

Technology gives hope to Africa's endangered Northern white rhinos

By <u>Pavithra Rao</u> 3 Aug 2020

Kenyan wildlife caretaker and guide Jemu Mwenda bittersweetly recounts one of his favorite memories of 'Sudan', the male Northern white rhino who died two years ago, making headlines across the world.



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"Sudan was the last northern white male rhino known to exist," explains Mwenda who works at the Ol Pejeta Conservancy, a wildlife centre in Kenya.

"One evening, while feeding him, I saw him dropping tears, and that made me ask myself: 'Why would he be crying?'"
He continues: "People may think that animals don't have feelings, but when I looked Sudan in his eyes, I felt the pain he was going through.

"It's not easy being the last of your kind on our planet. I think the emptiness of extinction, which means forever, and never coming back, is tragic. It is a void that would have made Sudan feel very sad. This really transformed me and helped me know I have a responsibility to be his voice."

Mwenda reflected poignantly on the extinction of white male rhinos. In May 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) assessed that approximately 1 million plant and animal species were in dire danger of extinction. Based in Bonn, Germany, the IBES works to strengthen the link between science and policy on issues related to biodiversity and ecosystem services.



A merciless chase

Rhinos have especially been victims of a merciless chase by poachers. The Ol Pejeta Conservancy is home to the two remaining Northern white females —20-year-old Fatu and 30-year-old Najin.

What makes these gentle giants susceptible to poaching?

Mwenda explains that poachers target rhinos for their horns that are made of keratin — the same component in human nails and hair. Though the sale of rhino horns was banned by the Convention on International Trade of Endangered Species (CITES) since 1977, its purported curative properties sustains its demand in the Far East.

"They're very prized," he says, "especially [as it is believed that properties from rhino horns] can treat cancer, influenza, convulsions, and even act as an aphrodisiac. They're also used as status symbols." A kilo can fetch \$60,000 - \$65,000 in the Asian black market, he adds. "People are willing to pay any price for their health."

The chase for rhino horns began since the 1960s. At that time the population of Northern white rhinos was about 2,400, according to conservation charity Save the Rhino.

Technological advancements

Although national governments with large rhino populations such as South Africa are taking traditional measures such as dehorning rhinos to make them less susceptible to poaching, innovative technology is also being explored to regrow the population of the endangered animals.

This past January, Ol Pejeta Conservancy released the encouraging news that sperm from the late Sudan and another deceased male northern white rhino was preserved and frozen and has been combined with 12 eggs harvested from Fatu and Najin to create viable embryos.

These embryos were slated to be implanted into the northern white rhino's cousin the Southern white rhino. Due to Covid-19, however, plans for implantation have been suspended.

Nevertheless, eggs from a Southern white female in Germany were recently harvested and fertilised, and the viable embryos are now awaiting transfer.

The invitro fertilisation (IVF) process had been accomplished with Southern white rhinos who carry their own embryos, but it is the first time that Northern white rhino embryos will be carried by surrogate Southern white rhinos. The results, according to OI Pejeta Conversancy, could potentially be groundbreaking in growing the rhino population in years to come.

Mwenda believes that using technology to save rhinos could be a boon. "I think different methods can be explored to save the Northern white rhino, including cloning, artificial insemination and IVF. These assisted reproductive techniques are essential."

It seems many people agree with him. Kenya's tourism minister Najib Balala urged "scientists to explore how to use technology and innovation to ensure that rhinos don't go extinct. It's amazing to see that we may be able to reverse the tragic loss of this subspecies through science."

In the meantime, Mwenda encourages people to be considerate of their fellow living creatures.

"I feel we have a greater responsibility to make the planet better and, especially being a young person myself, I am obligated to push young people to live conscientiously," he says. "It is going to have an impact on us as young people and we have a responsibility to continue to help the best we can."

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