



The Crash

March 2024 "The Spring Edition"

The IRKA newsletter: the leading network connecting rhino keepers.

President's Perspective

Welcome Spring!

Hopefully, many of you are beginning to experience the first signs of warmth and renewal. Spring is always one of my favorite seasons with nature bursting with color and new life.

In our first article, what a better way to celebrate than with Wildlife World Zoo's first white rhino calf! We congratulate Wildlife World Zoo for all the hard work and dedication that went into having a successful breeding program with the birth of their beautiful internet sensation "Masiki".

As we pull out of the winter doldrums this is the perfect time to start thinking about ways to improve, expand or highlight aspects of your guest talks. The BOD would like to thank Adrianna Davidson and Jazzmin Wipf for taking on a new initiative for IRKA and IRF - The Rhino Talk Survey. Now we need your help! **Please take a few moments to fill out this informative survey.** When we share our knowledge and experiences, the stronger our message and impact will be for the species we love!

When we speak about impact, the next article by our BOD member Angie Snowie will hit home for many of us. The pandemic took a toll that we are still dealing with professionally and on personal levels. Angie shares her personal and once in a lifetime experience at Care for Wild Rhino Sanctuary. It truly gives a unique insight into the great work being done at this facility and by founder Petronel Nieuwoud.

Finally, our last article is a fascinating update on the current hope and research with frozen biomaterials especially as a tool for conservation researchers.

Start planning for the next workshop in 2025! We are incredibly excited to announce that Omaha's Henry Doorly Zoo and Aquarium will be the next host of the Rhino Keeper Workshop. They are already hard at work planning a fantastic time for us!

Many times at workshops, we are asked how can I get further involved in IRKA? Well, we have several key initiatives that are in need of volunteers! You may have a special interest or ability in these areas which could help further our organization. IRKA is the organization it is today due to our dedicated and amazing members!



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Happy Spring everyone!

Peace, Love, Rhinos

Chris Bobko

2025 Rhino Keeper Workshop



We are excited to announce Omaha's Henry Doorly Zoo and Aquarium will be hosting the 2025 Rhino Keeper Workshop!

Stay tuned for more information to come



Facility Focus: **Wildlife World Zoo**

The Wildlife World Zoo started off as a small 30 acre zoo and has grown into a 110 acre home for over 600 different species of animals. WWZ entered the world of rhinos in 1990 when we housed a single male white rhino named Bam Bam which paved the way to our herd of 2.4 white rhinos. We imported three female white rhinos, Zuri, Imani, and Mashaka from South Africa in October of 2017. Our male, Maoto, came from the San Diego Zoo Safari Park in March 2021 as a recommended breeder for our girls.



Our dream of creating a successful breeding program came to fruition at the arrival of 0.1 calf, Masiki in November 2023.

Our 3200 sq. ft barn was built in fall of 2016 before the arrivals of the three females. The barn leads out to three corrals to our main exhibit of 1.6 acres and is currently being expanded to accommodate our growing herd. The barn has four stalls with a squeeze/chute that leads into the outdoor corrals. We recently adapted one of our squeeze doors to allow access for rectal ultrasound training.



After attending an IRKA workshop WWZ learned of the AIRS study. Our entire herd of 2.3 contributed to this study by participating in voluntary blood draws, fecals, and other data collections. Our herd contributed 9 monthly blood samples while the females also contributed 24 weekly blood samples and fecals for reproduction monitoring. Our plan was abbreviated to 9 months of participation and altogether the rhinos produced over 1200mL of blood for the study without missing a draw!!

Through these specimen samples we were able to learn that our female, Zuri, had high levels of progesterone. We then had our veterinary staff conduct a transabdominal ultrasound to confirm pregnancy. This was a surprise because our male had never shown interest in our females and no breeding activity was observed. It was not long after the confirmation of pregnancy that we started to witness baby kicks and physical changes to Zuri's body.

Due to not knowing how far along Zuri was in her gestation we conducted daily physical exams to monitor her progression. Our girls have been bonded since they were yearlings, and tend to get stressed out when separated so we left Zuri with the other females until she started showing signs of parturition. We charted Zuri losing her mucus plug on November 5. At 1:29PM on November 7 keeper staff observed the exposure of the amniotic sac, 2:20PM hooves were out, and 2:22PM Masiki was born. Our baby girl was standing by 2:52PM and nursing within two hours after birth. Zuri did not have any behavioral changes before birth, and stayed relaxed through the entire birthing process. Masiki is the first calf born at Wildlife World Zoo and the first calf born in Arizona in decades. Our other two adult females, Imani and Mashaka, are currently cycling normally and are participating in training for rectal ultrasounds.



