



HOT ON A COLD NIGHT

Friars, Rams roll closer to NCAA Tournament berths — PC overwhelms St. John's, URI muscles past Davidson. Sports, C1

AS MUCH AS \$322 IN COUPON SAVINGS INSIDE

Providence Sunday Journal

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TOXIC ALGAE HAUNTS R.I.

It was a nasty alien when it shut down the shellfishing industry last fall. It's back.

By Alex Kuffner
Journal Staff Writer

The first water sample containing an unusually high number of an algae that can produce a potent neurotoxin was taken off Newport Harbor last fall.

Within nine days the algae bloom had spread across Rhode Island waters, forcing the state to shut down many of its precious shellfishing beds out of fear that the toxin, once emitted, could be passed up the food chain from oysters and clams to humans. It has happened before in other places.

With as little warning as when it appeared, the algae colony collapsed, leaving no one sickened but raising questions in its wake.

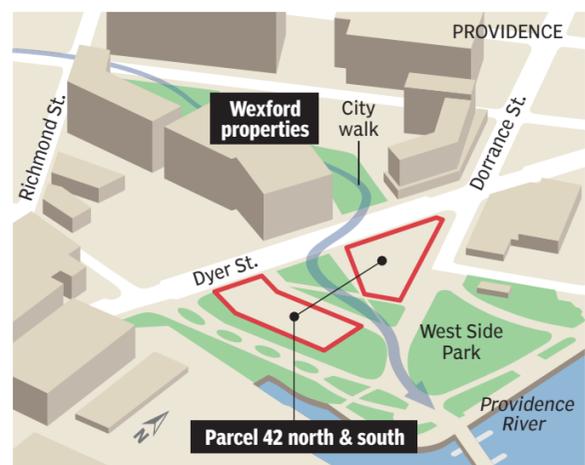
Four months later, the cause is still a mystery that is stumping scientists and vexing state regulators who worry that it may be more than



Gregory Velleca of Rome Point Oyster Farm sorts oysters that were pulled from beds near Wickford in mid-February. A toxic algae bloom has halted shellfishing in southern R.I. at least through Monday. [THE PROVIDENCE JOURNAL/STEVE SZYDLOWSKI]

Conflicting priorities

The 195 Commission leaders seek to divide any development of Parcel 42 into the red-bordered areas to allow pedestrian access from the planned Wexford innovation center to the riverfront.



SOURCE: 195 Commission documents THE PROVIDENCE JOURNAL

The towers never stood a chance

What doomed them in secret: A neighbor's pedestrian access to the riverfront

By Kate Bramson
Journal Staff Writer

PROVIDENCE — New York developer Jason Fane put the 195 Commission in a bind Nov. 14 when he pitched three luxury apartment towers for the length of a prime piece of the former highway land.

The problem was that Fane's towers would block pedestrian access between the planned Wexford Science & Technology campus and a public park envisioned for the riverfront land across the street.

Here's the bind: Fane's proposal had the strong support of Senate Majority Leader Dominick J. Ruggerio. The Wexford campus, meanwhile, was the centerpiece of Gov. Gina Raimondo's vision for the former highway land.

And in negotiations with Wexford, 195 leaders had encouraged the Baltimore developers to build on land that was open to the park, the Providence River and College Hill — not land blocked by a five-story pedestal and

SEE PARCEL, A8

POLITICS

Irate Trump: 'Obama had my wires tapped'

