

OSU researchers studying warm-water mass off West Coast

‘Citizen scientists’ can help with the project

By DIANE DIETZ
The Register-Guard

EUGENE — Oregon State University scientists are looking for a link between the California drought, climate change and a mass of warm water lingering in the Pacific Ocean off the West Coast.

The events may be without connection — but the blob and the drought, which is troubling Oregon, too, have one thing in common: They are extreme.

In recorded history, California hasn't seen a dry spell as severe as the past four years.

The mass of warm water in the ocean — hundreds of miles wide and about as long as California — has average temperatures that are 5 degrees to 7 degrees warmer than normal, Washington climatologist Nick Bond said.

“We're in, if not uncharted territory, pretty near it. It is an extreme sort of thing,” he said.

OSU scientists are joining with others at Oxford University, who work with scientists from the Royal Netherlands Meteorological Institute and the University of Melbourne in Australia to examine extreme weather and to determine their connection, if any, with climate change.

The teams are relying on the excess computing power of 30,000 home computers volunteered by their owners — and they're looking for other would-be citizen scientists to join in.

Bond identified the mass of warm water — seen as a red-orange pool on climate maps — in late 2013, and it has persisted since.

“We can keep track of sea surface temperatures quite well by satellites,” Bond said.

While the images were telling one story, anecdotes from the ocean — of marine ecosystem disruption — came trickling in.

Seabirds starved

Seabirds called Cassin's auklets starved this winter off Washington state and Oregon.

Northwest fishers reported strange species in their nets, skipjack tuna or ocean sunfish, which would be more likely along the coast of Baja, Calif.

Last fall's run of Fraser River sockeye salmon veered north around Vancouver Island. The Canadian fishery had a banner year and the U.S. fishers went home with empty holds.

Scientists are documenting an unprecedented West Coast-wide marine algae bloom this year. The bloom poisons shellfish, causing authorities to shut down harvests.

In mid-June, thousands of red crabs washed ashore in Southern California.

In each case, researchers wondered about whether the warm-water mass was a factor.

Air temperatures can fluctuate up and down rapidly, but change comes more slowly to the ocean, Bond said.

“There's so much thermal inertia that a seven degree anomaly is very large,” Bond said. “Once you get the water so much warmer — or so much colder — than normal, there's some persistence to it.”

The OSU scientists are working with counterparts around the globe to speed up

research on extreme weather events — flood, blizzard, drought, heat waves, wind storms — to better determine the likelihood that any event is associated with climate change.

The science is difficult because extreme events occur naturally also.

Think about a baseball player on steroids, said Phil Mote, director of the Oregon Climate Change Research Institute at OSU.

The player might hit 50 home runs in a season, begin taking steroids, and then the homers jump to 70 per season.

“You can't say any particular home run was because of steroids, but you can say overall the odds have gone up,” Mote said.

Massive statistical analysis

The scientists use massive statistical analysis, running hundreds of climate scenarios, to try to determine the probability that a given extreme event was connected with human-caused climate change.

In the past year, the answers to specific questions have emerged as probably yes, and probably no.

Participating groups of researchers found that a 2013 heat wave in Australia was probably related to global warming, but another research effort determined that extreme rainfall in Colorado in the same year was probably not.

Most recently, the researchers plan to test the connection between the California drought and the warm-water mass by

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Phil Mote

director, Oregon Climate Change Research Institute

comparing massive amounts of oceanographic and climate data for an 18-month period — December 2013 to May 2015 — and then compare it with similar 18-month stretches, beginning in 1981.

The scientists tweak variables in the computer models and run them over and over to see what happens.

They will ask, for example, whether there would be a California

drought if they removed the influence of the warm water from the calculation.

This requires analyzing staggering amounts of data.

The OSU scientists estimate that they would need three supercomputers to do the job, unless they could enlist the help of thousands of volunteers with idle space on their home computers.

For the past dozen years, the Oxford group has done projects using the idle power of the “citizen scientists” they drafted. The technique is called distributed computing.

Volunteers download a program, and then the rest is largely automatic. The home computer loads a project, does the analysis when it's not otherwise occupied and then communicates the results the next time the computer connects to the Internet.

“We can do hundreds if not thousands of simulations with the help of the volunteers we're hoping to recruit,” Mote said.

Mote said he volunteered with his MacBook Air. He normally uses only a fraction of its power.

Volunteers can go to a Web page and see the data graphed in real time, Mote said.

