

Scientists say Oregon Coast dodged 'dead zone' bullet

CORVALLIS — The Oregon coast is now facing annual threats from hypoxia, or low oxygen, and scientists liken the phenomenon to the wildfire season the state faces every summer and fall.

The oxygen content of Oregon's near-shore Pacific Ocean waters plummeted to dangerously low levels this summer before a timely storm arrived in mid-September to "flush" the system and ease the threat to many marine creatures. Hypoxia has become a seasonal threat.

"We are now living on a knife edge in terms of hypoxia, and this year we crossed the threshold into danger," said Francis Chan, an Oregon State University marine ecologist and an expert on ocean chemistry. "It was one of the worst

years we have had in a while and it looked like it was going to get really bad before that storm came in.

"This is something that only happened occasionally in the 20th century, but has been taking place on a near-yearly basis for the past 15 years. The leading hypothesis for why this is happening is that the ocean is changing. Warmer water holds less oxygen, for one, but there also may be increased stratification and other factors."

Chan said he and his colleagues began hearing anecdotal reports about abnormal conditions and animal behavior in July.

Researchers from the Oregon Department of Fish and Wildlife collected video of crabs in a research trap dying from lack of oxygen. Marine

educators at OSU's Hatfield Marine Science Center said crabs were leaving the ocean to enter bays and estuaries — some even burying themselves in sandy flats exposed to the air at low tide.

Researchers on survey ships run by the National Oceanic and Atmospheric Administration told Chan that when they sampled the ocean waters off Oregon this summer for juvenile fish, they caught almost nothing.

Jack Barth, director of the Marine Studies Initiative at Oregon State and a principal investigator with the National Science Foundation-funded Ocean Observatories Initiative, retrieved data that showed the level of oxygen in the ocean off Yaquina Head — in 25 meters of water — was down to 0.5

milliliters of oxygen per liter of water. That is classified as "severe" hypoxia, he noted.

"It lasted from mid-August to early September," Barth said, "which is enough time to do some damage, but not as bad as the event in 2006, which killed thousands of crab and other marine organisms."

"Oxygen levels were down to zero that year and it persisted well into September. We were lucky this year — we dodged a bullet."

When water near the seafloor reaches hypoxic levels — below 1.4 milliliters of oxygen per liter of water — some fish and other creatures have the ability to flee the area and find more oxygenated water. However, some animals don't have that ability and those that do, when the hypoxia is severe

and widespread, may not find a place to go.

"The good thing is that we now have a lot of eyes on the ocean, with more and more people reporting abnormalities," Chan said. "We can use instrumentation from the Ocean Observatories Initiative, research ships and gliders to determine where the levels of low oxygen are and when they occur, as well as where there may be areas of more oxygenated water. We are learning more each year."

Near-shore hypoxia, which can lead to the aforementioned marine "dead zones," first came to researchers' attention in 2002 when crabbers pulled up pots of dead crabs, Chan said.

The Oregon legislature has recognized the threat and estab-

lished an ocean acidification and hypoxia council, which Barth co-chairs. Chan is meeting with fishermen in October to brief them on the oceanographic data OSU has recorded, and to get their insights and observations from up and down the Oregon coast.

"Every year, things get a little weird and though we are observing more of it, there's still a lot to learn," Chan said. "This spring, for example, millions of pyrosomes showed up in the water — they are a luminescent, jellyfish-like sea creature that can grow up to two feet long — and no one is sure why, or if they may have contributed to the hypoxia."

"As the ocean changes, and we experience an annual hypoxia season, we can expect more surprises."

Little from 1B

School athletics, its fans and the Florence community.

The main reason given from school administrators was for player safety.

Back in 1975, I was coaching for Spray High School at a game in Heppner, Ore. Before the game, the opposing coach explained that 17 of his 19 players were freshmen. In contrast, my team of 13 players had eight juniors and seniors. As a result, I agreed to make sure not to pound his team into the ground.

The first quarter score was 27-0 Spray; the final score was

also 27-0.

I have to wonder if any communication took place between head coaches at Siuslaw and North Bend prior to the decision by Siuslaw to forfeit.

Football is a collision sport. I played football, as do many other players, to test my physical and mental toughness. I did not play for a championship that would never happen.

My Warrenton High School football team was a small fish in a big pond. In fact, all teams in the Cowapa League were larger, with some literally three times the size of our 201-member student body.

We played outmanned every

game and got our victories from within ourselves — and every now and then we'd upset a superior opponent.

One team we did not upset was Rainier. Their mascot was still doing push-ups after we showered and were boarding the bus to travel home.

I did a little digging and discovered we were in the same classification as Siuslaw High School while I was playing at Warrenton. It would not have been fun to play Siuslaw back then — but we would have suited up and given it our best effort.

One of the reasons given for Siuslaw's forfeit was the con-

cern that upperclassmen from North Bend would dominate and possibly injure our younger players.

Just up the road, Mapleton and many eight man football teams regularly use freshmen to fill out their rosters. When a senior quarterback at Mapleton was injured in a game two weeks ago, the Sailors' back-up freshman quarterback entered the game and scored two times in that game.

In 1976, my Spray Eagles traveled to take on Crane High School. Crane was a boarding school that routinely won our league. Our 13 players — including three freshmen and

two sophomores — watched as 48 Crane players lined the opposite sideline. Their team had 36 upperclassmen. We battled and lost by 14 points.

From my perspective, the players on that small Spray team deserved to play for the possibility — however slight — of winning.

Which they did on the toughness scale.

So what happens now at Siuslaw? What lessons have been learned from forfeiting?

The players are the ones who lost and they cannot get it back and, in the process, I feel other football players in the Far West League have lost respect for

Siuslaw.

Many past Siuslaw football players are shaking their heads and asking "Why? For Safety?"

No, not good enough.

Unless you have played football, you will never understand the never-say-die attitude of the underdog.

In my lifetime, I played 13 years of football and worked no less than four hazardous jobs without suffering a serious injury.

Coincidentally, I slipped on my front step seven years ago and broke my ankle.

Maybe I should move to a house without a front step, just for safety reasons?

the spotlight

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