



# 2<sup>nd</sup> Messenger

Biology Alumni Newsletter

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### Regents Hall Turns Five

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Regents Hall of Natural and Mathematics Sciences ([www.stolaf.edu/regentshall/](http://www.stolaf.edu/regentshall/)) is now about five years old. The Regents Hall Natural Sciences (new building) and link portions of the complex opened Fall 2008, while Regents Mathematical Sciences (renovated Old Music Hall) opened Fall 2009.



We often show the building to people from other colleges who are considering new science/math facilities. A common question is, "What would you do differently?" Thankfully, our answer mostly revolves around somewhat minor issues such as locks on particular doors or how some specific area was wired. We seemed to have gotten the big things right, which is important since the building represented a significant departure from many previous practices. For example, Regents Hall is organized in an interdisciplinary fashion rather than along departmental lines. In a recent survey of the faculty who spent time in the old Science Center, nearly 75% say that they spend more time with non-department colleagues in Regents Hall; interestingly, about 60% say they spend at least the same amount of time with departmental colleagues. Therefore, our goal of maintaining disciplinary ties while promoting interdisciplinary interactions seems to have been largely met.

We also recently completed a five-year follow up to an initial study we conducted comparing Regents Hall to the old Science Center. In our initial study, we compared the learning environment of the teaching labs in the old Science Center during the final year of use (Spring 2008) with that in Regents Hall during the first year of occupancy (Spring 2009). Nearly all students who completed the surveys had experiences in both buildings.

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# Notes from Washington DC

By John Schade, Ph.D.

Associate Professor of Biology and Environmental Studies (on leave)

Program Director, Ecosystem Studies Program, National Science Foundation

I am writing on the Orange Line metro train, riding from my home near Capitol Hill in Washington DC to Ballston Station, which is just a short walk from 4201 Wilson Street, in Arlington, Virginia. Many of my friends in the scientific community will recognize that address as the home of the National Science Foundation. I work there now. I am on leave from my position as faculty in Biology and Environmental Studies at St. Olaf College for the year, serving a rotation as a Program Director in the Ecosystem Studies Program, part of the Division of Environmental Biology, in the Biological Sciences Directorate.



Some of my students say I have abandoned them, and I suppose their feelings have some merit. I prefer to think of it as an investment in the future. My own future as an Ecosystem scientist and teacher, of course, but I also think this is, in some small way, an investment in the institution's future as well. I will provide some justification for this statement a little further along, but I should probably describe the job first.

My job is to provide support and vision for a national community of scientists studying natural and human-dominated ecosystems, pushing our understanding of interactions between species, energy flows, and element cycles into new frontiers of knowledge. This is an awesome and humbling responsibility, and provides me the opportunity to meet some of the smartest and most productive scientists in the world. Most of my time is spent managing the proposal review process and making decisions about what projects to fund to advance Ecosystem science and help to sustain a diverse community of ecosystem scientists.

I have embarked on this mission for three reasons. First, I see it as a unique chance for personal and professional growth. Like a number of my colleagues, I am very committed to maintaining a productive research program that is at the forefront of Ecosystem science because I have a deep and abiding love for the concepts and ideas at the heart of the discipline, and because I believe that Ecosystem Science comprises a set of complex and interdisciplinary problems that provide a rich context for the intellectual development of my students. Maintaining this type of research program at a liberal arts college presents some significant challenges, and I am already learning some lessons here that will more effectively prepare me to meet these challenges when I finish my rotation here.

Second, I believe these lessons can help my colleagues at St. Olaf College and other similar institutions become more successful at overcoming obstacles to their success at acquiring funding from NSF. I believe very deeply in the liberal arts as an educational model. Many of the top scientists that I am now meeting began their academic careers as undergraduates at liberal arts colleges that we consider to be our peer institutions. We are at the frontlines, educating the next generation of scientists and it is very important that we as faculty provide authentic research experiences if we are to properly train our students to be scientific leaders. Understanding how to access programs at NSF can help us provide those experiences, but the intense level of competition for funds here can be daunting. I hope that I can bring some lessons back with me that will help us build on our past successes as an institution.

Third, I believe that maintaining a strong, well-functioning community of scientists requires a commitment from all of us to serve that community when we can. This is one way for me to provide that service. When I was approached last spring by the foundation about this position, I thought about what I had accomplished during my eight years at St. Olaf College, and the role NSF funding had played in making my career possible. I have been fortunate. I have had funding from a variety of programs at NSF all of my years at the College, and that kind of support is worthy of a commitment to serve.

