

St Olaf Biology Alumni

Second Messenger

Winter 2019



Winter leaves its lovely
artistry around Regents Hall

Bio/ES alum returns to share insight with current Oles

~ "I speak for the roots!" Nora Flynn ('15)

Professor Meredith Holgerson's *Introduction to Environmental Studies* class recently hosted St Olaf alum **Nora Flynn ('15)**. As a graduate student pursuing her PhD in Soil and Crop Science at Colorado State University, she enthusiastically spoke about her research on the effects of irrigation on soil microorganisms and nutrient cycling starting by saying, "I speak for the roots!" I caught up with Nora after her talk to find out how she ended up on this path of study in the first place. She reminisced about the impact that St Olaf professors like Kathy Shea and Charles Umbanhowar had on her trajectory, solidified by her summer research on Northfield resident Dave Legvold's farm. She was inspired to investigate not only agriculture's impact on the environment, but also solutions for the future of sustainable farming noting that a well-rounded investigation includes social and economic factors in addition to biological data. As she looks toward achieving her PhD, she looks beyond, seeing herself working in an educational role, teaching and inspiring the next generation to keep looking into these important issues. We may even see her working to solve the water supply issue from a policy-making position! Well done, Nora! It was lovely to have you back on campus!



Nora Flynn ('15) speaks to ENVST 137 about her research on the effects of irrigation on Colorado farmland.



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Anna Dutke ('08)

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Recipient of Presidential Innovation
Award for Environmental Education
for EPA Region 5



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Scott Laursen ('87) p. 2,5

The MCC, bridging scientific research
with the richly diverse community on
Hawai'i Island.



Your gift. Your way.

Gifts to the St. Olaf fund are used to support financial aid for current students, strengthen academic programs all over campus, and enrich life for those who live and work on the Hill. But did you know that you can designate your philanthropic support to a specific program or department? (May we suggest the Biology Department?) That's right! You can make your annual gift to the St. Olaf Fund and show the world how much you love Biology at St. Olaf. These are the resources that provide for the extra things like paying for students' travel to conferences and consortiums and annual events like the Biology Senior Banquet. Will you visit www.stolaf.edu/giving and designate your gift to the "Biology Department"? And if you are celebrating a reunion this year, your gift will be counted in your class gift as well! Thank you for your consideration.

Photo: Carol Wass



Scott Laursen ('97) has developed a career bridging worldwide outdoor education expeditions and research ecology over the past couple of decades, focusing on and exploration of multiple knowledge forms (e.g. experience instincts, intuition, etc.) A result of this path is the [Manager Climate Corps](#) (MCC) developed by Scott and his supervisor,

Sharon Ziegler-Chong at the University of Hawai'i, Hilo. The basic theme of this four-year-old program is "collaboration across worldviews: utilizing knowledge co-production on Hawai'i Island to thrive through change while preparing for the future." Due to the long-term indigenous and immigrant histories of this island, it encompasses stunning cultural diversity, particularly for rural landscapes and seascapes. The basic notion of the MCC is that uniting these cultures – including the diverse worldviews of local scientists, graduate students, policy professionals and natural resource managers – greatly enhances capacities of adaptation, resilience, and sustainability. This pursuit carries with it a two-pronged approach of intertwining manager-driven collaborative

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Manager Climate Corps: Bridging diverse worldviews, multiple knowledge forms, and research

"I was inspired to contribute after reading about the Olaf Christmas Concert in the recent Duke Divinity Newsletter because my work relates directly to fundamental elements of the article in that both the article and our local climate change research program are embracing the change by uniting diverse worldviews."