Claim is 'simply false,' Obama spokesman says; intelligence officials cast doubt

By Philip Rucker, Ellen Nakashima and Robert Costa
The Washington Post



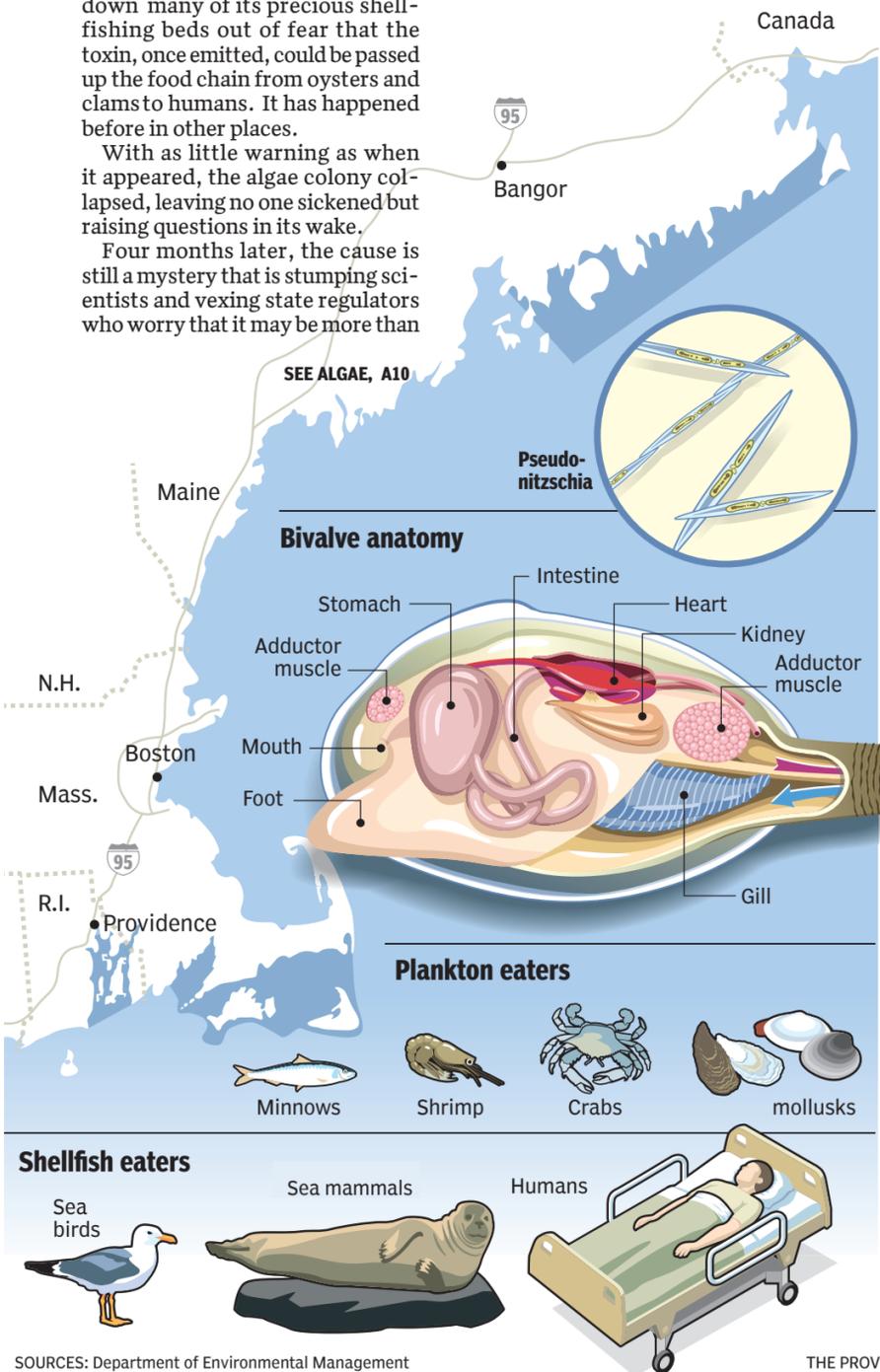
President Donald Trump on Saturday angrily accused former President Barack Obama of orchestrating a "Nixon/Watergate" plot to tap the phones at his Trump Tower headquarters last fall in the run-up to the election — a charge that Obama, through a spokesman, said "is simply false."

While citing no evidence to support his explosive allegation, Trump said in a series of four tweets sent Saturday morning that Obama was "wire tapping" his New York offices before

the election in a move he compared to McCarthyism. "Bad (or sick) guy!" he said of his predecessor, adding that the surveillance resulted in "nothing found."

