Notable Alumni



ANALISA BROWN (MS Physiology & Behavioral Biology 2017) is a SEPAL graduate and SF State's new Metro STEM Coordinator.



JENNIFER CHINCHILLA
(BA Biology 2014) is attending
Michigan State University
College of Human Medicine
for medical school and
participating in the
Leadership in Underserved
Medicine program.



CHRIS L. GRACE (MS Ecology, Evolution and Conservation Biology 2019)

published his thesis research on the genus *Marasmius* (mushrooms) from the African island nation of São Tomé and Príncipe in *Phytotaxa*. His work described twenty-one species - including seven new species of *Marasmius*.



BRITTA DENISE HARDESTY (BS Ecology 1999) is a

scientist working for the Commonwealth Scientific and Industrial Research Organization. Her work was featured in a CBS 60 Minutes program on plastics.



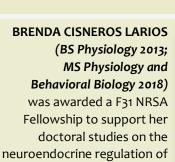
VANESSA HERNANDEZ (BS Physiology 2018) is attended the University of San Francisco's Master of

Science in Nursing program.



MAGGI HORN
(BS Physiology 2015)
is attending the American
University of the Caribbean
School of Medicine.

CHARLIE CHESNEY
(BS Zoology 2015) earned
a MSc in Biodiversity,
Conservation and
Management from the
University of Oxford's
School of Geography and
the Environment.



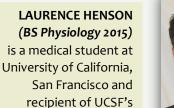


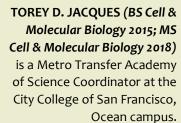
CARL GRIM (BS Cell & Molecular Biology 2014)

University of Michigan.

reproduction at the

earned a Ph.D. in Cell
Biology from the University
of Texas Medical Branch
Graduate School of
Biomedical Sciences
(Galveston), and co-authored
"Expression of Programmed
Death-Ligan 1 by Human
Colonic CD90+ Stromal Cells
Differs Between Ulcerative
Colitis and Crohn's Disease
and Determines Their
Capacity to Suppress Th1
Cells" published in Frontiers
in Immunology.





Disability Service Award.





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Editor: Colleen Francis silver@sfsu.edu

DEPARTMENT OF BIOLOGY

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Educating
generations
of
Scientists,
Healthcare
Professionals,
Teachers,
and Citizens



For the future of your family: Support the Department of Biology College of Science & Engineering

Dear friends,

I would like to thank all of the alumni who sent in their memories of their time at SF State, told us of their many accomplishments and for those who are collaborating with Biology faculty, staff and

students to help us continue our long tradition of educating generations whose work contributes to the well-being of our world.

Sadly, the recent fires in Northern California provide ample evidence of the devastating impacts of climate change. Events such as these lead us to wonder what our world will look like in 2030. Who will inherit our global community in 2030? What will be our legacy?

The Department of Biology is proud to have numerous faculty, staff and students engaging in research to understand the impacts of climate change and how to mitigate the effects of climate change. We are now leading a cross campus effort to develop a new Certificate in Climate Change Causes, Impacts and Solutions.



Photo left: Rice plant engineered by Dr. Zheng-Hui He's lab to be better at photosynthesis. This boost in photosynthesis increases crop yields while harvesting more CO₂ from the air. For more information, visit: https://cose.sfsu.edu/content/genetic-fix-gives-big-boost-rice-plants

Thinking about the future can be daunting. However, ensuring the well-being of loved ones especially after we're gone is important for all of us. Creating a well-crafted living trust or will is a vital element of accomplishing that. We'd like you to consider a charitable gift that will impact future generations, and would welcome the opportunity to explore gift options and provide language for a bequest to SF State to include in your living trust or will. It's a simple way for you to give back that doesn't impact you financially now, and you will leave your generous mark on the world. If you contribute currently to a Biology scholarship or program, leaving a bequest gift will further fund your investments and it can last in perpetuity.

