Social Hierarchy, Rank Reversal, and Conflict Resolution in Captive White-Nosed Coati (*Nasua narica*) Bands: Juvenile-Adult Interactions

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Introduction

- Many species in Order Carnivora have social hierarchies
- Dominants are top-ranking individuals in a group
- Subordinates are the rest of the group members who do most of the grunt work
- Tolerated aggression is when adults allow juveniles to provoke them and (typically) win in conflicts; it helps juveniles obtain more food and nutrients
- Wild white-nosed coati bands (*Nasua narica*) typically include adult females with juveniles
- In wild coatis, juvenile tolerated aggression can be seen, effectively ranking the young higher than adults



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Possible Questions

- Is tolerated aggression in coatis biologically fixed?
- Does tolerated aggression remain a trait in captivity?
- Will the age at which tolerated aggression dissipates in the wild change in captivity?
- Do coati adults behave differently than subadults in response to juvenile aggression?

Hypothesis Based on Prior Data

Tolerated aggression is biologically fixed, and therefore captive coatis' hierarchy will display high-ranking juveniles. Alternatively, captivity relaxes the need for tolerated aggression and masks it.

Proposed Methods

Record the Variables of Each Agonistic Interaction for an Extended Time Period → Compare the Results of Each Interaction

Build a Win/Loss Matrix

We plan to conduct research at Brevard Zoo

Categorical Variables

Identify the Context of Agonism

- Food-related/Enrichment Item
- Foraging
- Social

Identify the Age of the Initiator and Recipient

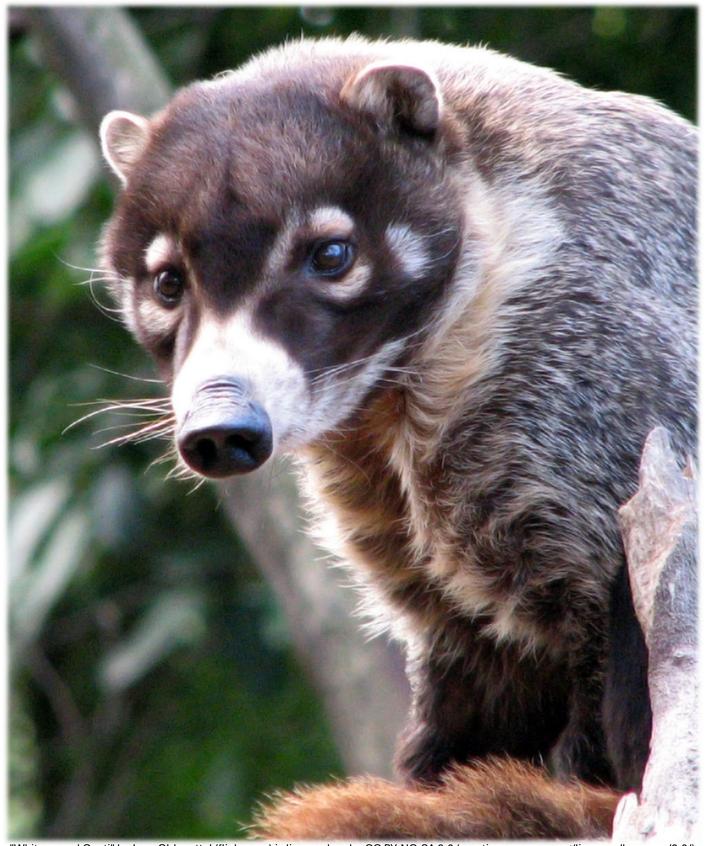
- Juveniles
- Subadults
- Adults

Identify Time of Day

- Morning
- Day
- Afternoon
- Night

Identify the Type of Agonism

- Lunge
- Bite
- Chase
- Escalated Fighting
- Avoidance
- Aggressive Vocalization
- Displacement



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