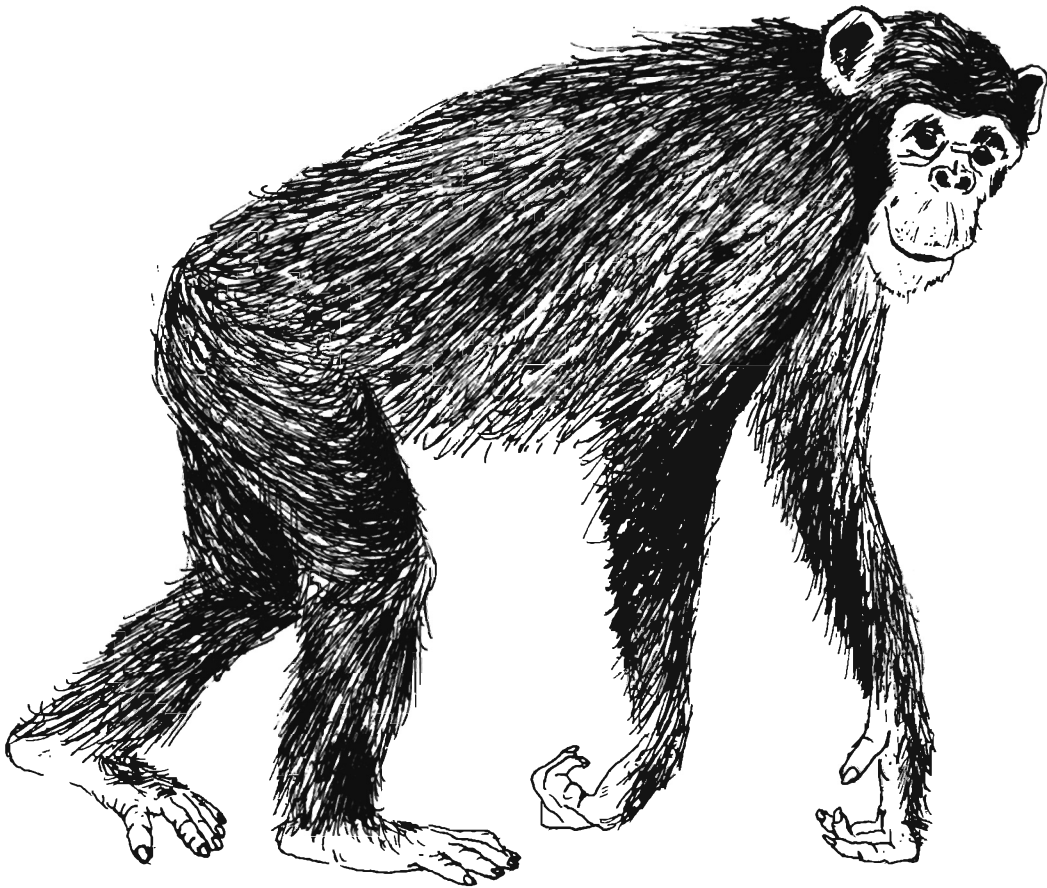


The Chimpanzee



Part I Field Study Notes

Strangely enough, until recently we knew little about the natural life of the animal species most like the human species. Some scientists had learned about the abilities of chimpanzees in laboratory experiments. Others had raised chimpanzees in their own homes, as though they were human children, to see what chimpanzees could learn in a human setting. But the most exciting information has come in the past few years from anthropologists studying chimpanzees in the wilds of Africa.

Most of the field information in the following pages comes from the studies of Jane Goodall, a young English anthropologist. She has been living with chimpanzees for a number of years in the Gombe Stream Reserve in Tanzania.

"I cannot remember a time when I did not want to go to Africa to study animals," she wrote, thinking of her childhood. In 1957, she went to Nairobi, Kenya, where for a while she worked with Dr. Louis S.B. Leakey, the famous fossil finder. Within a year, he sent her off to study the behavior of wild chimpanzees. African officials would not think of letting a single girl go into the bush by herself, so her mother went with her. Her mother soon returned to England, but Jane's camp gradually added new members.