Trump offered no citations nor did he point to any credible news report to back up his accusation, but he may have been referring to commentary on Breitbart and conservative talk radio

SEE TRUMP, A10



Last October, the waters of northern Maine, southern Massachusetts and Narragansett Bay were closed to shellfishing when high levels of toxin-producing plankton were found.

1 Pseudo-nitzschia is a type of marine phytoplankton, sometimes capable of producing domoic acid, the neurotoxin that causes amnesic shellfish poisoning.

2 Clams and other bivalves filter seawater for food.

If shellfish consume the pseudo-nitzschia plankton that is producing domoic acid, the toxin will accumulate in their bodies without apparent ill effects.

3 Larger mammals that eat contaminated mollusks and other hosts may suffer severe brain damage and sometimes death.

Round 2: Shellfishing banned in southern R.I.

By Alex Kuffner
Journal Staff Writer

PROVIDENCE — The ban on shellfishing in some Rhode Island waters because of the latest bloom of the toxin-producing algae Pseudo-nitzschia will be in effect at least through



Liberti

Monday. The state Department of Environmental Management went out two more times last week to collect shellfish samples

from the affected waters in lower Narragansett Bay, the lower Sakonnet River and portions of Rhode Island Sound and found elevated levels of the toxin domoic acid in mussels taken from four locations.

The levels of the toxin in the mussels ranged from

20 to 32 parts per million, according to Angelo Liberti, chief of surface water protection for the DEM. The safety standard set by the U.S. Food and Drug Administration is 20 parts per million.

SEE BANNED, A10

TODAY MON TUE
35°/14° 40°/29° 54°/47°
Complete forecast, C10



GE's Immelt pursues global strategy

Against a rising backdrop of nationalism and isolationism, General Electric CEO Jeffrey Immelt tells shareholders "GE is a global company today and in the future." B1

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Sunday

SURVEILLANCE

Wiretaps are not easily arranged

Strict rules and high standards govern the use of domestic taps

By Ellen Nakashima
The Washington Post

Wiretaps on Americans in foreign intelligence investigations are not easy to get. And if you're a candidate for president, it's even harder.

That's the experience of current and former senior U.S. officials who on Saturday expressed disbelief at President Donald Trump's accusation — leveled without any evidence — that President Barack Obama had him wiretapped at Trump Tower before the November election.

Senior officials, who spoke on the condition of anonymity because such matters are classified, said that there had been no wiretap on Trump.

Under the law governing foreign-intelligence surveillance inside the United States, an FBI agent would need to show a federal judge that there is probable cause that the target is an "agent of a foreign power" — and that requires more than just talking to, say, the Russian ambassador.

"Both criminal and foreign intelligence wiretaps have onerous and strict processes of approval that require not only multiple levels of internal Justice Department review, but also require court review and approval," said Matthew Waxman, an expert on national security law at Columbia University.

The law authorizing wiretaps in terrorism and espionage cases is known as the Foreign Intelligence Surveillance Act of 1978, passed out of reforms recommended by the Church Committee in the wake of spying abuses by the FBI and the National Security

Agency.

The law bars targeted electronic surveillance on U.S. soil unless the government can show that the target was a foreign power or an agent of a foreign power, and that the "facility" — the phone number or email address in question — is being used by the foreign power or agent.

The law authorizing criminal intercepts — in cases such as murder, drug dealing or racketeering — is Title III of the Omnibus Crime Control and Safe Streets Act of 1968. Like FISA, the law requires probable cause, but in this instance that the target is about to or has committed a crime.

In a national security case, the FBI working with attorneys in the Justice Department's National Security Division prepare a declaration laying out their grounds for seeking a FISA order. A senior intelligence official, typically the FBI or CIA director, must certify that the purpose is to collect foreign intelligence and that the information cannot be obtained by normal investigative means.

Then the package must be approved by a senior Justice official. Only three have authority to approve the order: the attorney general, the deputy attorney general and the head of the National Security Division.

Once approved, the order is served on the phone or Internet company that handles the number or email address in question.

On average, in recent years, there have been about 1,400 to 2,300 FISA orders a year. Each order can contain multiple names and numbers or email addresses.