~Scott Laursen ('97)

Welcome new faculty, Meredith Holgerson

Dr. Meredith Holgerson joins the St. Olaf Biology and Environmental Studies Departments as a freshwater scientist, specializing in the ecology, biogeochemistry, and conservation of ponds. She recently completed a post-doctoral fellowship in the Pacific Northwest, where she worked with state, federal, and academic scientists on floodplain conservation. Dr. Holgerson completed her Ph.D. at Yale University and her M.S. at SUNY's College of Environmental Science and Forestry. Dr. Holgerson's research highlights the local and global importance of ponds. Specifically, her work demonstrates that ponds play a significant role in the global carbon cycle and are locally important for biodiversity and food webs. This year, Dr. Holgerson is teaching Ecology (BIO 261), Introduction to Environmental Studies (ES 137), and a new seminar on Conservation Science and Management (ES 381). Dr. Holgerson moved to Northfield with her husband and two young sons, and they are excited to join the local community.





Anna Dutke ('08) receives PIAEE

Note: This article was taken from the US Environmental Protection Agency's web site. The entire article can be found [here](#).

Presidential Innovation Award for Environmental Educators (PIAEE) winner for EPA Region 5

**Anna Dutke, Jeffers Pond Elementary
Prior Lake, MN**

During the 2014-2015 school year, **Anna Dutke ('08)** developed a nature-based preschool option and piloted it for the Circle of Friends Preschool. The pilot was designed to align the preschool with the Prior Lake-Savage Area School district-wide E-STEM initiative (Environmental Education, Science, Technology, Engineering and Math). E-STEM is an instructional approach that emphasizes inquire-based and real-world problem-solving by integrating hands-on science, technology, engineering, and mathematical practices with projects and field experiences related to the environment. At the start of the 2015-16 school year, Anna's nature-based preschool classroom relocated to Jeffers Pond Elementary, creating new opportunities to bring preschool students together with kindergarten through 5th grade students. A "buddy class" partnership was formed with the 5th grade, and the preschool and 5th grade students met weekly to engage in activities and lessons that integrate environmental education along with the preschool and 5th grade curriculum and learning standards. In 2017, the students presented a research project about squirrel enrichment (protecting and preserving squirrel habitats) at the University of Minnesota's Ecology



Jeffers Pond Nature Preschool students find a bird skull in their outdoor "classroom." Pictured: **Anna Dutke ('08)** and William R, son of **Jeanette Wong ('05)**.

Fair, which was notable because the preschool students were the youngest participants in the fair's history.

In 2015-16, Anna formed a Family Nature Club with her colleagues that provides free, monthly gatherings for families at one of the school district's outdoor learning centers, where family members conduct activities that foster and support exploration and nature play. Anna also co-leads her school's Junior Naturalist Program that is geared toward 3rd grade through 5th grade students who select a focus area (such as waste reduction, schoolyard habitats, or energy conservation), identify challenges or aspects of the focus area in which they may need additional educations, and plan and implement activities at the school to address the focus area. Anna's students are developing a strong foundation and excitement for learning, increasing their understanding of the impact they have on nature, and developing a sense of responsibility and stewardship. Anna's efforts have inspired kindergarten teachers across the district to incorporate more nature-based learning into their curricula.



On June 30, 2017, **Neal Holtan ('69)** retired from his position as medical director of St Paul-Ramsey County Public Health which he had held since 1987. A significant part of his work was seeing patients in the Tuberculosis Clinic. He saw much change in the field of tuberculosis during those 30 years, but also few new tests (other than CT scans) or new drugs to treat TB. The disease, while fairly rare in the United States, remains an enormous global threat.

Based on a love for history that started at St Olaf in 1965, Neal started taking courses at the U of MN's Program in the History of Medicine mid-career and soon became obsessed with it. After 12 years and a dissertation on public health and genetics in Minnesota in the early 1960s, he earned his PhD in 2011. He has a paper about the birth control movement in 1930's Iowa accepted for this summer's quarterly *Annals of Iowa*.

