

GENERATIONS

Department of Fisheries, Wildlife, and Conservation Sciences

WINTER 2021
ISSUE 3



Generations is a biannual newsletter designed to connect the past, present, and future generations of our program while celebrating our accomplishments and our impact in fisheries, wildlife, and conservation sciences.



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Message from the Department Head

Dear FWCS family,

I hope you are having a wonderful Winter, as Zoe and I did with this visit to Mary's Peak! I also hope that you and your family are staying safe and sane. It has been quite the whirlwind dealing with COVID-19, and all the things that go with it. Our faculty, students, and staff have been so terrific, helping each other and assisting with many things to keep the department running, even when dealing with school closures, vaccine delays, and high COVID-19 case loads in our communities. We've had several outstanding publications these past few months in spite of the impacts of the pandemic on our research, and a record number of donations to assist our students. Thank you, one and all!

We lost two greats in the fall - Howard Horton and Jim Hall. These two professors meant so much to our department over the decades, and will be deeply missed. After a very busy and often turbulent year as Faculty Senate President, I am looking forward to reconnecting with everyone. My priority will be a strategic plan for the department, and I look forward to getting input from all of you! Now, as we look forward to Spring, we're excited to bring you a bit of news from the department in this copy of Generations. We're postponing our reunion yet again - too much uncertainty - but will be in touch about a spring virtual seminar series to showcase the amazing work of our faculty and students. Stay tuned!

All my best,

Selina



Thank you, donors!

Your generous contributions to our department make so much possible.

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Susan '78 & Stephen Klarquist '79
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Robert L. Kuhn '70
Judith L. '90 & Hiram W. Li
Karen K. & Daniel Liebert
Ronald L. Lindland '67
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Katherine West Myers '80 & John A. Myers
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Elizabeth H. & Robert J. Schuster
James R. Sedell
Dr. Hari S. & Dr. Renuka R. Sethi
Sandra L. Shelin '80
Thomas M. Sheridan '18
Ms. Gay Simpson
Linda V. & Courtland L. Smith
Marilyn J. Smith
Kim B. Snider '71
Southern Oregon Fly Fishers
Stacia A. Sower '78
Brian C. Spence '95
Joy A. Tamayose '07 & Bram H. Denhaan
Patricia Tester '76 & Phillip Golden
Doug Thompson '79
Kathleen Novak Thompson '76 & Bruce C. Thompson '76
Vivian Shriver Thompson '29
Jon M. Thorsby
Timothy L. Joyce Trust
Charlotte Marie Vickers '85 & Daniel W. Vickers
Betty L. Vincent
Frederic Vincent, Jr. '60
Denise Saunders & David W. Wagman '04
Clare E. Reimers '78 & W. Waldo Wakefield '84
Charles E. Warren '49
Richard Werner
Sally A. & Carl M. Yanagawa '66
Choo-Guan Yeoh

2021 Scholarship Recipients

UNDERGRADUATE

Lindsay Ball Fisheries and Wildlife Scholarship

Travis Shippentower-Sproed
Shelby Wells

Carl and Lenora Bond Scholarship

Marie Heuberger
Maizy Kesterson

Mike and Kay Brown Scholarship

Jasen White

Izma Bailey Conser Scholarship

Stephanie Ashley
Kathryne Herold-Daniels
Leigh Johnson-Schaefer
Michael Nelson
Ryan Stevenson

Davis Fisheries & Wildlife Scholarship

Theresa Bellak
Abbie Elrod
Kyle Evans
Emily Fish
Jesse Rodriguez

Roland E. Dimick Memorial Scholarship

Mayah Baker
Jack Hobe

Fritzell Diversity Scholarship

Briana Agenbroad
Alexandria Love

Jim and Bonnie Hall Fisheries and Wildlife Diversity Scholarship

Debora Garcia-Ovejero
Vanessa Ramirez

Howard Horton Fisheries Management Scholarship

Briana Agenbroad
Sarah Wright

Lee Wallace Kuhn Memorial Scholarship

Tadonisha Campos-Mejia

Bob and Phyllis Mace Watchable Wildlife Scholarship

Kailee Arndt
Erin Heaberlin

Mentors Scholarship

Catie Boucher
Caleb Centanni
Irie Cheng

William B. and Jean Morse Scholarship

Claire Clarke
Lee Lynn Thompson

Multnomah Anglers and Hunters Memorial Scholarships

(Milt Guymon, Bill Schenck, Chan Schaffer, Bernie Tanory)

Gabriel Askew
Hunter Grove
Marie Heuberger
Maizy Kesterson

Oregon Coalition for Educating Anglers Scholarship

Jasen White

Tamal Reece Memorial Scholarship

Megan Murray

Rogue Flyfishers Club

Gabriel Askew
Elena Eberhardt

Santiam Fish and Game Association Scholarship

Maya Stock

Phillip W. Schneider Scholarship

Shelby Wells

Southern Oregon Flyfishers Club Scholarship

Abigail Lundin

Vivian Schriver Thompson Scholarship

Gisell Anderson
Elena Gavrilov

William Q. Wick Memorial Scholarship

Hunter Grove



GRADUATE

M. A. Ali Graduate Chair Award in Fisheries Biology
Claire Rosemond

Robert Anthony Graduate Scholarship in Population Ecology
Ellen Dymit

Neil Armantrout Graduate Fellowship
Hannah Barrett

David J. Ashkenas Memorial Fellowship
Charlotte Eriksson

Briggs Scholarship in Biogeography
Lisa Hildebrand

H. Richard Carlson Scholarship
Mee-ya Monneedy

Coombs-Simpson Memorial Scholarship
Eric Wade

Stan Gregory Stream Team Scholarship
Juan Olivos

Hugo Krueger Graduate Research Award in Fish Physiology
Claire Rosemond

David & Georgia Leupold Marshall Wildlife Graduate Scholarship
Cara Appel
Kimberly Haab
Bryn Webber