TRUMP

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suggesting that Obama and his administration used "police state" tactics last fall to monitor the Trump team. The Breitbart story, published Friday, has been circulating among Trump's senior staff, according to a White House official who described it as a useful catalog of the Obama administration's activities.

Kevin Lewis, a spokesman for Obama, said in a statement early Saturday afternoon: "A cardinal rule of the Obama administration was that no White House official ever interfered with any independent investigation led by the Department of Justice. As part of that practice, neither President Obama nor any White House official ever ordered surveillance on any U.S. citizen. Any suggestion otherwise is simply false."

Officials at the FBI and the Justice Department declined to comment.

Trump has been feuding with the intelligence community since before he took office, convinced that career officers as well as holdovers from the Obama administration have been trying to sabotage his presidency. He has ordered internal inquiries to find who leaked sensitive information regarding communications during the campaign between Russian officials and his campaign associates and allies, including Attorney General Jeff Sessions and ousted national security adviser Michael Flynn.

Some current and former intelligence officials cast doubt on Trump's assertion.

"It's highly unlikely there

ALGAE

From Page A1

an anomaly.

Shellfishing has always occupied an outsize place in Rhode Island's cultural fabric, but its importance goes beyond the quahog's role as a symbol of the Ocean State.

The industry is an economic driver. The "pond-to-plate" movement has spawned new oyster bars around the state, and Rhode Island-grown varieties of the nubby bivalve — East Beach Blondes, Charleston Salts and Ninigret Cups — are being shipped to restaurants in New York, Washington and Chicago.

Between a recent boost in wild quahog harvests and the revival of oyster farming over the last two decades, the shellfishing industry has seen sales climb to \$12 million a year and its employment reach nearly 700 full- and part-time workers.

The state of the industry, however, is largely dependent on the health of the marine environment. The bloom in October was the first time in more than 40 years that shellfishing in Rhode Island had been closed down because of harmful algae.

But it followed close on the

heels of a series of so-called rust tides in local waters, caused by a different type of algae. It also appears connected to blooms that erupted in Maine and Massachusetts. And in another ominous sign, a similar bloom returned to Rhode Island waters just a few days ago.

It may be part of a larger trend of harmful algae blooming around the world.

"Rhode Island has been very lucky for decades," says Sandra Shumway, research professor of marine sciences at the University of Connecticut. "Now it's no longer immune."

Until last fall, in the 30 years that Angelo Liberti had worked at the Rhode Island Department of Environmental Management — the last 18 as chief of surface water protection — he had never seen a bloom of a type of algae called Pseudo-nitzschia.

The microscopic algae has always been present in Rhode Island waters, at least as far back as the 1950s, but generally at low levels. Even in high concentrations, the yellowish-brown algae largely blends into the water column.

So there was no visible indication of anything out of the ordinary before the first high cell count was

discovered Sept. 26 during routine monitoring by the DEM, explains Liberti, whose job is to monitor water quality in Narragansett Bay and other state waters.

Tests by the Department of Health on the sample pulled off Newport found about 29,000 algae cells per liter, nearly twice the threshold of what's considered normal. It caught the agencies' attention, but it didn't raise alarms.

That changed on Oct. 6 when water samples taken from mid-Narragansett Bay showed much higher levels, including one sample from near Prudence Island that showed 1.2 million cells per liter. More concerning, another sample tested positive for domoic acid, the toxin sometimes produced by Pseudo-nitzschia that can build up in filter-feeding shellfish. It is dangerous to humans and other higher mammals.

Liberti and other Rhode Island officials knew about a particularly aggressive bloom in Maine a week earlier that, in an unprecedented event for New England, had forced a recall of five tons of mussels and clams after samples showed unsafe levels of domoic acid.

So on Oct. 7, before any Rhode Island shellfish tested positive, the state banned all shellfishing in Narragansett

Bay, Mount Hope Bay and the Sakonnet River and ordered all dealers to hold on to their catch.

It was the first time that Pseudo-nitzschia had bloomed in Rhode Island waters, and only the second time in recent memory — after a red tide in the early 1970s — that dangerous levels of any type of algae had brought the state's shellfishing to a halt.

