

Borneo Orangutan *Pongo pygmaeus*



I want to thank you all for coming. It is great to see so many docents eager to learn. I am continually learning and a lot of times relearning about the animals at the zoo. I just wanted to start out and review the general characteristics of primates and ape specifically and also include a little bit on evolution. Then we will talk specifically about orangutans.

Order Primata



- Primates have larger brains relative to body size than other mammals
- Forward-facing eyes for binocular vision
- Nails, not claws on their fingers & toes as well as sensitive tactile pads for grasping, climbing and picking fruit
- Opposable toes and often thumbs for grasping, which enables them to climb and get food
- Live in social groups and have a longer period of development relative to other mammals.

What are the three types of primates? Primates are categorized as Prosimians, Monkeys (Old and New World) and Apes (lesser & greater).

Primates do not have a single characteristic that sets them apart from other mammals. They do have some unifying characteristics, including much larger brains than average relative to body size than other mammals.

They have extended gestation, where most births are singletons followed by a long period of dependence. They have longer life-spans than other mammals of a similar size.

Primates have a reduced sense of smell and are more dependent on vision as their dominant sense. Forward facing eyes provide binocular vision and allows them to take in the most visual stimuli. Stereoscopic vision (eyes overlap) results in depth perception. Why is depth perception important for the primates? This is extremely useful for forest-dwelling primates, as it lets them judge how far away the next branch is as they move from tree to tree. They also have color vision to varying degrees; this helps them perceive ripeness of fruit for their diet. Old world monkeys, apes & howler monkeys all have trichromatic vision rest of new world monkeys along with lemurs are dichromatic.

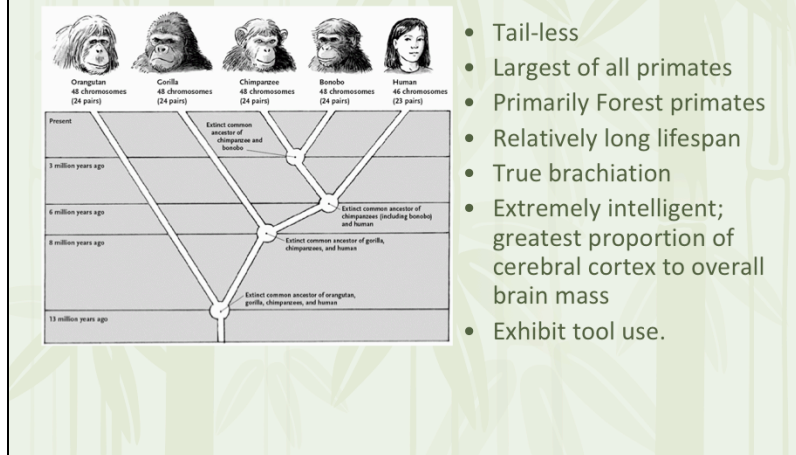
Most have 5 fingers and 5 toes; most have opposable thumbs and big toes; most have nails rather than claws. (which zoo primate has no thumb? black and white colobus) Nails allow primates to manipulate objects more easily. Two separate bones in the forearm and lower leg (ulna/radius, tibia/fibula) allows for better limb motion and precise movements. Clavicle provides support for the upper arm but also provides maximum movement at the shoulder

Touch pads on the fingers and toes have individual prints to them; fingerprints are unique.

Teeth are generalized in their features and can handle a diverse diet.

Primates spend their time in social groups. Group size and composition is species specific.

Great Apes



What is the primary difference between monkeys and apes? Apes are distinguished from monkeys by having no tail. Apes are the largest of the primates. They are primarily forest animals and are extremely intelligent. Tails in mammals often serve as a counter balance to the head and assist an animal in movement, especially running. Monkeys move around on all fours. Apes use long arms to swing from branch to branch. The trunk and legs hang below, giving an upright posture. A tail would get in the way.

Of the apes, there are lesser apes (gibbons & siamangs) which are generally smaller. They live in Southeast Asia with the orangutan. The great apes (orangutan, gorilla, chimpanzee, bonobo and humans) with exception of the orangutan are live exclusively in Africa.

