



# FAMILY MATTERS

MANAGING A FAMILY GROUP OF SOUTHERN  
GROUND HORNBILLS

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*speaker notes in italics*



## *Hornbills Under Human Care*

*Despite being common in the wild – only 10 institutions in both AZA and EAZA currently house family groups.*

*Dallas Zoo began building a family group in 2016 – this presentation will cover some of the tips & tricks we have picked up along the way in hopes of helping other institutions build family groups of their own.*

# FAMILY GROUPS IN THE WILD

- Range from Kenya (north) down through S. Africa
- Largest cooperative breeding bird in the world. Groups can be as large as 10 individuals, with one dominant breeding pair.
- Helpers largely consist of previously produced sons that have delayed dispersal, and usually only the single dominant female is tolerated within the group.
- Groups defend territories of 100-250 km<sup>2</sup>.
- Typically lay 2 eggs in nest with 3-5 days between egg with asynchronous hatches. Only one chick will usually survive.



“On average, attempts to breed are every 2.6 years, but the average overall fledging rate in the Kruger National Park is only one chick per group every 9.3 years”

- 0.1 15Q553 “Nanjamba” first came to Dallas Zoo in 2015 from Busch Gardens and paired with different 1.0 (who passed away). When introduced to new male in 2017 – very fast intro, were able to house together after 1 week.
- 1.0 17W072 “Okpara” came to Dallas from White Oak Conservation Center. Pair began producing eggs almost immediately in 2017.
- 1.0 17W217 “Mosi” was part of first clutch that was hand-raised with sibling. Introductions in socialization cage in habitat starting day 2. Required side x side intros before release with whole group.
- 1.0 17W265 “Pili” was part of second clutch of first year that was raised newly designed nest box with sibling. Did not require introductions.
- 1.0 21E154 “Kune” foster egg from Knoxville Zoo
- 0.1 22F272 “Sadi” foster egg from Memphis Zoo
- 2 previous females hatched in 2017 and 2018 that were moved to another facility in 2020.



## OUR FAMILY



# CHICK REARING AND INTRODUCTIONS

- Hand-reared initial clutch.
- Use of socialization cage & side by side introductions.

*Beak injury to 0.1 “Nanjamba” prevents her from being able to manipulate smaller food items to rear chicks successfully. We began hand-rearing chicks in 2017 with an initial plan of hand-rearing chicks away from parents but giving them interaction through a socialization cage beginning at day 2 for 10 minutes initially before increasing time span as weather allowed. Still had to do side by side intros to get chicks in with parents*



# CURRENT METHOD

Updated nest box design.

Added use of "playpen".

*With our next clutch (from the same year) we transitioned to a new nest box design that allowed us to feed chicks in nest box with 0.1 present. Allows us to maintain the socialization necessary for chicks to develop into non-imprinted Hornbills, but takes away the need for side x side intros after the chicks are fledged.*

*We also introduced the use of a "playpen" for chicks to be out in the yard and interact with other family group members. We usually will use this as a transition when chicks start to refuse food from keepers (usually around days 40-45) and allow the family group to assist with feeding. Have not seen evidence that males will feed chick if it is in the nest box with dam, but will feed when out in the playpen.*





*Our Habitat: Some perching, lots of logs/hollow logs. Do perch, but spend a majority of their time on the ground investigating. The swing is a popular place to perch. Lots of high and low options.*



*Feeding Ideas: Hornbills are very inquisitive and occasionally destructive. Different ways to keep them busy. Feeding strategies – almost never present the food pan as just a food pan. Use hollow logs and hiding spaces to spread food through out the habitat. Studies have shown that Hornbills can remember up to 10 spots, so they will consistently walk around looking for new places. Can also use in various enrichment items.*





# CAPTURE TECHNIQUES

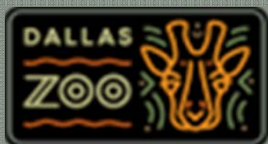
*Catching a hornbill out of a family group can be a bit like being in Jurassic Park....*

