

## *SELECTED NATURAL HISTORY OF THE AFRICAN ELEPHANT LOXODONTA AFRICANA*

### **Anatomy**

*Size* – Savannah male elephants weigh up to 13,000 pounds (6,000 kilograms) and grow up to 11 feet (3.3 meters) tall, while females weigh up to 7,700 pounds (3500 kilograms) and grow up to 8 feet tall. Forest elephants are smaller and only weigh up to 7,040 pounds (3200 kilograms) and grow up to 9 feet (2.7 m) tall.

*Skin and Hair* – The skin of an elephant is usually gray in color and may be as thick as 1 inch (2.5 cm) on the head, back, and the soles of the feet, but paper-thin on the backside of the ear, or around the mouth. (It is the thick skin of the elephant that is referred to when the term “pachyderm” is used.) Elephants have very little body hair, which is concentrated around the eyes, ear openings, the chin, the trunk, and the end of the tail.

*Trunk* – The trunk is a fusion of the nose and the upper lip of an elephant. It contains the nostrils and is equipped with 2 fingerlike projections for handling small objects. It is a highly sensitive, and strong organ equipped with an estimated 150,000 muscle units. An elephant can pour about 9 liters of water into its mouth at a time by sucking water into its trunk.

*Teeth and Tusks* – Elephants have 26 teeth during their lifetime including 12 deciduous premolars, 12 permanent molars, and 2 modified upper incisors called tusks. Tusks are present in both males and females, and grow continuously at a rate of about 7 inches (18 cm) per year. The maximum size for one tusk is approximately 287 pounds (1130 kg) and 7.7 feet (2.2 m) long, with the average being about 134 pounds (61 kg). Only two-thirds of the tusk is visible because the rest is embedded in the socket in the skull. An elephant’s tusk (like a human tooth) has pulp cavities which contain blood vessels and nerves.

### **Life span**

The average life span is between 60 and 70 years.

### **Diet**

Elephants are herbivores. They eat grass, reeds, shrubs, herbs, seeds, fruit pods, tubers, and all parts of trees. An elephant can use the projections on the end of its trunk to pluck individual leaves or fruits from a plant, or use its sharp-edged toenails to dig up roots and tubers. Feeding may occupy about 60% to 70% of an elephant’s waking hours, and a typical individual can eat around 300 pounds (140 kg) in a 24 hour period. In general, Savannah elephants prefer to eat grasses and Forest elephants prefer fruit (which makes them important seed dispersers). Elephants have an enormous effect on the habitats in which they live due to their large appetites, and their ability to use almost all parts of a plant. For example, when elephants disappear from a savannah, grasslands that once supported large populations of grazers and their predators become dense thickets of brush with fewer grazers and more browsers.

## Behavior

*Social* – Elephant societies center on females and are called matriarchal. Males live separately, either alone or in bachelor herds, until conditions are favorable for mating (usually during rains). An elephant family typically consists of several related females and their offspring. Male offspring stay with the female herds until they are at least 12 years old. Female herds generally contain 9 to 40 individuals, while male herds range from 2 to 144 individuals. In female herds, the largest and oldest adult female is the matriarch or leader. She decides where the herd will go each day and the pace with which the herd will travel. Larger female herds with older matriarchs tend to be able to compete more successfully for scarce resources. Therefore, calves born into these herds are more likely to survive than calves born into smaller herds.

*Reproductive and Parental* – Females become sexually mature between 8 and 18 years old, depending on habitat quality and food availability. Males become sexually mature at about 17 years old, however many of the dominant males are at least twice as old and twice as big and do the majority of the mating. Once mating has occurred, pregnancy (gestation period) lasts about 640 days or 21.5 months. Females generally give birth to their first calf when they are about 11 years old. Females can produce a calf on average every 4-6 years, depending on food availability. Newborn calves weigh approximately 265 pounds (1120 kg) and can stand within an hour of birth. A yearling calf remains in almost constant contact with its mother, and a calf that is between 1 and 9 years old will spend half of its time within 5 meters of its mother's side. These close ties help develop the bonds of the elephant herd and allow teaching to take place between older members and calves. Young elephants must learn techniques such as feeding, drinking, dusting, and manipulating objects with their trunks from older members. The dependence of young calves on their mothers is so strong that babies who are orphaned under the age of two do not survive their mother's death, and up to 70% of young elephants between the ages of two and five die within two years of their mother's death. The special bond between mother and daughter can last up to 50 years.

## Sources

Poole, J. 1997. Elephants. Voyageur Press, Stillwater, MN. 72pp.

<http://nature-wildlife.com/eletxt.htm>

[http://swishweb.com/trivia/Natural\\_History/Animals/nathist08a.shtml](http://swishweb.com/trivia/Natural_History/Animals/nathist08a.shtml)