Dear Friends,

It is six months since I last wrote to you in the spring/summer newsletter, but I hope you also heard from me via email that SAFS turns 100 in April 2019. I missed the School’s 75th birthday, but was aware that it was “quite a while ago.” Nevertheless, I was quite shocked last year while I was paging through Bob Stickney’s book, *Flagship: A History of Fisheries at the University of Washington* (Kendall-Hunt Publishing Company), and saw the statement on page 6, “on April 2, 1919, The College of Fisheries at the University of Washington was formally established.” It was clearly time to start preparing for this once-in-100-years celebration!

We have formed a steering committee to help organize and plan numerous events during 2018 and particularly 2019 in honor of this significant milestone. For example, there will be a special Bevan Series Symposium in April 2019 that will highlight all that is best about SAFS, now and in the past, and we will also offer a series of “labs unlocked” for you to visit our labs, talk to our students and faculty, and learn about our ongoing research projects.

I intend to start a “Fisheries Stories” e-newsletter soon. The history of SAFS is an accumulation of individual stories, and I invite each of you to share yours. Please tell us what you have been doing since leaving SAFS and your memories of times at 1919–2019 SAFS University of Washington

André Punt

---continued on page 2---

SAVE THE DATE
SAFS Centennial Celebration coming in 2019!

To ensure we are able to keep you informed of plans, please share your email address by contacting us at safsdesk@uw.edu.
SAFS and include photos and videos, past and present. Because much of the communication about the Centennial will be via email, if you only receive this newsletter by regular mail, but have an email address, please contact me at aepunt@uw.edu so we can include you on all our e-communication.

We are also planning to establish a SAFS Centennial Fund to help support the School for the next 100 years. This fund will be a legacy from the School's 100th birthday that we hope will still be supporting students, research, and outreach when the School celebrates its bicentennial in 2119. The fund will offer a great opportunity for each of you to contribute to this endeavour. In addition, there are already many wonderful opportunities to support the School if you choose to do so (https://fish.uw.edu/alumni-community/giving/).

While many of the current activities and events around the School focus on the Centennial, there are a lot of other things on the boil. In particular, it has been interesting, and often depressing, to watch the changes in policy coming from Washington over the last year, especially for a School where most faculty are investigating climate change and its impact on ecosystems, fish, and fisheries. I am proud to say that the School continues to provide “value-free” science to ensure that decision-makers have the best available science available when making their decisions.

With Sarah Converse, the new unit leader for the Washington Cooperative Fish and Wildlife Research Unit (Coop), firmly in place, I thought it was a good time to hear from four of our alumni (Joe Bumgarner, Neala Kendal, Todd Seamons, and Jamie Thompson) who work at one of the Coop’s state cooperators, the Washington Department of Fish and Wildlife (WDFW).

I mentioned in the previous newsletter that Vince Gallucci retired in March 2017 after serving the university as a faculty member since 1977. This issue includes an interview with Vince and some thoughts from a subset of his many graduate students (pages 10–12).

As part of our Centennial celebrations, I thought it would be good to learn more about the SAFS aquatic facilities that are housed in what was formerly the Fisheries Center. Pages 4–6 provide a history—and a very intriguing one indeed—of why a salmon run was started, some of the research that has been undertaken at the facilities, and some ideas for the future.

Finally, I want to thank all of our donors and friends who have given so generously to the School over the last year (see pages 14–15). Your ongoing support allows us to examine new avenues of research through “start-up” grants, fund travel for graduate and undergraduate students, and, of course, cover some of the stipend and tuition costs that make studying at the UW challenging for so many students. I was particularly pleased to hear about recent large gifts to the Alaska Salmon Program that will help ensure that we are able to continue sampling the pristine waters of Alaska and provide the baseline monitoring that is needed to understand some of the environmental changes our planet is facing.

As always, I look forward to seeing you at workshops, symposia, seminars, and social events over the next months.

