

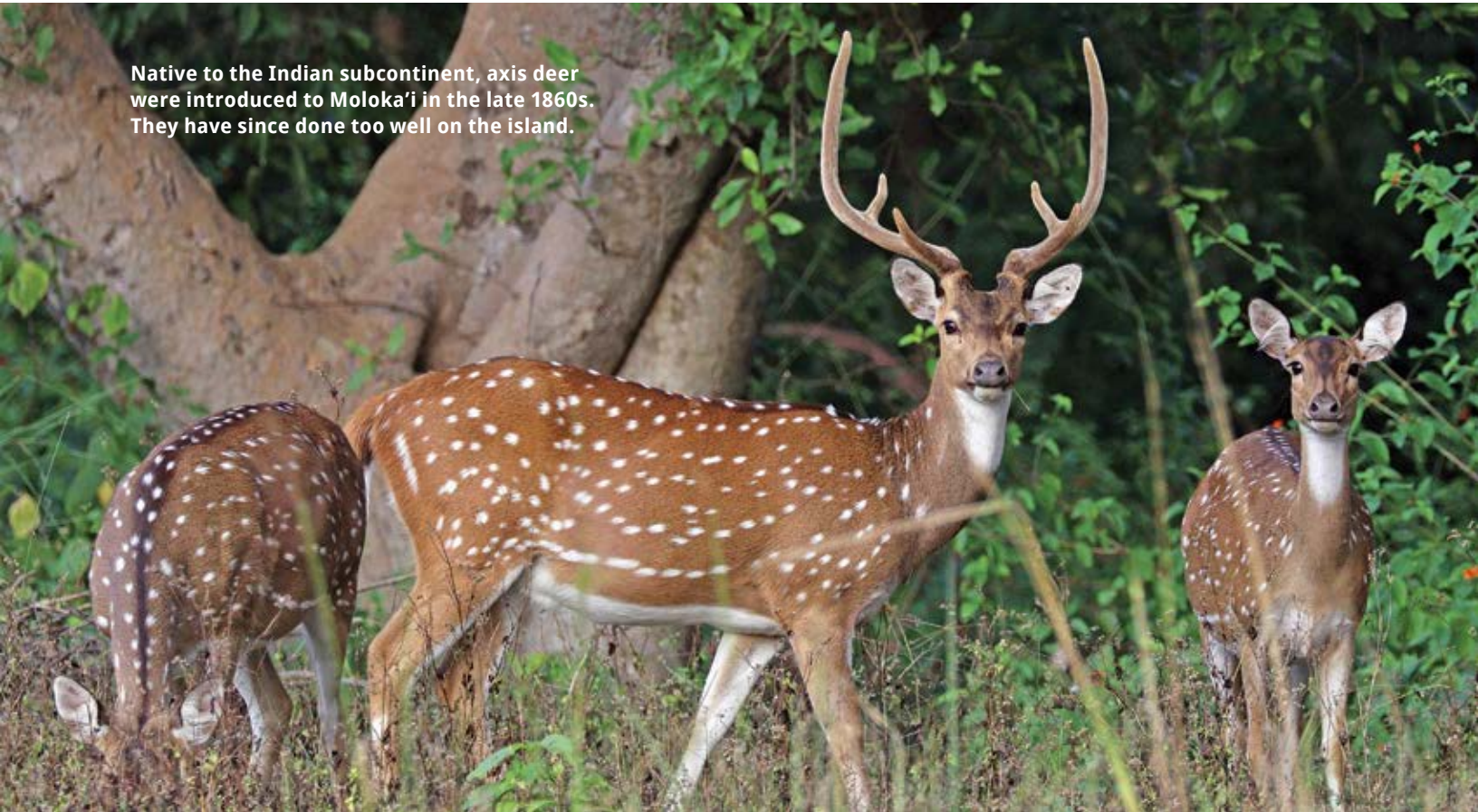
The Keepers of Molokai

As non-native axis deer proliferate in the middle of the Pacific Ocean, a market hunting and harvest operation has become the conservation tool of choice.