One of these was a photographer named Baron Hugo Van Lawick, who married Jane Goodall in 1964. Together, they continue studying the same chimpanzees, many of whom they know well. They have given these human names, some of them names of their own friends. (One "rugged but gentle male" chimpanzee is named Leakey.)

A FOREST-DWELLING APE

Chimpanzees, like all the apes, are creatures of the forest. Chimpanzees live in many kinds of African forests -- rain forests, mountain forests -- and even open woodlands. Generally, they choose to travel from place to place on the ground rather than through the trees, but they are never far from trees. They spend at least half the day and all the night in the trees, eating fruit and leaves, resting, and sleeping. Unlike baboons, they do not go out on the open plains for food.

Chimpanzees, being apes, are built more like men than like monkeys. Like man, they can rotate their arms in all directions, and in the trees chimpanzees easily travel by swinging from branch to branch. Monkeys can only move their arms forward and backward, and must walk along the branches on all fours.

On the ground, chimpanzees usually walk on all fours, in a slanting forward position. They rest their weight on special knuckle pads on the back of their hands. They cannot

stand completely straight and they cannot lock their knees. But they can, like man, walk and run on two legs. They do not usually do this because they become tired more easily in an upright position.

GROUP LIFE

The group life of chimpanzees is not like baboon troop life. Chimpanzees do not spend their whole lives with the same members of a group. This may be because chimpanzees do not need to fear predators as much as baboons do. Chimpanzees are much larger than baboons, and they are always near trees. They do not need the kind of group protection from predators that baboons on the open plains must have. The big cats may even be afraid of the very noisy apes. When chimpanzees become excited, they hoot, shriek and scream, stamp the ground, wave branches and throw sticks. Even leopards might keep their distance in these circumstances.

Chimpanzees wander freely through a large area, joining other chimpanzees or groups as they find them. An adult male may travel with six chimpanzees one day, sleep in a group of three that night, eat with twenty chimpanzees the next morning, and wander through the forest by himself in the afternoon. And chimpanzees do not travel repeatedly by the same pathways within a definite range like baboons do.

Because chimpanzees change groups so often, there are no permanent group leaders. Individual chimpanzees do know

each other well, but they may be separated for days at a time. When they meet, two chimpanzees have special ways of greeting each other. Sometimes chimpanzees throw their arms around each other and hug. Some kiss, others hold hands. At the same time, they also know if another individual is dominant over them. If two chimpanzees meet along a branch, or both want the same banana, one will give way without a fight.

There is not a single kind of chimpanzee group, but many kinds. Females with their young travel together in small "nursery groups." Large groups of males roam through the forest, sometimes in the company of childless females. Some groups have males and females of all ages. But the members of the groups are always changing, and each chimpanzee chooses to be with the group that appeals to it at the moment. An adult male may join a male-female group when he is interested in mating. He may then join his mother and play with his younger brothers and sisters for a while. Or he may go off with a band of males to explore the forest, looking for newly ripened fruit. Adult chimpanzees are very independent.

SLEEPING IN NESTS

The chimpanzees are nomads, that is, they have no regular sleeping trees. They sleep where they happen to be as the sun sets. They simply climb into the nearest trees and make new nests by folding branches over each other. They lie in

these nests just as we lie in bed. They do not sit upright as baboons do. During the rainy season a chimpanzee may build a tree nest in the daytime for resting. In the dry season chimpanzees rest during the day on the ground.

Chimpanzees usually sleep in small groups of four or five animals. Each chimpanzee builds a nest for itself, except infants who sleep in their mothers' nests. Infants probably learn how to build nests by watching their mothers. Very young chimpanzees have been seen building very small nests while they are playing.

PLANT EATING AND MEAT EATING

Chimpanzees spend six to eight hours every day eating, feeding mostly from fruit, leaves and bark in the trees. At the beginning of a day, a chimpanzee is usually so hungry that it will eat greedily whether the fruit is ripe or not. As the day wears on, the chimpanzee becomes more and more choosy, eating only the sweetest and ripest fruits.