Please contact our Office of Planned Giving at: giftplan@sfsu.edu or (415) 338-1042. Or, if you have questions regarding support for the Department of Biology, contact Associate Director of Development, Jasmine Minato: jminato@sfsu.edu or visit: sfsu.giftlegacy.com

And, please continue to keep in touch with us. All of us in the Department of Biology value highly your achievements, memories and support.



Last Spring Biology Undergraduate
Laboratory Manager and alumna,
Amber Johnson (BS Marine Biology &
Limnology 1998; MA Marine Biology 2004)
and Biology alumna and California Academy
of Science (CAS) Curatorial Assistant (Birds
and Mammals) Martha Velez (MS
Conservation Biology 2012) teamed up to
create a display of some of the bones gifted
to CAS by Biology alumnus Raymond
Bandar (Biology 1958)

"Posted in the display cabinet located on the second floor of Hensill Hall are labels with information about Bandar's strange and interesting hobby of collecting skulls and bones from carcasses he came upon including the baculum (penis bone) as a way to confirm the sex of the animal," explained Amber. "The foreground of the exhibit highlights the skulls of six different marine mammals that are all found locally. We also included notations on the cards above each skull of things that viewers should look at that are interesting about each skull, particularly in comparison to other skulls. These skulls are protected by law and it is special that we were able to obtain this loan from CAS. We hope this display will intrigue students to learn more about our local fauna."

Editor's note: The Bandar bone collection will be on display until December 30.



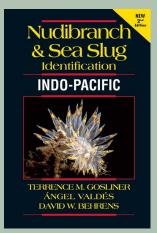
Photo L-R:
Amber Johnson and Martha Velez

Thanks for the menories

We all remember Dr. Goldstein. I attended Bernie's (he always

attended Bernie's (he always wanted us to call him by his first name) first Human Sexuality class in 1970. It was inspirational. I remember the controversy of offering this subject and I remember how he handled it. What a revolutionary, what a hero.

Bernie's teaching style and the way he interacted with students has stayed with me to today. How could you forget it? In my current position as a biology lecturer at Central Washington University, Sammamish I try to use the many lessons I learned from Bernie. They seem to be working.



Bernie not only paved my teaching style, he inspired me to continue to conduct research and share what I have learned with others.

My 12th and 13th books have come out; number 13 translated in Japanese by Tokai University in Tokyo. Wish I could read it.

Love you Bernie - I will never forget you. — **David Behrens**



David Behrens BS Biology 1971 MS Biology 1973



Deborah Taylor (nee Berliner) BA Biology 1977



Dr. Bernard Goldstien 1936-2018

I was lucky enough to be enrolled in Dr. Goldstein's Human Sexuality course in 1976.

It was, without question, the most well-attended lecture on campus. No one would miss one of Dr. Goldstein's lectures. He spoke honestly, openly, and with a sense of humor that added to his appeal. Truly, he was part entertainer and part brilliant scientist.

Of course, the most talked-about lecture was the Condom Lecture. Dressed in a bright yellow raincoat, Dr. Goldstein came to the stage carrying a large bucket. He placed the bucket on the stage and called up a number of student-volunteers. He then had one lucky student stand IN the bucket. You could hear a pin drop in the packed auditorium... with plenty of drama, Dr. Goldstein unwrapped a condom and held it over the student's head. And, with the help of the other volunteers, Dr. Goldstein proceeded to fill the condom with water - lots and lots of water. I can still see the student standing under what appeared to be a giant water balloon filled with gallons of water. The condom never broke and a relieved student returned to his seat. If we'd only had cell phones at the time, this would have made YouTube within minutes. The student's facial expression was priceless and the "audience" loved it.

