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‘Godmother of Bloodsucking Insects’ Plots Attack in Nation’s Bedbug Battle

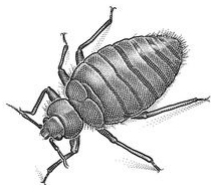
A medical-entomology professor takes center stage in what South Korea fears is the start of the worst bedbug infestation in decades

By [Jiyoung Sohn](#) [Follow](#)

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SEOUL—Kim Ju-hyeon is a medical-entomology professor at Seoul National University, a prestigious position that allows her to indulge a professional obsession with bloodsuckers.

Early on, her parents worried about her career choice. Now, she’s a national hero.



‘Dinner’s on you.’

Kim is a noted bedbug killer in the middle of what South Korea fears is the worst infestation in decades. Since the end of pandemic travel restrictions, more of the bloodsucking bugs are latching onto luggage and clothing and making their way around the world. Fears of the surge have spread to Singapore, Taiwan, Hong Kong and elsewhere.

Kim’s research on the insecticide resistance of local bedbugs has drawn scores of media interviews. “I’ve been inundated,” the 37-year-old professor said. With all the attention, her postdoctoral

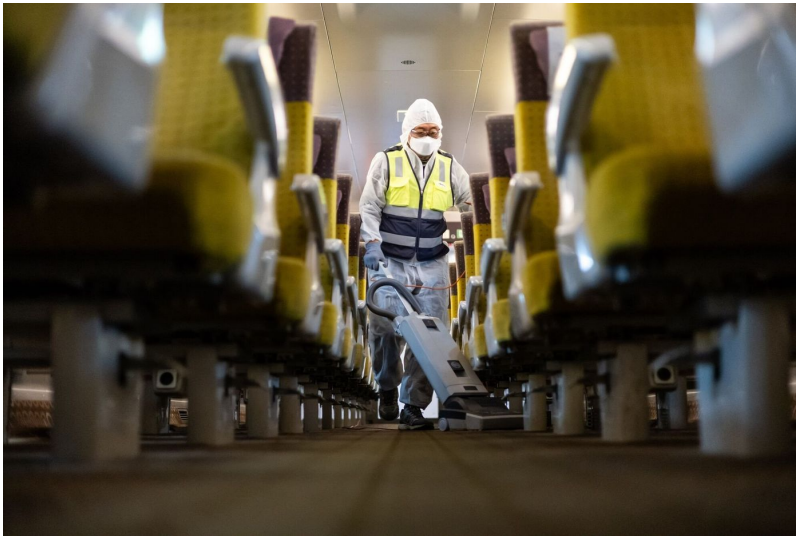
adviser, John Marshall Clark of the University of Massachusetts Amherst, called her the bedbug princess.

Residents of Paris also are in a panic. Videos of public trains swarming with bed bugs have gone viral, and so has the profile of French entomologist Jean-Michel Berenger. He has appeared in a splashy feature and photo spread in *Le Monde*.

At a recent entomology conference in Thailand, Chow-Yang Lee didn't expect much of a turnout for his keynote speech about the global resurgence of bed bugs. The four-day event was largely focused on mosquitoes. When he stood on the podium, he was surprised.

"It was packed," said Lee, a professor of urban entomology at the University of California, Riverside. "Everyone had traveled and was so worried about bedbugs."

Lee co-wrote an article this year in the "Annual Review of Entomology" that said bedbugs now permeate "virtually every sector of society" and cost billions of dollars a year to treat. Bedbugs basically laugh at conventional insecticides, according to his findings, and take advantage of the world's poor pest management.



A worker vacuuming inside a train in Seoul, part of an anti-bedbug campaign.

PHOTO: SEONGJOON CHO/BLOOMBERG NEWS

Bedbug studies have long operated as a niche field, yielding the big stage to mosquitoes—which carry all manner of hideous illnesses, from malaria to yellow fever—and Lyme disease-spreading ticks. Bedbugs aren't deadly, just gross as heck when you find a writhing mass of them on the underside of your mattress. Their bites itch, and some people have allergic reactions.

Roughly a decade ago, New York City had an outbreak of bedbug bedlam after a ballooning population of the insects spilled from apartments to movie theaters, stores and even the Empire State Building.

Many Americans now battle the bloodsuckers with the same rolled-sleeve resolve as the fight against cockroaches and other household pests, said Richard Cooper, a research associate at Rutgers University's Urban Entomology Laboratory and head of a pest-management consulting firm.

After a global lull in the latter part of the 20th century, South Korea gave little thought to bedbugs, which kept a low profile. The country had 20 reported bedbug cases from 2009 to 2019, according to government data. In the past weeks, there have been hundreds, and the government has set up a bedbug hotline.



A bedbug under the microscope during a lecture hosted by the Korea Pest Control Association in Seoul. PHOTO: ANTHONY WALLACE/AGENCE FRANCE-PRESSE/GETTY IMAGES

The crisis drew Kim from the lab to the limelight. Her 2020 peer-reviewed article showed how bed bugs in South Korea had developed an alarming resistance to conventional pyrethroid-based insecticides. She later identified two alternative insecticides that work better. Other researchers have come to similar conclusions about local bedbug populations in the U.S., Europe and elsewhere.

“I think she was destined to become the ‘Godmother of Bloodsucking Insects,’ ” said Lee Si-hyeock, Kim’s Ph.D. adviser and a fellow entomology professor at Seoul National University.

Lee recalled asking a group of graduate students who might consider studying bloodsucking head lice. Only Kim raised her hand.

Kim's grad-student research, which included both lice and bed bugs, required daily lab visits to feed the insect colonies.

Typically, the critters were fed blood donations rejected by the Red Cross. When supplies were short, Kim sometimes let them feed on herself. Her parents weren't happy about it.

"I figured out over time that the inner calves felt the least itchy when bit," she said of her sacrifice for science.

Kim is now conducting experiments for South Korea's Environment Ministry, seeking additional data to guide choices for the most effective bedbug insecticide to use on the local invaders.



Kim Ju-hyeon holding dolls of various critters in her office at Seoul National University. PHOTO: JIYOUNG SOHN/THE WALL STREET JOURNAL

She keeps a collection of insect dolls at her office in northern Seoul, including a tick, fruit fly, head lice and body lice. Her coffee mug has a mosquito and says, “Silent But Deadly.” Hanging on the wall is a T-shirt, printed with the critters, that says, “If You’re Still Breathing...We’ll Find You.”

“My interest has always been in how to best kill the bugs that hurt humans,” said Kim, who doodles insects in her free time.

On a recent afternoon, she retrieved some bedbugs she keeps in her lab to show students during lectures. She popped open a petri dish of them and exhaled a gentle breath into it. Her carbon dioxide got the bedbugs wriggling, sensing a potential blood donor.

“They’re cute, aren’t they?” she said of her tiny adversaries.

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