



Being Alive

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Death Cap Mushrooms

Death Cap Mushrooms are Extremely Deadly - and They're Spreading

The invasive death cap mushroom is thriving in North America. While it can be difficult to distinguish from an edible one, make no mistake: It can do a number on you.

The name itself is both alarming and self-explanatory: the death cap mushroom.

Scientifically known as *Amanita phalloides*, death caps are responsible for [90 percent](#) of the mushroom-related fatalities that occur every year, making them the world's most lethal mushroom. The infamous fungus was recently [in the news](#) after three people in Australia died after ingesting what investigators suspect were death caps.

The mushroom originates from the U.K. and parts of Ireland, but over the past century, it has hijacked trips around the world, spreading to Australia and North America.

Since arriving on the West Coast, the invasive mushroom has spread rapidly throughout California and has even appeared as far north as British Columbia, but much about its arrival remains a mystery. Why the mushroom spread so quickly, when exactly it arrived, and how it will impact the environment it grows in are the topics of ongoing research.

Here's what you need to know about this deadly mushroom—and how to spot one—in case it emerges in a forest near you.

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HOW THE MUSHROOM EARNED ITS NAME

The [unassuming mushroom](#) can grow up to six inches tall with a similarly sized domed cap, sometimes tinged yellow or green. Under its cap are white gills and an off-white stem—characteristics that make it difficult to distinguish from an edible mushroom.

Yet unlike an edible mushroom, it can cause extreme damage to the [liver and kidneys](#), or in some cases, death.

That's because the mushrooms contain a unique set of toxins, says U.S. Department of Agriculture plant pathologist Milton Drott. Though it is safe to the touch, a death cap [contains amatoxins](#), which prevent cells from creating proteins, ultimately causing cell death and organ failure.

Drott notes that these toxins may have allowed the populations spreading through the U.S. to thrive, serving up a defense against any new predators the fungus encounters in its environment.

But studying the death cap mushroom can be difficult. It's challenging to replicate ideal environmental conditions for a mushroom in a lab, and studying plucked mushrooms requires complex DNA sequencing.

[*\(Fungi are key to our survival. Are we doing enough to protect them?\)*](#)

Some fungi can damage the environment, like the [fungus that wiped out American Chestnut](#) trees, but so far, there's no strong evidence that death caps are a threat to their new environments. In fact, trees and other plants benefit from their presence.

Death caps are a [mycorrhizal fungi](#), which means they form a relationship with plants that's mutually beneficial for both plant and fungus. The plant receives nutrients from the soil that the fungus extracts, while the fungus receives sugars from the plant.

A MYSTERIOUS MOVE AROUND THE WORLD

It's nearly impossible to pinpoint the actual moment the deadly mushroom made its way to the western U.S. and why exactly it's continued to spread since then, says Anne Pringle, a mycologist at the University of Wisconsin-Madison and a leading expert on death caps.

One Family in Central Mexico is Struggling to Preserve the Production of Cochineal

By FERNANDA PESCE

SAN FRANCISCO TEPEYACAC, Mexico – One family in central Mexico is struggling to preserve the production of cochineal dye, an intense, natural red pigment so prized that, after gold and silver, it was probably the most valuable thing the Spaniards found in Mexico after the 1521 conquest.

For centuries, red clothing – along with purple – had been a sign of power and wealth because it was rare and expensive. An indigenous Mexican process deriving the pigment from insects gave the Spanish empire a new source of red dye.

Some of Mexico's most picturesque and imposing colonial cities, like Oaxaca, were essentially built on the wealth derived from cochineal dye, also called carmine, and known as “grana cochinilla” in Spanish. It was much prized by the Spanish nobility, and it would go on to dye, among other garments, the British empire's ‘Redcoat’ military uniforms, before it began to be replaced by synthetic dyes in the 1800s.

Obtaining the dye the old fashioned way is slow, tedious and painstaking. It comes from the crushed bodies of tiny female insects that contain carminic acid and feed on the pads of nopal cactus plants.

Each insect, known as *Dactylopius coccus*, must be bred to a larvae stage and “planted” on a previously wounded cactus pad, and then left for months to feed and mature.

Then each must be harvested by hand, usually with a tiny brush, sifted, cleaned and left to dry in the sun.

The Mixtecs of Oaxaca first developed the method to obtain the precious pigment centuries before the Spaniards arrived. A symbol of status, carmine red was already employed by the nobility of Mexico's Indigenous peoples to dye garments, and widely used in the arts, to write codices, decorate ceramics and paint murals.

Mayeli Garcia and her family run a greenhouse in the village of San Francisco Tepeyacac, east of Mexico City, which specializes in the slow, old production process.

At their greenhouse, rows of hundreds of cactus pads are held on racks suspended in the air and covered by a white powder. That is the sign of the insects working beneath, drawing nourishment from the juices of the nopal and protecting themselves with the waxy powder.

“You have to wait three or four months for them to complete their life cycle, and then we harvest,” Garcia said. “You have to keep monitoring and watching every cactus pad.”

That's essentially the way the best red was produced for three centuries.

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By the 1800s, synthetic chemical dyes, cheaper to produce and more plentiful, began to replace cochineal dyes.

But the story doesn't end there. Artisans in Oaxaca maintained some production, because weavers of traditional clothing and rugs preferred it in handicrafts.

