Biologist changing way wolves are tracked

Dave Ausband relies less on collars and more on cameras, analysis of scat

By JOHN O'CONNELL
Capital Press

COEUR D'ALENE, Idaho — Dave Ausband has been given the job of implementing a new and more accurate approach to tracking and counting wolves in Idaho.

The effort should produce the best estimate of the state's wolf population ever. Biologists believe many wolves go uncounted using traditional means such as radio collars.

After this winter, the state Department of Fish and Game plans to move away from the use of radio collars as its chief tool for monitoring wolves.

Ausband said radio collars may retain a limited role in tracking wolves where conflicts are reported with livestock, but the broader program will shift toward DNA analysis of wolf scat and a network of roughly 200 remote trail cameras scattered throughout Idaho. The cameras will cover Eastern Idaho and "big chunks" of the Frank Church wilderness that have been missed by collaring. They should also help Ausband monitor cougars and black bears.

Fish and Game hired Ausband, 41, in May as a research wildlife biologist, giving his position a new focus on large carnivores, and a special emphasis on wolves.

Photo submitted

Dave Ausband, who joined the Idaho Department of Fish and Game in May as a research biologist specializing in wolves and other carnivores, poses with a tranquilized wolf. Ausband will help the department shift from monitoring Idaho's wolf population with radio collars to using scat and remote cameras.

Ausband explained it's costly to capture and collar wolves, and using collars has become too labor-intensive for tracking the Idaho wolf population of at least 770 animals.

There are currently 88 collared wolves in Idaho.

"We don't collar anywhere near all of the packs in Idaho, which means there are known big holes in our map," Ausband said.

The University of Idaho will conduct the DNA analysis of wolf scat, which should provide Fish and Game biologists with "fingerprints" to assess the numbers of breeding females, litter sizes, sex, population trends and other elusive data.

Lisette Waits, head of UI's Department of Fish and Wildlife Sciences, said DNA from fecal samples will also be matched against saliva on livestock carcasses to determine which individual wolves are responsible for depredations, and against DNA of harvested wolves to estimate harvest rates.

Waits, who has been working on DNA analysis of scat and hair since 2007, said they are "accurate and cost-effective approaches" for understanding wolf populations.

Ausband has created a predictive model to narrow possible locations of wolf rendezvous sites, where wolves gather in large concentrations with their pups.

The model should reduce the search area by 90 percent for the Fish and Game interns and part-time employees who will seek out rendezvous sites and scat.

Ausband, originally from Pennsylvania, has spent the past nine years studying how to better monitor wolves, including Idaho packs, for the University of Montana and will soon complete his doctoral thesis analyzing the effects of hunting on wolves.

Jim Hayden, a Fish and Game regional wildlife manager, said the state will spend in excess of $400,000 this year on wolf management, with federal dollars and matching funds from Idaho hunting licenses and firearms and ammunition taxes.

He hopes Ausband's approach may prove to be cheaper and more effective, given that additional federal funding for managing wolves as an endangered species is no longer available to the state.

"I think it will be a fascinating project — very useful not just to Idaho, but to anybody who manages wolves," Hayden said. "I think it will help us refine our management."

This story first appeared on Dec. 2, 2015.

Dave Ausband

Age: 41

Hometown: Coeur d'Alene, Idaho

Position: Research wildlife biologist specializing in carnivores

Education: Bachelor's and master's degrees and is completing a Ph.D. in wildlife biology at the University of Montana

Family: Wife, Liz, and a 9-year-old son, Sam

Innovation: Developing a predictive model to locate wolf rendezvous sites throughout Idaho and helping the department move away from radio collaring as its primary means of monitoring wolves in favor of scat analysis and remote trail cameras.

Key figure in potato industry plans retirement

By JOHN O'CONNELL
Capital Press

MOSCOW, Idaho — Assisted by a small staff of University of Idaho undergraduates, Lorie Ewing raises tens of thousands of tiny plantlets each spring, fulfilling the first step in production for most of the potato growers in Idaho, and many in Washington and Oregon.

Ewing, manager of UI's Potato Tissue Culture Lab since 1983, is regarded by colleagues as an unheralded figure who, nonetheless, fills a central role in Northwestern potato production.

In Idaho alone, UI economists estimate the potato industry is worth more than $4 billion annually and responsible for more than 30,000 jobs, and almost every commercial spud can be traced back to the tissue cultures raised in baby food jars in Ewing's small lab.

Ewing, who devised UI's tissue-culture program, plans to retire in July and is currently interviewing candidates to fill her position.

"It's kind of a focal point that has a lot of downstream economic benefits associated with it, for which she's probably never gotten the attention and credit that she's deserved," said retired UI economist Paul Patterson.

Emma Atchley, a member of Idaho's State Board of Education who also raises early generation potato seed, said several people in the spud industry have encouraged UI to hire a new lab manager as soon as possible to give Ewing time to train her replacement.

"We have bought hundreds of thousands of plantlets from her over the time she's worked at the university, and we've never had an issue with disease," Atchley said. "She's also kept costs down and been very cognizant that plantlets tend to be one of the larger costs for early generation seed programs."

Courtesy of the University of Idaho

Lorie Ewing, manager of the University of Idaho's Potato Tissue Culture Laboratory, stands in the Moscow, Idaho, greenhouse where her program develops prenuclear seed for other potato seed growers to plant. Ewing plans to retire in July.

Tissue cultures can be raised in a disease-free environment and enable programs to rapidly produce plantlets to provide seed growers.

UI had no protocols for tissue production when Ewing first started her job, as the technology was in its infancy. She read publications, visited with other experts and relied on trial and error to develop her system.

"All of the different state certification programs were kind of learning at the same time," Ewing said.

Fortunately, the lab was small in those days, producing plantlets of about eight varieties. Nowadays, the clone bank includes about 300 lines, and the lab produces 120,000 tissue culture plantlets every spring.

When a new potato line advances to the Western Regional Trials, Ewing starts producing plantlets for growers to evaluate. She starts by allowing a single tuber to sprout, sanitizing the sprouts in bleach and cutting them into segments at each node to produce more plantlets. The plantlets are raised in an antiviral jelly and exposed to hot temperatures until some of them emerge pathogen-free.

The clean plantlets are tested by UI viralologist Alex Karasev and certified by Idaho Crop improvement Association. Ewing increases the plantlet supply by cutting subsequent generations into more segments, raised in a nutrient-rich medium.

Ewing also maintains a clone bank of plantlets, keeping the tiny tubers produced from tissue cultures as a backup. The program also produces about 3,500 pounds of the first seed used in potato production, called the prenuclear generation, from greenhouses in Moscow and Tetonia.

"She's the foundation to the whole Northwest potato industry," said Jeanne Debons, executive director of the Potato Variety Management Institute. "Every (PVMI) commercial potato pretty much starts with her."

Lorie Ewing

Job: Manager of the University of Idaho's Potato Tissue Culture Lab

Innovation: Set up the lab responsible for supplying tissue cultures used to produce the vast majority of Idaho seed potatoes, as well as seed potatoes planted by growers in Oregon and Washington.

Age: 59

Family: Husband, Steve Ford, and three adult children, Becca, Jesse and Gareth

Hometown: Genesee, Idaho

Education: Bachelor's degree from Montana State University and master's degree in plant pathology from Cornell University