Apes have a relatively long lifespan; not only do they live a long time but they also have a long rate of maturation. They take a long time to grow up and have a long spacing between successive births. What is the advantage of a long period of infant dependence? This gives infants a higher chance of survival and a time for social learning.

Great apes are less committed to a suspensory life than are the lesser apes and all are to some extent terrestrial in their habits. All of the great apes have the anatomical characteristics that allow brachiation, but most of them rarely use this mode of locomotion because they are too heavy to be supported by small branches.

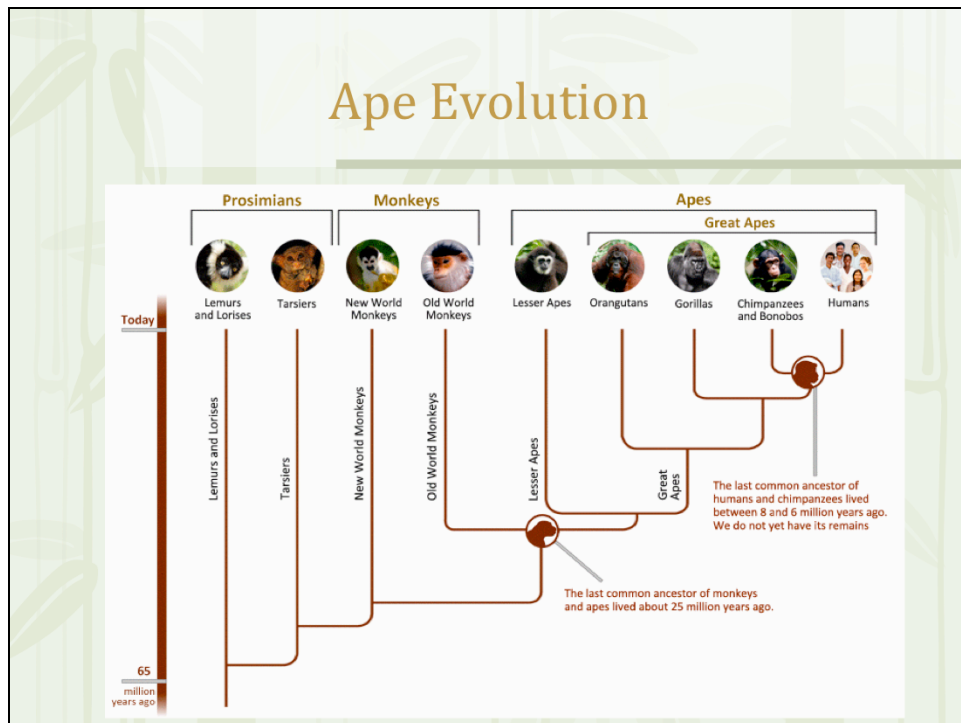
These adaptations to brachiation include extensive shoulder motion because of their ball and socket joint and a sturdy clavicle, which provides the only bony link between upper limb and the trunk. Hips too have a ball and socket joint and are mobile.

Apes have larger cerebellums than humans; the cerebellum is the part of the brain that controls posture and movement. Posture and movement are important traits needed in the demands of an arboreal, tree-dwelling lifestyle.

All great apes build nests for sleeping and resting, but have few unifying features in their social behavior.

Great apes exhibit tool use.

Ape Evolution



The oldest known primate-like mammal species can be traced back 65 million years; The first true primates evolved by 55 million years ago. They were small insectivores living in the trees in the warm moist climates. They resembled the modern prosimians with a longer wet nose and the sense of smell being an important sense.

The common ancestor of apes and monkeys lived in Africa ~25mya. Tectonic plates are moving away from each other. Seas were lower reestablishing a land connection between Africa and Eurasia that provided a migration route for primates and other animals between these continents.

