



The Observation of Captive Orangutans and their Behavior

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INTRODUCTION

- Animals in captivity show heightened levels of anxiety, stress, boredom, and suppression of natural instincts typically displayed in wild (Fyock 2017)
- Zoos strive to provide enriching environments to accommodate for the animal's Umwelt
- If not provided for properly Orangutans have suffered from obesity which in turn can lead to other health problems (Ting 2011)
- Captive Orangutans have been known to predominantly show more resting behaviors (Fyock 2017)
- We hypothesized that the orangutans would have heavily altered behavioral patterns in comparison to Wild orangutans.



Figure 1. Captive Orangutan- Rocky

- Live on the islands of Borneo and Sumatra in Southeast Asia.
- Wild orangutans typically display high activity levels in early and later hours (6-8AM & 4-6PM) of the day. (Ting 2011)
- Most Wild Orangutan physical activity consists of foraging behaviors (Morrogh-Bernard, 2009)
- In nature, this species is arboreal or "tree-dwelling"
- Naturally live isolated from other members unless mating or child-bearing
- Home ranges of orangutans vary by the sex. Females typically have 3.5-mile range. Males can have anywhere up to 15 miles.



Figure 2. Captive Orangutan - Katy

ETHOGRAM

Behavior Name	Description
Feeding	Anytime an animal is seen holding and/or ingesting food, as well as actively foraging for food.
Resting	Sitting or lying at rest, no obvious activity
Groom	Picking, prodding, pulling, or scratching at hair
Sleep	Sleeping will be marked if the animal has been laying down for an extended period and appears to have eyes closed
Climb	When an animal is either climbing a structure, a fence, or anything else, swinging or hanging is included.
Locomotion	When the animal is moving at any pace other than just standing in one place.
Play	Interaction with stimulus in the environment in a toyish manner.
Species Interaction	When animals come near one another, or make physical contact with another orangutan.
Manipulate	Any sort of interaction with non-food object in environment
Interaction with visitor	Anytime an animal shows any sort of reaction to visitor presence
Not visible	Animal has moved out of sight in the exhibit

Ethogram modeled after: Fyock, K. (2017).

MATERIALS & METHODS

- Experiment conducted at Simon Skjodt Center of Indianapolis Zoo
- Ethogram used to track behaviors
- Individual Focal Sampling was conducted; observation of one member of a species over an allotted amount of time
- Length of time the orangutan spent displaying the behavior was recorded
- Observed for 1-hour periods at a specified time of day (15 mins ON & 5 min break)

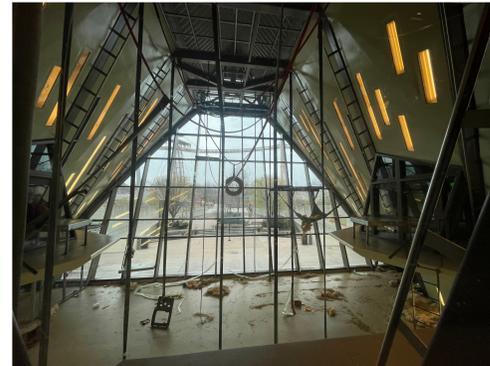


Figure 3. Main Exhibit

CAPTIVE VS. WILD ORANGUTAN DAILY ACTIVITY

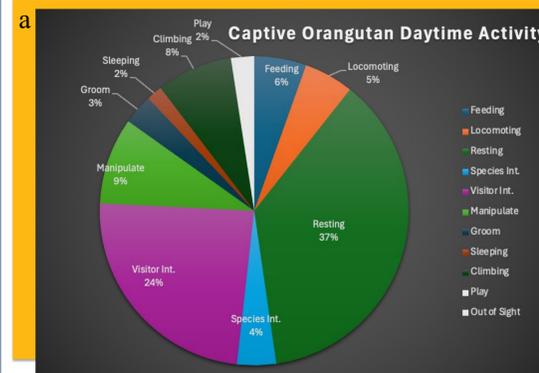


Figure a. - Represents the total daytime activity of both Rocky and Katy during observational hours

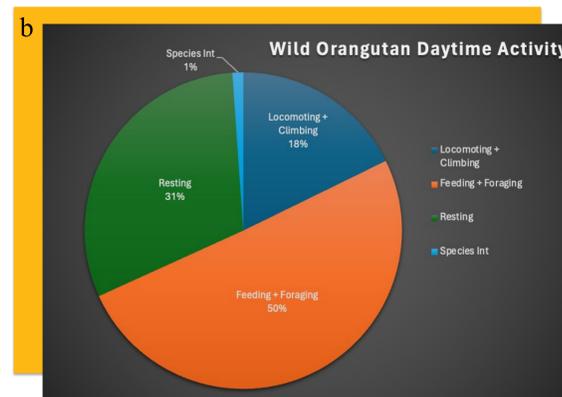


Figure b. - Displays the total daytime activities of wild orangutans in the Tanjung Puting National Park in Indonesia (Morrogh-Bernard, 2009)