Some studies began suggesting that chemical dyes, and particularly some of the red ones, could have adverse health effects if consumed as food colorings or in cosmetics like lipstick. By 1990, U.S. authorities banned red dye No. 3 for use in cosmetics, though it is still allowed in food products.

Those concerns have begun to spur the demand for natural colorings – and there was Mexico's cochineal dye all along.

Companies that might want it on an industrial scale are out of luck. It simply isn't available in such quantities.

“We have tried to automate a little bit to make it less manual work, with machinery we ourselves invented, to try some brushes” for brushing the insects off the cactus pads, Garcia said. The motor of their prototype burned out, she noted ruefully.

Garcia struggles to make a living off the 100 kilograms (220 pounds) of cochineal dye she produces each year, though she is trying to diversify into soaps, creams, cosmetics and other products derived from the nopal, such as jam.

Her family still grows fresh vegetables to make ends meet. Selling the dye for less isn't an option.

“It is a lot of work, very labor intensive. It costs too much to produce in terms of labor, so the cost is difficult,” she said.

But she still has plenty of reasons for keeping on with the cochineal farm, a whole ecosystem designed to keep the tiny bugs happy, well fed and safe from predators.

“We are having problems with synthetics and chemicals,” she said. “So, I think that there is a revolution going on, of returning to what once was, what was once produced, because it kept us much healthier.”

Are you Drinking Water all Wrong? Here's What you Need to Know About Hydrating

This summer's extreme heat has many wondering if there are better ways to address hydration. These are the considerations worth making

By Karen Peterson
Published September 14, 2023

Staying hydrated—and knowing how best to do it—is more important than ever.

This summer's excessive heat isn't just a hot spell, but rather a taste of what we can expect from climate change, says Ashley Ward, director of the newly opened [Heat Policy Innovation Hub](#) at the Nicholas Institute for Energy, Environment & Sustainability at Duke University: “This is not your grandmother's heat.”

To beat it, many of us now carry around water bottles, ready to quench a thirst at a moment's notice. And on [social media](#), videos about how best to stay hydrated can rack up millions of views.

But do we really need to down a gallon a day to stay healthy? And does your water need minerals, alkalinity, or salt to really hydrate you?

The important role of salt

The human body is upwards of three-quarters water. Most of it is absorbed by our cells; the rest lubricates muscles and tissues and generates saliva. Any noticeable loss of body moisture upsets the balance that keeps us healthy, alert, and alive.

The recommended daily intake, for a normal adult, is up to eight to 12 cups of water daily, according to [the Mayo Clinic](#), but [research](#) published last year suggests that advice doesn't take into account the water you absorb by eating certain fruits and vegetables like watermelon and cucumbers, or lifestyle factors like physical activity.

The more we sweat, the more water—and salt—we lose.

Salt helps maintain [fluid balance through osmosis](#), which regulates the amount of water in the cells. Without sodium, cells could shrivel from dehydration.

The salt in our bodies is also important because it contains electrolytes—minerals such as sodium, potassium, and chloride—that carry an electrical charge through the blood and body fluids, keeping hydration at a healthy level.

Most professionals agree that electrolyte-enhanced drinks are valuable because they replenish the potassium and salt lost through sweat, but before you add salt to your water, keep in mind that most of us get the recommended amount of sodium in our diet.

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But if you're healthy and don't have known heart problems, a sprinkling of salt in water won't harm you and may help keep you hydrated. The type of salt doesn't matter. The recent popularity of unrefined [Himalayan, or pink, salt](#) is based on the slightly higher number of minerals it contains. To replenish lost salt, it doesn't take much—one-quarter teaspoon will do—and any salt-containing energy bar or snack also replaces lost electrolytes.

And water isn't the only hydrating drink you can reach for—[studies show](#) that cow's milk is more hydrating than plain water. Milk can slow the loss of fluid in the stomach, which helps maintain hydration over a longer time span, and it also contains those needed electrolytes.

Other additives and enhancements found in bottled water have become popular but aren't proven to keep you any more hydrated than water from the tap.

Alkaline water, for instance, has a higher-than-average pH value that makes it less acidic, but to prevent dehydration, [medical professionals say](#) that the amount of water you drink—not pH levels—is more hydrating.

Studies are ongoing on the effects of alkaline water on athletic performance, and recent research has found potential benefits for the general public. According to the [Arthritis Foundation](#), one study suggests that alkaline water with an 8.8 pH “permanently neutralized stomach acid”; another [study](#) showed promising benefits to bone density.

Dangers to drinking too little—and too much

Beware of false narratives that your body will tell you when it's thirsty, says Josh Beaumont, former trainer for women's soccer at Arizona State University.

“That's too late to really hydrate. Especially now in the hotter climates, we're already in a bit of a dehydrated state,” he said, but cautions against just, “...slamming water. There's only so much water that the stomach and gut can absorb.”

It is also important to know which medications can interfere with the body's natural ability to hydrate. Those that make the heat more dangerous include certain anti-depressants, diuretics, and blood pressure medicine, which can interfere with kidney function and electrolyte levels. People with diabetes, which already increases the need to urinate, need to closely monitor fluid intake.

In extreme cases, drinking too much water can create a condition known as hyponatremia, which is a response to a lack of salt. Hyponatremia is most often found in the elderly and among those who have kidney disease. But people can and do drink too much water, most recently a [35-year-old mother of two](#) from Indiana.