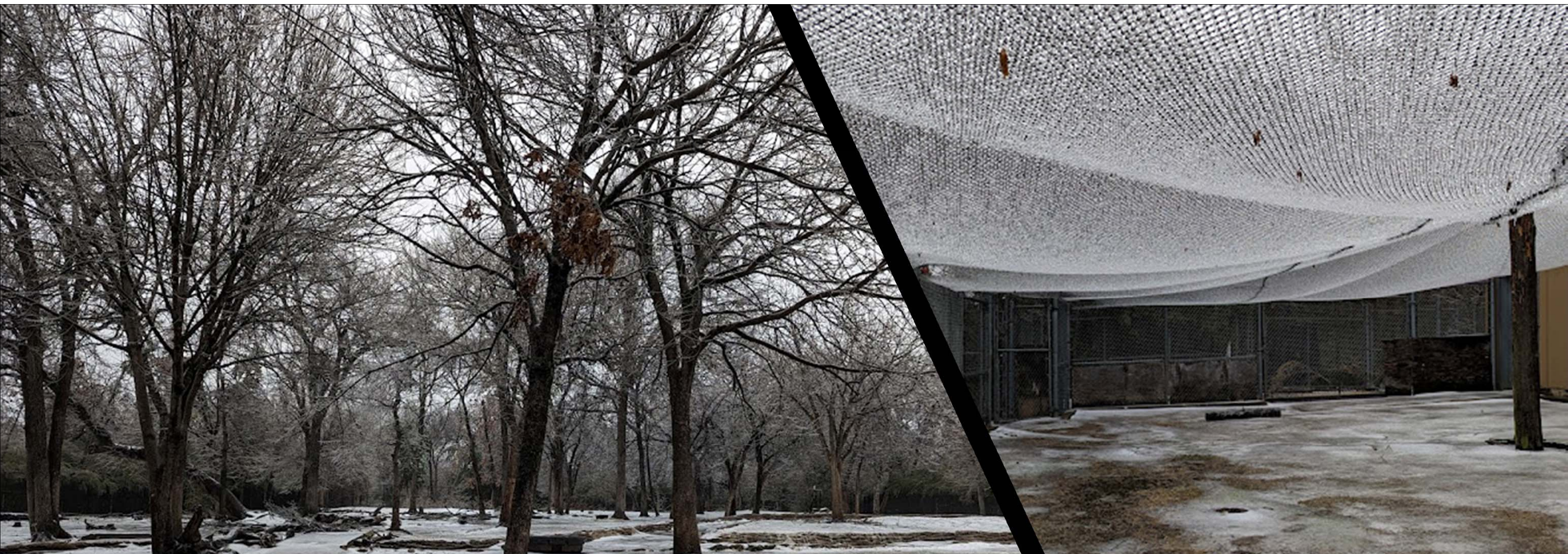
*Families are extremely protective of each other and will become aggressive/swarm to area if another family member begins making distress calls. If 2 people are required to grab a hornbill, need to have at least one other person on hand with a broom or other item to help defend as other keepers get bird in hand.*

*You can occasionally use this to your advantage for shifting birds inside – group will often follow you into holding spaces.*



Clever girl (and boys!)





### Housing Indoors

- When the zoo looks like this....birds have to be inside.
- Our attached indoor holding is small and does not accommodate having our entire group locked inside together. We have found that we are able to separate the group (dominant pair with youngest chick in one stall & older previous chicks in a different stall) without visual contact for extended periods of time as long as they can still “talk” with each other they are able to be reintroduced afterwards with no issue.
- We have also found this to be true if a bird needs to be separated for an extended time for medical reasons as well. We were able to have the dominant female separated for 2 weeks with no visual contact of the rest of the family group following a cataract surgery and was successfully moved back.



# A FEW PROBLEMS...

*While it's great that Hornbill families are protective of one another that can occasionally result in problems when locked in small spaces.*

*Have had aggression issues, especially overnight that have resulted in injury to birds. Birds aren't able to identify family members while in the dark and can become defensive if there are unexpected noises or movement. Can alleviate these issues with the use of a nightlight!*

*We have also seen issues with housing a family group with other species overnight, even in larger outdoor spaces.*





# ENRICHMENT!

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*Most important tool in our arsenal in keeping our family group healthy and busy is enrichment!!!*

*They are extremely fun and easy to enrich – they are interested in just about anything and will usually tackle items together as a family. Almost as fun for keepers as it is for animals. Are given enrichment at minimum 3x per week, but we often do more.*





*Things that are able to be pounded on are big favorites – boxes, pumpkins, rotten logs.*



