Lightning Tales Where Wisdom Sails

A Concurrent Session at the 39th Annual Salmonid Restoration Conference held in Santa Cruz, California from April 19 – 22, 2022.

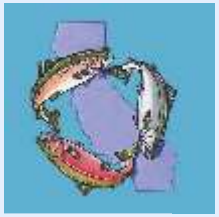
- **Session Coordinator:**
  - Eli Asarian, *Riverbend Sciences*
  - Sarah Phillips, *Marin Resource Conservation District*

This session will feature "lightning" (5-minutes or less talks in which presenters share nuggets of inspiration and wisdom relevant to restoration. Here are some thought provoking questions to help your brain start flowing:

• What's the best advice anyone has ever given you that you find yourself applying to your work in the field of restoration?
• What›s your favorite book/article/lecture/quote that›s relevant to restoration, and how does it guide and/or inspire your work?
• Who has had the greatest impact on you and why?
• What have you found to be a hidden gem that needs more time in the limelight?
• What do you know now that you wish someone had told you years or decades ago?

Share a distilled and focused insight with the SRF community. It can be anything from a practical tip to a philosophical musing or heart-stirring experience to captivate the audience. Let's focus on the positives and the possibilities. We welcome any and all to come share their gems of wisdom that have carried them through the days, months, years, or decades in their practice of restoration. Whether this is your first conference or you're an old-timer, we want to hear from anyone who is willing to impart such valuable wisdom to our restoration community. We aspire for people to leave this session feeling replenished, motivated, energized, and connected.

Presentations



Slide 5 – **Lessons Learned from 40 Years of Watershed Restoration**, Don Allen, *Mad River Alliance*

Slide 6 -**How to Maximize Your Grant Writing Efforts**, Steve Madrone, *Humboldt County Supervisor*

Slide 7 - **Creek Incision Prevention /Fish Habitat Creation**, Freddy Otte, *City of San Luis Obispo*

Slide 13- **A Few Nuanced Tips for Getting the Most Out of Large Wood-Loading Projects**, Tom Leroy, *Pacific Watershed Associates*

Slide 17- **Turning Forest Fuels into Instream Habitat to Benefit Long-term Ecological Function**, Brandt Gutermuth, *Trinity River Restoration Program*: *Bureau of Reclamation*

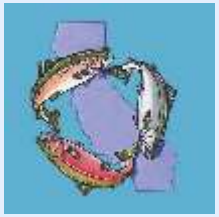
Slide 19 - **Restoration Success While Negotiating with Disney Villains, Plus a Perspective on Time**, Alison Willy, *SRF Board*

Slide 20 - ***Perfect Is the Enemy of Good; A Pragmatic Restorationist's Perspective***, Mike Berry, *CDFW and DWR*

Slide 28 - ***When Failure Leads to a Plethora of Successes***, Sarah Phillips, *Marin Resource Conservation District*

Slide 29 - ***How I Began to Listen to Traditional Environmental Knowledge (TEK),*** Michael Belchik, *Yurok Tribal Fisheries Program*

Presentations



Slide 29 – **Thinking Like a Natural Historian: Nature Nerd Nuggets from the Professor of Wonderment,** Brock Dolman*, Occidental Arts & Ecology Center*

Slide 36 -**What Makes a Good Mentor and Why is a Mentor Important,** Ross Taylor*, Ross Taylor and Associates*

Slide 37 - **Praise for Phil Pister's Species in a Bucket,** Eli Asarian*, Riverbend Sciences*

Slide 38 - **A So You Want To Be a Stream Scientist,** Bill Trush, Ph.D., *Cal Poly Humboldt River Institute*

Slide 39 - **A Different Perspective and Uncomfortable Conversations,** Larry Notheis*, California Conservation Corps*

Slide 42 - **Reflections on a Quarter Century in Waders,** Sarah Nossaman Pierce, *California Sea Grant*

Slide 44 - ***Effectively Engaging Elected officials and Public Agencies to Support and Advocate for Restoration and Conservation Projects,*** *Natalie Arroyo*, Eureka City Council

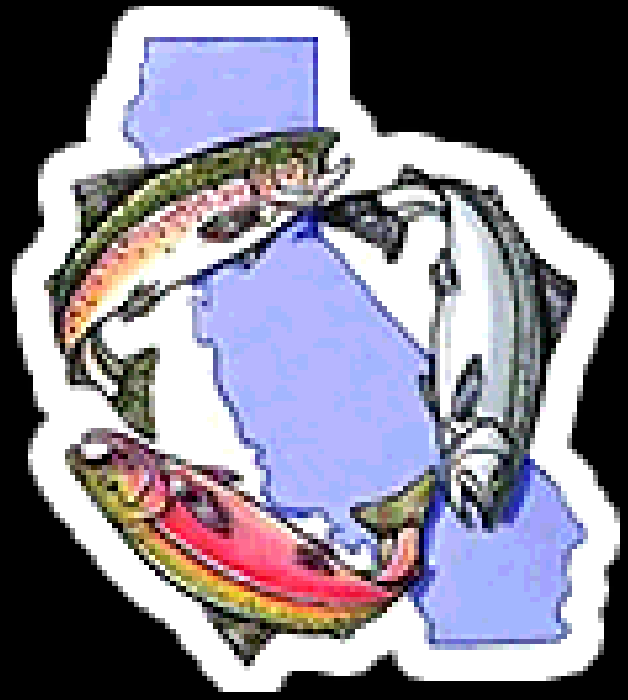
Slide 45 - ***There Is No EGO in Ecosystem Restoration,*** *Anna Halligan,* Trout Unlimited

Slide 46 - ***Teamwork Makes the Stream Work,*** *Elise Ferrarese,* Trout Unlimited

Slide 47 - ***Cultivating Salmon-saving People and Partnerships,*** Dave Kajtaniak, *CDFW*

