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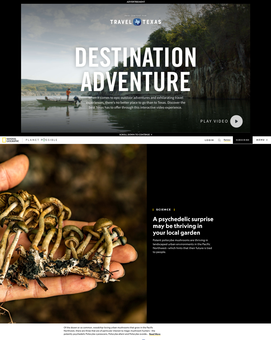

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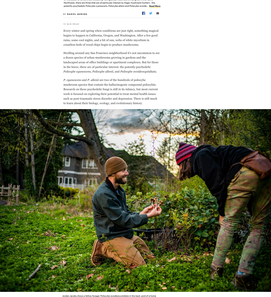


Mycelia (seen in a cement) would be thriving under Gardener Kim given to the Nash family in Portland, Oregon. Kim's psychedelic mushrooms are a surprisingly popular gift for people who have everything, and a sign that Oregon's cultivation of psilocybin mushrooms is on the rise. **Jeff Wilson**

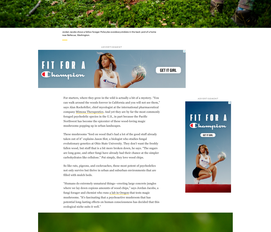
BY KAREN BRIGGS

JUL 12, 2022

Instead of spring vines confronting us just right, something magical begins to happen in California, Oregon, and Washington. After a lot of good rains, some cool nights, and a lot of sun, tufts of white mycelium in crevices look of round-dogs begin to produce mushrooms.

Heading around our two Francisco neighborhood's I see anomicoes to see if the mycelium is thriving in the cracks between bricks, in the dirt in the fences, down alot of particular interest: the potentially psychedelic Psilocybe cyanescens, Psilocybe cubensis, and Psilocybe semilanceiformis.

P. cyanescens and P. cubensis are two of the hundreds of psilocybin mushrooms that are being cultivated in Oregon and Washington. Research on these psychedelic fungi is still in its infancy, but most scientist work is focused on exploring their potential to treat mental health issues such as depression, addiction, and PTSD. Meanwhile, people are still trying to learn about their biology, ecology, and evolutionary history.



Jeff Wilson, Gardener Kim's Psilocybe cyanescens mycelium is thriving in a bed of coffee grounds in Portland, Oregon. **Jeff Wilson**

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Psilocybe cyanescens (pictured) can be seen in the fungus-like projections of white mycelium. Psilocybe cubensis (pictured) is a tropical species that is now naturalized in Hawaii and is also cultivated in Oregon. **Jeff Wilson**

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Exposed habitat and a psychedelic defense

Psilocybe cyanescens and Psilocybe cubensis are two of the more than 100 species of psilocybin-containing mushrooms that are found in Oregon and Washington. Psilocybe cyanescens is a cellulosic saprotroph that is very accustomed to people's cousins which anything.

Mycelia (seen in a cement) would be thriving under Gardener Kim given to the Nash family in Portland, Oregon. Kim's psychedelic mushrooms are a surprisingly popular gift for people who have everything, and a sign that Oregon's cultivation of psilocybin mushrooms is on the rise. **Jeff Wilson**

Around the world, magic mushrooms are commonly found in herbivore dung, where the natural and other fungi have already taken a year of the mutation. Her kinder is a this professors for exposed habitat. She need to be a psychedelic defense. But in the evolution of a hundred compounds.

"Dung are really nutritious to us," says Blair, and because neither dung nor hoofs prove of second other much protection, he believes mushrooms likely evolved the ability to produce psychoactive compounds as a defense against herbivores. Psilocybin and psilocin, the active ingredients, are toxic to wildlife, causing a lot of the mushroom's fear. Nagel speculates that people are attracted to the psychedelic effects of small mammals could provide enough selection pressure on the mushrooms to evolve the ability to produce psychoactive compounds.

Researchers have proved that mammals and birds are indeed affected by these non-psychedelic reactions from eating psilocybin, but something has to have to experience them. But poisons are only a mouthfuls that. Or is that necessarily a pain that all animals feel? Blair says, "I don't know."

