

ASU grad dedicated PhD to uncovering evolutionary relationships between their favorite creatures: Weevils

Alexis Cortes Hernandez received a prestigious Lakeside Fellowship to do highly advanced genetic sequencing for PhD

By Risa Aria Schnebly, ASU News
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Editor's note: This story is part of a series of profiles of notable [fall 2025 graduates](#).

When Alexis Cortes Hernandez was an undergraduate student, they¹ were determined to become a botanist. But then, they crossed paths with another creature that swept them off their feet: dung beetles.

"They are super cute," Cortes Hernandez said, laughing. "A classmate was telling me the story of how the males make balls of dung to give as gifts to the female, and I was like, 'What the heck?'"

Having grown up in the lush green mountains of Veracruz, Cortes Hernandez spent much of their childhood playing outside. They had always been drawn to insects: "I grew up with my grandma and my mom, and I was very lonely kid. Insects were kind of like my friends."

Once Cortes Hernandez started beetle research, they never turned back. Years later and now they're graduating with a PhD in evolutionary biology from ASU, having dedicated their career to studying beetles' evolutionary relationships. Cortes Hernandez spent last spring doing that work at the [California Academy of Sciences](#) in San Francisco, California, through the prestigious [Lakeside](#)

[Fellowship.](#)

Cortes Hernandez's journey with beetle research started by studying the diversity of dung beetles in different areas of the cloud forest around Jalapa, the city they grew up in, as an undergraduate.

"It's beautiful there. The cloud forest is less than 1% of the vegetation coverage in Mexico, but it's the most diverse habitat in the country."

After earning their bachelor's degree, Cortes Hernandez worked as a technician for a beetle biologist in Veracruz, then did their master's degree at the Universidad Autonoma de México (UNAM) in Mexico City. There, they began to focus on specifically studying weevils — a subgroup of beetles with elongated snouts — which they continue to study today.

"There are 65,000 species of weevils. To give you context, there are like 5,000 species of mammals — so there's a lot of weevils."

Cortes Hernandez studies weevil diversity using next generation gene sequencing — a highly efficient technique to read and construct the DNA from an organism. Using that technology, Hernandez is constructing full genomes for museum specimens that have never been sequenced before. They can then use those genomes to compare DNA between different weevil species and begin to understand how the incredibly diverse group evolved.

"I study one group of weevils that was classified as the same group because they have hairs in the side of their heads between their eyes. It's kind of like someone said 100 years ago that because they have those hairs, they should be related to each other. But that's not true, actually. So, what I'm trying to do is ... to see which ones are actually evolutionarily related to each other."

Outside of just researching weevils, Cortes Hernandez has a passion for taking their pictures. They post weekly weevil photos online, in hopes of helping others fall in love with the crazy critters.

"Every Wednesday is weevil Wednesday," they said, smiling. "That's the good stuff. Spread the word."

This story originally appeared on [ASU News](#).

¹ Hernandez uses they/them pronouns.

Main image

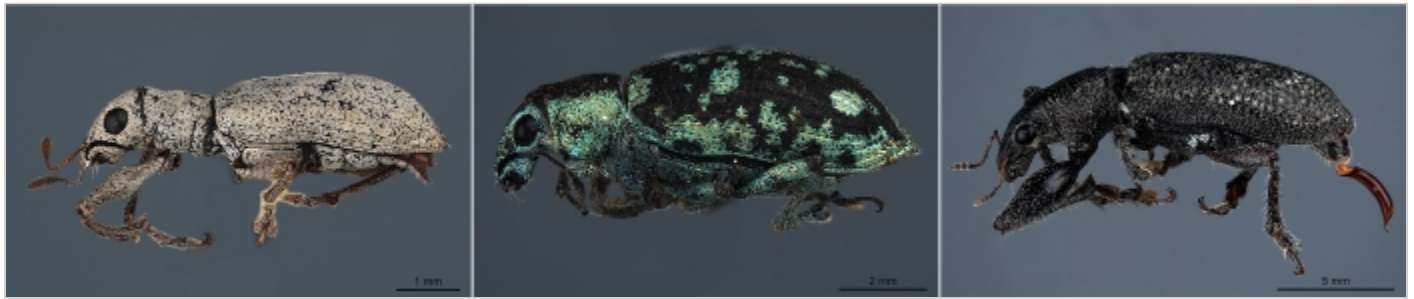


A weevil from the genus Apioninae on a lupine plant that Alexis Cortes Hernandez photographed last May.

Text image(s)



Alexis Cortes Hernandez



Three weevils of different species that Cortes Hernandez photographed under a microscope. Weevil genres from left: Airosimus, Leptopus and Hadromeropsis.