—André Punt, Director
The School has a long history of collaborating with the natural resources research and management agencies of Washington state. This article focuses on the relationship SAFS has with one agency, the Washington Department of Fish and Wildlife (WDFW). SAFS and WDFW collaborate on many research projects. WDFW scientists also serve as affiliate faculty and as members of graduate student committees, and they mentor capstone undergraduate students. In addition, many SAFS graduates have gone on to work at WDFW over the years, and several are currently working there.

I contacted four SAFS grads who now work at WDFW: Neala Kendal (NK), PhD 2011; Joe Bumgarner (JB), MS 1993; Jamie Thomson (JT), MS 2013; and Todd Seamons (TS), PhD 2005, to learn more about what they do at WDFW and how their time at SAFS helped shape their careers.

**AP:** What do you do at WDFW?

**JB:** I am the Hatchery Monitoring and Evaluations project leader under the Lower Snake River Compensation Plan. We monitor and evaluate hatchery salmonid releases from the Lyons Ferry and Tucannon fish hatcheries and conduct surveys to monitor the natural production of salmonids in many southeast Washington streams. Our program was originally related to harvest mitigation for losses caused by the four lower Snake River dams, but has shifted to using hatcheries as a tool to maintain, and hopefully increase, local populations.

**NK:** I am a salmon and steelhead research scientist and I get to work with many people on a variety of projects across the state. Right now, I am helping to write a general steelhead report, working to understand marine survival of Puget Sound and western Washington steelhead, evaluating how native freshwater fishes and salmonids would be impacted by a flood-control dam and restoration work in the Chehalis River Basin, and developing life-cycle models for steelhead and rainbow trout.

**JT:** I conduct winter steelhead spawner surveys on the Stillaguamish and Pilchuck rivers and co-manage salmon counts at the Ballard Locks and spawning surveys at Lake Washington, Lake Sammamish, and the Cedar River. I also forecast and estimate escapement for salmon and steelhead stocks in Lake Washington.

**TS:** I have been at WDFW since May 2011 as an analyst in the Molecular Genetics Laboratory, and last year, I became director of the lab. Most of my work is on Pacific salmon and steelhead, but I also have been involved on projects with mammals and amphibians and soon will be involved on projects with butterflies.

**AP:** Describe your SAFS experience.

**JB:** I attended SAFS as both an undergraduate and a graduate student.

**NK:** I got my MS and PhD with Tom Quinn. I conducted research in Bristol Bay on size and age at maturation change in sockeye and Chinook salmon, along with size, age, and sex selectivity of the fisheries there.

**JT:** I was an undergraduate and graduate student in SAFS, working with David Beauchamp. My cap-
SAFS and the WDFW

stone research involved growth and movement of juvenile bull and rainbow trout in tributaries to Chester Morse Lake, and my MS research focused on survival to adulthood of steelhead related to freshwater growth and environmental factors affecting freshwater growth.

TS: I came to UW in 1999, briefly working as a lab technician before starting an MS program with Paul Bentzen (now at Dalhousie University) and Tom Quinn. I got my PhD in 2005 and then worked for Tom Quinn, Kerry Naish, and Lorenz Hauser in a postdoctoral position until I was hired at WDFW.

AP: What about your time at SAFS has helped you the most in your career?

JB: There was a host of really talented and well-respected professors at SAFS, always open to help us. I learned a lot in the classroom, but the opportunities provided by field sampling or working directly at the on-site hatchery was what really made it great. Doing graduate research was most valuable and provided the needed experience to get hired full time, but a close second was the opportunity I had to work at the Alaska field stations.

NK: My advisers helped me develop as a scientist, but also as a mentor to others. I benefitted from having a NOAA scientist on my committee. I had wonderful fellow graduate student colleagues and friends who I learned a lot from and who supported me through graduate school, and I continue to benefit from this network of scientists. My experience with the Alaska Salmon Program doing research on healthy salmon populations in Alaska was incredibly beneficial for my career.

