AQUATIC & FISHERY SCIENCES NEWS

SCHOOL OF AQUATIC & FISHERY SCIENCES | COLLEGE OF THE ENVIRONMENT | UNIVERSITY OF WASHINGTON

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From the Director

André Punt

Dear Friends,

This will be my last "From the Director" letter as my 10-year tenure as SAFS director is drawing to a close. It has been an exciting, enjoyable, challenging, and at times exhausting decade. We have seen numerous transitions in the School's faculty, staff, and students, resulting in major changes in research, teaching, advising, and administration.

New faculty has meant more intensive work in freshwater science with the hiring of Gordon Holtgrieve; an emphasis on coral reef ecosystems, ecology of parasites, and ocean acidification once Jackie Padilla-Gamiño, Chelsea Wood, and Luke Tornabene joined us; and a new focus on behavior and movement ecology thanks to Andrew Berdahl's programs. We also welcomed our first teaching professor, José Guzmán, (we are currently in the process of hiring our second), and we gained a new unit leader (Sarah Converse) and assistant unit leaders (Mark Scheuerell and Alex McInturff) for the Washington Cooperative Fish and Wildlife Research Unit. In addition, the impact of our teaching within the College of the Environment has expanded since the implementation of the Marine Biology major in 2018.

Sadly, several of our emeritus faculty have passed away in recent years. This issue of *Aquatic & Fishery Sciences News* celebrates the life and work of Professor Emeritus Lynwood Smith, who died on July 30, 2021, having been on the School faculty from 1965 to 1993 (pages 10–11).

The pandemic has impacted all of us in profound ways. At SAFS, we have had to modify the way we teach and conduct research. It appears that COVID is on the wane in Washington, and the University has cautiously begun to work in-person again. See pages 8 and 9 for the thoughts of some of our community members on the 18 months of remote learning and the return to an in-person world.

Enhancing SAFS through increased diversity is an ongoing priority—the importance of which has been underscored by events of the last two years. Learn about the results of our recent Diversity, Equity and Inclusion (DEI) Assessment, some of the work being done in SAFS to increase awareness about DEI, and current activities to make SAFS a

—continued on page 3

Photos, above: Mark Stone; headshot: Dennis Wise

Diversity, Equity, and Inclusion (DEI) Assessment at SAFS

—Michael Martínez

After more than a year of research, planning, and advocacy by grad students, staff, and postdocs, SAFS completed its first-ever DEI Assessment (or "Equity Audit") in autumn quarter 2021. SAFS contracted with WhitworthKee Consulting, who held focus groups and developed a survey instrument to assess the School's climate and opportunities for growth. The final report, presented in November 2021, recommends a number of strategies to better align our actions with our ideals, including:

- expanding intentional recruitment practices,
- increasing access to trainings and professional development,
- clarifying processes and procedures within the School, especially around safety and bias reporting,
- engaging in ongoing review of SAFS policies and practices to identify where bias and discrimination are being (or could be) perpetuated, and
- revising those policies and practices to make them more equitable.

In the months since the report was released, the SAFS Equity and Inclusion Committee has been holding spaces for discussions of the Equity Audit findings and recommendations. These have been opportunities for community members in similar roles or with shared identities to engage in open and honest communication, share thoughts and feelings, ask questions, and suggest ideas for future actions SAFS can take to advance DEI. Already, three areas for growth have emerged as priorities: improving communication, building community, and enhancing consistency across the School. Communication, community, and consistency are deeply interconnected, and how well or poorly we engage in them affects everyone at SAFS, regardless of identity or access to institutional power.

It is critical to understand that members of our community who have less institutional power and/or belong to groups that are systemically under-represented in STEM are most negatively impacted by problematic dynamics. As we continue the work to advance equity at SAFS, beginning with necessary updates to our DEI Strategic Plan, we commit to centering our work on supporting and uplifting the members of our community with the least privilege and power. This is the way to create the greatest impact both for individuals and for the School as a whole.

Michael Martínez, SAFS diversity specialist and undergraduate adviser

Aquatic Sciences Affinity Groups

For some time, members of SAFS have wanted to build stronger connections with peers who share their social identities. Given the demographic realities of SAFS, UW, and environmental science fields, it is important to hold protective spaces that center the voices, perspectives, and experiences of people from groups that are under-represented in these institutions. To support that, we are now running two affinity groups centering people of color (POC) and lesbian, gay, bisexual, transgender, queer (or sometimes questioning), intersex, asexual, and two-spirit (LGBTQIA2+) folks.