Lightning Tales to Fill Your Sails

Salmonid Restoration Federation Conference 2022



Eli Asarian, Riverbend Sciences, SRF Board
Sarah Phillips, Marin RCD, SRF Board

Thursday, April 21st

McDonald Creek Riparian Restoration Project 1983- 1984

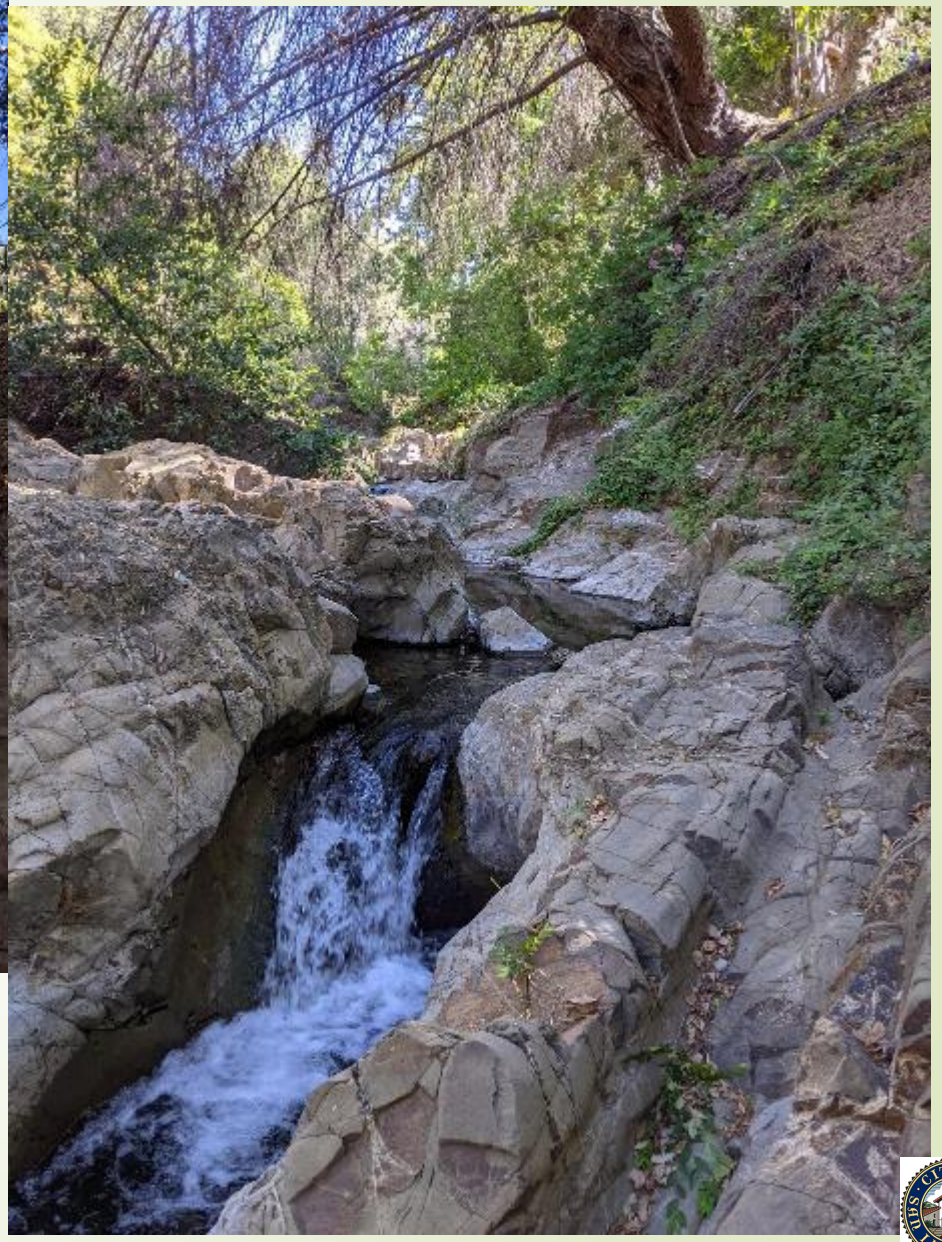
Lower Right– McDonald Creek restored riparian forest 2018.
Upper Left – McDonald Creek channel.
Lower Left – elk herd at McDonald Creek.

Steve Madrone, Humboldt County Supervisor

Channel Incision.
The Good, the Bad and the Ugly…

By: Freddy Otte, City of San Luis Obispo Biologist

- Bedload movement is a natural process to distribute/replenish gravels in the creek system.
- Human induced climate change is exacerbating this movement/incision.
- Sometimes it uncovers nice habitat to support Steelhead (The Good).
- Sometimes it causes unstable banks to promote large wood recruitment (The Good).
- Sometimes it causes trees to fall in the channel and create flood threats (The Bad).
- Sometimes it undermines existing infrastructure and archaic bank stabilization efforts (The Ugly).
- The Office of Sustainability and Natural Resources in the City of San Luis Obispo is looking at creative techniques to start aggrading the channels to slow the continued incision to protect the riparian vegetation, protect existing infrastructure and create more fish habitat.

