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# Second Messenger

St. Olaf College Biology Alumni Newsletter



## Your gift, Your way

Thank you, Biology Alumni, for your gifts to the St. Olaf Fund! Many of you have designated your donation to specifically support the Biology Department. We are grateful! While these gifts are used to financially support current students, strengthen academic programs all over campus, and enrich life on the Hill, your gifts to the St. Olaf Fund show the world how much you love biology at St. Olaf. The Biology Department uses these resources to provide for extra things like student travel to conferences and annual events like the Biology Senior Banquet. Will you consider visiting [stolaf.edu/giving](http://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.

## Congratulations to the newest St. Olaf Biology Alumni!

The St. Olaf College Biology department proudly awarded 90 degrees to the class of 2019. Of those students, 27% were double majors! Well done, Class of 2019! We welcome you as our newest alumni and look forward to all you will accomplish in the future.



### A few of our new graduates (L-R):

Alexis Legigand & Wed Al-nod  
Kim Nissen, Megan Backhaus, Sarah Kolling, Anna Pendergast, Sonya Flaten  
Charlee Skare

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Prof. Umbanhowar next to the blooming agave plant in Regents' Atrium.



Agave offshoot



Corpse Plant's rare twin blooms

## Regents Hall Greenhouse an ideal location for exotic plants!

contributed by Josie Mottram ('21)  
Student Greenhouse Supervisor

Early in July, the Regents Greenhouse experienced the bloom of twin corpse flowers. Corpse plants, *Amorphophallus titanum*, are known for their stinky smell, large size, and rarity of blooming. Twin blooms are especially rare and happens when the bulb splits and a flower emerges from each bulb. The flowers started blooming early in the morning and by the next day they had closed up and begun to wilt. Thankfully for Regents, the worst of the smell only lasted a few hours in the morning but was so strong that you could taste the odor and it made your eyes water. These flowers belong to Gustavus Adolphus College and are being housed in Regents for the year while they build a new greenhouse. St. Olaf does have its own *Amorphophallus titanum*, however it is currently in the leaf stage and will not bloom for another 10-15 years.

## Bio Alumni lead and participate in St. Olaf travel abroad opportunity

St. Olaf offers a wide variety of [travel experiences](#) for alumni. The variety of trips offered is broad enough to accommodate almost any bucket list. John Wilkinson ('73) and Rob Nesse ('73) and their wives Debra (Carlsen) Wilkinson ('75) and Rebecca (Carlsen) Nesse ('73) – yes, they're sisters<sup>1</sup> – made it a family affair this January. Rob and John, who are both family physicians at Mayo Clinic, explored New Zealand on a trip led by fellow alums (and Biology Emertus) Dave and Pat Van Wylen ('80). This active adventure took them from farms to glaciers; beaches to rainforests. "We all had a great time!" reports John.



(ABOVE)  
Steve Swanson ('75) on the 2017 trip.

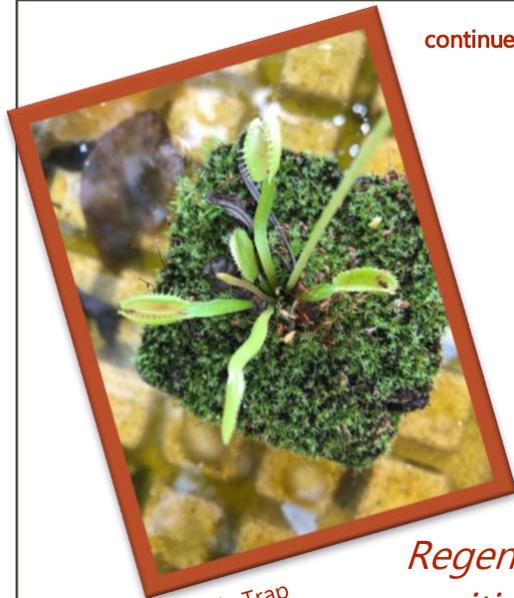


(RIGHT)  
L-R: Dave Van Wylen ('80), John Wilkinson ('73), and Rob Nesse ('73) on Fox Glacier in New Zealand, January 2019

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## Exotic Plants

Regents was also home to an +30-year-old tequila agave plant that bloomed in the fall of 2017. The plant had to be moved out of the greenhouse, first to the roof and then inside to Regents atrium, as it was too tall to fit inside the greenhouse. Agave are also known as the "Century Plant" because they take so many years to bloom. They bloom once and then they die. Although the original agave plant has died, some of the offshoots were transplanted and continue to live in the greenhouse.



