# Ungulate Hand-rearing Strategies at the San Diego Zoo Safari Park





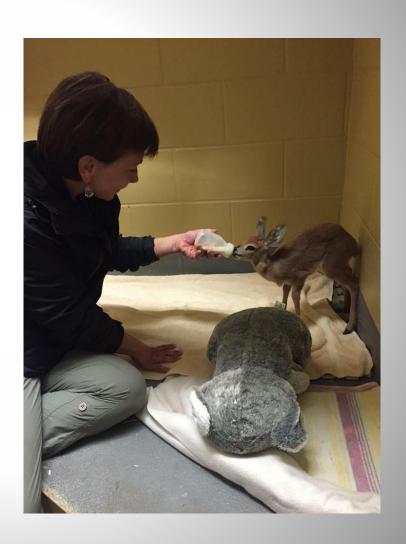


# Why do we hand rear?

- Maternal neglect
- Medical
- Shipments







# Negative effects of hand-rearing

- Aggression toward keepers
- Reduced flight distance
- Imprinting on humans
- Difficult to adjust back into herds
- Lack of breeding





# 3 Hand-rearing methods

- Free Contact
- Modified Contact
- Protected Contact







#### Free contact

- Traditional "hands on method".
- Flighty animals for shipment.
- Flighty herd animals that could benefit from a calm animal.
- Females of most species.







## Behind the scenes tours and training







## Free contact species

- Steenbok
- Dik Dik
- Zambesi Lechwe
- Impala
- Red-fronted Gazelle
- Springbok







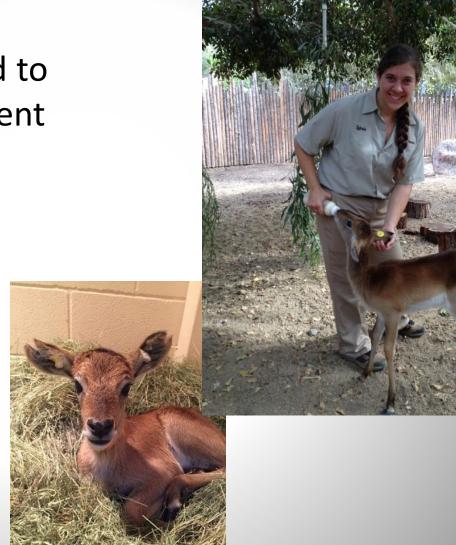


#### Zambesi Lechwe

 Females were pulled to hand rear for shipment to DAK Lodge.

Contacted future facility.

 Paired future re-call with bottle.



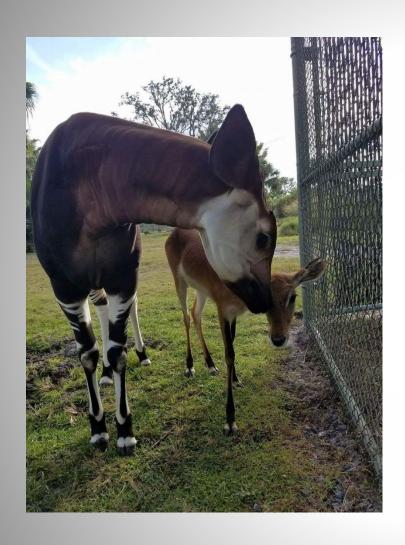


# Raised with multi-species to help with the transition.







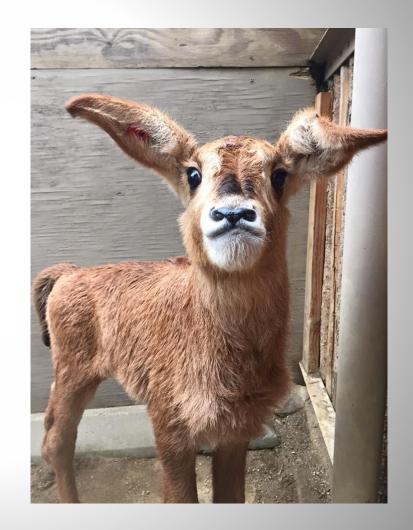




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# **Modified Contact Rearing**

