



THE ROAD NOT TAKEN . . .

-CONTRIBUTED BY DR. SHERYL ZAJDOWICZ

**Two roads diverged in a wood, and I -
I took the one less traveled by,
And that has made all the difference.
-Robert Frost (1874-1963)**

Much like the traveler in the timeless poem by Robert Frost, MSU Denver Biology students are taking the road less traveled. Despite the typical undertaking of semesters packed with challenging courses and various other commitments, many Biology students also embark on the path of undergraduate research, a journey that frequently has as many trials and tribulations as climbing to the summit of a fourteener, or perhaps reaching even higher summits of Mount Everest or Mount Kilimanjaro.

This past April, over 200 students from various disciplines presented their research, scholarly works, or creative projects at the 3rd Annual MSU Denver Undergraduate Research Conference: A Symposium of Scholarly Works and Creative Projects. It is no surprise that the Biology Department had a tremendous showing, having over 50 students presenting either oral or poster presentations! In chatting with many of the presenters, some of them described the extraordinary pitfalls and milestones that they encountered on their projects. Many of them commiserated with one another about how their projects were fraught with failure. And yet, the overwhelming sense of accomplishment that each



Photo courtesy of S. Daniel

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student expressed was truly enlightening about the overall experience. A sense of direction was attained through the undergraduate research experience, whether to continue to seek out research opportunities as employment, or through continued graduate education, or even to no longer continue on the path of research, but to pursue other incredible opportunities that a degree in Biology can offer. In any case, the road less traveled was taken...and, it made all the difference.



This year's 1st place winner for outstanding biology presentation, Victoria Ratcliffe, presents her poster to Dr. Doug Petcoff. *Photo courtesy of S. Surine*



Cole Archer and Letitia Salazar-Monk pose in front of their research poster on the dietary overlap in dove species of Colorado. *Photo courtesy of S. Surine.*



Senior Biology student, Kaylee Thorson, caused a bit of excitement with her research subjects from her Animal Ecology research project. *Photo courtesy of S. Surine*



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AN EXPERIENCE TO REMEMBER... PLANT TAXONOMY FIELD TRIPS

-CONTRIBUTED BY DR. BILL BAXENDALE

This Fall, students in BIO 3180, Vascular Plant Taxonomy, an upper division botany class taught by Dr. Baxendale, have taken two field trips, one to Genesee Mountain Park in early September, and one to the Aurora Municipal Xeriscape Garden later in the month. Students had a chance to use their identification skills, observe plants in their native habitats, and get a feel for the ecological setting in which the plants live. Getting into the field gives students a small introduction to the fieldwork they may encounter later in their botanical careers.



The whole gang at Genesee Mountain! *Photo courtesy of B. Baxendale*

The Genesee Mountain Park is just west of Denver; it was the first mountain park, and the land was acquired between 1912 and 1926. The Park has over 2400 acres and exemplifies the montane habitat. Despite the late summer setting, many plants were still in full bloom. After the trip, students ate their lunch in the pleasant setting.

The Aurora Municipal Xeriscape Garden, a 6 acre garden created in 2002, is located on the east side of the Aurora Municipal building. It serves as an educational demonstration garden for the community to show how to create a water-conserving garden that is



Students working on plant ID at the Aurora Municipal Xeriscape. *Photo courtesy of B. Baxendale*

still an attractive feature for the home. Many of these plants have their origins in the high plains, and are thus comfortable in the dry Denver climate. The class was given a tour of the garden by Zack Versluis, a member of the City's Water Department.

Students look forward to these forays into the natural world, and are always eager for the opportunity to look at plants in their natural setting.



Asters and Kingsley's Dream. *Photo courtesy of B. Baxendale*

ANIMAL BEHAVIOR AND SO MUCH MORE...

-CONTRIBUTED BY DR. JENNIFER GAGLIARDI-SEELEY

This summer, Dr. Jennifer Gagliardi-Seeley took three of her research students to Princeton University for a national Animal Behavior Society meeting. Alyssa Herrin, Lauren McHenry, and Kim Setnor presented a poster titled, "Male mate choice and pair-bond success in the monogamous, biparental convict cichlid (*Amatitlania nigrofasciata*)". In addition to presenting, they were able to attend many talks and network with professionals across the discipline. This exposure helps shape the future of our undergraduates in many ways.



Biology students Kim Setnor, Alyssa Herrin, and Lauren McHenry with Dr. Jennifer Gagliardi-Seeley at the Animal Behavior Society meeting. *Photo courtesy of J. Gagliardi-Seeley.*

UNDERGRADUATE RESEARCH CONFERENCE



A SYMPOSIUM OF SCHOLARLY WORKS AND CREATIVE PROJECTS



METROPOLITAN STATE UNIVERSITY
OF DENVER
Undergraduate Research Program

Upcoming Information Session

Participating in Undergraduate Research: Your Ticket to Grad School & Beyond

When: Wednesday, November 5, 2014, 2 p.m. – 3 p.m.

