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Conservation Dogs helping to protect endangered wildlife

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Wildlife's Best Friends:

How Dogs Help Find and Protect Endangered Species

By Isabelle Groc



ndangered species are hard to find. Their numbers are small. Their habitats are hard to navigate. They hide. In the race against extinction, some researchers are calling out the dogs to help.

A nose for conservation

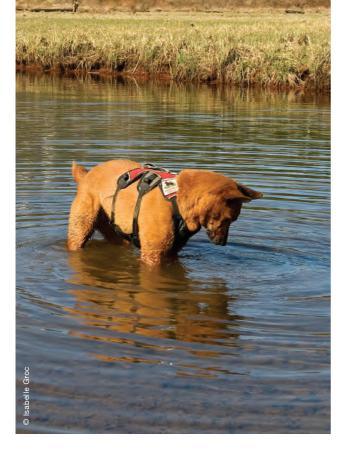
Alli, an energetic nine-year-old Australian cattle dog, moved swiftly over the spongy earth, cutting a sharp path through the knee-high grass of a wetland near Vancouver, British Columbia. Behind her, Monica Pearson, a conservation biologist, and Heath Smith, Alli's partner, followed in hot pursuit. But Alli paid them no mind. Nose to the ground, she was focused on a mission.

Just as she approached the edge of a nearby pond, Alli stopped suddenly and lay down. She looked over at Smith, fixing him with a gaze that radiated both intensity and expectation. Smith and Pearson approached the dog, and Smith knelt down and started digging through the grass. Within a few seconds, he uncovered what had made Alli stop—a small, golden-eyed frog. "Yeah!" Pearson exclaimed, turning to Alli. "Good girl."

Mission accomplished. Smith reached into his pocket, pulled out a ball, and rewarded Alli with a

spirited game of fetch. Pearson, meanwhile, focused on the frog, measuring its body length, checking its weight, and with an assist from another biologist, attaching a small transmitter belt.





This was no ordinary frog. Alli located an Oregon spotted frog, one of Canada's most endangered amphibians. Historically, the distribution of the Oregon spotted frog extended from the southwest corner of British Columbia to the northeast corner of California. Today, it is endangered throughout its North American range. In Canada, just 400 to 700 frogs are left, distributed in six isolated populations in British Columbia. To conserve the frogs, it is critical to understand where they live and how they are using their habitat.

Trying to discover new populations in pockets of wetlands through traditional surveys is a time-consuming and unreliable process, particularly as it is difficult for people to move through these habitats. Surveyors walk slowly in knee-deep mud during the short frog-breeding season and can easily miss the frogs. "You need to send out an army of people to cover every inch of these wetlands," Pearson says.

This changed when Alli—then a member of the Conservation Canines program at the University of Washington in Seattle—came along to help find the shy frogs. Dogs are nimble and fast and cover large areas in a short period of time, and their powerful nose can catch "It was one of the most pivotal moments in my career. I realized that Alli knows more than me. What I have learned from her and other dogs is that if you open yourself up, they will show you a completely different world."





the scent of a species very quickly. "While you are walking on a straight trail, the dogs are just reading the newspaper all across the landscape," says Pearson.

Dogs like Alli are increasingly assisting in global wildlife conservation projects. In addition to tracking elusive or rare endangered animals and plants in rugged terrain, they find invasive species and fight wildlife trafficking by sniffing out illegally obtained animal products such as shark fins and elephant ivory. They can also be trained to detect scat samples from many different species, which can tell researchers everything from the animal's diet and stress levels to their reproductive health and exposure to toxins and population abundance.

One of the benefits of using dogs for conservation is that the process is noninvasive compared with traditional wildlife detection methods such as radio collars or trapping. For example, radiotelemetry studies of Oregon spotted frogs are expensive, labor intensive, and damaging to the amphibian and its habitat.

"There is almost unlimited use for the dogs," says Smith, co-founder of Rogue Detection Teams, a Washington-based group that works with conservation canines. "So far there hasn't been a project too big for the dogs." Over the years, Alli located the scat of many cryptic species such as the Pacific pocket mouse, whose scat is as tiny as a grain of sand, and she has even found the scat (called frass) of the Oregon silverspot, an endangered butterfly that lives in coastal meadows from Washington to northern California. In 2021, Pips—another Rogue Detection Teams dog—detected the actual Oregon silverspot caterpillars, the first scientific observation of the species' larvae in the wild in 40 years.

