GETTING THE EADOUT







s the fifth eagle to arrive at the Cobequid Wildlife Rehabilitation Centre within a week lay dying on the examination table, wildlife veterinarian Helene Van Doninck made a promise to the bird.

"When we had those five eagles come in over Christmas 2011, all with lead poisoning, I just lost it," Dr. Van Doninck explains nearly seven years later. "After I'd watched one after the other die, I promised the last one I'd make people aware of what was happening."

If fortunate enough to be rescued, an eagle with lead poisoning is often dying of starvation by the time it reaches the small centre located in Hilden, Nova Scotia, outside Truro.

"The call we get is that an eagle is just sitting there; it won't fly away or it's flat as a pancake," Van Doninck says. "It usually has droopy wings because it has no muscle strength. Their breathing is raspy because their throat muscles are paralyzed; they can't swallow food. A lot of times, they are seizuring."

It takes several weeks for an eagle to become that sick so by the time it makes it to the centre, it's near death because it can't fly and it can't eat. Van Doninck says that is a horrific end to large, regal bird who was just looking for food.

With the help of her husband, graphic artist Murdo Messer, Van Doninck opened the small centre on their rural property in 2001, 10 years after graduating from the Atlantic Veterinary College. It wasn't until 2005 that the centre, which focuses on birds and small mammals (except raccoons), began treating injured eagles. That's when Van Doninck noted the number of sick eagles arriving after big game season.

"What kills the eagles is field-dressing an animal," says Van Doninck. "Hunters don't realize there are hundreds of pieces of lead in those gut piles."

There were enough eagles coming in to justify the purchase of a blood lead machine.

"Once we began testing eagles, we realized a lot of our eagles with injuries were also lead poisoned," she says. "I wouldn't have tested the ones I had to euthanize because their injuries were so severe, but they would have been neurologic [because of lead poisoning] and that's why they got injured."

To her husband, Van Doninck ranted, "Lead is a poison, lead is a heavy metal, why is it still in our food chain? Why are we still using it?"

"Maybe they don't know," he answered.

When Van Doninck began researching the issue, she discovered a shocking truth: No one realized using lead ammunition could poison eagles and even impact humans as well.

That's when she made good on her promise to the fifth eagle: "I thought, I'm not shutting up about this. I'm a volunteer so no one can tell me to be quiet. This is a problem with a solution."

Opposite page, clockwise from centre left: Scattered lead pieces in a deer carcass; an eagle at the rehabilitation centre; The Big Jeezley circular flyway where eagles learn to fly again.



Some of the information materials that the Cobequid Wildlife Rehabilitation Centre shares with hunters and other outdoor enthusiasts.

GETTING THE LEAD OUT

Her first presentation was in 2012 to the Halifax Wildlife Association, and that's when she met Michael Pollard.

A lifelong hunter, Pollard admits he knew lead was a toxin but never thought about the lead in his ammunition.

"I've hunted for the last 40 years with a man who is a dentist. We talked one day about when lead was removed from amalgam teeth; then we took a look at the chronology of removing it from paint, children's toys, gasoline, pewter. Even though we knew lead was a poison, we didn't know these little projectiles were doing that kind of damage."

Despite hundreds of years of using lead ammunition, Pollard says the difference is modern high-velocity rifles: "In the old muzzle loaders, the lead ball didn't move fast enough to break up inside an animal," he explains.

Now a fast-moving, steel-encased lead bullet fragments into hundreds of tiny pieces upon impact with an animal, scattering lead bits too small to see with the human eye throughout the body. Studies have proven that lead fragments travel up to 18 inches from the entry wound.

The average mature bald eagle weighs 13 pounds, and according to Michael Pollard, "There's enough lead in one bullet to kill five mature bald eagles."

Once ingested, the soft metal is ground down by the eagle's gizzard and absorbed into the blood stream, making its way to the bones and the brain.

Humans also can consume tiny pieces of lead fragmented into the meat without being aware of it.