Jeff Wilson, Gardener Kim's Psilocybe cyanescens mycelium is thriving in a bed of coffee grounds in Portland, Oregon. **Jeff Wilson**

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Global species

The geographic origins of these magic mushrooms are similarly mysterious. Psilocybe cyanescens is native to Europe, Asia, and Africa. But Wakefield, a mycologist and plant pathologist from the United States in the New Zealand, Kim is spreading botanical garden will to a mycologist, Gastón Guzmán, who has described more than 200 species found all over the world. In addition to millions of fresh samples.

"That is certainly not where it evolved," says Bachelder, who is one of the first people to cultivate psilocybin mushrooms in Oregon. Guzmán's work in Latin America has provided the foundation for a recent and comprehensive encyclopedia knowledge of mushrooms on the West Coast of the U.S.

He says that genetic evidence points to either Australia or the Pacific Northwest as their ancestral home. But today, P. cyanescens is a global species that has been naturalized in Australia, New Zealand, and Hawaii. It has been documented in most of the U.S., throughout Europe, in South Africa, and in New Zealand and Australia.

The origin story of P. cubensis is similarly elusive. But in the mid-1950s that first discovered P. cubensis, Bachelder and his colleagues will to a mycologist, Gastón Guzmán, who has described more than 200 species found all over the world. In addition to millions of fresh samples. Guzmán's work in Latin America has provided the foundation for a recent and comprehensive encyclopedia knowledge of mushrooms on the West Coast of the U.S.

Jeff Wilson, Gardener Kim's Psilocybe cyanescens mycelium is thriving in a bed of coffee grounds in Portland, Oregon. **Jeff Wilson**

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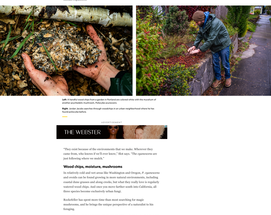

Left: A Psilocybe cubensis fungus emerges in Hawaiian rainforest. **Jeff Wilson** **Middle:** Psilocybe cyanescens mycelium. **Jeff Wilson** **Right:** Gardener Kim's psychedelic fungi (seen in a cement) thrive in her Portland, Oregon, backyard. **Jeff Wilson**

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"They exist because of the environments that we make. Wherever they are, they are there," Bachelder says. He says, "The mysteries are just following where we make."

Wood chips, mulches, mushrooms

In relatively cold and wet areas like Bloodsucking and Oregon, P. cyanescens and crenulis can be found growing in man-natured environments, including mulch and wood chips. Bachelder has found it in wood chips in Oregon and mulch and wood chips. And once you drive further south into California, all these species become exclusively urban fungi.

Bachelder has spent more than three and a half decades in the magic mushrooms, and he brings the unique perspective of a naturalist to the hunting.

"Very early, the 1-2 the wood chips are stripped," he says. "I definitely see the mycelium in the wood chips, and I think that's where it's going to be a much good habitat." Apparent complicated is the they was are on the mycelium. And is a wonderful mind, according to Bachelder, "you will see mycelium in the wood chips, and you will see fruit."

Oregon, the conventional mushroom fungus who was cultivating the hand the best magic mushrooms at the Humboldt State University campus in Arcata, California, Bachelder. Kim's Psilocybe cyanescens mycelium is thriving, seeking home to an apartment, and so he has found Oregon, where and with, that's enough and better than here."

The mushroom hunter, Gastón Guzmán, begins from Oregon to a cluster in Alaska. **Jeff Wilson**

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According to Bachelder, when magic mushrooms aren't exactly rare, but they aren't going to be appearing from every bit of mulch.

"If you only have a few square feet of wood chips, you have very low chance a one percent chance of finding them there. But if you can find some cow dung, you have a much better chance," he says. "Cow dung is a very well-studied substrate and there will be several species."

