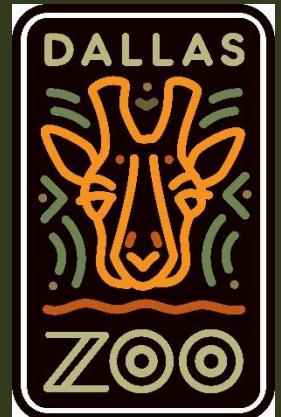


# Spotlight on the Elusive:



Shedding light on  
okapi nursing  
behaviors and

Improving public  
accessibility of the  
next generation of  
okapi



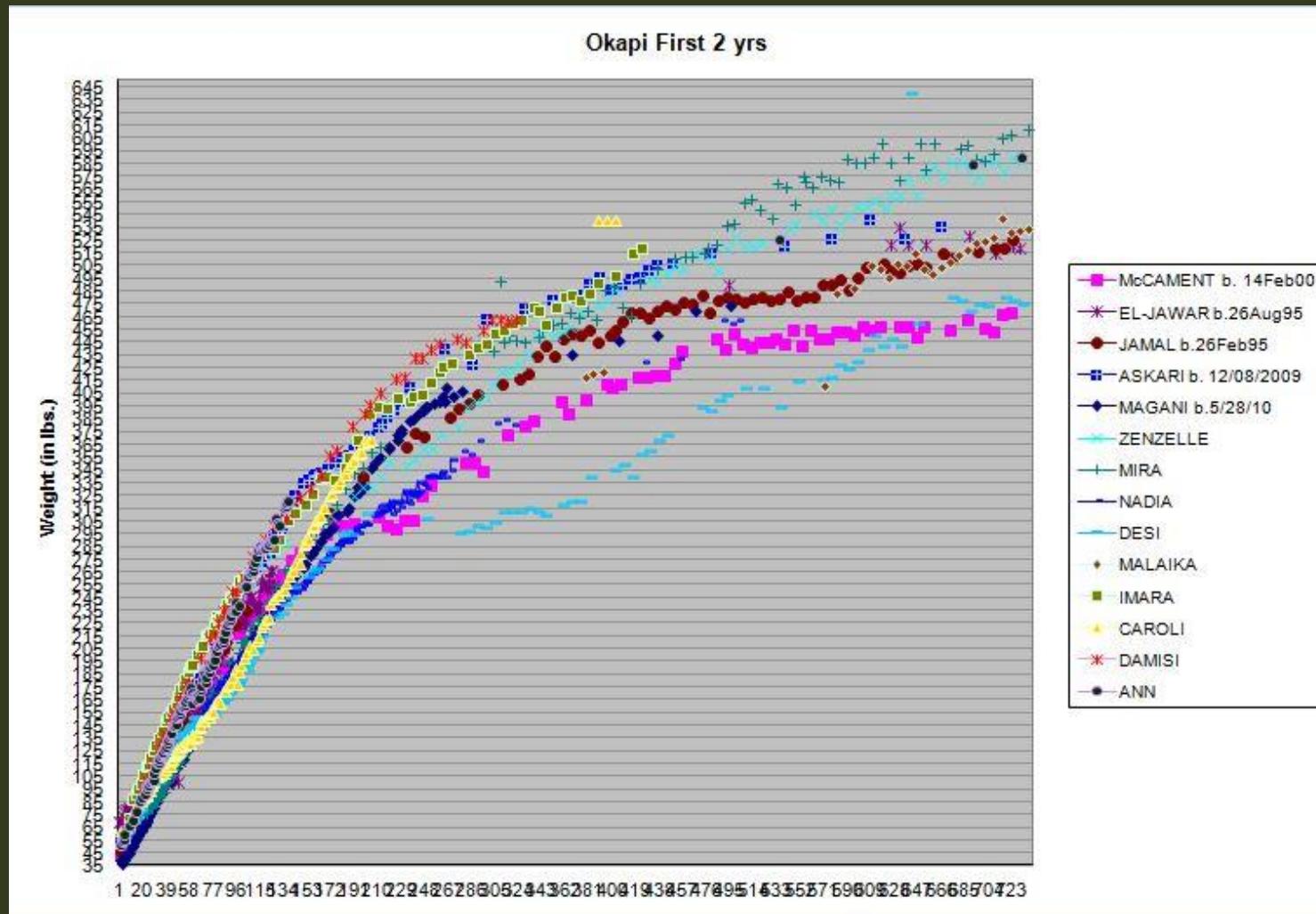
# Nesters vs. Followers



# Dallas Zoo Calf Monitoring



# Calf Weight Monitoring



# Dallas Zoo Dam/Calf Pairs



- 1999-2013
- 4.6 Okapi calves
- 0.4 Individual dams
- 2 Primiparous females