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Native to the Indian subcontinent, axis deer were introduced to Moloka'i in the late 1860s. They have since done too well on the island.



Moloka'i is an escape to Old Hawai'i. One of the eight main Hawaiian islands, its red slopes of iron-rich volcanic soil create a landscape sparsely punctuated with acacia trees and bunchgrasses. The high ground rises to over 3,000 feet from the island's midsection and gently flows down, a constant reminder that everything finds its way to the ocean. These tall peaks create a rain curtain that keeps the island's eastern half lush and green, ensuring a parched, near desert-like landscape on the western side. The dry western side is where the axis deer roam and where they wreak havoc on local ecosystems.

Generations of islanders have lived with these non-native deer. In 1867, King Kamehameha V received a gift of seven axis deer from British-ruled Hong Kong. Native to the Indian subcontinent, axis deer did very well in the hot, open land free of predators. With orange coats and white spots, they carry a pair of three-pronged antlers that can reach nearly a meter in length. They were transplanted to Lana'i, O'ahu, and Maui by the early 1900s. Axis deer breed early and often, and herd growth rates are greater than 25 percent annually. Current estimates put 60,000 axis deer on Moloka'i—a density of more than 200 deer per square mile.

Invasive and unrestricted, they created ecological upheaval. With a preference for native plants, the deer have decimated vast areas of the island, with a 90 percent reduction in native flora in some areas. This has sped up the encroachment of non-native flora. Overgrazed and barren ground cannot hold rainfall; mudslides have become more common. The eroding sediment has buried coral reefs and filled in fish ponds—both large protein sources for the 7,400 locals.

Recent droughts have exacerbated these troubles, and axis deer have died from starvation.

Government-funded efforts to control herd populations have had little effect. A bounty of anywhere from \$25-\$50 has incentivized private landowners to shoot more deer. Fencing programs have created exclusion zones to help prevent the spread of deer and allow for more focused eradication. None of this was enough to put a dent in deer numbers. Recognizing the need for management, some locals have taken matters into their own hands.

AN UNPOPULAR SOLUTION

Desmund Manaba is a keeper of this place. His roots run eight generations deep on Moloka`i, and he has only called the island home. Fishing and hunting were family traditions that immersed him in the natural cycles of the island. He has studied the change across his land and the upheaval created by the introduction of non-native species.

When an aquaculture venture tried to raise shrimp and found mediocre results, the owners turned to Desmond for help.

Leveraging his local and ancestral knowledge, he helped design better growth strategies that worked with the shrimp and island tides. Emboldened by his success, he founded his own company, rearing native species and restoring them around Moloka`i. Desmond's dedication to conservation caught the attention of the head of Hawai`i's Department of Land and Natural Resources, who recommended that he turn his efforts to axis deer.

Desmund offered a solution to the uncontrolled deer populations. It was, quite simply, to shoot them—a lot of them. Initially, the local response was not positive. "I got everybody hating me, bro," he says. "The whole island—because they didn't understand." Hunters on the island who had used axis deer as their source of protein for generations felt as though their sport was being taken away. Homeowners would lose their backyard pets. At the same time, collisions with deer steadily grew, ranches failed because domestic livestock

couldn't compete with the deer, and farmers were unable to harvest crops that never had the chance to grow. The need for Desmond's plan became apparent. Getting it approved by the regulating agencies would prove difficult.

Desmund devised a plan to harvest the deer, process the meat, and sell it to the public. "This was done in the light of conservation, sustainability, and creating food," he says. He wanted to ensure the meat would go to his neighbors and the rest of Hawai`i. In 2003, Desmond killed the first processed axis deer. It would take four more years to learn the requirements and laws of the United States Department of Agriculture (USDA) before he was granted a permit to sell deer meat to the public. Desmond thinks this is the first wild-sourced, field-culled meat processing program of its kind the USDA had ever granted.