The School's growing DEI library is available to all SAFS community members

Photos: Courtesy of Michael Martínez

The POC Affinity group is a space that focuses on Black folks, Indigenous folks, and other folks who identify as or are affiliated with people of color, building relationships and offering mutual support. The Queer and Trans Affinity Group works to increase visibility of LGBTQIA2+ individuals and identities in environmental science fields through educational events and offers a space to build relationships. Both groups are open to students, postdocs, faculty, and staff in any aquatic science field.

New Opportunities for DEI Learning

During autumn quarter, the SAFS DEI book club returned in a new format as the SAFS DEI Learning Group, which meets every other week. Members of the group read articles, watch videos and short documentaries, and listen to podcasts that serve as springboards for discussion during the group meetings. Past "readings" have included "Characteristics of White Supremacy Culture" by Tema Okun; the short documentary, "No Time to Waste;" and podcast episodes about housing segregation from Code Switch and 99% Invisible. The group also decides on a book to read each quarter, and this winter, members are reading "An Indigenous Peoples' History of the United States" by Rozanne Dunbar-Ortiz.

The DEI Learning Group is open to everyone in SAFS, regardless of existing knowledge and familiarity with DEI concepts; all participants need is the desire to learn and engage in respectful discussion. Discussions are informal and are focused on personal growth and reflection.

New DEIJ Award

In 2021, SAFS established the Diversity, Equity, Inclusion and Justice (DEIJ) and Community Service Recognition Award, which recognizes significant contributions of members of SAFS towards advancing a climate for excellence in community service, academic endeavor, teaching, and research. To date, the following SAFS members have received the award: Staci Amburgey; Ashley Townes; the team of Jenny Gardner, Kristin Privitera-Johnson, and Yaamini Venkataraman; Natalie Lowell (honorable mention); Jennifer Gosselin; and Eleni Petrou. SAFS is honored to have so many members of our community dedicated to advancing diversity, equity, inclusion, and justice. This award is supported by the SAFS community and our friends through donations to the "SAFS Diversity, Equity, Inclusion and Justice and Community Service Recognition Award" (fish.uw.edu/alumni-community/giving).

From the Director

—continued from page 1

more equitable community, including a new program to increase underrepresented students in the Geosciences, on pages 2, 3 and 6.

I would like to thank everyone for their gifts during the last year (pages 14–15), which give the School the ability to support students who would otherwise not be able to attend the UW, as well as new ideas for research projects.

On pages 4 and 5, we profile an internship program that has introduced math and statistics students to problems in fisheries science, based largely on a gift to the School by Usha and Rao Varanasi.

Finally, I am pleased to announce that Tim Essington, associate director of SAFS from 2012 to 2019, and previous director of the Quantitative Ecology and Resource Management (QERM) Program has agreed to be the next director of SAFS. Tim's leadership in SAFS and the College of the Environment, his outstanding contributions to teaching and research, and his commitment to sustainable use of marine ecosystems means that the School will be in good hands for the next five years. Welcome Tim.

André Punt, *Director*

Consider a Gift

Inspire new ideas

Support the School and the UW with a gift in your will.

giving.uw.edu/planned-giving

For questions, please contact:
Office of Planned Giving
206-685-1001
giftinfo@uw.edu

Where Fish and Math Converge

The Varanasi Quantitative Undergraduate Summer Internship Program has been connecting UW math students with fisheries science since 2012. Endowed by Usha and S. Rao Varanasi, this unique internship is funded jointly by the UW Department of Mathematics, SAFS, and NOAA's Northwest Fisheries Science Center (NWFSC). The internship provides math undergraduate majors with real-world experiences—working on west coast fisheries projects under the mentorship of scientists at the NWFSC. We talked with Usha and Rao and some recent interns about the internship and its impact.

Usha recalls that while she was director of the NWFSC, she identified how the agency's work would benefit from collaborating with UW undergraduates majoring in math: NWFSC could be infused with new ideas and methods and, at the same time, these students would be exposed to real-world challenges in areas that rely on complex mathematical models.

"Math and statistics students are usually unaware of the importance of quantitative analysis in fisheries science," said SAFS Director André Punt. "The Varanasi interns use methods, such as machine learning, which are not part of traditional fisheries programs, to address real-world problems. The work they can do during a summer internship may directly impact fisheries management in the US and around the world."

