



CHIMPANZEE

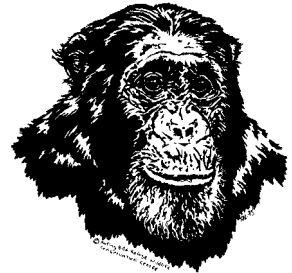


Phylum: Chordata; Class: Mammalia; Order: Primates; Family: Pongidae - The family Pongidae includes the “great apes” - chimpanzees, bonobos, gorillas, and orangutans.

Pan troglodytes

Chimpanzees are highly intelligent animals. Their ability to learn, to plan ahead, and to use objects as tools to solve a problem has been demonstrated in field and laboratory observations. Chimpanzees are our closest living relatives. Genetic analyses have revealed that we share 99% of our genetic material with chimpanzees.

There are 2 species of chimpanzees, the common chimpanzee (*Pan troglodytes*) and the bonobo (*Pan paniscus*). The bonobo is also referred to as the pygmy chimpanzee, although its size does not differ greatly from that of the common chimpanzee. Bonobos are also an endangered species and are restricted to a small region in the lowland rainforests of the Zaire River Basin south of the Zaire River. The name bonobo probably “stems from a mispronunciation of Bolobo, which, painted on a crate, was the name of the town in Zaire from where the first specimens were taken” (Watkin 16).



Weight: 100-150 lbs. (males), 60-110 lbs. (females)

Height: 4+ feet (males), 3 feet (females)

Armspan: about 50% greater than the animal's height

Lifespan: more than 40 years

Habitat: Their habitat varies widely even though they live in the tropical rain forest belt - forests, open woodlands, bamboo forests, swamp forests, and savannas.

Range/distribution: Populations of chimpanzees are found scattered throughout several Equatorial African countries.

Status: **ENDANGERED**

- Wild population estimates range from 100,000 - 230,000 animals
- Scientists estimate that just 50 years ago, millions of chimpanzees could be found in central Africa.

Threats to survival:

Rain forest destruction is perhaps the greatest threat to the chimpanzee. The forest is cleared for logging, agricultural use, and firewood collection. Habitat loss forces chimpanzees into smaller, isolated pockets of habitat. This isolation of communities may lead to inbreeding within individual communities. When chimpanzees are forced into smaller areas, group dynamics also change. Scientists believe that forest logging has caused escalated warring between chimpanzee communities in the African country of Gabon. Even though much of the logging is selective cutting, rather than clear-cutting, human presence appears to be causing some chimps to flee into neighboring chimp communities, where they are attacked because they are intruders. An estimated 20,000 of Gabon's 50,000 chimpanzees have died (Westrup 9).

In many countries, chimpanzees are hunted for medicinal or “magical” uses. Illegal capture for the pet trade or research purposes continues to be a concern. Female chimps are killed to capture the babies. Many chimps may die while being smuggled.

Chimpanzees are also killed for meat or “bushmeat”. While indigenous people were once able to trap and hunt in a sustainable manner, many of today's “market hunters” set snares that kill or seriously injure any creature that happens across them. Forest destruction and the presence of roads built for the logging industry have made forest animals easier targets for hunters. The roads have also provided easier access to markets.

Diet in the wild: A chimpanzee's primary diet consists of **fruit and other vegetation** such as leaves, flowers, and seeds. Insects make up a small portion of their diet. Chimpanzees will “**fish**” for termites by inserting sticks or leaves into termite mounds and eating the termites that collect on the object. Chimpanzees will also occasionally eat **meat** - bushbuck, monkeys, bushpigs, and baboons. Leaves may be added to soft fruits, eggs, or meat to form a “wadge” that the chimpanzees will hold in their mouth for 10 minutes or more to extract the juices.



Chimpanzees **may spend over half of their day feeding and looking for food** sources. When a food source is located, the chimps will often vocalize with loud calls to inform other community members that food has been found.

Special features:

- Chimpanzees **use and manufacture tools**. Objects may be used in the following ways:
- Sticks are used to investigate objects the chimps cannot reach
- Leaves act as sponges to gather rainwater from holes in tree trunks when the chimps cannot reach the water with their lips.
- In the evening, chimpanzees build **sleeping nests** of twigs and branches bent together. Nests are built in trees usually at a height of 3 - 30 feet.
- Chimps have **opposable thumbs** and thumb-like big toes. They can grip with both their hands and their feet when climbing.
- A chimp's arms are longer than its legs, an adaptation that helps them move easily through the treetops. The process of swinging through the trees from branch to branch is called **brachiation**.
- Chimps usually **walk on their knuckles** and the soles of their feet. They are also capable of walking on two legs.
- Chimpanzees, like humans, have full **color vision**.
- Chimpanzees have been taught American Sign Language. A chimp named Washoe became famous for this ability.

