



tree cotton

thorny popolo

hau kuahiwi

These three Hawaiian plants are at risk of dying out.

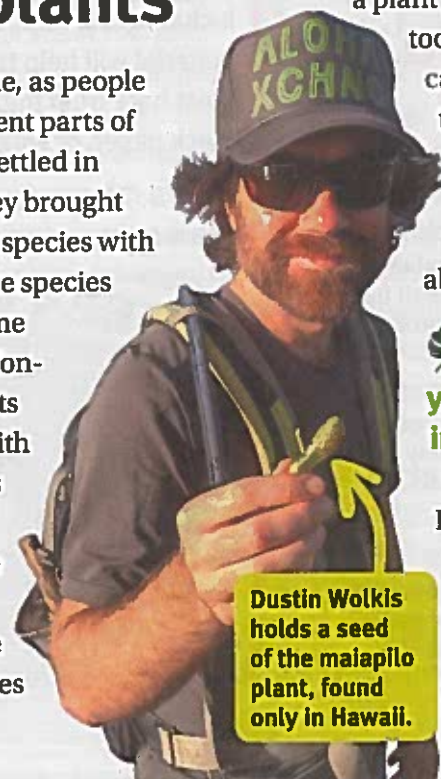
Seed Saver

Dustin Wolkis helps protect Hawaii's rarest plants

On the Hawaiian island of Kauai, a bushy plant with a yellow flower clings to the side of a steep cliff. It's one of just three individuals of this type of plant, called hau kuahiwi (how koo-ah-hee-vee). If the individuals die, the species will go extinct.

Hawaii makes up less than 1 percent of the total land of the U.S. But it's home to almost half of the country's endangered plant species. Why are these plants at risk of dying out?

Over time, as people from different parts of the world settled in Hawaii, they brought non-native species with them. These species have become **invasive**. Non-native plants compete with native ones for space. Non-native goats and pigs gobble up the leaves



Dustin Wolkis holds a seed of the malapilo plant, found only in Hawaii.

and seeds of native plants. As a result, many Hawaiian plants can survive only on cliffs where the animals can't reach them.

Dustin Wolkis is trying to save the plants. He's the manager of the seed bank and laboratory at the National Tropical Botanical Garden (NTBG) on Kauai. The bank stores nearly 14 million seeds. If a plant population becomes

too small, scientists can plant those seeds to try to help the species recover. Wolkis spoke with *SuperScience* about his work.

How did you get interested in plants?

After high school, I got a job in a store specializing in plant-based medicines. I learned so much there. I decided to

go back to school and study biology. I loved studying plants outside. After that, I never looked back.

Why is it important to have a seed bank in Hawaii?

We've been called the extinction capital of the world. There are more than 230 plant species in Hawaii that have fewer than 50 individuals in the wild. Many are found on only one island and nowhere else in the world.

How do you collect seeds for the seed bank?

Sometimes I fly out to remote places in a helicopter. Or I hike for a whole day to reach a particular plant. Some plants grow in steep places, with loose rocks or soil. For the most extreme locations, experienced

scientists rappel off cliffs on a rope to collect seeds.

How do you preserve seeds?

A seed's ability to **germinate**, or sprout, starts to decline as soon as we collect it. My job is to slow down that decline. First, we dry fresh seeds. Then we seal them in pouches and cool them for storage. The building where we house our seeds also helps protect them. It's made of concrete with thick glass windows, and it can withstand strong hurricane winds.

We regularly test stored seeds. If too few sprout, we know it's time to get fresh seeds for that species. Any seeds that do grow are planted in the wild when possible.

What do you love about your job?

I love working outdoors. For a long time, I didn't know there were jobs where I could camp and hike as part of my work. It's great.

—Jennifer Barone

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Where Is Hawaii?

Hawaii is made up of eight main islands and many smaller ones.



From Seed to Plant



The seed bank houses nearly 700 different types of seeds.



Wolkis tests whether seeds that have been stored for years can still sprout.



Sprouted seedlings grow in nurseries and can be planted in the wild.

Think: How do nurseries help keep plants safe as they grow?