



Mark Thiessen/AP Photo

Dead common murre lie on a rocky beach in Whittier, Alaska, in 2016.

Researchers link massive seabird die-off to heat wave

A threat to common murre

By DAN JOLING
Associated Press

ANCHORAGE, Alaska — Common murre look like skinny penguins but fly like F-15 fighter jets.

The North Pacific seabirds can quickly cover hundreds of miles searching for schools of small forage fish. Their powerful wings let them dive more than 150 feet under water to gorge on capelin, sand lance, herring, sardine and juvenile pollock.

So biologists were stunned four winters ago when carcasses of emaciated common murre showed up on beaches in what they say was the largest seabird die-off recorded in the world's oceans. The die-off eventually killed an estimated 500,000 to 1 million murre from California to Alaska, eliminating 10% to 20% of the northeast Pacific population of the species.

Seabird experts now believe they know why.

Common murre were ambushed by effects of the northeast Pacific marine heatwave dubbed "The Blob," according to a paper published Wednesday by 23 federal, university and private researchers in the science journal PLOS ONE. The heatwave lasted more than 700 days from 2014 to 2016, increasing water temperature and interrupting patterns in the food web from the smallest creatures to top predators.

Forage fish — the main prey of murre — feed on zooplankton, the floating small animals that feed on plant plankton. Cold water produces the biggest, fattiest varieties of zooplankton. But the marine heatwave reduced the nutritional value of zooplankton, researchers concluded, and the lower-grade food stunted the growth of forage fish.

In turn, warmer water increased the metabolism of large fish such as Pacific cod, walleye pollock and arrowtooth flounder, requiring

them to eat more forage fish.

That translated into a double whammy for murre, according to the researchers. The seabirds found that their main food source had a fraction of its usual nutrition. Murre also found themselves out-competed by large fish.

"The food just wasn't there and everybody wanted it," said lead author John Piatt, a research biologist for the U.S. Geological Survey who has studied seabirds for more than 40 years. "And it just got scarcer and scarcer."

Common murre have marvelous tools for finding forage fish but have an Achilles' heel: Murre must eat 56% of their body mass every day, the equivalent of 60 to 120 finger-length forage fish. If they don't, they can starve in three to five days, Piatt said.

Murre die-offs have occurred before but never in such numbers and never across three ecosystems, Piatt said, alluding to the California Current System, the Gulf of Alaska and the Bering Sea. Biologists with help from citizen scientists counted or collected 62,000 carcasses, although Piatt says the figure represents only a fraction of the deaths because murre spend most of their time far from shore.

About two-thirds of the dead birds were adults — and that carried ramifications for reproduction. Thirteen murre colonies in the Gulf of Alaska and the Bering Sea, where thousands of murre gather to reproduce, experienced complete failures for at least one breeding season during or after the die-off.

Seabird experts early on suspected naturally occurring toxins played a role in the deaths. So far, there has been no evidence that anything other than starvation could explain the mass mortality, Piatt said.

Pulling together work done by oceanographers, fishery and avian disease experts and data collected by citizen scientists, Piatt and his collaborators focused on effects of the marine heat wave.

The Blob created water with surface temperatures that were more than 4 degrees above normal. The heat wave extended hundreds of miles off shore and hundreds of feet below the surface.

The reasons for the heatwave are unclear. Global warming has slowly raised ocean temperatures over decades. Yet the marine heatwave also is tied to the recurring Pacific climate patterns including El Nino cycles of warm sea surface temperatures and changing patterns of wind speed, direction and duration that help mix ocean waters.

The murre deaths signaled that something was wrong in the ocean but starvation, die-offs, reproduction failures or population declines were recorded in other species: cod, arrowtooth flounder, rhinoceros auklets, tufted puffins, California sea lions and Guadalupe fur seals. Seventy-nine humpback and fin whales stranded during 2015-16, mostly for "unexplained" reasons and in the Gulf of Alaska. The common thread was their reliance on forage fish.

"It sort of hit me — no wonder things were so screwed up, no wonder this thing hit so hard, because the 4-inch species is at the heart of all this for the murre, the rhinos, the tufteds the humpbacks," Piatt said.

Fisheries professor Selina Heppell, the chair of the Department of Fisheries and Wildlife at Oregon State University, said it's long been known or suspected that there were big impacts from the marine heatwave.

"What this group has been able to do is actually pull several lines of evidence together into a cohesive story," said Heppell, who was not part of the study.