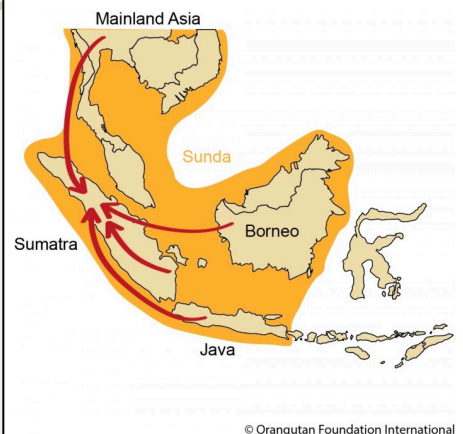
Great Apes split from lesser apes ~ 20 mya

Orangutans split off from the other great apes at ~14 million years ago - Orangutans share 96.4% of their DNA with humans. Orangs as we know them to day have been around for the past 2 million years.

Gorillas diverged off ~6-8 mya. Gorillas is ~ 98% of their DNA with humans.

Chimpanzees and Humans diverged ~4.5-6 mya. Chimpanzees and Bonobos share ~ 99% of their DNA with humans. (difference ~1.2%)

Orangutan Range



Today, orangutans are found only in the rain forests of the Southeast Asian islands of Borneo and Sumatra.

Orangutans once ranged as far north as northern India and southern China and as far south as the island of Java. About 12,000 years ago their range diminished to the island of Sumatra and Borneo. {Orangs evolved 2mya as we know them today}

There are three distinct species of orangutan: two are found on the island of Sumatra – Sumatran orangutan (*Pongo abelii*) and Tapanuli orangutan (*Pongo tapanuliensis*); there are no subspecies recognized. (Tapanuli discovered 2017 from analyzing DNA)

The Borneo Orangutan (*Pongo pygmaeus*), of which there are three subspecies, is found on the island of Borneo.

[Northwest Borneo orang: *P.p. pygmaeus* – west Kalimantan & Sarawak, Central Borneo orang: *P.p. wurmbii* – central Kalimantan, and Northeast Borneo orang: *P.p. morio* – Sabah & East Kalimantan]

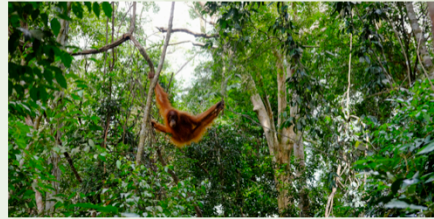
Each subspecies is differentiated by its geographic distribution and overall body size. The Zoo's oranges are from Northwest Borneo (*P.p. pygmaeus*).

Scientists have discovered that the newly found Tapanuli orangutan of Sumatra is more closely related to its cousins in Borneo than it is to its fellow Sumatran apes.

The land bridges between Sumatra, Java, Borneo and mainland Asia allowed orangutans from these areas to re-claim habitat in Northern Sumatra after the explosion of Toba volcano eliminated the original population. When sea levels rose after the last ice age, the islands and the mainland became isolated from each other again. The orangutan populations on Java and the mainland later became extinct.

Orangutan Habitat

- Tropical and subtropical moist broadleaf forests in lowlands and up to 4,900 feet.
- Almost exclusively arboreal; spend 95% of their time in trees.
- Live primarily in canopy.



The name “orangutan” translates to “person of the forest” in the Malay language. (“orang” means “person” and “utan” is derived from “hutan”, which means “forest.”)

Orangutans are found in tropical rainforests where they spend 95% of their time in the canopy-nearly their entire lives are spent in trees. Primary forests range from swamps and other areas near sea level to mountainous forest at 4,900 feet. They prefer upland rather than lowland forest areas, which tend to be wetter.

Adult females have a relatively small home ranges whereas adult males occupy a larger home range and may overlap with several adult females and even some adult males. Males move around their home range more each day, partly in search of more food to supply their greater bulk but also to monitor the local females and their male competitors. Males are generally intolerant of each other and will avoid each other in overlapping home ranges. Orangutans are not territorial.

The overlap of the home ranges of males and females means that orangutans of both sexes encounter each other while traveling and feeding, and may have brief social interactions. Generally they are solitary except females with young babies.

Orangutans



- Only great apes of Asia
- Arms 1.5 x longer than legs
- ~ 7 x stronger than humans
- Brachiate
- Do not knuckle walk
- Rely primarily on keen eyesight and color vision

Orangutans are the world's largest arboreal (tree-dwelling) mammals. They are intelligent and generally peaceful and quieter than other great apes. They are masters of escape and have been known to unlock doors with a length of wire.