Each rhino participates in voluntary training sessions throughout the week, including baby Masiki who is constantly keeping our staff entertained. Maoto is the teddy bear of the crash and prefers tactical as a reinforcer which often leads to him taking a snooze leaning against the stall in the middle of a training session. Imani likes to think of herself as the top dog of the herd but in reality that role falls to Zuri. Nonetheless Imani always exceeds expectations in her training sessions when she's not too busy causing trouble for the rest of the girls. Mashaka is our smallest female who pretends to play the role of the underdog so she has an excuse to babysit Masiki all day, but she is all work and no play in a training session. Zuri is the calm before the storm but conducts herself as the peacemaker of the herd. Butch likes to focus on multiple things at once and loves to fast forward to treats. Lastly, when she's not too busy tripping over a log and becoming an internet sensation, Masiki commands the attention of every animal and person she comes into contact with.



In the words of Steve Irwin, "No matter how small, every action can help to conserve wildlife, and preserve our planet." Through the work of our dedicated keepers and partnership with AIRS we have made a stride toward rhino conservation in not only our facility but also in the state of Arizona. We are extremely excited for the future and hope to continue to breed our Rhinos and use the research around us to make our Rhinos happy, healthy, and growing. For any questions about the Wildlife World Zoo or the work with our Rhinos feel free to reach out to our lead Rhino Keeper Emily Kading, she would love to answer questions and to discuss anything rhino related!

Masiki Video

Emily Kading
 Wildlife World Zoo
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The Rhino Talk Survey

The International Rhino Keeper Association and International Rhino Foundation need your help! We want to create a best practice guide for giving great rhino talks - by rhino keepers, for rhino keepers.

Keeper encounters have become one of the most effective tools for connecting and educating zoo visitors. For the majority, it has been woven into our daily routine. Every keeper has their own unique delivery and content they rely on entering any encounter. The checklist of concrete facts and talking points, anecdotal personal experiences, and the fun facts that make people love rhinos! The IRKA would like to capitalize on the vast knowledge and individuality of our membership to create a comprehensive collection of experiences, talking points and fun facts. We feel that once complete, this information could be a valuable resource for all keepers to enhance their ability to connect with people at every encounter.



We're looking for fun facts, stories about your rhinos, and any tips you have for giving a great rhino talk that leaves your guests loving rhinos.

By filling out the survey below you will help us create a shared resource for rhino keepers that will help more zoo visitors fall in love with rhinos and be inspired to take action for their conservation today and in the future.

Fill out Survey

Adrianna Davidson & Jazzmin Wipf
 Potter's Park Zoo

Care for Wild Rhino Sanctuary *An experience like no other!*

By the end of 2022, I found myself in a pretty low place. I had suffered some major losses, was struggling with compassion fatigue and was still trying to navigate the negative residual effects of COVID in the workplace.

I needed a change. I needed a break.

That opportunity presented itself in the most wonderful way, at the 2023 RKW! It was at our workshop that I met the Founder and CEO of the Care for Wild Rhino Sanctuary Petronel Nieuwoud. Petronel came to the workshop to learn about our organization as well as our zoo style of managed care.

The next thing I know, I have taken a three month leave of absence from work and was on a plane to South Africa headed to the Care for Wild Rhino Sanctuary.

Nestled within the Barberton Nature Reserve, CFWRs currently spans 28,000 hectares and is divided into three main sections of rhino rescue and recovery, rehabilitation and rewilding. After a week of joining and participating in the CFWRs volunteer program, I was given the opportunity to work alongside the full-time staff, that are the heart and backbone of the rehabilitation and rewilding processes. Under the experienced leadership of Petronel, CFWRs staff are responsible for the immediate, intensive care required by these rhino infants, who have found themselves newly orphaned, scared and often injured requiring around the clock care.



