


Call of the squash

Last fall, Thomas Andres was wandering around New York City's Chinatown when he happened upon the subject of his doctoral dissertation: the lacayote, *Cucurbita ficifolia*, a South American squash rarely sold in the United States. He was happy to shell out \$6 for the mottled green gourd. Twenty-five years ago, he had dreamed of discovering its wild ancestor on some scrubby hillside in Mexico. Because centuries of inbreeding have reduced the genetic diversity of many domesticated crops, finding their natural populations could help scientists identify beneficial genes which could eventually improve crop lines. Unfortunately, the lacayote's wild ancestor never turned up, and Andres never quite finished his PhD.

Apart from a thinning of the hair and a slight bulge at the belly, Andres, 53, still looks the part of a graduate student. He brought his lacayote to fellow squash enthusiast Michael Nee at the New York Botanical Garden in the Bronx. But as Nee cut into it, it squirted a coworker in the eye before oozing out on the lunch table. The other botanists at the table were not impressed. They tossed it in the trash. "People tend to ignore [squashes]," Andres laments. "They think 'It's just a squash.'"

Andres begs to differ. He helped found the Cucurbit Network in 1994 – a place, according to the website, "where people and cucurbits interact." He co-edited the club's newsletter for a decade, and has been invited to give a talk on cucurbits at Disney's Epcot Center in Florida. He even keeps a small jar of Argentinean lacayote jam in his refrigerator. 

The squashes are native to the Americas and one of our oldest domesticated vegetables. Earlier this year, Andres was part of a team describing ancient squash crops from northern Peru that date back more than 9,000 years (*Science*, 316:1890–3, 2007). Scientists recognize five species of domesticated squashes, but it has been a challenge to connect them to the fifteen known wild species. In 2002, Andres was on a team that traced the *nad1* gene in the mitochondrial genome of domesticated squashes to three wild ancestors (*Proc Natl Acad Sci*, 99:535–40, 2002). But that study left two unknowns: the ancestors of the butternut squash and the lacayote.

Two years later, Michael Nee received a package from a small herbarium in southern Venezuela, containing a peculiar squash that had been collected by a student on a tributary to the Orinoco river. Nee couldn't put a name to the species. "This is totally unexpected," he says, "I would have never guessed that

noon, he looks on as Nee opens a metal cabinet and flips through a drawer of desiccated squash plants pressed onto paper cards, some dating back almost 200 years. Finally, he comes to the mystery specimen. Nee points out that the stem, leaves, and fruits are more modest than that of a domesticated squash. But he cannot be sure that the specimen is not an escapee from an old settlement.

Facing a withered map of the Americas, Nee points to the Orinoco basin, where Andres and Nee will spend the winter retracing the Venezuelan student's steps. The goal is to find – and taste – the squash in the wild. That's the clincher: wild squashes contain a bitter compound bred out of domestics. "This is right in the region where I got elephantiasis," he tells Andres.

"What?" says Andres, his voice cracking.

"Would you like to see a five pound scrotum?" chuckles Nee, who once suf-

coursework, finished his research, and even published a portion of it as a book chapter. But he dropped everything for a part-time position helping out in the herbarium at the New York Botanical Garden, where he would have a chance to interact with Michael Nee. "It's a sore point," says Richard Robinson, Andres's former advisor at Cornell. "I was very disappointed when he did that."

After the last time we spoke, Andres sent me email about his ongoing quest. "By the way," he wrote, "if I found the wild ancestor of *Cucurbita ficifolia* on this coming trip, that would be a huge incentive for me to finish my PhD dissertation."

—Brendan Borrell

The virus hunter

For University of California, Los Angeles, epidemiologist Anne Rimoin, 2007 was a rough year. Rebel forces opened fire on her headquarters in Kinshasa, in the Democratic Republic of the Congo. An Ebola outbreak spread across her field site. And the cargo plane she charters to get there crashed, killing all passengers.

Yet none of that has slowed Rimoin or her Monkeypox Project, the most ambitious disease surveillance program ever conducted in the equatorial rainforests of the Congo, the cradle of such emerging infectious diseases as Marburg, HIV and Ebola. Rimoin is so resistant to calamity that her Congolese collaborators dubbed her Mama Etete, "the unstoppable woman."

Then came "the vampire situation."

One day, Rimoin was manning her makeshift lab behind a dilapidated jungle hospital and received word that villagers in one hamlet were refusing to give blood. "A rumor spread that the blood we were taking for the study was to be sent to Europe for white people to drink as an elixir of youth," she says. The rumor proved impossible to squelch and Rimoin moved on to another village, accepting her defeat.



there would be or could be a wild squash in that area." When Andres first saw the specimen, he was ecstatic.

Although he is not employed by the Botanical Garden, Andres spends a lot of his time there. On a recent after-

ferred a year and a half of grief from a filarial worm in his leg.

"I'll take my insecticide," Andres says.

For all his dedication, it's hard to understand what's kept Andres from completing his PhD. He took all of his