

# Behavior of a Newly Formed Bachelor Herd of Reticulated Giraffe at Zoo Atlanta

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# Savannah Exhibit

- Mid-2013 contained 1.3 giraffe, 2.0 lesser kudu, 0.2 common zebra, 0.2 ostrich.
  - By fall, there would be only 1.1 giraffes.
- Management wanted to maintain 4 giraffe, but configuration was unknown.
  - Calves for the public or animals for feeding platform?
- Bachelor group
  - 3.0 from Riverbanks Zoo, 0.1 to Riverbanks Zoo



# Previously Done?

- Knew bachelor herds existed within zoos.
- Literature search located nothing for captive populations.
  - Wild-male groups are rare, short lived and no strong associations.
- Female behavior similar to each other, wild vs captivity.

# Subjects

- Abu-born Sept 2005
- Calvin-July 2011
- Lennard-July 2011
- Oscar-Feb 2010
- 4 month quarantine
  - Able to see, hear and touch .





# Ethogram

- 14 Instantaneous Behaviors
  - INS, ING, SC, FD, R, LC, EL, ODB, SDB, NCA, CA, SOC, IOS, O
- 3 Distance Indicators
  - CON, PRX, OUT
- 19 All-Occurrence Behaviors
  - A, D, L, Y, MM, SI, AI, UT, F, PL, PW, K, SR, MA, NCA, CA, ET, ER, V

# Data Collection

- All animals on exhibit
- 3-4 sessions per week
- Each session, 30 minutes long
  - Occurred at 0900 or 1600 hrs
- Instantaneous collection at ever 1 minute intervals.
- 1<sup>st</sup> observation 23 Mar 2014, last 08 Feb 2015.

# Instantaneous Data

- Abu exhibit 13 of the 14 behaviors, three boys 11 of 14.
- Majority of time on only a few behaviors (overall, AM and PM).
  - Abu, Calvin and Oscar (86.7%, 90.94%, 88.56%) on SC, FD\*, LC, R.
  - Lennard (83.58%) on SC, FD\*, LC, O
    - “mouth” behavior
- Social behaviors very limited (SOC, CA, NCA)
  - Abu 1.8%, Calvin 1.15%, Lennard 1.3%, Oscar 0.65%
  - Abu was the only one to record CA or NCA



# Abu Distance

- Out of reach from the boys the majority of time.
- Contact was recorded only 15 times total (0.73%).

CON			PRX			OUT		
Calvin	Lennard	Oscar	Calvin	Lennard	Oscar	Calvin	Lennard	Oscar
4	9	2	83	100	123	599	577	561

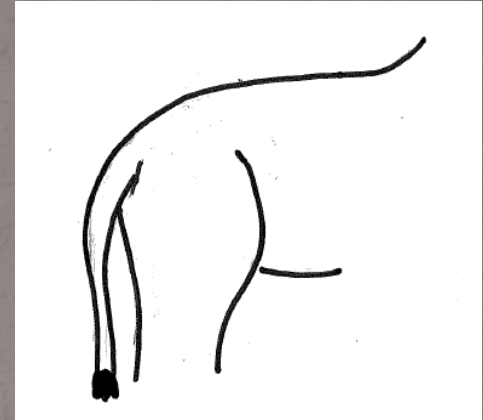


# All-Occurrence Data

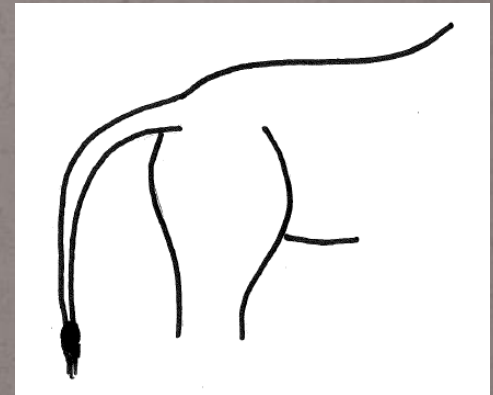
- Abu 877, Calvin 517, Lennard 406, Oscar 380 total recorded occurrences.
- Abu the cause of most of the interactions.
  - Majority of his interactions were approaches (61.9%)
  - Interactions towards him from the boys: Calvin (63.25%), Lennard (73.89%), Oscar (78.42%).
    - Displace or leave the most common: Calvin (64.53%), Lennard (65.33%), Oscar (53.69%).
    - Yield was next most common.

# Erect Tail

- No previous record of it in literature.
- Partially arched tail after being followed by Abu for minimum of two body lengths.
- Calvin 95 of 115 follows (82.60%)  
Lennard 69 of 92 follows (75.0%)  
Oscar 27 of 43 follows (62.79%)\*



Giraffe Tail – Normal



Giraffe Tail – Partially Erect (ET)



# Other (O) Instantaneous Behavior

- Boys would watch Abu and move close to him.
  - Typically Abu eating browse or attempting to get that the younger boys couldn't reach.
- Calvin 36 of 47 O's  
Lennard 23 of 28 O's (after removing "mouth")  
Oscar 52 of 67 O's

# Additional Behavior Information

- Social interactions (SI) typically involved ones head rubbing on another's giraffes upper back or lower neck.
- The younger boys typically hung out together.
- Oscar possibly different when dealing with Abu, most comfortable.
  - Least interactions from Abu, approached least by Abu but approached Abu the most, least number of D or L's, CON/PRX more, ET not significant
  - Scanned environment more then Calvin or Lennard, 21.24% vs 6.37% and 11.36%.
  - Year older than the other two.



# Conclusion

- Overall would consider a success at the time, but what about longterm?
- Why?
  - Lack of female presence so no need for territory.
  - Younger boys castrated so lack of hormone production.
  - Prolonged introduction period so gave time to adjust.

# UPDATE

- As of 2017, all boys still together.
- Abu still “in charge”
  - Displaces boys from feeding platform, breaks up interactions between the other boys.
- Abu focuses on Lennard more than the other 2, primarily following and mounting attempts.
- Oscar and Calvin seen necking more, non-aggressive.
- Oscar periodically attempts to mount Abu, without much response.



Questions?