Munson Wildlife Graduate Scholarship
Ryan Baumbusch

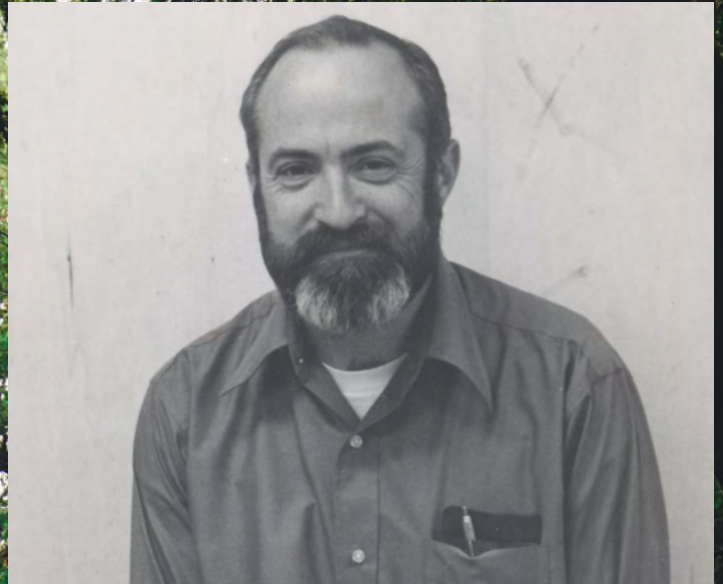
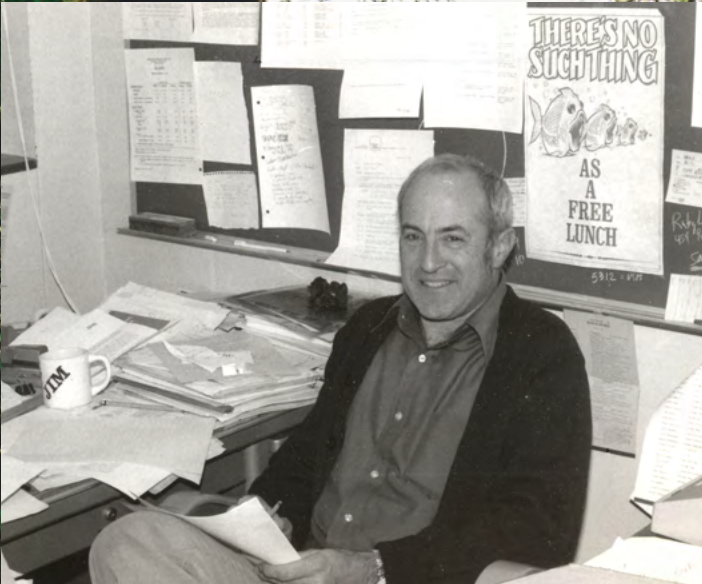
James Sedell Graduate Scholarship
Cailin Mackenzie

Thomas G. Scott Achievement Award
Ph.D. Dawn Barlow, Marie Tosa
M.S. Isabel Justiano, Geoffrey Walker

Charlie Taylor Fishin' Friends Scholarship
Hannah Barrett

Charles E. Warren Award
Eric Wade





IN MEMORIAM

We remember two invaluable members of our community with these tributes from students, colleagues, and friends.



Remembering Jim Hall

A tribute by colleagues, students, and friends.

Dr. Jim Hall passed in Seattle on Thursday morning, October 14, 2021 with his daughters, Carolyn and Kate by his side. He was 88. Jim attended UC Berkeley as a Starker Leopold Wildlife Conservation major, where he met his future wife, Bonnie, in an aquatic entomology class. After serving in the Navy, Jim completed his M.S. and Ph.D. at the University of Michigan, studying the ecology of the chestnut lamprey in the Manistee River.

Jim joined our faculty at Oregon State University in 1963 and retired in 1992. Jim was the first Head Advisor in the Department of Fisheries and Wildlife, which now has one of the largest advising programs on campus. He taught classes in Fisheries Biology and Population Dynamics, started the graduate Stream Ecology class, and mentored more than 30 graduate students. He co-founded the Stream Team research group, one of the early interdisciplinary research programs at Oregon State University.

From 1963-1973, Jim Hall was the Director of the Alsea Watershed Study, the first long-term interdisciplinary study of the effects of forest practices on salmon populations that laid the foundations for the Oregon Forest Practices Act in 1972. Jim led the aquatic program of the Coniferous Forest Biome of the International Biological Program from 1964-1974, which evolved into the aquatic component of the H.J. Andrews Long-Term Ecological Research Program. Jim Hall received the Award of Excellence by the Western Division of the American Fisheries Society and was elected a Fellow of the American Fisheries Society the first year the award was created.

Jim Hall taught Fisheries Biology for 30 years. In the 1960s, he compiled data on fish communities from ODFW and required students to develop management plans based on technical analysis of the data. He invited ODFW biologists to attend the students' presentations and provide real-world input. His early innovative approach can still be traced to our current curricula in group problem solving and internships. Jim also was the first instructor in the Department's graduate course in Stream Ecology.

The Stream Team seminar series that Jim helped develop 49 years ago still brings students, faculty, local scientists, and the public together to explore new research and issues in aquatic ecology. Jim created the Jim and Bonnie Hall Diversity Scholarship Endowment to support efforts to diversify the field of fisheries and wildlife and support all students in the department. Jim received the national Award of Excellence in Fisheries Education by the American Fisheries Society.

