proposed rule will be officially released in the federal register and there will be 60 days for comment. The Society for Freshwater Science, Science and Policy Committee is currently working on a comment letter from the Society to be signed by the President. In the meantime, members are encouraged to write their own letters. For more information on the rule and where to post comments, go to: <https://www.epa.gov/wotus-rule/step-two-revise>.



# CalSFS Workshop: Visualizing and Mapping Bioassessment Data in R

Marcus Beck (SCCWRP) and Ryan Peck (UCDavis)



A special Cal-SFS workshop was recently held at the 2018 California Aquatic Bioassessment Workgroup on Oct. 24<sup>th</sup> on the second half of the second day of the meeting.

The workshop focused on fundamentals of using the R statistical programming language with bioassessment data. R has become one of the primary analysis platforms used in data science and for data analysis across many of the natural sciences. Workshop topics included how to 1) use R to import and organize California bioassessment data, 2) create plots using R packages to explore data trends, and 3) create maps in R to explore spatial patterns and generate reports. Participants brought their laptops and worked through examples with the presenters and each other.

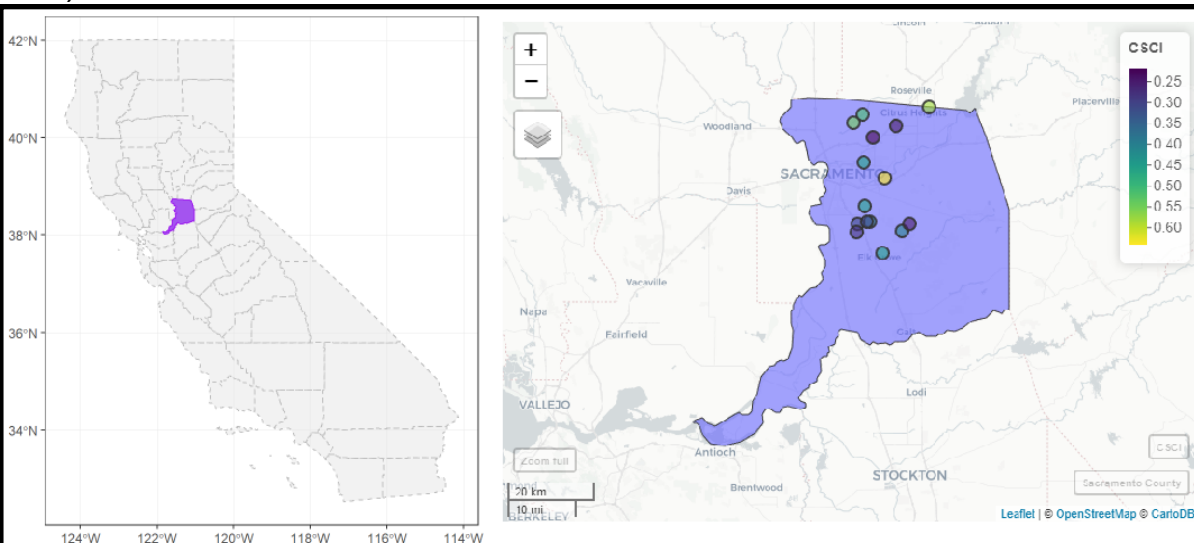
A special session held the day before the workshop also featured several talks on how data visualization and mapping can enhance the utility of bioassessment data. Many of these talks featured how to use R to bridge the research-management divide.



Workshop Data Visualization in R Workshop October 24th, 2018.

The workshop was organized by Marcus Beck (SCCWRP) and Ryan Peck (UC Davis), who have a combined 15 years of experience using R. Representation from 31 attendees included staff from the state and regional water boards, federal agencies, academics, and consulting groups. Several students from the UC and Cal state systems also attended.

(Below) Workshop participants learned how to import, manipulate, and plot bioassessment data such as the plotting of CSCI scores within a county or research area.



