

James Burnes

Primates

SIAMANGS:

(Hylobates Syndactylus)

Observations by others and generalizations:

These long armed primates reside in the wild primary and secondary forests of Sumatra. Some have been sighted in Malaysia, but the numbers are infinitely small. Sumatra is an island in Indonesia about 180,000 square miles, roughly three times the size of the state of Oklahoma. This nearly impenetrable rainforest is the last hold out for many species. This species is diurnal and arboreal; that is to say they are active in the trees during the day. Their diet consists of mainly fruits that are high in sugars such as wild figs. Siamangs consume more leaves than any other gibbon. The adult male Siamangs weigh nearly 11 kilograms; females weigh in slightly less at about 10.5 kilograms. Both are black in color and lack tails. As with other gibbons they are not sexually dimorphic but are monogamous, mate for life, which is a span of about 35 years. Both male and female vocalize using a throat sac similar to that of a bullfrog. This sac helps resonate their calls nearly a mile through the jungle, establishing boundaries and locating their mates. They are one of the only species that take part in “dueting” that is they each have a part to play in the vocalization. The Siamangs are true brachiators, this arm over arm swinging is their primary means of locomotion through the trees. This also tends to

lead to their suspensory behavior. This species also move terrestrially bipedal, albeit for only short distances.

Their social structure of monogamy is strengthened by their social grooming. Family bonds are also enhanced as they adolescence and subadult males participate in defending their territory from conspecific males with their fathers. Both males and females emigrate from their natal group around adolescence. Monogamy is also cemented by this species being codominant. Both male and females are dominant and the males take a very active part in raising their young, often observed in the wild carrying the infants. This trait is exclusive to the Siamangs in the Hylobates genus. The siamangs give birth to a single offspring after a 214 gestation period. The interbirth interval varies but averages less than three years. They range in group sizes from two to six and disperse, territorially, with only one or two groups claiming a square kilometer of rainforest. They are highly endangered in there natural habitat.

My observations in the field (zoo)

Date: March 3, 2007

Location: Houston Zoo

Time: Approximately 1330-1530 hours

(Note: first observation was during a “tour” stop for only a few minutes)

Weather: Sunny Low to mid-seventies.

Number observed: Three (captive)

Male, Female, young Female “Raya”

These captive siamangs were observed on what the Houston zoo calls “Enrichment Day”. This day of enrichment is used to change up the daily routine of the animals at the zoo. Several new ideas are added to the animal paddocks such as streamers, or paper chains with scent on it. The siamangs were enriched with blue and yellow streamers strewn about the cage. The first observations of the siamangs were during the whistle stop tour given by primate supervisor Lynn Killam. They were active around the cage with some vocalization, their duetting drawing a large crowd of people. This was prior to the streamers being introduced to the paddock to enrich the lives of the captives. Upon my return after lunch, the vocalization had subsided and the siamangs were about their business as usual.

Of the time observed, this primarily arboreal ape spent nearly half of their time on the ground. Their time spent terrestrially their favorite form of locomotion was bipedality. Nearly ninety percent of their movements on the ground were done on their hind limbs. The bipedality of this species is remarkable. Very seldom do they hold their arms up over their heads for balance as has been observed in chimps and orangutans. Their bipedality is also a much more deliberate, more fluid motion. They do not possess the “John Wayne-swagger” that comes to mind with the clips of other apes seen on television. When their arms were used for balance it was when they seemed to be “running”, or at least “speed-walking”. The other half of the time they were mainly “hanging around” this behavior is true with their dominant suspensory behavior that they are known for in the wild. All movement in the trees and along the cage ceiling was done with brachiation. The palms of this species seem to be specialized for this: the palm is elongated disproportionately to the digit length so that their thumb does not get in the

way of their swinging, all the while retaining the precious opposable digit that lends itself to a phenomenal grasp and ability to manipulate things.

There were little signs of grooming on this day, but vocalization seemed to act as the same social bonding agent. Most of their time was spent separately but never totally out of sight of one another. If one should doze off into a nap, upon awaking they immediately look for the others, once there has been visual contact, the napper generally settles back in and sleeps again.

Fruit at feeding time was favored over the “monkey biscuits” (as we were told, not biscuits made *from* monkeys but biscuits made *for* monkeys). The oranges were the favorite of the fruits that were available. Again this behavior coincides with what has been viewed in the wild with the choice of fruits with higher sugar content. The oranges had been cut up into what appeared to be quarters and the siamangs could put an entire quarter in their mouths and swing back to a favorite limb with a back rest. They are observed sitting on branches with their backs resting up against something, usually another branch.