In his role as Head Advisor Jim worked closely with Lenora Bond, another legendary advisor in the department. Together, Jim and Lenora created an advising system where every undergraduate student was assigned to a faculty advisor for the duration of their education at OSU, which is still the framework of our advising program. The College of Agricultural Sciences awarded Jim the Earl Price Award for Excellence in Student Advising and the Dar Reese Award for Excellence in Advising.

Jim served as a great role model of a scientist to his students and colleagues, as he was highly professional, thoughtful, principled, hardworking, and dependable. Jim was insightful, measured in his speech and a demanding editor. Taking a course from Jim Hall or interacting with him in meetings was a formative experience that shaped the lives of many aspiring young scientists.

All of Jim's friends, colleagues, and students can share tributes to Jim on his memorial website:

mykeeper.com/profile/JamesHall/

**Jim & Bonnie Hall Fisheries & Wildlife
Diversity Scholarship**

beav.es/wmn

The Howard Horton I Knew

A tribute by Dan Edge

I first met Howard Horton when I interviewed for my position as Extension Wildlife Specialist in May of 1989. Howard was the search committee chair; he and Jeannine picked me up at PDX and drove me to Newport for the first part of my interview. From the start I was struck by his graciousness, warm demeanor, sly humor, and natural history knowledge—a font of information interspersed with jokes and funny stories. Howard retired a few months after I started my job and I was exposed to my first and perhaps the best Fisheries and Wildlife Department retirement roast. We laughed for at least two hours! In many ways, Howard was the heart and soul of the department. And, if even part of the stories were true, the man did some crazy s___!

Howard continued to be a presence in the department until shortly before his death. He always came to the department's social functions and loved sharing stories with students and faculty. If it was a pot-luck affair, Howard always brought one of his beautiful smoked coho. He wrote a wonderful history of the department for the 75th anniversary reunion.

Howard was the original Energizer Bunny—the man could not sit still. He was always active, professionally and personally, especially if it was an outdoors activity. I think he was always looking for a new challenge—what other seventy-year-old would buy a tuna fishing vessel and fish for two or three years off the coast of Chile?

Howard was a consummate fisheries professional who left an enduring impact on hundreds of students and the resources he cared so deeply about. He taught numerous classes in the department,

mentored dozens of graduate students, and authored or co-authored over 75 peer-reviewed publications, Extension bulletins, and technical reports. Howard thought big and was a leader in many ways. He served as Assistant Director of the Agricultural Experiment Station, Extension Program Leader for Oregon Sea Grant, and was the first President of ORAFS. He was the PI and Director for two multi-million-dollar annual grants in the 70s and 80s—the first Pacific Fisheries Observer Program and the International Fisheries Program, which was the precursor of the Aquaculture CRSP Program.

Although his career was remarkable, his influence on the state and region became even more pronounced in his retirement. From the late 80s until about 2016, Howard served as Court Technical Advisor for the U.S. District courts of Washington and Oregon, where he advised several judges on most of the major court cases affecting fisheries and water management in the Columbia Basin including US v Oregon and the biological opinions regarding the management of the Columbia River hydropower system. I used to joke with Howard that he wasn't much of a professor, but ended up controlling the flow of water in the Columbia River!

In 2007, one of Howard's graduate students established the Howard Horton Fisheries Management Scholarship in the department through which Howard will continue to make an impact on our students. I hope you will join me in making a gift to this scholarship in Howard's memory. Thank you, Howard for everything! You will always be in my thoughts.

Howard Horton Scholarship: beav.es/w5F

From the Archives



Robert W. Henderson Photographic Slides (P 098 - SG 1), Oregon State University Special Collections and Archives Research Center, Corvallis, Oregon.





Amanda Gladics (right), a fisheries specialist with Oregon Sea Grant and the Oregon State University Extension Service, talks with shrimper David Vandecoever on the dock in Warrenton. (photo by Lynn Ketchum)

What's in a Name?

In the last issue of *Generations*, you read about the history of our departmental name as background and context around our recent departmental name change. Some might still be wondering "how does that translate to differences in how the department conducts research and trains students?" As most working professionals know, on the ground action is usually more about managing people than about managing habitats or species population size. Towards that end, understanding human motivations and developing tools to help reach decisions in the face of data uncertainty and different human values is increasingly important to conservation. Research and student training in these areas comprises some of what fits under the new element of our departmental name "conservation sciences".

Recognition of the importance of human dimensions in fish and wildlife conservation is manifesting itself in several ways in the department. First, we hired **Dr. Kelly Biedenweg**, an outstanding social scientist faculty member whose research focuses on understanding the factors that influence natural resource decision making among individuals and agencies, as well as the impacts of environmental health on human wellbeing, and the newly hired fourth member of the U.S.G.S. Coop Unit, Dr. Meagan Jones (who will start next month and who you will meet in future issues of *Generations*), is also a social scientist focusing on communication

and conflict resolution. Both positions complement the expertise around decision making of USGS Coop Unit Leader **Dr. Jim Peterson**. Trained as a fisheries biologist, Jim recognized the need for better decision making that resulted in him becoming a nationally recognized expert in Structured Decision Making. Second, we've created a new required course in communications for undergraduates and added a graduate-level course titled the Psychology of Environmental Decisions to go along with our long existing undergraduate courses titled Human Dimensions of Wildlife, and Multicultural Perspectives in Natural Resources. Third, Extension faculty in the recently created position titled Professor of Practice continue to expressly work at the interface of communities, industry, and conservation to seek solutions to complex problems, and **Amanda Gladics** is a key piece of that puzzle.