Eventually, the OSU researchers will analyze the patterns, calculate the probability that events are connected and publish their findings in a peer-reviewed journal, Mote said.

“We hope to have enough results within the next couple of months to write a paper and submit it this fall,” he said.

Black lives matter



EDWARD STRATTON — The Daily Astorian

The Lower Columbia Diversity Project organized a March Sunday as part of Black Lives Matter, a movement created after George Zimmerman was acquitted in the 2012 shooting death of Trayvon Martin in Florida. Around the country, the group has demanded an end to racial profiling, police brutality, mass incarceration of African Americans and the militarization of police departments.

Bridge and road repairs planned

The Daily Astorian

The Oregon Department of Transportation continues work this week on the Astoria Bridge. The project involves recoating the steel above the bridge deck on the southern side of the Columbia River bridge along U.S. 101 north of Astoria.

The scheduled work includes prepping and painting the steel above the bridge deck along with miscellaneous touch-up painting throughout the bridge structure. Flaggers control single-lane traffic. Lane delays of up to 20 minutes are allowed anytime on weekdays and weekends.

At Manzanita Avenue on U.S. Highway 101 (milepost 43.00 to 43.34), ODOT is replacing an existing culvert at Neahkahnie Creek with a tunnel structure, enhancing of the stream bed, and relocating and improving the highway alignment along U.S. Highway 101 near Manzanita. Also, turning lane movements into downtown Manzanita are being enhanced.

Work includes installation of temporary shoring and a temporary water diversion system. Minor delays can be expected when flaggers need to occasionally control single-lane traffic.

Bridge rehabilitation work is being performed at both the Old Youngs Bay and Lewis & Clark River bridges along U.S. Highway 101 Business (mileposts 4.78 and 6.89).

Work includes reconstruction of the Lewis & Clark River Bridge, which is now closed until August to facilitate construction activities. A detour route is currently designated with signing.

The scheduled work at the Old Youngs Bay Bridge includes rehabilitation of the electrical and mechanical systems. When flaggers need to occasionally control single-lane traffic, minor delays can be expected.

The Oregon State Police enforces the speed limit through the work zone areas.

For information, call 5-1-1 or go to www.trip-check.com or www.odotproject.info

Vintner hopes to ‘Kickstart’ winery

By R.J. MARX
The Daily Astorian

CANNON BEACH — Mark Proden wants to bring a winery to the North Coast, and he is asking for the public's help in making his dream come true.

The Portland-based winemaker, inspired by Manzanita and its proximity to the Pacific Ocean, is holding a Kickstarter campaign to help raise funds for The Winery at Manzanita.

The campaign, which began in June and continues through Wednesday, seeks to involve the community in bringing a wine-making facility to the coast.

Originally from Wisconsin, Proden, 41, became interested in wine through cooking during his 11 years as a U.S. Air Force pilot and engineer, visiting Napa and Sonoma in California and eventually Oregon. Proden said he fell in love with Oregon “the first time I came up.”

He began making wine in a small space in Salem and started looking for a new building in a location that was “inspired by nature.”

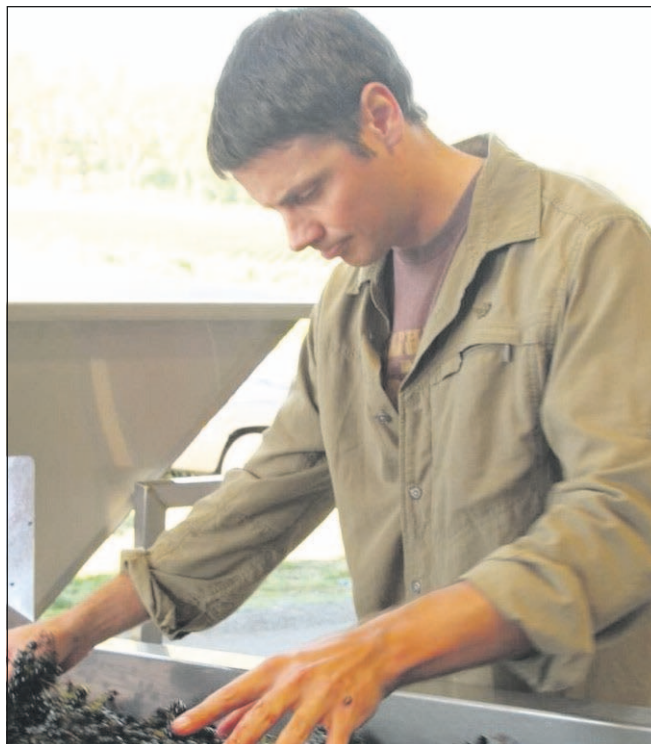
Proden worked with Erath Winery, and later in the Cubanismo and Orchard Heights tasting room, both in Salem. In 2013, he opened his own tasting room, The Portland Wine Bar in downtown Portland, just off Pioneer Courthouse Square.