# Patterns Identified

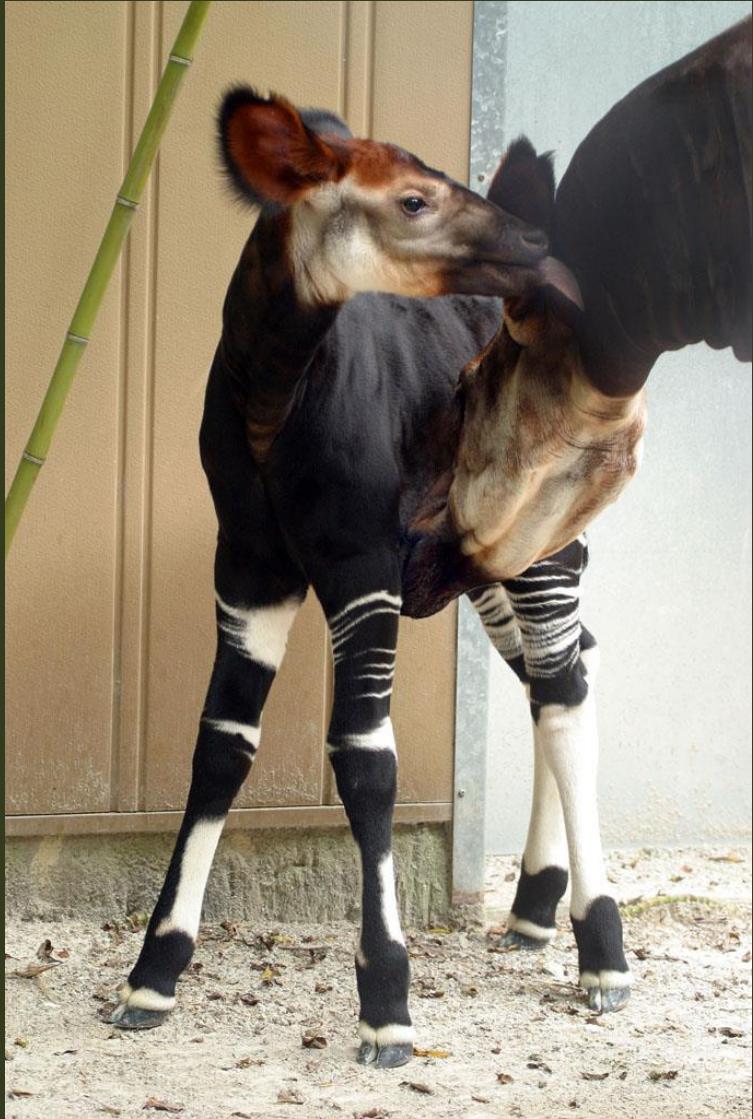
- Visual presence of the dam cues the calf to nurse.
- Average sustained nursing duration: 6 minutes
- Average number of nursing sessions/24hrs: 4
- Nursing duration and frequency change little from 1.5-4 months.  
Nursing times vary.
- Low incidence of dam refusing calf from months 2-4, coinciding with strong nesting behaviors of calf
- Strong nesting behaviors persist through week 21.