And now Neal is on the planning committee for the 50th reunion for the St Olaf Class of '69 this May. *"It has been great to re-connect with classmates...and I recently took a look at today's Biology course catalog. I was amazed at how much more complicated the degree has become! It occurs to me, too, how a liberal arts St Olaf education led to a richer life in unexpected ways."*



Jenny Cho and Ryan MacSwain, ('03)

After graduating from St. Olaf, Jenny obtained her Master of Science degree from the University of MN College of Veterinary Medicine, Veterinary Population Medicine Department having studied aerosol transmission of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV). She then went on to the U of MN veterinary school and was awarded her Doctor of Veterinary Medicine (DVM) degree in 2009. She completed a small animal internship at Iowa State followed by a 3-year small animal internal medicine residency at the U of MN, researching the use of probiotic bacteria – specifically *Lactobacillus* bacteria – to degrade oxalate, which is an important factor in the formation of calcium oxalate stones in dogs. She is now (as of 2015) a board certified veterinary internal medicine specialist, working at the U of MN Veterinary Referral Center in Apple Valley. Jenny and her husband Ryan MacSwain ('03) are pictured above with their 3-year-old son and 15-year-old dog at the St. Paul Bike Classic this fall.

Itinerant Occupational Therapist Catches August 2017

After St. Olaf, **Ellen Shuldts ('88)** went on to graduate school at Colorado State University and got a Master of Science degree in occupational therapy. She has found it to be a great career field with opportunities to work in a variety of settings and with different populations: pediatrics, geriatrics, rehab, acute, mental health, home health and work hardening, to name a few. She is currently a traveling OT, taking 3-month assignments around the United States. This has been a fantastic experience with the bonus of crossing several items off her bucket list, including swimming with manatees, going to Yosemite National Park, touring Claiborne Farm where Secretariat is buried, and seeing the Great Smokey Mountains and Everglades National Park. Because she was out west in August 2017, she got to see the total solar eclipse in Wyoming!

“Traveling OT is a great way to go if you are adaptable and flexible, are willing to pack up your car and drive to another place every 3 months or so. There is a demand also for traveling physical therapists, PTAs, COTAs, SLPs, nurses, cath lab techs, radiology techs, and more.”

If you're interested in being a traveling health professional, feel free to email Ellen for more information at elleno208@gmail.com.



Alyssa Anderson ('06)

After 5 years teaching at Northern State University (Aberdeen), I accepted a tenure track position in the Biology Department at Southwest State University in Marshall, MN. My family is happy to renew our Minnesota residency and introduce our now 2-year-old son to the state. Along with teaching zoology and ecology, I look forward to exploring streams in southwest Minnesota where I will continue my research in aquatic ecology.



Jonathan Weber, MA, PA-C ('85 – St Olaf Biology/Science Education) was recently appointed to Assistant Professor and Academic Coordinator at the Yale University School of Medicine Physician Associate Program. For the last 20 years he has practiced internal medicine in the Yale New Haven Hospital and Yale University health systems. Throughout his medical career, Jonathan has remained active in PA education, program administration and leadership, serving for many years as clinical clerkship instructor and academic lecturer at the Yale University School of Medicine. His areas of interest and expertise include Preventive & Behavioral Medicine, Health Care Policy, Medical Bioethics, End of Life Care, Spirituality & Health, and the International Development of the PA profession.



As his first job after graduation **Mark Madsen ('71)** worked as an arborist for Bartlett Tree Experts in the suburbs of Washington, DC. After four years as City Arborist for the city of Alexandria, Virginia, his career shifted to the world of landscape design. He and his wife, **Jane (Solberg) Madsen ('71)**, moved back to the Minneapolis/St Paul area in 1984 where Mark continued in landscape design during which he earned several landscape design awards from the MN Nursery and Landscape Association. Before retiring a few years ago, he ironically ended his career working for the same company with whom he began his career – Bartlett Tree Experts – only this time in Minnesota.

"I had worked hard in the plants end of Biology under the tutelage of Dr. Harold Hansen who encouraged me to stay in the field. And of course, being a singer from St Olaf, I had to continue that avocation, singing in the National Lutheran Choir for 14 years under founder Larry Fleming and his successor, Dr. David Cherwien."

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Manager Climate Corps, continued from page 2

research with interactive forums that are aimed at strengthening and diversifying existing professional networks.

