SCITECH

"Let me take you down / 'Cause I'm going to Strawberry Fields"
STRAWBERRY FIELDS FOREVER THE BEATLES

Law student's app rewards users for exterminating invasive lanternflies

BY KARISSA CHENG
CONTRIBUTING REPORTER

Like the dots scattered across their distinctive wings, spotted lanternflies seem to be a ubiquitous presence at Yale in the weeks after move-in. These invasive bugs have posed a threat to ornamental plants and crops alike, meriting aggressive stomps from some.

One Yale Law student seeks to generate a more coordinated approach to eradicating lanternflies on campus. Ilani Nurick LAW '27 launched Lantern Hunt, an app where users earn points by squishing the bugs or their egg masses, just over a week ago.

"Oftentimes, climate and environmental issues, they feel massive, and it makes people feel powerless, as if there's nothing we can do," Nurick said in an interview. "Invasive species removal is a problem in that same sphere, where small repeated actions by individual people can actually make a difference."

The app uses lanternfly reports from users to create a map showing where the insects are most concentrated.

Nurick said he plans to use this data to help local or state governments prevent the lanternfly from spreading further. He also wants to expand his app to the West Coast and Pennsylvania, the "frontier of the spotted lanternfly infestation."

Where do lanternflies come from?

According to the U.S. Animal and Plant Health Inspection Service, the spotted lanternfly was first reported in 2014 in Pennsylvania and likely traveled to the U.S. from China, where it is native. Currently, 19 states and the District of Columbia experience some form of infestation.

Garret Jolma, a Peabody Museum assistant in the entomology department, said that the bugs spread across states primarily through the transportation of goods, because egg masses may be laid in wooden pallets or on vehicles.

Connecticut reported two established populations of the bug in 2020, and its presence has become widespread since. In 2025, the Connecticut Agricultural Experiment Station issued a quarantine order on the lanternfly, which regulates transport of outdoor equipment and agricultural products to prevent the spread of the bug across state lines.

The U.S. Animal and Plant Health Inspection Service instructs people to check their outdoor items and backyards for lanternfly egg masses and smash them, especially if they live in areas where lanternflies are particularly pervasive.

The lanternfly eats grapevines, hoptrees and other tree varieties. As it feeds, the lanternfly may cause sooty mold growth on the plant, which inhibits photosynthesis. According to the National Invasive Species Information Center, the lanternfly "poses a serious economic threat to multiple U.S. industries, including viticulture, fruit trees, ornamentals and timber."

Lanternflies at Yale

The insects are especially concentrated at Yale due to trees on campus, but students who work at the Yale Farm say they have not found them to be environmentally harmful yet.

The lanternfly primarily feeds on the tree-of-heaven, which Yale Facilities estimated in 2020 makes up approximately 0.5 percent of the total tree population on campus. A 2025 study found that lanternflies who feed on the tree-of-heaven become bitter-tasting, providing a layer of protection from predators like birds. Jolma said the tree-of-heaven is also invasive, and can grow in disturbed land and empty lots.

Maple trees, which constitute approximately 15 percent of the total tree population on campus, are another significant food source.

Claire Newman '27, a student manager at the Yale Farm, wrote in an email that she previously tried to get Yale to remove the tree-of-heaven specimens lining the Prospect Street sidewalk adjacent to the Grove Street Cemetery wall a year or two ago. She said couldn't identify the landscaper responsible for their planting, so she stopped pushing.



ISABEL LI / CONTRIBUTING ILLUSTRATOR

The invasive spotted lanternfly, which has emerged in Connecticut over the last several years, feeds on campus trees and crops. To address the large-scale impact of the invasive insect, a new app seeks to engage the public in collective extermination.

Lanternflies could potentially cause agricultural damage at the Yale Farm.

Jules Morris '27, a student manager at the Yale Farm, said that the lanternflies concentrate around the Yale Farm's Concord grape vines, although she said she is unsure if this has actually affected grape production.

Morris said that while people like to pick grapes as they pass by the farm, grapes are not regularly donated to local families or used for programming.

"There hasn't really been a problem, because the farm is so actively worked and actively used," Morris said in a phone interview.

According to Jolma, the initial spread of lanternflies caused a panic, since researchers predicted substantial crop damage. Recent studies, however, suggest that the effect is not as bad as feared — aside from in vineyards.