Orangutan coloration can vary greatly between dark-brown and pale reddish-orange but is most often reddish-orange in color. Orangutan hair is thin and shaggy. Borneo orangs tend to be darker in color than those on Sumatra, with a broader face and shorter beard; they also do not have as close of social bonds than their Sumatran cousins.

Limbs are specialized for suspensory behavior. Orangutan arms are one and a half times longer than their legs. When stretched out to the sides, an adult male orangutan's arms may measure 7-8 ft. in length. Although not as strong as a gorilla, an orangutan is about seven times stronger than a human. Their strength enables them to brachiate from tree to tree while support the weight of their body.

Shoulders, wrists, hips and ankles are all highly mobile. They have full rotation at these joints, allowing their arms and legs to move at almost any angle. Their hands and feet have long, hook-like digits with a shortened thumb/big toe. What advantage do orangs have with their big digits shortened? The opposable thumbs and big toes are small in size so they do not hinder swinging through the forest but they are still able to use them to grasp and manipulate objects.

Adult males, especially the older ones, frequently descend to the ground to travel. Surface locomotion is quadrupedal with clenched fists or open palms but they do not knuckle walk.

Orangs extensively rely on their keen eyesight and color vision. Color vision helps primates detect ripe fruits and vegetation.

Lifespan ~ 35-45 years (50's in captivity)

Orangutan Skull



Eyes are set close together. Orbits are completely enclosed in bone (postorbital closure); there is a bony cup around each eye. The closure helps protect primates' foremost sense — vision. The sense of smell is not as keen as other senses, such as vision but sense of smell plays a role in reproduction, communication, and food evaluation.

Orangutans have a high, rounded braincase. The skull is more sloping than that of the chimp and gorilla.

Humans and orangutans lack prominent brow ridges. It has been thought that the purpose of the brow ridge was to reinforce the weaker bones of the face while eating. Computer modeling has shown that is not really the case. Scientists think the brow ridge might be used as a physical sign of aggression to intimidate others. Orangutans however are generally peaceful animals and they lack a prominent brow ridge. The lack of a brow ridge allows more facial expressions. Because orangutans are highly visual in nature they also use a variety of visual expressions to communicate.

Orangutans have 32 teeth, the same number as humans; the teeth of primates are generally less specialized than those of other mammals. Molars are flat for crushing hard seeds; they are low cusped teeth that grind against each other. Jaws are powerful and capable of cracking, crushing, and chewing fibrous foods such as fruit with spiny coverings, nuts, and tree bark.

They have large upper central incisors and small peg-like lateral incisors. Large incisors are an adaptation in fruit eaters.

Canines are large and sexually dimorphic. The males have longer canines because they are used in displays to threaten away danger and when they fight.

Male-male competition for access to sexually receptive females is a major factor in orangutan adaptations. The interactions between adult males are usually aggressive, occasionally involving fierce battles, but most interactions are only vocal exchanges.

Sexual Dimorphism

- Sexual dimorphism: Males weigh 110-220 lbs, Females weigh 66-110 lbs
- Most males have cheek pads or flanges
- Throat sacs larger in males than females



Unflanged male lower left;
flanged male lower right.

Among primates, orangutans exhibit one of the most extreme examples of sexual dimorphism. Males are about twice as large as females with males weighing 110-220 and females 66-110 lbs. Sexually mature male orangutans have cheek pads or flanges that are composed of fibrous tissue. These pads are located between the eyes and ears and have a similar appearance to a horse with blinders on. These cheek pads are thought to help extend the range of their vocalizations by channeling the sounds directly, similar to a megaphone. In addition their massive cheek pads enhance adult male orangutans' visual impact, making their threats more convincing.

There are two “types” of mature male orangutans: flanged and unflanged males (see photo above). Why this is the case is not known. Both are sexually mature and able to father offspring; the flanged male is more desirable to the female. Flanges may take up to 20 years to grow and is triggered by an increase in testosterone. Unflanged males look more like females and they are smaller than the flanged males. Unflanged males often resort to “forceful copulation” in order to attain matings.