All of this information galvanized the Halifax Wildlife Association.

"We decided we'd do something about this because if you're an ethical hunter and you find out something like this, you can't sit back and do nothing," says Pollard, who sits on the association's board of directors. "You can do something on your own, or you can try to convince the majority of hunters they need to make the change for the better of themselves, the environment and the animals. I say 'themselves' because a lot of hunters consume what they harvest and that lead is getting into their system and into their children."







Clockwise from top left: Testing for lead in eagle blood; CWRC co-founder Dr. Helene Van Doninck monitors a mature bald eagle as it wakes from surgery to fix a broken leg; CWRC co-founder Murdo Messer holds a mature bald eagle as it recovers from anaesthetic. They can become disoriented and thrash about as they wake up, so it is important to hold onto them so they don't injure themselves or others.

A MESSAGE FROM THE EAGLES

"The science is tight," says Van Doninck, so armed with irrefutable proof, the vet teamed up with Pollard for a presentation to Mi'kmaq harvesters in Cape Breton. The co-ordinator of the Unima'ki Moose Management, Clifford Paul, calls that presentation his "Eureka!" moment.

"The Mik'maq see ourselves as stewards of the natural world, as responsible harvesters who respect not only the animals we hunt but also the entire ecosystem," he says. "We didn't know historically we were leaving toxins behind. It was an eye-opener; a lot [of hunters] changed over to non-lead ammunition immediately."

Paul says eagles have a high honour with the Mi'kmaq because they fly the highest and the closest to the Creator. They are believed to be messengers.

"When an eagle disappears out of our sight, it is the belief the eagle has gone to visit the Creator," he explains. "The eagle will sit on the lap of the Creator and tell the Creator what the humans are doing right and what the humans are doing wrong. All the while, the Creator is stroking the feathers of the eagle. The Creator will acknowledge the conversation and send the eagle back to the humans, so if an eagle shows up in your presence, it's up to you to interpret what you are doing right in your life and what you are doing wrong."

When it comes to lead poisoning, Paul says the eagle is willing to give its life to show us what we are doing wrong.

"That's why it so important," he says. "Once we got that information out to our harvesters, they knew they had to change. It's not one hundred per cent yet but we're pushing hard."

PERSISTENCE IN THE FACE OF RESISTANCE

In 2012, the Nova Scotia Federation of Hunters and Anglers, consisting of 35 clubs including the Halifax Wildlife Association, passed a motion to take a leadership role in encouraging the hunting community to switch to non-lead

ammunition. Pollard says they've had a significant impact on Nova Scotia, despite pockets of resistance.

"When a hunter says to me about non-lead bullets, 'They're 10 dollars more a box,' I look at him—wearing \$2,000-worth of gear, a \$3,000 rifle, a \$1,000 dollar scope, and a \$30,000 four-wheel-drive to get into the camp, and he can't spend 10 more dollars on the thing that matters the most?"

While reasons like "I've always used lead" and "I can't find the calibre I want in non-lead" are heard frequently, some lead shot holdouts also claim copper and steel bullets aren't a quick, clean shot.

Clifford Paul says that's untrue.

"I help organize the moose harvest in Cape Breton Highlands National Park and in three years, we have taken out 121 moose with copper bullets. The success and efficiency of those bullets are unmatched. Like any other bullet, copper bullets well-placed allow for a quick, clean kill. We have no issues."

When someone in a remote rural area claims Canadian Tire or Home Hardware don't carry non-lead ammunition, Dr. Van Doninck tells them they have a lot of power when it comes to voting and shopping. "Go to the store and say you're not buying lead."

Still others try to argue the eagles are being poisoned by air pollution or jet fuel. Van Doninck has the science to refute those arguments as well. "It's like fingerprinting," she says. "Lead exists in four isotopes in the environment. The way the lead is manufactured is traceable by these isotopes. Studies have shown that more than 95 per cent of the lead in these birds is directly attributable to ammunition."