A 2020 study from Penn State University economists estimated that the lanternfly's unregulated presence in Pennsylvania could cost the state at least $324 million in revenue and almost 3,000 jobs. A second study, published in 2023, found that some of the tree species initially perceived to be under threat are less vulnerable than previously thought.

"Right now, people are nervous that they're going to spread to the West Coast to California and Washington and stuff because they could be damaging for hops," Jolma said.

A future for extermination

As for here in New Haven, Samuel Moyn, a Law School professor and the head of Grace Hopper College, said he downloaded Lantern Hunt to support Nurick, who is one of his students.

"I think we shouldn't become a version of the thing we hate, in killing these things that threaten us," Moyn said in an interview. "If we want to keep the natural environment the way it's been, then maybe it's for a good cause."

The app is meant to gamify the elimination of lanternflies, in a similar manner as Pokémon Go, Nurick said. Currently, players can spend their points on growing and accessorizing digital lanternfly nymphs.

"Eventually, and hopefully soon, that will transition into a much stronger and more direct incentive of money," Nurick said.

Jolma remarked that smashing lanternfly egg masses is much more effective at population control than smashing adults.

On Lantern Hunt, a smashed egg mass earns 80 points as opposed to 10 for an adult fly.

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Yale Center for Natural Carbon Capture showcases student research

BY ALISSA SUNDRANI
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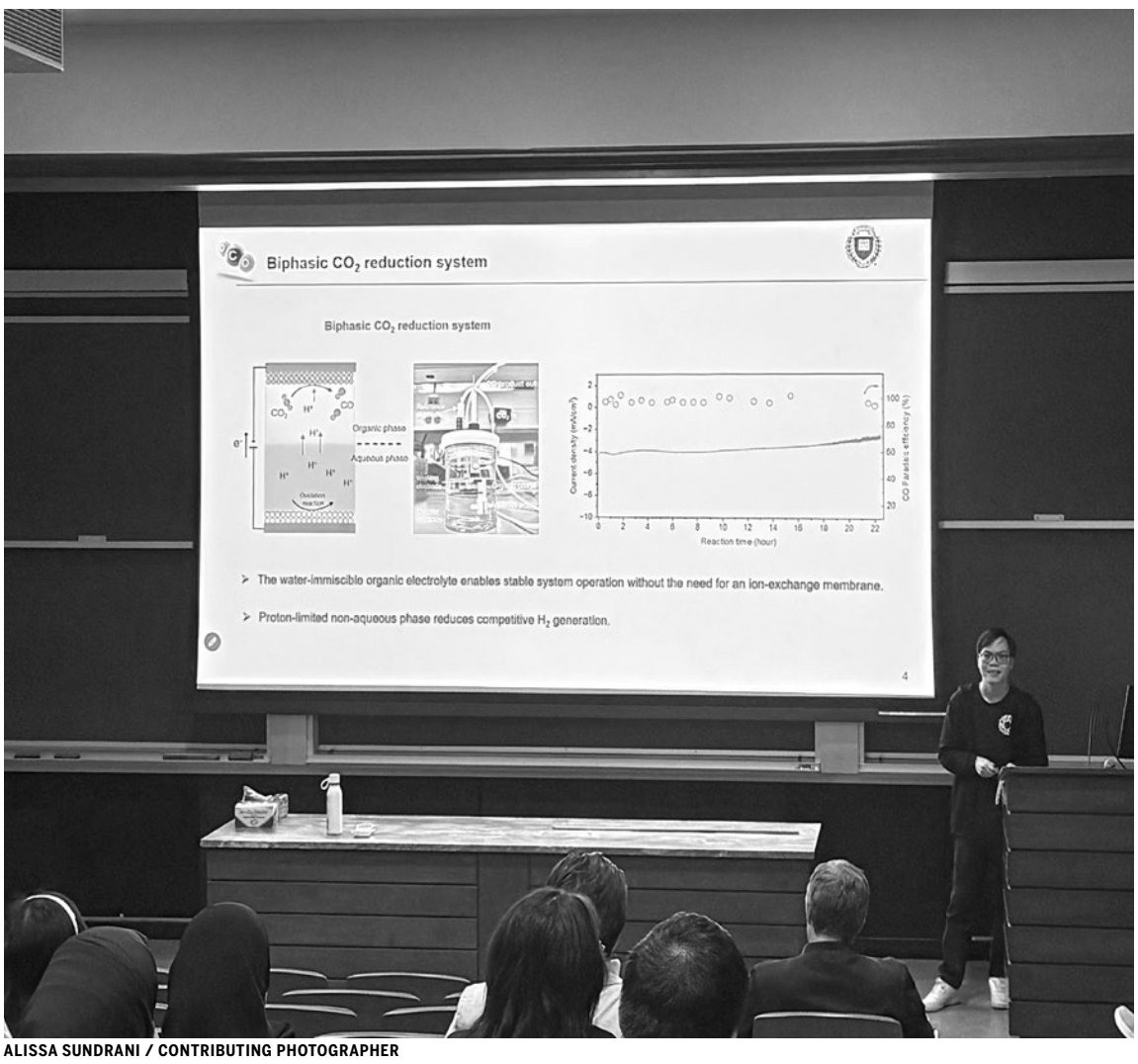
The Yale Center for Natural Carbon Capture hosted its annual Fall Research Showcase on Friday, showcasing student work on topics relevant to climate solutions.