"This was not a bloom that people had a lot of experience with on the East Coast, so we didn't want to take any chances," says Liberti.

His team increased the frequency of testing to twice a week and the number of sampling locations from 2 to 24.

Workers at the Department of Health lab in Providence worked overtime to get results, one DEM staffer was even doing cell counts on his home microscope, and everyone was talking or emailing late each night to figure out if and when to reopen the shellfish beds.

"It was sheer determination," Liberti says. "I don't think we could have kept up that pace too much longer."

Over a week of testing, no shellfish samples showed the presence of domoic acid, and

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BANNED

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Oysters and quahogs also sampled by the DEM had much lower levels of the toxin, ranging from less than 1 to 1 part per million. They tend to filter water at a lower rate than mussels, which may explain the lower levels of the toxin in their bodies.

The state Department of Health has also finished checking with all seafood dealers in the state and confirmed that no shellfish from the affected areas have been for sale since the closure went into effect on Wednesday after high toxin levels were first detected.

"Everything that's on the market is safe," Liberti said. "Consumers shouldn't have

any concerns."

The DEM was not planning to take any more samples over the weekend, but will head out on the water again on Monday to take cell counts of the algae. The agency will work with the health department to assess any developments that could lead to lifting the ban.

Rhode Island authorities are consulting with

their counterparts in Massachusetts, where a Pseudo-nitzschia bloom is also occurring. Although high cell counts have been found in Buzzards Bay, a closure has not gone into effect there because domoic acid has not been detected.

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POLITICS

Trump fans and foes clash at rallies across U.S.

Verbal and physical scuffles erupt as supporters fend off counter-protesters

The Associated Press

From Colorado's state Capitol to Trump Tower in New York and the Washington Monument, groups of hundreds of people rallied for President Donald Trump on Saturday, waving "Deplorables for Trump" signs and even carrying a life-size cutout of the president.

The March 4 Trump demonstrations were held around the country, and supporters clashed with generally smaller groups of counter-protesters.

In Berkeley, California, Trump supporters fought counter-protesters during a march in support of the president. People wearing goggles, motorcycle helmets, gas masks or with their face half-covered with bandannas pushed each other, throwing punches and hitting each other with the sticks holding their signs.

Six people protesting the rally in St. Paul, Minnesota, were arrested on felony riot charges after they lit fireworks inside the Minnesota State Capitol and fled, the police said. About 400 people attended the St. Paul event, and about 50 showed up to protest it. Some other



Supporters of President Donald Trump gather on the lawn of the state Capitol in Lansing, Mich., on Saturday while a group of protesters hold a separate demonstration a short distance away. (DETROIT NEWS VIA AP/DALE G. YOUNG)

minor scuffles between the dueling demonstrators were quickly defused.

In Nashville, two people were arrested as protesters clashed with Trump supporters at the Tennessee Capitol. The groups at times cursed at each other and made physical contact, which state troopers broke up, WPLN radio reported.

Near Mar-a-Lago, the Palm Beach Post reported that people on both sides exchanged profanities. Trump's motorcade briefly stopped so he could wave at supporters.

In Ohio, Trump supporter

Margaret Howe, 57, of Pataskala, said she increasingly fears civil war.

"We did not want to have something like this happen," she said, adding, "We came out today because Trump deserves to see he still has people for him. It's just all sad."

Outside the state Capitol in Denver, hundreds gathered, listening to speakers including former U.S. Rep. Tom Tancredo. Chelsea Thomas, an accountant from Thornton, Colorado, brought her family.

"It's nice to be surrounded by people who share your

morals and opinions," said Thomas. A group of counter-protesters gathered nearby, separated from the rally by police tape. They chanted "No Trump. No KKK. No fascist USA" and held signs with messages such as "Your vote was a hate crime."

Hundreds gathered in rallies on both ends of Pennsylvania to show support for Trump. Supporters waved signs and flags and listened to speeches during Saturday's "Spirit of America" rally in Bensalem's Neshaminy State Park in eastern Pennsylvania's Bucks County.

IMMIGRATION

Revised travel ban expected Monday from White House

By Abby Phillip and Robert Costa
The Washington Post

The White House is expected to unveil a new entry ban executive order on Monday, according to senior administration officials.