In 2013, the Nova Scotia department of natural resources stopped using lead ammunition to euthanize deer, and added two pages in the annual hunting and fur harvesting guide that explain the danger of lead bullet fragments.

It's a different story in New Brunswick, however, despite the efforts of the Moncton Fish and Game Association.

The average mature bald eagle weighs thirteen pounds, and according to Michael Pollard, "There's enough lead in ONE bullet to kill **FIVE** mature bald eagles."



Hugh O'Neill manages the club's shooting range and says Van Doninck's presentation in 2015 was such an "eye-opener", it resulted in the club adopting a resolution in favour of voluntary reduction in the use of lead ammunition.

But, "For three years running, we've made motions to the New Brunswick Wildlife Federation, and they've died each time," says O'Neill. "Helene actually made a presentation to the federation, but it didn't convince people. I find it somewhat bizarre, but I can also understand where some of these people are coming from. They're long-time hunters, they've had great success using lead, they don't want to change. It's an uphill battle."

O'Neill feels so strongly about this issue, he wrote to New Brunswick's minister of natural resources, suggesting the department follow Nova Scotia's example in adding two pages of information to the province's hunting and fishing guide, as well as using non-lead ammunition when they have to deal with wildlife.

With an election this fall, he's not expecting a response.

NOT AFRAID OF THE SKEPTICS

A friend once asked Van Doninck if she was afraid of questions after making a presentation.

"I love questions," she grins, "because I know the answers that will change their minds."

She's not afraid to walk into a room full of men leaning back in their chairs with their arms crossed over their chests. She is not afraid to face the resistance and the skepticism. "The solution is education. People need to know this is an issue."

For the first three years of her campaign to get the lead out of ammunition, she travelled around the Maritimes on her own dime (she works part-time for a vet clinic in Dartmouth) while running a wildlife rehabilitation centre funded by donations. In 2015, she applied for federal funding through the EcoAction Program.

"Getting that funding was huge," she says. "It basically covers my travel and made my pamphlets and DVDs. I could go to a couple of hunting shows, I could really get out there."

ON A WING AND A PRAYER

The Cobequid Wildlife Rehabilitation Centre is a small, white-sided building alongside Van Doninck's house. The centre's main goal is to prepare orphaned birds and mammals to return to the wild; the injured are taken into nearby Truro to the Central Nova Animal Hospital which provides its facility and equipment at no cost. Behind the rehab centre

is an octagonal wooden structure, built in 2013 and known as the Big Jeezley. This is where eagles and other injured raptors learn to fly again.

"It was a game changer for us," Van Doninck says. "The typical bird of prey rehabilitation cage is 100 feet long, 20 feet high and 18 feet wide. You can only put one bird in there and they don't break well in that short space; they slam back and forth into the walls."

After seeing a flyway online built for hawks and owls, she wondered if a continuous, circular flyway would work for eagles-and 10 years of fundraising later, Van Doninck had her answer.

"Until we put the first eagle in there, we had no idea if they could make the corners," Van Doninck admits. "Now we know they can turn 180 and 360 degrees in the flyway, no problem. They are extremely agile birds."

And with treatment, Dr. Van Doninck is able to save many of them. The Big Jeezley is the first step back to the wild for an eagle recovering from lead poisoning. The second step-making the wild lead-free—is up to the rest of us.



GETTING THE LEAD OUT OF FISHING

In 1999, Canada banned the use of lead ammunition for hunting migratory game birds due to millions of bird dying after swallowing lead shot. But lead-based tackle, sinkers, jigs and lures are still used by many anglers.

Birds like loons and other wildlife can ingest lead if they mistake the tackle for prey, if they eat fish containing tackle from a broken line, or when foraging on the bottoms of waterways for grit to aid digestion. Once the lead has been eaten, it's usually fatal.

[Sources: Government of Canada; Non-Lead Ammunition & Tackle Exchange and Education Program pamphlet]