Usha adds that she believes that young math students need to become more informed citizens in regard to natural resources and management when they are exploring what career options are available to them.

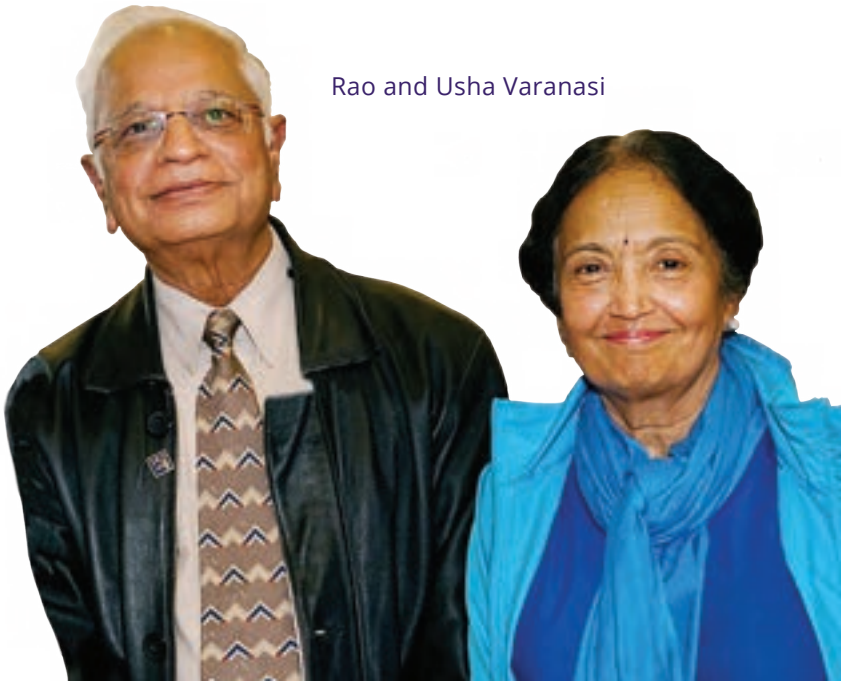
For the program to be successful, it became clear that incoming students need to work on important, relevant projects. To that end, each year NWFSC scientist mentors develop and propose research questions as part of the application process. Interested students are encouraged to tackle issues ranging from how noise pollution impacts protected species to the use of algorithms to study dynamic ocean physical processes. The program also offers a unique opportunity for the NWFSC mid-level scientists to step into a managerial role.

To date, 20 summer interns have worked with the NWFSC. Their projects have resulted in at least two peer-reviewed publications, two developed apps, one technical memorandum, and one chapter of an Integrated Ecosystem Assessment, with more products and publications still in process and review.

Zhe Han, a 2019 recipient, revealed that the Varanasi Scholarship was her first internship experience and that she was particularly impressed by the elegant statistical models using otoliths to predict fish growth. During her internship, she developed a real-world application that helps with the assessment and management of data-limited fisheries using her programming, math, and statistics knowledge.

"I felt quite proud for being able to build a tool using a programming language I hadn't used before, and it has certainly built my confidence for a career in software development," Zhe said. "This experience has also motivated me to learn more about modeling with data using more complex models, and I'm currently pursuing a master's degree on the AI (artificial intelligence) track."

Lukas Naehrig, a 2021 recipient, shared that he was surprised by how useful statistical simulations were in understanding fish behavior. "Even though some fish phenomena can be modeled with a simple mathematical equation, the simulations can be quite complex, revealing some fascinating facts about our data that can drive research progress immensely," he said.



Rao and Usha Varanasi

Photo: UW Photography

Photo: Courtesy of Zhe Han

Recipients like Zhe Han spend their summer working on a research project that integrates mathematics with the science that informs fishery managers

For his project, Lukas evaluated the mark recapture methodology used to estimate the number of sockeye salmon entering a creek on the Olympic Peninsula. Along with his NWFSC mentor, he developed a simulation model and tested different estimators with different assumptions for the biological and sampling processes.

Lukas credits the experience for increasing his understanding of how scientists and researchers work with real data, and he also recognizes how valuable it was to learn from and work with professionals.

At the end of the internships, students and mentors meet with André Punt; Owen Hamel, NWFSC coordinator of the internship program (and SAFS affiliate professor); and Usha and Rao Varanasi to discuss their experiences and accomplishments and to provide suggestions for improvement.