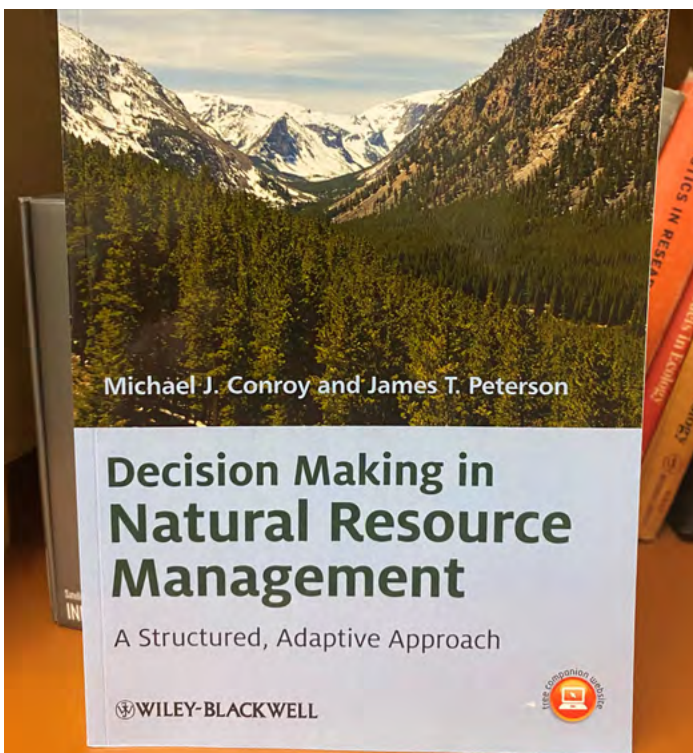
These examples are not exhaustive of how research, teaching and outreach are evolving in the department to be more inclusive of ideas, people, contributions to science, and solutions to real-world problems that fit under the framework of conservation science, but are impactful examples of how our academic, research, and outreach is changing to meet the increasingly complex problems of helping wild animals and natural habitats coexist with our growing human population.



The Psychology of Environmental Decisions and Human Wellness

Dr. Kelly Biedenweg is an Associate Professor of human dimensions in the department. She works with state and federal agencies to conduct social research, translate the implications of social scientific knowledge to environmental policy, and advise on the integration of social science in planning and integrated science. One long-term project has been with the Puget Sound Partnership, a Washington State agency, where she led the effort to develop environmental human wellbeing indicators and still leads the data collection for those indicators on

a biennial basis. The human wellbeing indicators have been formally adopted into state policy. They are used to identify recovery strategies of the regional Action Agenda, and data from them are used in the integrated recovery monitoring process. More recently, Dr. Biedenweg and a team of social scientists worked over 18 months with staff from the Sacramento-San Joaquin Delta to identify strategies for integrating social science for improved ecosystem recovery. Dr. Biedenweg is an elected member of the Puget Sound Partnership Science Panel and an Associate Editor for the Human Dimensions of Wildlife journal. Her students have studied a variety of topics within the conservation social sciences, including Dr. Brittany King's dissertation on the experiences of underrepresented minorities in fisheries and marine sciences; Dr. Eric Wade's dissertation on decision-making in small scale fisheries; Dr. Whitney Fleming's dissertation on the relationships between perceptions of environmental governance and environmental health; Jackie Delie's M.S. thesis on black bear tolerance in Oregon; Kerrick Robison's M.S. thesis on salmon habitat restoration preferences and sense of place within the Quinault Indian Nation; and Hailey Kehoe-Thommen's honors thesis and continued work on emotional analyses of public responses to fisheries and orca conservation.



Improving Transparency and Inclusivity in Conservation Decision-making

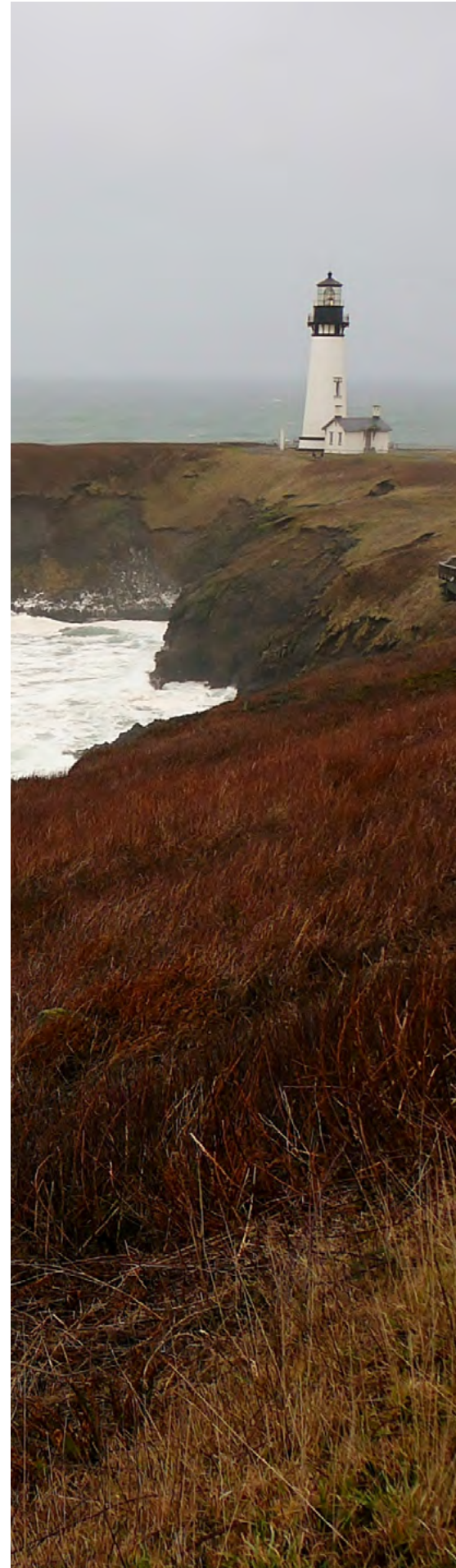
Most natural resource conservation problems are complex, and decision makers and stakeholders often disagree on the best decision. The process by which decision makers traditionally arrive at decisions also tends to be difficult to explain, which often results in conflicts. **Jim Peterson** has been at the forefront of developing and implementing structured decision making (SDM), an inclusive and transparent process to address contentious natural resource problems. He has coauthored a book and has developed two graduate-level courses on SDM principles and practices. Jim has also led several research efforts using SDM to assist managers address diverse conservation problems ranging from conservation of a rare desert-dwelling minnow to managing boat traffic and shoreline access at Glacier Bay National Park. An example of his work on anadromous fish restoration in the Central Valley, CA can be found at the project website: beav.es/Uvy