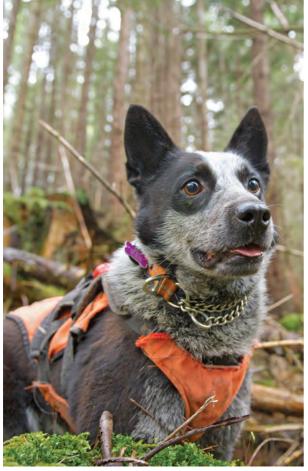
Conservation canines can even sniff out scat in the water, and they have helped advance the scientific



understanding of the endangered southern resident killer whale population in Washington State. Thanks to the dogs, scientists have collected hundreds of scat samples, and discovered that the orcas went through unsuccessful pregnancies due to malnutrition and high stress. These findings were vital to advocate for better protection of Chinook salmon, the orcas' main food source.

A job for unwanted shelter dogs

Not any house pet qualifies to become a conservation canine. The ideal dog is highly energetic, intensely focused, and ball obsessed. Because of their unique personalities, detection dogs are not suitable as family pets and usually end up in shelters. They have little hope of being adopted unless they cross the path of



someone like Heath Smith, who is looking for these specific traits as the perfect match for working on wildlife search missions in rugged conditions for long periods of time. "We find an outlet for these dogs and give them a second chance," says Smith.

In the field, the dogs are happy to work all day, motivated by the expectation that they will get to play with their ball if they find evidence of their target species. Communication and teamwork are critical. Once the dog has identified the wanted scat or species, they will lie down next to their find and signal the discovery to the handler. For a wildlife mission to be successful, the two-legged partner must understand what the dog is saying and support them in their search. While the canine's job is solely to smell, the handler pays attention to changes in the environment and considers things such as wind speed and direction that can affect the dog's ability to locate the odor. "Just like not every dog is a conservation canine, not every person is a bounder," warns Jennifer Hartman, a bounder and field scientist for Rogue Detection Teams.

The Dog Knows

Rogue Detection Teams refers to the handlers that work with the dogs in conservation as "bounders" because they are bound to their dogs and to the ecosystems in they work in. For this group, the first rule of becoming a bounder is to trust the dog.

Hartman learned this as she was working with Alli on a marten-scat survey. That day, Alli was working fast. She suddenly stopped, turned, alerted, and waited for her partner to come over and inspect the spot. Jennifer looked and could not find anything. She called Alli away. But the dog stood her ground. In doubt, Jennifer went back to the spot, got down on the ground and started digging. To her shock, she found an underground cavity. She put gloves on, reached out into the dark hole, and found twelve marten scats. "I would have never found that without Alli," she says.

"It was one of the most pivotal moments in my career. I realized that Alli knows more than me. What I have learned from her and other dogs is that if you open yourself up, they will show you a completely different world."



Isabelle Groc is an award-winning writer, conservation photographer, book author, and documentary filmmaker focusing on wildlife conservation, endangered species, and the relationships between people and the natural world. With masters degrees in journalism from Columbia University and urban planning from the Massachusetts Institute of Technology, she brings a unique perspective to documenting the impacts of human activities on threatened species and habitats. She is the author of *Conservation Canines: How Dogs Work for the Environment, Gone is Gone: Wildlife Under Threat*, and *Sea Otters: A Survival Story.* Her photography and stories have been published in magazines and news outlets all over the world, and she has written and directed a dozen films on wildlife and nature. Isabelle grew up in France and now lives in Vancouver, BC. To learn more, visit her website: isabellegroc.com and follow her on Instagram: @isabellegroc.

DOGS ON DUTY!

"A beautiful book, filled with stunning images, on how our best friends are working to make the world a better place. *Conservation Canines* takes us from British Columbia to Namibia, following the work these incredible dogs and their human handlers are doing to guard some of our planet's remaining wildlife. A joy to read for both children and adults."

> —Brian Hare and Vanessa Woods, authors of the New York Times bestseller *The Genius of Dogs*



How Dogs Work for the Environment

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