Behavior and Social Organization:

(Chimpanzee behavior and society is very complex. All of the information cannot be covered in a few short pages - volumes have been written on chimpanzee behavior. For more information go to the RHZ library)

- Chimpanzees are **diurnal** but sometimes move about at night. They feed for 6-8 hours during the day and forage over a distance of 1-10 miles or more. Peaks of activity occur in the early morning and at around 3:30 - 6:30 PM.
- "The chimpanzee community is a **fusion-fission society**. The society is **extraordinarily complex**: without a high level of intelligence, chimpanzees would not be able to cope with the uncertainties and tensions so often engendered by the **constantly changing social environment**," (Goodall-Gombe 147).
- Chimpanzee populations are divided into **communities** - "loose and flexible associations of males and females with a shared home range," (Nowak 508).
- Communities can range in size from **20-100 individuals** of all age classes.
- Chimpanzees of either sex have nearly **complete freedom to come and go** from a community as they wish. Chimps will associate with each other for varying lengths of time, depending on the "intensity of relationship, reproductive status, and resource distribution. Each animal has its own network of social contacts" (Nowak 508).
- The community is divided into **subgroups or parties**. Only rarely, if ever, do all members of a community congregate in one place. Subgroups are generally unstable, except for females with immature offspring" (Nowak 508).
- Chimpanzees are thought to be **territorial**. Aggression can occur between two communities.
- Aggression between communities is generally much more serious than aggression between the members of the same community. Encounters and conflicts between communities can result in serious injuries or even death. Conflicts between members of the same community "seldom last more than a minute or so" (Goodall/Grzimek 475).
- Each community has a **dominant male leader**. "Power-wielding coalitions" also exist among both females and males. "The ability of a male to enlist support during conflict is perhaps the most crucial factor in attaining and maintaining his rank" (Nowak 508).
- A male's rank is not based on physical strength alone. Biologists have observed that some dominance struggles are "like a contest of wills in which self-confidence, initiative, resourcefulness and persistence" seem to be important," (Goodall-Gombe 415).
- Males usually reach "their **zenith in the hierarchy between age 20 and 26**. Once a male reaches about 30 years of age his status drops, gradually or suddenly" (Goodall-Gombe 415).



- **Aggression may occur between males** in a struggle for social position. Confrontations may also occur when one family member defends another. **Frustration** may also cause aggressive behavior. When an individual has been attacked or threatened by an animal of higher rank “against whom he dare not take revenge”, he may vent upon some lower-ranking individual in the area (Goodall/Grzimek 475).
- **Females** cannot always be ranked in a clear-cut dominance hierarchy. However, several observations have shown that a hierarchy of levels may exist among the females in a community, similar to the levels seen in males. There are often females “who are clearly very high ranking (one of whom often emerges as alpha) and others who rank very low; the remainder fall into a middle-ranking class.” A female’s rank is greatly influenced by the “nature of her family” and the presence of certain family members when she encounters another female (Goodall-Gombe 437-439)
- **Communication** such as posture, touching and grooming, sound, and facial expressions are used to reinforce social hierarchies.
- The ‘**pant-hoot**’, the most common adult call, consists of a “series of *hoo* sounds connected by audible intakes of breath, gradually getting louder and usually ending with *waa* sounds also connected by panting intakes of breath,” (Goodall - Shadow 273). The pant hoot is used to maintain contact between the scattered subgroups of a community. Chimps can recognize each other by the sound of individual calls.
- **Greeting behaviors are used to reaffirm the social status** of the individuals involved. The pant-hoot and gestures such as presenting and crouching are important.
- A nervous animal may hold out a hand toward the higher-ranking animal, or bow to the ground and crouch submissively with a downbent head. The dominant animal may then give the lower-ranking animal a reassuring pat or touch, or even hold its hand.
- Chimpanzees may also use high- or low-pitched grunts to communicate. “A subordinate chimpanzee is likely to pant-grunt as he approaches a superior during a greeting or after being threatened or attacked. If the superior behaves at all aggressively during the interaction, pant-grunting quickly becomes squeaking or screaming and the chimpanzee grins,” (Goodall - Shadow 276).
- A frightened or excited chimpanzee may touch or embrace a nearby chimpanzee as a form of reassurance.
- **Mutual grooming** is extremely important in chimpanzee societies.
- **Aggressive behaviors/gestures** may include: hitting, kicking, scratching, hair pulling, biting, stomping, and dragging.
- **After a quarrel**, the “vanquished” will often approach his or her attacker, crouch, “weep”, and sometimes hold out a hand. The superior animal will then “comfort” the animal it attacked by touching, embracing, or ‘grooming’ him or her (Goodall/Grzimek 475).
- Chimpanzees, like nearly all social animals, may **act out disputes** with threatening gestures or sounds. This behavior **prevents direct combat** and possible injury. Males, and occasionally females, may “**display**” by charging across the ground or through the trees while swinging or dragging branches, throwing stones or sticks, and stomping about. Such displays are important to males in attaining a position of high rank (Goodall/Grzimek 475).
- Chimpanzees are not always engaged in aggressive behaviors or displays. Chimpanzees also “exhibit a large measure of **care, sympathy, and helpfulness** towards conspecifics. Usually such behavior pertains to family members, but it will also happen that adults not related to each other will risk their lives for those in danger” (Goodall/Grzimek 481).
- Members of a chimpanzee community have been seen embracing, kissing, touching, and holding hands after a period of separation (Goodall/Grzimek 467).
- Chimpanzee **enemies**: leopards and humans