Approaching this new venture much like a beef cattle operation, USDA officials placed the same restrictions on Desmond's operation. Animals for slaughter were brought to pens for observation and then killed immediately after inspection in the presence of agency officials. However, rounding up wild animals didn't work. The deer ran into the corral fences, killing themselves trying to escape. In this frenzied state, the deer overworked their muscles, tainting the meat and precluding it from being put into the food system.

Still, it took several attempts before inspectors would try Desmond's way, which was shooting the deer in the head at night. "These deer are nocturnal and only calm at night," Desmond says. "We can make one stand and get our full load we can process for the night." Instead of rounding deer up, USDA officials accompany the shooters to the field and verify that humane headshots quickly dispatch the animals. A lead truck with shooters



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This aerial view shows a herd of axis deer on the neighboring island of Maui.



and a spotter eases into areas where axis deer are known to frequent. The spotter will locate deer and shine the light while calling the distance. Most shots are within 200 yards, but some could be out to 400. Anything other than an instant kill is a demerit that could lead to a permit being revoked. “I’ve had hunters wanting to work with me say they are sharpshooters. I’ll take them out, and one, two, three—they fail out. They get that adrenaline and miss the shots. That can’t happen.”

The carcasses are hauled back to the plant and processed. On a given night, the whole operation can handle 30 animals. Shoots happen every few days and are limited only by local manpower to run the meat plant. The tropical heat makes it a race. The meat must be rushed back and cooled before it spoils. Desmond’s philosophy is that if it can’t feed families now, then it can wait in the field until

the next harvest.

He tries to keep the meat on Moloka`i and the rest of Hawai`i. “We want to feed you guys, the ones that come to Moloka`i. And the locals are always going to get great meat. They always will.” Venison is sold to other restaurants on Maui, O`ahu, and Lana`i. Axis deer sausage is made for local airlines. Meat bars are sent to the University of Hawaii athletic programs.

Moloka`i Wildlife Management, Desmond’s company, employs over a dozen residents. On an island where work is limited and wages barely keep up with the “paradise tax,” employing locals in something other than the tourism industry is

Desmund Manaba, owner of Moloka`i Wildlife Management.



PHOTO COURTESY OF DESMUND MANABA

a boon. Ku Keanini has been working for Desmond for several years. A Moloka`i native of Hawaiian heritage, he’s hunted since he could walk. He is keen to be part of this unique conservation model on his home island. Ku has worked all

stages of the hunt, from spotting and shooting to pick up and processing. “This is a special place, and it needs to be protected. It’s a small island, and we all know we have to do our part.”

Both Desmond and Ku will tell you there are plenty of deer on the island, but setting up an operation is not easy. “If you aren’t a sharpshooter, please don’t get into this business. It’s going to get expensive for you and put your family in dire straits. If you get three demerits, you’re done, and you lose your license.” Instead, Desmond encourages you to support their work by purchasing venison. “That’s a safer bet anyway.” Still, they have both found success. Ku guides throughout the year and takes many clients on meat hunts to fill the freezer. Forgoing the single buck for the wall, these hunters kill several does and take the meat home. Desmond’s management company is in its second decade with over 20,000 deer being served at local tables. Both of these approaches take hundreds of animals off the island annually.

Axis deer populations are still above carrying capacity, but there’s hope with stewards like Desmond and Ku. Populations are beginning to decline, and areas once overgrazed are seeing new growth. The only downside to this unique strategy might be that what many consider a seasonal pastime becomes work. While we were driving around looking for another deer, I asked Ku if this could ever get old. He smiled, waved his shaka (Hawaii’s thumb and pinkie wave), and said, “Nah, braddah. It’s all good.” ■

RIGHT: Moloka’i axis deer tacos made it to the Big Island of Hawai’i at Shaka Tacoz. **BELOW:** Ku Keanini takes a selfie among axis deer that are being processed.

