



ADVANCED MARINE BIOLOGY STUDENTS EXPLAINING MORPHOLOGY OF PRESERVED FISH

MESA Mathematics
Engineering
Science
Achievement
SEATTLE
Saturday Academy
January 29, 2016

DECEMBER SATURDAY ACADEMY

Saturday Academy: On the Inside

by Brian Tracey

Welcome to Seattle MESA's Saturday Academy Monthly Newsletter. In this exciting December issue, we will look at UW's Ichthyology collection, spend some time with industry professionals, and review the highlights of our December session. As always, take a peek at our announcements page for important dates and special events.

So what's this Ichthyology thing?

The actual study of fish is known as **Ichthyology**. This includes fish of all shapes, sizes, colors and unique adaptations. Since the theme of December for the marine biology sections was *fish and fisheries*, students and volunteers learned the ins and outs, quite literally, of being an ichthyologist.

Burke Museum Ichthyology collections

UW's Burke Museum Ichthyology collections has the largest collection of fish specimen in North America, mainly from the Pacific Northwest, Bering Sea, and North Pacific Ocean. With almost 98% of specimens cataloged, available online, and databased, scientists and non-scientist alike have limitless access to this impressive collection.

In case you missed it:

The intro marine biology section explored their inner fish scientist from all angles. The laboratory work focused on dissecting specimens and identifying internal structures. Then there was the fish collection tour which drained phone batteries from all the pictures. The in-class activities centered on navigating the many types of career paths in the world of marine science. It wouldn't be a complete session with some artwork. The group ended the day with fish painting and reflections.

The advanced marine biology group was a bit more focused. Staying true to their research-based agenda, they explored the internal structures of fish specimen and discussed morphology. They also addressed the world of fisheries management, and sustainable harvesting practices. They had two guest speakers: the Year-Up program, a post high school pre-career training organization, and the Washington Opportunity Scholarship to promote STEM and college pathways.

Food science had three phenomenal guest speakers. One speaker on fermentation, another on managing UW food services and loving the self, and one speaker on food chemistry and industrial food production.



Intro to Marine Biology

Miguel, from Chief Sealth, begins the lengthy process of exploring the internal structures of this specimen. We can't see it, but he's wearing a huge smile and ichthyologist hat.



Food Science

Think that's just an apple slice? Well, yes, it is. Here Beth discusses seeds, their importance, and the many varieties and uses during the food harvesting process.

The Ichthyology Collection



Katherine Maslenikov takes the intro to marine biology group on a tour of the Burke Museum's Fish Collection Storage Site. It's housed in UW's Fisheries and Teaching Research Building.



FOR MORE INFORMATION

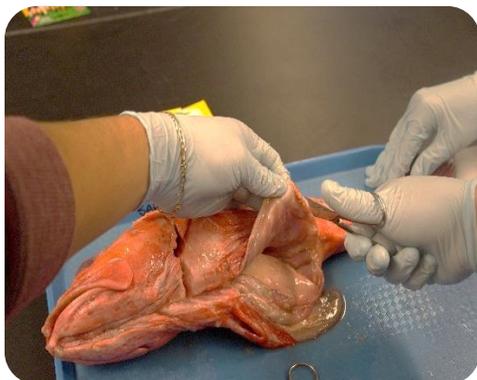
Are you a scientist, researcher, or citizen interested in accessing the database or visiting the collection? Please contact:

KATHERINE MASLENIKOV, COLLECTIONS
MANAGER

pearsonk@uw.edu



A Closer Look at the Insides...





Chef Tracey MacRae and Klondy Canales

Following a successful cooking demo, the crew gathers for a group picture with stomach full of vegetable goodness. Klondy presents scholarship opportunities to the juniors and seniors of advanced marine biology.

FAST FACTS

3

The average number of guest speakers or presenters we have at each Saturday Academy session

5

The number of guest speakers we had for the December installment of Seattle MESA Saturday Academy

Visits from Industry and Academic Professionals: Spotlight on Guest Presenters and Speakers

by Brian Tracey

There are multiple ways to volunteer with Seattle MESA Saturday Academy. Aside from our core long-term volunteer group, a crucial component of the science enrichment and career preparation is our guest speaker and presenter group. These are individuals already in STEM professions that graciously donate their time, experience, and in some cases their work space to impart wisdom to our aspiring STEM students. Check out this feedback from some of our recent guest speakers and presenters:

"My experience in doing a cooking demonstration with the Saturday Academy was very satisfying. I was able to connect with the students through something that we all do....eat! It was suggested by Farmer Beth that we focus on winter produce. I was intrigued with exposing the students to simple foods that they possibly would not have considered before or on their own. All in all, it was a true pleasure to teach and engage with such bright and interested students. I hope they were able to get as much as I did from our time together."

-Chef Tracey MacRae

"On behalf of the Washington State Opportunity Scholarship, it was a pleasure to speak with students attending the MESA December Saturday Academy about the importance of careers in STEM in our lives and in the future of Washington State and the nation. I hope I was able to motivate students to think about their futures and how participating in programs."

-Klondy Canales

"Students had the chance to ask us questions on how we chose our careers and what our experiences were as female scientists. Subsequently, we all did an activity that simulated examining sequence data from the gut contents of cod. The purpose of this hands-on activity was to demonstrate how DNA can be used to investigate ecological questions, such as food web connections. I hope the students enjoyed themselves as much as we did!"

-Eleni Petrou

"It was quite a fun and pleasant experience attending the MESA Saturday Academy. Talking with students at the beginning of their journey is inspiring. The challenge is deciding what topics you want to talk about. There is so much that we learn in life that can be helpful to others when we put it in the right format."

-Stephen Green



Eleni Petrou and Stephen Green

PhD student Eleni demonstrates proper pipette technique during a fisheries lab exercise focusing on core skills. Following a talk about food chemistry and the fun food experiments at work, Stephen, Beth, and Livi from Mariner HS discuss the farm to final product route.

FOR MORE INFORMATION

Know a STEM professional interested in being a guest speaker or presenter? Have them contact:

BRIAN TRACEY, PROGRAM COORDINATOR
Briant54@uw.edu

Important Dates and Announcements:
Remaining Saturday Academy sessions for 2016:

February 6th and February 27th
March 12th
April 2nd and April 30th

Upcoming Field Trips

February 27th

- Food Science** trip to Continental Mills Food Research and Design Plant
- Advance Marine Biology** trip to Seattle Aquarium

March 12th

- Intro to Marine Biology** Ocean Inquiry Project (OIP), Puget Sound research boat trip
- Advanced Marine Biology** local field trip studying sea birds

April 2nd

- Advanced Marine Biology** Salish Sea research boat trip

Important Announcements

March 19th

Parent Meet & Greet

-Parents of Saturday Academy students are invited to UW campus to meet MESA staff. The goal is to network with other each other and learn how MESA can best serve the needs of parents. Light refreshments will be served.

MESA Scholarship

Open to all current MESA students. For more details, visit:

<http://seattlemesa.org/scholarship/>

Useful resources for parents:

Helping your students thrive at school

<http://www2.ed.gov/documents/family-community/parent-checklist.pdf>

*Special thanks to the advanced marine biology students for this background picture. Keep up the great work and creativity.