“Choose a work that you love and you won’t have to work another day.” —Confucius

After over 16 years as a beloved botany professor in the Biology department at MSU Denver, Dr. R. William “Bill” Baxendale will retire this upcoming June. As someone who always says “hello” to those he passes in the hallway and enters classrooms with a boisterous “Good morning” or “Good afternoon,” Dr. Baxendale has been a favorite professor and valued colleague during his time at MSU Denver. While Dr. Baxendale will officially be retired after this June, he has graciously agreed to teach Paleobotany during the fall 2017 semester because in his words “I’m happy to help. Use me in any class where you need me.” Those two statements really help to give an idea of what Dr. Baxendale provides for the Biology department.

With his pending retirement, we asked Dr. Baxendale to provide a little information regarding his career and what lead him to MSU Denver. Many thanks go to Dr. Baxendale and his wife Betsy for sharing insight into an amazing career. As you will see, Dr. Baxendale has had a broad career that has encompassed teaching, research, and stints as both a microbiologist for Birds Eye Foods, and as a palynologist for Amoco Production Company.

What’s a palynologist?
A palynologist is someone who studies plant pollen, spores, and certain microscopic plankton organisms (collectively termed palynomorphs) in both living and fossil form.
Having grown up in the agricultural area of Wayne County, New York, Dr. Baxendale’s initial influences were both biological and medical. He was encouraged by both his dentist and his physician to consider a career in either of the two professions, but the agricultural roots of his region, and the influence of both his microbiologist mother and his Great Aunt (an amateur botanist), won out. (Dr. Baxendale has had an abiding interest in medicine, however, for all of his life.)

Dr. Baxendale graduated from Hiram College, in Hiram Ohio, in 1968 with a degree in Biology where he was influenced by Dr. Lawrence Berg to pursue a career in botany. There he met his wife Betsy, where both sang in the College Concert Choir. He went on to the State University of New York at Geneseo where Dr. Arch Reid’s interest in plant ecology lead him to write his thesis on physiological plant ecology. His teaching assistant experience led him to consider a career in teaching.

From Geneseo, Dr. Baxendale went to the University of Kansas (Lawrence) with the intention of a Ph.D. in plant ecology. As experiences often evolve, Dr. Baxendale became fascinated with fossil plants under the mentorship of Dr. Robert Baxter, and received his Ph.D. in 1977. For his dissertation, he examined the Middle Pennsylvanian genus *Cordaites* from Kansas and Iowa coal balls.

From Kansas, Dr. Baxendale and Betsy travelled to the University of Reading, England where he spent a post-doctoral year working with Dr. Peter Barnard and Dr. Tom M. Harris, the latter of whom became a life long friend. Following another post-doctoral year at Arizona State University with Dr. James Canright, Dr. Baxendale taught at Oklahoma State University briefly before accepting a position as a palynologist with Amoco Production Company. When oil prices took a downturn, Dr. Baxendale’s interest in the fruit industry from his childhood days lead him to Cornell University, before accepting a teaching position at the University of Denver’s Teikyo program working with Japanese students interested in an American style education. Wanting to return to his botanical roots, in 2001, Dr. Baxendale accepted a biology position at MSU Denver, where he has taught a broad spectrum of courses that reflect his many interests and has enjoyed...
his interactions with both students and faculty. In 2008, Dr. Baxendale was awarded the Tenured Faculty Teaching Excellence Award.

Dr. Baxendale’s easy style has attracted students to the field of botany, and his belief in “hands on” science is obvious in his popular field trips to Florissant National Monument, Genesee Mountain, and the Aurora Municipal Xeriscape Garden in Aurora, Colorado.

Dr. Baxendale’s non-academic interests include reading (many genres of fiction and a variety of nonfiction), listening to all genres of music, birding, and gardening. Dr. Baxendale also wanted to emphasize that he’s also an avid hockey fan.

So, what’s next for Dr. Baxendale? He and his wife Betsy are looking forward to attending more concerts, some travel, seeing family and friends, and exploring various national parks and fossil localities.

Thank you, Dr. Baxendale, for your commitment to the success of MSU Denver, the Biology department, your colleagues, and most importantly to all of your students!

Want to know more about opportunities in the field of botany? Please visit with a Biology advisor today!
Hello! My name is Liz and I’m the new Program Coordinator for Biology. I graduated from MSU Denver in 2015 with a B.A. in Anthropology, minor in Biology. As an undergraduate, I did research on nasal function and adaption, investigating climatically-driven variation of the human skeletal nasal cavity. Since graduating, my areas of interest have expanded and I am now pursuing a B.S. in physics. To supplement my passion for science and STEM education, I co-founded the Women in STEM group at MSU Denver and volunteer at the Denver Museum of Nature & Science as a museum guide and telescope operator. In my free time, I enjoy reading, watching Doctor Who (classic and new), listening to Pink Floyd, crocheting hyperbolic models of the universe, and talking about space. Also, microbes are cool.