Until recently no one had ever seen chimpanzees eating anything but plants. Now several people have seen chimpanzees eating small pigs and monkeys. Jane Goodall even saw chimpanzees hunt and kill a monkey.

Jane describes the short hunt like this: *A red colobus monkey was sitting in a tree when a sub-adult male chimpanzee climbed a neighboring tree and sat very still as the monkey looked at*

him. A second sub-adult male chimpanzee then climbed the tree in which the monkey was sitting, ran quickly along the branch, leapt at the monkey, and caught it with his hands, probably breaking the monkey's neck. The monkey did not struggle or call out. The other sub-adult male then leapt into the tree and five other chimpanzees, including a mature male and a very young chimpanzee, climbed up. The chimpanzees ate the monkey slowly, taking mouthfuls of leaves between bites.

FOOD SHARING

Chimpanzees do not usually share food. Each chimpanzee searches for its own food every day. Sometimes, but not often, Jane saw a mother give bananas to her young if the small chimpanzees begged long and hard enough. One chimpanzee mother even gave her infant a piece of fruit after she had cracked the hard shell. Jane never saw adults sharing plant food.

When a male chimpanzee has killed an animal, many others will sit close by and hold out their hands. They are begging him to share his food with them. Sometimes he refuses, and the others must wait for him to lose interest in the kill before they can eat. But sometimes he responds to the begging gestures -- most often if the beggars are young or female -- and all will eat together.

Throughout the animal world, food sharing is more frequent among the meat-eaters than plant-eaters. This may be because

even young plant-eaters can get their own food easily, but not all meat-eaters can hunt equally well. Females carrying young are a good example. If they are to have any meat, the males must share the kill after a hunt.

MAKING AND USING TOOLS

Chimpanzees like to eat termites. But termites live deep inside mud nests that are as strong as concrete and nearly impossible to break. Once a year, termites build tunnels to the surface of the nest so that a few termites will be able to leave the nest to mate.

One day Jane Goodall found David Greybeard, as she named a favorite old chimpanzee, sitting by a termite nest. She watched as he trimmed the edges off a blade of sword grass, which he pushed into the nest. He pulled it out and picked something off the blade with his hand. Then he put his hand to his mouth. After a while, David discarded the blade of grass. He picked up a piece of vine, stripped the leaves, and then put the vine into the nest.

Jane had just seen David Greybeard make a tool to get food. Many animals use objects they find as tools. But the chimpanzee had made a tool by changing a natural object to make it serve a new purpose. Baboons and birds also like termites, but they must wait for them to fly out; chimpanzees can use their tools to go in after them.

It is not surprising that the chimpanzee, which is the animal closest to man in so many ways, is the one animal that can make tools. To make a tool, you must be able to solve a problem and to think ahead into the future, and this takes a large and complicated brain. And, in fact, the chimpanzee has the largest and most complicated brain in relation to its size of any animal except man.

Chimpanzees make and use tools in a number of ways. A thirsty chimpanzee chews on a leaf, dips the leaf in water, and then sucks the water from it. This way the chimpanzee can drink water from places it could not otherwise reach.

Chimpanzees also use leaves to clean themselves. Once Jane saw a female use a leaf like a handkerchief to blot her bloody nose after a fight. Other chimpanzees use leaves as toilet paper.

ALL-NIGHT DANCING AND DRUMMING

Africans have a word to describe one of the strangest things that chimpanzees do. The word *kanjo* means carnival. It describes a special behavior of the chimpanzees when they spend the night drumming, yelling and running around wildly. No other ape or monkey is known to act like this.

Eight times during the year they spent studying chimpanzees, two anthropologists heard what sounded like a *kanjo*: chimpanzees beating some type of drum, yelling at each other as

they crashed wildly through the underbrush.