Dr. Goldstein's frank discussion of sexuality was refreshing and enlightening and one of the most memorable classes I had the privilege of taking at SFSU. We'll miss you Dr. Goldstein, but thank you for all you did! — **Deborah Taylor**



Dr. James Duncan 1932-2018

We were saddened to learn of the passing of James T. Duncan, PhD. One very special role Dr. Duncan

fulfilled at SFSU was not mentioned in Dr. Stubbs' memorial statement. When we were there in the mid to late 70's, Dr. Duncan was the premed advisor. It was a busy time to be the premed advisor with many redirected returning students, "refugees from the 60's." With patience, gentle compassion and a warm smile, he ushered us through the stressful process of preparing for and applying to medical school. Through our careers of service, we have touched many lives. Dr. Duncan, and our other dedicated, generous teachers of life science at SFSU have been a part of all of it.

- William Eggimann, M.D. and K. Jane McClure, M.D.

I had the privilege of knowing Drs. Duncan and Goldstein.

I was a student In Dr. Duncan's embryology course, possibly one of the most difficult I had. It taught me how to organize and study and the exams were challenging.

My relationship with Dr Goldstein was on a more personal level. I was invited to attend a Passover Seder at his house and Rosh Hashanah services with him and his family. Bernie sang Sunrise/Sunset from Fiddler on the Roof at my wedding. Although I moved away from the Bay Area in 1980, I never forgot him. - Susan Gray



William Eggimann
K. Jane McClure
(BS Biology 1979)





Susan Gray BA Biology 1975 MA Marine Biology 1978



Dan Button
BS Physiology 1983
Secondary Education
Teaching Credential (Life
Sciences and Chemistry)
1989

I have some vivid memories of Professor Duncan. He was my embryology professor in the early '80's.

I will never forget his exams where he would have students locate and identify various structures within frog embryos using slides and a microscope. Once you located the structure, you raised your hand and Professor Duncan would confirm whether or not you were correct. A high pressure testing situation to be sure. He expected that you knew your stuff!

Because of his high standards, I spent a lot of time preparing for one particular mid-term. I was sure I was going to do pretty good on the exam and I did. After getting back my 'Blue Book' with Professor Duncan's corrections, I noticed a rather lengthy written note at the end of my exam answers.

He wrote, "....it is obvious you spent a lot of time preparing for this exam. One can only hope that in 10 years time you can recall the concepts on this exam."

At first, I was a little offended by this remark but when I thought a bit more I realized that Professor Duncan knew that I had spent days cramming and, perhaps, I might not be able to recall this material later.

I never threw away that Blue Book and from time to time I read that note. Professor Duncan was more than correct. Thirty years later, I have no idea what some of these terms actually mean! Well, I have a little idea. For the past 30 years, I have been a high school biology and chemistry teacher. I have used Professor Duncan's comments as a foundation for a grading system that emphasizes learning and not rote memorization. I often speak of these comments to my students as a way to communicate the importance of really knowing and understanding the biological and chemical world around us.

I will never forget my time at San Francisco State and teachers like Professor Duncan. - **Dan Button**



RAINA JAIN
(BS Physiology
2016) is
attending the
College of
Human
Ecology

graduate program in Policy Analysis and Management and the Sloan Master in Health Administration program at Cornell University.



SAHAR MIRY (BS Physiology 2019) is a Clinical

Research Coordinator in the UCSF's Cutaneous Oncology Department. I found the "In Memory" of your latest issue a sad read of a passing but also a joyful remembrance of a man, a true teacher, and my first collegiate mentor back in 1967-1968 — Dr. James Duncan.

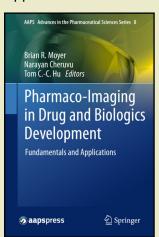
Getting educated at SFSU during that tumultuous time was challenging. I graduated a few days before the California primary when Robert Kennedy was killed and two months after Martin Luther King's assassination. SFSU, Berkeley and so many other colleges were national focal points of protest.

I took Dr. Duncan's classes because of a classmate in my grammar school in the 1950s who had thalidomide-induced phocomelia (grossly underdeveloped arms and legs). I could not get it out of my mind that a drug could cause such damage to a child and I set my path early to work on birth defects. Dr. Duncan set my sights career-wise into medicine, cleft palate and general deformities, and reproductive toxicology. He was relentless in giving me related papers and showing his love for the subject matter. I still refer to Dr. Duncan's zoology class textbook "Foundations of Embryology" because of the art (embryology graphics), the writing style, and the memory of how special his class was to me and how he really did seek our success and his help to build our futures.

