DEPARTMENT OF FISHERIES AND WILDLIFE

NEWS & VIEWS

SUMMER 2017



Selina Heppell, Department Head, and Haruo Uchiyama, master wild bird carver, at RAFWE 2017

A MESSAGE FROM THE DEPARTMENT HEAD

It has been a great year for Fisheries and Wildlife, full of student activities, faculty achievements, and self-reflection in our 10-year program review. Putting together the data for that review was a mammoth undertaking, with credit largely going to our outstanding Program Assistant, Leighann Auer. External reviewers from fish and wildlife departments and agencies toured our facilities, met with faculty and students, and provided recommendations that will enhance our programs in the future. I am happy to say that we received excellent reviews, with accolades to our online programs, faculty productivity, collegial atmosphere, and our outstanding internship program. Many thanks to all who participated, and to all of you who have made Fisheries and Wildlife the amazing program that it is today!

We graduated 122 Bachelors of Science, 22 Masters of Science, 10 PhD degrees, and 18 Graduate Certificates (8 Fish and 10 Wildlife) in 2016-17 from both our Ecampus and Corvallis campus students – fantastic! Our online programs continue to grow, expanding our network of students, alumni and professionals. We said a fond goodbye to Carl Schreck, Rebecca Goggans and Rob Chitwood – these three have given so much of their time and energy to the Department over the years, and we wish them the very best in their retirement. We welcomed new faculty and staff and kept our community traditions strong with social events. Our friends and alumni donated over \$130,150, enabling our incredible scholarship program (see pages 10-11) and support for student clubs and events. I am so proud to be at the head of this amazing department of spectacular people!

SELINA HEPPELL | selina.heppell@oregonstate.edu

Selina gets a pie in the face as her reward for raising the most donation money for the annual OSU Food Drive this past spring.

We raised \$1,837.00 in donations and 7,459lbs of food!



FROM THE EDITOR

It has been an interesting summer right here in river city. We were to be invaded by millions of tourists to see the Solar Eclipse.

The event was as magnificent as advertised. Vineyard Mountain slopes to the east of us. Most of our neighborhood enabled wonderful views from our yards. Spontaneously, when the Solar Eclipse was attained, a cheer erupted simultaneously from the residents of Vineyard Mountain, as though a cheerleader was leading us.

The only wildlife reaction that was unusual was a brush rabbit that sprinted from one den to the next 10-12 times when the eclipse was nearly over and bright sunlight resumed.

This year was a year of change. New faculty, new ideas, and the retirement of several faculty members. Many faculty were recognized for their recent contributions, a few distinguished scientists were praised for lifetime achievements by their societies, and others completed their lifespans.

We have a number of letters from alumni. It's interesting to see how their careers are progressing. They're a reflection of our program and we encourage them to stay in touch with us. We can still provide guidance—they will always be "our students." At the same time, they can give us ideas about what different agencies expect as skill sets from new hires.

This issue answers why beetles in the bathtub are important and what is the Stumptown Scud.

HIRAM LI, EDITOR



Carl Schreck and Rob Chitwood at their retirement party in July. Fun was had by all!

THE LEGACY OF CARL SHCRECK, ROB CHITWOOD, AND THE OSU FISH HOLDING FACILITIES

This summer, Carl Schreck and Rob Chitwood celebrated their retirement. They are responsible for the OSU Fish Holding Facilities out at Smith Farm east of the OSU golf course and just west of ODFW's Research Facilities. Carl met Rob when Rob was with the ORAQUA facilities at Springfield. Carl was developing a program to examine how stress physiology affected hatchery fishes. This expanded to hatchery fishes being transported in barges, negotiating fish ladders, and research on the effects of stressed hatchery fishes communicating diseases to wild fish. Carl also developed a fish genetics component to his research to better understand subspecific differences among populations and subpopulations of "wild salmonids". He developed the concept of physiological performance capacities and coupled this with genetic identification to rank different stocks in terms of hardiness, and behavior. It is reasonable to say that Carl is a world leader

 bringing scholars from Asia, Iceland and Europe to spend a sabbatical with him. Rob was amazing as a hatchery manager. Joseph Feldhaus, one of my students was interested in how to quantify the effect of different levels of heat shock protein on rainbow trout and steelhead in warm streams of the John Day River. Rob said that Joseph should set up an experiment so that fish raised at different temperatures would be at the same size at the end of the experiment. He would then measure the amount of food (calories) consumed by fishes at different temperatures. This may sound easy but was not. Unless, like Rob, you understood when to shift the implementation ration of food on different days. Totally amazing! Joseph published his research in Environmental Biology of Fishes and cited often.