**Have an idea for a future workshop? We want to hear it!**

Send an email with a topic and suggested presenters to:

cal.chap.sfs@gmail.com  
Or via twitter



CalSFS  
@CalSFSsocial

**Did you miss the workshop? All course materials can be accessed online:**

[https://sccwrp.github.io/CABW2018\\_R\\_training](https://sccwrp.github.io/CABW2018_R_training)

**For more information you can contact the presenters:**

Marcus Beck [marcusb@sccwrp.org](mailto:marcusb@sccwrp.org) and Twitter [@fawda123](https://twitter.com/fawda123)

Ryan Peck [rpeek@ucdavis.edu](mailto:rpeek@ucdavis.edu) and Twitter [@riverpeck](https://twitter.com/riverpeck)

# STUDENT SPOTLIGHT!

*Cal-SFS was able to support these students' travel to the Annual SFS Meeting in Detroit, MI. Here they share a little of their experiences, their research focus, and their involvement with SFS.*

Christine Parisek took home the Boesal-Sanderson Endowment Award for natural history research. Christine has recently joined the Rypel Lab at UC Davis in the Department of Wildlife, Fish, and Conservation Biology. You can connect with Christine on Twitter [@caparisek](#)

The last time I was able to attend the annual Society for Freshwater Science meeting was when it was local (#2016SFS, in Sacramento, CA). At the time, I was months away from beginning a Master's program in Ecology and Sustainability at California State University Stanislaus, so I was excited to be able to attend in Detroit this year where I could give a talk on my Master's thesis research. I was also fortunate to receive the Boesal-Sanderson award this year in support of my research on the ecological and evolutionary dynamics of aquatic insects crossing lotic-lentic boundaries in the northern Sierra Nevada, CA. While fauna in lakes and streams are frequently studied, surprisingly little is known about species that can inhabit both lentic and lotic habitats; understanding the natural history of these organisms is an essential link to understanding the lentic-lotic differences I have found thus far. Attending SFS this year gave me the opportunity to share and receive feedback on my research on the ecological and evolutionary dynamics of aquatic insects crossing lotic-lentic boundaries in the northern Sierra Nevada, CA; I also got to meet scientists following different career trajectories and hear my peers' unique experiences in their research and scientific communication efforts. While in Detroit, I became involved in SFS' Public Information and Publicity (PIP) committee and attended my first committee meeting. Additionally, because so many freshwater folks at the meeting were also on Twitter, I was able to meet new friends and strengthen existing relationships through the #2018SFS hashtag. Being able to attend this meeting was a great capstone to completing my Master's program and a fantastic bridge to my next program. I'm so grateful to the SFS California chapter for allowing me to attend the 2018 meeting in Detroit, MI.



Hana Moidu was awarded a student travel award from Cal-SFS for her to attend the 2018 SFS Meeting in Detroit. While there she won the Best Post for Basic Research for her poster "Linking Landscape-Level Processes and Aquatic Refugia in Intermittent Streams of Central California". Hana is currently a graduate student at UC Berkeley and you can connect with Hana on twitter at [@hansmem](#)

I am grateful to be a recipient of a travel grant from the California Chapter of Society of Freshwater Science, which allowed me to attend the 2018 annual meeting in Detroit. It was a great opportunity to meet others, network, and learn about the broad range of topics encompassed by the conference. I presented a poster on my research focusing on the physical features that affect pool persistence in intermittent streams, and it was a very valuable experience to discuss my findings with fellow researchers and get feedback. Given my topic, I was especially interested in the special session on temporary freshwaters, and I attended several talks from researchers whose work spanned from resource subsidies to connectivity to nutrient cycling. Not only did I learn greatly from these talks, they also provided insights into my own research and inspired new ideas. In addition to these talks, the plenary speakers and student-mentor mixer were particularly valuable on providing scope and direction. I am looking forward to the 2019 meeting in Salt Lake City, and hope to present an update on my findings, reconnect with those I met in Detroit, and get to know others!





**California Currents..... See what some members of Cal-SFS have been up to during 2018.**

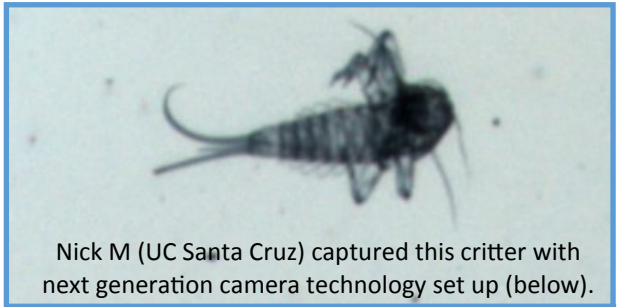


Cal-SFS and American Fisheries Society hosted a collaborative fundraiser at East Cliff Brewing in Santa Cruz in October.

