

## [University of Florida News](#)

### **Finding too-small-to-see bedbugs no problem for these sniffers, UF researchers say**

Filed under [Environment](#), [Florida](#), [Research](#) on Wednesday, May 2, 2007.

GAINESVILLE, Fla. — At the sound of a bag of treats being latched onto her handler's waist, she bounds up and down, as if on springs.

Nine-pound Nudie's feet skitter across the concrete floor as she speeds by, keeping her tiny nose to the ground. She scurries around the perimeter of a bed, then hops on top.

"Find your B's, find your B's," handler Jose "Pepe" Peruyero commands. Within seconds, she's pawing furiously at a spot on the bed as if trying to dig through it.

She's found her "B's" — meaning bedbugs. She gets a handful of kibble, a hearty "Good girl!" from Peruyero and a kiss on her scruffy head.

Nudie is a bedbug-detecting Chinese crested terrier mix trained by Peruyero's J&K Canine Academy in High Springs, part of a 3½-year collaboration with [University of Florida entomologists](#).

They've worked together to gauge the accuracy of more than 17 termite-detecting dogs since 1998, but early next month will be the first time they've added bedbug-sniffing dogs like Nudie to the mix.

About 20 dogs will be tested for their termite- and bedbug-detecting accuracy during the Southeast Pest Management Conference May 6-9 on the UF campus. UF entomology graduate students run the tests.

"We've been working to try to make sure that there are quality dogs out there to detect termites, and now bedbugs," said [Phil Koehler](#), an entomology professor with [UF's Institute of Food and Agricultural Sciences](#). "Both those pests are very difficult to detect in structures."

For instance, he said, researchers have found as many as 15 bedbug nymphs in the slot of a drywall screw.

Both pests can be destructive, with termites said to cause some \$5 billion in damage a year in the United States. There is no similar tab for bedbugs, partly because the pests have only become resurgent in recent years, and partly because there is still a stigma that keeps many from reporting them, said Cindy Mannes, spokeswoman for the [National Pest Management Association](#).

From 2000 to 2005, she said, the number of inquiries pest control agencies received about bedbugs went up 71 percent.

Although Nudie is a mixed breed rescued from a Lake City, Fla., animal shelter, most of the termite- and bedbug-detecting dogs are Brace beagles, a breed known for their ability to methodically track a scent.

Dogs aren't a silver bullet when it comes to finding termites or bedbugs, Peruyero says, but they have skills humans don't.

Peruyero explains it like this: A human can walk into a kitchen and know — through sense of smell — that stew is cooking on the stove. But a dog's sense of smell is so sharp that it can be trained to distinguish a stew made with carrots from one without.

"I tell people they're buying a nose with four legs to carry it," Peruyero says. "They love to eat, love to smell. It's what they live for."

Peruyero became involved with UF's entomology program in 1998 after realizing there was a need for termite-sniffing dogs. A 1981 study out of Berkeley had shown trained dogs could detect termites accurately about 81 percent of the time, but with "false positives" — alerting for termites when none were there — 28 percent of the time.

Peruyero, a former K-9 handler for both the Gainesville Police Department and Miami Police Department, thought he could do better.

Enlisting UF's help, he learned everything he could about termites and began to work with Shawn Brooks, an entomology graduate student who was writing his thesis on termite-detection dogs.

After training dogs using a combination of the U.S. Customs method and a food-reward system, they tested five beagles and a German shepherd, with far better results than the earlier study.

The dogs were accurate 96 percent of the time and their false positive rate dropped to less than 3 percent.

There are several reasons Peruyero believes his training method worked better than previous attempts. His dogs are handled by more than one trainer to get them used to different people, the dogs work every day, and they associate the work with food.

And then there are the intangibles, like the classical music piped into the kennel every day, with the occasional Jimmy Buffett tune thrown into the mix.

"We've taken a lot of steps on this end to minimize problems down the road," he said. "When we sell a dog, we want to be able to make sure they can stand up to any challenges in court."

Now after some initial resistance, he's making inroads in the tight-knit pest control industry, with sales and queries coming from as far away as California and Australia.

"The bedbug training is sort of like hitting the Lotto — everybody's interested now," he said.

-30-

## Credits

### Writer

Mickie Anderson, [mickiea@ufl.edu](mailto:mickiea@ufl.edu), 352-392-0400

### Source

Pepe Peruyero, [pepe@jkk9.com](mailto:pepe@jkk9.com), 386-454-3647

### Source

Phil Koehler, [pgk@ufl.edu](mailto:pgk@ufl.edu), 352-392-2484