"The internship is a confluence of really dedicated, smart people like André, Owen, the mentors at the NWFSC, and the absolutely wonderful students," added Usha. ■

Awards & Honors

STUDENTS

(Degree track and faculty advisers in parentheses)

Hannah Bassett (PhD, Hilborn) netted the best student paper award at the MARE Center for Maritime Research conference for her paper, "A comparative study of small-scale fishery supply chains' vulnerability and resilience to COVID-19."

Rachel Fricke (PhD, Olden) obtained the College of the Environment Integral Environmental Big Data Research Fund Award for her project,"Emerging technologies to assess human benefits from and risks to water resources."

Maria Kuruvilla (PhD QERM, Berdahl) received a Wild Fish For All Scholarship from the Native Fish Society.

Natalie Mastick (PhD, Wood) gave the best student oral presentation at the Pacific Fisheries Technologists 72nd Annual Conference for her paper, "Detecting change in anisakids using archival canned salmon."

Anne Polyakov (PhD QERM, Berdahl) received a Hall Conservation Genetics Research Fund for her project, "Characterizing genetically distinct ectomycorrhizal fungal communities adapted to a natural nitrogen gradient along salmon streams." She also received a Stuntz Mycology Grant from the Stuntz Foundation and the Forest Fungal Ecology Research Award from the Mycological Society of America.

Souta (Bill) Saechao (undergraduate) was awarded a Clarence H. Campbell Endowed Lauren Donaldson Scholarship from the College of the Environment.

Anna Simeon (PhD, Hauser) obtained a research grant from the Save Our Seas Foundation.

FACULTY AND STAFF

Tim Essington was elected as a Fellow of the American Fisheries Society.

Jason Toft helped organize the 2021 Nearshore Restoration Summit, which won the Washington Department of Fisheries and Wildlife's Steve Phelps Leadership in Science Award. This award recognizes the challenge of science communication and the value of a robust dialogue to achieve conservation outcomes. Jason's lab was also selected as a 2021 UW Lab Safety Innovator.

Chelsea Wood won a NSF CAREER Award (see page 7 for further details). ■

Investing in the Future:
Introducing Underrepresented Transfer Students to the Marine Geosciences

The number of jobs that require Geoscience training continues to grow, but the number of students pursuing this training is declining. It was this concerning trend that prompted SAFS Professor and Marine Biology Director Kerry Naish, along with her colleagues, José Guzmán (SAFS), Mikelle Nuwer and LuAnne Thompson (both Oceanography), and Jane Dolliver (College of the Environment), to apply for National Science Foundation funding to develop the recruitment and bridge program, GEODUC (Marine Geoscience Education, Oceanographic Discovery, Undergraduate Collaboration).

The percentage of underrepresented minorities working in STEM occupations lags that of trends in the whole population, an issue even more evident within the Geosciences. Paradoxically, underrepresented minority communities are those most likely to experience environmental challenges—the same problems and issues Geoscience can address.

"Students enrolled in community colleges often represent more diverse populations and socioeconomic backgrounds than students at four-year institutions," said Kerry, GEODUC's lead PI. "By targeting these students of high potential, we are looking to broaden the perspectives of our marine science programs here at the UW."

The aim of the program is to make more community college students aware of the full breadth of the UW College of the Environment's Geoscience majors and programs, which include Marine Biology, Aquatic and Fishery Sciences, Oceanography, and the Friday Harbor Laboratories campus on San Juan Island. By incorporating local issues important to students and introducing them to the methodologies used by researchers to tackle these issues, the program aims to increase recruitment into the UW's marine programs. Students will be able to see firsthand how science can directly affect the wellbeing and livelihoods of their communities, while also advancing their own education and career opportunities.

"Students will be given the tools needed to work on and understand topics such as ocean acidification and shellfish farming in the Pacific Northwest," said Co-PI José Guzmán. "For example, we can show students the data that charts the declines around shellfish harvesting, followed by ways in which they could explore possible solutions."

Photo: Dan DiNicola

Flyer for the GEODUC Scholars Initiative

The 2022 inaugural cohort of at least nine students will participate in a summer bridge program conducted aboard the R/V *Rachel Carson* and at Friday Harbor Labs.

The PIs write, "If we are successful in the design, development, and delivery of a place-based, issue-based immersive summer bridge program linking lived experience to Marine Geoscience as a focal point of learning and problem-solving, then we will have also been successful at widening the academic and career choices of our participants."