According to news reports, she was “severely dehydrated” after a day of boating and drank 64 ounces of water in 20 minutes, way beyond the body's capacity for absorption. She died from water toxicity, which caused the brain to swell and cut off its own blood supply.

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How hydration keeps us cool—and safe

On a hot day, you may notice that your blood vessels seem closer to the surface of your skin or even swollen on your arms. That's because the hypothalamus, the part of the brain responsible for keeping body temperature in homeostasis—is directing more moisture into the blood stream to help cool down the body's surface as it sweats.

Be aware of your body and mindful of the circumstances. For example, if you stop sweating, that's a bad sign, because the body is conserving the little fluid it has to keep blood pumping to your muscles.

At the cellular level, any substantial decrease in water going into the body—and the increase going out via sweat—triggers the hypothalamus gland in the brain to send out its own heat alarm. The first alarm hits the kidneys, which are instructed to stop withdrawing water from the blood. The end result, and a clue that something's amiss, is infrequent urination.

The dropping levels of water in the blood makes blood pressure drop and the heart rate to spike. Throughout, the body is doing what it can to minimize the loss of this precious fluid.

Eventually, your internal temperature begins to rise because the body is incapable of cooling itself off. At that point, drinking water won't help, warns Beaumont. First, the exterior body needs to be cooled down immediately with damp cloths, cold compresses, and ice packs. Emergency rooms in Phoenix have even brought in [body bags filled with ice](#) to revive the heat-stricken.

If you experience mild dehydration, without the above symptoms, rest in the shade or indoors with air-conditioning or fans; take a shower or pat down with a damp cloth to cool the body; and slowly drink water, plain or with electrolytes. “Chugging” water can intensify the imbalance between the body and its electrolytes, and it is hard on the stomach.

It can take upwards of an hour to fully recover.

Alcohol and Women New Info

https://www.nationalgeographic.com/premium/article/alcohol-effects-worse-women?rid=C8919E3582B3934EE4AF2936D5F9010D&cmpid=org=ngp::mc=acq-email::src=ngp::cmp=subs_ngm_acqemail::add=NGM_AutoSeries_NYCU

Healey: State Agencies will be Banned from Buying Single use Plastic Bottles

The governor said Massachusetts would be the first U.S. state to institute such a ban, which she hopes will help protect ocean life and reduce carbon emissions.

By [Susannah Sudborough](#)

September 18, 2023

Massachusetts [Gov. Maura Healey](#) announced her plan to ban state agencies from buying single-use plastic bottles Monday during a speech about the importance of clean oceans and biodiversity.

During a speech at the [Clinton Global Initiative](#) in New York City, Healey said the ban, which is meant to protect ocean life and reduce carbon emissions, would be the first enacted by a U.S. state.

“Plastic production and plastic waste are among the leading threats to our oceans, our climate, and environmental justice. In government, we have an obligation to stop contributing to this damage and chart a better path forward,” she said.

Healey’s office said the governor plans to enact the ban through an executive order on Thursday.

How the ban will impact Massachusetts

The ban will be most noticeable when visiting state agencies, which purchase about 100,000 plastic bottles a year across all departments, Healey’s office said. For example, the governor’s office won’t be giving out bottled water in meetings. Instead, her office said, visitors will see more water coolers and other types of water dispensers.

There are some exceptions to the ban, Healey’s office said. It doesn’t apply to current contracts, or when there is no alternative to plastic bottles, such as during emergencies.

“We are also encouraging all [Massachusetts](#) quasi-public authorities and boards to adopt their own plans to eliminate their purchasing and sale of single-use plastic bottles,” Healey’s office said in a statement.

You Do Not Need to Be A Rocket Scientist to Foster an Idea

Could a wave ‘speed bump’ protect coastal communities...

By Aruni Soni Globe Correspondent, Updated September 17, 2023, 4:44 p.m.

In 2012, Hurricane Sandy ripped through Alex Berkowitz’s hometown of Rockaway Beach in Queens, N.Y.

Her community, a thriving neighborhood where children played on the street and the elderly walked their dogs, was suddenly coated in gray silt.

“It was a difference of night and day,” she recalled. “I remember thinking, I never want anyone to ever experience this.”

Eleven years later, her idea that formed in the aftermath of the storm has germinated into a company that aims to protect coastal areas from devastating storm surge. Berkowitz founded Coastal Protection Solutions, a company working on building Wavebreakers: structures floating offshore that act like a wave speed bump to decrease the height and velocity of destructive waves. She runs the company herself and has raised money from Harvard Innovation Labs as well as private funders. She wouldn’t disclose the total amount raised.

The idea of a wave-dampening apparatus is not new, but what is new is the purpose and the scale of the Wavebreaker. Floating breakwaters today are mainly used for lakes and marinas, while this structure is specifically built for the ocean and is to be used for climate-aggravated hurricanes and storms.

“For the last 70 years, the world has been focused on concrete barriers like concrete walls, which are not sustainable and cost millions of dollars and years to build,” Berkowitz said. “Traditional methods are obsolete, and we need to think out of the box if we’re going to continue to live on the coast in the future.”

If you had just looked at Berkowitz’s résumé four years ago, it would be hard to believe that someone with a bachelor’s degree in visual arts — and no background in engineering whatsoever — would design a technology that has the potential to protect entire swaths of vulnerable coastal communities. But her personal experience — particularly the feeling of shock after her community was hit by Hurricane Sandy — has been fueling her passion to keep going.