Working with Resource Agencies and Commercial Fisheries

Amanda Gladics is a community-based Assistant Professor of Practice with Oregon Sea Grant in our department and OSU Extension Service in Clatsop County. As a professor of practice, the community is her classroom and she can be found teaching about local seafood and commercial fisheries, working to advance safety at sea for commercial seafood harvesters, facilitating collaborative working groups and conducting original research to reduce conflicts between fisheries and whales and seabirds, and finding innovative ways to share knowledge using both experiential and new media approaches. Partnerships, collaboration, and responsiveness are key elements to nearly every project Ms. Gladics works on.

One example of this is in her work to convene and co-facilitate a collaborative working group to address the potential risk of whale entanglement in Dungeness crab fishing gear, the Oregon Whale Entanglement Working Group. Starting in 2014, reports of whale entanglement in fishing gear in West Coast waters dramatically increased, to the concern of fisheries managers and conservation organizations alike. By 2016, some members of the Oregon Dungeness crab fleet began to express concerns that the issue might threaten

the industry (\$60.6 million ex-vessel value in 2020–2021) and, therefore, coastal economies. In response, she sought funding, convened, and co-facilitated a collaborative working group comprised of key stakeholders to advance short- and long-term solutions to reduce Oregon's whale entanglement risk. Gladics led the group, which gathered information from relevant technical experts, developed a voluntary Best Practices Directive, conducted fleet outreach to avoid endangering whales, disseminated information on how to report entanglements, developed state-level management recommendations, and catalyzed action on this issue by Oregon and Washington fisheries managers. In 2019, ODFW announced a range of policy proposals to reduce the risk of whale entanglement and developed a comprehensive conservation plan to ensure regulatory certainty for the fleet. In both cases, the management approaches were explicitly drawn from ideas the OWE Working Group developed. The OWE Working Group continues to advise the agency on how to ensure long-term health of whale populations and a thriving fishery, and continues to support an inclusive and transparent policy-making process.



Nuestra Casa/Our Home

Five FWCS scientists are showing young latino children the importance of their role in the future of wildlife and conservation.



“Nuestra Casa / Our Home” is a bilingual (English and Spanish) children’s book for elementary students, made by students and faculty in the Department of Fisheries, Wildlife, and Conservation Sciences. Written by Christopher Cousins (PhD Student), Dr. Tiffany Garcia (Professor), Isabel Justiniano (Masters student), and Jessica Li (Undergraduate student) and illustrated by Jordan Eaton (Recent Graduate) the book helps to address the need for early STEM education to Spanish-speaking communities in the Pacific Northwest.

The book tells the story of Ale and Emilio, two young children who just moved and struggle with belonging. Visiting a pond in a nearby natural area, they meet two amphibian narrators: Sally, a larval long-toed salamander and Tito, a chorus frog tadpole. The amphibians tell the children about the challenges they’ve faced due to pollution, and the children

resolve to help. As a park ranger helps them clean the pond, she tells them about the role that amphibians play in the ecosystem. The story ends with the children finding a sense of belonging, as the title phrase “Nuestra Casa” is used by both the children and amphibian narrators to show that both wildlife and people call the same place home.

“Nuestra Casa” aims to represent Latinos in the outdoors as both enjoyers of nature and professionals. The book aims to emphasize belonging on two levels: community, and ecological. “Nuestra Casa” shows the children developing a sense of belonging as the story progresses, feeling at home in their community and their local ecosystem. The authors hope that this will help instill a sense of stewardship of nature from an early age. At the end of the story, the book provides basic information about native amphibians to help young readers, with the goals of providing basic



"Me convertí en ecologista mucho antes de haber escuchado la palabra."

"I became an ecologist long before I had even heard the word."

- Chico Mendes

information on native amphibians and stimulating future interest. The book ends with a highlight of Dr. Jenny Urbina, a Latina scientist who received her doctoral degree from OSU, as a means of showing professional representation by Latinos in STEM fields like wildlife conservation.

As the authors work to finalize a formal publishing agreement that finds a permanent home for the book, they’ve begun sharing the book with local organizations and schools. They’ve presented the book as part of William L. Finley National Wildlife Refuge’s Winter Wildlife Field Days and have delivered a small number of the books to schools with large Spanish speaking student populations. Their hope is that the book serves to bring families together and that family members different proficiencies in English and Spanish can read the book together and generate curiosity and excitement for the environment.

