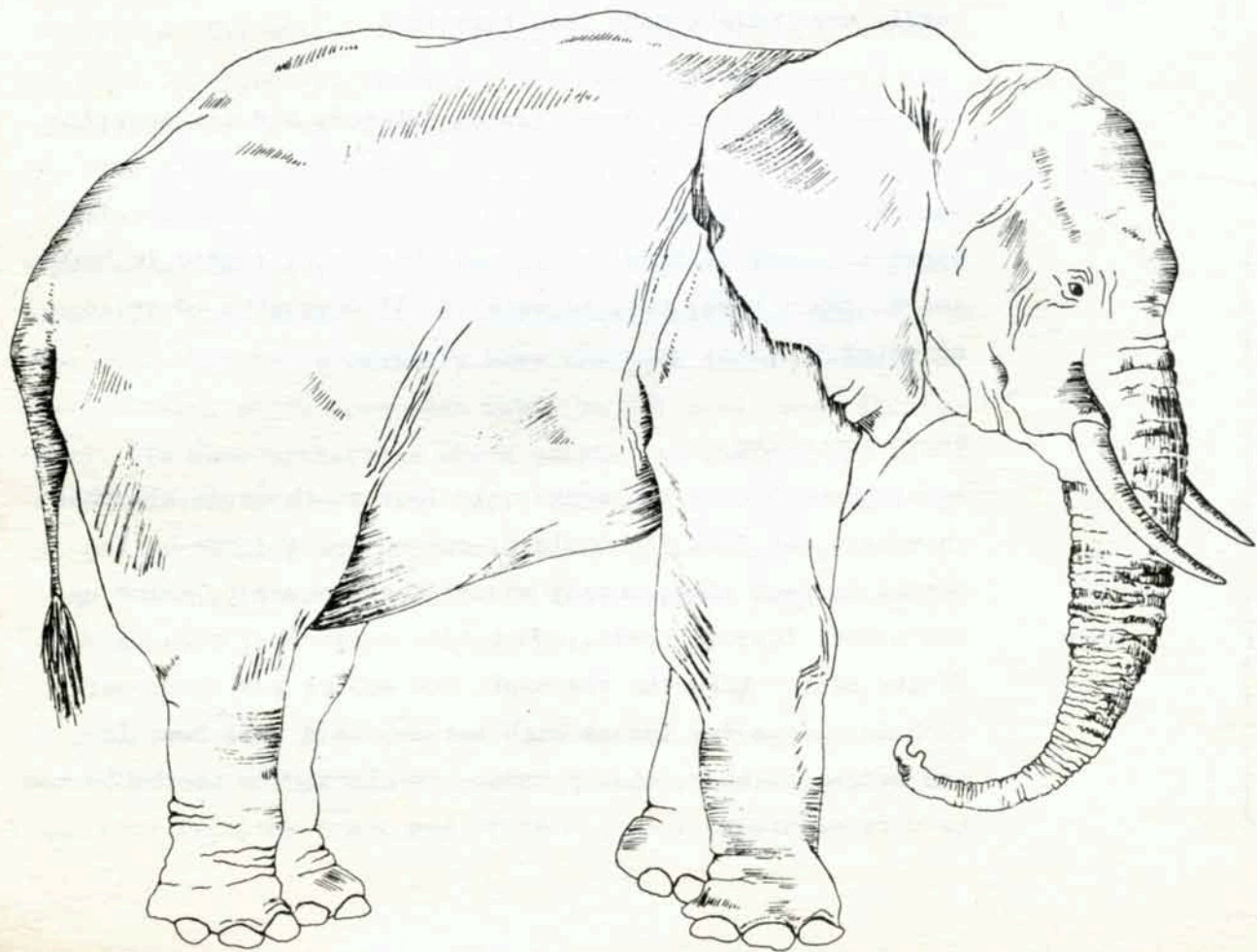


# **The African Elephant**



## The African Elephant

The African elephant is the largest living land animal. By the time he's through growing, a good-sized bull may be over eleven feet tall and weigh more than seven tons. The female is much smaller: a cow reaches a height of nine feet and hardly ever weighs more than five tons.

Because of the tremendous size of its body and its appetite for vegetable food only, it has to spend most of its time eating. Just to keep alive, an elephant must find several hundred pounds of food daily, and this takes a good 16 hours. And it takes time, too, to wash it all down with 40 gallons of water.