However, she said the study underscores the need for additional research on forage fish even though many do not have commercial value. "That's what you really have to get to do to answer these ecosystem-change kinds of questions."

#TimberUnity to state legislators: 'We're fed up'

Fight over cap and trade

By SIERRA DAWN McCLAIN
Capital Press

SALEM — Angelita Sanchez's message was loud and clear when she spoke about the renewed effort in the Oregon Legislature to pass a new cap-and-trade bill.

"We're fed up," she said. "The Legislature is giving us a false narrative so they can shove through a tax scam. But there's no more room for these taxes. We've been working, working, working, and there's no room to pinch anymore. So we're saying enough is enough."

Sanchez, of #TimberUnity, said the new legislation — a similar proposal to 2019's cap-and-trade bill — is 157 pages and counting. The bill would limit the carbon dioxide emissions of some businesses in urban areas, but rural residents say the costs of the bill will ultimately be passed on to them, as well.

Sanchez spoke Wednesday at the 50th Northwest Agricultural Show.

The Legislature's five-week session begins Feb. 3, with lawmakers in the Democratic supermajority planning to push through the new bill.

On Feb. 6, #TimberUnity plans to take their complaints to the Capitol with a truck convoy and a protest, — while also deploying semitruck fleets to demonstrate in Portland and other cities the same day.

Last year's attempt to limit carbon dioxide emissions flopped. Protesters, most of whom were part of #TimberUnity's move-



Sierra Dawn McClain/Capital Press

Angelita Sanchez, of #TimberUnity, speaks Wednesday at the Northwest Agricultural Show in Salem.

ment, rallied in Salem against the bill. The measure provoked a nine-day walkout by Senate Republicans in late June. They returned two days before the session ended. By then, the bill was dead for lack of Democratic support.

"I thought last year's bill was bad," Sanchez said. "And it was. But I think this year's bill may be worse."

After 2019's legislative chaos, Gov. Kate Brown met with rural residents from across the state and listened to their concerns. According to Kate Kondayan, deputy communications director for Brown, the governor is committed to "ensure the bill protects jobs and livelihoods in rural communities."

Sanchez, however, said that although the bill may not target rural communities initially, it has the potential to hold them under its power later. This is because, according to the legislation's text, once 19 counties have bought into the cap-and-trade program, the legislation will then

apply to the rest of Oregon, too.

"The reality is," said Julie Parrish, another spokesperson for #TimberUnity, "the Legislature is really saying, 'Here's your first bite of the apple, then here's your next bite.'"

Although #TimberUnity formed to protest cap and trade, the movement has mushroomed into something broader.

When Sanchez joined the movement last summer, she wanted to stand up for her trucking business. Now, she said, the movement runs a political action committee and a nonprofit, teaches people how to exercise their political rights, is planning new chapters in five states and will begin endorsing political candidates at the upcoming rally.

"Why in the circle of life do we have to deal with stuff like this crushing us?" asked Phil Kuehnel, a retired salesman from Yamhill County. He was sporting red suspenders that said "Loggers World" — one word per suspender. "I tell you, it's time we stood up."

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States oppose Trump plan to allow LNG shipments by rail

Oregon among the 15 states

By MARC LEVY
Associated Press

HARRISBURG, Pa. — The attorneys general of 15 states said this week that they oppose a Trump administration proposal to allow rail shipments of liquefied natural gas, arguing the trains will share tracks with passenger trains and travel through congested areas.

The protesting states included Pennsylvania and New Jersey, where the Trump administration issued a special permit in December to ship LNG by rail. Oregon and Washington are also among the

states.

The rule-making by the U.S. Pipeline and Hazardous Material Safety Administration stems from Trump signing an executive order in April that, in addition to seeking to speed up oil and gas pipeline projects, directed the transportation secretary to propose a rule allowing liquefied natural gas to be shipped in approved rail tank cars.

In their 18 pages of comments submitted Monday, the states said the Trump administration's proposed rule would put residents, first responders and the environment at greater risk of catastrophic accidents. The administration failed to adequately analyze those risks and failed to consider the environmental and cli-

mate effects of allowing LNG to be shipped in rail tank cars, the states said.

The flammable and odorless liquid would be transported "through densely populated areas, potentially in unit trains of up to 100 tank cars operated by just one person, on the same rail lines used by high speed passenger trains, with inadequate safety precautions," the states said.

They asked the pipeline administration to withdraw the proposed rule pending the completion of more safety studies and the development of an environmental impact statement.

Federal hazardous materials regulations allow LNG shipments by truck, but not by rail, except for with a special permit.