

- [Front Page](#)
- [Newsroom](#)
- [Archives](#)
- [RSS](#)
- [Subscriptions](#)
- [About Us](#)
- [Daily Climate](#)

Support our journalism!

[DONATE](#)



Subscribe to our eletter

Enter your email address

Go

Search our news archives



## Winged Warnings: Built for survival, birds in trouble from pole to pole

[Share This](#)



[Read the rest of our series, Winged Warnings](#)

By [Alanna Mitchell](#)  
Environmental Health News

Part 1 of *Winged Warnings*, published in conjunction with [National Geographic](#)



Tomorrow:  
Osprey  
whisperers

August 25, 2014

The ice of Antarctica doesn't faze birds. Nor does the heat of the tropics. They thrive in the desert, in swamps, on the open ocean, on sheer rock faces, on treeless tundra, atop airless mountaintops and burrowed into barren soil.

[An interactive, global map](#)

Some fly nonstop for days on end. With just the feathers on their backs, they crisscross the hemisphere, dodging hurricanes and predators along the way, pinpointing scarce food, tracking down safe resting places, arriving unerringly at a precise spot, year after year.

[The journalists](#)

Sole descendents of the dinosaurs, birds have penetrated nearly every ecosystem on Earth and then tailored their

## behind Winged Warnings

own size, habits and colors to each one, pollinating, dispersing seeds, controlling bugs, cleaning up carrion and fertilizing plants, all the while singing notes so beguiling that hearing them makes even the urban dweller pause to listen.

Birds are the planet's superheroes, built for survival. But for all their superhuman powers, they are in trouble.

Globally, one in eight – more than 1,300 species – are threatened with extinction, and the status of most of those is deteriorating, according to [BirdLife International](#). And many others are in worrying decline, from the tropics to the poles.

“If birds are having issues, you have to think about whether humans are going to have issues too,” said Geoff LeBaron, an ornithologist with the National Audubon Society based in Massachusetts and international director of the [Christmas Bird Count](#).

**Globally, one in eight – more than 1,300 species – are threatened with extinction, and the status of most of those is deteriorating, according to BirdLife International.**

In North America's breadbasket, populations of grassland birds such as sweet-trilling meadowlarks are in a free-fall, along with those everywhere else on the planet. Graceful fliers like swifts and swallows that snap up insects on the

wing are showing widespread declines in Europe and North America. Eagles, vultures and other raptors are on the wane throughout Africa. Colonies of sea birds such as murres and puffins on the North Atlantic are vanishing, and so are shorebirds, including red knots in the Western Hemisphere. Sandpipers, spoonbills, pelicans and storks, among the migratory birds dependent on the intertidal flats of Asia's Yellow Sea, are under threat. Australian and South American parrots are struggling and some of the iconic penguins of Antarctica face starvation.



Barn swallows, [Pete Myers](#)

Across the globe, many species of birds are sending us warnings.

While birds sing, they also speak. Many of their declines are driven by the loss of places to live and breed – their marshes, rivers, forests and plains – or by diminished food supply. But more and more these days the birds are telling us about new threats to the environment and potentially human health in the coded language of biochemistry. Through analysis of the inner workings of birds' cells, scientists have been deciphering increasingly urgent signals from ecosystems around the world.

Like the fabled canaries that miners once thrust into coal mines to check for poisonous gases, birds provide the starkest clues in the animal kingdom about whether humans, too, may be harmed by toxic substances. And they prophesy what might happen to us as the load of carbon-based, planet-warming gases in the atmosphere and oceans climbs ever higher.



Red-winged blackbird, [Pete Myers](#)

### "And no birds sing"

Rachel Carson was the earliest and best-known scientist to link the fate of birds to that of humans. Alerted by reports of sharp declines in birds of prey and songbirds, she began to examine the effects of the pesticide DDT. It was the first modern synthetic pesticide, in wide use after World War II to control mosquitoes and other insects.

Her book *Silent Spring*, published in 1962 – the title echoes the poet John Keats' celebrated line “And no birds sing” – explained that DDT moved up through food chains, from the insects it was designed to kill to the creatures that ate them. It accumulated inexorably in tissues, organs and fat in top predators such as peregrine falcons, ospreys, bald eagles and pelicans. “Over increasingly large areas of the United States, spring now comes unheralded by the return of the birds, and the early mornings are strangely silent where once they were filled with the beauty of bird song,” Carson wrote.