The order is expected to be a revised version of an entry ban that President Donald Trump signed in January, which has been blocked by a federal court.

On Saturday, Trump met with Attorney General Jeff Sessions and Department of Homeland Security Secretary John Kelly — both central to the implementation of the order — at his Mar-a-Lago resort.

White House officials have said that the new order will address some of the legal concerns raised by federal judges.

"Fundamentally, you're still going to have the same

basic policy outcome for the country," White House senior policy adviser Stephen Miller said on Fox News last month. "But you're going to be responsive to a lot of very technical issues that were brought up by the court."

Trump's first order blocked immigration from seven predominantly Muslim countries: Iraq, Syria, Iran, Sudan, Libya, Somalia and Yemen.

Critics called the order a de facto "Muslim ban," which

Trump had advocated during the presidential campaign. In the face of numerous legal challenges, a federal court in Seattle blocked the implementation of the ban. That court's stay was upheld by the U.S. Court of Appeals for the 9th Circuit.

Trump administration officials have promised to continue defending the original order in courts, even while the president is expected to sign a new order.

SCIENCE

Plants are microscopic, but they pack a wallop

It's not clear what makes them release domoic acid, but the effect is outsize

By Alex Kuffner
Journal Staff Writer

At the very base of the ocean food chain are the single-celled plants known as phytoplankton, whose growth is usually kept in check by the animals that eat them — tiny zooplankton, fish and shellfish.

From time to time, individual colonies of phytoplankton grow out of control. The most common cause is an excess of nutrients washing into waterways from fertilizers, livestock waste and other terrestrial sources during rains.

But sunlight plays a role, as do water acidity, salinity and temperature.

Of the many thousands of types of phytoplankton, less than 1 percent can be dangerous to other organisms. They include the species with red pigments in its cells that causes rust tides like those that occurred off Rhode Island in mid-September. Rust tides are harmless to humans but can damage the gills of fish and shellfish.

Some blooms can pose a risk to other organisms when they collapse and decompose, using up oxygen in the water

and creating the conditions for fish kills.

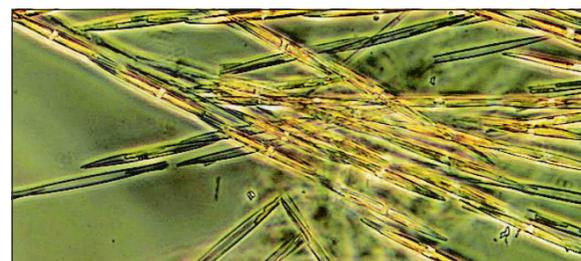
The genus *Pseudo-nitzschia* can be among the nastiest. Individual cells are encased in silica — “living in tiny glass houses,” says Ted Smayda, professor of oceanography at the University of Rhode Island — and they join together in long chains. Under a microscope, these groupings look like narrow filaments with pointy ends.

About half the known species of *Pseudo-nitzschia* are able to produce domoic acid, which can be transferred from clams and herrings to seals and whales — and people.

An invasion of crazed seabirds in California in 1961 that researchers later determined

had been poisoned by domoic acid, is believed to be Alfred Hitchcock's inspiration for the movie “The Birds.” Two years ago, in the largest bloom in the United States to date, which stretched from the Aleutian Islands to California, hundreds of marine mammals suffered seizures or died due to suspected poisoning.

It's when the toxin accumulates in the meats of shellfish that it poses a danger to humans. Poisonings are rare, but the risks are real. The toxin can cause “amnesic shellfish poisoning,” so named because one symptom is memory loss. It can also be fatal. In 1987, four people in Canada died and more than



Pseudo-nitzschia, a marine algae that produces a toxin called domoic acid. Excess production of Pseudo-nitzschia can result in a harmful algae bloom such as those that shut down shellfisheries in Rhode Island in October and again last week. [COURTESY OF NOAA FISHERIES]

100 others were sickened after eating mussels harvested from Prince Edward Island.