The Oregon 2020 Birds Project

Written by Dr. W. Douglas Robinson, Mace Professor of Watchable Wildlife. Read about a decade of work made possible by the Bob and Phyllis Mace Professorship



A decade ago, with support from a gift from Bob and Phyllis Mace, I launched the Oregon 2020 Birds project. Their endowed professorship was the greatest gift of my career. It allowed me to do work that was creative, aligned with my own unique skills and interests, achieved the land-grant mission of connecting with Oregonians and supporting needs of our state, and to do work that is difficult to support with traditional resources. The funds supported exploration of our state to survey birds and train the public to value their observations of watchable wildlife. More than 1100 birders contributed data to our project via the eBird database. Two PhD students and more than 2 dozen undergraduate students were also heavily involved in the work (Figure 1).

Inspiration for the project came from scientists like Joseph Grinnell, an ornithologist in California whose surveys of birds in the early 1900s are now being repeated



Figure 1. Highlights of accomplishments so far from the Mace Professorship (illustration by Tara Kate Designs).

so we can learn how birds have responded to a century of change. As humans, we tend to worry about change and its potential negative consequences, even when we lack data. As field biologists, we worry about our favorite organisms and how they will handle climate

and other forms of change. The best way to understand how birds or any other organisms respond to change is to watch them over long periods of time. Even better, try mapping and counting them in a way that anyone can repeat decades or centuries from now.

From 2011-2021, we counted birds across Oregon using precisely repeatable methods. Future scientists can return to our exactly geo-referenced sites, use the same counting methods to repeat our work, and subsequently measure exactly how bird distributions and numbers change through time. Link those data with climate information and habitat data from the “eye in the sky” (remote sensing data from satellites) and our future Oregonians will be able to discover explanations for changes they see in the bird data. What greater gift could we offer our future citizens and scientists than a high-quality data set they could exactly repeat? If only Lewis and Clark had been able to leave us a similar legacy!

To accomplish our goals, we sampled our very large state as efficiently as we could (Figure 2). We randomly chose a one-square mile section from each of Oregon’s nearly 3000 townships in the

Public Land Survey System. Then, three people (myself and two PhD students) counted birds at four to twelve sites in each of those sections, which resulted in surveys being conducted at nearly 11,000 locations using professional-style surveys.

To those count data we added data from birders across Oregon, taking advantage of a readily accessible online platform that allows recreational birders to contribute data useful to scientific inquiry, eBird. We provided training and recruited people by conducting many workshops (in person and online), giving talks to nearly every Audubon Society and bird club across Oregon, and holding “county blitzes” where we worked alongside birders for long spring and summer weekends.

We enjoyed the camaraderie of many highly skilled and passionate birders during the blitzes. The blitzes explored poorly surveyed

counties and were filled with plenty of bird counting but also fun evenings of socializing, planning the next day’s adventures, and connecting with like-minded enthusiasts.

It has taken a multidisciplinary team involving skilled bird people, geographers, and computer scientists to design a survey that controls for bias, produce distribution maps, and estimate species population size. To that end, I have been extremely fortunate and grateful to have Drs. Rebecca Hutchinson and Weng-Keen Wong in the School of Electrical Engineering and Computer Science at OSU as collaborators. To take our work even further and connect the eBird data with our data, we are collaborating with some of the best minds in the world to solve the challenge of connecting different sorts of bird survey data.

Besides maps of species distributions and estimates of population size, we can connect

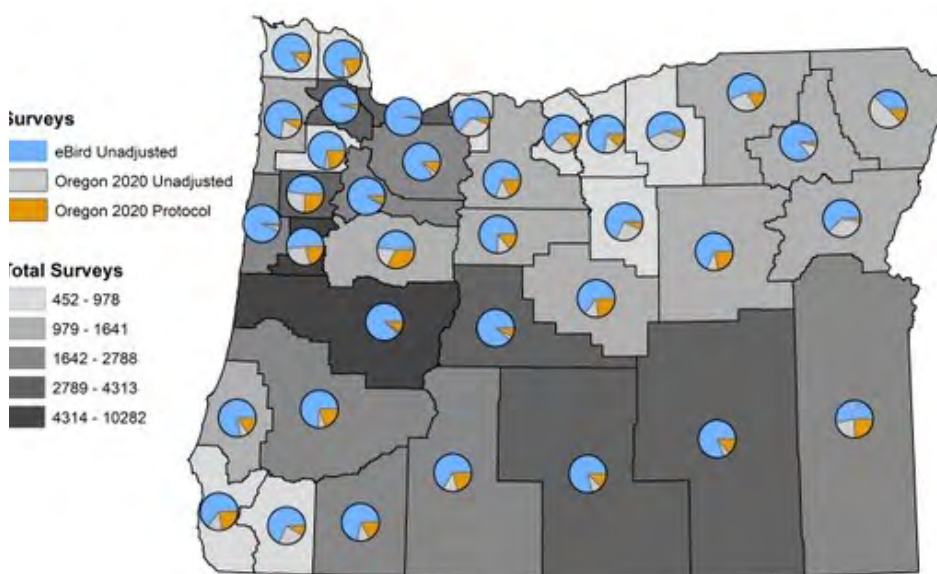


Figure 2. Oregon’s counties and the amount of data contributed to the Oregon 2020 Birds project. As the number of checklists contributed in each county increases, the shade of gray gets darker. The pie charts report proportions of counts in three categories: Orange indicates counts using our Oregon 2020 professional-style counts; Blue is the fraction of counts contributed to eBird by birders that met our criteria for inclusion—these counts are called unadjusted because all birds are counted without collection of any additional information (like we collect in our professional-style counts) needed to adjust for detectability issues; Gray is the proportion of counts done by our Oregon 2020 crew that followed the same method birders use when contributing data to eBird. A large and important fraction of data were contributed by birders.

our data with land ownership maps to calculate the fraction of each species' population residing on State, Federal and private lands, thereby helping agencies prioritize their management efforts for the species they host the most and develop public-private partnerships that are efficient. Additionally, using our data in combination with information on historical habitat coverage in the state, we can estimate what the population sizes of species were before the recent widespread changes in habitats.