But it wasn't just the birds. Carson reasoned that if DDT could accumulate in birds, it would accumulate in humans, too. “We have subjected enormous numbers of people to contact with these poisons without their consent and often without their knowledge,” she wrote. By 1972, after public uproar, DDT was banned in the United States and eventually banned around the world except in malaria-prone countries, mostly in Africa.

Yet DDT's legacy remains. Traces of the persistent pesticide, classified as a “probable” [carcinogen](#), are still found in most people around the world today and in the land and water they depend on. And, again, it's birds that are telling us this tale: A recent study reported that birds of prey in South Carolina still carry as much DDT and other legacy pesticides in their bodies as they did before such chemicals were banned in the 1970s, “suggesting exposure has not declined substantially over the past 40 years.” And in the town of St. Louis, Mich., near an old chemical plant, robins are still dropping dead of DDT poisoning, registering some of the highest levels ever recorded in wild birds.

The idea that birds tell us about our own health has gained even more scientific traction in the decades since *Silent Spring* as biochemical analysis has become more precise. Much of that work stemmed from [studies](#) conducted on the [Great Lakes](#), the world's first and biggest testing ground for contaminants and birds.

The work of Canadian Wildlife Service toxicologist Glen Fox and others began with tales from terns and other fish-eating birds. He found

**Seven continents:  
Snapshots of troubled  
species**



*Everybody thought these parakeets were doing well until a couple of decades ago, when scientists realized that the government had doused marijuana and coca plantations with herbicide.*

**[More...](#)**

high levels of polychlorinated biphenyls or PCBs, in the Great Lakes and their sediments, and enlarged thyroids that were producing little hormone in the birds. Thyroid hormones are critical for ensuring proper brain development, so altering them can impair intelligence, motor skills and behavior. Building up in food webs just like DDT, PCBs were banned in the United States in 1978, with the rest of the world to follow.

By the late 1980s, zoologist Theo Colborn, then at the World Wildlife Fund, began examining the Great Lakes studies to see if she could discern a big picture. She recalls reading through stacks of academic papers and tracking the findings in a chart.

The results were stunning: The Great Lakes' top 16 or 17 bird predators were vanishing. The problem stemmed from assaults on the endocrine system, which controls hormones and reproduction. And that, in turn, was linked to manmade substances in the water and prey. So, birds' ability to reproduce crashed in multiple ways: Young failed to hatch; babies were deformed; male young were feminized; female young were more masculine; chicks' immune systems were impaired; parents forgot how to parent. The concept of the "endocrine disruptor" was born.



Cheryl Katz

This Arctic tern chick died on Iceland' Flatey Island, where there have been massive chick dieoffs, likely due to changing ocean conditions.

**“The birds really told the story, elegantly.” –Theo Colborn, scientist and co-author of *Our Stolen Future***

“The birds really told the story, elegantly,” said Colborn, who co-authored the 1996 book *Our Stolen Future*, which chronicled the threats of hormone disruption.



Black oystercatcher, [Pete Myers](#)

## Proxies for people

Once the chemicals' effects on birds were established, scientists began looking more intensively at humans. Their [studies](#) have suggested that those same chemicals also may be altering human hormones. Part of a pregnant mother's load of chemicals passes to her baby while it is still in the womb, with evidence mounting that suggests the chemicals can alter development of the baby's brain and its reproductive and immune systems, leading to troubles later in life, such as lower intelligence, behavioral problems and reduced fertility. Some studies suggest a link between endocrine disruptors and a greater risk of prostate and breast cancers

and other diseases. Some research even suggests chemicals can switch genes on and off, affecting grandchildren and great-grandchildren – all the unexposed generations, humanity's future.

When it comes to chemicals and broad planetary changes, birds have shown us that they are in a unique position to tip us off to health threats. That doesn't mean that birds are more vulnerable than humans, said Pierre Mineau, an expert on pesticide ecotoxicology and its effects on birds who recently retired from Environment Canada. In fact, amphibians such as frogs are likely more vulnerable because their thin skins draw in the chemicals and because they are in constant contact with polluted water. But they are much harder to find, count and assess than birds.