Now he hopes to settle permanently in Manzanita.

“I started going to Manzanita on my last few vacation days from the Air Force,” Proden said. “I drove up from L.A. to Manzanita, and I thought, ‘This is such a cool little town.’ I kept going up because of my dog, Pinot. It's a very friendly dog beach, and it's very reminiscent of Nantucket, with cedar shingles and architecture. I thought how cool it would be to have a great winery so close to the beach.”

Working with good friend Richard Cuddihy — one of the legends of Oregon wine lore — Proden responded to a sign posted on Manzanita's main street, Laneda Avenue, stating “Imagine the possibilities!”

Cuddihy, who lived in Yam-



Submitted Photo

Mark Proden of The Winery at Manzanita. He hopes to open his winery this fall.

hill, died in 2014.

Manzanita Real Estate broker Charley Lostrom helped move the project ahead by brokering the location close to the beach.

Upon completion, the Manzanita winery will feature a shingled, 500-square-foot tasting room, 2,000-square-foot production facility, with courtyard, grapevines and string-bulb lighting. The plan calls for Adirondack chairs, fire pits, a glass roll-up garage door entrance and a two-bedroom, second-floor beach vacation rental with ocean-view deck.

Proden is seeking \$55,000 through his Kickstarter program to raise funds for a destemmer, press, fermentation tank, barrels, commercial dishwasher, tasting room bar, chairs and wine barrel fire pits. Rewards range from a cup of coffee a day for a month to tapes, pizza parties, private candlelight dinners, picnic beach lunches and an opportunity to design your own label.

Along with pinots, Proden urged wine lovers to sample the state's wide range of wines, especially malbec and cabernet sauvignon. “They're more diversified,” he said. “I think the pinot

bubble has burst a bit, because Oregon is so renowned for pinot. People are still definitely asking for it. But then they're surprised to know we can grow all these single varietals that are normally in a blend.”

He said that while some vines will be onsite, most of the wine grapes will be grown elsewhere, including throughout Oregon and Washington state.

He said when seeking to partner with a vineyard, he looks for growing practices and sustainability. “When you get into the harvest, you're looking at the acid, the pH and the fruit quality,” he added.

Proden will make the wine himself, and said he plans to produce about 2,000 cases per year.

Oregon students doing better than expected on new tests

The Daily Astorian

Oregon students are outperforming expectations on the new Smarter Balanced state tests, according to the Oregon Department of Education.

The department reported preliminary state-level results showing students in math and English outperforming projections given to the state Board of Education last year.

The department received preliminary results for 95 percent of Oregon students who took the Smarter Balanced assessment. The results covered students' performance in third-, fourth-, fifth-, sixth-, seventh-, eighth-, and 11th-grade math and English.

Students who score three or four on a four-point scale in any area of the Smarter Balanced assessment are considered on track to graduate college- and career-ready.

The percentage of students earning a three or better on the English portion of the test exceeded expectations by an average of 15.4 percent, increasing as students got older.

Students exceeded expectations in math by 7.3 percent. The only area Oregon students did not exceed expectations was 11th-grade math, where 2 percent fewer than expected passed the Smarter Balanced exam with a score of three or better.

“I am very pleased to see so many Oregon students demonstrating college- and career-ready skills in English and math,” Deputy Superintendent Salam Noor said in a release by the department. “Oregon has raised the bar and this transition to higher expectations will require persistence and patience from our students and a continued focus on implementation and high-quality instruction from our educators.”

The state expects percentages to drop as final results come in.

More than 280,000 Oregon students took the new Smarter Balanced assessments, which were aligned with higher academic standards. They were asked to write, reason, think critically and solve multistep problems the state said better aligned with classroom learning in the real world.

“Students in my classes prepared for the test all year, but there was no ‘teaching to the test,’” Janna Reid, a teacher at South Middle School in Grants Pass, said in the release. “Students practiced the skills they'll use after middle school and beyond high school. These skills involve critical thinking and problem-solving, and perhaps the most noteworthy skill: an emphasis on writing, and writing for a purpose.”

The state will release final school, district and state-level results later this summer.

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