*Die box die!*

*Example of them working together  
on a project – attacking from all  
angles!*



(video included as  
a separate file)





*Digging/Foraging: Things that can be dug through – substrate piles, bags and boxes.*



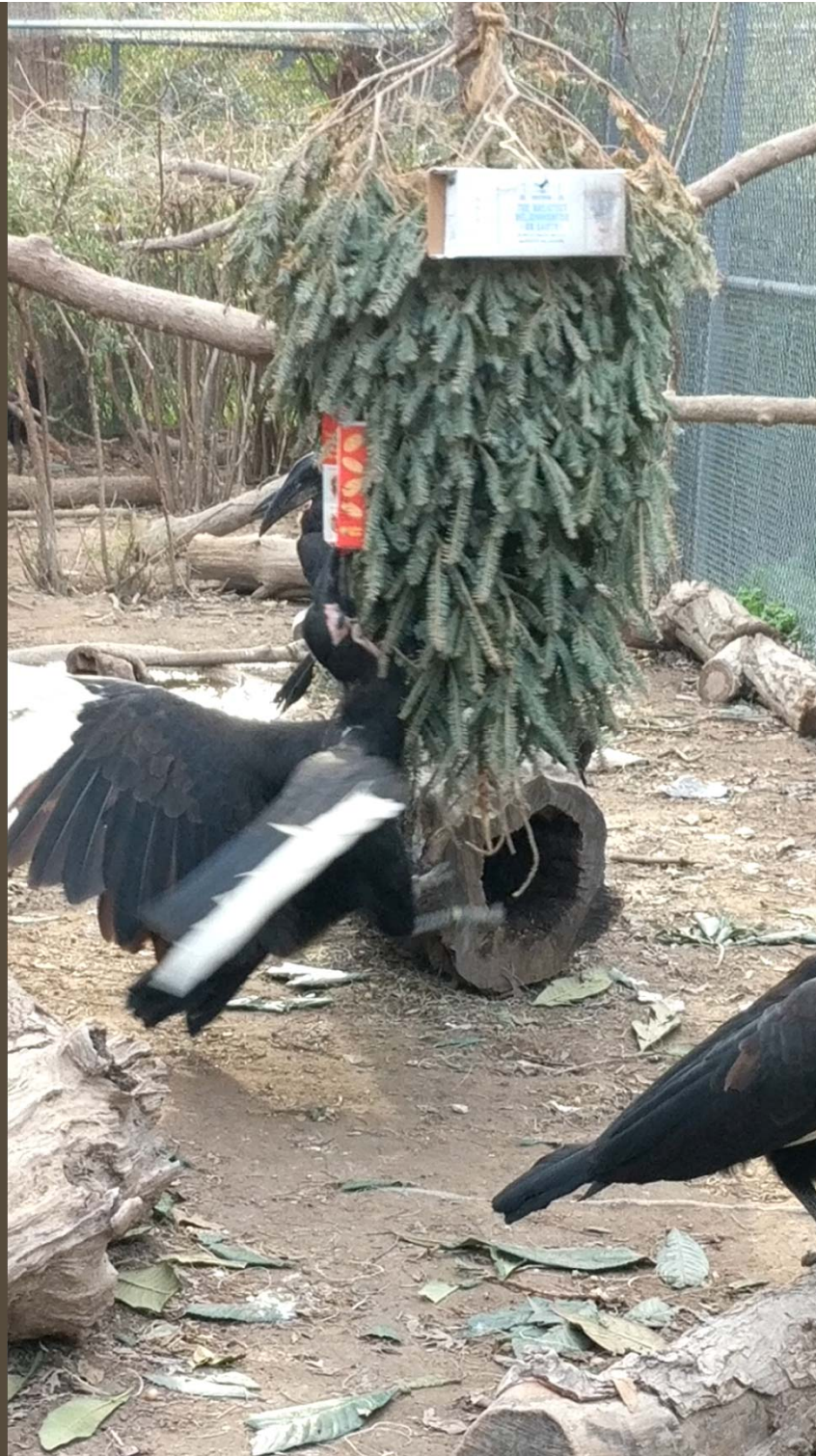
*Things that can be carried – pinecones, tennis balls, apples.*





Hanging items.





(video included as  
a separate file)

# QUESTIONS?

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