FHL Sea Stars

MONTHLY NEWSLETTER

Attendees and organizers of Echinoderm Academy. All members are part of the Association of Zoo & Aquariums SAFE (Saving Animals From Extinction). Photo courtesy of Paul Selvaggio.

Echinoderm Academy

SAVING ANIMALS FROM EXTINCTION

The **Hodin Lab** had the honor of hosting the first ever **Echinoderm Academy**, a workshop aimed at sharing knowledge of ***Pycnopodia helianthoides*** captive breeding and rearing! We are a very small operation trying to learn as much as we can about this species at every stage of its lifecycle with an eye towards eventual restoration in the wild. In order to reach that goal, we collaborated with **Ashley Kidd**, Conservation Aquaculture Project Manager for the Sunflower Star Laboratory in California. Kidd convened aspiring Sunflower Star researchers from all over the world to gather with us at **Friday Harbor Labs** (FHL) to learn more about our operation and to share valuable knowledge gained through independent studies. Sunflower Star populations in California are most affected by Sea Star Wasting Syndrome (SSWS) along with other Southern populations along the Pacific Coast. Our lab is enthusiastic about supporting Sunflower Star captive rearing efforts throughout the west coast, where kelp forests are disappearing likely due to SSWS, as well as anywhere else dedicated to saving the Sunflower Sea Star from extinction.

Echinoderm Academy

A COLLABORATIVE EFFORT

Researchers and Aquarists from all over the world gathered under one roof to learn the ins and outs of our *Pycnopodia* Captive Breeding Program. The Hodin Lab is the first lab to successfully culture and raise the Sunflower Star throughout its entire life cycle! We enjoyed sharing our great discoveries along with our trials and tribulations at the workshop.

Workshop attendees were able to use some of our recently settled juvenile stars to perform various behavioral and feeding experiments.

Rearing a threatened species is no small feat. We are incredibly fortunate to have learned so much from all of our guests. This collaborative effort allows for greater opportunities to learn more about this important star and work towards restoring wild populations.

Special thanks to Paul Selvaggio, from Pittsburgh Zoo & Aquarium, who took all of the stunning photos of Echinoderm Academy featured in this edition.

Principal Investigator, Jason Hodin, leading the Echinoderm Academy workshop.

Jen Burney from Aquarium of the Pacific and Riah Evin from California Academy of Sciences planning out their experiment.

Ben Morrow from Omaha's Henry Doorly Zoo and Aquarium, placing his experiment into the sea table.

L to R clockwise: Andrew Kim from Moss Landing Marine Labs, Rachel Zak from Shedd Aquarium, and Boaz Hung from Vancouver Aquarium, carefully observing juvenile stars.

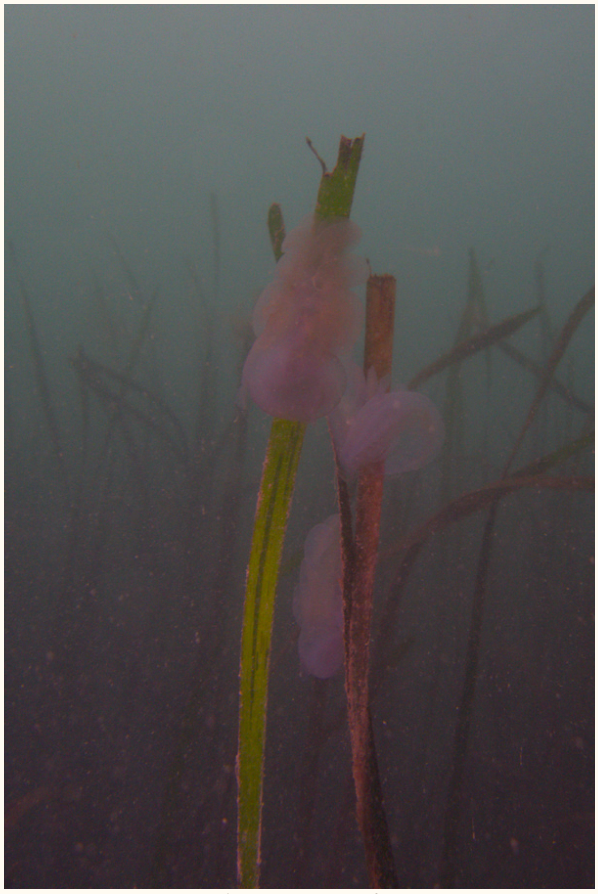
Latest News

SEA STAR TIMELAPSE

Curious about how active Sunflower Stars can be? We recently sampled and took pictures of our 2 year olds for record keeping. The video on the right shows a top-down view of the stars cruising a new tank sped up 7x. Their size and color patterning reminds us a lot of personal sized pizzas!

Research assistants, Vannessa Valdez and Chloe Schwab, shown placing stars into a sea table.

A recently settled juvenile (left. ~1.0mm) and a juvenile still transforming (right ~0.6mm) shown on a leaf of decaying eelgrass.



Healthy and decaying blades of eelgrass shown right next to each other in the field. The critters on the eelgrass are *Melibe sp.*, a type of sea slug!

KEEP ON THE GRASS

Eelgrass Experiments

Zostera marina is a native eelgrass and a threatened habitat currently protected under Washington state law. Eelgrass serves as a nursery habitat for many important species including salmon, herring, crabs, and other commercial species you can find at your local market.

Until recently, it has been a mystery where juvenile sunflower stars take shelter until they become big enough to wander the seafloor as one of the ocean's top predators.

Experiments in collaboration with FHL's Seagrass lab have begun to demonstrate that sea star larvae are attracted to settling on eelgrass. Surprisingly, they appear to have a preference for settling on naturally dying (necrotic) eelgrass leaves. We think this might be due to decaying eelgrass providing a refuge from herbivores that patrol up and down healthy leaves, or maybe there is something growing on brown leaves that they are purposefully seeking out.

Stay tuned for future experiments relating to eelgrass!

Stars for the Sea

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Our research would not be possible without the support from our super star donors! You can become a friend of the stars through our official donor page linked below.

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