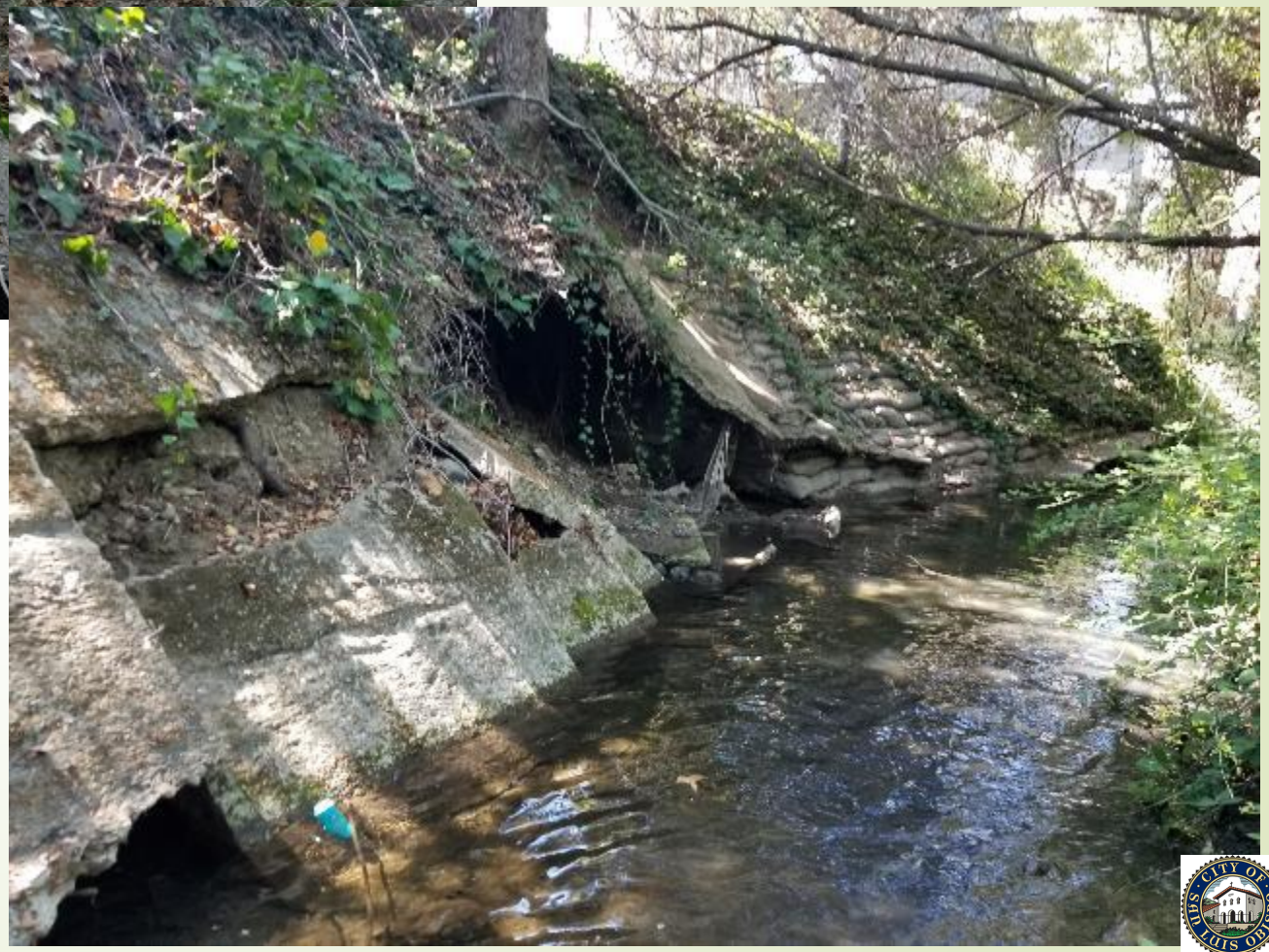


The Good…Bedrock step pools

The Good and Bad…Large wood recruitment, but next to homes

The Bad…Fine sediment clogging gravels

The Ugly…
Failing infrastructure



Photos by Robin Stocum

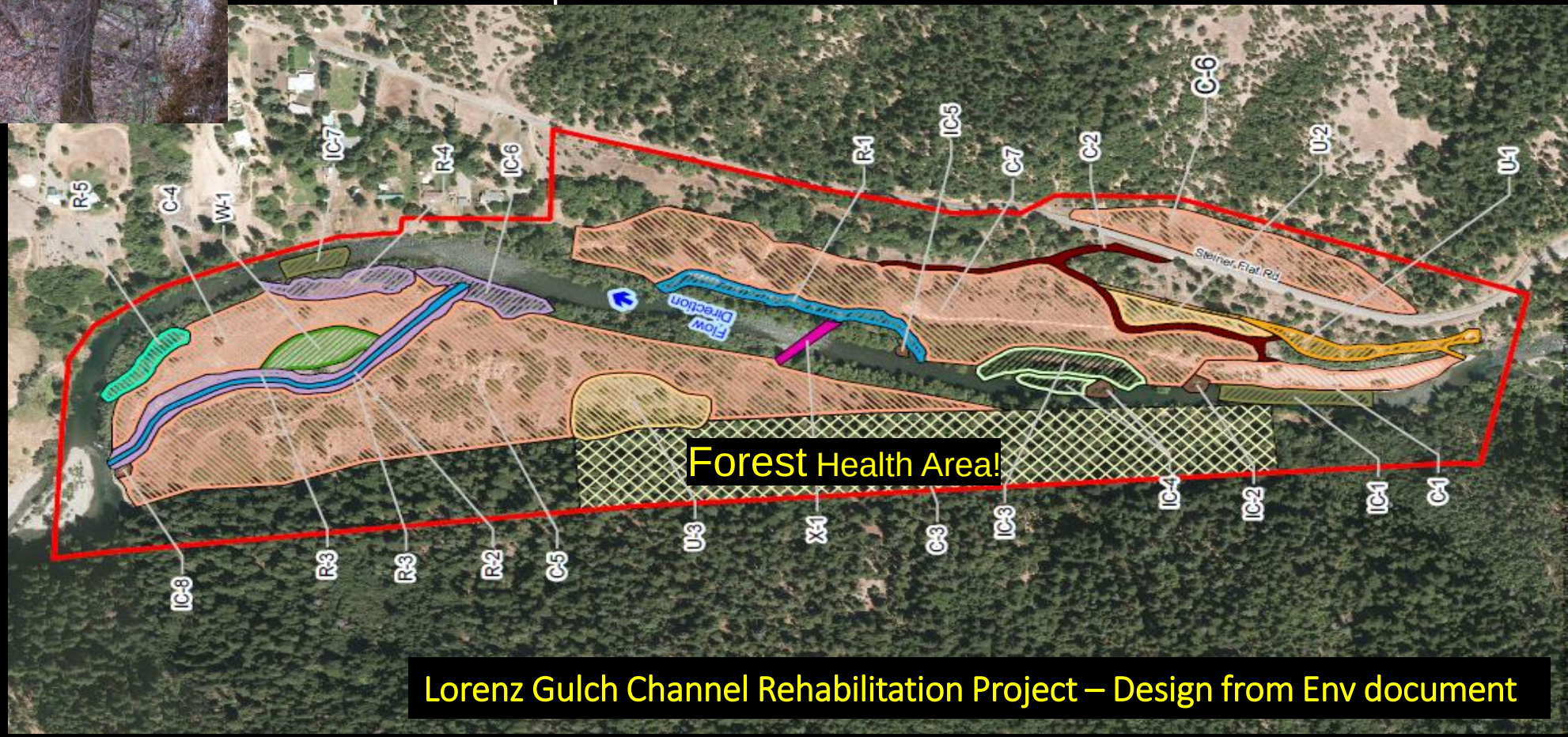
Forest Fuels Sustain Fire, Cause SMOKE, and Burn Homes

In the Forest and Right Places, Fuels are Great Habitat

Pre-project

Plan for it!

Obtain enough trees for Proper restoration!



Lorenz Gulch Channel Rehabilitation Project – Design from Env document

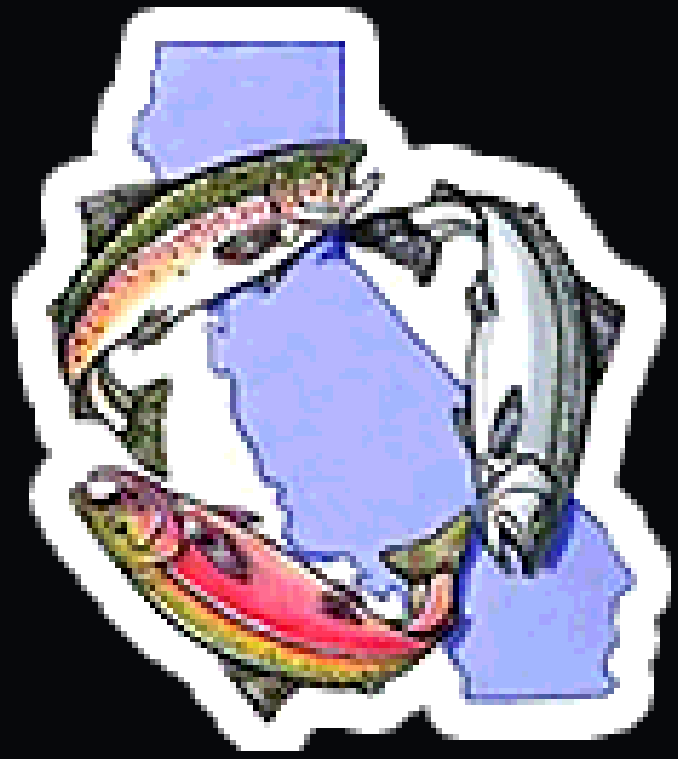
Now, a Healthy Forest

Wood supports function. Wood is GOOD!