It is due to this passion for rhinos that Petronel and her team have successfully saved numerous rhino lives. The acute 24/7 care, endless bottle feedings, intense socialization, and love have not only helped these orphans to survive, but to thrive. This became very clear to me on one of my first visits out to the "Intensive Protection Zone" (the second stage of the rewilding program). As we rounded a corner, we encountered a rhino roadblock. It was Wyntir and her 18-month-old calf Blizzy.



Each orphan has their own story, and some are more harrowing than others. In Wyntir's case, she was left alone to defend herself after the poaching of her mom. Hyenas wasted no time and attacked her, successfully chewing off her ears. She endured extensive rehabilitation to heal her wounds and injuries, including intense efforts to keep her ear canals open to give her a chance of hearing.

And yet here she was, alive and all grown up, standing in front of the vehicle. For me, the most amazing thing was the calf standing beside her. I found myself getting so emotional. This once traumatized, orphaned rhino, who grew up with no mom of her own, has now become a mother herself thanks to a team of amazing rhino champions. This must have been the biggest reward for the years of agonizing work in saving these orphans, to now being apart of creating new rhino lives – the second generation. It was an amazing moment for me

to experience and to get a real sense of the impact this facility and team are doing to save African rhino.

As mentioned, CFW is essentially divided into three stages of rehabilitation. New arrivals are assessed and most start their recovery at the ICU. Physical injuries, psychological trauma, PTSD, any illnesses and positive introductions to humans are worked on initially in the ICU. Petronel and team have found that pairing up multiple calves as soon as possible provides the most success for each rhino's recovery. The calves provide a comfort to each other that humans cannot replicate. These social groupings often end up lasting throughout all stages of the rewilding process and beyond.

Calves are moved from the ICU as soon as their recovery allows, to the boma facilities (the first stage of the rehabilitation/ rewilding stage). This area is known as Care for Wild Africa. In the bomas the paired calves are able to learn and play with each other and establish a feeding routine while still being accessible to the staff for daily and or medical care.

The Care for Wild Africa bomas is the area that I spent most of my time working in, helping to care for 5 SWR "kids". They ranged in age from 14 months to 27 months of age. These rhinos lived in the boma spaces at night and in a large paddock together during the day. The 5 were in various stages of being weaned while being transitioned toward the beginning stages of living on their own.

I won't lie, I was conflicted by really wanting the opportunity to experience a new orphan's arrival. I wanted to see and have the chance to participate in everything that is involved in saving a rhino's life in this fashion, but of course that would mean a mother would need to be poached... obviously I did not want that to happen. I did end up leaving CFW without that experience, but that was a good thing in the end – no rhinos poached!

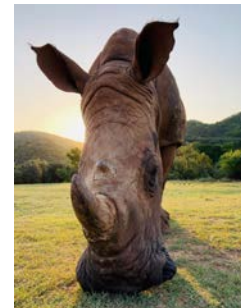
Daily care of the rhino kids was pretty similar to what we do in our facilities on a daily basis – shift, clean, feed, repeat! While these rhinos are seemingly out of the wood's health wise, there are still some concerns these young rhinos face until they are fully weaned. One rhino, Aquazi, suffered multiple bouts of pneumonia and almost did not make it. These young rhinos are also at risk of obtaining tick bourn illnesses and with their somewhat compromised immune systems, is a real threat as death can occur within 48 hours of detection. From experience, CFW staff have learned that a temperature spike is the first indicator of potential disease or illness and as such have incorporated daily rectal temperature monitoring during the rhino's morning feed. It was a great way to start my day!

CFW is the largest rhino orphanage in the world and plays a huge role in gathering information and data, that is readily shared to help aid in the survival of South Africa's rhino. Weights, biometrics, social observations, diets and medical findings of the numerous individuals living within Care for Wild, is providing the industry with a lot of valuable statistics.

Some of the most important data collected are the biometric measurements. Once a week, the rhinos that have not yet graduated to the Intensive Protection Zone (IPZ) (sexually immature individuals that range in age from 14 months to 6 years old) get front and back horn lengths and circumference measurements, body length, body girth, tail length, foot circumference and height measurements that are uploaded to a database called Earth Ranger. These measurements help CFW track the development of the orphans, which helps to ensure the rhinos are growing at an average rate. However, this data has also served as a great resource for facilities or reserves who can not get hands on their rhino (eg: Kruger National Park rhino) to be able to get an idea of how old or how heavy a rhino might be, which would enable the reserve to administer a more accurate dose of immobilization drugs and or medication to these wild rhino. It was great to be able to participate in obtaining the biometrics and weighing the CFW rhinos and to see the methods used to obtain and train the animals to get the results.