# Nesting Patterns



- 2 months: brief periods off nest, 30-60 minutes at a time
- 3 months: strong attachment to nest continues; calf may exhibit stress when locked away from nest for hours
- 4 months: calf voluntarily off nest for hours at a time

# Indicators of Potential Problems



- Calf not returning to nest after nursing session
- Calf initiating nursing more frequently than dam before month 3
- Frequent pacing and inappropriate maternal behaviors
- Frequent dam refusal of nursing from months 2-4
- **Solutions:** access to visual separation, scheduled daily separation, operant conditioning

# Habituation: Warning vs. Welcome



# Habituation



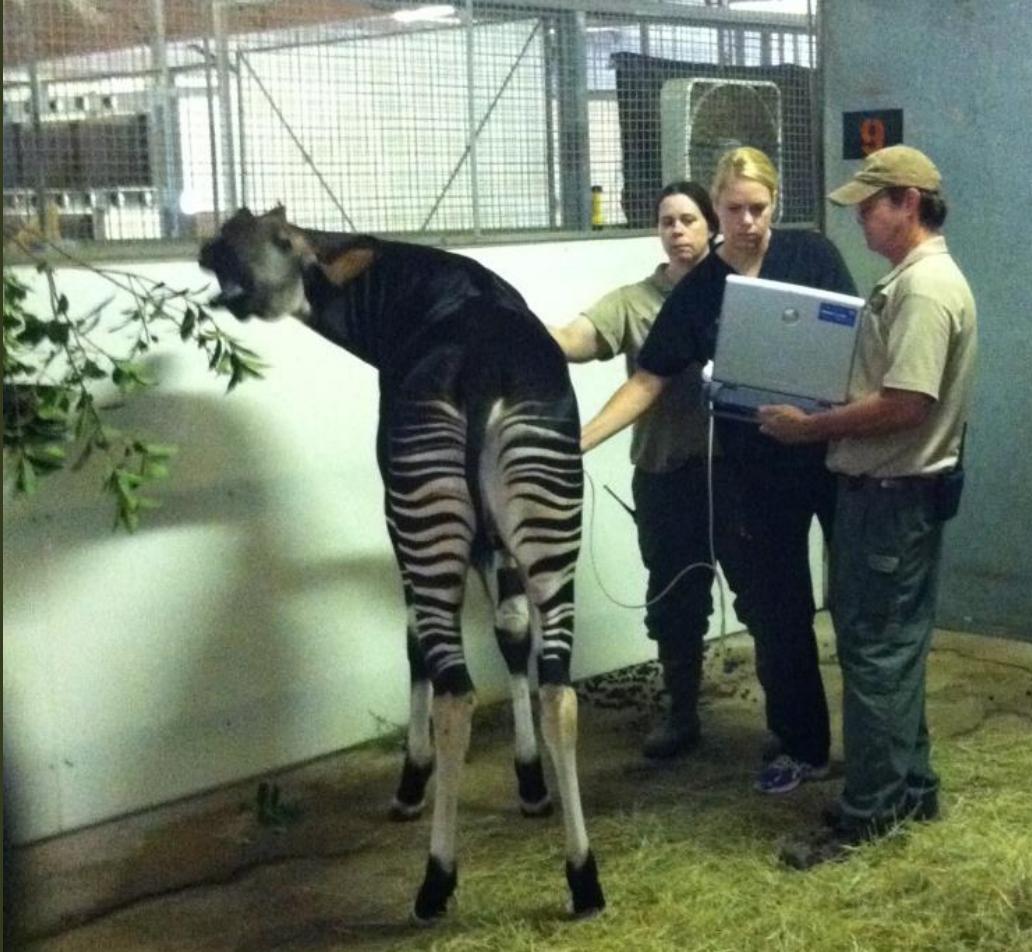
- Brief, frequent, positive interactions
- Timed when calf is on nest and dam is separate/outdoors
- Initial interactions slow/stress reactions avoided
- Includes all team members and outside staff