Both males and females have a hanging sac from their throats. As males mature, their throat sacs become much larger. The throat sacs are inflated to make their vocalizations carry further.

Orangutans have an assortment of both verbal and non verbal methods that they use for communicating. Females do some vocalizations but are quieter than males; they are able to express excitement or fear and they warn their babies to stay close by a soft, scraping sound. Communication is also expressed through touch, facial expressions and gestures.

Male orangutans are capable of a “long call,” exceptionally loud calls that carry through forests over ½ mile. These calls help males claim territory, call to females, and keep out intruding male orangutans. They may also pull small trees and limbs down to add a crashing sound along with the call. This “snag crashing” is comparable to chest beating in gorillas; they are letting off steam.

Adult Male Long Call



Only sexually mature, flanged males emit long-distance calls. “Long Calls” not only serve to attract females, but also contain information on the identity and the context of the caller. Individual recognition is important in long distance communication when individuals are separated beyond visual contact.

When females with dependent offspring hear a long call, they tend to move away from these calls whereas a small sample of sexually active females seem to approach the caller.

If a flanged male hears a long call or a tree falling or pushed over, they may respond back in an aroused state with a long call which is slightly faster and has pulses of shorter duration than the traditional long call. When an aroused long call was heard, females appeared to ignore the caller all together.

Orangutan Diet

- Primarily frugivorous; fruit composes 60% of diet
- Favorite durian fruit
- Also eat leaves, insects (termites and ants), bird eggs, flowers, and honey.
- At the Zoo, diet consists of fruits, vegetables and primate chow.



Durian fruit
Durio sp.



Bornean Slow Loris
Nycticebus menagensis

Orangs have a very diverse diet and feed on twice as many plant genera as do other great apes; their diet consists of over 500 different plant species. Orangutans are primarily frugivores with about 60% of their diet being fruit. They will also eat considerable amounts of new leaves, shoots and bark. There is a difference in the diet of males and females: Males eat more termites than the females, getting more protein. Females tend to eat more fruit and during fruit scarcity their reproductive cycles are affected and conception suffers.

Orangutans favor a fruit called durians. The durian is distinctive for its large size, strong, pungent odor, and thorn-covered rind. Orangutans use their powerful jaws to break into such fruits.

The orangutan has been know to catch and eat a slow loris.

Orangutans get most of their water from the succulent fruits they eat, but will also drink from rivers and streams.

In some regions, orangutans occasionally eat soil to get minerals that may neutralize the toxins and acids they consume in their primarily vegetarian diets.

Orangutans use their lips to detect food textures before biting into them and to exaggerate facial expressions used in communication. Orangutans will carry large objects in their mouths while keeping their hands and feet free for traveling.

Orangutans have hind gut fermentation; their cecums are quite large to process the largely herbivorous diet.

Orangutans are very important to their ecosystem. During high fruiting season, they are great seed dispersers, which helps keeping trees coming back throughout the forests.

Social Structure

- Extended social system – single female/offspring or solitary male.
- Adult females stay with their young on average for 8 years; this is longer than any other great ape.
- Orangutans are not territorial but adult males will display threatening behaviors upon meeting other males.



Adult orangutans are solitary but mothers stay with their young on average for eight years—longer than any other great ape. Only consistent social group among orangutans is the female with her immature offspring.

Although orangutans are not territorial, adult males will display threatening behaviors upon meeting other males. Orangutans exhibit an individual fission/fusion; adult orangutans may come together in travel bands, temporary feeding aggregations and consortships. Adult males and adult females form a consortship group for a few days, weeks, or even months after copulation.

Orangutans will use their lips, tongues, hands, and feet to assist with self-grooming. They rarely groom each other. Because they are highly flexible, orangutans can groom almost any part of their bodies. Female orangutans engage in social grooming more often than males.

Reproduction

- Most mating occurs in heaviest fruiting months (Dec. - May)
- Consortships between copulating pairs, some promiscuity
- No linear dominance
- Longest birthing interval of all great apes
- Care given exclusively by female



Orangutans exhibit the longest infancy and thus birthing intervals of all great apes with about eight years between births. After a female orangutan has given birth, her next 8 years are devoted to her offspring's survival.