Pseudo-nitzschia has been documented in Rhode Island waters as far back as

the 1950s, but until last fall, seldom in high numbers and never producing domoic acid.

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ALGAE

From Page A10

the broad shellfishing ban was lifted.

But on Oct. 20, when littleneck clams taken from Sakonnet Harbor tested positive for the toxin, shellfishing was halted in the lower Sakonnet River. The next day, mussels taken from waters near Wetherill in Jamestown also came up positive, so a ban went into effect for lower Narragansett Bay.

Those bans were lifted a few days later after additional samples came back negative for the toxin.

Over the course of the bloom, domoic acid was found in only 6 of 150 algae samples. Further tests on the two shellfish samples that tested positive determined that the toxin levels were well below what's considered dangerous by the U.S. Food and Drug Administration.

Although no humans were poisoned, two seabirds that died suddenly did test positive for the toxin. The birds — a cormorant and a seagull — were found on the Warwick shoreline by a resident who also reported seeing other cormorants that appeared disoriented. The DEM collected the dead birds and sent them to a U.S. Geological Survey animal lab in Wisconsin, which determined that domoic acid levels in their bodies were low but could not conclude that the toxin caused their deaths.

Officials have been frustrated by a lack of definitive answers about the bloom. Why did the algae proliferate at all? Why were concentrations higher in the lower Bay and the ocean? What triggered the production of the toxin?

“Every time you turn around, there's another question, not another answer,” Liberti says.

The Rhode Island bloom not only came shortly after the one in the Gulf of Maine, but it also coincided with another that stretched from Nantucket Sound into Buzzards Bay. Ocean currents off New England tend to move south around Cape Cod and may have carried algae cells with them.

Lending credence to that theory, the first positive tests in Rhode Island were in the state's ocean waters. The bloom also spread from east to west.

But Liberti says that local factors may have also been involved. Although nutrients in Rhode Island waters have diminished as stormwater regulations have been tightened and sewage-treatment plants have improved, they may still have helped fuel the bloom.

After a dry summer that starved the algae of nitrates, phosphates and other nutrients in runoff, rains in late September washed a feast into the water that the *Pseudo-nitzschia* may have gorged on. But it's not clear why it thrived and not other types of algae, Liberti says.

As for when and why

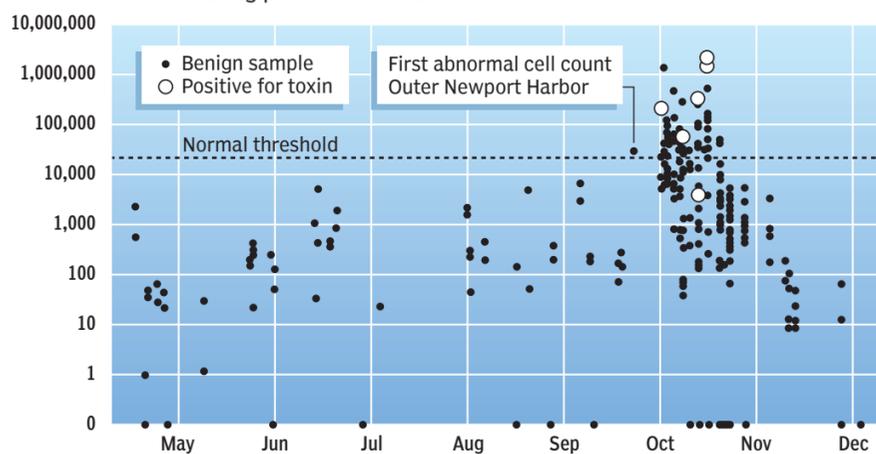


Russell Blank holds a handful of oysters from his Rome Point Oyster Farm, an aquaculture operation in western Narragansett Bay that sells its harvests through a state cooperative. [THE PROVIDENCE JOURNAL/STEVE SZYDLOWSKI]

Toxic algae bloom

Number of *Pseudo-nitzschia* algae cells per liter

Cell counts by state regulators remained normal through the spring and summer of 2016 and then spiked in the fall with several samples testing positive for toxin.