JT: I would say that exposure to fisheries management while involved with the Alaska Salmon Program directly impacted landing this position. Meeting people at SAFS who I would later work with or for shows that building relationships at SAFS was very important for my career.

TS: The education at SAFS is top notch and set me up perfectly for the genetic work we regularly do here. Exposure to a broad range of research topics allows me to make connections among coworkers and collaborators. I also made a ton of connections and friendships with fellow graduate students that have proven very useful. Our lab now has the capability and expertise to take on environmental DNA (eDNA) samples, and we recently wrote a proposal with SAFS alum Sean McDonald for detecting invasive European green crab using eDNA.

AP: Tell us something about yourself that we probably don’t know

NK: Between raising my two young kids (ages 1 and 4), I’m trying to keep my swimming up and am training to swim under the Golden Gate Bridge again this September.

JT: I went to culinary school after graduating high school and was working my way to chefdom when I decided to change careers.

TS: I played bass guitar in a (really bad) heavy metal band called “Carp” (this is the kind of name three fish and wildlife majors choose). Our song “Deathcrow” was a fan favorite.

AP: What could SAFS do to strengthen the relationship with WDFW?

JB: What about an internship program with WDFW folks so people can get some field experiences and make contacts within the agency for potential future jobs down the road?
NK: I think having an internship program would be useful. We often have fieldwork and analysis projects that SAFS students could be involved in. There are many career opportunities within WDFW for SAFS students (undergrads and grads), from tech positions to scientists, so increasing student awareness of these will be helpful for both sides.

JT: SAFS could focus more on fisheries and ecology issues in Puget Sound, the Columbia Basin, and the Pacific Northwest. More practical learning opportunities, such as the Alaska Salmon Program, but in Puget Sound, could spur ideas about how to improve understanding of our changing environment, fisheries, and populations. I hope to see a more concerted effort to support more freshwater fisheries positions and provide more courses in this area.

TS: I think a WDFW-led class is in the works already, and press like this newsletter helps. Encouraging students, graduate and undergraduate, to come talk to us may also open some doors.

Alumni Update

Update your record and sign up for the newsletter by email.

Our spring–summer issues are distributed online only (email, website), and the fall–winter issues continue to be published in print and online. If you are still receiving printed newsletters, please consider switching to email/web. If you would like to do so or if you need to update your contact information (or both), go to the following UW Alumni Subscription Center and/or SAFS Alumni Update webpages (applies to alumni and friends):

- Update your contact information
  www.washington.edu/alumni/services/update-your-information
- Change newsletter subscription format
depts.washington.edu/safs/alumni/update.php

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Office of Planned Giving
206-685-1001 giftinfo@uw.edu
From the Atom Bomb to Fish Runs: Research and Teaching in the SAFS Aquatic Facilities

For those of us who have a long affiliation with SAFS, the School is synonymous with its earlier location—the Fisheries Center on the Montlake Cut. The Fisheries Center, now the Portage Bay Building (PBB), housed the School from 1949 until the new Fishery Sciences Building opened in 2000. Although SAFS no longer uses the aquatic facilities in the PBB building for teaching, and the last releases of salmon occurred in 2010, the facilities still provide unique and essential laboratory space for faculty and students.

Over the years, the research conducted at the aquatic facilities has led to numerous BS, MS, and PhD degrees by graduates who now populate agencies, private industry, and academia throughout the United States and many other countries. The facilities also have allowed faculty and staff to conduct extensive outreach and engagement activities, including links with the King County school system, the Washington Department of Fish and Wildlife (WDFW), and tribal fishery programs.

Ghosts of research past
The facilities for holding freshwater fishes started with a surprise federal contract awarded to (then) Assistant Professor Lauren “Doc” Donaldson. The funds secretly originated from the Manhattan Project to develop the first atomic bomb. Project engineers were planning a plutonium plant on the Columbia River, and the nuclear reactors were to be cooled by river water. Donaldson was charged with exploring the effects of nuclear radiation on fish, but was kept in the dark about the rationale for the project as a part of wartime secrecy!