Venus Fly Trap

*Regent's Greenhouse is home to many exotic plants; an exciting oasis right here in Minnesota!*

Regents Greenhouse is also home to other exotic plants such as pitcher plants and a venus fly trap. These are carnivorous plants, plants that derive some of their nutrition from prey, usually insects. Venus fly traps have tiny hairs along the inside of the trap that trigger the trap to close. Once the prey is trapped, the plant will secrete digestive enzymes to dissolve and digest the prey. Pitcher plants lure their prey into their "pitchers" which contain digestive fluids, the prey cannot escape and are drowned and then dissolved and digested. One interesting aspect to pitcher plant care is that they go dormant during the winter months. To facilitate this in our plants, we put them in a refrigerator for a few months during the winter.



Pitcher Plant

## Biology Students & Alumni seek connection opportunities...

Are you in a position that supports job-shadowing? Is your current employer looking to hire? Are you looking for an opportunity to share your research? St. Olaf Biology is seeking alumni who would like to connect with current students and/or alumni, whether it be through a seminar presentation, a job interview, or a job-shadow possibility. If this appeals to you, please contact Kathie Towler at [towler2@stolaf.edu](mailto:towler2@stolaf.edu).



L-R: Prof. Eric Cole, Sasha Dmytrenko ('16) and Adrien Ripecky ('17) Photo: St. Olaf College News

## Ole Biology Alumni Updates

**Eden Em ('13)** graduated with a master's of science in business intelligence and analytics (MS-BIA) and a master's in business administration (MBA) from Creighton University in May of 2019. She stayed true to her biology roots by completing a final masters project using predictive analytics to estimate air quality safety in several Iowa locations. Eden used data mining with decision tree and neural network modeling techniques to reveal the factors, dependencies, and interconnections that most impact the quality of our air.



**Gregg Vanderwaerd ('99):** When I was on the student Biology club board and stated at a meeting that I wanted to be a physician that works part time, I remember hearing quite a few laughs. While I changed my career and became a physician assistant, I'm happy to report that as a locum ER provider I just have to work a few shifts a week. In my off-time, I've been busy training for marathons, Ironman Wisconsin, raising my two sons, caring for my mother with Alzheimer's, and running a property management business.

**Wes Braker ('18):** I have been busy working with Rainbow Treecare as a Plant Healthcare Technician. I will be starting a master's degree program at the University of Minnesota's Conservation Sciences program.

**Ola Fincke ('71)** recently retired from the U. of OK Biology and relocated to Portland OR. She still does field research in the neotropics and Italy. Picture is from March, in Costa Rica with best field assistant, Mani.



**Rachel Wieme ('12):** I received my PhD in Soil Science from Washington State University in May (2019)



**Patrick Lytle ('03)** recently became the Director of HealthPartners Behavioral Health Services, leading inpatient and outpatient care.

**Phuong Tran ('12):** I am working on my PhD in Microbiology at the University of Iowa. I study *S. aureus* pathogenesis and recently published a first-author paper in the Journal of Bacteriology along with three other co-authorships.

**Nicole Baldwin ('15)** has recently published an influential paper on Gulf War Illness. The May 16, 2019 edition of the StarTribune ran an [article](#) after which she presented her findings at the Minneapolis VA. Nicole is currently a medical student at the University of Minnesota.



**Najaha Musse ('12)** (far right in photo) was featured in the January 10 article *10 women in medicine who inspire*. See her feature here: <https://thedo.osteopathic.org/2018/09/from-ethiopia-to-the-us-to-haiti-a-journey-to-support-underserved-patients/> Photo Credit: *The DO*



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# Urban Container Farming: Expanding options for the next generation



Shortly after graduation I (Micah Helle, '18) knew I wanted to be in agriculture. Throughout college, I was a program manager at a food rescue nonprofit in Illinois. I saw fields of organic produce and farmer's markets on one side of the industry. On the other side, I saw communities and families struggling to get by financially. Local food has the potential to feed a lot of people in these small towns, but it seemed to be accessible only those who could afford organic and/or local produce. Redistributing the excess of this produce by holding farmer's markets for WIC and SNAP recipients felt

rewarding...I was eager to do more.