# Operant Conditioning



- Positive Reinforcement
- Choice emphasized
- Free and protected contact
- Variety and flexibility of time and place

# Operant Conditioning



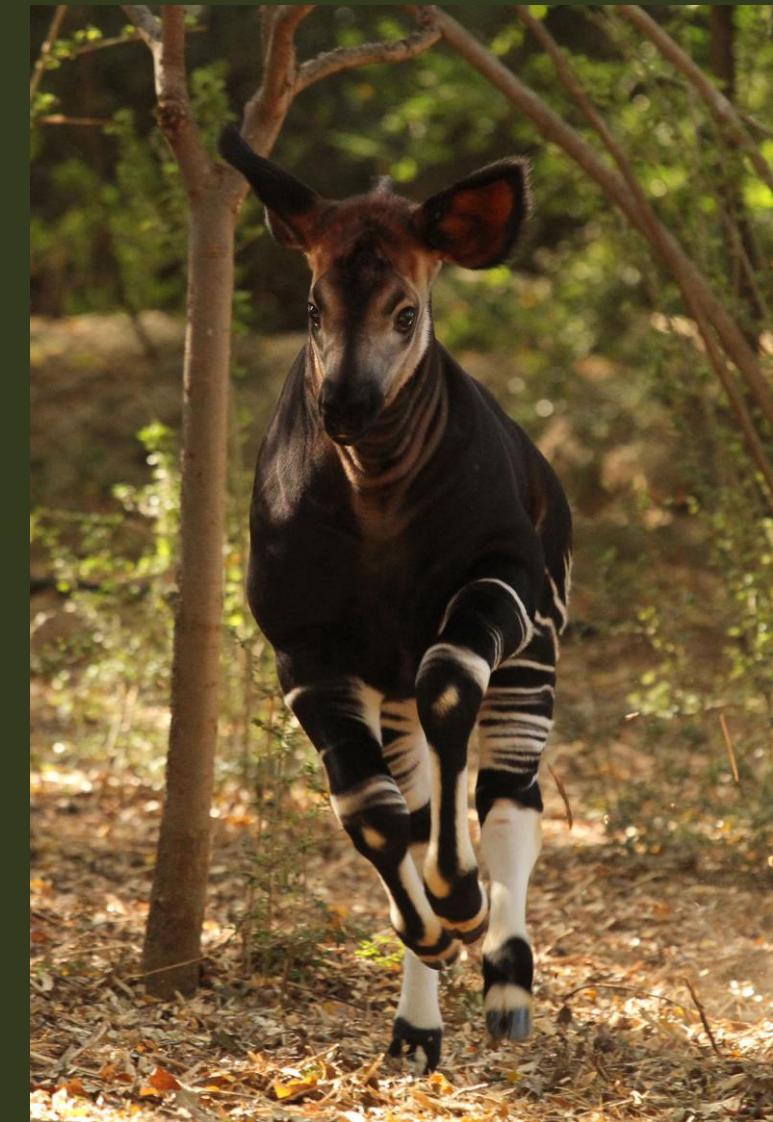
- Scale training
- Full body tactiles
- Hoofwork
- Ultrasound
- Radiographs
- IM and sub cue injections
- “Come” “Shift”

# Challenge: Exhibiting Nester Species



- Calf's strong need to nest through Week 21
- Dam's stress reactions to the calf spending time off nest and within sight
- Long transfer lanes

# Exhibit Modification



# Exhibit Modification



# Keeper Talks



# Keeper Talks



# Donor and VIP Tours



- Special keeper talks/training demos
- Education tours
- Special events
- VIP behind-the-scenes tours

# BTS and VIP Tours



- Select animals
- Photo policy
- Careful supervision
- Safety protocols

# Potential Applications



