

Bullet fragment shows Wallace the rhino survived poaching attempt

December 23 2016, by Paul Sisson, The San Diego Union-Tribune

Now there's no more doubt about it: Wallis the rhino was shot. A trail of clues that started more than a year ago with a wound on the left side of Wallis' chest, right over her heart, led the 3,000-pound mammal's caretakers to suspect that someone tried to kill the rhinoceros before she came to the San Diego Zoo Safari Park in November 2015.

The decisive clue surfaced Saturday.

While getting Wallis ready for a presurgical examination, Jill Hampson, a mammal keeper at the park's Nikita Kahn Rhino Rescue Center, spotted a black object about the size of a ballpoint pen's tip poking out of the animal's wound. She immediately called over Dr. Jim Oosterhuis, a veterinarian at the park, to take a look.

Right away, Oosterhuis knew he was dealing with a [bullet](#) fragment. With only his trusty Leatherman tool at the ready, he reached in, grabbed onto the black speck and pulled on it. Out came a larger metal ring with jagged edges.

"I jerked it through the hole, pulled it out, and I had the bullet in my hand. It was an unbelievable feeling," Oosterhuis recalled Tuesday. "I've been here 41 years now, and it never ceases to amaze me the stuff that happens."

Technically, that metal ring appears to be a bullet jacket, the soft brass or copper coating often applied to the outside of lead bullets to increase

penetration power. In this case, the veterinarian said, the casing seems to have peeled away from the bullet once inside the rhino's inch-thick skin, lodging under one of her ribs but not puncturing her left lung or the thoracic cavity that holds her vital organs.

The lead bullet itself is probably still somewhere inside the rhino's body, but there have been no signs of it causing additional injury, Oosterhuis said.

Wallis' caretakers have been playing the role of patient detectives for more than a year. After her arrival, they began flushing the wound with a saline solution and treating it with antibiotic ointments, but the lesion wouldn't heal.

Given the wound's location on Wallis' body and the fact that she was taken from an area where poachers had shot several other southern white rhinos, her team surmised that it was looking at a gunshot wound. Still, confirming that theory wouldn't be easy.

While Wallis was anesthetized, caretakers explored the wound site to make sure the rhino didn't have reproductive-system problems. During this procedure, they discovered that the wound ran deeper than anticipated - about nine inches along her rib cage before dipping below a rib.

Swiping a metal detector over the site, the safari park's staffers detected a strong signal that a metal object was present. When veterinarians followed up with an X-ray, though, their equipment wasn't powerful enough to penetrate Wallis' nearly three-foot-thick chest. Undeterred, the team called in the San Diego Fire-Rescue Bomb Squad, which confirmed the presence of metal with extra-powerful equipment it uses to conduct investigations of explosive devices.

"We were able to confirm that there was a metal fragment in her side, but because this wasn't medical equipment, we weren't able to pinpoint the exact location," Oosterhuis said.

With noninvasive options exhausted and the wound still refusing to heal, the caretakers chose exploratory surgery. Before giving the go-ahead to the surgical team, Oosterhuis decided to check the wound site one more time with a metal detector. That's why he was at the park Saturday.

With the bullet jacket in hand, the park staff was able to make its confirmation: Similar to what happens with many other animals, the shell had worked its way back through the path of its original entrance. The vets believe this casing's ragged contours scraped along the edges of Wallis' wound, preventing it from healing until the foreign object was expelled.

Oosterhuis said since the extraction, the change in Wallis' injury has been dramatic.

"In the four days, it has healed up quickly. I just palpated it today, and it's only about a half-inch deep," he said.

The rhino's caretakers are now left to estimate the mechanics and motives for the shooting.

The reason for the gunshot seems clear: African rhinos are regularly killed due to the tragically mistaken notion that their horns have medicinal properties. Some cultures also prize the horns as status symbols. According to Save the Rhino, an international nonprofit conservation group, poachers killed 1,175 South African rhinos in the wild last year. That was more than three per day on average.

As to how Wallis survived the likely poaching attempt, it appears that

the bullet didn't hit her side at a perpendicular angle - which probably would have allowed it to enter her chest cavity and cause life-threatening damage.

"It was definitely a heart or lung shot that somebody was going for. My guess is she turned toward them and the shot came in at a shallow angle and bounced off a rib," Oosterhuis said.

The zoo plans to have its key piece of evidence examined by an as-yet-unspecified local forensics lab before putting it on exhibit as compelling proof of the perils that rhinos face in the wild. The goal is to identify the caliber of the bullet it came from and the type of gun that fired the bullet. Such information would then be communicated to the South African reserve where Wallis came from.

The reserve had reported suffering several rhinoceros poaching incidents right around the time that Wallis was collected for transfer, the safari park's officials said.

Modern forensics labs can learn a lot from bullet fragments.

Lt. Scott Wahl, a spokesman for the San Diego Police Department, said if there's enough material to work with, a professional lab can use recovered bullet casings to determine caliber and even which gun fired the round. The barrel of each gun leaves a distinct pattern of grooves, similar to a fingerprint, on the outside of each bullet fired.

Wallis came to the park to be part of an ambitious breeding program that seeks to bring the northern white rhino back from the brink of extinction.

Currently, there are only three northern whites left in the world. The number was four until November 2015, when a bacterial infection

forced the park to euthanize Nola, a 41-year-old park veteran, after repeated treatments couldn't eliminate the pathogens.

Because the world's remaining northern whites are too old for active breeding, a collaborative program that includes the San Diego Zoo seeks to use the southern-white branch of the genetic tree as a surrogate. That's how Wallis, a 5-year-old southern white, joined the initiative.

The first step will be to perfect the zoo's ability to transfer embryos grown in labs to the six recently arrived female southern whites at the safari park. Once that technique is refined, the next step could be to create hybrid northern-southern offspring using sperm collected from male northern whites. Finally, if those steps go well, advanced genetic techniques could help turn cell samples collected from 12 northern whites into stem cells that could then be used to produce northern white rhino sperm and eggs.

Those would then be combined to generate a northern white embryo. Researchers would transfer that embryo to a southern white female rhino, which would nurture it all the way through birth.

The zoo's staff estimates it could take at least five years to achieve this milestone.

©2016 The San Diego Union-Tribune
Distributed by Tribune Content Agency, LLC.

Citation: Bullet fragment shows Wallace the rhino survived poaching attempt (2016, December 23) retrieved 24 April 2024 from <https://phys.org/news/2016-12-bullet-fragment-wallace-rhino-survived.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.