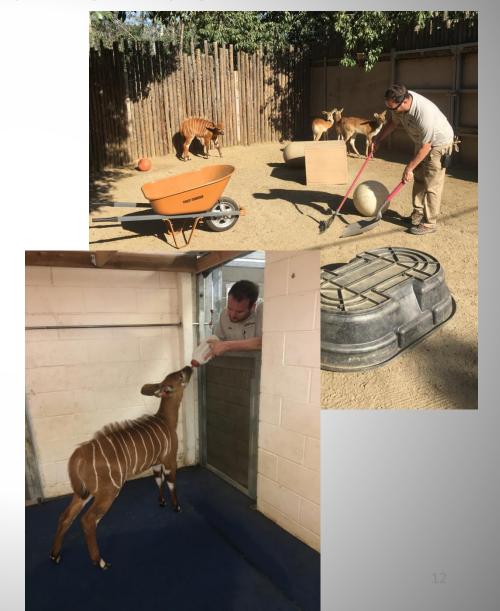
- Used for species that are large in size or have large horns.
- Minimal human interaction once neonate is established on bottle.
- Fed on racks, over doors, or in crates.





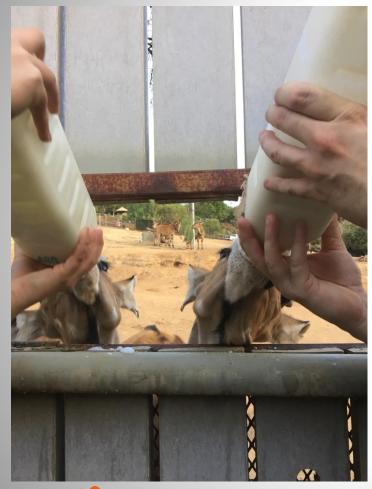
### **Modified Contact**

 Keepers can enter exhibit to clean, but discouraged from contact with animals while sharing the same space.





# Animals should approach feeding station for their bottle instead of the keeper.







# **Modified Contact Species**



- Giant Eland
- Common Eland
- Wildebeest
- Female Oryx
- Bongo



# **Protected Contact Rearing**

- Most difficult rearing style.
- Requires flexibility and consistency.
- Keepers do not enter space with animal.
- Limit talking around animal during feeding.







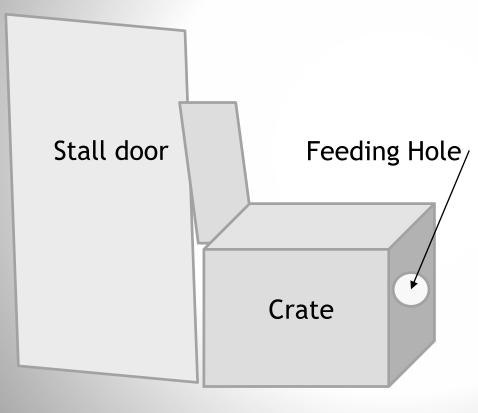
# Fed on a Rack, Stick, or Crate with no Visual Contact during feeding





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# **Crate Feeding**







# Rack Feeding







# **Protected Contact Species**



- Male Deer
- Male Oryx
- Male Bontebok
- Male Sheep and Goats



# Challenges

- Difficult in extreme medical cases.
- Sheep and goats have a quick imprint period.
- Follow up management style must be enforced during transition period.





#### Do these methods work?



- All 3 methods have produced animals that exhibit similar behaviors to parent-reared animals.
- Less aggression toward keepers.
- We have been able to hand-rear a wide variety of species that we were unable to in the past.



The next step...

- Beginning stage of follow up on all hand-reared animals at SP.
- Will be reaching out to other facilities for information on animals shipped out.
- Adjust methods based on results.





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