**“Birds can tell us a lot about what's going on around us that we might not be able to see.” –Christy Morrissey, University of Saskatchewan**

Birds, on the other hand, are highly visible. People track them, notice them, care deeply about them. Of all the non-human creatures on Earth, birds are by far the most closely scrutinized, said Nicola

Crockford, international species policy officer with BirdLife International in England. That translates into a robust body of knowledge about how and where birds live, a baseline for scientists seeking to monitor change.



Kenneth R. Weiss

Teton Raptor Center program director Jason Jones wrestles a bald eagle with a broken wing.

Looking at birds gives humans the unsurpassed ability to identify and quantify chemical threats across time and space around the globe, noted Christy Morrissey, an ecotoxicologist at the University of Saskatchewan. “Birds can tell us a lot about what's going on around us that we might not be able to see,” she said.

Perched atop many food webs, birds of prey such as eagles and falcons soak up chemicals from the things they eat. That means looking at birds is a proxy for looking at plants, insects, fish and small mammals, over time. Not only that, but about one in five birds migrates, so those birds are sampling pollutants in many parts of the world. Scientists can capture birds, test them, band them, let them go and then catch them years later to see what's changed. Birds normally maintain relatively stable numbers, unlike small mammals, so when their populations take a dive, it means something noteworthy is going on.

Many birds also live a long time – for eagles and owls, decades – meaning scientists can study a bird's life cycle and then extrapolate what would happen to a human exposed to the same chemicals from birth to death, Morrissey said. Reading birds is a reasonable stand-in for a human epidemiological study, especially when it comes to the endocrine system, she added. "Vertebrates are vertebrates," she said. "The endocrine system is so similar [in birds and mammals]. We all have circulating hormones and a thyroid that regulates the system." Today, studies on how endocrine-disrupting chemicals affect birds is a main plank of future research that may also have implications for human health.



Northern cardinal, [Pete Myers](#)

## Beyond DDT and PCBs

On the prairies of Canada, Morrissey is trying to decipher where sanderlings, red knots and semipalmated sandpipers are picking up contaminants as they travel. Then she's tracking those chemicals – which include PCBs and polycyclic aromatic hydrocarbons or PAHs – through a bird's lifespan, examining whether they affect its ability to fatten up and sustain a long migration. She's also looking at whether the chemicals have affected brain development, robbing them of the ability to navigate and learn when to molt. Early results of birds dosed in captivity in the first days of life say they do.

In other words, she's investigating not just whether the chemicals impair the birds' ability to reproduce, but also their ability to thrive. "If they're not able to fatten, they won't make it," she said, as grackles, orioles and yellow warblers sang in the background.

**Barn owls are dying from massive stomach bleeds caused by eating rats laced with rodenticides.**

Morrissey and Mineau also are at the forefront of research globally on the newest class of pesticide, the neonicotinoids or neonics for short. Mineau helped unlock the puzzle in the mid-1990s of how the organophosphate pesticide monocrotophos, which replaced DDT-like insecticides, killed off masses of endangered Swainson's hawks in Argentina. He said he was originally relieved that neonics replaced organophosphates, which are ferocious bird-killers, but now his [research](#) on neonics, including a report for the American Bird Conservancy, has him worried. They are extremely persistent in the environment and water soluble, which means they move around, he said. They take down nearly any insect or crustacean that comes along. "The real issue is the ecosystem-wide effects," Mineau said.

Rat-killing poisons also are causing agonizing deaths of not just rodents, but the birds that eat them. Barn owls in Canada, for example, are dying from massive stomach bleeds caused by an extra-strong class of rodenticide.

And in Southeast Asia, tens of millions of vultures have perished from feasting on carcasses of livestock treated with diclofenac, an anti-inflammatory drug. Three vulture species now are teetering on the edge of extinction. In a victory, hopefully not too late, the drug is no longer used for livestock in Asia. Its use is [on the rise in Europe](#), however, particularly in Spain, where it has killed thousands of vultures, eagles and other carrion-eaters in recent years.



Sanderlings, [Pete Myers](#)

Contaminants may affect shorebirds' ability to fatten up before migrating.

Traces of people's prescription drugs, washed into sewers, also are collecting in fish, which means ospreys and other birds of prey are sometimes exposed to [therapeutic doses](#) of heart medications, antidepressants and other drugs.