Western Pond Turtle (*Actinemys marmorata*) from Coyote Creek, Santa Clara County. Photo by Matt Cover



Angela D., a Water Resources biologist in Lake County, CA, monitors turbidity from post-fire runoff in Alley Creek, downstream of the Mendocino Complex burn scar.



Nick M (UC Santa Cruz) captured this critter with next generation camera technology set up (below).



Students in Dr. Olson's classes at CSU Monterey Bay used New Zealand Mud Snails (*Potamopyrgus antipodarum*) collected from the Carmel River for experiments on velocity tolerances.

**SHARE YOUR FRESHWATER ACTIVITIES WITH US ON SOCIAL MEDIA!**



Facebook: Society for Freshwater Science - California Chapter



Twitter and Instagram: CalSFSSocial



**Do you like social media?**

**You could be a communications ambassador for Cal-SFS!!**

Help Cal-SFS share and communicate their message beyond the stream banks right from your own phone or laptop! We are currently recruiting anyone interested in tweeting, instagramming, facebooking, or writing and designing newsletters, blogs, and other outreach and marketing materials. If this seems like something you, or someone you know, would like to do please contact Angela at [Adepalmadow@gmail.com](mailto:Adepalmadow@gmail.com) or Nick at [niamacia@ucsc.edu](mailto:niamacia@ucsc.edu).



# 2019 SFS Annual Meeting: Salt Lake City May 19-23

## *Translational Ecology in Freshwater Science*

[sfsannualmeeting.org](http://sfsannualmeeting.org)



### California Chapter Society for Freshwater Science —Student Travel Grants for SFS 2018 Application Deadline: January 22, 2019

The California Chapter of SFS (Cal-SFS) has made two \$500 awards available to support the travel expenses of undergraduate or graduate students presenting at the 2019 SFS annual meeting in Salt Lake City, Utah. Awarded funds may be used to cover the costs of transportation, lodging, and/or registration. If the student is not yet a member of SFS and the California Chapter, a portion of the travel grant should be used to cover the cost of membership.

Cal-SFS is supporting student travel to the 2019 SFS meeting in Salt Lake City, UT in order to provide funding to students who otherwise would not be able to attend, and for whom not attending the meeting would be detrimental to their academic or professional development. Thus, students who have funding available through other sources, such as research grants or university awards, should not apply. Award funding will be given directly to students, and can be used for any expenses related to travel to the meeting.

#### Award recipients are expected to:

1. Attend the SFS meeting in entirety, including any California Chapter events, and provide assistance, if required, to chapter officers.
2. Submit an abstract by the required deadline in order to present their research at the 2019 meeting, in either an oral or poster format.
3. Within two weeks after the conclusion of the meeting, submit a short article describing your experience at the meeting for publication in the Cal-SFS newsletter.
4. Maintain membership in the National society and Cal-SFS in 2019 and 2020.
5. Attend and present your research at the Fall 2019 Cal-SFS Chapter meeting, scheduled for late October at UC Davis.
6. Recipients of awards are expected to post on one of the Cal-SFS social media platforms (Twitter, FB, or Instagram) while at the meeting.

#### To Apply:

Please send a single electronic file (.doc, .docx, .pdf, or .txt) as an attachment in an email to Matt Cover ([mcover@csustan.edu](mailto:mcover@csustan.edu)) by **January 22, 2019**. Please include the following information in your application:

1. Full contact information (name, address, phone, email)
2. Student status (college or university, degree program, years in program, expected graduation date)
3. A brief statement of interest in the SFS meeting ( < 250 words). Please describe:
  - A. How your academic and career goals will be advanced by attending the SFS meeting
  - B. Other scientific conferences where you have attended or presented
  - C. Evidence of financial need; other existing or potential sources of funding
  - D. Evidence of past or planned education or outreach activities that expand access and involvement in the field of freshwater science in California
4. A copy of your submitted abstract, OR a draft copy of the abstract you plan to submit by the January 26 deadline, and the name of the session you wish to present in.

Applications shall be judged on academic and career promise, demonstrated need, and the potential for championing freshwater science in California. A committee of Cal-SFS officers and members who are unaffiliated with any applicant shall review submissions and select a recipient by January 28th. Award monies will be delivered, in the form of a check sent directly to the awardees, in late February.