For the River, Landscape, and Community

Tom Leroy, Pacific Watershed Associates

Alison Wily, SRF Board



Perfect is the Enemy of Good: A Pragmatic Restorationist's Perspective

Mike Berry

39th Annual SRF Conference

Santa Cruz, CA

April 2022

"*Perfect is the enemy of good.*" – Voltaire

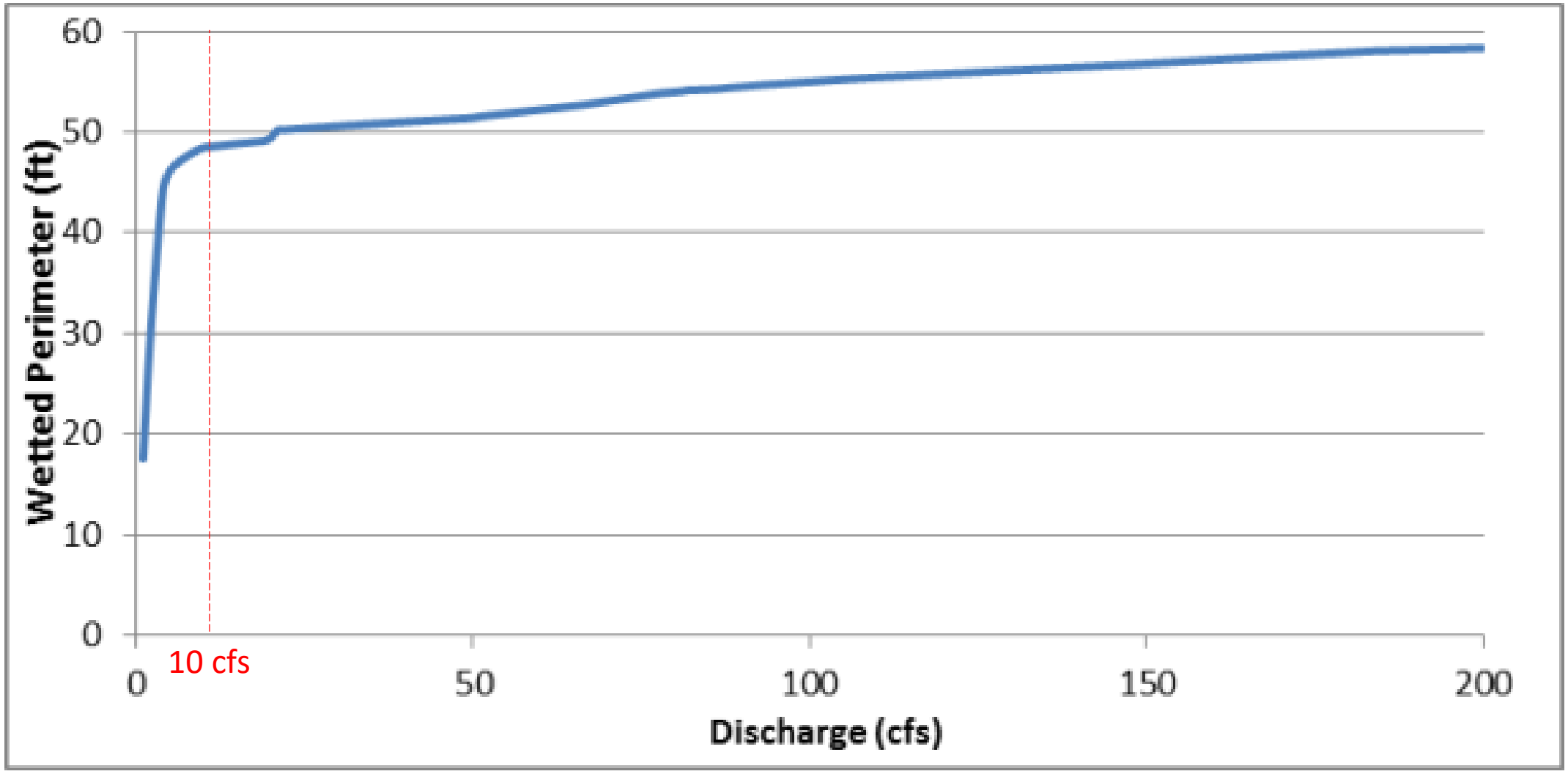
Cow Creek


Unscreened ditch


Facing downstream

speaking of diversion dams…

Mill Creek (typical cross-section)



Thank you

Sarah Phillips, Marin RCD, SRF Board

Mike Belchik, Senior Water Policy Analyst for the Yurok Tribe

UNIVERSITY OF CALIFORNIA
SANTA CRUZ

KENNETH S. NORRIS CENTER FOR NATURAL HISTORY

Natural History Field Quarter 1973 to 1990

Natural History Field Quarter 1978

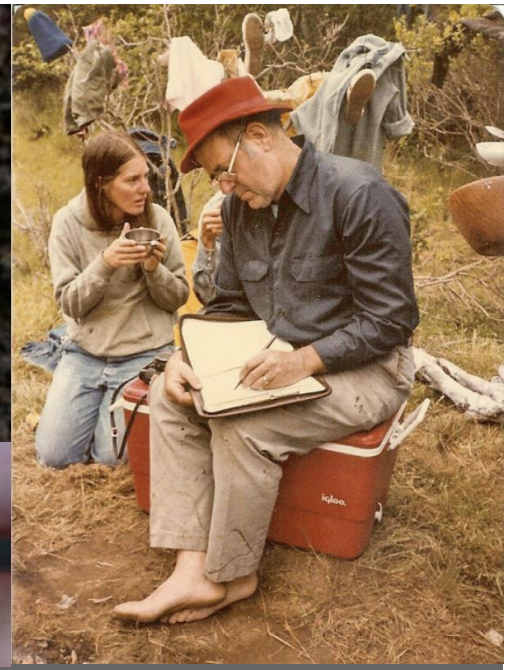
50 Years of Wonder

Celebrating the first half-century of Natural History at UC Santa Cruz

PROFESSOR OF WONDERMENT

Places for Teaching, Research and Conservation

Natural Reserve System
UNIVERSITY OF CALIFORNIA



1100+
publications
2016-20

species of
native plants
2,100+

41
natural reserves
all major state ecosystems

100,000+
students & researchers
visit each year

47,000 acres
world's largest
university reserve system

50
miles of protected
coastal shoreline

Natural Reserve System
UNIVERSITY OF CALIFORNIA

1111 Franklin St.
Oakland, CA 94607-5200
ucnrs.org

Reserves are listed by managing campus

Berkeley
1 Angelo Coast Range Reserve
2 Blue Oak Ranch Reserve
3 Chickering American River Reserve
4 Hastings Natural History Reservation
5 Jenny Pygmy Forest Reserve
6 Point Reyes Field Station
7 Sagehen Creek Field Station

Davis
8 Bodega Marine Reserve
9 Jepson Prairie Reserve
10 Lassen Field Station
11 McLaughlin Natural Reserve
12 Quail Ridge Reserve
13 Stebbins Cold Canyon Reserve

Irvine
14 Burns Piñon Ridge Reserve
15 San Joaquin Marsh Reserve
16 Steele/Burnand Anza-Borrego Desert Research Center

Los Angeles
17 Stunt Ranch Santa Monica Mountains Reserve
18 White Mountain Research Center

Merced
19 Merced Vernal Pools and Grassland Reserve
20 Yosemite Field Station

Riverside
21 Box Springs Reserve
22 Boyd Deep Canyon Desert Research Center
23 Emerson Oaks Reserve
24 James San Jacinto Mountains Reserve
25 Motte Rimrock Reserve
26 Sweeney Granite Mountains Desert Research Center

San Diego
27 Dawson Los Monos Canyon Reserve
28 Elliott Chaparral Reserve
29 Kendall-Frost Mission Bay Marsh Reserve
30 Scripps Coastal Reserve