The streamers introduced during their enrichment process seemed to fulfill their intended goal, for the young “Raya” at least. She is the only one observed actually interacting with the enrichment articles. She seems to have a favorite color: blue. She will carry a piece of blue streamer around the paddock, pull off a piece of another streamer and compare it to the one she had in hand. If the streamer was yellow and found wanting, it was discarded and she made her way to another, repeating the process until she found one matching her blue one, that one she liked and put it in the hand with the other blue one. She could nearly tie a knot in the streamers but she just couldn’t quite get

the last step of the tying process down. She eventually lost interest in the pieces of blue streamer she had in her hands and discarded them like so many leaves. She then picked up a longer piece of yellow wrapped it around herself like a sash and paraded around the compound like the New Year's Eve baby, or Miss Teen Sumatra. She loses interest even more quickly with her garb and busies herself trying to catch a fly that had violated her personal airspace.

The siamangs remained relatively active during the times they were observed on this day. There is sparse nap-taking throughout the day mainly by the adult female. The male, for the most part, doesn't nap, but doesn't move around with any great pomp and circumstance either. He moves around slowly and never without some goal in mind, be it a leaf, a piece of orange, or a more comfortable position in the tree.

Date: March 12, 2007

Location: Houston Zoo

Time: Approximately 0930-1200 hours

Weather: overcast, just finished raining, everything is wet.

Number observed: Three (captive)

Male, Female, young Female "Raya"

Following a heavy morning downpour, about a quarter of the siamang paddock is under an inch or so of water. There is very little movement this early and it's mostly terrestrial. The young female, "Raya", stays close to the observer. Male rests quietly on

a rope in the center of the cage and the adult male stays within a few arm lengths of him. Brachiation is observed from the moment that they wake up and find the place where they want to be for the morning. Raya, losing interest in her observer, moves to a fresh piece of bamboo and attempts to take it up to the top of her favorite limb where she will eat it. The problem with her plan is that she is trying to climb a wet rope and hold a six feet of bamboo. She utilizes a free hand or foot to hold onto the stalk. She gets almost where she is going and drops the bamboo. She drops her head and watches it fall to the ground. If body language is an indication, it was definitely an “oh hell” expression as she climbed back down, picks the bamboo back up, and starts all over again. Once she gets where she is going she hangs from the branch and uses her feet to manipulate the stalk, stripping it into smaller, easier to handle pieces. (Interesting side note: the strips that are dropped or discarded are picked up by birds in the zoo and taken to build a nest. I am not sure of the bird-to-siamang ratio in the wild, but the siamangs seem to help in the prefabrication of bird nests.)

All observed this morning eating. If the food item isn't small enough to stuff in their mouth whole, they take a bite and hold the rest in one of their feet, this leaves both of their hands free. They do not have to be seated to eat, in fact most of the time they are eating while hanging from a branch, or the top of the cage.

The female is up in the crook of one of the branches curled up into a ball and trying to take a nap. The male hangs from one of the ropes in the center of the paddock and stares at his reflection in one of the pools of water. The first few visitors to the siamang exhibit are small groups and are fairly quiet, so the apes do not take much notice. The first large family of whiny, hyperactive small children shows up and the adult

female puts as much distance between her and them as her cage will allow. After the crowd goes on to bother the next exhibit the female returns to the crook in the napping branch and settles back in. This prompts the male to swing over where she is and sit next to her. At only 10:05 in the morning the adult male and female are officially napping. Raya takes the opportunity to inspect a zoo employee picking up stray bits of trash that has fallen through the board walkways. Another zoo worker shows up to see the morning's activities and wakes up both of the napping adults. Thoroughly agitated from being woken up again, the female goes to the opposite side of the area and sits looking annoyed. The male goes down to the area that leads to the enclosed area where they spend the night and picks up some leafy greens. He climbs back onto the napping branch and eats his greens.

After he finishes the greens he makes a few head shakes at the female, and she makes a few swings in his direction only to stop half way. He looks at her again, and shakes his head some more. After a few moments she decides that she wants to go over there and they are back together on the napping branch. This is monogamy in action. It is the first grooming observed in the siamang group. The male picks and grooms the females back.

Raya, is on the bottom of the paddock uninterested in the grooming going on, she is looking through the water picking out leaves to eat. She takes a few seconds and watches a beetle swimming around in the pool. Growing tired of the beetle she plucks it from the water and promptly eats it.

