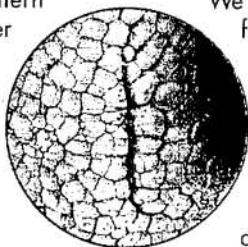


# THE INSIDE TRACK

By Jane Kennedy, Senior Keeper, Wild Animal Park

**T**O VISITORS, the job of a Wild Animal Park rhino keeper sounds both exciting and dangerous. It certainly is, but it also entails aspects you might not think about. Every day we are required to monitor the health of all of our animals and help evaluate our charges for the veterinary staff. This was crucial after the surgery attempting to remove an ovary from Nola, a northern white rhino, and Dumisha, a southern white rhino. Often, the keeper staff is in charge of post-opera-

Nola's healed incision, five months after surgery.



tive treatment for large field exhibit animals like rhinos.

Daily, the keeper team needed to approach the rhinos to check their incision sites that were several inches long and deep. Because Nola is such a tractable animal, it was easy to look at and clean the area, as long as we had some apples or a brush to scratch her with! Over the course of 10 weeks, we were able to examine her wound

and treat it as necessary, and now it has completely healed.

With Dumisha, we had to take a different approach. Because she is an intractable animal and can get testy with us, we had to use other methods to evaluate her. We tried using her favorite foods like alfalfa hay to lure her into a position where we could get a close look at her incision, but she didn't cooperate.

We then used binoculars to focus in on her from a distance and get a good look, but this wasn't as effective as we needed it to be. Eventually, she had to be immobilized several times for follow-up treatment. Her recovery has taken longer than Nola's, but now she too is back with her fellow rhinos and seems back to normal.

One of the many things I also get to do as a senior keeper is represent the Zoological Society at conferences. At the International Rhino Keeper Association (IRKA) Workshop in Melbourne, Australia, last May, I had the opportunity to share what we learned from our attempts at ovary removal in white rhinos. This global network not only shares manage-



The procedure to remove one of Nola's ovaries was a coordinated effort between many staff members.

ment ideas but also the latest in rhino conservation and research projects. The Zoological Society of San Diego provides funds to help support the IRKA.

My talk focused on how, even though we did not recover any eggs from our rhinos, this type of procedure holds great promise. Hopefully, we will attempt a similar procedure in the future on other candidates. By recovering an entire ovary we may have the potential for cryopreserving thousands of eggs, not just a handful as is done with other egg recovery procedures. Considering that there are only eight northern white rhinos left in zoos, and likely none in the wild, this possibility may be instrumental for their future survival.



CRES scientists are still working through the data, but diet may be one factor contributing to low reproductive success in zoo-born rhinos. In most North American and European zoos, white rhinos are fed a nutrient-rich diet of hay and pellets consisting of a large percentage of alfalfa. While rich in protein and other nutrients, alfalfa also contains compounds that can mimic the effect of estrogen in some species. Exposure to these compounds during embryonic development and while nursing can cause irregular ovulatory cycles and reproductive tract problems later in life.

CRES endocrinologist Matt Milnes, Ph.D., is conducting research to determine if white rhino estrogen receptors are particularly sensitive to compounds in the diet offered in captivity. To further

test this theory, Park curators are considering bringing in zoo-born southern white rhino females whose diet has never included alfalfa. They will be introduced to our southern white males for breeding.

On behalf of both northern and southern white rhinos, the Society continues to follow the guidance of the Association of Zoos and Aquariums' Taxon Advisory Group and the Species Survival Plan for white rhinos. The Park is working to rebuild the southern white rhino population in a way that may encourage reproduction among the first generation of zoo-born offspring. "The Park is known worldwide for successfully breeding rhinos, but we still don't know it all," says Rieches. "Our CRES scientists have the best opportunity to find answers, not only for us, but for all of the world's rhinos."

Chapman, spent the last year researching managed white rhino populations worldwide to find out if this low reproduction is an issue in all zoos and on private reserves in South Africa. The International Rhino Foundation funded the study, an organization that the Society is actively involved with for the conservation of all rhino species.

The Zoological Society of San Diego would like to thank Dr. Helen Ranne for her generous support of CRES's white rhino reproduction study.