Adult males produce a musk-scent that is marked throughout their home range as an attractant for receptive females. Generally, mating is the prerogative of the female.

The primary mating tactic involves "harassment" of female by males. Most mating occurs in the heaviest fruiting months (December to May). Male-female sexual encounters vary dramatically from violent interactions between young unflanged males and adult females (may be considered rape) to occasional, long erotic treetop trysts, which usually occur between older adult males and females.

Nests are built with bent branches, sticks, and leaves and orangutans nap or sleep in them. Fathers will play no direct role in the upbringing of their offspring.

Estrous cycle lasts ~ 29-30 days lasting 3-4 days

Gestation ~8.5 mos

For the first two years, young stay in close physical contact with their mother; for the first year infant clings to her abdomen as she moves through the forest canopy.

At ~4-5 years when they are weaned, young animals become increasingly independent of their mothers and formed small groups of their own. Young orangutans are highly social, establishing bonds with same gender and age mates. Young orangutans will travel and sleep with their mothers until ~ 8 years of age, males move off on their own and females will often establish home ranges overlapping their mothers.

Sexual maturity: male 8 – 15 years; female 6 – 11 years, tend to have first offspring at about 14–15 years.

Tool Use



Orangutans have been known to use tools but this tool use is more limited than reported for the chimpanzees. Sumatran orangs are known to use tools more than the Bornean orangutans. Specific ways of using tools comes from observing others. You will see difference in how tools are used in different areas.

Sticks are used to help forage for insects and honey. They help knock fruit down from trees and act as visual deterrents when threatened (shaking and/or throwing them). Leaves have been used as a sponge to obtain water from streams and to wipe off feces and unwanted substances from their hair. A bunch of leafy branches will be held together as an "umbrella" while traveling in the rain. This is the main use of tools for the Bornean orangutan.

Predators



Clouded leopard
Neofelis diardi



Reticulated Python
Python reticulatus

Humans are the biggest threat and predators to orangutans. Orangutans don't have very much to defend themselves with except their size. The fact that they are found almost always in the trees helps to protect them from a variety of land animals.

Sumatran tigers constitute the major predatory threat to the Sumatran orangutans and the presence of predators is probably the reason that Sumatran orangutans are rarely seen venturing onto the ground.

Bornean orangutans, on the other hand, are not subject to predation by large cats— there are no tigers on Borneo. They may be seen on the ground more frequently than the Sumatran orangs.

Borneo does have clouded leopards; clouded leopards are capable of killing adolescents and small adult females, but have not been known to kill adult males.

Large reticulated pythons that live in the trees are also a threat to them. Reticulated python is world's longest snake. (32', 350 lbs)

[green anaconda worlds largest – 29', 550 lbs]

Conservation Status

- Critically Endangered on the IUCN Red List and Appendix I of CITES
- During the past decade, orangutan populations have decreased by ~ 50%.
- As a result of poaching and habitat destruction, viable orangutan populations could be gone within the next 20 years outside of national parks and reserves.
- Climate change is affecting rainfall in orangutan habitats resulting in less abundant food and nutrients.



Just as polar bears have become an ambassador for global warming and climate change from human actions, orangutans have become the symbol for tropical rainforest conservation.

All orangutans are Critically Endangered on the IUCN Red List and on Appendix I of CITES. Their numbers are decreasing due to deforestation (logging and palm oil plantations), and the bushmeat and exotic pet trades.

Climate change is another threat to orangutan conservation. The affects that human activity have had on Indonesian rainfall have made food less abundant. With less rain, there will be less fruit. Remember, fruits make up more than 60% of orangutan diet, so orangutans are less likely to receive full nutrients so that they can be sufficiently healthy to breed. The birth rate for orangutans has been decreasing largely due to a lack of sufficient nutrients as a result of this habitat loss.

Orangutans play a vital role in seed dispersal; especially for the larger seeds, which cannot be dispersed by smaller animals. Orangs help maintain the health of the forest.