“I had a very strong vision for what it should be,” she said. “I started modeling it in a 3D model software and did tests in my bathtub with [3D-printed] models.”

As for her lack of experience as an engineer or biologist?

“I remind myself that Thomas Edison did not have any formal training or education in engineering,” Berkowitz said. “It was a mix of intuition and iteration that drove him to world-changing inventions.”

The world is facing a biodiversity crisis, due to land clearing, pollution and climate change, with some scientists saying we are entering [a sixth mass extinction](#). Almost half the planet's species are experiencing rapid population declines, according to a [May study](#).

“This vote shows that there is still hope to restore and grow what's left,” Špela Bandelj, Greenpeace's Central and Eastern Europe biodiversity project manager, said in a statement.

“As another [unprecedented heatwave](#) grips Europe, it's clear that to survive climate breakdown and ensure food supplies we'll need nature on our side,” she added.

The vote comes after months of protracted negotiations that exposed long-standing divisions in the European Parliament after the European People's Party (EPP), the EU Parliament's biggest lawmaker group, spearheaded a campaign to reject the plan.

The EPP group chairman, Manfred Weber - who was among the most vocal opponents of the bill - called into question the financial implications of the legislation in a [press briefing](#) after the vote, saying it would hurt farming.

“The law is not giving us a real answer about the food production question creating legal uncertainty for local and regional authorities and will potentially hurt our renewable energy transition - rather than support it,” he said.

However, before the vote several EPP members including Ireland's Frances Fitzgerald broke ranks to support the bill.

“I cannot in good conscience and good faith vote against this law,” Fitzgerald said in [video](#) on Twitter. “We need to protect biodiversity. We need this law to protect our citizens, our businesses and, above all, the future generations,” she added.

Other supporters of the bill included the Parliament's center-left Socialists & Democrats, the Greens, the Left and part of Renew Europe. Swedish climate campaigner Greta Thunberg also attended the voting session to show support for the new climate legislation.

EU lawmakers and member countries will now negotiate the final text, aiming for a deal before EU Parliament elections in 2024.

The nature restoration law is one of two key pillars of the EU's 2030 Biodiversity Strategy, a package of proposals aimed at rehabilitating Europe's already damaged ecosystems.

In 2021, the European Environment Agency found that 81% of the EU's ecosystems are in either a “poor” or “bad” condition, according to Greenpeace.

MSO Staff Distribute Backpacks to Kids of Incarcerated Individuals

BILLERICA – Members of the Middlesex Sheriff's Office distributed nearly 40 backpacks to children and younger siblings of individuals incarcerated at the Middlesex Jail & House of Correction.

Leaders of the MSO Family Support Services Unit and Education Department spent time meeting with families as they picked up backpacks filled with supplies and chose from a wide array of age-appropriate books.

The backpacks, supplies and books were donated by Concord Prison Outreach, which works with the office on a number of initiatives. The Discovery Museum in Acton donated family passes.

More Than 700 New Businesses were Registered on YELP

More than 700 new businesses were registered on Yelp across the Boston metro area in July 2023, per the company, up 21.5% year over year.

Why it matters: New business openings are a good measure of economic sentiment – people generally don't take the risk of spinning up a new venture if they foresee economic peril ahead.

The big picture: Business openings nationwide have exceeded 2019 levels every month this year, thanks to a surge in travel, events and get-togethers, Axios's Hope King reports.

- California, Florida, Texas, New York and Georgia have seen the largest total number of new business openings so far this year.

Tap Water Testing Volunteers Needed

Through a National Science Foundation grant, the [Merrimack River Watershed Council](#) is helping UMass Lowell find volunteers who live in Dracut, Lowell and Lawrence to collect water samples from their home taps for testing.

An informational meeting on the tap water testing volunteer project will be held on Thursday, Sept. 28, at 6:30 p.m. at the Lawrence Public Library, 51 Lawrence St. Volunteers will test drinking water for a wide variety of contaminants such as heavy metals and other pollutants using a [handheld device](#). The samples provided by the volunteers will help validate and improve the new technology.

For information, email John Macone at jmacone@merrimack.org

Apple Picking Thru October

This farm was voted **Number One Apple Picking** in the country. Might be a good day trip in case you and your family want to go.

Check out the link.

Directions are from Portland so its at least 1.5+ hrs from Chelmsford likely

<https://www.libbysonupicks.com/>

All of Best Cider Doughnut Spots in 2023 According to Boston.com Readers

Connecticut:

- [Bishop's Orchards](#), 1355 Boston Post Rd., Guilford
- [Clyde's Cider Mill](#), 129 N Stonington Rd., Mystic

Maine:

- [McDougal Orchards](#), 201 Hanson Ridge Rd., Springvale
- [Thompson's Apple Orchard](#), 276 Gloucester Hill Rd., New Gloucester

Massachusetts:

- [Apex Orchards](#), 225 Peckville Rd., Shelburne Falls
- [Atkins Farms Country Market](#), 1150 West St., Amherst
- [Bartlett's Farm](#), 33 Bartlett Farm Rd., Nantucket
- [Bartlett's Orchard](#), 575 Swamp Rd., Richmond
- [Basic Batch Donuts](#), 206 E Main St., Milford
- [Belkin Family Lookout Farm](#), 89 Pleasant St. S, Natick
- [Berlin Farms](#), 200 Central St., Berlin
- [Berlin Orchards](#), 310 Sawyer Hill Rd., Berlin
- [BJ's Wholesale Club](#), 278 Middlesex Ave., Medford (multiple locations)
- [Bolton Orchards](#), 125 Still River Rd., Bolton
- [Bolton Spring Farm](#), 149 Main St., Bolton
- [Boston Hill Farm](#), 1370 Turnpike St., North Andover
- [Boston Public Market](#), 100 Hanover St., Boston
- [Breezeland Orchards](#), 1791 Southbridge Rd., Warren