I am very happy to join the Biology Faculty at MSU Denver. I am currently teaching Anatomy & Physiology and Advanced Physiology. I am teaching Neurobiology this Spring, as well as in the summer. I have extensive training and experience in Neuroscience. I am looking forward to teach my area of expertise. I love teaching and sharing knowledge with my students and my colleagues. I am grateful to work with very good people! I got my Master’s degree in Biological Sciences with a concentration in Cellular and Molecular Biology and my Ph.D. degree in Medical Sciences with a concentration in Neuroscience at the University of São Paulo, Brazil. In my last postdoctoral position at Yale University I developed a new animal model for the study of Tourette Syndrome. Regarding my future line of research, I aim to study neuropsychiatric disorders, specifically anxiety-like behaviors, using Zebrafish as an animal model. We will use behavioral and psychopharmacological approaches to investigate the involvement of histamine in the modulation of anxiety-like behaviors.

Dr. Lissandra Baldan Jenkins. Photo courtesy of L. Baldan Jenkins.

Want to know more about opportunities in the field of neurobiology? Please visit with a Biology advisor today!
This past July, Dr. Jennifer Gagliardi-Seeley and eight MSU Denver biology students presented their research on the behavior of snakes and fish at the Joint Meeting of Ichthyologists and Herpetologists in New Orleans, Louisiana. This experience gave these undergraduate students the chance to present the research that they had been working on for several months. The work that was presented was either from independent research projects conducted under the mentorship of Dr. Gagliardi-Seeley, or was as a result of projects from a Reef Ecology course that was lead by Dr. Robert Hancock. In addition to presenting, students were able to see many different presentations on cutting edge research, including topics such as DNA analyses of snakes, acoustic behavior of frogs, tagging Great White sharks for conservation efforts, and even infectious agents that plague fish and amphibians. Furthermore, this was an excellent opportunity for these students to not only present their findings to experts in their respective fields, but also to network with other researchers for future internships, graduate positions, and/or jobs.

Are you interested in learning more about internship and research opportunities? Speak with a Biology faculty advisor today!

Additional information regarding undergraduate research can be found on the Applied Learning Center’s website.
This past fall, the BIO 3180 Plant Taxonomy class took a field trip to Genesee Mountain Park to get hands on experience in using a key to identify plants in an outdoor setting. 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. Taking the class from the laboratory to a real world setting provides valuable experience that translates into resume building skills for careers in field botany, eradicating invasive species, and other plant science related fields. 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.

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.

Rarely do institutions offer this course at an undergraduate level. Former students often remark that this one course set them apart from other job applicants and enabled them to get a position in the plant sciences. Metro students who are working professionally have been employed by the Bureau of Land Management, the Colorado State Department of Agriculture, or have successfully completed their doctorates in the plant sciences.

Dr. Baxendale assists Plant Taxonomy students while in the field. Photo courtesy of B. Baxendale
The 6th Annual MSU Denver Undergraduate Research Conference: A Symposium of Scholarly Works and Creative Projects will take place on Friday, April 21, 2017 in the North Classroom Atrium. The conference showcases the diverse set of scholarly works and projects in which MSU Denver students engage. Current MSU Denver undergraduate students and December 2016 graduates may present any research project that they completed or have in progress. Any student wanting to present at the conference should submit an abstract by midnight on March 17th. Individuals who simply want to attend the conference should register by midnight April 12th.

This year’s conference will feature Dr. Nicole Garneau, who will be presenting her keynote seminar entitled: “From Failure to Setback, From Setback to Success.”

For registration, conference details, and workshop schedules, please visit the Undergraduate Research Program website at: tinyurl.com/MSUDenverURC
BIOLOGY READING LIST
- CONTRIBUTED BY VARIOUS BIOLOGY FACULTY MEMBERS

Looking for something enjoyable to read, but you’d still like for it to have a science component? Whether it’s for relaxing on your own patio, or at Starbucks in between classes, or while on a glorious vacation destination during spring break or summer, here are a few enjoyable books that the Biology department faculty members recommend. We hope that you enjoy them!

SCIENCE AND LITERATURE:

Be pumped and inspired by last year’s keynote speaker with…

**Healthy Brain, Happy Life**
“A neuroscientist transforms the way we think about our brain, our health, and our personal happiness in this clear, informative, and inspiring guide—a blend of personal memoir, science narrative, and immediately useful takeaways that bring the human brain into focus as never before, revealing the powerful connection between exercise, learning, memory, and cognitive abilities.” --Amazon

Embrace your inner 13 year old with …

**Gulp: Adventures on the Alimentary Canal**
by Mary Roach
“In her latest rollicking foray into taboo, icky, and underappreciated aspects of the human body, bestselling science writer Roach takes readers on a wild ride down the alimentary canal. --Donna Seaman for Booklist

