

Warm Pacific Ocean 'blob' facilitated vast toxic algae bloom

By PHUONG LE
Associated Press

SEATTLE — A new study finds that unusually warm Pacific Ocean temperatures helped cause a massive bloom of toxic algae last year that closed lucrative fisheries from California to British Columbia and disrupted marine life from seabirds to sea lions.

Scientists linked the large patch of warm ocean water, nicknamed the "blob," to the vast ribbon of toxic algae that flourished in 2015 and produced record-breaking levels of a neurotoxin that is harmful to people, fish and marine life.

The outbreak of the toxin domoic acid, the largest ever recorded on the West Coast, closed razor clam seasons in Washington and Oregon and delayed lucrative Dungeness crab fisheries along the coast. High levels were also detected in many stranded marine mammals.

"We're not surprised now having looked at the data, but our study is the first to demonstrate that linkage," said Ryan McCabe, lead author and a research scientist



In this undated file photo provided by NOAA Fisheries, NOAA researchers pour a sample of sea water containing a brownish toxic algae into a jar aboard a research vessel off the Washington Coast.

NOAA Fisheries via AP, File

at the University of Washington's Joint Institute for the Study of the Atmosphere and Ocean. "It's the first question that everyone was asking."

McCabe and his co-authors explain how the toxic algae bloom thrived in their study published in the journal *Geophysical Research Letters*.

Seasonal algae blooms are common each year along the West Coast, but most are not toxic. The scientists found that the algae bloom was dominated by a single species called "Pseudo-nitzschia australis" that is highly toxic.

The algae survived and took advantage of warm, nutrient-poor conditions set up by the patch of water that was warmer at the surface than normal.

Coastal upwelling last spring — a seasonal event that brings nutrient-rich, cooler waters up from the deep ocean — provided nutrients for the algae to bloom into a large population fairly quickly at sea. Finally, a series of spring storms delivered the bloom to the coast.

"While temperature isn't everything, it's serving as a decent proxy," said McCabe. "We think there's a linkage between toxic events along our coast and climate variability indices."

The blob was a one-time event that was not due to global warming, "but we are looking at this event as a potential window into the future as what conditions could look like,"

McCabe said.

Kathi Lefebvre, a co-author and marine biologist at NOAA's Northwest Fisheries Science Center, said the bloom resulted in the highest levels of domoic acid contamination in the food web ever recorded for many species.

Domoic acid accumulates in anchovies, sardines and other small fish as well as shellfish that eat the algae.

Marine mammals and fish-eating birds in turn can get sick from eating the contaminated fish. In people, it can trigger amnesic shellfish poisoning, which can cause permanent loss of short-term memory in severe cases.

Sea lions in California commonly experienced seizures, a common sign of domoic acid poisoning, during harmful algae blooms along that state's coast. But 2015 was the first year that such harmful effects were documented as far north as Washington state, scientists said.

"This is an eye-opener for what the future may hold as ocean conditions continue to warm globally," Lefebvre said.

Ammon Bundy's lawyers seek to stop trial

Associated Press

PORTLAND — Ammon Bundy's federal conspiracy trial resumed Thursday despite a motion from his lawyers seeking a postponement until a court rules on their appeals.

Among other things, attorneys Marcus Mumford and J. Morgan Philpot have taken issue with U.S. District Court Judge Anna Brown's order that the ownership of the Malheur National Wildlife Refuge is not on trial, and her notice to jurors that the federal government owns the refuge that Bundy and his followers occupied for 41 days last winter.

Philpot, in a separate court document, reiterated a longstanding argument that Bundy's pretrial detention has hindered his defense.

He also lodged complaints about the government's treatment of his client during the trial, saying U.S. marshals have not allowed Bundy to confer with attorneys during breaks and that Bundy has been denied the use of "normal"



"I figured if it was illegal, they would have nipped it in the bud."

— Jeff Banta, On the occupation of the Malheur Wildlife Refuge

pens, paper and amounts of paper.

Philpot said his client is also not getting enough food.

"Since the beginning of trial Mr. Bundy has regularly been deprived of meals and adequate sustenance, resulting in physical and mental fatigue beyond what is normal or allowable under basic principles of fairness and decency," he wrote.

Bundy and six co-defendants have pleaded not guilty to conspiring to impede federal employees from doing their jobs at the refuge during the standoff. The occupation followed a rally protesting the imprisonment of Dwight and Steven Hammond, two Oregon ranchers convicted of arson. It grew into a wider call for

the government to relinquish control of the refuge and other Western lands.