I miss St. Olaf College. I miss my colleagues and my students. I also have fallen in love with DC, and am enjoying making new friends with the folks here in the Division of Environmental Biology. I feel quite confident that this experience will make me a better colleague, collaborator, and teacher. I look forward to sharing the lessons I have learned with the St. Olaf Community. □

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Given the transformation in their learning spaces, it was satisfying but not overly surprising that the teaching labs were deemed much better in Regents Hall. However, we were curious whether asking a group of students who had only had classes in Regents Hall would give similar opinions about the teaching labs. When we repeated the survey with students in Spring 2013, we found that the learning environment was for the most part deemed equally positive when compared to Spring 2009. While there were a few items that seemed to have had a "new building" effect, in general we found that the increased level of satisfaction observed after one year was sustained after five years of occupancy.

In sum, Regents Hall continues to be a wonderful place to do science and mathematics, providing an inviting and inspiring place for inquiry-rich and highly interactive learning. If you have not yet visited Regents Hall, please know you are always welcome. □



## National Conference Creates Academic Buzz

By Kate Seybold '15  
Biology and Environmental Studies Major

Sending an undergraduate student to a national conference is like sending a hungry kid into a candy shop; but instead of a sugar buzz, the student gets a certain kind of "academic buzz". A national conference is an incredible opportunity for an undergraduate to meet and network, consider future career paths, and learn about current research and work happening in his or her field of study. Last summer, I was fortunate enough to attend the 98<sup>th</sup> Ecological Society of America conference in Minneapolis. The three days I spent at the conference were a whirlwind of intellectual stimulation. I attended a wide

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range of presentations; some were applicable to my professional interest in agro-ecology and others that I simply found intriguing. The variety of research that I learned about was fascinating, and certainly made me a more well-rounded student and ecologist. It was exhilarating to hear about the diverse research work that ecologists are doing, and the innovation being harnessed to further our understanding of the world in which we live.

I most enjoyed attending the presentations of Ole graduates and talking with some of them at the St. Olaf reunion dinner. The thought of leaving St. Olaf and entering the scientific community can be a bit daunting and overwhelming for an undergraduate. "Where will I go to graduate school? What will I study? What do I do after graduate school?" are all questions that race through one's mind as graduation year approaches. But attending ESA and talking with past Oles was encouraging and comforting. I not only had a glimpse into a diverse academic community founded upon intellectual curiosity, but also heard about the variety of paths that students have taken upon graduation from St. Olaf.

Overall, my experience at ESA was a wonderful opportunity to consider where I will go after St. Olaf and meet with successful and accomplished individuals who have found their way in the world of science. I hope to have the opportunity to attend ESA again, particularly as a presenter of my own research. I also hope that my fellow peers receive similar opportunities to attend national conferences and see the possibilities that await them after St. Olaf. □

#### **Biology majors and recent alumni and the national conferences they have attended in the last year**

- Chiamaka Isiguzo '14, Society for Neuroscience Annual Meeting (Demas)
- Alison Seline '12 and Michelle Logsdon '13 presented at the Experimental Biology meeting in San Diego in 2012 (Listenberger)
- Emma Cornwell '13 presented at the Ecological Society of America meeting in Minneapolis. Kate Seybold '15 and Sonja Helgeson '15 attended. (Shea)
- Serina Robinson '15, Karin Sather '15, Seth Spawn '14, and Ellen Squires '14, American Geophysical Union, Dec 2013 (Schade). Recent alumni at this conference included Erin Seybold '11, Laurel Lynch '12, Sarah Ludwig '13, and Kateri Salk '12. Kateri won a best poster award. Congratulations Kateri!

## **From the Land of 10,000 Lakes to the Land of the Midnight Sun**

By Caitlin Marine '10

The majority of the people living in Alaska are recent immigrants even for the United States. In the past 18 months, I have found that one of the richest sources of conversation comes from asking why someone came to a place where many people assume polar bears roam the streets. Some of the answers involve Midwestern farming families moving up during the Colony period. Others came for seasonal summer work and never left. Many also cite a love of wilderness and self-sufficiency. When asked the question myself, I say "mountains" or "cross country skiing" or "graduate school" depending on the context.

To step back a few years, I came to Alaska via a rather circuitous path. Following graduation from St. Olaf, I earned a Fulbright scholarship in Norway (2010-2011). I attended a technical school studying Natural Resource Management. In addition to coursework, I did research on grouse in collaboration with the faculty. The project involved compiling ten years of data on tracking studies of habitat and distribution of the black grouse (*Tetrao tetrix*) and capercaillie (*Tetrao urogallus*), which is the European equivalent of the turkey. Spending a year there convinced me that I really loved living near mountains and in northern climates.