I earned a masters in Toxicology at the University of San Francisco while working at the Lawrence Berkeley Laboratory (LBL). I worked for 15 years at LBL heading up a new trace metals surveillance lab where I trained in radioactive isotope work. I then became an integral part of programs in nuclear medicine instrumentation, particle beam radiotherapy, radiation injury, and space radiation. I worked on Apollo-Soyuz, and Apollo 14, 15, 16, and 17 on light flash observations by astronauts caused by charged particle penetration through the eye.

I left LBL to earn a Ph.D. in Comparative Pharmacology from UCSF, then worked as a Pharmacologist for four companies specializing in protein therapeutics, radiopharmaceuticals and MRI contrast agents. I was part of seven FDA drug approvals.

In 2006, a special event changed my career uniquely. In London, Alexander Litvinenko, a former officer of the Russian Federal Security Service, died after ingesting a poisonous radioactive isotope (polonium-210). Two weeks after his death, I was contacted by Health and Human Services in Washington to join a new effort in government to foster faster development of innovative medical countermeasures for infectious diseases, chemical threats and radiation injury. That organization is now known as BARDA. My role was to serve as a scientific adviser in the pharmacology of radiation and chemical injuries and assist in procuring FDA approvals. I retired in 2016 but now consult for BARDA.



I served as the Program Chair for the 2016 National Biotechnology Conference of the American Association of Pharmaceutical Scientists (AAPS) and was a scientific reviewer for six journals. I co-edited and wrote chapters for a book "Pharmaco-Imaging in Drug and Biologics Development" for the AAPS' Scientific Series and currently am writing chapters and co-editing a book on "Systems Pharmacology and Applied Imaging."

My career owes a great deal to the early mentoring and stewardship of Dr. Duncan. His memory remains very personal to me, and I am grateful to have had him when I did. — **Brian R. Moyer**



Bruce Manion
MA Biology 1975

Dr. Goldstein was easily one of my most favorite professors. Besides being brilliant, he was kind and warm and always ready to discuss anything. He was a mesmerizing lecturer and we all heard and believed that he practiced his lectures before a mirror until he thought they were as good as they could be. I will always remember a lecture during his comparative physiology course. He was delivering his usual engrossing lecture when a student broke in and asked a question. Dr. Goldstein paused, looked at the student and asked "Where does it say students have lines?". Needless to say it brought the house down. Dr. Goldstein then continued as if nothing had happened.

—Bruce Manion



Brian Moyer BA Biology 1968

It was 1974. My first undergraduate institutions had been the University of Kansas and College of San Mateo. Of the many introductory courses I explored, Biology spoke to me, and I wanted to transfer to San Francisco State, but it was beyond the application deadline.

After doing some research on who's who, I boldly entered Dr. John S. "Jack" Hensill's office without an appointment. In my youthful naïveté, I told him that I understood that the deadline for Fall enrollment had passed, but I really was ready to continue my education and I loved Biology. Jack, looking at me over his glasses, cleared his throat and took a deep breath. I anticipated a respectful but firm reminder that you can't just expect the rules to bend because you want something badly. When he said, "OK, looks like your transcripts are in order. I will accept your application today," I almost fell off the leather chair.

Thus began my SFSU journey. In my first semester, among other courses, I took Human Sexuality from Dr. Bernie Goldstein. This experience changed my life, my relationships, my goals and my future. Bernie made me want to teach. Bernie made me want to start difficult conversations about reproductive and sexual health. Bernie helped define my trajectory.

I finished my Bachelor's in Biology in 1977. In graduate school, I taught labs in Human Physiology, Zoology and General Biology, and then I had a once-in-a-lifetime opportunity: Bernie offered me the position of Lecturer for his Human Sexuality class. The huge class in McKenna Theatre was at first daunting, but confirmed that I was indeed called to the art and science of teaching.