### TEETH AND TRUNK

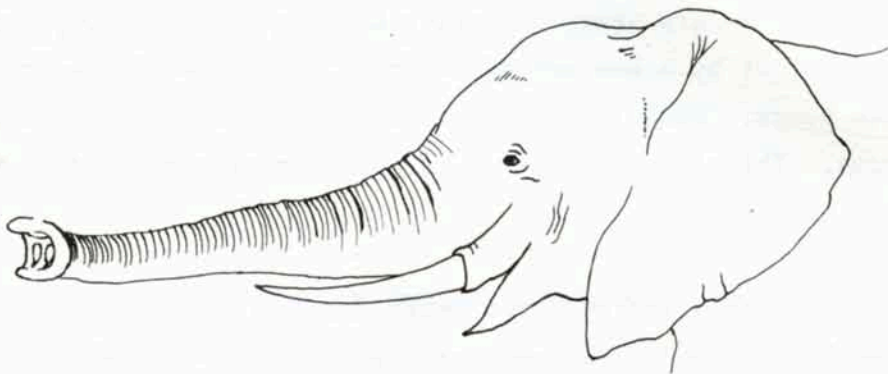
An elephant has in its mouth only four teeth to do all that chewing. But four flat molars, one on top and one on the bottom on each side, supply enough tooth power to grind up the grass, leaves, fruit, and tender twigs that make up most of its diet. Like the elephant, the molars are enormous; each is only a few inches high but may be a full foot long and weighs eight or nine pounds. An elephant's toothache can be very painful.

A set of molars wears out after ten years. Then they are pushed out by a new set of molars that is good for another ten years. Finally, after six sets of teeth, there are no more. The old elephant can no longer chew and its fate is sealed.

An elephant's long, curved tusks are teeth, too -- overgrown teeth that cannot be used for chewing. They are two front teeth that grow right out of its mouth and keep growing for the rest of the elephant's life. Both females and males have tusks, but the males' are longer, sometimes weighing a total of over 300 pounds. The tusks are useful in many ways, including fighting and digging up roots to eat or underground water to drink.

Just as a tusk is a tooth that grew and grew, a trunk is an upper lip gone wild. It is also a nose, with two nostrils at the end. Elephants probably have the best sense of smell of all animals, which more than makes up for their weak little eyes. In many situations where people use their eyes, an elephant uses its nose instead. For instance, it checks for danger by raising its trunk and sniffing the air while it slowly turns in all directions. That way the elephant picks up any scent of smoke or an enemy in the breeze.

An elephant uses its trunk most often for eating. It can curl the end of the trunk around a delicious clump of grass and then lift the trunk and stuff the food into its mouth.



And it can delicately pluck a single leaf from a branch with the two finger-like tips of its trunk.

Or it can use its trunk like a huge straw to suck up water for a drink or a cooling shower. Sometimes an elephant will give itself a dust shower which gets rid of mosquitoes and other insects that bite its tender skin. (Itchy skin can drive an elephant frantic; its trunk is not long enough for scratching all over.)

If you watch a group of elephants cross a deep river, all you may see of them is the tips of their trunks sticking up above the water like snorkels. They walk across with their heads underwater and breathe through their trunks.

#### ELEPHANTS ALONE OR TOGETHER

Most adult bulls live alone or in groups of two or three. But at any time they may visit a herd and seek out a female to mate with. If two bulls are interested in the same cow,



there may be a fight in which one male may be killed by the other's tusks or trampled by him.

Females, on the other hand, live with their young in nursery herds. The herd usually has ten to twenty members but there can be fifty elephants in a herd. With the cows and calves may be one or two grown bulls not quite ready to go off on their own.

The nursery herd protects the calves in their years of growing up. A mother can give her calves more attention if there are other elephants to lead the way and to look out for danger. If something should happen to the mother, chances are the calf will be looked after by another cow from the herd.

The herd keeps moving, maybe thirty miles a day, ever onward to more food. It is a sure sign that elephants have stopped to eat when there are trees scattered all over the ground. If the best leaves are high up in a tree the elephant takes the tree between its tusks and pushes hard with its forehead. The tree comes crashing down, and the elephant has a feast -- unless the other elephants come over and join it.

Elephants cooperate. If a member of a herd is hurt, others from the group often help it. A game warden in Africa was once asked to shoot an elephant stealing regularly from the local farmers. The warden wounded the elephant, which fell to the ground. Almost immediately three other elephants

appeared. One stood on each side of the hurt elephant and helped it to stand, and the third pushed from behind until the four elephants disappeared together into the nearby forest.

Many people claim that an old cow is the leader of every nursery herd. She has walked the area over and over for many years and knows exactly where to find the best food. But how well does she really remember? There is a saying that elephants never forget, and a German professor recently put the elephant's memory to a test. He taught an elephant that a box with a drawing of a square on the lid had food in it, but a box with a drawing of a circle was empty. The elephant was slow in learning; it looked into the boxes 330 times before it learned which had the food. Then it learned which one of 13 other pairs of boxes had food. A year later the professor gave the elephant a test with the same boxes. As it turned out, the elephant remembered better than the professor! Although this is not proof that elephants never forget, there is certainly one elephant with a very good memory.