Tapanuli Orangutan (*P. tapanuliensis*) – populations declining with fewer than 800 individuals. Only about 10% is in protected areas.

Sumatran Orangutan (*P. abelii*) – populations declining with 7,000 individuals. Two new populations are being reintroduced from confiscated illegal pets. To date more than 260 have been reintroduced. 35.6% of population is in protected areas.

Borneo Orangutan (*P. pygmaeus*) – population declining. #s not as well known. Estimates 55,000 individuals. ~31-40% of population is protected. Many habitat patches in the area are small and fragmented.

Northwest Bornean orangutans are the most threatened subspecies. Its habitat has been seriously affected by logging and hunting, and a mere 1,500 individuals or so remain.

Central Bornean orangutans are the subspecies with the most animals, with at least 35,000 individuals.

Recovery Efforts

- Dr. Biruté Mary Galdikas has been working with Orangutans for over 40 years.
- Orangutan Foundation International (OFI)
 - Research
 - Rescue, Rehabilitation and Release
 - Forest Protection
 - Community Programs



Dr. Galdikas conveyed her passion of orangutans to Dr. Leaky who then provided funding for orangutan studies, as he had previously done with both Jane Goodall for chimpanzees and Dian Fossey for mountain gorillas. Over the last 40 years, she has been working to protect the orangutans and founded the Orangutan Foundation International as the vehicle to do so. Understanding orangutan behavior becomes an important and necessary tool to help save the species.

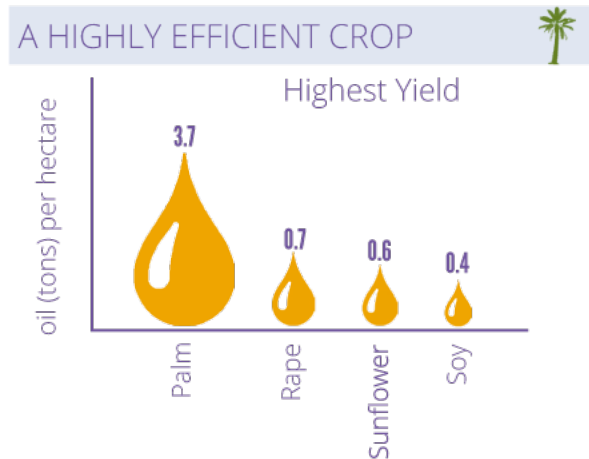
A number of orangutan rescue and rehabilitation projects operate in Borneo. This includes Borneo Orangutan Survival Foundation and the Orangutan Foundation International. These organizations are working on removing orangutans from the commercial pet trade, by rehabilitating and then releasing them back into the wild. Along with this, the locals/government officials are being educated as to why capturing wild animals is bad and the rehab center becomes a tourist attraction to help ensure the protection of forests in years to come.

As another viable solution, World Wildlife Fund launched a sustainable honey business on the island of Borneo. Where they previously would have taken the whole hive to get the honey, they now follow rules that leave the core of the hive intact so the bees will be more productive. They are also placing man-made hives in wet areas, because orangutans do not swim and prefer the higher elevations. The sustainable honey provides income and deters destruction of orangutan habitat.

Forest land is being purchased and guarded and set up as reserves and protected forests. Well-managed protected areas and wider forest landscapes help to connect sub-populations.

Education programs concerning orangutan and forest conservation is provided to local communities and palm oil companies. Employees are trained to implement a Zero Tolerance policy on the killing, harming, or capturing members of endangered species, including orangutans. Locals want orangutans in the forest because they disperse the seeds for fruit trees.

Promoting land use plans that provide an economic benefit to local communities, while at the same time protecting the forest, is an important conservation strategy. It is important with all these programs to get local buy in and provide a good financial alternative.



The biggest threat to wild orangutans is deforestation due to agriculture; the main crop that is planted is palm oil. Palm oil is used in so many foods we eat and products we use every day, like cookies, crackers, toothpaste, lotions and cleaning products. More than half of manufactured items found in grocery stores contain palm oil.