CFW is also writing the book on how to save, care for and raise a premature rhino calf, whose name is Daisy. It was a privilege to have been at CFW in December to help celebrate Daisy's 2nd birthday, a birthday CFW staff were not sure she would survive to see, having almost died on 3 different occasions. Daisy is much smaller than her conspecifics of the same age, and has only just reached a weight of 500kg, about half the weight of the other 2-year-olds she spends time with. Her care required a different path than the other orphans. She was too small and sickly to pair up with the other orphans at an early age and relied on CFW staff and other non-rhino friends for her physical development and life skills.

A zebra taught Daisy to graze and offered companionship when they were both quite young, but it was up to staff to ensure that she was using her muscles and getting the physical exercise a rhino really needs. Daily walks and runs around the CFW property have helped her to reach the milestones she has so far. Daisy is naturally attached to her caregivers due to her situation, so it is easy to encourage her to follow along on a walk. I was absolutely thrilled to have been given the task of taking Daisy out for her daily walks while I was there. Often, after the exercise of a walk or run, we would end up in a field to give her the chance to get in some extra grazing time. This was my favourite time of day. I would get lost in the wonder of just watching Daisy eating, surrounded by beautiful scenery and sounds. This was a quiet time of day and interestingly, ended up being a time for me to slow down and do some good, positive thinking about the low parts of my life at home that I needed to deal with, but had not been able to. Daisy helped me to remember the joys of life and for that I am so very thankful.



Orphaned rhinos are recovered from the field and brought to Care for Wild Africa boma section to heal and grow. By about age 3 the young rhinos are completely weaned and have started transitioning toward living outside of their boma areas full time in large paddocks. Rhinos in the Care for Wild Africa paddocks are given daily rations of hay (both Timothy and alfalfa/ lucerne) as well as a pelleted dry feed. The rhinos have access to paddock grass but are supplemented to ensure their continued growth.

As the rhinos approach sexual maturity they are transitioned to the "Intensive Protective Zone". The IPZ is a very large area within the Barberton Nature Reserve and in this space the rhinos wander freely within the zone's boundaries. Fending mostly for themselves, these rhinos are given supplemental hay during the harsher winter months when grasses are less abundant. Beyond the IPZ is an even larger area for wildlife known as the "Reserve". This is the final stage of the rewilding program and when the rhinos are moved into this zone, they are totally self sufficient and living as fully wild rhino.

Care for Wild Rhino Sanctuary not only rewilds rhinos but also numerous other animals that have found themselves as orphans or injured. However, one of the most amazing species (other than rhino) CFW has

a rehabilitation/ release program for are pangolin. Yup PANGOLIN!! One of the most trafficked animals on the planet, pangolins are poached for their scales (which are also made of keratin). These animals eat ants and termites, so daily walks in the IPZ were necessary for the pangolins to forage and eat. Such remarkable and unique animals. Pangolins are a species we should consider adding to our keeper talks to raise awareness of their poaching crisis, which is so similar to what rhinos are facing - being killed for their keratin. It was such a joy to have had the experience of being pangolin walker, something I never imagined I would ever do and something I won't soon forget.



This is just a small view of my time spent at Care for Wild Rhino Sanctuary. I'd like to leave it to you to learn more about the facility and the incredible accomplishments this NGO has had success with by visiting www.careforwild.co.za and follow them on social media (where you will be able to keep up with Daisy and all of her amazing milestones!)

Thank you Petronel and CFW staff for making me feel so welcome and allowing me to make a small, but meaningful, contribution toward South African rhino conservation. My biggest, heartfelt thanks goes to Daisy and the all of the amazing rhinos that helped me find my way back to brighter days, for that I will be forever grateful.

Angie Snowie
Toronto Zoo

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Volunteer Opportunities



The volunteer committee would like to thank all the amazing volunteers who have come forward to get involved and helped the IRKA since the committee's inception. Thanks to their help, we are making strides in improving social media experiences and keeping the website relevant with the latest information and content. We are also continuing our volunteer partnership with the International Rhino Foundation, providing research on special projects.

