# Facility Focus on Indianapolis Zoo—by Amber Berndt

In 2001, the Indianapolis Zoo was chosen to receive 1.2 Southern White Rhinos from Kruger National Park in South Africa. They made their debut in 2003 after a trial period at the Fort Worth Zoo. Due to unsuccessful breeding attempts it was recommended we rearrange our rhinos in 2007. Our male Ongava was moved to Disney's Animal Kingdom and their proven male Spike moved to Indy. One of our females Jao also moved to DAK where she still resides. Unfortunately Spike and our remaining female Mambo did not have a successful reproductive pairing, so Gloria, a proven female from Fort Worth, moved to Indy in 2008.

Mambo has a history of anovulatory reproductive cycles. We therefore teamed up with Cincinnati Zoo's Center for Conservation and Research of Endangered Wildlife (CREW) in 2012 primarily with Dr. Monica Stoops. For about the first year we focused on tracking her progesterone via blood and transrectal ultrasounds to track follicular development on her ovaries. We found she would develop follicles however they would regress before they would ovulate. She was prescribed a hormonal treatment involving a progesterone injection followed by administration of GnRH once a follicle was ready. We have performed eight artificial inseminations on her including the opening of her intact hymen. She was pregnant for the first time last year, however her progesterone dropped and she reabsorbed the embryo around day 100. We are continuing procedures on her and are hopeful for the future.

Gloria has had 8 natural calves and in fact has numerous generations in the current population. Spike bred Gloria fairly quickly, however the 2010 pregnancy resulted in a stillbirth. She seemed to then have sporadic estrus cycles and Spike only bred her couple of other times without any confirmed pregnancies. We started monitoring her progesterone and follicles as well to see what the issue may be. To our surprise she was cycling monthly however we were not seeing any physical signs from her and minimal from Spike. An AI was performed on her one time in 2017 and it resulted in a successful pregnancy with an expected birth date from Memorial Day to end of June 2018. Our assisted reproduction research involved some in depth husbandry training with both of our females. Without this training we would not be where we are today. Some examples of these behaviors are becoming comfortable in the chute, blood draws from both front legs, transrectal and transabdominal ultrasounds, vaginal desensitization/palpation, IM injections in the neck area and the artificial insemination procedures. Just like any other new training behavior, we had some bumps in the road that we had to adjust to. In addition, our females have opposite personalities so they had their own pace and acceptance that we had to respect. Our first AI took over 2.5 hours and today it takes us about 45 minutes.

Most of us know that the reproduction of white rhinos in captivity is minimal compared to the amount of facilities who have them. We rearranged our animals and we changed our diets but it still wasn't enough. We chose assisted reproduction in order to contribute to the captive population in North America along with hopefully adding the genetic diversity of our wild caught female.