

## SUMATRAN ORANG-UTAN

Scientific name – *Pongo abelii*



### Background

*The Sumatran orang-utan is the most threatened of the six great ape species – the least threatened is of course the human. The orang-utan really is 'King of the Swingers'; it is the world's largest tree-dwelling animal and is superbly adapted for the high life. Sadly, if the uncontrolled destruction of their forest habitat continues, very soon there will be none of these shy and secretive apes left in the wild.*

*Durrell has been working with Sumatran orang-utans since 1968 and between 1963 to 1990, also bred the Bornean species. Over the years, 7 valuable babies have been born here and some are now at other institutions continuing to make a valuable contribution to the breeding programme for their critically endangered species.*

### Species classification

The Great Apes comprise the primate family known as the *Hominidae*, which includes gorillas, orang-utans, chimps and humans. Of the Great Apes, orang-utans are actually the most distantly related to humans – they share a mere 96.7% of their genes with us, whereas we have an amazing 98.4% in common with our closest ape cousins the 2 species of chimpanzee *Pan paniscus* and *Pan troglodytes*. Until recently, all orang-utans were classified as a single species *Pongo pygmaeus*, which was separated into two sub-species - the Bornean and Sumatran orang-utans, *Pongo pymeaus pygmaeus* and *Pongo pygmaeus abelii*. Orang-utans from the two islands have now been distinguished as different species because of genetic differences that have resulted from their geographical isolation – *Pongo pygmaeus* in Borneo and *Pongo abelii* in Sumatra.

### Description

Orang-utans have long, sparse, coarse ginger hair, which covers most of their body – only the palms of their hand, soles of their feet and part of their face is bare. The colour varies from bright orange in young animals to maroon or dark brown in some adults. Skin colour also varies, from pink in youngsters to almost black in some adults. The extent of hair coverage and its thickness varies between individuals, depending on age and sex. Sumatran orang-utans are generally thinner than Borneans, have a paler red coat, longer hair and a longer face. The Sumatran male's cheek pads are covered with fine white hair. Contrary to popular belief, the name orang-utan has nothing to do with the colour of their hair, it is a Malaysian term that means 'forest man' - according to folklore, these apes are really people who do not speak for fear that they will be put to work!

Orang-utan hands and feet are long and dextrous, which effectively gives them two pairs of hands! Their arms are also very long; with a span of some 2m (6½ft). They have brown eyes with white around the iris, which can give the impression of a more 'human' face than our other close relatives the gorillas and chimpanzees. However, orang-utans have fewer facial muscles and so lack the range of expressions that we have, which may account for some people mistaking their demeanour for boredom!

Adult male orang-utans can reach a height of 1.4m (4ft 8in) and weigh an average of 100kg (220lb). In captivity, their hair grows much longer than that of the females and it hangs in impressive ginger tresses up to a metre long, but in the wild it is constantly trimmed as they travel through the trees. Males also have 'flanges' around the face and a large fleshy throat sac (that inflates to amplify their vocalisations) which develop when they reach maturity, and emphasise their size to deter smaller males who may challenge them. Male orang-utans mature at around 15 years in captivity and not until 20-25 years in the wild. This difference is because adult males are usually kept apart in captivity and so do not risk conflict with an early show of strength. Females are usually half the size of males and weigh 35-55kg (77-121lb). They also have shorter body hair, less facial hair and lack cheek and throat flaps. In the wild orang-utans usually live from 40-45 years, but in captivity their life expectancy is longer and still increasing – a female has set the record at 58 years.

### Distribution and habitat

As their name implies, Sumatran orang-utans are found only in Sumatra - a large Indonesian island in the eastern Indian Ocean. Their range

is extremely limited and consists of a small area of fragmented forest in the northern tip of the island. They are found in lowland and hilly tropical rainforest including peat-swamp forest. Orang-utans have an arboreal lifestyle; they feed, rest, play and sleep in the tall trees of the rainforest. They build nests to sleep in, a new one every night, by folding down branches to make a platform, sometimes with extra vegetation added to make it more comfortable. Nests are also made during the day for a 'siesta' before the business of finding food is resumed.

Orang-utans are the largest arboreal animals and are very well adapted for moving through the trees. They are immensely strong, but slim compared to ground-dwelling apes like gorillas, and have large hands and feet with a powerful grip, as well as eyes that are close together, which makes them good at judging distance. They never jump between branches, but use both their hands and feet to move securely. When a large gap between two trees is encountered, orang-utans usually close the gap by swaying on the branches until the next one is in reach. In Sumatra orang-utans never travel on the ground, because they face the risk being eaten by tigers. However, in Borneo, orang-utans have no predators on the ground and adult males in particular will occasionally venture down, especially to move between fruiting trees. Although more energy efficient and often quicker, movement at ground level appears cumbersome – their arms are used like crutches with the body swung between them, or held upright for balance as they walk upright.

### **Feeding habits**

In the wild, orang-utans spend much of the day searching for food and eating – they may sit in a single tree for a whole day, gorging themselves on fruit. Travel through the forest is slow (maybe just a few hundred metres a day), but orang-utans have an uncanny ability to locate fruiting trees. They have detailed knowledge of the forest and their diet varies according to what's in season. They are known to eat the parts of over 200 different plant species, including fruits (probably 60% of their diet), leaves, buds, stems, bark, insects and occasionally raid nests to get eggs, small mammals and birds. The grand total of the different types of food that orang-utans eat is estimated at around 400. Their teeth and jaws are large and powerful for tearing open and grinding up coarse foods like spiny fruit casing, hard nuts and tree bark.