Where: 325 Administration Building

RSVP: Email undergradresearch@msudenver.edu
Subject line: Participating in UR RSVP, November 5
Walk-ins are welcome but RSVP is preferred.

Workshop attendees will receive a tote bag.

Undergraduate Research Conference coming May 1, 2015!

Conference is open to ALL MSU Denver Students!

Registration Opens: February 2, 2015

Registration Closes: April 3, 2015

Questions? Contact us:

Applied Learning Center, 303.556.3290

undergradresearch@msudenver.edu

MONTEREY BAY...A TOTAL IMMERSION EXPERIENCE

-CONTRIBUTED BY DR. CYNTHIA CHURCH

A combination of lectures and hands-on exploration at Monterey Bay made the summer Marine Biology course a total immersion experience. This intensive one-week class drew on the diverse flora and fauna of Monterey Bay, home of the nation's largest marine sanctuary, and focused on issues of conservation of the ocean and coastline. We also utilized the facilities at the Monterey Bay Aquarium (MBA), home to an 8.5 meter (28 foot) kelp forest exhibit and a 4,500,000 liter (1.2 million gallon) "Open Sea" tank. Students read "At the Water's Edge: Fish with Fingers, Whales with Legs, and How Life Came Ashore but Then Went Back to the Sea" by Zimmer before the course began, and each participant became our local expert in an area such as animal or plant identification, MBA interning, or ocean stewardship. Several students chose to present in an "outdoor classroom" as a part of the experience of exploring tide pools.



Marine Biology students with Dr. Cynthia Church.
Photo courtesy of C. Church



Marine Biology students exploring and enjoying the wonders of Monterey Bay. *Photo courtesy of C. Church.*

MSU DENVER BIOLOGY CLUB EVENTS

Upcoming Events for the MSU Denver Biology Club:

October 22, 2014 @ 12:30pm in SI 1067: Ross University School of Veterinary Medicine

October 29, 2014 @ 5:00pm in SI 1086: Halloween Party and Club Meeting

Other upcoming events: Dates and times to be determined:

Dr. Chacon speaking on drug resistant microbes and pharmacy school.

Dr. Liu - Snail Research and how to join a research lab

More information regarding the MSU Biology Club can be found:

Facebook: <https://www.facebook.com/MSUDenverBiologyClub>

Website: <http://msudbiologyclub.weebly.com/>



The Biology Club is also actively seeking faculty and staff who would like to present on their research or a key topic of interest. Please contact the Biology Club at: biologyclub@msudenver.edu

MSU DENVER BIOLOGY CLUB EVENTS

Learn more information regarding these events through OrgSync!!

Become a member or find additional events and information through www.orgsync.com or on our Facebook page: <https://www.facebook.com/MSUDenverBiologyClub>

COLORADO WILDLIFE FEDERATION: MSU DENVER CHAPTER UPCOMING EVENTS

November 5, 2014 5:30-6:30pm in Science Building (Room TBD):

Polly Reetz of the Audubon Society of Greater Denver Conservation Committee will update us on the status of the Colorado Water Plan and the revision of the State Wildlife Action Plan – both of which are in the draft stages. She can also address oil and gas development, wind energy development, Chatfield reallocation plan, and other local issues in which her committee is currently involved. Polly has been a member of the Conservation committee for a number of years, and works closely with Colorado Environmental Lobbyists and the local community to bring awareness to issues affecting natural areas



WANT TO CONTRIBUTE TO THE NEWSLETTER?

At this time, the newsletter is scheduled to be prepared during the fall and spring semesters. However, additional newsletters may be prepared per semester if a great number of entries have been received.

Biology Faculty, Staff, Students, and Alumni: if you have an accomplishment (ie awards, acceptance into a fellowship, entry into graduate or professional school, presentation at local, national, or international meetings, or publication) that you would like to showcase in the newsletter, please send a brief summary and any photos to **Dr. Sheryl Zajdowicz** at dr.zbiology@gmail.com. We are also looking for any photos of anything biological to include in upcoming newsletters. Faculty, who would like to have their research highlighted in an issue of the newsletter, may also submit their request and a synopsis of their research with any appropriate images; please indicate if you are looking for research students. Also, any club who would like to have their events advertised may send their information at the start of the respective semester.

This newsletter is compiled and edited by S. Zajdowicz. Photograph credits: Unless otherwise indicated, S. Zajdowicz provided the photographs used in the making of this newsletter.