The MCC is part of the larger Pacific Island Climate Adaptation Science Center (PI-CASC) which is one of eight regional Climate Adaptation Science Centers (CASC's) nationally. All of the regional CASC's are partnerships between the USGS and a consortium of universities to develop adaptive capacities of natural and cultural resource managers through climate science research. The headquarters, the National Climate Adaptation Science Center, is in Reston, Virginia and recently ran an [article](#) on the MCC. This article focuses predominantly on the science and not as much on the cultural diversity and approach to "collaboration across worldviews." For a deeper look into these elements, a University of Hawai'i Sea Grant television program, *Voice of the Sea*, featured the MCC and their efforts to bridge the science with the community and culture around them. The *Voice of the Sea* feature can be seen by clicking [here](#). Additionally, for a detailed look into the development of the MCC, check out their 2018 publication in *Environmental Management*.

"In order to bridge the gap, you have to be that gap."

~Kamala Anthony, graduate student & kia'i loko (fishpond caretaker)



Managers maintaining the wall of a loko i'a (traditional Native Hawaiian fishpond) at the mā kāhā (sluice gate). Kia'i loko (fishpond managers), graduate students, and faculty from University of Hawai'i at Hilo all collaborate

Biology Ole Updates

Travis Olson ('93) is working for the Associate Dean for Agriculture and Natural Resources at the University of Wisconsin, Division of Extension. He works on projects and issues ranging from grants to supporting the Lake Superior National Estuarine Research Reserve to developing internal procedures for budgeting and programmatic work plans.

Emily (McConnell) Deckenback, LM CPM ('07) relocated in December to San Diego, CA with her husband – who works in biotech at Illumina – and her two children, Will and Lillian. She will continue practicing as a homebirth midwife after a brief hiatus to unpack the house.

Emma Lee ('13) received a PhD in Kinesiology with an emphasis in Exercise Physiology from the University of Minnesota in November of 2018.

Carter Lukenda ('18) has been accepted to and will be attending the University of Minnesota School of Dentistry next fall. He comments, "Thank

you to all the faculty and staff at St Olaf College, specifically within the Biology Department, who helped me achieve this goal!"

Niels Ryden ('18) has been accepted to the University of Minnesota Medical School and will begin classes August 2019.

Paul McCray's ('76) lab is working on the [gene therapy for cystic fibrosis lung disease](#).

In January, **Lynda Morrison ('82)** began working in a newly created position: Assistant Dean of Pre-Clinical Curriculum at Saint Louis University School of Medicine. Her responsibilities include oversight of and leading change in the first two years of the medical students' curriculum. Years of teaching experience helped her get the position. *"I credit my love of teaching to the great example set by Dr. Ted Johnson during my St Olaf days."* Her secondary challenge is to simultaneously maintain her research lab!

Rachel (Gates) Katkar ('06) published her second article in *Click2SciencePD*. She works at Hamline University in St Paul, MN and is raising a smiley 8-

month-old baby named Ursino, meaning "little bear."

Professor Kathy Shea and alum **Sonja Helgeson ('15)** have a paper that has been published in the journal *Ecological Restoration* entitled [Tree Growth Patterns, Mortality, and Colonization in a Restored Maple-Basswood Forest](#).

Michelle (Kissner) Johnson ('88) has been working almost 20 years part-time as an ultrasound technologist at Mayo Clinic Health System – Eau Claire and also as a self-employed mobile veterinarian performing small animal ultrasounds. She lives in Eau Claire with her daughter (a sophomore at the University of Wisconsin, Eau Claire), her son (who is in middle school), and her husband who works in Eau Claire as a dentist. *"We both went to the University of MN for professional school. We make it back to Minnesota to visit my family fairly often, so I've made it back to St Olaf for a few fun reunions. My Norwegian ties have been strengthened by visits to relatives in Norway and their visits to us in return."*



Class of 2042?

Professor Freedberg and family welcomed
Spencer Michael Freedberg...

Born January 11, 2019 • 7 lb, 7 oz • 21" long

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