

Students' underwater robot returns to aquarium after competing abroad

NEWPORT, Ore. – At first glance, a cube of PVC pipe trailed by a string of wires and cables is a puzzling presence for some Oregon Coast Aquarium visitors in the new exhibit, Secrets of Shipwrecks: Part History. Part Mystery.

In the exhibit, it represents one of the tools researchers use for underwater exploration and archaeology, and pays homage to the fact that people from all walks of life can wield this technology.

The contraption sports scratches and wear, and zip-ties hold repurposed plastic water bottles to its control tether. The underwater remotely operated vehicle, or ROV for short, is the creation of three Taft High 7-12 students under the guidance of Science Department Chair Noah Lambie.

Team RUWE (Robotic Underwater Exploration) created the ROV for the Northwest Regional MATE (Marine Advanced Technology Education) Competition. Each student assumed a role, with **Kyle Macrae (a Siletz Tribal member)** as CFO, Hunter Bishop as CEO and Eneki Trujillo as head engineer.

RUWE took the title in the Ranger Class, qualifying it for the international competition in Newfoundland, Canada.

The opportunity to compete against 60 other teams from universities and prestigious prep schools across the globe presented a tremendous opportunity and set of challenges. The team's winnings only covered a portion of the trip, so Lambie and the students started a crowd-funding campaign and sold totes and shirts to make up the difference.

The trio's previous triumph was in a freshwater pool – no deeper than 12 feet,



Courtesy photo from the Oregon Coast Aquarium

Team RUWE, including Kyle Macrae (right) and their coach with their interpretive sign board

but the international competition would plunge the students' robot into Arctic Ocean conditions.

Team RUWE knew it needed to adjust the robot's buoyancy control for deep saline water and was unsure how its ROV

would react to the cold. Lambie reached out to the aquarium for help.

The first test drive in the Passages of the Deep exhibit deflated the bicycle tube, sending buoyancy control plans back to the drawing board. Round two proved more successful and as June drew to a close, the team headed to Canada.

It found fierce competition – many of the rival ROVs cost more than 10 times the Taft High students' budget and were handled by college students. Team RUWE's innovation and dedication earned it 20th place out of 63 competitors and the Bang for the Buck award.

"This was a huge opportunity for my students," said Lambie. "They are very capable, natural and intuitive with robotics. Just give them a few projects, a little bit of guidance and let them go."

The aquarium offered to exhibit the ROV to honor Team RUWE and in hopes of inspiring more applied-STEM projects in classrooms and beyond. The ROV will be on display through December 2016.

The Oregon Coast Aquarium is dedicated to the highest quality aquatic and marine science programs for recreation and education so that the public better understands, cherishes and conserves the world's natural marine and coastal resources.

An accredited Association of Zoos & Aquariums institution, this 501(c)3 non-profit organization is ranked as one of the top 10 aquariums in the U.S.

Visit us at 2820 S.E. Ferry Slip Road in Newport or at aquarium.org, 541-867-3474. Follow us on [Facebook.com/OregonCoastAquarium](https://www.facebook.com/OregonCoastAquarium) or [Twitter.com/OrCoastAquarium](https://twitter.com/OrCoastAquarium) for the latest updates.



Courtesy photos

SuSun Fisher, recently crowned as Miss Chemawa 2015-2016 at Chemawa Indian School in Salem, Ore., was asked to participate in a panel discussion with American Indian youth at the Center for Native American Youth in Washington, D.C. in November. The panel sought to raise broader awareness of Native youth issues and priorities. It was co-moderated by Native journalist Patty Talahonga (left) and (ret.) U.S. Sen. Byron Dorgan (third from left). Kevin Washburn (far right), assistant secretary of Indian affairs at the U.S. Department of the Interior, gave the closing remarks.

Siletz Community Dental Clinic

Contact the Siletz Community Dental Clinic if you experience dental pain or a dental emergency. Staff will do everything they can to see you as soon as possible.

Morning check-in time is Monday-Thursday from 8:30-9 a.m. and Friday from 10-10:30 a.m. Afternoon check-in time is Monday-Friday from 1-1:30 p.m.

Taft Native Students Association
Presents

Winter Solstice
Literacy Night
Celebration

Food demonstration by
Chef Jack Strong!

Date:
12/08/15



Time: 5:30-8:30pm

Book Reading
5:30 pm-6:15 pm

**Food Demonstrations and
Traditional Teachings**
6:20 pm-7:15 pm

**Celebration Dinner, Dancing,
and Drumming**
7:20 pm-8:30 pm

December 8, 2015
at Taft High 7-12

This is a free event

Taft High 7-12
3780 Spyglass Ridge Road
Lincoln City, OR

For more information, contact Juanita Whitebear at:
Phone: 541-996-2115
Email: juanita.whitebear@lincoln.k12.or.us

Sponsored by Walter R. Behrens Foundation, Taft 7-12 staff, Chinook Winds Casino Resort, Taft N.S.A., and all the time and donations from the Lincoln City community