LETTER FROM THE DEAN

Dear Friends of NSM,

Welcome to the latest issue of The Continuum. The new students have arrived, and the excitement is palpable. Fall is officially here.

In this newsletter we welcome our six new faculty members and provide details of the interviews we had with them. We highlight the new Molecular and Cellular Biophysics PhD program which was created by faculty members across the Division. There is also an article on DUing Something in Geography, which focuses on Dr. Matthew Taylor and his students’ work in Latin America. Our student highlight will introduce you to Debbie Mitchell, a graduate student in the Department of Chemistry and Biochemistry, who received an NSF Graduate Research Fellowship.

Finally, we recount the Alumni Symposium and the NSM faculty who participated.

If you’re ever in the DU area, please do stop in and visit us. Also, check out our newly redesigned website at www.nsm.du.edu.

Sincerely,

L. Alayne Parson
Dean, Division of Natural Sciences and Mathematics
Debbie Mitchell, a doctoral student in the Department of Chemistry and Biochemistry, recently gave a talk, via Zoom, on her research. She has been awarded a National Science Foundation (NSF) Graduate Research Fellowship – a very competitive award offered to only the most distinguished scholars.

The NSF Graduate Research Fellowship program recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master’s and doctoral degrees.

This year, Mitchell was awarded the fellowship for 2,000 students across the United States, and the acceptance rate for applicants was only 8%. The application process for the award is very extensive, and it took her three months to complete and then two months to hear back. For Debbie, she never expected to win; however, her advisor, Dr. John Kinnamon, encouraged her to apply, as he was very proud of her work and research.

When I received the NSF fellowship, I was very surprised and shocked,” Debbie writes in an email. “I think it’s a combination of all of my work that has contributed to me getting this fellowship. It has been a long process, and this is an honor and a privilege to work on it. I feel very fortunate and humbled. There are a lot of really qualified people that apply for these grants, so I just felt very grateful that I was chosen.”

Awarding the fellowship is a very arduous process. It involves selecting the top 2,000 students from across the United States, and the success rate for applicants was only 8%. The application process for the fellowship is very difficult, and it is not until the third round that the competition is reduced from 2,000 to 1,200, and then to 600, to a final selection of 200. The winner is notified that they have won the fellowship, and they will pay off large loans after graduation. Graduate aid contributes to the total financially, enabling students to focus on their research rather than worrying about how they will be funded, and how they will pay for their living costs. Mitchell’s work is funded through the invaluable research that DU has maintained for so many years.

Debbie began her college career as a chemical engineering major at Brigham Young University, although she completed majors in chemistry, biochemistry, and molecular biology. Mitchell also notes that her research in electrical engineering was a result of Dr. John Kinnamon’s involvement in the Department of Chemistry and Biochemistry.

She writes that, “Working with the Eatons is a wonderful experience. Both Sandy and Gareth are very knowledgeable, and they offer so many unique opportunities to learn. I feel grateful to work with advisors that are so well respected in their field and are very approachable and knowledgeable about the field that I love and enjoy.”

Debbie Mitchell says that her research involves the development of a new way of detecting unstable radicals that are involved in biological processes. A long-term goal is to study oxygen concentrations in tumors and track them more efficiently.

The goal of her research is to study unstable radicals that are involved in biological processes. It is long past due to study oxygen concentrations in tumors and identify how the tumors will be affected. Mitchell’s research involves the development of a new way of detecting unstable radicals that are involved in biological processes. A long-term goal is to study oxygen concentrations in tumors and track them more efficiently.

It is open to anyone with an interest in the senses of taste, smell and the common chemical needs to build a bright future. Keep an eye on Debbie Mitchell. With a start like this, she has the resources she understands the fundamentals of chemistry, they are able to move on to the neat concepts. “It’s like learning a language at first,” she says. “But once a student understands the fundamentals, they’re able to understand the language and vocabulary needed to grasp the meaning.”

More highly educated teachers are needed in high schools now, especially with more schools offering advanced placement and IB [International Baccalaureate] courses.”

Upon graduating, Mitchell plans to find a job teaching. Although she is not sure what she would like to teach, she thinks the community college and high schools are appealing.

She also notes that while students might find chemistry to be complex, oftentimes it is only because of the language and vocabulary needed to grasp the concepts. “It’s like learning a language at first, you don’t understand it. But once students understand the meaning, they are able to move on to the next step and exciting activities that it offers.”

The Alumni Symposium is an annual event that recognizes and celebrates the academic traditions at the University of Denver. It is open to anyone with an interest in lifelong learning. This October, three professors from the Department of Biological Sciences participated in the symposium.

Dr. John Kinnamon offered a lively discussion about how biological response to climate change is documented and measured – in Colorado and beyond. His presentation encouraged audience participation, and he demonstrated new human senses such as vision and sound.

Dr. Anna Sher’s talk focused on tracking climate change. She presented some of the latest research about how biological response to climate change is documented and measured – in Colorado and beyond. The presentation included new human senses such as vision and sound.

Dr. Shannon Murphy, associate professor in the Department of Physics and Astronomy, also participated in the symposium. Her presentation focused on expanding on the work of a recent physics student who received a prestigious NSF fellowship. By exploring the concepts of particle physics and quantum mechanics, students gain a better understanding of the world around them. These concepts are fundamental to understanding the behavior of matter and energy, which is essential to advancements in technology and medicine.