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- [Brookfield Orchards](#), 12 Lincoln Rd., North Brookfield
- [Brooksby Farm](#), 54 Felton St., Peabody
- [Calareso's Farm Stand & Garden Center](#), 100 Main St., Reading
- [Cape Cod Donuts](#), 66 MA-6A, Sandwich
- [Carlson Orchards](#), 115 Oak Hill Rd., Harvard
- [Carver Hill Orchard](#), 101 Brookside Ave., Stow
- [Cervelli Farm Stand](#), 247 Rounseville Rd., Rochester
- [Cider Hill Farm](#), 45 Fern Ave., Amesbury
- [Clearview Farm](#), 4 Kendall Hill Rd., Sterling
- [C N Smith Farm](#), 325 South St., East Bridgewater
- [Connors Farm](#), 30 Valley Rd., Danvers
- [Country Kitchen](#), 745 Main St., Walpole (multiple locations)
- [Davidian's Farm Market](#), 500 Church St., Northborough
- [Davis Farmland](#), 145 Redstone Hill Rd., Sterling
- [Derby Ridge Farm](#), 438 Great Rd., Stow
- [Douglas Orchard & Farm](#), 36 Locust St., Douglas
- [Drew Farm](#), 31 Tadmuck Rd., Westford
- [Dunkin'](#), 715 Boylston St., Boston (multiple locations)
- [Echo Hill Orchards & Winery](#), 101 Wilbraham Rd., Monson
- [Elliot Farm](#), 202 Main St., Lakeville
- [Fairmount Fruit Farm](#), 8877 Lincoln St., Franklin
- [Farmer Dave's](#), 437 Parker Rd., Dracut (multiple locations)
- [George Hill Orchards](#), 582 George Hill Rd., South Lancaster
- [Hager's Farm Market](#), 1232 Mohawk Trail, Shelburne Falls
- [Hilltop Orchards](#), 508 Canaan Rd., Richmond
- [Hollis Hills Farm](#), 340 Marshall Rd., Fitchburg
- [Honey Dew Donuts](#), 470 Meridian St., Boston (multiple locations)
- [Honey Pot Hill Orchards](#), 16 Boon Rd., Stow
- [Hornstra Farms](#), 246 Prospect St., Norwell
- [Ingaldsby Farm](#), 14 Washington St., Boxford
- [Jack and the Beanstalk](#), 800 Gifford St. Extension, Falmouth
- [Jennifer Lee's Gourmet Bakery](#), 100 Hanover St., Boston (multiple locations)
- [Kane's Donuts](#), 90 Oliver St., Boston (multiple locations)
- [Kimball Farm](#), 400 Littleton Rd., Westford (multiple locations, only sold at Westford)
- [Lakeview Orchard](#), 94 Old Cheshire Rd., Lanesborough
- [Langwater Farm](#), 215 Washington St., North Easton
- [Mahoney's Garden Center](#), 242 Cambridge St., Winchester (multiple locations, only sold at Winchester)
- [Mann Orchards](#), 27 Pleasant Valley St., Methuen (multiple locations)
- [Marini Farm Stand](#), 259 Linebrook Rd., Ipswich
- [Market 32](#), 240 East Main St., Marlborough (multiple locations)
- [Market Basket](#), 170 Everett Ave., Chelsea (multiple locations)
- [Mashpee Commons](#), 22 Steeple St., Mashpee
- [Mass Hole Donuts](#), 2 Lake St., Arlington
- [Meadowbrook Farm](#), 247 Essex St #2403, South Hamilton
- [Mike's Maze](#), 23 S Main St., Sunderland
- [New Salem Preserves & Heritage Cider](#), 67 S Main St., New Salem
- [North Hadley Sugar Shack](#), 181 River Dr., Hadley