It is hard to imagine why chimpanzees would beat drums all night. People have noticed that chimpanzees seem more excited when they are in large groups. Perhaps *kanjos* take place when several large groups of chimpanzees meet.

Adult male chimpanzees may also get very excited when it rains. When they start their rain dance, females and the young chimpanzees climb trees and watch. The males sway from foot to foot, rock small trees, stamp the ground. They charge around and tear off branches to wave. They spring into trees and then hurl themselves to the ground. Rain, high winds and exciting social gatherings seem to make them act like this.

The information in this booklet came from a book and three articles by Baroness Jane Van Lawick-Goodall:

"Chimpanzees of the Gombe Stream Reserve," in Primate Behavior (New York: Holt, Rinehart and Winston, 1965), edited by Irvén DeVore

My Friends the Wild Chimpanzees (Washington, D.C.: National Geographic Society, 1967)

"My Life Among Wild Chimpanzees," (National Geographic, August 1963)

"New Discoveries Among Africa's Chimpanzees," (National Geographic, December 1965)

The information is also included in the film, "Miss Goodall and the Wild Chimpanzees."

Part II A Chimpanzee Family

In the wild, chimpanzees live about thirty years. A female chimpanzee is ready to mate when she is about seven or eight years old, but males probably do not mate until they are eight or nine. Females have an infant about every three years, and in their lifetime normally have seven or eight offspring. Because of disease and accidents, probably only two or three of these survive to reproduce.

A chimpanzee infant grows inside its mother for seven months before it is born. Infants nurse from their mothers for almost three years, sometimes longer. For these three years, infants depend on their mothers for transportation and protection. Even when they are older and able to walk and to find their own food, infants stay close to their mothers. This closeness to the mother lasts at least until the young are twelve years old.

Jane Goodall observed many chimpanzee mothers with their offspring, but Flo was her favorite. The following pages are part of the story of Flo's family.

FLO'S FAMILY

Flo was an old, very ugly female. Her teeth were worn down to her gums, her nose was tremendous, and one of her ears had



a large hunk of skin missing. When Jane first saw Flo, Flo was with her four-year-old daughter, Fifi, her young juvenile son, Figan, and Faben, an almost-adult male. A year later, Jane was in London. (She had just married Hugo.) She received a message, *Flo amekwisha kuzaa* -- Flo had had a baby! Cutting short their honeymoon, Jane rushed back to the Gombe Stream Reserve to see the new infant. From this time on, Jane was able to observe in detail how a chimpanzee infant grows up.

Jane named the new infant Flint. Flint was completely helpless at first. When Flo sat down, she cradled Flint in her arms and legs. When she walked she put her hand under his back to help him hold on to her chest. If she let go, Flint lost his grip and fell. Until he was several weeks old, he was much more helpless than a baboon infant of the same age. Fortunately, unlike a baboon mother, Flo did not need to worry

about staying with a troop. She could move about slowly and sit down to rest every fifteen steps or so. She did not even have to look for her own food. When large groups of wandering chimpanzees find new sources of food, they make a great deal of noise. Flo would simply go toward the noise and find food.

For five months, Flint traveled on his mother's chest. As he grew heavier, Flo began to push him into riding on her back. After a few weeks and much encouragement, Flint learned to stay on his mother's back. He traveled this way until he was two and a half years old. Even when he was older and much heavier, Flo still let him ride on her if he was frightened.

Fifi, five years old, seemed to be jealous of her young brother, but she also found him very attractive. When Flint was small, Flo would not let her daughter near him. She pushed Fifi away or moved away herself. Sometimes she played with Fifi to distract her from the infant. As Flint grew older, Fifi was allowed to touch him more often. When he was fourteen weeks old, Fifi managed to pull him away from her mother. This was the first time in his life that Flint was not touching Flo. Flo did not object, but her son did. He began to whimper. At the first cry, Flo took Flint back.