Donaldson and a team of three research associates began to investigate the effects of x-rays on fish without knowing the actual significance of the work. The program required years of data collection to monitor multigenerational effects, thus requiring returning runs of fish. Data were only just starting to emerge when the war ended in 1945, but the funding and studies did not stop. The new Fisheries Center and ponds were being built in 1949 when (then) full Professor Donaldson established the salmon runs. Releases of Chinook salmon started in 1949, and coho salmon in 1952.

The facilities were central to many decades of investigations into the mechanisms by which salmon return home to their natal sites for reproduction. This work was conducted by a series of Fisheries faculty and their respective graduate students, including Professors Donaldson, Ernest Brannon, and Thomas Quinn, and (then) graduate student Andrew Dittman, and others. These studies revealed many details about the ways in which juvenile salmon learn the odors of the natal site at sensitive developmental stages prior to their seaward migration, retain these odor memories, and return to the site years later at the onset of sexual maturity.

Former Professor Dave Beauchamp and his group used the larger outside tanks and troughs to examine...
shifts in habitat use by juvenile Chinook salmon during early months of lake rearing. They also used the larger outdoor troughs for predator-prey experiments in collaboration with geneticists from Fred Hutchinson Cancer Research Center to investigate how changes in the lake transparency and artificial light pollution triggered rapid reverse evolution of armor plating on threespine sticklebacks in Lake Washington.

Research Professor Jim Anderson recalls, “Over the years, I have been involved in several experiments doing unpleasant things to fish in the hatchery in the hopes of making things better for fish and humans. In the 1980s, a group consisting of graduate student Gary Ostrander, now Vice President of Research at Florida State University, and Professor Marsha Landolt, Research Professor Dick Kocan plus myself studied how fish responded to Benzoapyrene, a common mutagen found in coal and grilled meats. Later, my graduate student Rick Nemeth, now a professor at the University of the Virgin Islands, examined whether lights could be used to divert juvenile salmon from turbines.”

The research in the laboratories has not all been about salmon genetics and ecology. Associate Professor Emeritus Chris Grue said, “My graduate student Kerensa King and I used the hatchery facility and the coho run from 2004 to 2012 to study the effects of pesticides in urban streams in Western Washington on coho reproduction.” This was important in ultimately redirecting research on the causes of poor survival of returning adult coho to contaminants associated with highway runoff.

Ghosts of research present
To this day, the aquatic facilities continue to provide a platform for ground-breaking research into genetics, physiology, behavior, and pathology. “We use the facilities to rear experimental crosses to build genomic maps to pinpoint genes and linkage groups involved in ecologically important traits in Pacific salmon,” say Research Professors Jim and Lisa Seeb. They note that DNA harvested from experimentally produced haploid salmonids has been the basis of genomic resources for sockeye, Chinook, chum, and pink salmon. Students have also used the facility to rear normal diploid sockeye salmon and Chinook salmon to identify genomic association with traits such as thermal tolerance.

Assistant Professor Chelsea Wood joined the faculty in 2016 and just received Biosafety Level 2 certification for a wet lab in the facilities to hold low-risk human pathogens, including the trematode Schistosoma that infects more than 200 million people world wide. The Wood lab is conducting field work in the West African nation of Senegal to increase understanding of this aquatic parasite, which is transmitted to humans through skin contact with contaminated fresh water. Freshwater snails harbor the asexual stage of the parasite, and each infected snail can produce thousands of infectious parasite larvae per day. “I need the wet lab to test heterogeneity in infection susceptibility among intermediate host snails, the dynamics of co-infection, and

—continued on page 8
eventually fish predation rates on host snails,” says Chelsea. “We also plan to add Fasciola hepatica—the ‘common liver fluke,’ a trematode that co-occurs with Schistosoma and causes liver disease in humans and livestock—to our research agenda.”