Mikelle Nuwer and LuAnne Thompson from the School of Oceanography serve as GEODUC's other Co-PIs. To learn more about GEODUC visit: environment.uw.edu/students/future-undergrads/prepare/marine-geoduc. ■

Time-Traveling Parasites: Chelsea Wood Wins NSF CAREER Award

SAFS Associate Professor Chelsea Wood is the recipient of a 2022 CAREER Award from the National Science Foundation (NSF). This prestigious award will support Chelsea's novel research on the historical ecology of parasitism and will allow her to create an active-learning, open-access version of her undergraduate parasite ecology course.

Global environmental change is thought to increase the transmission of parasites that cause infections; however, there are vanishingly few historical data that track rates of wildlife disease over time. Without a long-term dataset, it is challenging to determine if the burden of infection observed today is "normal."

Chelsea has put together a powerful experimental design using fish collections to look at the parasite burden before and after a change in the environment. The award will also provide support for her to re-design the Parasite Ecology course (FISH 406), infusing active-learning principles and implementing a course-based undergraduate research experience.

Chelsea is making sure that all the products of her CAREER award are publicly accessible. "Our data will be posted to public repositories, the re-designed course will be fully downloadable for other institutions to use, and our elementary learning module will be an open educational resource."

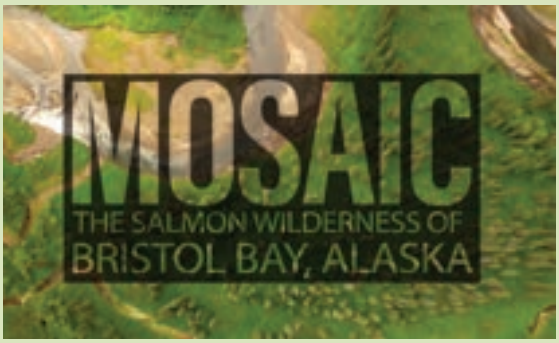
"It's about time for us to understand whether parasites are increasing or declining through time, and beyond time, for parasitism to be part of biology education," Chelsea emphasized. ■

Chelsea Wood (right) showing students a nematode-infected eelpout

Photo: Dan DiNicola

Documenting the Salmon Wilderness of Bristol Bay

Jason Ching, Daniel Schindler, and Chris Boatright from the Alaska Salmon Program (ASP) released a short film on the salmon habitats of southwest Alaska. Filmed over the course of the summer and fall of 2021, "Mosaic: The Salmon Wilderness of Bristol Bay, Alaska" showcases the region's pristine streams, rivers, lakes, and wetlands and how they sustain the vast sockeye salmon runs. Watch the film on Vimeo at vimeo.com/637271167.



"I was excited to work on this video because Bristol Bay and environmental communication through camera work have become a central part of my life. I have worked as a researcher for ASP and as a photographer in the area for over a decade. As I've learned more about Bristol Bay, like how its freshwater habitats function to maintain colossal sockeye salmon runs, I've enjoyed the challenge of sharing and communicating what I've learned—primarily through photos and videos.

I hope that people watching it gain an understanding of how the intact salmon habitats of Bristol Bay work and a general appreciation for one of the few pristine and healthy ecosystems that we have left in the world. Because I enjoy sharing the beauty, as well as the science, research, and understanding of our natural environments through visual media, working on this film has been an incredible opportunity for me."

Jason Ching

SAFS Returns to Campus

The SAFS community shares thoughts on what it's like to be back on campus after nearly 18 months of mostly remote instruction and administration.

> ***"Teaching in person definitely reignited my passion for education. It was incredibly refreshing to see how excited and engaged the students were for our in-person labs. I think these students are now, more than ever, incredibly grateful for the unique opportunities that in-person education brings."***
>
> Anita Wray, *Teaching Assistant and MS student*

> ***"My favorite aspect of remote learning that has stuck is online office hours. I feel like it increases the accessibility of professors and TAs and makes it easier to ask questions outside of class."***
>
> Courtney Carpenter
> *SAFS undergraduate major*

Graduate student retreat, February 2022, at Friday Harbor Labs

Photos, clockwise from top right: Dan DiNicola, Rachel Fricke, Lindsay Alma, Dan DiNicola, Dan DiNicola

“While it’s always preferable to meet in-person, I do appreciate the new flexibility to meet remotely when needed—it creates opportunities and is helpful in meeting students where they are (literally, in this case).”