Meet your fishy and four-legged ancestors in …

**Your Inner Fish: A Journey into the 3.5-Billion Year History of the Human Body** by Neil Shubin
“Shubin [a fish paleontologist] excels at explaining the science, making each discovery an adventure, whether it's a Pennsylvania roadcut or a stony outcrop beset by polar bears and howling Arctic winds. I can imagine few things more beautiful or intellectually profound than finding the basis for our humanity... nestled inside some of the most humble creatures that ever lived, he writes, and curious readers are likely to agree.” --Publishers’ Weekly
Marvel at the bravery of two WWII French Resistance fighters who later became Nobel Prize Winners in …

**Brave Genius: A Scientist, a Philosopher, and Their Daring Adventures from the French Resistance to the Nobel Prize** by Sean Carroll

“Carroll deftly weaves science and history together in his account of the lives, accomplishments, and friendship of two exceptional men…Spanning history, science, and philosophy, this dual biographical study of two significant 20th-century figures will appeal to a diverse audience.” —Library Journal

Feed your inner botanist with this delightful collection in…

**The Big, Bad Book of Botany: The World’s Most Fascinating Flora** by Michael Largo

“In a quirky, alphabetical collection of folklore, traditional botany, growing suggestions, and modern science and nutrition, Largo shares delight in the weird and wonderful corners of the plant world. … Colorful. … Largo’s palpable enthusiasm means every page yields something to catch the reader’s interest.” --Publishers Weekly

Marvel at the mighty magnitude of a deadly pathogen and how two parents worked to stop its deadly siege in…

**The Speckled Monster: a Historical Tale of Battling Smallpox** by Jennifer Lee Carrell

“Long before vaccination for smallpox was developed in Europe in the 1790s, people in the Middle East, the Caucasus and Africa knew that small amounts of live smallpox virus injected under the skin would induce a mild form of the disease that rendered a person immune from full-blown smallpox. In her intriguing book, Carrell, a writer for Smithsonian magazine, switches between the stories of two courageous people in early 18th-century England and America who believed passionately in this procedure, called variolation.” – Publishers Weekly
Contemplate what it means to be human…

The Gene: An Intimate History 1st edition by Siddhartha Mukherjee

"This is perhaps the greatest detective story ever told—a millennia-long search, led by a thousand explorers, from Aristotle to Mendel to Francis Collins, for the question marks at the center of every living cell. Like The Emperor of All Maladies, The Gene is prodigious, sweeping, and ultimately transcendent. If you’re interested in what it means to be human, today and in the tomorrows to come, you must read this book."

- Anthony Doerr, author of All the Light We Cannot See

Become riveted by the history of cancer…

The Emperor of All Maladies: A Biography of Cancer by Siddhartha Mukherjee

“Mukherjee’s magisterial history of cancer research is poorly served by Stephen Hoye's impersonal, tone-deaf narration. Mukherjee is a practicing oncolgist, and his is a deeply personal account, replete with stories of his own patients and practice, that begs for an intimate reading. But Hoye is pedantic, dry, stentorian—everything that this book isn’t—and his newscaster's delivery cannot convey the author's compassion for his patients or the suspense and thrill of scientific discovery that the book so brilliantly describes.” – Publishers Weekly

Delve into the haunting world of germ warfare…

Germs: Biological Weapons and America’s Secret War by Judith Miller, Stephen Engelberg, and William Broad

“While the U.S. maintained an active "bugs and gas" program in the ’50s and early ’60s, bio-weapons were effectively pulled off this country’s agenda in 1972 when countries around the world, led by the United States, forswore development of such weapons at the Biological and Toxin Weapons Convention. The issue reemerged in the early ’90s thanks to Saddam Hussein and revelations of the clandestine and massive buildup of bio-weapons in remote corners of the Soviet Union. The book's description of the Soviet program is horrific. At its peak the program employed thousands of scientists, developing bioengineered pathogens as well as producing hundreds of tons of plague, anthrax, and smallpox annually. The authors conclude that while a biological attack against the United States is not necessarily inevitable, the danger of bio-weapons is too real to be ignored. Well-researched and documented, this book will not disappoint readers looking for a reliable and sober resource on the topic.” – Amazon.com

Have a book that you’d like to suggest? Please send your suggestion with a brief description to Dr. Sheryl Zajdowicz at swaltonz@msudenver.edu.
More information regarding the MSU Biology Club can be found:
Facebook: https://www.facebook.com/MSUDenverBiologyClub
Website: http://msudbiologyclub.weebly.com/
Follow us on Instagram: https://instagram.com/p/BP6MvrvgVSC/

The Biology Club is active!! Please welcome our new officers:
- President: Lindsey McNaughton
- Vice President: Hillary Whitcomb
- Treasurer: Athanasia Christus
- Secretary: Courtney Brown
- Chief Technology Officer: Brandon Shea

The Biology Club is also 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 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
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 (i.e., 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.

**Want to contribute to the newsletter?**

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.