Another new faculty member, Assistant Professor Jackie Padilla-Gamiño said, “My lab group will be using wet labs in the PBB to study the ecophysiology of marine organisms. We are planning to install a closed system that has the capability to control temperature, oxygen, and pH levels.” Jackie mentioned that the system will allow her to design experiments to understand how global stressors such as ocean acidification, hypoxia, and warming can affect organisms at multiple levels of biological organization.

**Ghosts of research future**

Feasibility studies were completed in 1990 and 1994 for a new Aquatic Research/Freshwater Hatchery Facility that would have been part of/adjacent to the new Fishery Sciences Building and taken the place of the Bryant Building. Those facilities were never built. In 2002, the main hatchery was completely renovated, with the aim of providing a flexible experimental space for a greater variety of research programs. The modular approach supported a wide range of experiments on returning salmon, from genetic investigations on the fitness effects of inbreeding that required many tanks of small sizes to behavioral work that required few large tanks with overhead cameras.

Andrew Berdahl, who will be joining SAFS as an assistant professor in 2018, is aiming to use the aquatic facilities to test hypotheses about collective decision-making using out-migrating juvenile salmon. He is planning to use circular flow tanks to vary both fish density and water temperature. He is also interested in using the facilities to explore how fish are influenced by conspecifics when deciding to migrate and if these interactions can help them appropriately time their decision to migrate.

Professor Kerry Naish is interested in understanding how conservation actions, such as moving populations or releasing individuals to enhance population size, might influence the fitness of wild salmon populations. “A renovated aquatic facility that can support a significant number of salmon that can be reared throughout the year will facilitate genetic-based research that addresses these key issues” she said.

Recently, Tom Quinn, Chris Grue, and Lisa and Jim Seeb have been developing a vision for revitalizing the existing facility or constructing a new facility with WDFW and the Muckleshoot Tribe as partners. They are currently moving ahead with plans for a College of Built Environments graduate studio and graduate seminar in Spring 2018 to develop conceptualizations of such a facility in cooperation with the UW Planning Department and with the participation of SAFS, other academic units on campus, and our partners. Stay tuned for more.
Awards & Honors

Students

Degree track and faculty advisers in parenthesis

Caitlin Allen Akselrud (PhD, Branch, Punt) and Natalie Lowell (PhD, Hauser) obtained NMFS-Sea Grant Population Dynamics Fellowships.

Catherina Austin (MS, Quinn) was awarded a Scholarship from the International Women's Fishing Association.

Marta Gomez-Buckley (PhD, Tornabene) obtained a Rho Chapter Scholarship for Women Educators in Washington from the Rho Chapter of the Delta Kappa Gamma Society International and a Waitt Foundation Research Grant through the Vava'u Environmental Protection Association, in the Kingdom of Tonga.

Thiago Couto (PhD, Olden) was awarded a Graduate Student Research Fellowship from the Society for Conservation Biology.

Jennifer Gardner (MS, Tornabene) won the best student paper in Copeia for her paper, “Molecular Identification of Snailfish (Liparidae) Egg Masses in the Gill Cavities of King Crabs (Lithodidae).”

Elliot Koontz (MS, Olden) won a Science for Public Good Award from the Union of Concerned Scientists.

Eleni Petrou (PhD, Hauser) was a member of the group that won the Association of Pacific Rim University—New York Times Asia-Pacific Case Competition for 2017 for their policy brief tackling climate change and the future of the Pacific Ocean.

Charlie Waters (PhD, Naish) netted the American Institute of Fishery Biologists, W. F. Thompson Award for the best student paper published in 2015 for “Effectiveness of managed gene flow in reducing genetic divergence associated with captive breeding” that was published in Evolutionary Applications.

Staff

Karen Irwin and Katie Effert were awarded the SAFS Staff Award for their substantial and ongoing efforts to implement the University’s new payroll software, Workday, for SAFS and for their never-ending patience with its quirks.

Isadora Jimenez-Hidalgo received the SAFS Staff Award for her excellent lab work, her outreach and diversity efforts, and her teaching and mentorship to graduate students.