**Perched atop many food webs, birds of prey such as eagles and falcons soak up chemicals from the things they eat. That means looking at birds is a proxy for looking at plants, insects, fish and small mammals, over time.**

Adding to their burden, birds are contaminated with a whole new spate of pollutants, such as perfluorinated compounds or PFCs, used to manufacture such substances as Teflon and stain-resistant coatings. Brominated chemicals used as flame retardants in furniture foam and electronics also are collecting in bird tissues, just like PCBs. Kestrels [exposed in laboratories](#) have fewer chicks, smaller eggs and some behavior issues, such as bad parenting skills and more aggressive males. Some flame retardants seem to mimic estrogen, others mimic or block testosterone. It all adds up to a load of dozens of chemicals, many with consequences still unknown.

In Sweden, for example, ornithologists are racing to figure out why white-tailed sea eagles on the coast of the Baltic Sea, devastated by DDT and PCBs in the 1970s, are again experiencing thin shells and deformed embryos, said Cynthia de Wit, a professor of environmental science at Stockholm University who specializes in human and wildlife exposure to synthetic chemicals. "It's very alarming; we really don't know why," she said, adding that it's possible that old chemicals are being "remobilized" or that new ones are having effects not yet

assessed.

Scientists are closely examining the effects of heavy metals such as mercury and lead. A recent [study](#) of Antarctic skuas showed those contaminated with mercury, a byproduct of coal-burning power plants, have more trouble reproducing. Mercury even seems to alter the singing of songbirds. Lead, sometimes lethal to birds of prey that eat it in gut piles left by hunters, also seems to have subtle effects, perhaps interfering with their ability to navigate around obstacles.



Cedar waxwing, [Pete Myers](#)

### Why do people care about birds?

Pragmatically, humans have relied on birds' superpowers for millennia to let us in on their secrets. Imagine forest-dwellers of ancient times, anxious to avoid snakes and jaguars, listening for the alarm calls of sharp-sighted, high-flying, omnipresent birds. Think of medieval sailors, following fish-eating birds to find out where they should throw their nets, or rejoicing that shore was near when they caught sight of a land-loving cormorant instead of the albatrosses that favor the open ocean. Sailors of old may have even followed the paths of migratory birds to colonize new lands, said Garry Donaldson, a conservation biologist with the Canadian Wildlife Service.

And throughout history, humans have considered birds to be our protectors, the vigilant sentinels, writes the Nobel laureate immunologist Peter Doherty in his 2012 book *Their Fate is our Fate: How Birds Foretell Threats to our Health and Our World*. "Way back to mythological times, guard duty has been part of the avian job description. Gods with the body of a man and the head of a bird, like the ibis, falcon, hawk or heron, watched over the ancient Egyptians...Sacred geese in the temple of the Goddess Juno alerted the exhausted defenders of ancient Rome to a nocturnal attack by marauding Gauls," Doherty wrote.

And to many Native American and other indigenous cultures, birds are messengers sent by the creator, or symbols of change, or protectors and healers. Today they play that role in a non-spiritual sense: They send warnings to tribes about the health risks of eating fish tainted with industrial pollutants.

Birds also herald the presence of pathogens, such as avian influenza and West Nile virus, noted Nicholas Komar, a biologist who specializes in vector-borne diseases with the Centers for Disease Control and Prevention in Fort Collins, Colo. When birds are found dead of West Nile, it's proof humans also are at risk. Infected birds don't transmit the virus to humans – mosquitoes do – but they are a sign that it is present in the environment. He is pressing for more testing of dead birds as a swift means of detecting flashpoints for potential transmission to humans.

Apart from data points, birds also provide us with sheer joy – in their songs and striking colors, and from the spectacle of watching them swoop through the air. "Which of us has not wished we could do that?" asked John Fitzpatrick, director of the Cornell Lab of Ornithology in Ithaca, New York. He said humans intuitively respond to birds' colors and varied voices, which signal that the year is marching on. "They move with the seasons. It's a major annual heartbeat we feel."

**"Thou wast not born for death, immortal Bird!  
No hungry generations tread thee down;  
The voice I hear this passing night was heard  
In ancient days by emperor and clown."  
–John Keats**

In his "Ode to a Nightingale," Keats declares steadfastly that birds must prevail despite us, just as they always have.