I was occupied writing and researching about the natural environment for the year that I spent in Steinkjer, but when I returned, I realized that I had a lot of experiences that I didn't want to forget. I began talking about writing a book to compile the stories and funny encounters of a year spent in a small town where I could go days without speaking English. After returning home, I made a list of stories and began recording the details before I forgot names and places. Initially, it was a project that I thought I would share with close friends and family, but enough people showed interest that I decided to self-publish. It took nine months to write the book (titled [If you call a moose a mouse](#), and available through [authorhouse.com](#) or [amazon](#)) as I was working various part time jobs while living in Boulder, Colorado. I had moved there as an intermediate step between Norway and graduate school because I wanted to continue to live with mountains in my back yard.

Following the publishing of the book in May of 2012, I returned to Norway with another Fulbright student named Tyler King.



We planned a 3,100 mile bicycle tour to cross the county from south to north and visited the friends we had made there. In addition to seeing more of the beautiful fjords and mountains, we met new friends on home stays and while riding. Neither of us had done a long distance bike tour before, but we found it to be an incredible way to travel. I returned from Norway to re-pack my bags and head to Alaska, where I had been accepted into graduate school.

I am now completing my degree in Outdoor and Environmental Education at Alaska Pacific University. The program is flexible and designed to incorporate a practical teaching component in the student's area of interest. For me, cross country skiing was the natural answer for what I had the skills and interest to teach. I was on the Nordic ski team for four years at St. Olaf and those same skis have traveled all over the world with me. They are a tool I have used to meet people and make life-long friends. While in Norway, I volunteered with the local ski club, helped at the national championships, and still keep in touch with some of the people I met through skiing.

Last year I was a coach for the local high school ski team and this position involved travel on many weekends to ski areas all over the state (Fairbanks, Valdez, Homer, Kenai, etc). It was an amazing way to see what Alaska looks like in the winter, while learning not just how to coach, but about how to manage 30+ teenagers on overnight trips. This year I am a skiing instructor for APU in multiple programs. I coach adult and women's groups at the Nordic Ski center and teach Nordic skiing as an adjunct professor to undergraduates.

Currently, I am finishing my thesis, which is an evaluation of a home school extension program based in Palmer that focuses on outdoor and environmental education. I taught at the school last year and since it is a relatively new program, I wanted to investigate how well it was accomplishing its stated goals and objectives. Following graduation, I am searching for opportunities to continue to live and work in Anchorage while exploring the Last Frontier. □

*Image: Flattop mountain, Anchorage, Alaska*

## The Wind Wolves Preserve

By Landon Peppel '11

It's been a great run! I started off as a ranger in summer 2012, and I now work at the 93,000 acre nature preserve, called Wind Wolves Preserve, in Southern California as the preserve manager. Wind Wolves Preserve is owned by The Wildlands Conservancy. The preserve is an incredible property, check out the webpage.

[http://www.wildlandsconservancy.org/preserve\\_windwolves.html](http://www.wildlandsconservancy.org/preserve_windwolves.html). It's the largest non-profit preserve on the West coast, spanning from 600' in elevation up to 6000' across about 145 square miles.

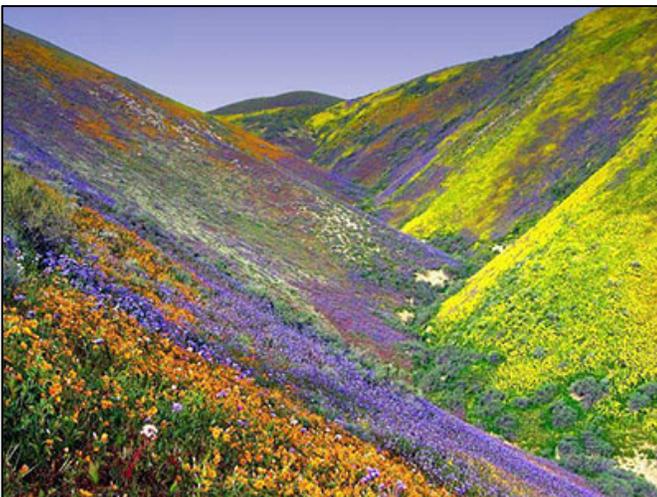
We have a fairly diverse staff of outdoor educators, rangers, biologists, and maintenance personnel. We offer free camping, hiking, nature tours, and outdoor education programs to the general public. It's something like a privatized free version of a national park. We run solely off donations.

