Dear Brian,

Over the summer the lab has been filled with the sounds of kids learning marine science and college students working on research projects. Watch and read below to learn about what we've been up to this summer. Best Regards, Brian Tissot, Director

NEW Marine Lab Video!

The Marine Lab is now on YouTube with a video showcasing our intertidal and subtidal research projects. Stay tuned for more videos in the near future.

Watch the Video!
**K-6 Summer Program a Big Success!**

**HSU Marine Lab camp introduces young minds to ocean science**

The moment you step into the Humboldt State University Marine Lab in Trinidad, it becomes readily apparent that this is not your run-of-the-mill summer camp.

The classroom hums with the chatter of campers and the sound of cold, oxygenated water trickling into tanks lined along the wall, each containing an array of colorful and strange sea creatures. The class tables show evidence of previously completed arts and crafts projects - all marine-themed - but not of the shark dissection that took place a few days prior.

*Read the full story in the Times-Standard...*

**Sea Star Research Update**

**Sea star babies return in droves amid die-off**

After whole populations of starfish along the West Coast were decimated by a wasting disease over the last two years, researchers in Oregon and Northern California are finding that droves of baby sea stars are returning to the shores. Check out this article to learn about recent discoveries by HSU faculty and students.

*Read the full story in the Times-Standard...*

**A STARRing Role**

Jana Litt, a marine biology graduate student at Humboldt State, is studying Sea Star Wasting Disease in ochre star populations from an entirely new vantage point.

Litt is studying how the disease progresses through our wild populations and affects individuals. By following individual sea stars in the field throughout the progression of the disease, Litt is doing something new and innovative in her field.

*Read the full story in the Lumberjack...*
My Experiences at the HSU Marine Lab

By Paige Weiss

Paige Weiss is an undergraduate student in Humboldt State University's Department of Biological Sciences working under the direction of Dr. Frank Shaughnessy.

I came to Humboldt State University with the goal of becoming a marine biologist. I first began working as a lab technician at the Telonicher Marine Laboratory to get hands-on experience in the field. Lab techs are the heart of the facility: responsible for culturing algae or zooplankton as food, keeping the aquarium alive, and merchandise sales, but mostly cleaning.

After two years of working as a lab technician, I was selected to be the new marine naturalist. Marine naturalist is a position at the Marine Lab that bridges the gap between the HSU researchers and the general public. I regularly lead tour groups around the tide pools and through our labs. Not only do I inform people about their local environment, but I am also able to communicate what I've learned through my coursework.

As marine naturalist, I am also in charge of running the Marine Science Summer Program (MSSP). The MSSP is a weeklong summer camp for ages 6 - 12. Voracious minds from across California and out-of-state come to Trinidad to learn about oceanography, zoology, and marine biology. It has definitely been the most rewarding experience of my time at the Marine Laboratory. Each year I construct a new and engaging curriculum for the summer camp incorporating my knowledge from classes and experiences at HSU, exposing the kids to ideas I wasn't taught until attending university.

Over my time as a lab technician and marine naturalist, I have been exposed to an array of research taking place inside the laboratory. I am able to talk to other scientists about the experiments that they are conducting here every day. My own research is focused on marine invertebrates; specifically, nudibranchs. These are colorful sea slugs that stick out of the tide pools like Christmas lights. I am interested in understanding how they utilize chemical defenses to stay alive. To investigate this topic, I have designed preliminary experiments to understand if a chemical defense is secreted. We extracted a crude mucus from the nudibranchs and added it to gelatin in order to feed it to potential predators such as Sebastes melanops (Black Rockfish) or Sebastes caurinus (Copper Rockfish). If these defensive chemicals are present in the extract, the fish should display...
aversion. By measuring how quickly the predatory rejects the food, we can learn about its existence and potency.

As for the future, I plan to continue my education through graduate studies. My ultimate goal is follow in the footsteps of my idol and become the Steve Irwin of invertebrates, so working with any kind of invertebrate in graduate school would be great. However, I would love to continue my research on nudibranchs and catalog all of the chemical defenses that they use. Many marine natural products have medicinal applications. Who knows, the next cure could be from a slug!

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**Giant Squid Being Prepared for Exhibit**

The giant 12 foot robust club hook squid we received in February is being prepared by Lab Technician Grant Eberle for permanent display at the marine lab. The two month preservation process involves 8 steps, 75 gallons of formalin, 100 gallons of alcohol and a custom-made 120 gallon aquarium. We hope to open the exhibit this fall so stay tuned for further announcements in our next newsletter.

We are accepting donations specifically for the squid display. Just add "Squid" in the comment section using the "Give Now" button below.
If you are interested in supporting the lab your donations can help fund a number of activities; even a small donation is important to us. If you have any questions please don't hesitate to give me a call or send an e-mail.

Sincerely,

Brian Tissot, PhD
Director & Professor, Marine Laboratory
Humboldt State University
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