



Biosphere

The Weekly Bulletin of Biology

Biology Colloquium – Fall 2017
Friday Sep 01, 2-3pm, CR5125

Biology 490 & 692 Organizational Meeting

CSUN alumnus wins top prize in ecological research

Chris Bowman-Prideaux, a Schiffman lab alumnus (MS. 2011) and a senior PhD student at University of Idaho won the best invasion ecology presentation award at the Annual Meeting of the Ecological Society of America in Portland, OR, for his work titled "*Working together: Fire and post-fire rehabilitation create homogeneous plant communities.*"

Find out about a great NSF graduate fellowship

NSF will present an information session on the Graduate Research Fellowship Program (GRFP), on **Sep 12 @ 10am** in the Oviatt Library Presentation Room. This highly competitive research fellowship provides an annual stipend of \$34,00 for three years towards a MS or PhD degree. Both undergrads and grads with less than 1 year in a graduate program can apply. Join NSF at

this information session, and find out more details about this program. Contact [Hedy Carpenter](#) for more information.

Off to a great start

New data compiled from a group of graduates from *Ernest Lawrence Middle School Magnet* shows that K-12 students who published their research in *The New Journal of Student Research Abstracts* have continued their education at top institutions, such as Penn State, UCLA, UCSD, UC Berkeley, UC Davies, San Francisco State University, University of Tokyo and CSUN. **Dr. Oppenheimer**, Editor of *The New Journal of Student Research Abstracts*, has suggested that students who do research and publish in middle school may likely have a competitive advantage to meet rigorous admissions criteria in top institutions.

Some “old” news for renewed excitement!

Some news from our department did not make it into our last issue of *Biosphere* before the Summer break by a split hair. However, they are rather timeless in the way that they highlight great accomplishments by our Biology colleagues. Therefore, and with due apologies to their protagonists for delayed publication, here they are:

Sa La Kim, a student in the Kelber Lab, placed second at the 31st Annual Student Research Competition at CSU-SLO, with her work titled “*ITGAI is a Novel Biomarker and Therapeutic Target for Blocking Stemness in pancreatic Cancer*”.

By the end of the Spring semester, **Dr. Cindy Malone** hosted the *19th Annual Sigma Xi Symposium*, where the following students were recognized for their outstanding abstracts and presentations: **Stephanie Kennedy** (Teitell, Malone labs), **Jacqueline Saenz** (Nsair, R Medh, Malone labs), **Samantha Hain** (Butler, Malone labs), **Bobby Teng** and **Daniel Hicks** (Banner lab), **Allea Cauilan** (Ruiz-Rueda lab), **Lena Vincent** (Bermudes lab), **Aiden Kim** (J Medh lab) and **Ismail Hossain** (Oh lab).

Dr. Raquel Martinez, a former CSUN MS graduate who later obtained a PhD at Dartmouth College, and who currently serves as Director of Clinical and Molecular Microbiology at Geisinger Medical Laboratories, was named a Top Five honoree by the American Society for Clinical Pathology (ASCP) *40 Under Forty*.

Research Spotlight

The white seabass (*Atractoscion nobilis*) is such an important species for both commercial and recreational fisheries in Southern California that many worried when their abundance began to decline due to overfishing. Fortunately, things are looking better for these animals, as populations are on the rise along California’s coast. However, it is still unclear how strong of a comeback this may be, and what it means for fisheries.

That’s where **Edwin Leung** and **Dr. Larry Allen** come into this story. They recently published their investigation on the correlation between the estimated strength of a white



Holder, Charles F. (1910) Fishermen in Santa Catalina Island, sporting a day’s worth of white seabass catch.

seabass population and their catch ⁽¹⁾. The ultimate goal of their research was to find out

how much the age structure and reproductive success of the species on a given year can predict about their commercial fishing at later times. To assess the health of a population, they estimated the age of individuals in the population by microscopic measurements of bands present in over one hundred *otoliths* (ear stones) that had been collected every year for over a decade as part of a separate project (like aging trees by counting tree rings). As Edwin explains, the data showed that “year-class strength (an index that measures and summarizes the reproductive success of a species for a given year) and commercial landings had a significant relationship with an eleven-year time lag”. In other words, the strength of the *young-of-the-year* white seabass population today is a really good predictor of how successful their catch will be eleven years from now.

Edwin was particularly surprised by how tight the correlation was, adding that “even with data separated by over a decade, a graph visually shows how similar they were to each other, nearly matching”. He is also still amazed at how much data can be gathered using classic methods focusing on otoliths and looks forward to further research. “The results from our study updates what we know about the species. It’ll be exciting to see the questions that may come up concerning the future of white seabass”.

[1] Edwin Leung and Larry G. Allen. Year-class strength predicts commercial catch 11 years later for white seabass, *Atractoscion nobilis*, off southern California. *California Fish and Game* 102(4):175-182; 2016