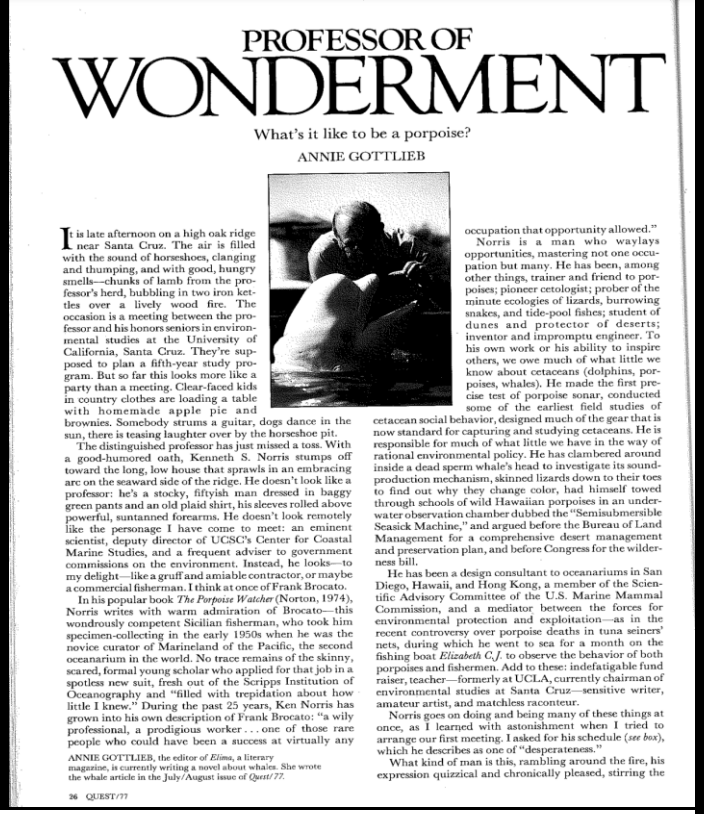
Santa Barbara
31 Carpinteria Salt Marsh Reserve
32 Coal Oil Point Natural Reserve
33 Kenneth S. Norris Rancho Marino Reserve
34 Santa Cruz Island Reserve
35 Sedgwick Reserve
36 Sierra Nevada Aquatic Research Laboratory
37 Valentine Camp

Santa Cruz
38 Año Nuevo Island Reserve
39 Fort Ord Natural Reserve
40 Landels-Hill Big Creek Reserve
41 Younger Lagoon Reserve

Professor Norris was a man of big ideas and one of his biggest was the UC Natural Reserve System (NRS). As a graduate student at UCLA, Norris was surprised to find that field study sites, many of which he frequented, were rapidly disappearing due to increasing development. The beauty and ecological integrity of many open remote areas were being rapidly transformed into motels and parking lots.

Norris felt a responsibility toward preserving these undisturbed natural lands for research, teaching, and habitat conservation. In 1963 Norris proposed a UC-wide plan to acquire land to represent the broad range of California's habitats and to make them accessible for the benefit of all UC campuses. Once approved, Norris took time off from teaching to travel throughout California to interview other field researchers and survey numerous potential reserve locations. Norris analyzed 81 original sites, 13 of which were initially drawn into the NRS.

Today, the UC Natural Reserve System has grown significantly and now encompasses over 756,000 acres of protected land with a total of 39 reserves, making it the largest system of natural reserves in the world. Each year, thousands of researchers and students from universities and schools around the world utilize the UC NRS system.



PROFESSOR OF WONDERMENT

What's it like to be a porpoise?

ANNIE GOTTLIEB

It is late afternoon on a high oak ridge near Santa Cruz. The air is filled with the sound of horseshoes, clanging and thumping, and with good, hungry smells—chunks of lamb from the professor's herd, bubbling in two iron kettles over a lively wood fire. The occasion is a meeting between the professor and his honors seniors in environmental studies at the University of California, Santa Cruz. They're supposed to plan a fifth-year study program. But so far this looks more like a party than a meeting. Clear-faced kids in country clothes are loading a table with homemade apple pie and brownies. Somebody strums a guitar, dogs dance in the sun, there is teasing laughter over by the horseshoe pit.

The distinguished professor has just missed a toss. With a good-humored oath, Kenneth S. Norris stumps off toward the long, low house that sprawls in an embracing arc on the seaward side of the ridge. He doesn't look like a professor: he's a stocky, fiftyish man dressed in baggy green pants and an old plaid shirt, his sleeves rolled above powerful, suntanned forearms. He doesn't look remotely like the personage I have come to meet: an eminent scientist, deputy director of UCSC's Center for Coastal Marine Studies, and a frequent adviser to government commissions on the environment. Instead, he looks—to my delight—like a gruff and amiable contractor, or maybe a commercial fisherman. I think at once of Frank Brocato.

In his popular book *The Porpoise Watcher* (Norton, 1974), Norris writes with warm admiration of Brocato—this wondrously competent Sicilian fisherman, who took him specimen-collecting in the early 1950s when he was the novice curator of Marineland of the Pacific, the second oceanarium in the world. No trace remains of the skinny, scared, formal young scholar who applied for that job in a spotless new suit, fresh out of the Scripps Institution of Oceanography and "filled with trepidation about how little I knew." During the past 25 years, Ken Norris has grown into his own description of Frank Brocato: "a wily professional, a prodigious worker . . . one of those rare people who could have been a success at virtually any occupation that opportunity allowed."

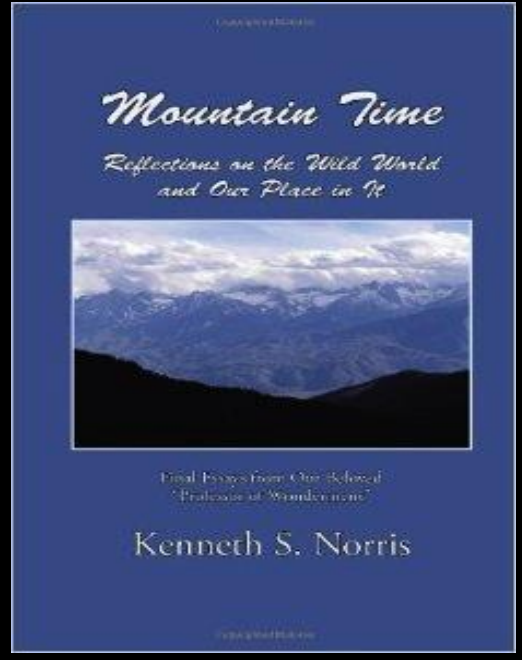
Norris is a man who waylays opportunities, mastering not one occupation but many. He has been, among other things, trainer and friend to porpoises; pioneer cetologist; prober of the minute ecologies of lizards, burrowing snakes, and tide-pool fishes; student of dunes and protector of deserts; inventor and impromptu engineer. To his own work or his ability to inspire others, we owe much of what little we know about cetaceans (dolphins, porpoises, whales). He made the first precise test of porpoise sonar, conducted some of the earliest field studies of cetacean social behavior, designed much of the gear that is now standard for capturing and studying cetaceans. He is responsible for much of what little we have in the way of rational environmental policy. He has clambered around inside a dead sperm whale's head to investigate its sound-production mechanism, skinned lizards down to their toes to find out why they change color, had himself towed through schools of wild Hawaiian porpoises in an underwater observation chamber dubbed the "Semisubmersible Seasick Machine," and argued before the Bureau of Land Management for a comprehensive desert management and preservation plan, and before Congress for the wilderness bill.