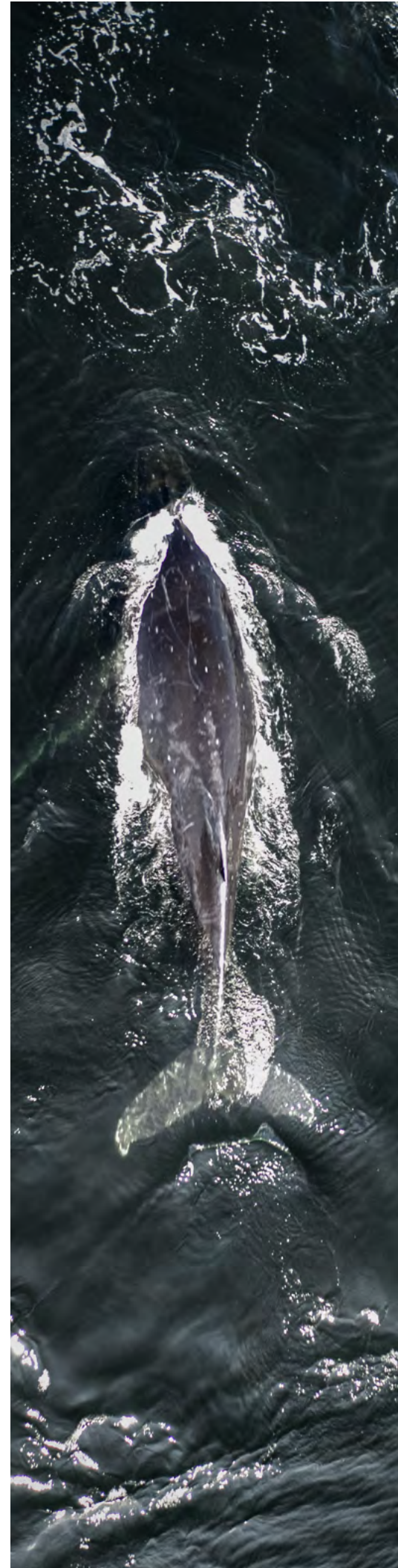
What's next? Covid delayed implementation of sampling birds for genetic material we will use to create another baseline of information about our birds, so we will complete that work over the next few years. We will also be assembling our bird survey work into more scientific publications and a coffee-table-style book with photos, art, and maps to share our

most important discoveries about Oregon's birds with the public.

Without the support of Bob and Phyllis Mace, none of this work would have been possible. It is the generosity of donors like the Maces that allow faculty to pursue work meaningful to Oregon and beyond that might not typically be supported by traditional funding sources. It was extremely gratifying when, over dinner at the end of a long weekend of surveying birds, a community member who had participated in our surveys and had also worked professionally alongside Bob Mace told me: "Bob would have loved this project. This is exactly what he had in mind when he created Watchable Wildlife." I hope whoever repeats our surveys decades or centuries from now will continue to thank the Maces for their remarkable kindness.



Baker County Birding Blitz for Oregon 2020





VIEW Fellow Samantha Muñoz sets a camera trap at HJ Andrews Experimental Forest, as part of a study with Dr. Ivan Arismendi's lab on wildlife use of log jams. Read more about VIEW on page 22.

2021 Registry of Distinguished Graduates Inductees

We are pleased to announce that the following three professionals have been added to our Department's Registry of Distinguished Graduates. With this year's inductees, there are 105 names on our list. The text that accompanied their nomination is below. Maybe you know of someone deserving recognition? If so, please email us at fw.alumni@oregonstate.edu with your recommendations. You can find our list of Distinguished Graduates at fwcs.oregonstate.edu/fisheries-and-wildlife/alumni-and-news



Alec Maule, Ph.D.

Alec Maule spent most of his career working for the U.S Biological Survey in the Ecosystems Mission Area. Alec worked his way up the administrative ranks to the top of what would still be considered a scientist at the U.S.G.S.' Columbia River Research Laboratory, Cooke, Washington. His position was as a four-factor scientist, meaning that high scientific productivity was expected. In addition, he became the leader and supervisor of several research programs at the lab that each consisted of several different projects. At times he was responsible for what I am sure must have been 50 or more researchers. He achieved his scientific renown admirably, producing information critical to management of Columbia River salmonids as well as other species and other systems. Much of Alec's research has been directed at providing information needed for decisions relative to ensuring fish health and well-being. Much of this work was in the area of developmental biology. He collaborated

widely and internationally; he and Scandinavian scientists even coauthored successful research proposals and conducted the research both here and abroad. Alec is a big thinker; his findings and his conclusions therefrom have shifted scientific paradigms. An example of Alec's research excellence is that at one of his discipline's international symposia one of the most senior members of our field and a member of the National Academy of Sciences in his closing remarks of the symposium singled out Alec's contribution as being the greatest new contribution. Even though Alec was a federal employee, he was essentially on soft money for the entire time. This meant that he had to secure funding for his personal salary as well as for the staff he supervised and the associated research expenses. The fact that he was able to do this uninterrupted for so many years attests to the high regard numerous funding agencies have for his work. Another significant attribute is that Alex very much care for the people he supervises. For example, he has provided funding for junior staff members go back to graduate school for advanced degrees; I know of at least five instances, and there are likely more. Alec has remained active scientifically following his retirement to help with decisions relative to Columbia system fish and wildlife resources. One major effort in this regard is his membership on the Independent Scientific Advisory Board and Independent Scientific Review Panel of the Northwest Power Planning Council, serving as Chair of both groups.