In 1981, I completed my Master's in Physiological and Behavioral Biology, having researched the Reproductive Behavior of Matschie's Tree Kangaroo (*Dendrolagus matschiei*) under the tutelage of Dr. Bernie Goldstein and Dr. Hal Markowitz. I taught Biology at several community colleges around the Bay Area. While teaching I also worked full time for nonprofits including Mt. St. Joseph-St. Elizabeth, a residential program for at-risk and pregnant teens (where I worked as an educator), Planned Parenthood (as Director of Education) and the Center for Health Training, now Cardea (as a regional trainer). I also served as a consultant to schools and community groups in the facilitation and implementation of educational programs in reproductive and sexual health.

Fast forward to 2002: Having taught and worked for 25 years in the Bay Area, we returned to Kansas City to be near family. Within the first year, I was hired full time as a Biology faculty member at Metropolitan Community College-Kansas City, Penn Valley campus (MCC-PV). This 5-campus system serves 40,000 students and has been a respected educational mainstay in the Kansas City area since 1915.

MCC-PV has given me opportunities to teach, to thrive, to grow and to change lives. While teaching a full load in Biology, I have developed courses, programs and community connections to enrich student experience in the areas of equity, inclusion, social and reproductive justice and sexuality. This institution might have been initially surprised at my determination and fervor for these topics in 2002, but at this point I look back to see 16 years of MCC's support and appreciation of my efforts.

In 2013, I became Chair of the Science, Math & Engineering Division, which I have enjoyed immensely while still teaching Biology of Human Sexuality. Now, I am days away from retirement from MCC. I am ready to shift my focus from action to reflection and to explore other ways I might work for the causes dear to my heart. There will be parties, there will be tears, but I know I have SFSU and Bernie Goldstein to thank for such a rich and rewarding career. — Nancy Harrington



JEFFREY
SCHINSKE (MS
Ecology 2018)
is a tenured
Biology Instructor
at Foothill College.
He was profiled in
a Los Altos Town
Crier article
"Foothill Endeavor
Aims to Upend
Scientist
Stereotypes."



NICHOLAS SILVA
(BS Physiology 2011;
MS Physiology &
Behavioral Biology 2012)
earned a Ph.D. in
Neuroscience and
a Graduate Teacher
Certificate at the
University of Michigan.
He is a Postdoc at UCSF
studying synaptic
plasticity during
development
in the zebrafish.

MICHAL TENNE
(BS Physiology
2019)
graduated summa
cum laude from
SF State and is
attending the
Doctor of
Osteopathic
Medicine program
at Touro University,

Nevada.

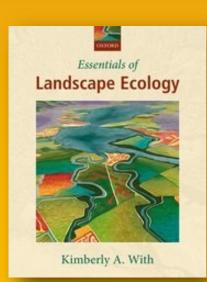




NANCY HARRINGTON (BA Biology 1977; MA Biology 1981)



KIMBERLY WITH (BS Zoology 1985)



As a 1985 graduate of the Department of Biology, I doubt there are very many left in the Department who will remember me. I have, however, been keeping up with all the new programs, faculty hires, student achievements and other developments through issues of *BioNews*. So, I thought I might contribute my own academic and professional achievements since graduating SFSU in the hopes this might serve as further evidence of the long success of the program!

After graduating SFSU, I completed my Master's degree in Biology at Northern Arizona University (1988) and my Ph.D. in Zoology at Colorado State University (1993). Although my initial research was in ornithology (the study of birds) and my master's research entailed a behavioral study of parental care in western bluebirds, I expanded my research during my Ph.D. to the field of Landscape Ecology.