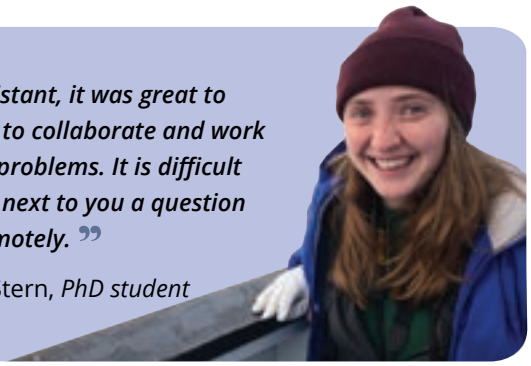
Sam Scherer, *Assistant Director of Student Services*

“We discovered a genetic marker that can distinguish Pacific cod populations from the eastern and the western Gulf of Alaska. In a recent in-person lab, students were able to identify the population of origin of cod in a blind test using a lateral flow cell similar to the one used in COVID antigen tests. Most students obtained the correct answer within a single lab!”

Lorenz Hauser, *Professor*

“As a teaching assistant, it was great to see students able to collaborate and work together to solve problems. It is difficult to ask the person next to you a question while learning remotely.”

Jenny Stern, *PhD student*



“I missed the small, easy conversations that happen naturally between colleagues in the hallway or the kitchen, etc. Now that we’re back in the office, it has been really nice to be able to stop briefly in someone’s doorway to say hello and check how their day is going.”

Amy Fox, *SAFS Human Resources Manager*

“Since students have returned to campus, SeaDawgs has been hosting monthly meetings to update them on relevant research or volunteer opportunities and events. At our events, we try to foster community and friendship through interactive activities such as trivia games or craft nights.”

Corinne Klohmann, *MS student*

UW SEADAWGS

Photos, clockwise from top right: Aina Hori, Courtesy of Jenny Stern, SAFS, Dan DiNicola, Mark Stone, Courtesy of Sam Scherer

IN MEMORIAM

Lynwood Stephen Smith

November 15, 1928–July 30, 2021

Thank you to the Smith family and the many students, colleagues, and friends for their contributions to this memoriam.

On July 30, 2021, Lynwood Smith, SAFS professor emeritus, passed away at the age of 92.

Lynwood was born in Snohomish, Washington. He obtained his undergraduate degree and PhD from the University of Washington. Before joining the School of Fisheries in 1965, Lynwood taught zoology at Chehalis High School, Bremerton Community College, and the University of Victoria, Canada. Lynwood joined the UW faculty as an associate professor and was promoted to full professor in 1976. He retired from the University of Washington in 1993.

During his time at the School of Fisheries, and as member of the Fisheries Research Institute (FRI), Lynwood's research focused on real-world issues and opportunities. His publications included contributions to fish physiology and the effects of environmental stress on fish. He also documented gas-bubble disease in migrating salmon on the Columbia River around the tailraces of the major dams with Tim Newcomb (PhD, 1978), one of his students. This work led to the deployment of "flip lips" in the tailrace, which project water along the surface of the river, thereby reducing gas supersaturation that causes gas-bubble disease. Lynwood also conducted research on salmon smoltification; work with Tom Flagg (MS, 1981) demonstrated the reduction in swimming ability of juvenile salmon during smoltification.

Later in his career, Lynwood helped to set up a "Center of Excellence" in Valparaiso, Chile, funded by the Rockefeller Foundation, and then led the same kind of program for USAID in Ambon, Indonesia.

Lynwood published six books: "Common Seashore Life of Northern California & the Pacific Northwest" (1962), "Introductory Anatomy and Biology of Selected Fish and Shellfish" (1973), "A Practical Guide to the Anatomy and Physiology of Pacific Salmon" (1975 with Gordon Bell), "Living Shores of the Pacific Northwest" (1976 with Bernard Nist), "Introduction to Fish Physiology" (1982), and "Environmental Stress and Fish Diseases" (1999 with Gary Wedemeyer and Frey Meyers).