Christian Torgersen, Ph.D.

Christian Torgersen is a research scientist with the US Geological Survey, Forest and Rangeland Ecosystem Science Center in Seattle Washington. Christian is recognized around the world as one of the leaders in bringing landscape ecology to rivers, or “riverscapes.” Since his PhD at Oregon State University, Christian has led the field in this area of study. He even has a statistical tool, the “Torgegram” as a namesake bestowed upon him by other admiring scientists. His work is focused on the Pacific Northwest and for many years he has led the study of the largest dam removals in human history

on the Elwha River in Olympic National Park. His work has also attracted collaborations across the United States as well as internationally, and in 2014 delivered the Annual HBN Hynes Lecture to the Canadian Rivers Institute -an honor that has been bestowed on only a handful of aquatic ecologists around the world. He co-led a national study of dam removal. In his current capacity Christian also takes the time to volunteer, mentoring numerous graduate students, teach courses, and provide other volunteered services to the University of Washington, where he holds a faculty affiliation.



Becky Flitcroft, Ph.D.

Becky Flitcroft is a research scientist with the U.S. Forest Service Pacific Northwest Research Station in Corvallis Oregon. Becky’s research has ranged widely from fisheries biology to geomorphology, hydrology, and human dimensions of river restoration and ecology in the region and beyond. She has published numerous articles on these topics in peer reviewed journals and reports for over 20 years. In keeping with her record of publications, Becky’s reputation as a leading scientist in her field is well established and she is increasingly sought after by science colleagues and managers alike for her expertise. She has gone outside of the normal range

of duties for her research position in volunteering to teach courses and mentor students at all levels at Oregon State University. Becky is very active in the American Fisheries Society (AFS) and recently served as the Oregon Chapter president. These are only a few examples of Becky’s remarkable accomplishments, and there is no question that her work has contributed to better resource management, recruitment of new young scientists into the profession, advancing the mission of professional societies such as AFS, and more generally contributing to the well-being of society as embodied by the values we all attach to healthy rivers, fish, and freshwaters in general.

Vanguarding an Inclusive Ecological Workforce (VIEW) Fellowship

The Vanguarding an Inclusive Ecological Workforce (VIEW) Fellowship, created and hosted by the Department of Fisheries, Wildlife, and Conservation Sciences (FWCS), is a summer research experience program that supports the professional development of future ecologists from communities that have historically been excluded or are currently underrepresented in our field.

The goal of the VIEW Fellowship is to increase participants' access to graduate school by helping them attain technical skills and by developing a network of professionals who can serve as a mentor and reference as they move into their careers. Fellows will gain marketable experience in collaboration and research, build relationships with their cohort, grow their professional network, and learn more about our field of fisheries, wildlife, and conservation.

The VIEW Fellowship was born out of an understanding that the fields of conservation and ecology have a history of exclusion of people from non-dominant groups, resulting in a present-day workforce that is often not as diverse as the general population, nor of the communities we serve. Also, we recognize that the fish, wildlife, and conservation fields are relatively small and are built on relationships, and thus finding your first job can often depend on “who-you-know.” This hiring style can perpetuate existing patterns and make it tough for people to get their foot in the door, either because they are new to the discipline, or because they are from communities that have lacked the professional social capital to access skill-building opportunities and thus been effectively barred or dissuaded from pursuing graduate education. The VIEW Fellowship aims to disrupt this cycle.

fwcs.oregonstate.edu/VIEW





VIEW Fellow Jose Robles ends a long field day at HJ Andrews Experimental Forest.



OUR SPRING REUNION IS ON HOLD

We have made the tough call to cancel the reunion event set for the weekend of May 20-22, 2022.

There are still opportunities to engage with us, virtually and in smaller groups!

- » Attend Research Advances in Fisheries, Wildlife, and Ecology Symposium (RAFWE), a student led event to highlight research, extension, and outreach happening within FWCS.
fwcs.oregonstate.edu/RAFWE
- » Sign up for our mailing list for research highlights, outreach events, defense seminars, and all things fisheries, wildlife, and conservation sciences.
Email fw.alumni@oregonstate.edu to be added.

What kinds of events would you like to participate in? We want your feedback as we think about future gatherings and events.

Please fill out our Qualtrics form: beav.es/wh5

Calling All Artists

We are holding a design contest for an updated emblem to represent FWCS.

This contest is open to all, so please stay tuned for more information

fwcs.oregonstate.edu/fwcs/design-contest

FWCS by the Numbers

1179 Students Currently Enrolled

- » 714 Undergrad
- » 102 M.S./Ph.D.
- » 44 Professional Science Masters
- » 319 Grad Certificates

174 Students Graduated This Year

- » 75 Undergrad Degrees
- » 41 Graduate Degrees
- » 100 Grad Certificates

\$118,900 Awarded Scholarships

You can read more about our offered scholarships and see all our past recipients on our website beav.es/Zma

Ways to Contribute

- » Make a donation beav.es/Zma
- » Get involved with student organizations and clubs
- » Volunteer to give a seminar or host a workshop
- » Email fw.alumni@oregonstate.edu to learn more

Fisheries, Wildlife, and Conservation Sciences
104 Nash Hall
Oregon State University
Corvallis, OR 97331



Oregon State University
College of Agricultural
Sciences