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Every year, over 10,000 school children come up from the inner-city schools and are taught a lesson plan on the preserve from one of our trained naturalists. The program is award winning and wonderfully designed! Many of these children have never experienced nature and come from underprivileged backgrounds. During the weekend we host small (less than 100 people) nature based programs, like the "Plant and Play" program last week where families helped us plant a few hundred native species in our planters around the office. We discussed the beneficial insects that utilized the plants and the significance of their role in the ecosystem to the children.

One of the main focuses I want to add to our preserve is more college-oriented curriculum. A few hundred college students have helped us in service learning projects, guided hikes discussing natural resource management, preserve tours, and other types of activities this year. I would like to increase this demographic. We have excellent winter camping facilities and a whole lot of topics to study; including a few endangered species such as the California condor, blunt-nosed leopard lizard, san joaquin kit-fox, Buena Vista lake shrew, and the Bakersfield cactus. We also have mountain lions, tule elk, black bears, coyotes, bobcats, mule deer, and so much more!

The preserve is massive (think 4+ hours in 4x4 to drive across). Snow typically caps the upper elevations in January, and the flats are beginning to turn green with the non-native *Erodium* (fillaree) beginning to grow and bring the tule elk down from the hills. Our Mission: To preserve the beauty and biodiversity of the earth and to provide programs so that children may know the wonder and joy of nature. □



## **Sarah Anderson '08**

After graduating from St. Olaf in 2008 with a Biology degree and Biomedical Studies Concentration, I pursued a career in Health & Wellness Coaching at Medica Health Plans in Minnetonka, MN. In 2009, I began pharmacy school at the University of MN College of Pharmacy while continuing to work part-time at Medica. I graduated this past May (2013) with a Doctorate of Pharmacy (Pharm.D.) degree, proposed to help develop a residency program within the Pharmacy Services department at Medica and . . . my proposal was accepted! Therefore, I am currently completing a one year Post-Graduate Year 1 (PGY1) Managed Care Residency Program at Medica.

## **Brittany (Bensch) Dean '12**

I just finished my General Practice Residency at the University of Washington and I am now working as a community health dentist in Everett, Washington. I love it!

## **Jean Anderson Dunham '99**

Greetings from Texas, y'all! I graduated from St. Olaf in 1999 with Biology major. I remembered being mentored by Anne Walter, Dave Van Wylen, and Ted Johnson. I think of St. Olaf often and am so excited about the new science center and the development of the biology program. I used my degree to go to medical school and become a child and adolescent psychiatrist. I moved to Texas to be closer to family and am now in Austin, and officially finished with training in the academic world! I love my work and have found a way to incorporate my love of writing as well, by editing our professional news magazine, AACAP News. My heart has always been for child development, therapy, and spirituality. After my children get a little bit older, I will have more time to dedicate to this field. The world needs more child psychiatrists and workers in the field of mental health. It is a terrible, but beautiful field. I'm so thankful for the relationships and mentors I had at St. Olaf for helping me along the way.



Jean Anderson Dunham and her twin boys Oliver and Sawyer

## **Genevieve Fridlund Dunton '98**

Genevieve Fridlund Dunton PhD, MPH is an Assistant Professor in the Department of Preventive Medicine at the University of Southern California. She recently received a 4-million dollar grant from the National Heart Lung and Blood Institute to conduct a 5-year study of how stress in working mothers influences obesity risk in children. She is also the Chair of the Public Health Sector



Panel of the National Physical Activity Plan.

## **Judi A. (Chenevert) Roux, Ed.D. '90**

I just received my Ed.D. (Doctorate in Teaching and Learning) from UMD in May. I am currently an adjunct instructor for UMD teaching BIOL 1001 Biology and Society and also an adjunct instructor at the College of St. Scholastica teaching science methods to pre-service teaching candidates.

## **Marc Tompkins '99**

Two and a half years ago, I completed all of my orthopedic training and joined the University of Minnesota faculty as an assistant professor. I work as a sports medicine orthopedic surgeon, based at TRIA Orthopaedic Center in Bloomington. I am grateful for my science background from St. Olaf and now strive to follow the lead of my St. Olaf professors as I train medical students, residents, and fellows.

Email [bioalumnews@stolaf.edu](mailto:bioalumnews@stolaf.edu) and let us know what you are (or aren't!) doing with your biology degree. We will include it in the next alumni newsletter. Pictures are great too!