Volunteer Opportunities include:

Rhino Dentition research/content
Rhino Husbandry Manual review and revision
Webinar content curation

For more information contact:

Jason Faessler at jfaessler@nashvillezoo.org or Jade Tuttle at jade.tuttle@nczoo.org

We can always use content for our social media sites! Anyone interested in helping out can contact Pat Fountain at pfountain@ingham.org



Rhino Research Review:

The Neonatal Southern White Rhinoceros Ovary Contains Oogonia in Germ Cell Nests

As a growing number of species face the threat of extinction, conservation researchers around the world are exploring an expanding number of scientific approaches to halt further species decline. Many of these approaches require cryopreserved biological material stored in biobanks that ultimately can be utilized to develop various assisted reproductive technologies for a species of interest. The northern white rhinoceros is an excellent example of this scenario. With only two females remaining, male gametes (i.e., sperm) needed for successful reproduction will need to come from material(s) stored in a biobank. Furthermore, biobanked female reproductive tissues will be needed to ensure sufficient genetic diversity for a future northern white rhino population should these efforts succeed.

One central question regarding biobanked samples is whether they contain the required living cell types needed for developing assisted reproductive technologies. In most cases, reproductive tissues such as ovaries and testes, are collected post-mortem and often from individuals that are either very young, or very old. Thus, many biobanked reproductive tissues either never functioned properly because the animal was not reproductively mature, or ceased functioning properly, because the animal was post-reproductive.

To address the suitability of biobanked tissues, Appeltant et al (2023), examined cryopreserved ovarian tissue from southern white rhinoceros. They examined ovaries collected from 4 individuals; one neonatal stillborn calf, and

three adults ranging from 30-39 years of age that had and had not previously given birth. They looked to see whether the ovarian tissue contained follicles, the structure that houses the oocytes, or eggs. They also looked for the presence of oogonial cells, which are stem cells in the ovary that eventually develop into oocytes. Surprisingly, they found evidence of follicles in all ovaries examined. Most importantly, in the neonatal ovary they describe the presence of many oogonial nests that appeared viable and actively undergoing cell division. The challenge now is figuring out how tissues such as these can be used in the laboratory to generate rhino oocytes, and likely sperm from similarly collected male samples. With laboratory-generated sperm and eggs available, one could theoretically create rhino embryos, which could be transferred to a surrogate female for gestation and ultimately birth. While their focus was on southern white rhinos, the authors note that tissue collected from northern white rhinos, or possibly any endangered species, could be used in a similar manner and be quite an effective tool for conservation researchers.

References

Appeltant, R., Hermes, R., Holtze, S. et al. The neonatal southern white rhinoceros ovary contains oogonia in germ cell nests. *Commun Biol* 6, 1049 (2023).
<https://doi.org/10.1038/s42003-023-05256-5>

New Members

- Michelle Peck ----- Cleveland Metroparks
- Amanda Kile ----- St. Louis Zoo
- Kayla Jordan ----- Sedgewick County Zoo
- Nathan Beilke ----- Niabi Zoo
- Rhiannon Russell ----- Monterey Zoo
- Seth Cantrell ----- Monterey Zoo
- Katelin Franklin ----- Miami Zoo
- Laurel Connolly ----- Wildlife World Zoo
- Emily Kading ----- Wildlife World Zoo
- Brittani Crenshaw ----- Georgia Safari Park
- Katie Phillips ----- Georgia Safari Park



Conservation Partners are conservation organization or zoological institution which supports rhino conservation in accordance with the objectives and purpose of the IRKA. These partnerships often provide discounts for the supporting institution . It is important that as the IRKA grows we continue to garner the support from all facilities that are responsible for the protection and management of rhinoceros. We would like to extend our appreciation for the support from the following institutions, and hopefully we can add your zoo to this growing list! If you or your institution are interested in becoming a

Conservation Partner, please visit:

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Platinum Conservation Partners

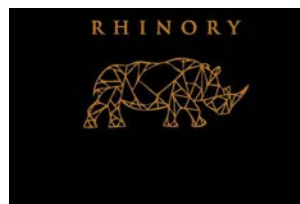
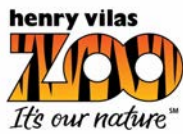


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