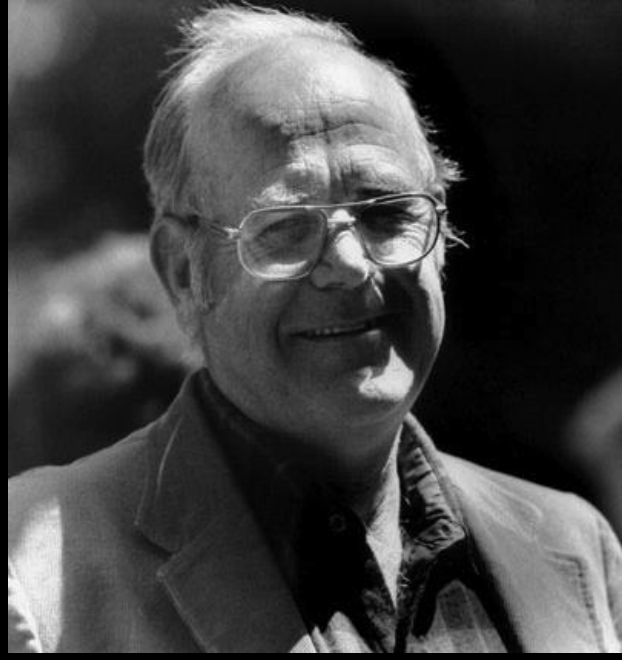
He has been a design consultant to oceanariums in San Diego, Hawaii, and Hong Kong, a member of the Scientific Advisory Committee of the U.S. Marine Mammal Commission, and a mediator between the forces for environmental protection and exploitation—as in the recent controversy over porpoise deaths in tuna seiners' nets, during which he went to sea for a month on the fishing boat *Elizabeth C.J.* to observe the behavior of both porpoises and fishermen. Add to these: indefatigable fund raiser, teacher—formerly at UCLA, currently chairman of environmental studies at Santa Cruz—sensitive writer, amateur artist, and matchless raconteur.

Norris goes on doing and being many of these things at once, as I learned with astonishment when I tried to arrange our first meeting. I asked for his schedule (*see box*), which he describes as one of "desperateness."

What kind of man is this, rambling around the fire, his expression quizzical and chronically pleased, stirring the

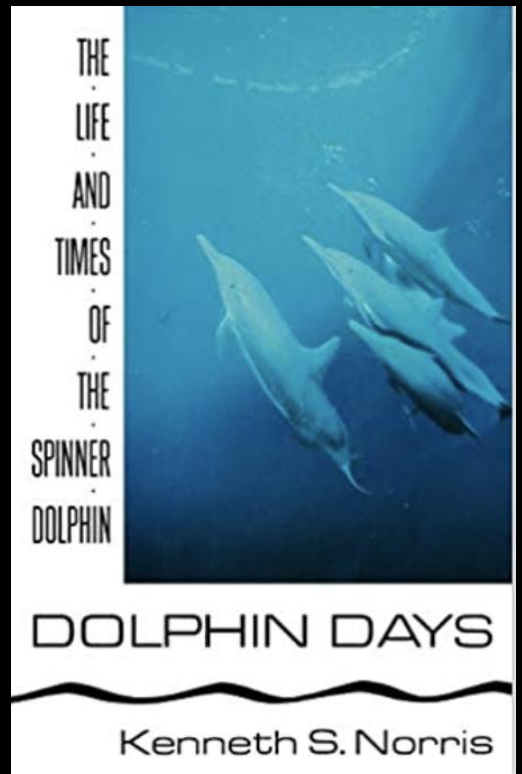
ANNIE GOTTLIEB, the editor of *Elimo*, a literary magazine, is currently writing a novel about whales. She wrote the whale article in the July/August issue of *Quest/77*.





"Choose your words with care. Make them fit. That's both science and poetry."

"I was a naturalist down to my toes and fingertips-teetering between art and science, seeking synthesis."



Professor of Natural History

- **Natural history is a continual, iterative investigation.**
  Professor Norris refers to the cycle of [making] direct observation, posing questions, and developing hypotheses as "spinning the wheel." This is a critical process for naturalists to practice in order to refine their understanding of nature.

- **Focus attention on how places, organisms, and ecosystems change over space and time.** Professor Norris constantly challenged his students to see that "nature is not just a here-and-now thing, but a thing through time, built of nesting connected layers of organization that allow the many faces of life to be expressed.

- **Build a direct and personal relationship with the natural world, and allow this relationship to become deeply emotional**. Professor Norris believed there is no point in studying something for which you didn't feel a strong emotional attachment. He also knew that this attachment is the basis of a strong ethic of stewardship and sustainability.

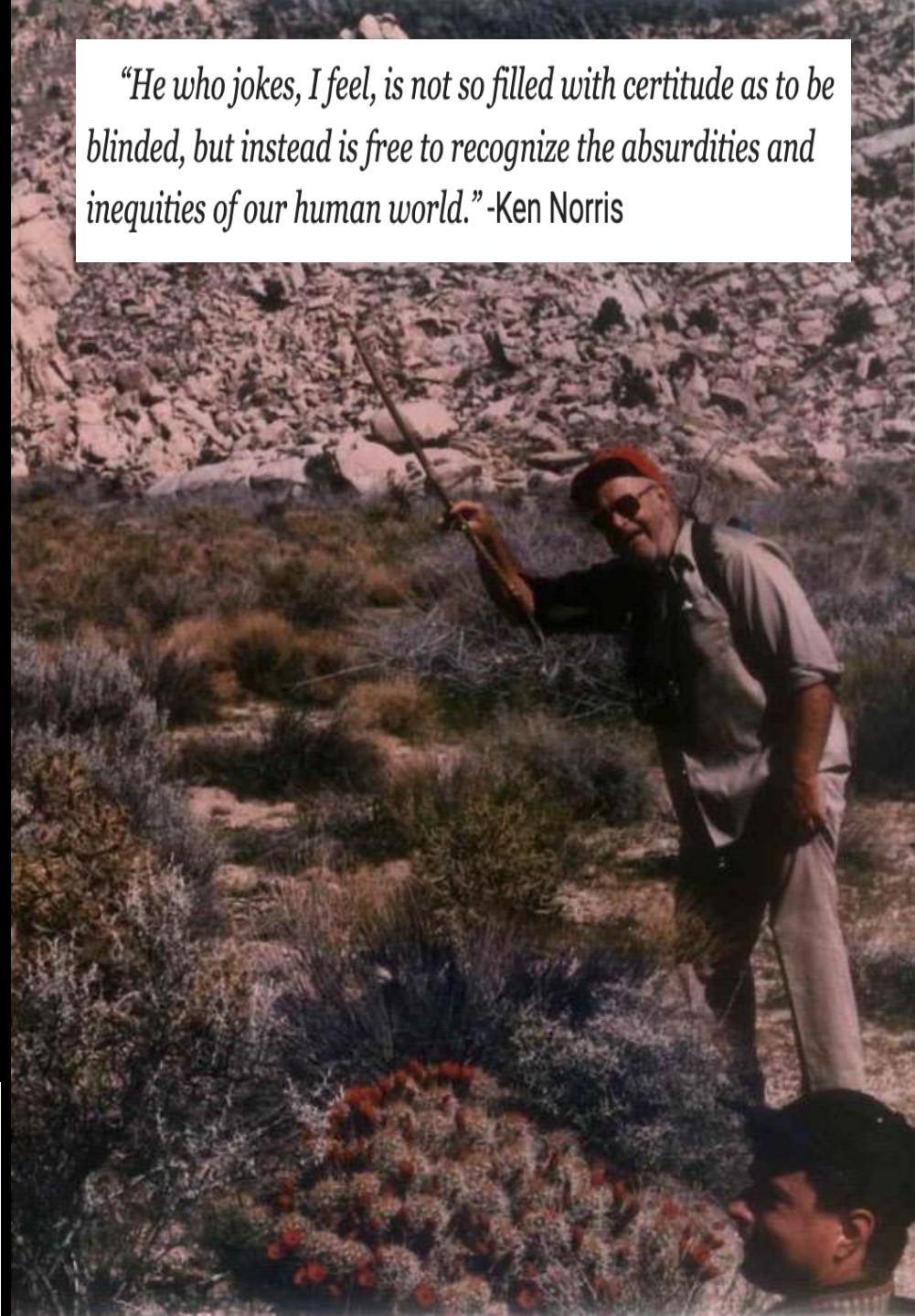
- **The naturalist must slow down and match nature's rhythms.**
  Through the repeated practice of being still and observing for extended periods, the naturalist can overcome "the threshold of boredom."