As the appeals await rulings by the 9th U.S. Circuit Court of Appeals, the trial continued with testimony from The Rev. Franklin Graham, who helped negotiate the surrender of the final four occupiers on Feb. 11, two of whom are on trial.

The FBI initially called Graham at the suggestion of Jeff Banta, who is on trial. Graham had daily phone calls with the holdouts before flying his own plane to Oregon from North Carolina.

Graham testified he relied upon God as he tried to encourage a peaceful resolution. He said memories

of what happened at Ruby Ridge, Idaho, and Waco, Texas, were a reason he wanted to help.

When the occupation was finally over, two FBI negotiators cried uncontrollably, "just so thankful to God no one was hurt," Graham testified.

Banta, 47, followed Graham to the witness stand, testifying for two hours. Banta said his initial reason for traveling from Nevada to Oregon was to help out at Hammond's ranch because it was short-staffed.

He testified that he did nothing wrong, and it didn't appear law enforcement was overly concerned with an occupation that had been underway for three weeks when he arrived.

"I figured if it was illegal, they would have nipped it in the bud," Banta said.

Banta said he asked that Graham serve as a negotiator because he had seen him on Facebook, traveling to different states and praying. "I thought that's what our country needs," Banta testified.

BRIEFLY

Medford woman named Teacher of the Year

MEDFORD (AP) — A Medford School District teacher has been named 2017 Teacher of the Year.

The *Mail Tribune* reports that Gloria Pereyra-Robertson of Howard Elementary School was honored Wednesday as the winner of the prestigious award, which comes with a \$5,000 prize both for Pereyra-Robertson and for the school.

Oregon Deputy Superintendent of Public Instruction Salam Noor made a surprise appearance at Howard's first assembly to announce the prize.

Pereyra-Robertson beat out 250 nominees for the award and is the first Jackson County teacher to receive it since 1988.

Feminist bookstore sours on 'Portlandia'

PORTLAND (AP) — A Portland feminist bookstore is cutting ties with the TV comedy "Portlandia," which used its space to film sketches parodying a feminist bookstore.

Actors Carrie Brownstein and Fred Armisen wore long-haired wigs and frumpy clothing as the humorless, aggressively conscientious co-owners of the Women and Women First bookstore in IFC's "Portlandia."

The Portland store, In Other Words, initially enjoyed the publicity. But its front door now feates a list of several grievances with the show, including gentrification, queer antagonism and devaluation of feminist discourse.

Corrections

The *East Oregonian* works hard to be accurate and sincerely regrets any errors. If you notice a mistake in the paper, please call 541-966-0818.

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541-966-0827 • cmcclellan@eastoregonian.com

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COMMERCIAL PRINTING

Production Manager: Mike Jensen

541-215-0824 • mjensen@eastoregonian.com

AccuWeather.com Forecast

TODAY	SATURDAY	SUNDAY	MONDAY	TUESDAY
Clouds and sunshine	Partly sunny, a shower or two	More clouds than sunshine	Mostly sunny	Clouds and sunshine

PENDLETON TEMPERATURE FORECAST

71°	44°	65°	37°	65°	38°	65°	47°	64°	41°
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HERMISTON TEMPERATURE FORECAST

74°	47°	69°	37°	69°	37°	71°	50°	70°	43°
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ALMANAC

PENDLETON
through 3 p.m. yesterday

TEMPERATURE	HIGH	LOW
Yesterday	79°	49°
Normals	72°	43°
Records	93° (1932)	28° (1919)

PRECIPITATION
24 hours ending 3 p.m. 0.00"
Month to date 0.68"
Normal month to date 0.53"
Year to date 8.07"
Last year to date 5.82"
Normal year to date 8.95"

HERMISTON
through 3 p.m. yesterday

TEMPERATURE	HIGH	LOW
Yesterday	79°	47°
Normals	73°	43°
Records	93° (1967)	25° (1985)

PRECIPITATION
24 hours ending 3 p.m. 0.00"
Month to date 0.45"
Normal month to date 0.42"
Year to date 5.44"
Last year to date 3.48"
Normal year to date 6.57"

SUN AND MOON

	New	First	Full	Last
Sunrise today	6:53 a.m.			
Sunset tonight	6:37 p.m.			
Moonrise today	6:27 a.m.			
Moonset today	6:44 p.m.			

REGIONAL FORECAST

Coastal Oregon: Mostly cloudy today with a passing shower in the afternoon.

Eastern Washington: Sun and clouds today.

Eastern and Central Oregon: Partial sunshine today with a shower in places; not as warm near the Cascades.