David Noakes will be the new head of the Smith Farm facilities. He will be looking for the next Rob Chitwood to run the program. This will complement the research that David is conducting at the Oregon Hatchery Research Center located in Alsea, OR.



in Fisheries and Wildlife

150 Species for Oregon State University's 150th Anniversary

We have compiled a website showcasing of 150 species that our department has helped sustain or protect through research done by our students and faculty. We're still adding the details for each species (150 is a LOT). We'll make the announcement when the site is ready to launch – follow us on social media to stay in the know!

<u>Facebook.com/osufw</u> <u>Instagram.com/osufw</u> <u>Twitter: @osu_fw</u>

STUDENT STORIES

Check out our new webpage in which we highlight blogs from students studying abroad alongside highlight stories of our Ecampus students.

<u>fw.oregonstate.edu/department-</u> fisheries-and-wildlife/student-stories

STUMPTOWN SCUD



What is a Stumptown Scud? I knew that Stumptown was a brand of Coffee made in Portland, but I

never realized that Portland was known as Stumptown because it logged most of its timber, leaving the city surrounded by, yep-you-got-it, stumps. Bill Gerth discovered the scud, which is endemic only to the Portland area. This scud is an important part of food web providing ecological services to streams in the Portland area. It cleans the substrate and food for fishes. The use of environmental DNA is used to track the trophic network and the biomasses of the scud in streams. For more, check out the article (see below).

<u>www.oregonzoo.org/news/2017/04/</u> <u>scientists-scour-portland-stumptown-scud</u>

BEETLES IN THE BATHTUB?

Stygoporus oregonensis is a blind diving beetle that cannot swim, does not fly because of tiny wings and is a predator. Its discovery goes back to the early 1980's. It appears to be a denizen of deep acquifers. Richard Van Driesche who has worked for Bill Gerth and Judy Li's invertebrate lab is our department's link to the research. Dr. David Maddison in the Department of Integrative Biology is the leader of this research.

zookeys.pensoft.net/article/9866/

RAFWE RECAP 2017

The 2017 Research Advances in Fisheries, Wildlife, and Ecology

(RAFWE) symposium was held Friday April 14th, 2017 at the LaSells Stewart Center at Oregon State University. Over 155 people attended RAFWE throughout the day (with even more during the keynote), encompassing 15 different departments from OSU, many federal agencies, four institutions outside of OSU, and many people from the community. We are very excited that such a diverse group of people attended the symposium.

The keynote was given by Drs. Peter and Rosemary Grant, titled "In Search of the Causes of Evolution." Their talk filled up the entire auditorium (200 seats) with many people standing as well, and an over flow room was created where the talk was streamed. The Grant's said they had a stimulating and enjoyable visit and loved interacting with many different people.



Donations for items for the silent auction, a raffle, and live auction were provided by local businesses and individuals. Which raised over \$3000 for the Fisheries and Wildlife Graduate Student Association. All

proceeds go toward supporting future RAFWE symposiums and professional development events.

RAFWE could not be possible without the support of our sponsors, local businesses, and those individuals who donated items! Thank you!

HAPPY RETIREMENT TO REBECCA GOGGANS!



Rebecca Goggans began her academic career in Fisheries and Wildlife in 1998 as the department's first Internship Coordinator. Her previous experience as Leader of the Wildlife Diversity Program for ODFW for 12 years gave her the perfect background for this new position. Rebecca was a true genius at helping students acquire work experience and develop career skills. Her numerous contacts while working at ODFW was a gold mine for connecting students to potential employers. Rebecca also served as the Faculty Advisor for our Fisheries and Wildlife Club. In just two years, from 1999 to 2001, club membership increased from approximately 20 students to over 70. With Rebecca's guidance, these students gained relevant experience, professional development, and networking skills interacting with natural resource professionals.