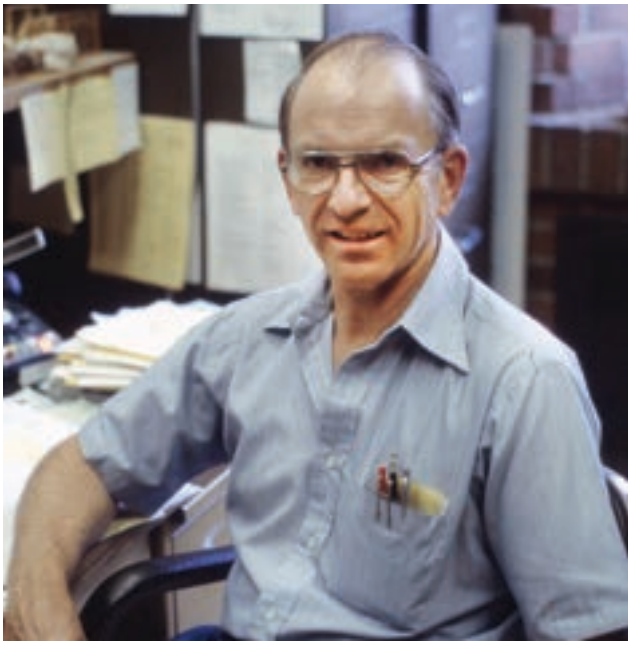


Photo: Paul Smith

Lynwood in his office in the former Fisheries Building

Tom Flagg noted, "When I took Lynwood's Fish Anatomy class in the early 1970s, I was introduced to the informative lab book he had authored that detailed organ anatomy, nerve, and circulatory systems. I used the book when I subsequently served as his teaching assistant, and a now very dog-eared copy still sits on my bookshelf."

Lynwood's students emphasized how he developed new hands-on tools for working with live fish and carefully documented each tool, from surgical procedures to exposure chambers to biochemical and physiological stress response measures.

Lynwood's work on the swimming physiology of adult salmon took place on the 100 x 35 ft floating laboratory R/V *Kumtucks* ("to know or to understand"

in Chinook), which he was instrumental in getting built and running. Alan Mearns (PhD 1971) said that Lynwood's idea for the *Kumtuks* was simple: "take the lab to the fish." (To learn more about the R/V *Kumtucks*, read Alan's centennial story at *fish.uw.edu/2019/04/centennial-story-91-alan-j-mearns-phd-1971*.)

Alan recalled, "Lynwood was a perfect professor for me at the time of my doctoral studies. He was a very thoughtful, quiet, respected person, who cared for his students. He was chief of the '*Kumtuks* team,' having designed, then overseen, construction of the UW's floating laboratory, involving graduate students in every aspect of vessel and laboratory maintenance and field work. He collaborated with other staff and faculty, basically showing his students how to appreciate diversity, connecting us with other FRI projects and the larger world of prominent fish physiologists. He taught us medical and surgical procedures that he adapted for working with live fish, yet he also gave us independence to work out our own approaches to solving scientific challenges." Alan also noted, "I learned much more than science from Lynwood—lessons that carried me through the rest of my career: think big, design your own approach to problems, challenge conventional wisdom, make lasting friends...and summarize what you learn in a simple graphic."

Rick Cardwell (PhD 1973) recalls, "I felt Lynwood distinguished himself for his character and as an educator, not for the rough-and-tumble life of getting grants and publishing."

Gary Sakagawa (PhD 1972) remembers Lynwood as a gracious person who provided him time for an experiment on his barge, which was anchored one summer in Neah Bay. Gary's time on the barge was a great experience because all Lynwood's graduate students were there. They lived on the barge and had time to exchange information on each other's experiments and thoughts about fishery issues.

Photo: David Greenfield

Lynwood providing guidance to a student during a research project

Following his retirement, Lynwood continued to build small boats, do woodwork, create Bonsai trees and make music.

Lynwood is survived by his wife Betty; their three children, Becky, Peggy, and Paul; four grandchildren; and one great granddaughter. ■

> ***"I learned much more than science from Lynwood—lessons that carried me though the rest of my career."***
>
> Alan Mearns (PhD 1971)

Lynwood with Indonesian students and professors during his time in Ambon

Photo: Paul Smith

André Punt Passing the Director's Torch

After a decade of serving as director of SAFS, André Punt is stepping down to focus on his teaching and research. Over the past ten years, he has navigated the School through challenging times, such as the ongoing pandemic, as well as historic highs, like the centennial celebration in 2019. Please join us in thanking André for going above and beyond as SAFS director.