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- [Pakeen Farm](#), 109 Elm St., Canton
- [Parlee Farms](#), 95 Farwell Rd., Tyngsborough
- [Pat's Apple Crisp & Cider Donuts](#), various locations (see next [event](#))
- [Pine Hill Orchards](#), 248 Greenfield Rd., Colrain
- [Pizzi Farm](#), 495 Lincoln St., Waltham
- [Ragged Hill Orchard](#), 94 John Gilbert Rd., West Brookfield
- [Randall's Farm](#), 631 Center St., Ludlow
- [Red Apple Farm](#), 455 Highland Ave., Phillipston (multiple locations)
- [Rice Fruit Farm](#), 757 Main St., Wilbraham
- [Rocco's Doughnut Company](#), 238 Millbury Ave., Millbury (multiple locations)
- [Roche Bros.](#), 150 W Central St., Natick (multiple locations)
- [Russell Orchards](#), 147 Argilla Rd., Ipswich
- [Sauchuk Farm](#), 53 Palmer Rd., Plympton
- [Schartner Farm](#), 279 W Berlin Rd., Bolton
- [Shaw Farm](#), 204 New Boston Rd., Dracut
- [Shelburne Farm](#), 106 W Acton Rd., Stow
- [Smolak Farms](#), 315 S Bradford St., North Andover
- [Somebody's Place](#), 38 Andover St. #4802, Andover
- [Stop & Shop](#), 1620 Tremont St., Boston (multiple locations)
- [Sunrise Gardens Farm Stand](#), 94 Center St., Plympton
- [Taft Farms](#), 119 Park St., Great Barrington
- [Tangerini's Farm](#), 139 Spring St., Millis
- [The Farmer's Daughter](#), 150 Millbury St., Auburn
- [Tougas Family Farm](#), 234 Ball St., Northborough
- [Trader Joe's](#), 211 Alewife Brook Pkwy., Cambridge (multiple locations)
- [Trucchi's Supermarkets](#), 858 Bedford St., Abington (multiple locations)
- [Union Square Donuts](#), 20 Bow St., Somerville (multiple locations)
- [Verrill Farm](#), 11 Wheeler Rd., Concord
- [Volante Farms](#), 292 Forest St., Needham
- [Ward's Berry Farm](#), 614 S Main St., Sharon
- [Wegmans](#), 3850 Mystic Valley Pkwy., Medford (multiple locations)
- [Westward Orchards](#), 178 Mass Ave., Harvard
- [Willow Tree Donuts](#), 60 Centre Ave., Rockland
- [Wilson Farm](#), 10 Pleasant St., Lexington

New Hampshire:

- [Applecrest Farm Orchards](#), 133 Exeter Rd., Hampton Falls
- [Butternut Farm](#), 195 Meaderboro Rd., Farmington
- [Chichester Country Store](#), 257 Main St., Chichester
- [Cider Bellies Doughnuts](#), Moulton Farm, 18 Quarry Rd., Meredith
- [McKenzie's Farm](#), 71 NE Pond Rd., Milton
- [Patch Orchards](#), 40 Patch Rd., Lebanon
- [The Common Man Roadside](#), 530 West River Rd., Hooksett (multiple locations)
- [White Mountain Cider Co](#), 207 US-302, Bartlett

The 15 Happiest Places to Live in the U.S.

This year for our annual Best Towns package, we decided to go in search of the happiest towns in America. Why did we choose this focus? Because the world is still rethinking how to work and live post-pandemic, and many people are searching for that perfect place to move to where they just feel better. We've also long been inspired by the World Population Review's annual [Happiest Countries in the World list](#) and decided that the U.S., and our readers, could benefit from some similar advice.

The project was an enormous undertaking, and we turned to *Outside* researchers [Philip Kiefer](#) and [Delilah Friedler](#) to sort through piles of facts and figures to land on these 15 towns. (See more on our exact methodology below.) Once we had the list of places, we asked our writers—who are based around the country and have lived in most of these locales—for their expert reporting and intel.

What constitutes a happy town? It comes down to things like ample outdoor access for all, affordability, a safe environment, diversity, and freedom for residents to be who they are. Let us know what you think of our choices. —Associate managing editor Tasha Zemke and deputy editor and travel director Mary Turner

SEE LINK

<https://www.outsideonline.com/adventure-travel/destinations/north-america/happiest-places-to-live-us/>

Beer and Wine Garden Fall Festivities

LOWELL – The city of Lowell, in partnership with The Anthem Group, announces the debut of the Beer and Wine Garden Series on Friday, Sept. 22, and continuing every weekend through Oct. 15, at Kerouac Park, 75 Bridge St. Hours are Fridays from 4 to 10 p.m.; Saturdays and Sundays from 11 a.m. to 10 p.m. The series features craft beverages, food trucks, live music and lawn games.

“The Kerouac Park Beer and Wine Garden is a great opportunity to enjoy Downtown Lowell during the beautiful fall season,” Director of Economic Development Allison Carter said. “We hope people come to experience the beer garden and also to visit the many independent retailers and restaurants that you can only find in Lowell.”

Admission is free and all are welcome to attend. Nonalcoholic beverages will also be available for purchase. For information, call 978-674-1483 or [email CASE@LowellMA.gov](mailto:CASE@LowellMA.gov).

Blessed are the Peacemakers

“So many criticize and say that everything is going wrong. But that’s not what the Christian is called to do; instead, he is called to deal with it, to get his or her hands dirty: first of all, as St. Paul told us, to pray, and then not to engage in idle chattering - idle chatter is a plague - but to promote good, and to build peace and justice in truth. This, too, is apostolic zeal; it is the proclamation of the Gospel; and this is Christian beatitude: ‘blessed are the peacemakers’.”

Pope Francis

Boston is a Hub for Climate Tech

From building better EV batteries to designing fusion power reactors, climate tech is one of the fastest-growing sectors of the economy.

But with so much at stake — think killer storms, rising seas, wildfires — the industry needs top minds to tackle its biggest problems. So, who is going into this field and driving innovation locally?

Massachusetts is home to at least 115 privately held companies in climate tech, according to financial database PitchBook. They range from battery makers to carbon-capture firms to startups developing more sustainable materials. And they have collectively raised \$1.4 billion in funding this year, which is roughly on pace to match last year’s \$1.9 billion. Globally, the Boston area ranks in the top five climate-tech hubs, along with the San Francisco Bay Area, New York City, London, and Paris, according to corporate-data firm Dealroom.

All of this activity means there is plenty of opportunity for a new generation of technology workers to make their mark.