Fast forward to me knee deep in the farm fields weeding beds of kohlrabi, harvesting fistfuls of carrots and Swiss chard. My first job after graduating was as a farm hand for a 40-acre organic vegetable operation in northern Illinois. On blue sky days, there wasn't a place I'd rather be. But on days where it was pouring rain, blisteringly hot, or mosquito infested, I seriously doubted my decision to pursue a career in agriculture. I even questioned the longevity and future of sustainable agriculture all together.

My next job addressed this issue entirely. It's all about optimizing the farmer's job and giving young people the opportunity to see a future in agriculture – one that might allow someone to live in New York City and farm! In October of 2018, I flew out to New York and landed a yearlong position as one of eight Next-Gen Farmers with Square Roots in Brooklyn. Square Roots is a tech-enabled urban farm (the brain child of Kimball Musk, and Tobias Peggs). Picture a shipping container with a farm inside. There are ten on our campus! My job here has been to first learn the ins and outs of hydroponic farming and controlled environment agriculture. Secondly, I am beta testing an in-house IOS for growing food. This is a digital platform – essentially an app – that connects with sensors and dosers that allow us to set thresholds, controlling environmental factors like photoperiod, humidity, temperature, water PH level, electrical conductivity of the nutrients in our water, and more with the touch of a button. Yes, I am growing leafy greens for independent retailers and Whole Foods out of a shipping container in New York City! My year is almost up and another round of "what's next" is to come! For more information and to keep up with urban farming, follow my Instagram (@herb.m.grower) and Square Roots (@squarerootsgrow). Who knows, maybe one day we will be growing citrus in Minnesota!



(TOP)  
Using a tablet to control the LED photoperiod, humidity, and nutrient levels

(ABOVE)  
Season 3 cohort of the Next-Gen farmer training program

(RIGHT)  
Harvesting sage in Farm 4



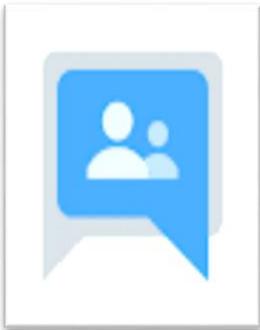
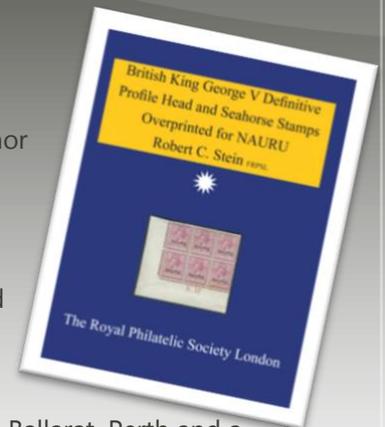
## Ole Updates, continued

**Bob Stein, '52:** Over the years I have had little contact with St. Olaf. I visited in 1964, and attended my 50th and 65th reunions, last in 2017. At that time, I was much impressed with the change toward internationalism, from the relatively parochial tenor of my college days. After I retired as a Biology Professor from SUC Buffalo, my activities changed. My hearing is bad, so I no longer do much bird research or recording. It has become more incidental.

One of the great things about being an environmental biologist is the chance to add to background wherever you are. Last year was a great one for travel. I started with two weeks on the Antarctic Peninsula. Two trips to Europe included Barcelona and London. The last was a trip around the world returning to Australia (and my 1971 home in Perth) and Sri Lanka. I did make a few bird recordings in Antarctica, Sydney, Ballarat, Perth and a national park in Sri Lanka. This year will be a little quieter, though a trip to Norway (hopefully also Svalbard) in May/June and a safari in South Africa in Aug/Sept are planned and expected. It still feels great to be able to travel widely. I missed that while being a caregiver for my wife for several years. She died on January 1, 2017.

My hobby, philately, has taken more time. Last year the Royal Philatelic Society of London published my book *British King George V, Definitive Profile Head and Seahorse Stamps Overprinted for Nauru*.

Now for more writing and travel...



### We've Migrated to Google Groups!

St. Olaf College has migrated its email groups out of the "alias" format and into Google Groups. This move has streamlined the process for keeping the St Olaf Biology Alumni email list up-to-date. If you find you no longer wish to be a part of the group, you can unsubscribe from the group within any email you receive from us. You can also unsubscribe by emailing [bioalumninewsletter+unsubscribe@stolaf.edu](mailto:bioalumninewsletter+unsubscribe@stolaf.edu). If you need to update your email, please email [towler2@stolaf.edu](mailto:towler2@stolaf.edu). Your old address will be removed and replaced with your new one. This will generate a "Welcome Message" as confirmation of the changes made.



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