Cascades: Times of clouds and sun today; cooler in the south.

Western Washington: Times of sun and clouds today; a passing afternoon shower at the coast.

Northern California: Cooler today with clouds and sun; windy in the interior mountains in the afternoon.

REGIONAL CITIES

	Today			Sat.		
	Hi	Lo	W	Hi	Lo	W
Astoria	64	50	pc	63	49	r
Baker City	79	38	pc	65	25	pc
Bend	67	33	pc	58	31	c
Brookings	60	49	c	61	49	sh
Burns	76	31	s	63	23	pc
Enterprise	77	41	pc	62	34	sh
Eugene	67	46	pc	65	46	sh
Heppner	72	41	pc	65	36	sh
Hermiston	74	47	pc	69	37	s
John Day	79	45	pc	65	42	pc
Klamath Falls	67	27	pc	59	28	pc
La Grande	78	42	pc	65	30	sh
Meacham	74	38	pc	60	31	pc
Medford	72	44	pc	68	44	c
Newport	59	49	c	59	49	sh
North Bend	64	50	c	64	51	sh
Ontario	86	50	pc	73	35	c
Pasco	78	46	pc	71	38	pc
Pendleton	71	44	pc	65	37	sh
Portland	68	50	pc	63	49	sh
Redmond	70	32	pc	62	30	c
Salem	66	47	sh	63	47	sh
Spokane	73	47	pc	62	39	c
Ukiah	73	35	pc	61	31	s
Vancouver	65	49	pc	61	47	sh
Walla Walla	73	50	pc	66	44	pc
Yakima	76	39	pc	67	37	c

WORLD CITIES

	Today			Sat.		
	Hi	Lo	W	Hi	Lo	W
Beijing	77	52	s	79	55	pc
Hong Kong	84	78	s	84	79	c
Jerusalem	79	62	s	82	65	s
London	64	48	sh	60	47	t
Mexico City	74	54	t	74	55	t
Moscow	58	50	r	57	46	pc
Paris	65	49	t	65	47	t
Rome	74	58	pc	74	62	t
Seoul	74	61	c	79	64	pc
Sydney	68	53	sh	71	55	sh
Tokyo	73	65	c	73	68	sh

WINDS

(in mph)	Today	Saturday
Boardman	WSW 7-14	WSW 6-12
Pendleton	NW 6-12	W 6-12

UV INDEX TODAY

Time	UV Index
8 a.m.	10
10 a.m.	2
Noon	3
2 p.m.	3
4 p.m.	2
6 p.m.	0

0-2, Low; 3-5, Moderate; 6-7, High; 8-10, Very High; 11+, Extreme

The higher the AccuWeather.com UV Index™ number, the greater the need for eye and skin protection.

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NATIONAL WEATHER TODAY

Shown are noon positions of weather systems and precipitation. Temperature bands are highs for the day.

National Summary: A storm will persist and continue to cause areas of rain today from the Midwest to the mid-Atlantic and southern New England coasts. Showers will dot the Northwest with storms in Florida and the Rockies.

Yesterday's National Extremes: (for the 48 contiguous states)
High 98° in Chino, Calif. Low 22° in Hohnholz Ranch, Colo.

NATIONAL CITIES

	Today			Sat.		
	Hi	Lo	W	Hi	Lo	W
Albuquerque	77	55	pc	80	55	s
Atlanta	76	55	s	80	60	s
Atlantic City	70	65	r	74	66	sh
Baltimore	67	62	sh	74	62	sh
Billings	81	55	s	80	51	s
Birmingham	77	54	s	82	58	s
Boise	85	56	pc	72	44	pc
Boston	60	53	r	58	54	r
Charleston, SC	86	66	pc	84	69	pc
Charleston, WV	70	51	t	78	52	c
Chicago	65	57	sh	67	54	c
Cleveland	72	59	r	72	57	t
Dallas	80	59	s	82	61	s
Denver	78	49	r	80	50	pc
Detroit	64	59	r	69	56	r
El Paso	81	60	pc	87	62	s
Fairbanks	52	32	s	54	35	s
Fargo	72	49	pc	72	53	pc
Honolulu	86	73	sh	84	75	pc
Houston	83	59	s	85	62	pc
Indianapolis	66	55	sh	67	51	t
Jacksonville	87	65	pc	88	68	pc
Kansas City	72	53	s	72	55	pc
Las Vegas	91	72	s	92	68	s
Little Rock	79	59	pc	83	60	pc
Los Angeles	86	64	s	82	61	pc

	Today			Sat.		
	Hi	Lo	W</			