- **Naturalists must remain humble.**

"We must not forget how little we know," wrote Norris. "The history of ours, and of the life on every mountain, is intricate almost beyond understanding. It has taken the time since life began to assemble and to fit and test. In our simplicity, we think we know, but we don't really. We cannot leave behind the others who have been fitted to the Earth along with us. In their intricate patterns lie the fruits of the Earth's wisdom about us all, and about itself. In these patterns lie the balances that can allow our kind to continue. We must forever return to the Earth to learn and relearn this crucial story."

- **Mutual peer mentorship gives students a sense of empowerment.** Professor Norris de-emphasized one-way transmission of knowledge from teacher to student. Instead, he encouraged student collaboration, provided opportunities for students to share their special knowledge, and gave them the freedom to develop their own ideas about how the natural world works.

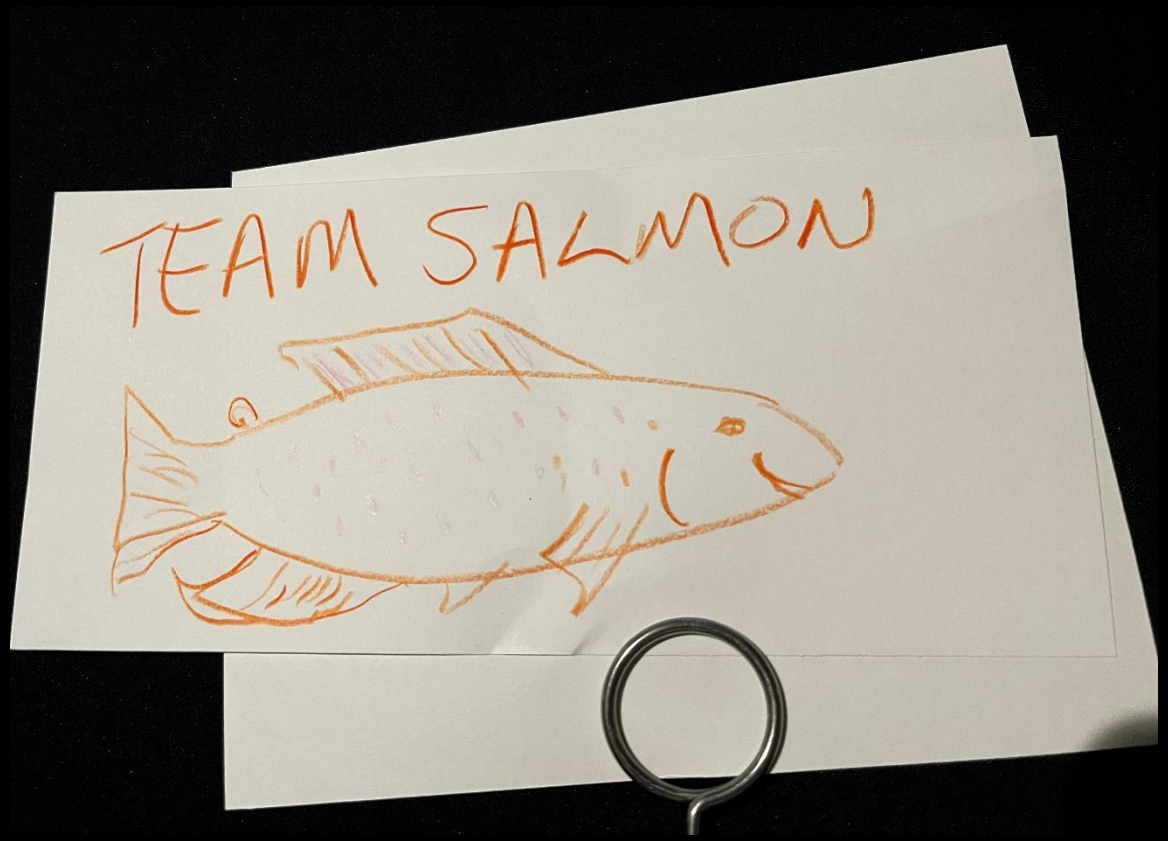
- **Learning must be fun for it to stick.** Knowing that it motivated the deepest engagement, Professor Norris always incorporated an element of fun and whimsy into his teaching.



"He who jokes, I feel, is not so filled with certitude as to be blinded, but instead is free to recognize the absurdities and inequities of our human world." -Ken Norris