Over the 20 years of her service, our department has been through many changes. Another title Rebecca acquired here was Program Coordinator for our distance education degree. She was instrumental in the success of our online BS degree which we began offering in 2009. As coordinator and advisor for all of our online students, it soon became clear she would need help, as the program was extremely successful and grew quickly. Since 2009, we have filled seven new advising, staff, and faculty positions and currently have over 600 students earning their degree online.

Rebecca leaves a legacy, not just for all that she has accomplished here, but for the countless success stories that students have shared about how she helped them find their dream careers. We miss her dearly and can only hope to continue offering the excellence that she fostered and inspired.

Graduation BBQ 2017













Fish & Wildlife in the News

Featured stories of students and faculty

NATURE TIME IMPROVES YOUR WELL-BEING, SAYS OSU STUDY

Assistant Professor, Kelly Biedenweg's research reveals that outdoor activities can bring about a sense of well-being that markedly improves life. Her research was published in The Journal of Environmental Psychology and was picked-up by Oregon Public Broadcasting (on their website):

<u>www.opb.org/news/article/nature-time-improve-well-being-oregon-state-study</u>

MOST BLUE WHALES ARE 'RIGHT-HANDED'

Cetacean expert Ari Friedlaender of the Marine Mammal Institute, Oregon State University and UC Santa Cruz led the study. It was published November 20, 2017 in the peer-reviewed journal Current Biology.

<u>earthsky.org/earth/blue-whales-right-handed-lateralization-bias</u>

MARINE MAMMALS OUTDUELING FISHERMAN FOR SALMON, AND IT'S A PROBLEM FOR ORCAS...

According to a new study by Brandon Chasco, lead author of the study and one of our PhD students,

marine mammals, such as orcas, sea lions and harbor seals, up and down the West Coast may now be eating more Chinook salmon than those being caught by commercial and recreational fisheries combined.

<u>fw.oregonstate.edu/article/marine-mammals-outdueling-fisherman-salmon-and-its-problem-orcas</u>

CATCH HER DRIFT?

Between 2012 and 2017, scientists documented nearly 300 species of marine animals arriving alive in North America and Hawaii on hundreds of vessels, buoys, crates and many other objects released into the ocean by the Japanese earthquake and tsunami. In a recent article in the journal Science, [Dr. Jessica] Miller and her co-authors suggested that expanded coastal urbanization and storm activity, which may be enhanced due to climate change, could lead to a dramatic increase in the role of marine debris as a vector for invasive species.

<u>www.oregoncoasttoday.com/article/20171120/</u> ARTICLE/171129985

Photo by Andrew Olson - Sage-grouse field work





Photo by Jonny Armstrong

FISHERMEN, RESEARCHERS TRY TO OUTSMART BAIT-ROBBING SEABIRDS TO SAVE THEM

When commercial fishermen spool out long lines in pursuit of sablefish— better known to consumers as black cod—seabirds looking for an easy meal dive to steal the bait off the series of hooks. Some unlucky birds get hooked and drown as the line sinks to the deep. And when the drowned bird is an endangered species such as the short-tailed albatross, it triggers scrutiny. "Just one was all it took. Yeah, just one," said Amanda Gladics, a coastal fisheries specialist with Oregon Sea Grant. "Because they are endangered there is a lot of scrutiny on every single time any of those albatrosses are caught in a fishery."

<u>kuow.org/post/fishermen-researchers-try-outsmart-bait-robbing-seabirds-save-them</u>

RESEARCHERS SCOUT DILLINGHAM AREA FOR ALEUTIAN TERN NESTING SITES

Also on the ground with Nesvacil is assistant professor with Oregon State University Don Lyons. He has been studying terns for about 20 years. Lyons estimates that the Aleutian tern count in Alaska is down about 90 percent from the 1970s and 1980s. If it is true that terns are declining, a number of factors could be contributing. Lyons says that because the bird count is down across the state the cause is likely to be widespread, not localized.