- Wild orangutans devote just about half of their daily activity to foraging for food and feeding (Fig. b). This is in sharp contrast to our results (Fig. a). We found that only about (~6%) of Captive Orangutan activity involved foraging and feeding and that their main activities (61%) were resting and interacting with visitors.
- Captive Orangutans don't have to search for their meals as they are provided by the Zookeepers
- The amount of time spent resting was one of the few similarities between captive and wild Orangutans with both spending about (~30-35%) of their time resting
- Rocky and Katy displayed visitor interaction by tapping on the wall of the exhibit, baring teeth, putting face directly against barrier. During our time observing they mostly reacted to rings, tattoos, our notebooks, and purses.
- Higher levels of species interaction in Captive Orangutans as they are sometimes placed in same exhibit as another member

TIME OF DAY IMPACT ON BEHAVIOR

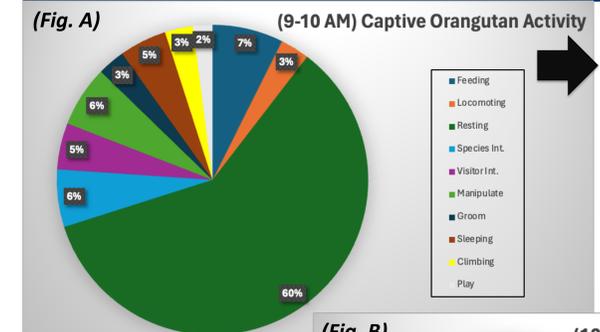


Fig A – Majority of time was spent resting in early hours of day. Little to no physical activity. Highest prevalence of feeding behavior.

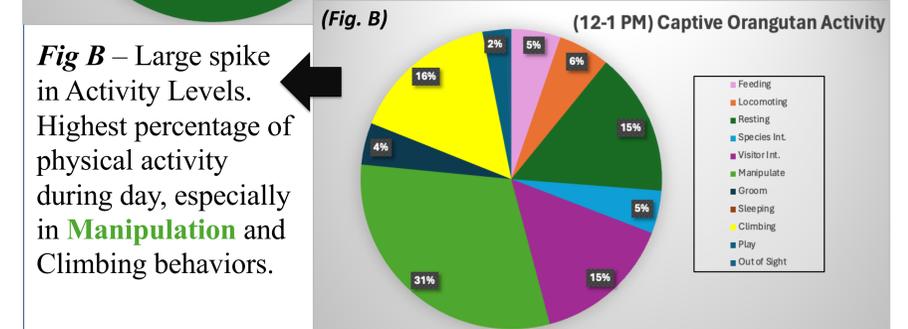


Fig B – Large spike in Activity Levels. Highest percentage of physical activity during day, especially in Manipulation and Climbing behaviors.

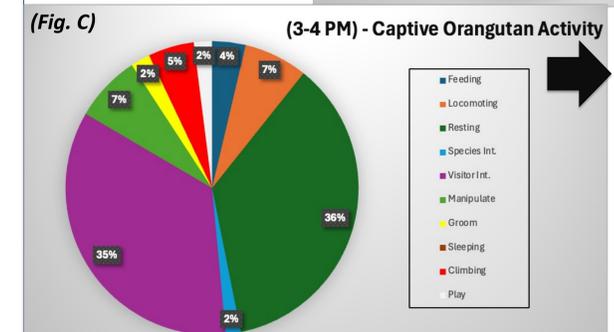


Fig C – Orangutan show peak in visitor interaction behaviors in the later afternoon. Regression back to resting behaviors and fading of physical activity behaviors.

CONCLUSIONS

From our time observing and collecting data we were able to draw some conclusions about the behavior of these captive orangutans. First, the literature that we found regarding decreased levels of activity in captive animals (Prince 1999) did not seem to apply to the orangutans we observed. The Captive orangutans showed only a slight increase in resting behaviors in comparison to their wild counterparts. So, despite the two groups being in very different environments their levels of relative activity were similar. Our other conclusion, revealed that time of day played a large role into the activity levels of captive orangutans. Their daily activity pattern had clear distinctions from the daily patterns of wild orangutans.

LITERATURE CITED

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