Faculty

Tim Essington received the 2017 Oscar Elton Sette Award, the highest honor given by the Marine Fisheries Section of the American Fisheries Society. This award is given for sustained excellence in marine fishery biology through research, teaching, administration, or a combination of the three.

Ted Pietsch (Professor Emeritus) won the fourth annual Meritorious Teaching Award in Ichthyology from the American Elasmobranch Society and the American Society for Ichthyologists and Herpetologists.
A Chat with Vince Gallucci

It is a warm Thursday in early July, and I am at the UW Club chatting with Vince Gallucci about his extraordinary career. My aim is to learn more about what drives this polymath whose 40-year career covered topics as diverse as benthic ecology to marine policy in the Arctic.

Vince said it all started “when I was an undergraduate at Stony Brook University in New York, and I observed the idyllic existence that my professors in the physics department lived. Of course, in retrospect I was getting a highly filtered version of their lives, although an amazing part of these observations did mold my first faculty job here at UW. At Stony Brook, in a small physics department that started with 24 students and graduated about 12, I was allowed to have a minor in political science, whereas most of my colleagues minored in astronomy or mathematics. This choice of a minor is relevant as I close the circle on this career.”

Vince’s first job was not in fisheries, but rather on the Apollo moon project for Grumman Aircraft, working for half a year on trajectories. Then it was off to the State University of New York at Buffalo, supported by NASA again, but now working on the biology of cell membrane reproduction using methods of electrostatics and electrodynamics. After Buffalo, Vince came to Seattle to work for Boeing Scientific Labs, but left after half a year and landed in North Carolina to do a PhD in stochastic processes and a minor in cell and environmental biology. After earning a PhD, he returned to Seattle again and did a year in a postdoctoral position working with Douglas Chapman, then the director of the Center for Quantitative Science (CQS) and later, the dean of the College of Fisheries. That was Vince’s first introduction to stock assessment and fisheries management. Vince reminded me that CQS was started with a five-year grant from the Ford Foundation to hire 5–6 new faculty. Vince’s appointment to CQS was fortuitous. He was not one of the original five faculty members.

Mentoring Students

Steve Scherba, the second graduate student Vince mentored and a current instructor in the QSCI program, said, “Vince has done many things for me over the years that I gratefully remember. But, there is something I would like to especially thank him for. Vince supported my development as a critical and independent thinker—able to examine, express, support, and stand up for my ideas and beliefs. I have relied on that trait, perhaps more than any other, throughout the several chapters of my life—as student, financial executive, business consultant, angel investor, life-long learner, and now as a teacher in the College of the Environment—to sustain me and help me achieve my personal goals. Thank you, Vince, I continue to appreciate and benefit from the support you gave me then.”

Rick Hertzberg, another early student of Vince’s, emphasized Vince’s “seemingly endless patience and suggestions.” He said that the best advice Vince gave him was to force him to think how data are gathered, not just how they are analyzed.

Ian Taylor, a more recent graduate, stressed Vince’s infectious enthusiasm for what he called “shedding light in the valley of darkness,” which could mean finding new patterns in old data, a new sampling opportunity, or a new statistical proof. Ian says that
members. However, one of them did not get tenure, which left a gap that could be filled, and Vince took the opportunity.

Stock assessment has all the breadth Vince could have hoped for, and he took advantage of this through his teaching and research. He taught statistics, calculus, and differential equations, all with biological applications. Such an approach, pioneered by Doug Chapman, was unique, and Vince says that it set CQS apart internationally as a program. Vince eventually became director of CQS several times.

Vince's research has had different foci, but all have been connected via stock assessment. As a matter of fact, it was through stock assessment that he first encountered dogfish sharks, a species that became a major research interest over many years. Vince also turned his attention to fisheries in developing countries with support from organizations such as USAID and the German GTZ, leading to a book on stock assessment of artisanal fisheries, with chapters by and with students and faculty colleagues. During this time, he developed an interest in management and policy—especially in developing countries in Latin America and Northeast Asia and Russia.