<u>kdlg.org/post/researchers-scout-dillingham-area-aleutian-tern-nesting-sites#stream/0</u>

FEWER FOXES COULD MEAN AN UPTICK IN LYME

"This is the first paper to empirically show that predators are good for your health with respect to tick-borne pathogens," Dr. Taal Levi, an ecologist at Oregon State University, told The Times. "We've had the theory but this kind of field work is really hard and takes years."

<u>www.treehugger.com/animals/fewer-foxes-could-meanuptick-lyme-disease.html</u>

GRIZZLY BEARS GO VEGETARIAN DUE TO CLIMATE CHANGE, CHOOSING BERRIES OVER SALMON

Grizzly bears have stopped eating salmon in favour of elderberries after being forced to make a choice due to climate change. Warming temperatures meant that the berries are ripening earlier than usual, at exactly the same time as the freshwater streams on Alaska's Kodiak Island are overflowing with sockeye salmon... "What you have is a scrambling of the schedule," said William Deacy, a biologist at Oregon State University that studied the phenomenon.

<u>www.telegraph.co.uk/news/2017/08/25/grizzly-bears-go-vegetarian-due-climate-change-choosing-berries</u>



IN MEMORIAM



James (Jim) Lawrence Fessler Nov. 18, 1936 — July 13, 2017

Jim attended Oregon State University and earned a BS in Wildlife Management, 1962 and a MS in Fisheries and Statistics (date unknown). He began a career with ODFW shortly after October 1962. Working in the research division

on steelhead in the Deschutes River. Then he moved to management, serving first as Assistant Supervisor of the NW region in Corvallis. He then spent his final seven years as Regional Supervisor of the SW region in Roseburg, retiring in 1992.



Charles "Chuck" Edward Trainer June 25, 1931 — July 21, 2017

In 1966 Chuck was given the opportunity to complete his Master's Degree in Fisheries & Wildlife Management and engage his talents as a new research wildlife biologist. The sagebrush country of Burns and Hines in southeast Oregon brought forth a new phase of projects from

the ODFW, investigating mule deer and antelope mortality on the Steens Mountain using radio telemetry. He would occasionally bring home injured fawns to care for in the family basement in Hines before releasing them to safety. The sunset years of his career led him to Adair Village near Corvallis to help establish a new Wildlife Investigations Laboratory in 1984. He retired from ODFW in 1993 with a ceremony paying honor to his 32 years of service.

Robert T. 'Bob' Gunsolus July 31, 1923 - July 21, 2017

In 1942, Bob joined the Navy Air Corps and served during WWII as a fighter pilot. After the war, Bob attended OSC and graduated with a BS in Fish and Wildlife Management in 1950. Following a year of graduate work in fisheries, he accepted a position as a fishery biologist with the Oregon Fish Commission. He worked with anadromous fish for the next 33 years with the OFC/ODFW and PFMC mostly involved with research, fish passage, and harvest management.



SCHOLARSHIP RECIPIENTS 2017-18

UNDERGRADUATE SCHOLARSHIPS

Trenton Gianella – Lindsay Ball Fisheries and Wildlife Scholarship

Gabriel Sandoval – Carl and Lenora Bond Scholarship

Gabriel Sandoval - Mike and Kay Brown Scholarship. Awarded jointly between FW and College of Forestry

Natali Moor - Izma Bailey Conser Scholarship

Heather Fisher – Davis Fisheries & Wildlife Scholarship

Olyvia Childress, & Jessica Dally - Roland E. Dimick Memorial Scholarship

Azita Roshani, Jesse Laney, Justin Hansen, Charlotte Levy, & Sarah Riutzel – Fritzell Diversity Scholarship

Ameyalli Manon-Ferguson – Jim and Bonnie Hall Fisheries and Wildlife Diversity Scholarship

Cristopher Derrickson, Benjamin Couchman, & Benjamin Nicholas – Howard Horton Fisheries Management Scholarship

Amy Hilger – Lee Wallace Kuhn Memorial Scholarship

Samantha Hooper, Morgan Olson - Bob and Phyllis Mace Watchable Wildlife Scholarship