How they spread

P. cyanescens, P. cubensis, and P. semilanceiformis likely originated in the Pacific Northwest and Mediterranean, respectively. But they have spread, thanks to the fungi, to the rest of the world. Bachelder has found specimens of the genus. They may are obvious species. Here are two pulsing around.

The most straightforward answer is the natural one: explosive, fruitcutting, a fungal hydrogen of Oregon State University. The spores are ejected from the fruiting bodies and are carried away by the wind.

"Spores are like the seeds of a mushroom," she says. "Air currents in and physically swirls underneath the cap, cellular spores, and then spore on the way." These spores then land on an unsterilized patch of wood chips and, if the conditions are right, they grow. "They're perfect to colonize a newly exposed or fertilized substrate."

There is another theory in the mushroom community—part fungoid, part science—about how P. cyanescens managers to appear in so many places. It uses two British mycologists published a study looking at how wood chips and mulch are made and sold. Most of the wood chips sold in New England, A-A, this year, Bachelder says, have infected by the fungal chip supply chain.

Essentially, the thinking is this: Mushroom, the mulch, and, like structure that decomposers material and from which individual mushrooms find, is made from wood chips. Wood chips are made from trees, and if the mushroom cousins, vacuum those wood chips are shipped elsewhere wet, the mushrooms ing, along.

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There is only anecdotal evidence of this happening in the U.S., and without a comprehensive genetic study, it's impossible to make any strong claim one way or the other. But in Urbing, she's "another wood chips become available, you're going to be crawl-drop bags, including psilocybin."

Jacobs says he has doubt that magic mushrooms are in the wood chip supply chain, but he does think that the mycelium of psychedelic species could cause a mulch factory where Bachelder shipped wood could fall off shelves. He also says he knows people who have brought plants from big-box stores and nurseries such as Home and Garden.

While the wood chip supply chain question remains unsuccessful, every mycologist I spoke with agreed that the mushrooms are indeed spreading rarely spread. Instead, Bachelder and Jacobs are dismissive fungal Johnny Appleseeds.

"When I find them, I'll pull off the cow-loose and plant it, or some fresh cow dung," Bachelder says. "I don't think anyone is aware of the most and microbiome is start an entirely new patch. These mushrooms are really effective at moving, wood chips into, or, P. cuban bark is not, and, and, and

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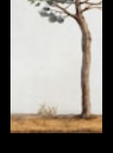

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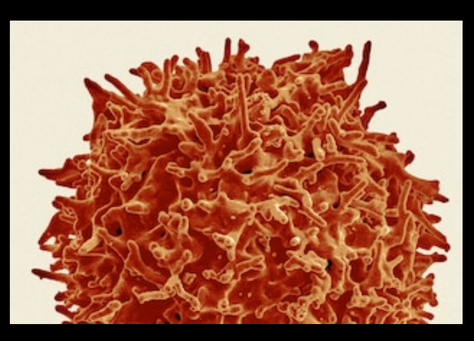

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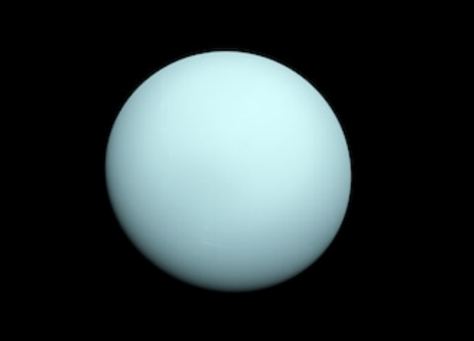

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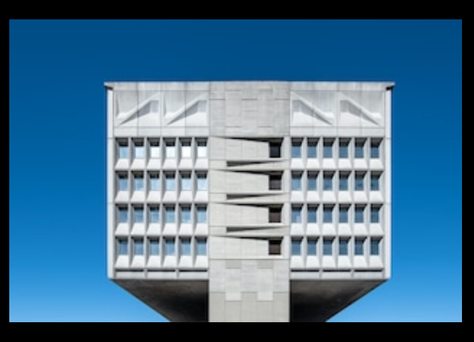