Vince's work in tropical climates highlighted the situation of sharks in those environments, placing the other tropical species he had been studying into the “prey” category. Vince commented, “I took several UW faculty to Costa Rica when I was working there— including Loveday Conquest and Don Gunderson.” He continued, “Gradually, my focus moved to cold water sharks, which very few scientists were studying at that time. Happily, graduate students from my own lab graduated with theses and dissertations that added more expertise to the understanding of cold water sharks. We did pioneering research on salmon sharks, sleeper sharks, six gill sharks, and dogfish sharks—all cold water sharks.”

Eventually, Vince shifted from primarily field work and stock assessment to focus on management policy in a more general context. He said, “Movement toward policy studies without explicit quantitative content brought me back toward an early interest in political science.” (The closing of the circle he mentioned earlier.)

—continued on page 12

enthusiasm inspired his path through graduate school and onward to a career in fisheries science.

Brian Langseth, a former undergraduate student Vince mentored, recalled that he met Vince at a SAFS talk around the time he had decided to do a dual degree between SAFS and the Applied and Computational Mathematical Sciences program. Vince had need of an undergrad helper in his lab to work on sharks, and Brian couldn’t say no. “I appreciated his willingness to take an undergrad into his lab, his grad students’ willingness to treat me like another grad student, and his guidance in basic research and analyzing the data. He definitely helped me grow in appreciation for the field, and gave me positive and worthwhile experiences that I can look back on fondly.”

Jason Gaspar has the last word: “I first met Vince on a salmon shark research cruise in Cordova, where he recruited me to SMA (School of Marine Affairs). Vince showed confidence in my academics and also trusted me to manage a complex research grant and project. He used to call difficult situations ‘poetry for the soul.’ I called it sink or swim, but the confidence I gained has helped me throughout my life and career. I am forever grateful for Vince’s encouragement and involvement. Most importantly, I met my wife (Cindy Tribuzio) in his lab, so an indirect thanks to Vince for that!”
Vince Gallucci  
—continued from page 11

Vince was subsequently invited to chair the Canadian Studies Center in the UW Jackson School for International Studies, which allowed him to continue his shark research and develop a new research program in the Canadian Arctic, along with his contacts and research in the Russian Far East and northeast Asia. This expanded and enriched the Canadian Studies program and was an important part of a major Carnegie Foundation grant to the Jackson School. For Vince, it led to extensive travel in Arctic areas and new connections within Alaska and its Arctic programs. Vince said, “The new program we developed in the Jackson School included an academic undergraduate minor in Arctic Studies—the first in the country.”

Vince reminds me of the amazing opportunities of being a faculty member and particularly the benefits of sabbaticals. He said, “I took four sabbaticals. I went twice to Italy and once to Costa Rica and once to Iceland. I don’t understand people who don’t take sabbaticals. I even did some human demography in Parma during one of those sabbaticals, applying the methods I used on fish to humans.”

Vince concludes by commenting, “Looking back over my 45 years as a UW and SAFS faculty member, I recognize that the system, along with the various administrators have all patiently listened to my always evolving interests and provided assistance when needed. I was given sabbatical and other leaves to facilitate changing interests. I have resisted mentioning student names, but I can say with no exaggeration that student research and welfare were always a central part of my thinking, leading to my supervising more than 20 graduate students, all of whom now have successful careers in agencies around the world. Among my greatest pleasures has been seeing my students grow and develop as scientists, all with different personalities. My career was first of all a tremendous amount of fun that allowed me to serve the cause of advancing science in a broad sense and at the university. The best job in the world!”

Degrees Awarded  
Aut 2016–Sum 2017

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 between humans, our environment, and the resources upon which we rely.