#### THE SMALLEST ELEPHANT

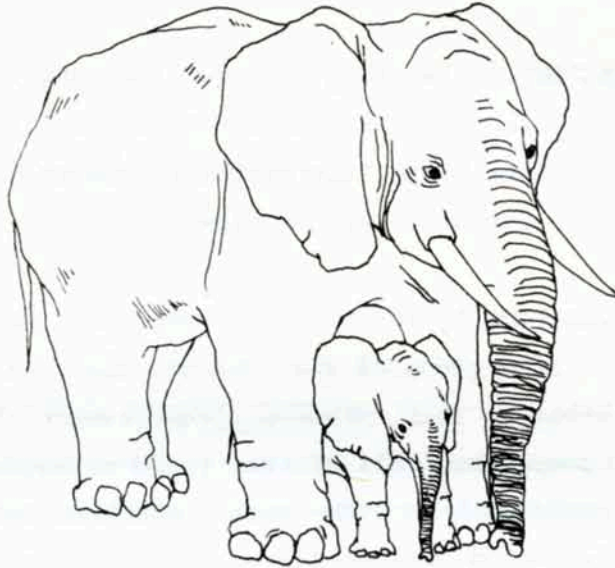
Even though elephants keep growing until they are twenty or twenty-five years old, a bull and a cow may mate for the first time when they are only thirteen or fourteen. Then the pair separates. Almost two years later a calf is born to the cow. She may have a new calf every three years.

For a few months before her baby is born, the female spends nearly all of her time with another cow from the herd. When the time comes for the birth, the mother leaves the herd, with her companion cow still at her side.

One scientist watching an infant being born saw most of the herd walk on, while a group of six cows and their five calves stayed behind. They formed a circle around the mother and her companion. All of them faced outwards. That way they could spot an enemy that might harm the baby. The cows quickly chased away vultures and other elephants who came near. The only other elephant they let come close was a young bull, which turned out to be the mother's older calf.

Although a newborn elephant is three feet tall and weighs 250 pounds, it is quite helpless. All it can do is lie on the ground and squeal. The mother stands over it, shading the infant with her huge body. The burning African sun has killed many a calf.

The scientist saw the cows trying to coax the calf to its feet when it was only minutes old. They used their trunks and feet, but it was no use. After half an hour, all gave up except the mother's companion and her seven-year-old son. Finally, after two hours the infant stood! It took its first stumbling steps! It fell on its head and rolled over onto its back. But they



did not let it rest. Mother, companion and brother helped it stand again each time it fell.

Once on its feet, a calf follows its urge to nurse. It nurses with its mouth, not with its trunk, which flops around and gets in the way because the infant does not yet know how to hold it aside. The calf also flaps its big ears, which is one way elephants keep cool.

The herd waits in the area for about two days. By then the calf is ready to walk a short distance and the whole herd moves on to new eating grounds. The herd goes slowly enough for its newest member to keep up. The infant walks underneath its mother where it is safe and shady. The mother's companion still stays near and protects the calf for its first few years of life.



## GROWING UP

Within days the calf steps out from under its mother and walks a few steps away on its own. But it is back next to her in minutes. After the first year, the infant no longer fits under its mother, but until it is about two, the calf stays close to its mother's side. And usually the companion cow stays close to the calf's other side.

By the time it is three or four months old the calf can control its trunk well enough to drink water. The first attempts to drink are disappointing; all it can do is blow bubbles in the water. When the calf finally manages to suck up water instead of blowing it out, it is still likely to squirt water all over its head before getting a drink into its mouth. By now, the mother is not letting it nurse as often as it wants. The young calf tries solid food and water. It may be five years before the calf stops nursing altogether.

The mother constantly watches the calf so that it does not get into trouble. A curious calf must learn to stay away from dangerous things -- hungry lions, poisonous snakes, and elephant traps dug deep in the ground. A scientist who was studying elephants tells this story of a watchful mother and her calf who still had a lot to learn:

[The scientist]...once saw a fat calf walking along the edge of an undercut river bank. The mother, feeding nearby, sounded a warning to come away from this dangerous place. But the calf paid no attention to her. Sud-

denly the earth gave way under its weight, and it tumbled into the water. As it floundered about helplessly, the mother and three other cows hastened to the rescue. Two of them knelt at the edge of the bank, but were unable to reach the calf with their trunks. Then the mother and her third companion waded into the water, got their tusks under the frightened young animal, and lifted it up to the two on shore. When all four had pushed and dragged it to safety, the anxious mother felt her sputtering offspring all over carefully. Finding it safe and sound, she gave it a terrific whack with her trunk, and bellowing with rage, chased it away from the stream.\*

A young elephant learns many things by watching adults. It may see an adult wrap its trunk tightly around a palm tree and shake the tree with all its might. Down fall the tasty coconuts. The youngster may curl its small trunk around the tree and try to shake it even though it is not yet strong enough.

The young calves in a herd spend a lot of time playing together. They chase each other, squirt water from their trunks, and push each other into the stream. They learn the hard way to leave old bulls alone. An old bull who gets a trunkful of water sprayed in his face is likely to end the game with one quick thump of his powerful trunk.

Calves stay with their mother's herd for at least ten or twelve

\*Carl Burger, All About Elephants (New York: Random House, 1965), pp. 84-85.

years, and some female elephants never leave the herd they are born into. It is not unusual to see an old cow followed by her grown calf, who is followed by three of her own calves of various sizes. They may, in turn, be followed by a scientist who is trying to learn something about elephants.

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.