Held in the Kline Geology Laboratory auditorium, the showcase was part of a series of events hosted by Yale's Office of Sustainability as part of this year's Sustainability Week. Presenters on Friday largely consisted of graduate students, postdoctoral students, research scientists and faculty on projects sponsored by or relevant to the center.

"The YCNCC Fall Research Showcase is one of the Center's most inspiring events in that it shows the incredible quality and range of the work happening across the YCNCC to advance our mission to translate climate mitigation research at Yale into safe, effective, and scalable real-world impact and outcomes," Toby Bryce, the managing director of the center, wrote in an email to the News.



ALISSA SUNDRANI / CONTRIBUTING PHOTOGRAPHER

As part of the Office of Sustainability's programming last week, the center's annual Fall Research Showcase provided a vehicle for Yale students — including graduate students and one undergraduate — to present on their research findings and network.

Of the 21 students presenting at the showcase, Natalie Haase '27 was the only undergraduate. She gave a talk on her work to enhance electrode performance under David Kwabi, a faculty member of the center.

The showcase began with an introduction by Peter Raymond, the center's director, before a series of "lightning talks," or five- to seven-minute presentations showcasing research findings.

Talks given on Friday ranged across fields with three primary focus areas: industrial carbon utilization, ecosystem capture, and geological and ocean capture. Many presentations grappled with issues within forestry, carbon crediting, satellite imagery and ocean alkalinity.

The center was founded in 2021 as a part of the larger project called Yale Planetary Solutions, which focuses on climate and sustainability initiatives. Haase points to the center's infancy as an explanation for the lack of involved undergraduates.

"I think just because they're so new and they're building out there's less of an undergrad presence," Haase told the News in a video interview.

She said that the center is open to undergraduates, though its focus is on employing fellows and doctoral students.

Prospective presenters at Friday's showcase filled out an application prior to the event, detailing a working abstract along with a brief explanation of their research.

"Becoming a Yale researcher is itself a selective process, but the purpose of the Showcase is to provide a forum for all YCNCC researchers to share their work. As such we do not turn away any credible and relevant talks. If there are more talks than time permits, we will invite some applicants to present via a poster session, but this year we were able to accommodate all as lightning talks," Bryce wrote.

Kerry Chen GRD '31, a second-year doctoral student who works in the lab of chemical and environmental engineering professor Lea Winter, said the experience was impactful for her.

"I feel like it actually opened my eyes because I didn't really know that these kinds of research exist. I'm pretty limited by my vision of engineering," Chen told the News in a video interview.

The session ended with closing remarks by Bryce and a reception hosted in the Kline Geology Laboratory, where presenters and interested attendees could connect with one another.

Haase said it was interesting to connect with people from across disciplines, and said she spoke to other presenters about economic strategies during the reception.

"If no one is talking to each other, I think that's when things get lost and that's how we lose forests," Haase told the News.

Presenters were affiliated with the Yale School of the Environment, the Department of Chemical and Environmental Engineering, the Department of Earth and Planetary Sciences and the Yale Applied Science Synthesis Program.

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