FIELD WORK

By Ilona Popper

Camas with her prize.

Scouring the search quadrant is a slow and systematic process.

On a calm winter morning in Three Forks State Park in Montana, I stand next to Alice Whitelaw and her truck. Three dogs crated in the back bark and yodel. Ten-year-old Camas, the most experienced tracker, moans the loudest. Whitelaw pops the latch, and out hops Camas, a fine-boned, dark German Shepherd. Though I stand close to her handler, she doesn't even quiver a nostril in my direction. Camas focuses her bright brown eyes on Whitelaw, vibrating with excitement as Whitelaw straps her into her working vest. Camas is first up to give me a demonstration of what a conservation dog can do.

Before I arrived, Whitelaw planted bear scat (poop) in the brushy field in front of us. Camas is going to find three samples, using her nose. Camas is off-lead, and she and Whitelaw stand at the edge of the field and lock eyes for a second. She gathers herself, as though balancing at a starting gate. Whitelaw pulls out a rope-ball toy and shows it to Camas. "Ready?" she asks. "Find it," she says in a calm voice. Camas begins to run, nose to the ground.

Camas is one of a handful of dogs in the United States who works for science through Working Dogs for Conservation. The dogs scan wild terrain to find wildlife scat or hair, plants and even animals. The organization was founded by four biologists—Whitelaw, Aimee Hurt, Megan Parker and Deborah Smith—to provide scientists with a noninvasive, inexpensive but accurate way to count or study wildlife and plants.

Conservation dogs scent out the wild

Left, top: Julie Larsen Maher © Wildlife Conservation Society; bottom and right: © Working Dogs for Conservation

Leading by a nose—Camas tracks, Whitelaw follows.

Whitelaw worked as a wolf biologist for the U.S. Fish and Wildlife Service. "I loved it. It's great work, but it's no secret that if you handle wild animals, at some point somebody's gonna get hurt, and I'm talking about the animals." "Capture and handling" is still considered one of the best ways to study and observe wildlife. Biologists set traps in the woods or dart wildlife from helicopters. Sometimes they drug and fit the animals with radio collars, then use receivers to locate the animals later and observe or count them.

Yet, capture and handling can be costly and difficult. Animals may detect traps and bypass them or, like wolves, dig them up and poop on them (gotcha!). Some animals fight the trap, expending terrific energy or injuring themselves. Wildlife in traps may hyperventilate, overheat or, very rarely, die of "capture myopathy," heart failure from stress. They can also fall prey to other animals.

About 15 years ago, there was a shift in the wildlife field. Researchers figured out ways to collect and decode DNA from scat, hair or skin samples. "What if we could get information from scat without ever seeing the animal? We started thinking about using dogs. It seemed natural: loved dogs, loved working with them, loved being in the field with them, wondered if we could make this work," says Whitelaw.

Whitelaw and her partners teamed up with trainers of narcotic-detection dogs. Together, they developed a protocol for training conservation dogs to help wildlife biologists do their jobs. Working Dogs for Conservation, a 501(c)(3) foundation, is one of only three organizations in the country that uses dogs for conservation detection.

Dogs have a leg up on humans as searchers and trackers. And it's a rare dog who doesn't love to sniff out, evaluate, roll in or coolly sprinkle over poop. Most dogs seem to consider the examination of scat as one of the major jobs of the day. There's a difference, however, between a pet dog's daily rounds and the focused work of a detection dog, who communicates with her handler about every single scat of the "target" species.

What motivates conservation dogs is not poop, but play. While Camas searches for scat the way any dog does, she does not *relate* to scat the way other dogs do. Camas equates material from the species she's been trained to find with playing tug-of-war with Whitelaw. Whitelaw explains, "These dogs are not smelling every poop like most dogs do. They are out there working for the target scent that they've been trained to associate with their reward [their ball]. That's *all* they're doing. They're *not* out there acting like dogs." Most of them are toy-obsessed—they're the dogs you'll see in shelters, bouncing off the walls. In fact, that's how many conservation dogs have been discovered. The partners visit shelters, looking for the dog who won't put down her toy for anything. Others are rescue dogs, and some come from breeders who specialize in detection dogs.

This morning, conservation veteran Camas is engrossed in her job, rushing

through the dried grass with her nose above the ground, zigzagging on an imaginary line in front of Whitelaw. Once Camas has found her target, she's trained to look at the scat, thrust her nose toward it without touching it, sit next to it and then make eye contact with Whitelaw. This series of movements is called an "alert."

Camas is a generalist; she can identify 13 species, including kit fox, wolf, cougar, grizzly bear, black bear, desert tortoise, and several invasive and rare plants. This lowland state park is a good place for a demonstration of finding grizzly scat because the bears don't live in this habitat. The scat samples Whitelaw has planted should pop out at Camas.

Generalist dogs like Camas can't turn off their training. She'll alert on any and all of the species she knows, wherever she finds them. In the Montana mountains, Camas is asked to search for grizzly, black bear, cougar and wolf all at once.

Working Dogs for Conservation's dog/handler teams have helped study animals all over the globe, including Amur tigers, African wild dogs, and snails in Hawaii. Closer to home, Camas and Whitelaw work in Montana's Centennial Mountains on a predator-connectivity study. Jon Beckmann, the lead researcher, studies the ways in which many grizzlies, black bears, wolves and cougars live in and use the mountains as a link to other habitats. Beckmann's data, gathered in part by the dogs, have contributed to several land management decisions that have protected the predators and their migration corridors.

"The dogs have allowed us to study a whole suite of carnivores simultaneously in a really rugged landscape, where it's difficult to trap animals." Beckmann adds that he's learned not to doubt the dogs. "In five years, the dogs have had 98.6 percent accuracy over 1,000 data points," says Beckmann.

