



WHO INVITED YOU?

When Species 'InvaDE'

Marauding camels from Afghanistan, India, and the Middle East overrun Australia. The "invaders" flatten fences, topple into wells, and devour native plants. Meanwhile, toxic toads originally from Central and South America multiply without mercy and poison Aussie critters to near-extinction.

The prickly pear cactus is the state plant of Texas. In Kenya, though, it threatens the livelihood of tribal herders. The cactus sucks water from the soil, making it tough for native plants to thrive.

Nine thousand miles away (14,500 km) in Texas, toothy Eurasian wild pigs with shovel-like snouts decimate crops and backyards. Huge flocks of European starlings strip clean farmland across the United States and shower main streets with guano. Stealthy Burmese pythons swallow most of the mammals in the Everglades in Florida.

This is a small sample of a big problem. Non-native species cost more than \$1.4 trillion in damages worldwide per year. The distance traveled in these continent-hopping journeys is just as staggering.

Have you ever wondered exactly how your local invader got from the other side of the globe to your backyard? Do the pythons slither thousands of miles? Do the camels walk on water? Are they all alien "super villains" imbued with superpowers? Nope. In almost every case, people are the ones to blame.

Invaders!

In 1493, a year after Christopher Columbus sailed the ocean blue, he brought domestic pigs to Cuba. They multiplied. A half century later, another Spanish conquistador, Hernando de Soto, invited 13 descendants of those pigs to what is now the southern United States.

There were no hoofed beasts in Australia before British colonizers appeared with horses and donkeys in the late 1700s. The British also brought in camels from their other colonies. They introduced these animals, as well as water buffalo, into Indigenous territory.

In the 19th century, Europeans and Americans formed clubs entirely devoted to species introduction. One English gentleman entreated his cousin to send a few rabbits, "a touch of home," for a hunting party on his Australian estate. Bunnies bred and spread. An American released 100 European starlings in New York City. There are now 200 million across the country.

Fur ranchers in the United States imported nutria, also known as swamp rats, from South America to meet a demand for fur coats in the 19th and 20th centuries. Today descendants of the ones that got away munch through miles of marshland with their orange chompers.

The British continued to mix and match. Colonizers introduced the prickly pear cactus to Kenya in the mid-20th century to use as a "live fence." Ouch.

When You Were Small

The invasive python, iguana, and snail in Florida most likely started out as people's pets. In Madrid,

Spain, and London, England, parakeets that descended from pets build nests outside apartment buildings. Temples in Tokyo, Japan, are infested with released American raccoons. Blame a 1977 TV animated series, called *Rascal the Raccoon*, about a boy and his pet raccoon.

What goes wrong? When people don't want their pets anymore, they may release them into the wild. "Most of the time, the exotic pets are sold when they're young. They're small bodied and kind of cute, but inevitably they get bigger and eat more and outgrow enclosures and may live for decades," says Julie Lockwood. She's a professor of ecology at Rutgers University in New Jersey and an expert on invasive species. Lockwood says the multi-billion-dollar illegal wildlife trade is growing.

Free Ride

Many introductions are unintentional. Species hitch rides in shipping containers, cargo holds, even on the clothing of airplane passengers. About 50,000 merchant ships are crossing oceans right now. These ships transport an estimated 5,000 to 10,000 invasive species a day just in their ballast water.

Right Place, Right Time

Not all introduced species become invaders. Some die off. Others thrive without disrupting the ecosystem. Some known invaders may ultimately prove beneficial, replacing species impacted by climate change.

A non-native species becomes invasive when it harms an ecosystem. That ecosystem happens to be the right place with the right conditions for the species. There's no malice in this. "Birds have simple thoughts: Can I eat it, will it eat me, can we make babies?" says Kevin McGowan. He's an ornithologist at the Cornell University Lab of Ornithology in New York. "Starlings didn't ask to be here; they were brought over here and they do what starlings do."

Homecoming

Indigenous communities are regaining stewardship of their land and the freedom to practice traditional methods of conservation. At the United Nations Biodiversity Conference in December 2022, tribal leaders from across the globe had a seat at the table. In Australia, Indigenous rangers manage invaders and monitor the welfare of small mammals fighting for survival. And in the United States, Native American tribes are re-wilding their lands with native species.

Lynn Ermann is a repentant member of the worst invasive species on the planet. When not learning about cool stuff or giggling to herself, she explores the streets of New York City, pops into her favorite museums, and practices archery.