Orang-utans are highly intelligent and adept at problem solving. They make simple tools to help them get things that are otherwise out of reach.

Examples include: sticks to probe ant and termite nests for insects to eat and remove seeds from fruits with stinging hairs, crumpled leaves as a sponge to obtain water from tree holes and large leaves as an umbrella during a downpour.

### **Breeding**

Orang-utans are generally thought of as solitary, even though they may congregate in areas where favourite foods are available,. However, despite this apparent lack of interest in each other, orang-utans whose ranges overlap do recognise each other individually and related females often have neighbouring ranges. In fact orang-utans do have a highly complex social system, it is just more subtle and less well understood than those of the chimpanzees, for example. As less overtly social apes, orang-utans use vocalisations less often than their more social relatives, but are still capable of a wide range of vocal expressions. These include 'kiss-squeaks'- a sign of annoyance, distress calls by infants, submissive noises by subordinates and loud territorial 'long-calls' - bellowing or grumbling noises made by adult males that can be heard over 1km through the forest, probably to warn other males away and attract females for mating. An adult male has a 'home range' that includes the ranges of as many potential mates as possible, in which he will ward off encroaching males. Once he has mated with all these females at their receptive time and made them pregnant, a dominant male can alter his range to include a fresh supply of females!

A male will sometimes remain with a female for a number of days after mating and she may have one or two offspring travelling and sleeping with her. Breeding is not seasonal – it may occur throughout the year, and pregnancy lasts for 8½ months. In the wild an average female will have 3-4 infants in the 20 or so years of her reproductively active life. Single infants are usually born and are dependent on their mother for food, warmth and transportation during the first 3 years. After this time an infant is less dependent on its mother, but it may remain with her until 8-10 years old - even after she has another baby, on which she will focus most of her attention. Adolescent Orang-utans are the most sociable and sometimes come together to play for a few hours. Orang-utans become sexually mature at about 8 years old, although few will actually breed before the age of 15, and males are unlikely to breed until they attain their fully mature appearance. However, sub-adult males have an alternative mating strategy of

forced copulations (rape), which could account for a considerable percentage of births.

### **Conservation status**

Orang-utans once lived in the tropical rainforests of many Indonesian islands and much of mainland South East Asia up to as far north as China. Although there is evidence that they were hunted in the past for food, this is no longer a major threat. The pet trade, which was booming from 1900 to the 1960s, with a further surge in the 1980s, resulted in the death of up to 30 000 orang-utans, mostly Borneans. For every young orang-utan that ends up in captivity there is a loss of about 50 from the wild population, due to the number that are killed before just one survives and loss of a potential breeding animal. Since 1975 orang-utans have been listed under Appendix I of CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora), which affords them the highest degree of protection against international trade. They are also legally protected from hunting throughout their range, but these regulations are difficult to enforce.

As for just about every threatened species that appears on the dreaded Red Data List, habitat loss is now the major contributor to the orang-utan's continued decline. Their forest home is being felled at an astounding rate, to accommodate and feed a growing human population and to provide hardwood to developed nations, which boosts the economy of this poor region. Both species of orang-utan are facing a severe risk of extinction, and it is debatable which one is in a worse situation. The Borneans have the largest population – around 15 000, but this is divided into 8 or 10 isolated sub-populations, which makes the species very vulnerable, whereas the number of Sumatrans is estimated to be just 6 500 at the most, with the current rate of decline around 1000 per year. The species' respective classifications on the World Conservation Union's Red Data List (IUCN, 2000) are Endangered and Critically Endangered – they face a very high risk of extinction in the near future.

### **In the wild**

The Indonesian government has begun to establish reserves for orang-utans, and those found in logging areas are transported to these sanctuaries. There are also rehabilitation centres where orphaned youngsters are cared for and taught to fend for themselves before they are returned to the forest. However, these measures can only save a small number of animals and overcrowding and inbreeding in the relatively small, isolated reserves are likely to

cause problems for the population. The reserves are also not policed effectively and commercial forestry still goes on in these supposedly protected areas. In fact illegal logging outstrips legal logging by 4:1 in Sumatra.

Durrell's former orang-utan specialist, Ian Singleton, spent 2 years in the swampy forests of Sumatra, tracking orang-utans to determine how far they travelled during the year. This allowed him to establish the total area needed for the apes to live in and the routes they used to travel around it. One important discovery was that they were not using the areas set aside as reserves. He also found that females move through the forest in groups, when previously it had been thought that they were solitary. Depressingly, Ian also discovered that illegal logging is rife and extensive, and when he confronted some of the culprits, he was threatened with a chainsaw. It is clear that further education of the local population is still critically important to ensure the species' survival.

### **The future**

The outlook for Sumatran orang-utans is bleak, and devastating forest fires in 1997-8 made a desperate situation even worse. As with every environmental problem, there is no easy answer, but there is a glimmer of hope – the Sumatran Orangutan Conservation Programme (SOCP). Dr Ian Singleton is the scientific director of this fairly recently formed organisation, which repatriates illegally held apes to the forest. A 120,000 hectare park in the south of the country is ideal for orang-utans and has historically held them. The SOCP has put 50 individuals into the park and there have subsequently been two wild births, a great step forwards! A genetically viable population is thought to be 500, so there is a long way to go, but they certainly have a chance of turning the tide of extinction. Durrell is proud to support the SOCP's work on an annual basis and currently holds 8 captive individuals in Jersey, who are powerful education tools for people who may never see them in the wild, but can have an impact on their status. They are also ambassadors for their wild counterparts and many vital captive management and husbandry techniques have been employed conserving them in Sumatra

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