SOURCE: RI Department of Environmental Management

THE PROVIDENCE JOURNAL

Pseudo-nitzschia spawns domoic acid, the toxin may help it outcompete other algae, or it may aid in cell growth. Experiments have found that changes in trace metal concentrations in the water can trigger its production. There seems to be little correlation between *Pseudo-nitzschia* cell counts and toxin production. Often, the poison is emitted after the cell count has started to drop.

Scientists expect algae blooms to become more common as warming oceans and acidifying waters throw off the ecological equilibrium. But UConn's Shumway says it's simplistic to blame only climate change. Rather, she says that the exact combination of natural and human-influenced circumstances is unknown.

Ted Smayda, professor of oceanography at the University of Rhode Island, agrees.

“Multiple factors are coming together and leading to its growth,” he says. “But why it should behave that way is quite mysterious.

An extensive bloom in the Pacific in 2015 — which hammered crab fisheries with \$100 million in losses — is attributed to an area of unusually warm water that helped fuel the growth of *Pseudo-nitzschia*. A recent study found a correlation between warm-water ocean phases in the Pacific with previous blooms. But Vera Trainer, a Seattle-based oceanographer with the National Oceanic and Atmospheric Administration, cautions against drawing conclusions about the New England blooms from what's been found on the West Coast.

“We do know a lot, but there's a lot we don't know,” Trainer says.

Which is why scientists say that until the causes of blooms are better understood, it is critical to track algae levels and respond swiftly to abnormalities.

Before last fall, Rhode Island had never been faced with a *Pseudo-nitzschia* bloom, but protocols were in place to get the word out fast and

step up testing. There were minor hiccups, such as when the state ran out of testing kits and had trouble ordering more because of the Columbus Day weekend. But the response was aided by shellfishermen, as well as officials and scientists in Maine and Massachusetts.

The state had to act fast because the stakes are so high for shellfishing, says DEM director Janet Coit.

“The reputation of our clams and oysters is superlative,” she says. “Our record of managing them carefully to ensure protection of public health underpins the value of our Rhode Island brand.”

If there has been any lingering fear about local shellfish, it isn't having a noticeable effect. Clam prices didn't drop after the scare, says quahogger Mike McGiveney, president of the Rhode Island Shellfisherman's Association. Neither did oyster prices, says Russell Blank, owner of Rome Point Oyster Farm, an aquaculture operation in the Bay that sells its products through



Quahogger Mike McGiveney, president of the R.I. Shellfisherman's Association, says that clam prices did not drop after last fall's algae scare. [THE PROVIDENCE JOURNAL/KRIS CRAIG]

a larger state cooperative.

“The closure is an indication that our surveillance works,” says Robert Rheault, president of the East Coast Shellfish Growers Association. “It's telling you that everyone is doing their job.”

Still, the state has upgraded its monitoring program in response to the scare. Until the bloom, the DEM collected samples at two locations in the Bay only between April and November, forgoing the winter months because cold weather discourages algae growth. Going forward, the agency has extended monitoring year-round to get a fuller picture of how species fare in all seasons.

Only two labs in the nation are approved by the federal government to test for domoic acid concentrations, one in Washington state and one in Maine. During the blooms last fall, samples had to be sent to the Maine lab for testing, which may have slowed the response in Rhode Island. The state's health department can test for toxin levels at its own lab and is considering getting certified.

Meanwhile, Rhode Island Sea Grant is offering funding to

scientists to do more research into *Pseudo-nitzschia*. Rhode Island officials are continuing to work with their counterparts in Maine and Massachusetts. They met in January in Providence and are set to get together again in April.

Smayda says that Rhode Island is moving in the right direction, but he wants to see a more comprehensive sampling program that covers the full range of water conditions that can contribute to blooms, similar to one he ran at URI from 1959 until funding ran out in 1996.

He suspects a link between the *Pseudo-nitzschia* bloom and the extensive rust tides that occurred just weeks earlier. He worries that they are signs of bigger changes taking place in the oceans.

“It's actually an extraordinarily difficult problem to solve,” Smayda says. “You don't know when they're going to bloom. You don't know how long they will occur or how intense they will be.”

“So,” he adds, “you better be on the alert.”

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