While Raya searches the water for more swimming beetles, the male grows weary of the grooming and tries to pull away, only to be pulled back by the female. Following a

short tug-of-war, she gives up and he moves on to mind his own business elsewhere on the limb. When the female curls back up in her ball to sleep he slowly make his way back over to her, and settles himself in for a nap as well.

Raya comes to see what all the napping is about and in the process wakes everyone up. This leads to the agitated male leaving the napping branch and the female readjusting her position and going back to sleep. Raya, bored with napping mom, swings over to where the male is lounging and he immediately finds somewhere else to be. So she plays a bit in the ropes and heads over to the fruit bowl for a treat. With the little one on the other side of the cage the male goes back to the female, there is no sign of grooming, the female asleep...again. Whatever plans of grooming the male had are gone, and he decides that now is as good a time as any to nap himself. Raya has finished her treat and heads back to the napping branch with the others. Now there are three curled up siamangs sleeping on a branch. Such an exhibit draws little attention from the masses and they are passed by. After a few inglorious moments of napping they stir to groom one another: male grooms female, female is grooming younger female. This last for a couple of seconds and everyone switches positions, so that the young female is grooming the adult female and she, in turn, grooms the male. Few more seconds pass, and the indulgence in grooming has, within the span of about five minutes, turned to complete indifference towards one another.

Everyone now leaves the napping branch and swings down to the covered hay bed at the door to the enclosure to pick up a delicious leafy green stalk of something. Reward in hand, or foot, they take off in various direction to enjoy it at their leisure. The male finishes his green stalk off, reaches down and picks up a leaf from the ground, licks the

water from it, wipes his face with it and discards it back to the ground. No napkin led deforestation for these guys.

Now everyone is on the dry side of the compound, out of fruit, and forced to eat the monkey biscuits, which they soften up by dipping in the water. Even at rest before, after, and even during, eating they usually have one arm straightened out holding onto a branch, rope, cage bar, or something. They actually move around terrestrially on the dry side, maybe they don't like walking in the water. Today's bipedality requires the assistance of one arm for balance, much like a bull rider uses. This was unobserved on the first day. These guys still do not swagger or waddle when they walk though. Siamangs still have a more fluid more deliberate gate than most of the other apes. (Humans excluded, well humans not in heels excluded, these guys still walk better than most women can in heels)

After a quick shakedown the adult female is back in the trees and around the walls of the cage. The male rests higher in the trees, while the females hang out around the edges, never out of visual contact with one another. I am sure this is much more difficult in the wild where they have around a square kilometer to themselves. Here they are content (?) to live in about 200 square feet with a lid only a few stories above their heads.

Ever the champion of the power nap, the adult female finds her way back to the napping branch. The male pulls a few more oak leaves through the bars before deciding to join her again. Raya beats him to her. He is annoyed but not discouraged; he just stops by and digs out a piece of fruit he had covered with hay and takes it up to the napping branch. The female is still asleep, Raya is grooming her, and the Male grooms the young

female and eats his fruit. The grooming lasts until he finishes his orange and the family all curls up together and sleeps again.

Another forty winks and the female, feeling crowded, retreats a little higher on the limb and reclines with her legs crossed to sleep again. The male and the young female remain in the crook and engage each other in some extensive grooming: paying special attention to the area around each other's eyes. This extensive grooming goes on for around 5 minutes, the longest stint of grooming observed so far.

The male, all groomed out, finds a comfortable spot along one of the rope swings and retires. The females are now involved in a major grooming session. This Mary-Kay party lasts almost as long as the Raya's grooming with the male. The adult female loses interest and returns, yet again, to the napping branch.

Compared to the last observation when there were droves of loud, obnoxious, and smelly people around, there were far fewer instances of vocalization. This leads me to believe that the "duetting" that is done by these apes is more to reiterate their territorial lines than to strengthen social bonds. These apes are in constant visual contact with each other and do not seem to need to vocalize to find each other. However when there is a large group of loud sapiens around they tend to vocalize more, which unfortunately draws a larger crowd that infringes even more on their territory, until they just give up and go take a nap.

I have observed nothing revolutionary to the generalizations that are given in our textbook and by professionals in the primate field. The only inference that I can logically make is the one mentioned above, and as a hypothesis I am sure it will not stand up to scrutiny. The final thought I have on the subject is that to really have an enjoyable day in

captivity, as a primate, at least, it would behoove you to pray for torrential rains that keep the people away. Then is it truly a peaceful day at the zoo.