Leading American and International Musical Artists to Perform at Launch of US Department of State's Global Music Diplomacy Initiative

Office of the Spokesperson

The U.S. Department of State announced today that leading American and international artists from genres ranging from opera to rock to hip hop will headline the launch of the Department's Global Music Diplomacy Initiative on September 27, 2023. The initiative leverages public-private partnerships with U.S. companies and non-profit organizations to elevate music as a diplomatic tool to promote peace and democracy.

The launch, which will be held at the U.S. Department of State in Washington, D.C., will chronicle the past, present, and future of music diplomacy, and feature live performances by Jamie Barton, GAYLE, Dave Grohl, Mickey Guyton, Herbie Hancock, Christopher Jackson, LADAMA, Aimee Mann, Rakim, Armani White, DJ 2-Tone, and a video message from U2 Lead Singer Bono. It will culminate with several announcements that will shape the future of music diplomacy, ranging from public-private partnerships with American music industry leaders to educational opportunities for youth globally.

Through these efforts, the Department aims to cultivate a music ecosystem globally to create economic equity and strengthen the creative economy, expand societal opportunity and inclusion, and increase access to education.

The launch of the Global Music Diplomacy Initiative is sponsored by YouTube, Chevron, The Boeing Company, Wasserman Foundation, United Airlines, Adrienne Arsht, and John F.W. Rogers. The Department has partnered with the American Pops Orchestra who worked with Nouveau Productions to produce this event, supported in full by donations from the launch sponsors.

This initiative builds on the bipartisan PEACE Through Music Diplomacy Act, which President Biden signed into law last year. It will augment current U.S. efforts, which consist of myriad public diplomacy exchange programs that use music as a diplomatic tool, including [American Music Abroad](#), [Arts Envoy](#), [Center Stage](#), [Next Level](#), and [OneBeat](#).

Media interested in learning more about this event and initiative may contact eca-press@state.gov.

Compromise Bill Could Move Pay Equity Closer and Help Attract Workers to MA

By [Shirley Leung](#) Globe Columnist, Updated September 25, 2023, 6:55 p.m

Legislative leaders released the [compromise bill](#) some four months after a [high-profile hearing on wage equity in May](#), which featured [Samantha Mewis](#), a member of the United States Women's National Team that successfully fought for equal pay for professional soccer players.

The Frances Perkins Workplace Equity Act – named after the [first woman to serve as US Labor Secretary](#) – combines two pieces of legislation that would strengthen the state's existing [Equal Pay Act passed in 2016](#), according to Representative Josh Cutler and Senator Patricia Jehlen, co-chairs of the Joint Committee on Labor and Workforce Development.

The compromise bill requires employers with 25 full-time workers or more to disclose salary ranges in job postings and protect an employee's right to ask for salary ranges in the workplace. The bill also mandates organizations with 100 or more full-time employees to submit to the state copies of its federal equal employment opportunity report about workforce demographics. The state would aggregate the data by sector and publish the results annually so it can track inequities by race and gender.

The legislation would take effect in 2024. Employers that don't comply with the salary transparency section would face penalties of up to \$1,000 per offense. The attorney general's office would oversee enforcement.

Other states – including [California, Connecticut, and New Jersey – have passed similar salary transparency laws](#). Requiring employers to list a salary range on job postings – say from \$80,000 to \$100,000 for a project manager – can reduce inequities.

The provision aims to address the unintended consequences of the 2016 equal pay law, which barred employers from asking salary history. That practice had contributed to the pay gap because employers would base offers on the lower pay that women and minorities typically received.

So, employers began asking candidates salary expectations. But that again penalized women and people of color, who tended to underestimate their earning power while white male candidates tended to overestimate theirs.

The wage data aspect of the bill builds off the work of the [Boston Women's Workforce Council](#), which aggregates gender and racial wage gap data from about 250 employers on a voluntary basis. The legislation would create a comprehensive look at the racial and gender wage gaps that exist across more than 20 sectors.

The effort also has been supported by [Wage Equity Now](#), a coalition of more than 80 organizations and labor unions.

The full House is expected to take up the legislation in the coming weeks. In a statement, House Speaker Ron Mariano said: "Enhancing wage transparency is a critical facet of the effort to ensure equal pay for equal work, and to make Massachusetts more competitive."

Asian Jumping Worm Identification

I was surprised how few of my seeds germinated this season, but I figured I hadn't managed to keep the soil moist enough in the insane swings in temperature (25 one day, 68 another) we had in early spring.

It turns out soil infested with jumping worms inhibits germination. When I pulled back the straw on a spot in my raised bed that I hoped to replant in early July, I noticed the soil looked different than I'd ever seen it. Garden in one place for awhile, and you know what to expect from your soil. It often has a certain look or feel. My soil had never looked like this before.

The top layer was crumbly and loose on top, the consistency of ground beef. It can also look like coffee grounds, which, as it happens, you don't want to use directly in the garden anyway, so there's no chance of mistaking grounds for worm-ravaged soil. Here's what to know about [using coffee grounds in the garden](#), and here are safer [uses for used coffee grounds](#).

Then I spotted a worm that wriggled away far more quickly than the European earthworms I'm accustomed to. I grabbed it and spotted the telltale white band (called a clitellum).

This band is even with the rest of the worm's body and a whitish or grey in color. Earthworms, on the other hand, have clitella close in color to their body, which rises above the surface of their body and does not form a complete ring (usually described as saddle-shaped). European earthworms also move more lethargically compared to the vigorous wiggling action of "crazy worms."