Zachary Pinard, Rachel Lertora, & Andrea Fuchs - Mentors Scholarship

Morgan Dally, & Josiah Poole – William B. and Jean Morse Scholarship

Jordan Rodriguez - Bill Schaffer Memorial Scholarship, awarded by the Multnomah Anglers and Hunters Club

Christopher Derrickson - Chan Schenck Conservation Scholarship, awarded by the Multnomah Anglers and Hunters Club

Trenton Gianella – Milt Guymon Memorial Scholarship,

awarded by the Multnomah Anglers and Hunters Club

Teresa Nicholson - Larry Cassidy Memorial Scholarship, awarded by the Multnomah Anglers and Hunters Club

Benjamin Nicholas - Davenport Scholarship, awarded by the Multnomah Anglers and Hunters Club

Jessica Beatty – Tamal Reece Memorial Scholarship

Tyler G. Johnson & Rachel Lertora - Rogue Flyfishers Club

Christopher Derrickson & Tyler G. Johnson - Southern Oregon Flyfishers Club Scholarship

Brianna Ford – Phillip W. Schneider Scholarship

Melissa Gwinn & Christopher Cousins - Vivian Schriver Thompson Scholarship

Marisa Monroe - William Q. Wick Memorial Scholarship

UNDERGRADUATE INTERNSHIP AWARDS

Jordan Levi – Gerald L. Fisher Internship in Aquaculture and Hatchery Management

Hanna Hagler, & Brooke Graham – Kenneth and Lois Klarquist Internship Award

Juliana Moore – Kristle Volin Internship Fund

Amy Hilger, Alayna Lawson, Christopher Poole, & Matthew Henrikson – Brooks A. Pangburn Internship Fund

Rachel Lertora, & Melissa Robell – Izma B. Conser Memorial Scholarship

(cont. on next page)

SCHOLARSHIP RECIPIENTS (CONT.)

MUNSON UNDERGRADUATE TRAVEL AWARDS

Noelle Moen Gabriel Sandoval Alvaro Cortes Hanna Hagler Azita Roshani

GRADUATE SCHOLARSHIPS

Elizabeth Lee– M. A. Ali Graduate Chair Award in Fisheries Biology

Beth Orning - Robert Anthony Graduate Scholarship in Population Ecology

Eric Wade, & Andrea Jara – David J. Ashkenas Memorial Fellowship

Aimee Massey – Briggs Scholarship in Biogeography

Brittany Schwartzkopf - H. Richard Carlson Scholarship

Jane Dolliver - Coombs-Simpson Memorial Fellowship

Kerrick Robinson - Stan Gregory Stream Team Scholarship

Thaddaeus Buser - Hugo Krueger Graduate Research Award in Fish Physiology Andrew Olsen, Beth Orning, & Samara Haver – David B. and Georgia Leupold Marshall Wildlife Graduate Scholarship

Elizabeth Schuyler- Munson Wildlife Graduate Scholarship

Christina Murphy & David Roon - Oregon Council Federation of Fly Fishers Scholarship

Selene Fregosi, Lauren Smith, Matthew Ramirez, & Linsey Arnold - Thomas G. Scott Grant Scholarship for the Outstanding Ph.D. student in F&W

David Roon & Christina Murphy – James Sedell Graduate Scholarship

Kerrick Robinson - Charlie Taylor Memorial Fishin' Friends Graduate Award in Fisheries and Wildlife

Stephanie Loredo - Ted Thorgaard Student Research Fund

Eric Wade – Charles E. Warren Award for Ecology and Sustainable Societies

Angelica Munguia - Washington County Flyfishers Marty Day Scholarship

FW Club Spring Break Trip 2017





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College of Agricultural Science Awards 2016-2017

Faculty Awards

Christian Hagen – F.E. Price/ARF Award for Excellence in Research

Selina Heppell – Roy G. Arnold/ARF Leadership
Award

David Jacobsen – ARF Faculty Research Assistant Award Kelly Biedenweg – EPA Early Career Award

Taal Levi – Savery Outstanding Young Faculty

Award

Staff Awards

Aaron Moffett – CAS Classified Employee and Professional Faculty Award