In the next weeks, Fifi was allowed to take her brother more and more often. She sat near her mother and played with Flint as long as he remained happy. Fifi took care of Flint because she enjoyed it. But she was also getting practice that would

help her be a good mother herself. A female in the wild has experience with other infants before she has one of her own. Sometimes juvenile chimpanzees even adopt younger brothers or sisters who have lost their mothers.

Flint first spent all his time with his mother, and then with his mother and sister. Fifi chased away other chimps who wanted to play with her brother. Flint, meanwhile, grew bigger and bigger. One day Fifi picked up her brother and carried him away from Flo. Flint clutched Fifi's hair and held on tight. Fifi tried to make him let go, but he wanted to hold on. Then, for the first time, she picked him up and carried him back to his mother. After that, Fifi was perfectly willing to let other chimpanzees play with Flint.

Flint's mother gave him comfort, security, and protection. She kept him from falling off her body and, later, from falling off branches and rocks. She kept him in her nest at night. For his first year, she followed behind him as he tried to explore his world, always ready to help him if he got into trouble.

When Flint was very little, Flo pushed away or attacked any chimpanzee that tried to touch her son. If he reached out and grabbed the hair of a nearby chimp, she hastily pried him loose. When he was older and could walk, he would run toward any new chimpanzee he saw. Sometimes Flo ran after him and stopped him. Sometimes she followed him and groomed the new-

comer. Flo was nervous because adult chimpanzees, both male and female, sometimes hit young chimpanzees if they are annoyed.

Flo protected her older children, too. Fifi and Figan also ran to their mother if they were attacked by adults. Once the juvenile Figan, chased by an adult, came screaming to his mother. Flo turned and charged the attacker. Figan turned and charged the other animal, too, but he was careful to stay behind his mother.

A chimpanzee mother seldom punishes her offspring. She threatens but she does not hit. Once Jane Goodall saw a chimpanzee mother bite her infant's hand. Immediately afterward, the mother took her infant in her arms and hugged it. Flo herself hardly ever lost her patience. But once she was pushed too far. Fifi begged for food all the time, and she had temper tantrums if she was refused. Usually, Flo gave her some of her fruit. Once, however, Flo gave Fifi a bite instead. Fifi had been screaming and begging with one hand while holding a perfectly good banana untouched in the other.

Female chimpanzees are naturally gentle mothers. After three years, a chimpanzee mother has no more milk and the infant can no longer nurse. But during weaning an infant is not pushed away from its mother as baboon infants are. Flint cried when Flo had no more milk. Flo tickled him and held him close to comfort him. She did not push him away. Even when she has another baby, she will remain close to Flint.

Mothers play with all their offspring, infant to adolescent. Flo liked to tickle and rub Flint and Fifi. She rolled them over, sparred with them, hung one up on a branch and pushed it to and fro. She joined her older offspring in games of chasing each other round and round a tree. Or she sat up in the middle and let them run around her. But as Flo's offspring grew older, she changed her way of expressing her affection for them. Instead of holding them or stroking and kissing them, she groomed them. And in turn the older children, Figan and Faben, groomed other animals. Young males, five or six years old, begin to leave their mothers for days at a time. They join other mothers and children and travel with them for a while in a "nursery group." Young females are more timid. Fifi will probably stay with her mother until she herself is ready to mate. Then, like the males, she will begin to wander off more and more on her own. She will be ready to start her own family.

Man: A Course of Study

Developed by Education Development Center, inc., under grants from the National Science Foundation.
First commercial edition 1970.

Disseminated and produced by Curriculum Development Associates, Inc., Suite 414, 1211 Connecticut Avenue, Washington, D.C. 20036.

Except for the rights to materials reserved by others, the publisher and the copyright owner hereby grant permission to domestic persons of the United States and Canada for use of this work in whole or in part without charge in the English language in the United States and Canada after December 31, 1975, provided that written notice is made to Education Development Center and that publications incorporating materials covered by these copyrights contain the original copyright notice and a statement that the publication is not endorsed by the original copyright owner. For conditions of use and permission to use materials contained herein for foreign publication or publication in other than the English language, apply to the copyright owner.