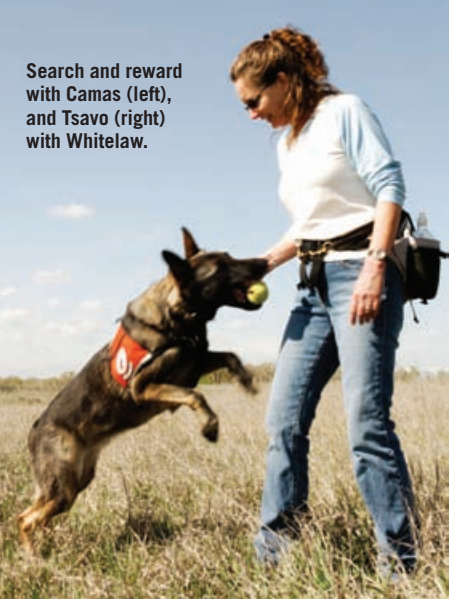
Camas pauses, pokes her nose toward something on the ground and looks at Whitelaw. "Show me," says Whitelaw. The dog steps to the patty, pokes her nose toward it, sits, then stares at Whitelaw. Whitelaw whips the ball end of the pull-toy into Camas's mouth and her voice travels high up into a sunny range. "What a good girl! What a dog!"

Finding the Right Dogs

Only a very special dog can be taught not to treat poop like poop. "Out of every 300 dogs we test," Whitelaw says, "only one even looks like a candidate. And out of these, 60 percent fail." Primarily, Whitelaw says, the dogs need "the drive and nerve strength" to do the work.

Drive gets the dogs through repetitive, sometimes grueling training and searches. The dogs must be crazy for their rewards, ignoring distractions. "Play has to be a big enough deal," says Aimee Hurt, "so that searching wouldn't be enough. If a dog liked searching more than the toy, that's a problem, because it cuts down on the dog's need to communicate with you."

Nerve strength is crucial because the dogs work in the wild. It's one thing to



Search and reward with Camas (left), and Tsavo (right) with Whitelaw.

Julie Larsen Maher © Wildlife Conservation Society

ask a dog to find a bomb in a human environment like a building or airport; it's another to teach a dog whose focus is on reading poop to ignore the messages that poop is sending. A conservation dog overrides what he knows about the animal whose scat he's sniffing. Wolves, for instance, treat other canids as competition and may try to kill them. Not surprisingly, some dogs react to wolf scat. "They pee on it, get their hackles up and walk around it in a creeped-out way, or won't go into it at all." If a dog is too nervous around wild scat, he won't make the cut. (Whitelaw and her partners have been known to fall in love with some dropouts and keep them as pets.)

Even an accomplished tracker like Whitelaw's male dog, Tsavo, occasionally balks when scat wafts a territorial warning. "He'll identify all kinds of wolf scat, but there are a couple of instances where we've come across a great big pile of what I'm assuming is alpha male wolf scat and he'll alert from a distance." Whitelaw adds, "A handler has to know how to read that individual dog in order to work him at his peak. Every dog is different."

Training

Working Dogs for Conservation handlers own and live with their detection dogs. "The dog is your work partner," says Whitelaw. "Having something go wrong with that dog is really hard. And retiring a dog? It's like, 'I don't want you to be done yet!' With my older female [Camas], we have this great relationship in the field." The foundation's Dog Life program acknowledges this bond, ensuring the dogs' lifelong care and enrichment at home, even in retirement.

At first, the dogs play hide-and-seek and games with their handlers. Handlers downplay manners. "You want as wild an animal as you can get. We want the dog to be very independent—listening, but not in the obedience sense." At about one year old, the dog is ready for search training. Whitelaw sets up a row of cinder blocks with holes in them. Into one she inserts a glass jar with something stinky, like hair gel. "When the dog gets to the hot block, the ball appears out of nowhere." (She drops it from under her arm.) Each time the dog stops and notices the scent, the handler throws a toy or plays tug-of-war.

Once a dog makes the link routinely, he's taught a formal alert. There are many steps and pitfalls on the way to field readiness, which generally takes four months for conservation dogs, a longer training period than for most detection dogs. And in the end, training alone does not make a conservation detection dog. The dogs have to have a "willingness to cooperate," says Whitelaw. "No amount of training's going to make a dog do something like this."

Victory Round

One day, I observed as Whitelaw and Hurt introduced their dogs to a new scent: moose scat. They were back at the cinder blocks, working with Camas and Wicket in Whitelaw's garage. Wicket, a bouncy Lab mix, sometimes got so excited when she found the target that she'd drop into her alert on top of a nearby cinder block, perching uncomfortably as she beamed at Hurt.

By noon, Hurt, Wicket and I were pressed against the wall as Camas ran her final trial. She punched her nose into one block and neatly sat, eyes on Whitelaw. She'd located the target scat and this time, after tugging and hallooing, Whitelaw let Camas carry her rope-ball.

She stepped over to us, showing off her toy. Then, after greeting Hurt, for the first time since I'd met her, Camas looked up at me, glance expansive, lips drawn back as though smiling. She reminded me of a prime athlete, chatting up the spectators after winning. *Look, my toy*. She waggled her head just a bit. *I got it because I did well*. Whitelaw had instructed me not to engage with Camas or her toys, even if she offered them. Yet, the dog waited for acknowledgement. I touched her head lightly, "Yes, you did well. You did!" She grinned and turned abruptly, seeking out Whitelaw's eyes, ready for whatever her partner might want from her. B

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