"André brought a wide range of skills to his role as director of SAFS. He prided himself on data-driven decisions in scholarship as well as departmental management, and he could be depended upon to keep the dean's office on our toes in providing timely and accurate reports to chairs and directors. Underlying his drive to quantify is a deep commitment to doing the right thing. Beyond data, he is known for his warmth, humor, and abiding concern for the wellbeing of students, staff, and faculty. He cares deeply about the future of fisheries as well as the future of all those people who depend on the sustainability of the resource. He has left a fine legacy as director that will serve SAFS for years to come."

Lisa Graumlich
former Dean, College of the Environment

"André stepped into the director's chair at a rough time for the School. The University was still reeling from the great recession, and the School's budget situation was perilous. He stepped in and did what few could pull off: dig *deep* into the minutiae of the School's finances, track every penny spent on every budget, ultimately putting the School on solid footing for the future. At the same time, André approached the position as a partnership: a partnership between him and his staff, between him and the faculty, and between him and the students. He always put the School's needs first and created a new model for transparency in decision making in the School."

Tim Essington, *Professor*

"As we approach the final season with André Punt as director of SAFS, I think it is important to recognize and appreciate what he has done for the School. It would be an understatement to say that the past several years have offered up some challenges. André has served a central role in the success of our School, championing its members and leading the way for continued success going forward. I do not think even André could have ever predicted the dynamic role the director has had to serve these past few years, yet he has shown up every day to do what was necessary for the rest of the community to teach, learn, and grow. It has been a pleasure working with him, and I thank him for serving as director for the last 10 years."

Steven Roberts, *Associate Professor*

Photos: Courtesy of André Punt

André in his office

Photos: SAFS Archives

André at SAFS Centennial dinner in 2019

Degrees Awarded AUTUMN 2020–SUMMER 2021

In June 2021, we celebrated our second online SAFS graduation ceremony. To our collective delight, it went off without a hitch—thanks in no small part to the efforts of Samantha Scherer, Amy Fox, and Dan DiNicola. Visit the 2021 SAFS graduation page at *fish.uw.edu/news-events/ spring-graduation* to view the graduation ceremony and to learn more about our graduates.

Our student research encompasses numerous and diverse disciplines, including biology, ecology, fisheries management, disease, genetics, physiology, and statistics—as well as interdisciplinary subjects—in pursuit of improving our understanding of the interactions among humans, our environment, and the resources upon which we rely.

BS Degrees

Alison Brown
Ruth Drinkwater
Hannah Kieler
Po-Ou Kouch
Parker Lehman
Janelle Li
Josef Mayor ∞
Jonathan Schroeder
Zachary Thomas °

∞ magna cum laude
° cum laude

MS Degrees (advising professors in parentheses)

Kerry Accola (Horne) Diel habitat use by juvenile Pacific salmon along an urban shoreline

Molly Jackson (Hauser) Reproductive biology of farmed purple-hinged rock scallop (*Crassadoma gigantea)*

Michaela Lowe (Schindler) Analyzing the chemical tracers in fin rays: a non-lethal approach to infer the migratory patterns of bull trout

Kristin McQuaw (Hilborn) Rebuilding mixed stock fisheries: lessons from the U.S. West Coast

Madison Shipley (Punt) Reproductive buffers on exploitation in male-only fisheries: Tanner crab (*Chionoecetes bairdi*) management strategy evaluation case study

Stephanie Thurner (Branch) Key factors that exacerbate declines in exploited multispecies systems

PhD Degrees (advising professors in parentheses)

Lucas Defilippo (Schindler) Salmonid life histories and fisheries management

Natalie Lowell (Hauser) A genetic risk assessment of native shellfish aquaculture

Sean Rohan (Essington) Effects of variation in the visual environment on the feeding and catchability of Alaska fishes

Laura Spencer (Roberts) Physiological response of shellfish native to the North American Pacific Coast to ocean acidification and warming

John Trochta (Branch) Modeling population collapse and recovery in herring

Yaamini Venkatarama (Roberts) Ocean acidification influences on physiology and epigenetics in the Pacific oyster **(***Crassostrea gigas***)**

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SEAS (Students Explore Aquatic Sciences) is excited to host the annual SAFS Open House as an in-person event on Saturday, May 21, after two years of holding it online. Booths from lab groups at SAFS, nonprofits in Seattle, and UW's Underwater Remotely Operated Vehicles team will offer interactive lessons that relate to aquatic sciences.

Aquatic & Fishery Sciences News provides information on SAFS teaching, research, and service.

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