BS Degrees
Amaryllis Adey  
Aleighsha Nichelle Akin  
Jeremy B Axworthy  
Bryan Antonio Briones Ortiz  
Kaylie Elizabeth Bazzano Carr  
Joycelyn Wai Ting Chui  
Michealene Corlett  
Amanda Aulty Jolean Delaney  
Kayla Kathryn Ellis  
Sam Ghods  
Kelsey Renee Gibbons  
Kathleen Patricia Gill  
Jonathan David Grindall  
Theodore Shumway Hartinger  
Griffin Weir Hoins  
Zachary Aaron Charles Houghtaling  
Ingrid Tong Tong Howard  
Alexander Martin Johanson  
Ruth Helen Kazmerzak  
John Dongyun Kim  
Nina Sofia Lottsfieldt  
Nicole Marie Parris  
Kayla Ashley Peterson  
Hannah Morgan Waterman  
Mariah Elise Weavil-Abueg

* departmental honors  
∞ magna cum laude  
° cum laude  
°° summa cum laude
MS Degrees (advising professors in parentheses)
Caitlin Allen Akselrud (Punt) Fisheries stock assessments for commercial Alaskan species, accounting for age-size-structured population dynamics
Ava Maie Fuller (Friedman/VanBlaricom) Transmission dynamics of the withering syndrome rickettsia-like organism to abalone in California
Qi Lee (Punt) Incorporating an otolith-derived environmental index into growth for stock assessment models
Hannah Lorraine Linder (Horne) Evaluating statistical models for baseline characterization and measuring change in environmental monitoring data
Gary Wayne Marston, Jr (Beauchamp/Quinn) Do freshwater growth opportunities and migration barriers limit recovery of imperiled anadromous *Oncorhynchus mykiss* populations?
Brianna Dailey Pierce (Simenstad) Resource use and life history patterns of juvenile Coho and Chinook salmon in an Alaskan estuary
Shelby M Richins (Skalski) Influence of juvenile and adult experiences on tributary overshoot and fallback by steelhead in the Columbia River Basin
Andrew R Spanjer (Beauchamp/Roberts) Influence of urbanization on the health of juvenile salmonids in Pacific Northwest perennial streams
Michael J Vlah (Holtgrieve) Murky waters: discerning among sources of natural variation under high uncertainty and at multiple scales

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BS degree recipients, graduation 2017

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PhD Degrees (advising professors in parentheses)
Emma Hodgson (Essington) Understanding the impacts of anthropogenic stressors on species, ecosystems, and fishing communities
Stuart Harold Munsch (Simenstad) Fish ecology along modified shorelines
Merrill Rudd (Branch) Accounting for variability and biases in data-limited fisheries stock assessment
Adrienne P Smits (Schindler) Physical controls on landwater linkages: carbon cycling and food webs in boreal watersheds
Chantel Rene Wetzel (Punt) The impact of data, modeling approaches, and control rules on the performance of management strategies: applications to West Coast groundfish fishery

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BS degree recipients, graduation 2017
SAFS alumni, faculty, and friends have a long history of generous giving. They continued this tradition during 2017, providing critical financial support for our students, faculty, and programs. We acknowledge and thank you for your sustained support.

More than $10,000
Aleutian Spray Fisheries, Inc.
Arctic Storm, Inc.
At-Sea Processors Association
Bering Sea Fisheries Research Foundation
Chignik Regional Aquaculture
Mr. Clairmont & Mrs. Evelyn Egvedt
Dr. William Clark & Ms. Elizabeth Pfender
Coastal and Estuarine Research Fed
Dr. Michael Dahlberg
Freezer Longline Coalition
Mr. Mike & Mrs. Lynn Garvey
Hall Charitable Lead Trust
Lowrance Maruo Charitable Fund
Mr. Douglas & Mrs. Joyce McCallum
Mr. John McQuown
Norton Sound Fund
Mr. Sean O’Leary & Ms. Jill Snyder
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In the field: Ashely Nichole Lewis (center), Heather Lopes (right).

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In the lab: Sam Ghods (left); In the field: Merrill Rudd (right).

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