Palm oil is a crop that a huge economic benefit to the people of southeast Asia. From 1990 to 2010, there was a 600% increase in the amount of land dedicated to palm oil production in Indonesia. Because the palm oil industry is so lucrative, it is also spreading to other tropical areas of the world such as Africa and South America which is a great threat to other animals that are already under the brink of extinction in those areas.

Palm oil can be produced in a responsible way without cutting down more rainforest. On 2004, The Roundtable on Sustainable Palm Oil (RSPO) which promotes a sustainable palm oil industry was created as a solution to reduce deforestation. Look for products that are RSPO; these are products designated as containing certified sustainable palm oil (CSPO) and are considered orangutan friendly.

At this point in time, those who are members of the RSPO (companies, plantations and mills) have not necessarily reached 100% certified sustainability. However, as members of RSPO they are taking steps toward sustainability, and are committed and obligated to become 100% certified sustainable by a goal date agreed upon with the RSPO. Currently only 19% of global palm oil is RSPO certified sustainable palm oil.

Why not boycott? The thinking is not to boycott palm oil products as the US doesn't use as much palm oil as the more developing countries and might not have as great an effect as stressing sustainable palm oil. Boycotting may also create bigger problems. The industry would shift to other types of vegetable oil to meet the global demand. These products need more land and produce less vegetable oil per tree than a palm oil tree. Palm oil is the highest yielding vegetable oil- 1 hectare of land annually produces: .4 tons soybean oil, .6 tons sunflower oil, .7 tons canola oil (type of rapeseed) but 3.7 tons palm oil. [1 hectare = ~ 2.5 acres]

[GHG - greenhouse gases]

[paraquat - toxic herbicide, widely used]

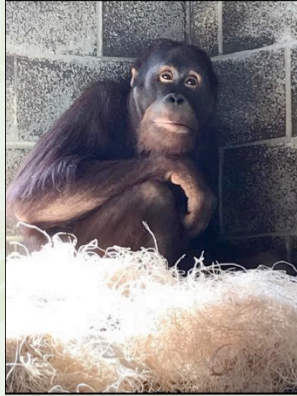


Cheyenne Mountain Zoo is offering a way to choose environmentally friendly foods and health, beauty, and cleaning products that are purchased every day. You can go to their website (www.cmzoo.org/palmoil) and look for their guides for making responsible decisions to purchase Orangutan-friendly products. You can also download their sustainable Palm Oil Shopping App– just scan a product in the app, and it will tell you how that company is doing with using responsibly sourced palm oil for their products. The easiest thing you tell Zoo visitors is: “If you want to help wild orangutans, then support the companies in this shopping app – they are making the commitment to use sustainable palm oil.”

In order for conservation to be a successful, we have to consider the human element as much as the animal one. This is where sustainability comes in. The solution is to support sustainable palm oil and be an educated consumer. Community-based conservation is key in saving any species.

GAP – *Pongo pygmaeus pygmaeu*

- Berani – 9.5 year old male, born 9/18/2009
- Judy – 16 year old female born 5/02/2003



Berani

Judy



9½ -year-old male Berani (means “brave” in Malay), born 2009 at the Erie Zoo in Erie, Pennsylvania.

16 year old female Judy, born 2003 at the Henry Doorly Zoo in Omaha, Nebraska. Orangutans are part of a SSP but there is no breeding recommendation at this time.

The two animals are meeting each other and getting acclimated to their new exhibit.

The female came from an environment where she was more socialized than where the male came from so she is more confident than he is.

These two will be residing in the triple grotto and the new Orangutan garden outdoor habitat. The triple grotto was designed to exhibit both chimpanzees and orangutan’s without barriers. In 2003, the Zoo still had orangutans there.

The Orangutan Passage is 48 feet long and almost 14 feet high; the chimpanzee passageway is almost 70 feet long and about 13.5 feet high.

1.0 Northwest Bornean orangutan, DOB 9/18/2009, arrived at SF on 4/11/2019 from the Erie Zoo in PA.

0.1 Northwest Bornean orangutan, DOB 5/02/2003, arrived at SF on 5/02/2019 from the Henry Doorly Zoo in Omaha, NE.

Sources

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