But will Keats's prophecy stand the test of time? In the past five centuries, about 150 bird species have gone extinct at the hand of humanity, including the passenger pigeon and the dodo, according to research by Duke University biologist Stuart Pimm. But that rate is speeding up and will be 10 times higher by the end of this century if trends persist, his [study](#) calculates. BirdLife's most recent survey shows that 197 species are critically endangered, which means they are just one disease

outbreak or a couple of bad breeding seasons away from extinction. Hotspots of risk are hot parts of the world: The Atlantic forests of Brazil and the islands of Indonesia are a particular worry because so many birds live there, so much of the land is being cleared and few protections are in place.



Great crested grebe, [Pete Myers](#)

Birds signal the presence of dangerous pathogens such as West Nile virus.

### Omens of a dangerous future



Eastern bluebird, [Pete Myers](#)

The wild card for birds, with the potential to magnify all past and future threats, is the high-carbon world humans have created through the burning of fossil fuels for energy. Scientists are struggling to chronicle the intricate layers of fallout from climate change -- and to glimpse once again what birds foretell about humanity's fate. Frank Gill, who wrote the textbook *Ornithology* and was president of the National Audubon Society, said the scientific effort has shifted dramatically from the time when Carson's work on chemicals set the standard. Today, biologists are examining complex, continental effects of climate change on birds' abundance and distribution.

For instance, brown pelicans, taken off California's endangered species list in 2009, are in the throes of a catastrophic breeding failure this year, said Dan Anderson, professor emeritus of ecotoxicology and marine ornithology at University of California, Davis, who recently completed his 46th annual census of the birds. The cause appears to be an El Niño event with its strongly warmer ocean currents and high winds. While El Niños are natural and periodic phenomena, they are expected to intensify and become more common. Anderson and others are assessing what effect that could have on pelicans, noting that it would take two or three terrible breeding seasons in a row to seriously affect the population.

**Birds have many superpowers that humans can only envy. Yet we also have the power to make sure birds continue to sing.**

Already, Audubon's Christmas Bird Count has found that the "center of abundance" of more than half of North American species that stay through the winter has shifted as much as 200



Brian Bienkowski

Ringed-billed gulls in Quebec are highly exposed to flame retardants.

miles north over the past 60 years, a response to warmer average temperatures, LeBaron said. And a [study](#) of 40 western North American songbird species found that those inhabiting the highest elevations on mountaintops are moving farther up, rather than farther north, to flee the heat, said David King, a research wildlife biologist at the U.S. Forest Service's Northern Research Station in Massachusetts. Inevitably, they will run out of places to go.

Omens from the birds are not easy to read. So far, they are telling us that this world is shifting where they can live, forcing them to change the timing of their migrations and nesting, making their food harder to find and perhaps fostering diseases such as the West Nile virus.



Eastern phoebe, [Pete Myers](#)

## Birds, people share superpowers

Birds have many superpowers that humans can only envy. But we have extraordinary powers, too: The ability to alter the chemistry of the air and the sea, and to create synthetic substances that live longer than we do. Yet we also have the power to make sure birds continue to sing.

Fitzpatrick pointed to the data from around the world that impassioned birdwatchers are feeding to scientists at websites such as eBird.org – which is growing by 40 percent a year – so they can map birds in real time. Citizen science is part of the reason, for instance, that waterfowl numbers have been bouncing back in North America as people band

together to protect and restore wetlands.

"Birds do recover," Fitzpatrick said, "if we pay attention to what they're saying."

In "A Fable for Tomorrow," the opening chapter of *Silent Spring* that describes a fictional, nightmarish, poisoned town, Carson wrote, "It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens, and scores of other bird voices there was now no sound; only silence lay over the fields and woods and marsh."

Muted, perhaps, but not silenced, birds keep sending us winged warnings.

Published in conjunction with [nationalgeographic.com](http://nationalgeographic.com).

For questions or feedback about this piece, contact Editor in Chief Marla Cone at [mccone@ehn.org](mailto:mccone@ehn.org).

Read more about author [Alanna Mitchell](#). Follow her on twitter [here](#).



[Pete Myers](#)

Brown pelican populations in California are crashing this year, likely due to warmer ocean currents.

## Global map: 50 birds at risk

Arctic Ocean

Source: BirdLife International, Environmental Health News Map by [Leslie Carlson](#)



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](#).