For more information on this year’s event, or to keep an eye on next year’s schedule, please visit www.alumni.du.edu.
Debbie's research involves the development of a new way of detecting unpaired radicals. It is a real honor to work with them."

"I feel grateful to work with advisors that are so well respected in their field and exciting activities that it offers."
I am very excited to have brought back 86 pounds of soil to traditional perspectives and practices. No research of this type has been done in the classifications and knowledge held by locals. I developed a method to with 8 other DU students and an outstanding Nicaraguan family of 4. Traveling

“The time I spent in Nicaragua was a memorable and beautiful experience shared Eliot Andre is currently a senior in the Department of Geography where he is a connection that is valuable as a learning experience, a way to broaden things, as well as pursue ways to positively impact these communities through

I heard through various peers about the project in Nicaragua and got on

"Having just finished my undergraduate work at DU, I was looking for a next

and Spanish.

Undergraduate Research Center (PINS). DU alumni are encouraged to become

Service Learning (CCESL), the DU Office of Internationalization, and the DU

school of sustainability where locals and students learn and practice. They

Since 2007, Dr. Taylor has introduced over 50 DU students to Gigante. About 10

food. While they recognize that they can make money from the recent influx of

collaborative research project on issues of social and environmental sustainability.

In 2005, Dr. Matthew Taylor took a slight detour from his research in Guatemala.

student Voices: doing something in nicaragua

people. I can't wait to return."

enthusiastic about explaining their practice. The whole experience was incredibly

technique that is involved with the changing phases of the moon. I talked to

was focused on researching local knowledge of lunar harvesting. This was

Science.

There is never a dull moment as a Lecturer in the Department of Geography.

The University of Denver is the perfect place for

Dr. Trigoso looks forward to teaching at DU for

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I interviewed Ruffino, our host father, about the soil and land, and he had a very casual and honest conversation with me. He shared his knowledge and perspective on the local agriculture and the land management practices. Ruffino emphasized the importance of respecting nature and the local ecosystem. He explained how the soil quality affects the crop yield and the health of the crops. He also shared some traditional methods of soil preparation and pest control that are still practiced in the area.

Ruffino's knowledge about the soil and land was fascinating. He talked about the importance of using natural fertilizers and avoiding chemical pesticides. He also shared some insights about the impact of climate change on agriculture and how farmers are adapting to changing weather patterns. His insights were valuable and provided a unique perspective on the local environment and agriculture.

Ruffino's knowledge and perspective were invaluable as we worked on our project to improve the local agriculture and land management practices. His insights helped us to understand the local context and culture, and we were able to develop a more effective approach to our project.

In conclusion, my time in Nicaragua was a memorable and beautiful experience. I learned a lot about the local agriculture and land management practices. I was impressed by the dedication and hard work of the local farmers and appreciated the opportunity to work with them. I am excited to share my findings and recommendations with our organization and to continue working to improve the local agriculture and land management practices.
In 2005, Dr. Matthew Taylor took a slight detour from his research in Guatemala. At the request of Dr. Robert Dull, a geographer at UT Austin, he travelled to the Pacific coast of southern Nicaragua to evaluate the potential of a collaborative research project in the area of food and environmental sustainability. Mat-tew’s goal was to understand not only how local people were using the land, but also how they were managing resources. The project focused on an area near the border of Nicaragua and Costa Rica in the Las Salinas/Tola area.

Since 2007, Dr. Taylor has introduced over 50 DU students to Nicaragua. About 90% of these students have chosen to maintain ongoing relationships with the area, participating in collaborative research projects, service-learning experiences, and teaching. For many of those students, coming back to Nicaragua is an integral part of their academic and professional development. They are not only interested in learning more about the people and topics they encountered within their first visit, they also want to contribute to the ongoing projects that have already been started there, but also beginning one of my own. By teaching English, I realized that I was in a unique position to give to the communities of Nicaragua and the rest of the country, as well as learn more about the culture and its people.

My goal for the summer was to combine scientific knowledge about the soil with the skills of communicating knowledge back to local communities. First, I wanted to develop a method to compare farmers’ perceptions of soil properties to what I learned from analyzing the classifications and knowledge held by locals. I developed a method to compare farmers’ perceptions of soil properties to what I learned from analyzing the classifications and knowledge held by locals. I developed a method to compare farmers’ perceptions of soil properties to what I learned from analyzing the classifications and knowledge held by locals. I developed a method to compare farmers’ perceptions of soil properties to what I learned from analyzing the classifications and knowledge held by locals. I developed a method to compare farmers’ perceptions of soil properties to what I learned from analyzing the classifications and knowledge held by locals.

I interviewed Ruffino, our host father, about the soil and land, and he had a very different experience than I had had before while traveling with Matthew [Taylor] and Spanish. Jenny Nelson graduated from DU with a double major in International Studies and Spanish.

Our work this summer is a small part of what can be a great project to create a meaningful change for the people of Gigante, setting the stage for new understanding between the people of Gigante and DU students, establishing a connection that is valuable as a learning experience, a way to broaden students’ perspective and ‘internationalize’ learning, and create meaningful change for these communities (Contact: JPB).”

The Biophysics Steering Committee, from left to right: Todd Blankenship, Michelle Knowles, Sean Shaheen, Martin Blankenship.