Breeding & Care of Young:

- **Puberty** in both sexes occurs at about 7-8 years of age, but females do not usually give birth until 13-14 years and males are not fully integrated into the social hierarchy until they are 11 - 15 years old.
- Females are capable of reproducing in to their 30s and 40s.
- The great apes have **no ‘breeding season’**. Males are sexually active at all times. Females have a hormone-controlled cycle usually longer than 30 days.
- Chimpanzee **estrous cycle** is approximately **34 - 37 days** in length, **but there are tremendous individual differences**. Cycles ranging in length from 22 - 187 days have been observed.



- When a female chimpanzee comes into heat, or estrus, the skin in her genital area becomes swollen. This 'sex skin' is maximally swollen for approximately 10 days. Ovulation occurs near the time of the last day of maximal swelling.
- A variety of situations may arise **when a female enters estrus**. A female may be mounted by most or all of the males in the community or the highest ranking male may try to prevent others from mating - especially during the last 3-4 days of the cycle, when the probability of conception is the highest (Goodall/Grzimek 464).
- **Gestation** = 7.5 months
- Females usually give birth to one young that will **remain with her from 6 - 10 years**.
- Infants are generally tolerated by all members of the community. Females may carry or comfort infants other than their own. Males are usually tolerant of infants and may pat, touch, groom, play with, comfort, or embrace infants.
- **During the first few months** of their life, young chimpanzees are **in almost constant contact** with their mothers. Babies less than 5 months of age are "normally protected by their mothers from all contact with other chimpanzees except their own siblings. Infants from the age of 3 months onward often reach out to other chimps sitting nearby, but usually their mothers pull their hands quickly away," (Goodall - Shadow 148).
- **Social play** begins with mother-infant interactions after about 3 months of age. Play may include the mother bouncing the baby on her hands while she lies on her back, mother and infant mouthing each other, play faces, and laughing.
- Infants will begin to try solid foods between 4 - 6 months of age.
- During the first 6-10 months, Infant chimps travel almost exclusively in the **ventral-ventral position** (clinging to their mother's belly).
- Chimpanzees at 12-16 months of age "have about as much understanding as a human child of about the same age" (Preuschoft 396).
- Young chimps also "**practice**" using **twigs and sticks** for insect-eating.
- By **age 2, riding on the mother's back** is the predominant mode of travel for young chimpanzees. By **3 years**, their travel is much **more independent**.
- The **time that young chimpanzees spend in contact with their mother decreases over several months**. Generally speaking, by 2 years of age, young chimpanzees spend 20 -30% of their time with their mothers (Fulk 26).
- Infant chimps are gradually weaned around 4-5 years of age, as their mother resumes cycling.
- Wild chimps will usually **give birth every 5 or 6 years**.
- Wild chimps will continue to **associate with their mothers** for at **least 3 to 4 years after the birth of a sibling**. Even 5 year old captive chimps have been observed to spend 10 - 25% of their time in contact with their mothers.
- Family bonds usually last for a lifetime.
- **During adolescence**, females **tend to move to a new community** and seek acceptance, but **males usually stay with the community** they were born into.

Efforts to save chimpanzees:

- Wild chimpanzees are protected in almost 40 reserves and parks. They have legal protection in many countries, but poaching continues to be a problem.
- The chimpanzee has been given high priority by the IUCN (International Union for the Conservation of Nature) Species Survival Commission Primate Specialist Group.
- Jane Goodall, famous for her studies on chimpanzee behavior in the wild, founded the Jane Goodall Institute. The organization supports behavioral research in the field, conservation, ChimpanZoo (which seeks to improve the well-being of captive chimps through behavioral research), and education programs.
- The American Zoo & Aquarium Association's chimpanzee SSP (Species Survival Plan) oversees a captive breeding program. There are approximately 250 chimpanzees managed under the SSP.