BREAK

Ross Taylor, Ross Taylor & Associates



Phil Pister's Species in a Bucket

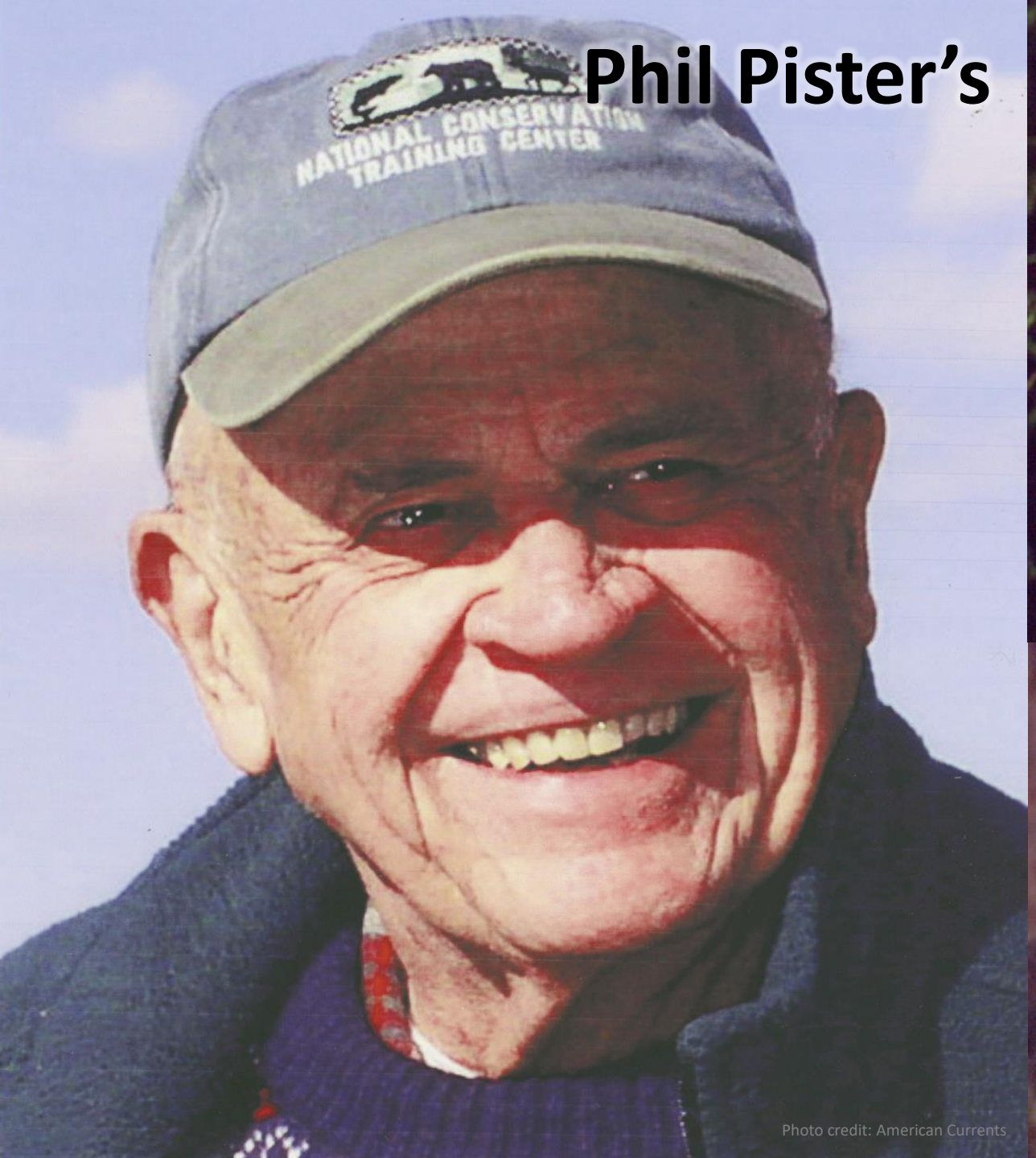


Photo credit: American Currents

Photo credit: American Currents/John Brill

Owens Pupfish

Photo credit: American Currents/John Brill

Bill Trush, Humboldt State University River Institute

CALIFORNIA CONSERVATION CORPS

A Different Perspective and Uncomfortable Conversations,

Larry Notheis, Senior Deputy Director

THANK YOU

Larry Notheis

Senior Deputy Director
Pronouns: he/him/his

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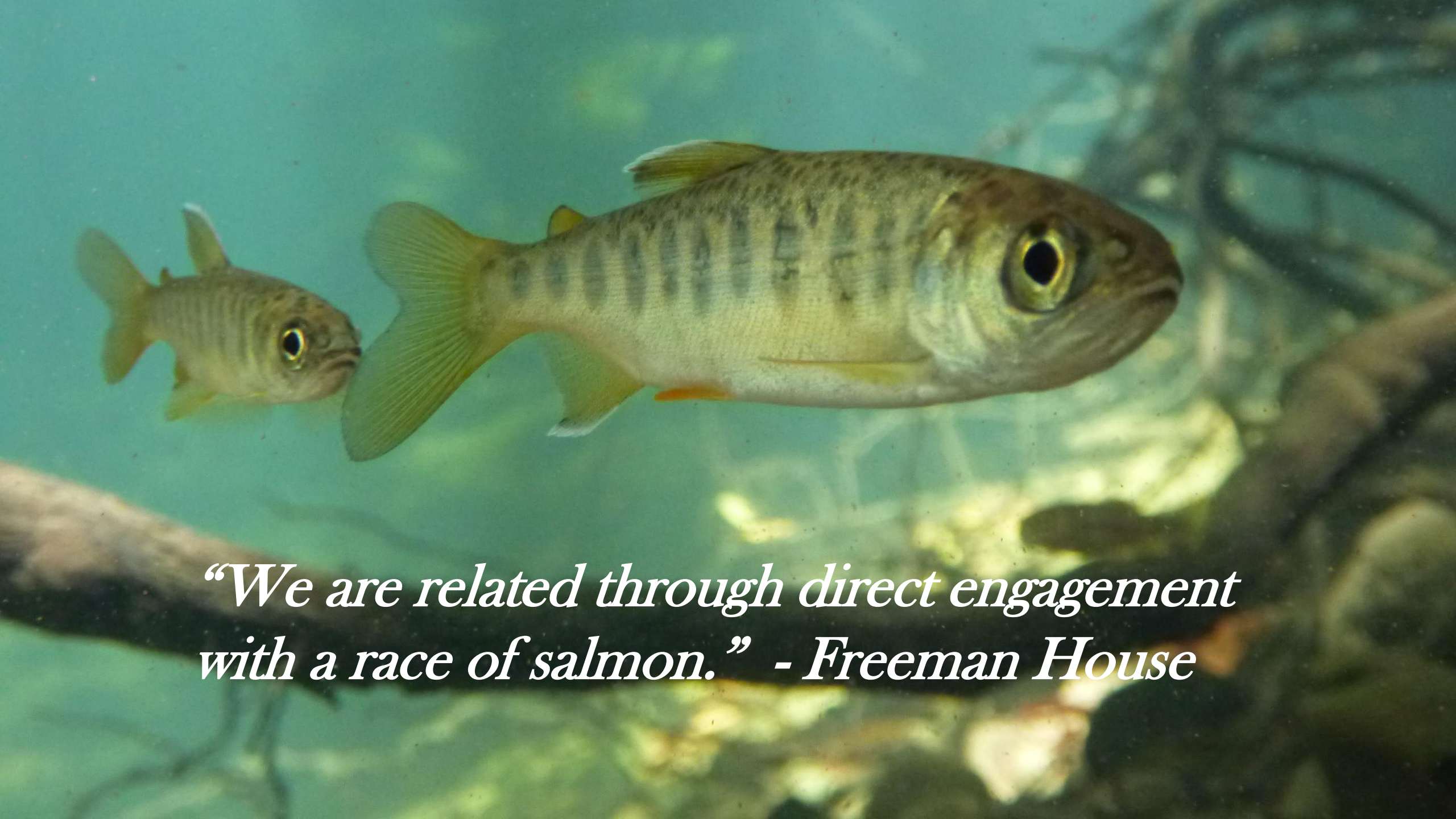
Reflections on a quarter century in waders

Sarah Nossaman Pierce - SRF, April 21, 2021


“We are related through direct engagement with a race of salmon.” - Freeman House

Natalie Arroyo, Eureka City Council

Anna Halligan, Trout Unlimited

Elise Ferrarese, Trout Unlimited

Dave Kajtaniak, CA Department of Fish & Wildlife

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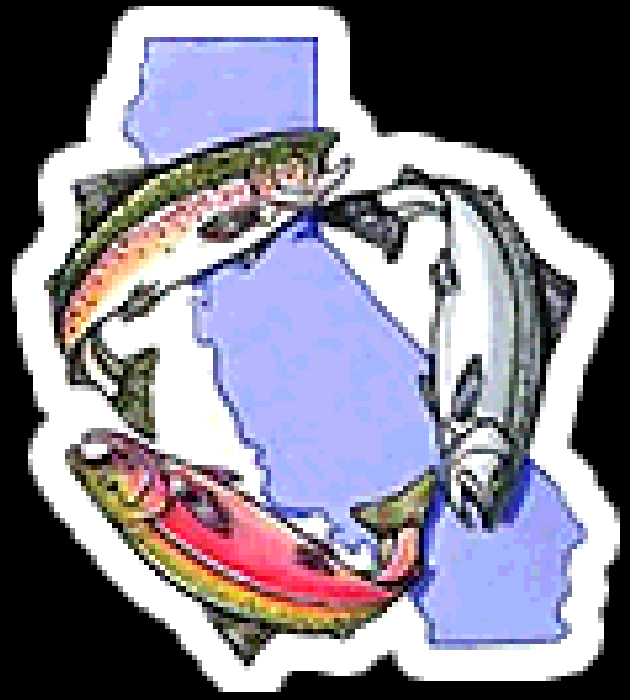
THANK



YOU!

Eli Asarian, Riverbend Sciences, SRF Board

Sarah Phillips, Marin RCD, SRF Board

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