[Share This](#)

Follow us:   



25 August [Winged Warnings: Built for survival, birds are in trouble from pole to pole](#). Descendents of the dinosaurs, birds have penetrated nearly every ecosystem on Earth, pollinating, dispersing seeds, controlling bugs, cleaning up carrion. Birds are the planet's superheroes, built for survival. But for all their powers, they are in trouble. First in a series. [Environmental Health News](#).

18 August [Golf copes with a wetter, warmer climate](#). Hot weather combined with intense downpours – one of the signature signs of a changing climate – has flummoxed duffers and greenskeepers alike on East Coast golf courses. But don't handicap them yet. [Daily Climate](#).

18 August [The high-tech, high-stakes world of turf grass](#). Idyllic settings and lush greens at golf courses are the product of a global research effort working hard to prepare the industry for a changing planet. [Daily Climate](#).

14 August [Quats: Common disinfectants cause reproductive problems in mice, study](#). Mice exposed to disinfectants in commercial-grade cleaning products took longer to get pregnant, had fewer pups and suffered more miscarriages and distressed fetuses, researchers reported today. [Environmental Health News](#).

6 August [Health experts question safety of Superfund site where songbirds are dying](#). Health experts are questioning the Environmental Protection Agency and Michigan state officials for their handling of a Superfund site that is killing songbirds in yards, possibly leaving people at risk, too. [Environmental Health News](#).

6 August [Southerners think differently about energy impact - poll](#). Live in the South and in the market for a new car? Need to replace some light bulbs? Chances are you think a little less than other Americans that your choice will have an impact on the environment. [Daily Climate](#).

5 August [A quiet year, then smoke](#). The American West is enjoying the quietest fire year in at least a decade. But smoke and fire is still plaguing the region – and stretching across the continent. [Daily Climate](#).

29 July [Lightning at Venice Beach? California faces really weird – and deadly – weather](#). Southern California's coast rarely sees lightning storms, because the weather is so stable. Could drought be destabilizing things? Sunday's deadly, freak storm shows what the Golden State may face. [Daily Climate](#).

28 July [Songbirds dying from DDT in Michigan yards; Superfund site blamed](#). Jim Hall was mowing the town's baseball diamond when he felt a little bump underneath him. "And there it was, a dead robin," he said. Just last week, he found another one. "Something is going on here," said Hall, who has lived in this mid-Michigan town of 7,000 for 50 years. [Environmental Health News](#).

28 July [Looks like we'll be blessed with a little more rain....](#) Drought in the West has grabbed headlines lately. But a good portion of North America's grain belt would happily bid adieu to the storm clouds. A Climate at Your Doorstep video. [Daily Climate](#).

25 July [Your next roadside attraction: Carbon storage](#). Hitting the road this summer? Take a closer look at the blur of the roadside shrubbery and grass. It soaks up a lot of carbon. With better management, it could soak up a lot more. [Daily Climate](#).

24 July [A generation of emissions takes a toll on Arctic ice](#). It's just a snapshot - two points in time. But the differences in the Arctic ice cap from 1979 to 2014 are stark – and getting starker. [Daily Climate](#).

23 July [Amazon oil spill has killed tons of fish, sickened native people](#). On the last day of June, Roger Mangía Vega watched an oil slick and a mass of dead fish float past this tiny Kukama Indian community and into the Marañón River, a major tributary of the Amazon. Community leaders called the emergency number for Petroperu, the state-run operator of the 845-kilometer pipeline that pumps crude oil from the Amazon over the Andes Mountains to a port on Peru's northern coast. [Environmental Health News](#).

23 July [Derrame de petróleo en Amazonia mata toneladas de peces y enferma a nativos](#). Esta ruptura en el oleoducto norperuano, que ya tiene 39 años de antigüedad, ha aterrorizado a los aldeanos kukama a lo largo del río Marañón. Además de las quejas por náuseas y erupciones en la piel, la gente siente nerviosismo por comer pescado, preocupaciones por la pérdida de ingresos y temor de que el petróleo se esparza por todo el bosque tropical y los lagos cuando comience la inundación estacional en noviembre. [Environmental Health News](#).

23 July [Arctic Sea Ice Comparison](#). (Left) Arctic sea ice cover on July 19, 1980; (Right) Arctic sea ice cover on July 19, 2014. [Daily Climate](#).

## Recent Environmental Health News coverage

Copyright © 2013 Environmental Health Sciences. All rights reserved. [Submit a story or report](#) | [Email the editor](#) | [Give us your feedback](#)