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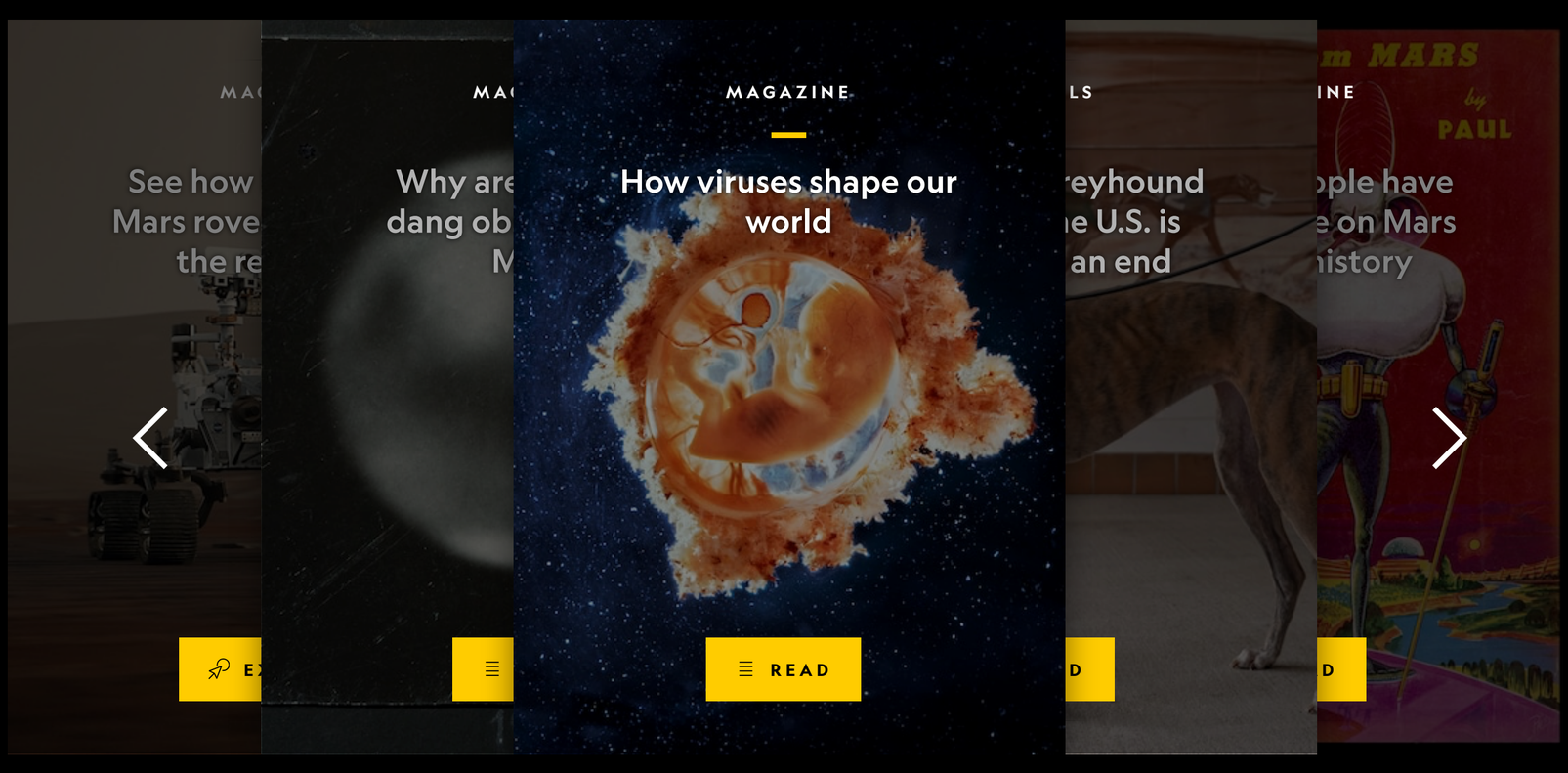

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