HOW TO GET RID OF ASIAN JUMPING WORMS: NO ONE KNOWS YET

Unfortunately, there isn't an easy solution to getting rid of jumping worms once you find them in your garden. Sorry I can't point you to an easy remedy for this problem! The [University of Minnesota Extension](#) advises, "there are no recommended control measures at this time beyond hand removal and disposal in the trash."

But university extension services are asking gardeners to try different jumping worm control methods and report back about their findings.

PREVENTING JUMPING WORMS FROM COMING INTO YOUR GARDEN

Preventing jumping worms from getting in your garden in the first place is your best bet, but it's not entirely practical. The barely-visible cocoons of jumping worms can hitch a ride on mulch, compost, or even plants you got from a nursery, likely how they wound up in my raised beds. One source I found recommended checking potted plants you purchase. Remove it from the pot and look at the roots. Jumping worms may consume the roots, so that would be one tip-off, though not a certain one if you have few or immature jumping worms. Pouring a mustard solution (see management strategies below) can help drive them out.

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If you can find mulch and compost that has been heated above 104 degrees to manage pathogens, you're less likely to bring unwanted pests like jumping worms into your garden.

Though you likely won't be able to spot tiny cocoons hiding in every bit of mulch and soil, if you're on the lookout for jumping worms and they're mature enough to identify, you can take steps to avoid bringing them into your garden.

Check the mulch, potting soil, compost, and any potted plants you bring home for worms. If you identify jumping worms, immediately bag up the material and dispose of it. You don't want to put any of it in your garden,

Alert the source of material to the problem so they can stop selling it and potentially spread jumping worms further.

You may also bring tiny cocoons into your yard on shoes or equipment, so take care to remove soil from shoes if you've gone hiking and keep your equipment in your own yard. If you share equipment like shovels, be sure to clean them before using them at a different property.

WHAT TO DO IF YOU SEE A JUMPING WORM

1. Positively identify jumping worms

If you spot an Asian jumping worm in your soil, grab it and put it in a container. Rinse off any soil and take a photo and a video to get a positive ID from your local extension service.

2. Store samples

Keep the worm in a container in your refrigerator in case researchers would like the sample.

3. Gather all you can

Take a plastic bag out to the garden and grab all the worms you can find. Seal the bag and put it in the trash. Some sources suggest allowing the bag to sit in the sun to kill the worms first.

4. Do NOT share soil or plants

Gardeners love to share plants (a favorite way to [get plants free](#)), but if your garden has Asian jumping worms, you do NOT want to share them. Don't move any soil or plant material from your garden once you find jumping worms.

5. Experiment with management techniques

There are a number of control methods home gardeners are experimenting with.

The UMN's [jumping worm project](#) includes the results of many home gardeners experiments with jumping worm eradication techniques.

Read more about the methods to get rid of jumping worms in the section below.

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ASIAN JUMPING WORM CONTROL METHODS TO TRY

1. Handpicking

The good news for home gardeners is that since we're working in limited spaces, we have a chance to control the populations of Asian jumping worms. Jumping worms stay in the top couple inches of soil and they loosen it as they go about their destructive paths, so finding and grabbing them is relatively easy. Not so much if you're dealing with a whole infested forest.

When you spot a jumping worm, grab it and bag it. When you're done catching worms, seal the bag and leave it in the sun to kill the worms. Then dispose of it in the trash.

2. Mustard Pour

Water mixed with powdered mustard can drive out jumping worms. Note that it won't kill them, but will force them to the surface, making it easier for you to handpick.

To make a mustard soak: Mix 1/3 cup ground mustard in 1 gallon of water and soak the area to bring the worms to the top of the soil. Collect them in a bag and put it in the trash.

You can use mustard water on purchased potted plants as well. Researchers recommend a mustard pour as a way to check for jumping worms in plants you bring home from a nursery, though it won't do anything for the cocoons that may remain in the soil.

Mustard seed powder is very inexpensive, and it may have other uses in the garden, helping to deter other bothersome pests like aphids and potato beetles.

I found a great deal on a pound of [mustard seed powder at Vitacost](#) (plenty to share with neighbors who want to check their soil). You can also find it at [Amazon](#).



[Susannah](#)

Susannah is a proud garden geek and energy nerd who loves healthy food and natural remedies. Her work has appeared in *Mother Earth Living*, *Enzia*, *Northern Gardener*, *Sierra*, and on numerous websites. Her first book, *Everything Elderberry*, released in September 2020 and has been a #1 new release in holistic medicine, naturopathy, herb gardening, and other categories. Find out more and grab your copy <https://www.healthygreensavvy.com/everything-elderberry/>

Thursday, September 14

"It is not in knowledge alone but rather in the application of such understanding that the mental body, the soul body, grows."

Edgar Cayce reading 683-1

Sunday, September 10

"To remember the smile of a babe, the blush of a rose, the harmony of a song - a bird's call; THESE are creative. For if they are a part of yourself, they bring you closer and closer to God."

CCL 1431-1

*CCL = *Contemporary Cayce Language*

Friday, September 8

"...see and know that worry will only unfit and prevent the body from meting out the best in self and for others..."

Edgar Cayce reading 39-4

Friday, September 1

"Music is that expression that spans the distance between the sublime and the ridiculous, that which appeals to the physical, the spiritual, the mental emotions of individuals."

Evolutions in Being

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