Landscape Ecology addresses the human dimensions of land use that drive landscape change, such as those contributing to the loss and fragmentation of natural habitats worldwide that are contributing to the global biodiversity extinction crisis. Landscape Ecology seeks to understand the reciprocal interactions between spatial patterns and ecological processes at any scale. Landscape Ecology has become a powerful research paradigm for studying ecological responses to spatial heterogeneity at all levels, from the influence of resource distributions on the movement behavior of individual organisms, to the effect that habitat fragmentation has on the distribution and dynamics of populations and communities, to how ecological flows among communities and ecosystems influence the stability and sustainability of these systems, as well as the goods and services they provide.

I was awarded a prestigious Alexander Hollaender Distinguished Postdoctoral Fellowship from the U.S. Department of Energy and Tennessee's Oak Ridge Institute for Science and Education (1993-1995). In 1995, I became a tenure-track Assistant Professor in the Department of Biology at Bowling Green State University in Ohio. Currently, I am a Professor of Biology at Kansas State University. Much of my current research involves applications of landscape ecology for conservation, especially in managed grassland systems such as the Great Plains' tallgrass prairie region and the Brazilian Cerrado, a biodiversity hotspot.

I am a two-time recipient (1996 and 2002) of the "Outstanding Paper Award" from the North American regional chapter of the International Association for Landscape Ecology and in 2016, I was recognized as a "Distinguished Landscape Ecologist" which is the highest honor bestowed by this organization. This year, my textbook, Essentials of Landscape Ecology was published by Oxford University Press.

I doubt none of this would have happened if I hadn't enrolled in the "Birds of the Sierra Nevada" summer course taught by Dr. James Mackey at the Sierra Nevada Field Station in 1982. I had just completed my first year at SFSU, and although I had been interested in birds and other wildlife since childhood, I had very little understanding of what a scientist did or even how one became a scientist. Dr. Mackey's summer field class rekindled my interest in both birds and science, and I switched my major from English to Biology, eventually graduating with high honors (magna cum laude).

Hopefully my experience will serve as an inspiration to others who might have the interest but are uncertain if they have what it takes to become a scientist. Despite little to no professional guidance or research experience in high school (promoting female representation in the STEM fields was *not* a priority in the late-70s/early-80s), I was fortunate enough to stumble upon the biology curriculum and supportive faculty at SFSU which set me on a successful career path that led to my position as a university professor in the ecological sciences. — **Kimberly With**



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We want to hear from our alumni!
Let us know about your academic/scientific/ professional achievements, and/or share a memory of your time at SF State.

Email silver@sfsu.edu

CSU's 2019 PRE-DOCTORAL PROGRAM SCHOLARS

Four Biology students have been accepted into the prestigious **CSU Pre-Doctoral Scholars Program** established to increase diversity in university faculty. Mentors for the 2019 Scholars are Drs. Mark Chan, Lily Chen, Scott Roy and Ravinder Sehgal. Each scholar will receive financial support for activities related to applying to, and developing their candidacy for doctoral programs.



"The CSU Pre-Doctoral Scholarship has enabled me to present my research at national conferences, and supports my efforts to pursue a doctoral program in Biomedical Sciences. My goal is to conduct my own research as a principal investigator and continue to diversify the faculty at the collegiate level." - Luis Ayala

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"As a first generation college student, receiving the CSU Pre-Doctoral Scholarship has opened many opportunities for me to successfully apply to PhD programs in the biological sciences. I would like to research how a single cell seemingly "knows" how to become multiple cells during early embryogenesis." - Angeline Chemel



"I have worked hard to pursue a doctoral degree in Ecology and Evolutionary Biology and as a Pre-Doctoral Scholar, I now have the support necessary to achieve my goal. I have increased the strength of my application, met with potential faculty mentors, attended conferences, and am working to improve as a researcher to ensure I earn and excel as a future PhD student." Wilmer Amaya Mejia



"CSU's Pre-Doctoral program will allow me to conduct a summer research experience at an institution of my choice with expenses paid for. Thus, I can experience how a certain campus or lab suits me before even being accepted into their PhD program in Bioinformatics & Molecular Evolution!" - Steven Sun