

Classification

Kingdom: Animalia

Phylum: Chordata

Class: Mammalia

Order: Proboscidea

Family: Elephantidae

Genus: *Loxodonta*

Species: *Loxodonta africana*

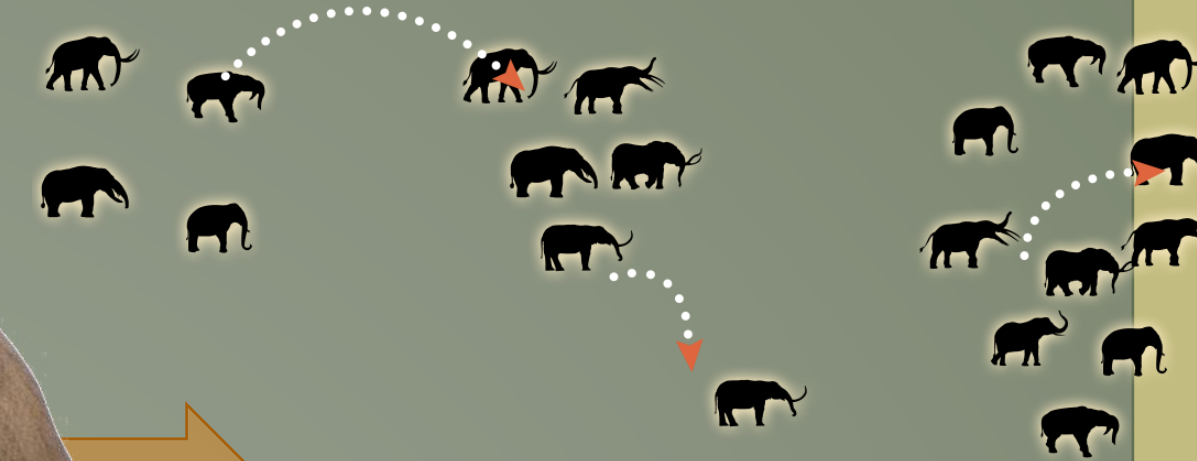
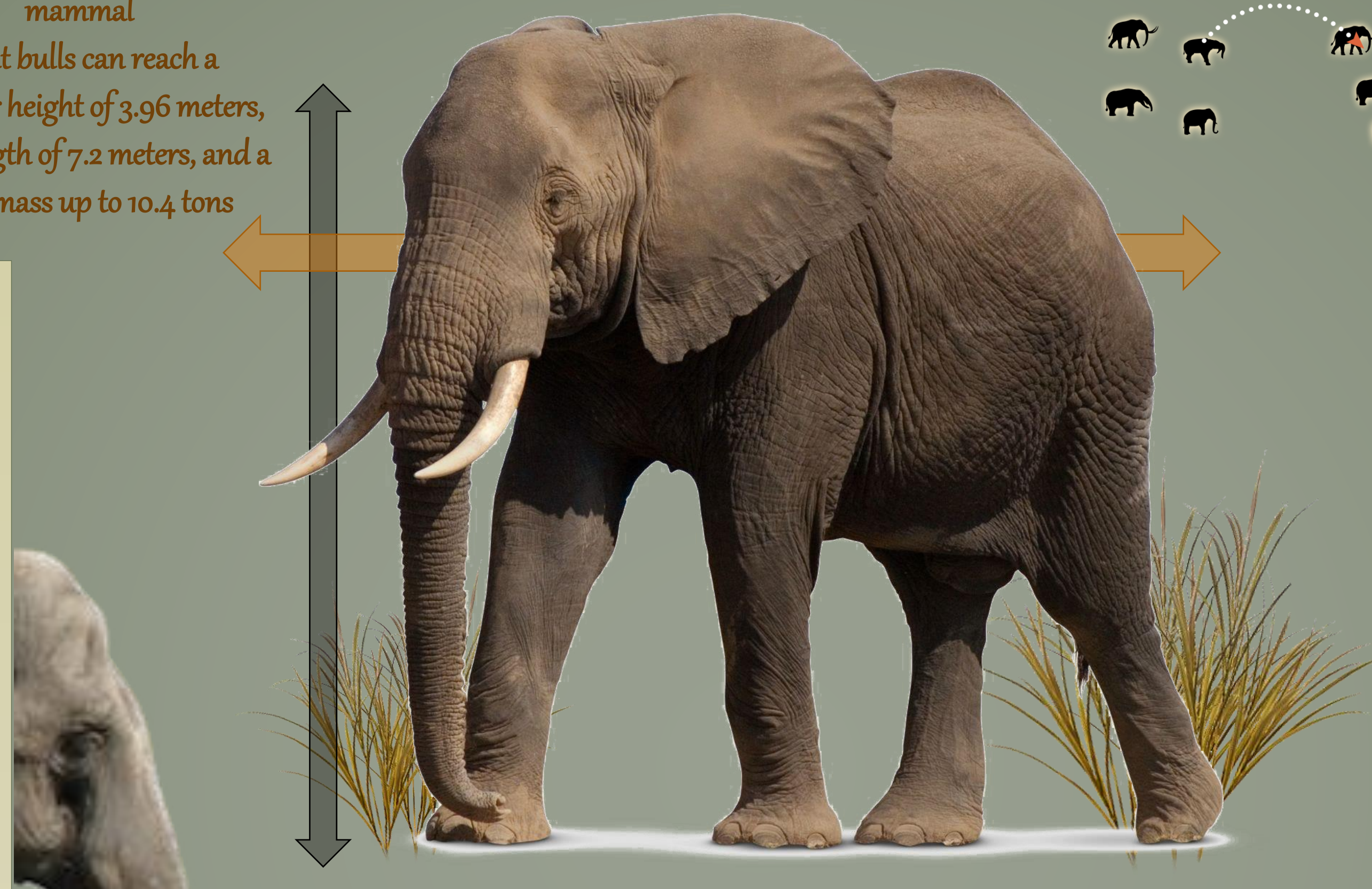


The African Bush Elephant

Loxodonta africana

Largest living terrestrial mammal

Adult bulls can reach a shoulder height of 3.96 meters, body length of 7.2 meters, and a body mass up to 10.4 tons



SOCIAL BEHAVIOR & COMMUNICATION

Female herds – typically 6-70 members consisting of female cows and their young

Climate – dry season groups will often join for protection against predators

Males – live within the herd until around 14 years old, then split from the herd to live a life in solitary or with few other bulls in what is called a “bachelor group”

Auditory communication – infrasonic frequencies are used for intraspecific communication to send messages over long distances, as the African bush elephant is migratory. Trumpets and snorts demonstrate signs of aggression both intraspecifically and interspecifically

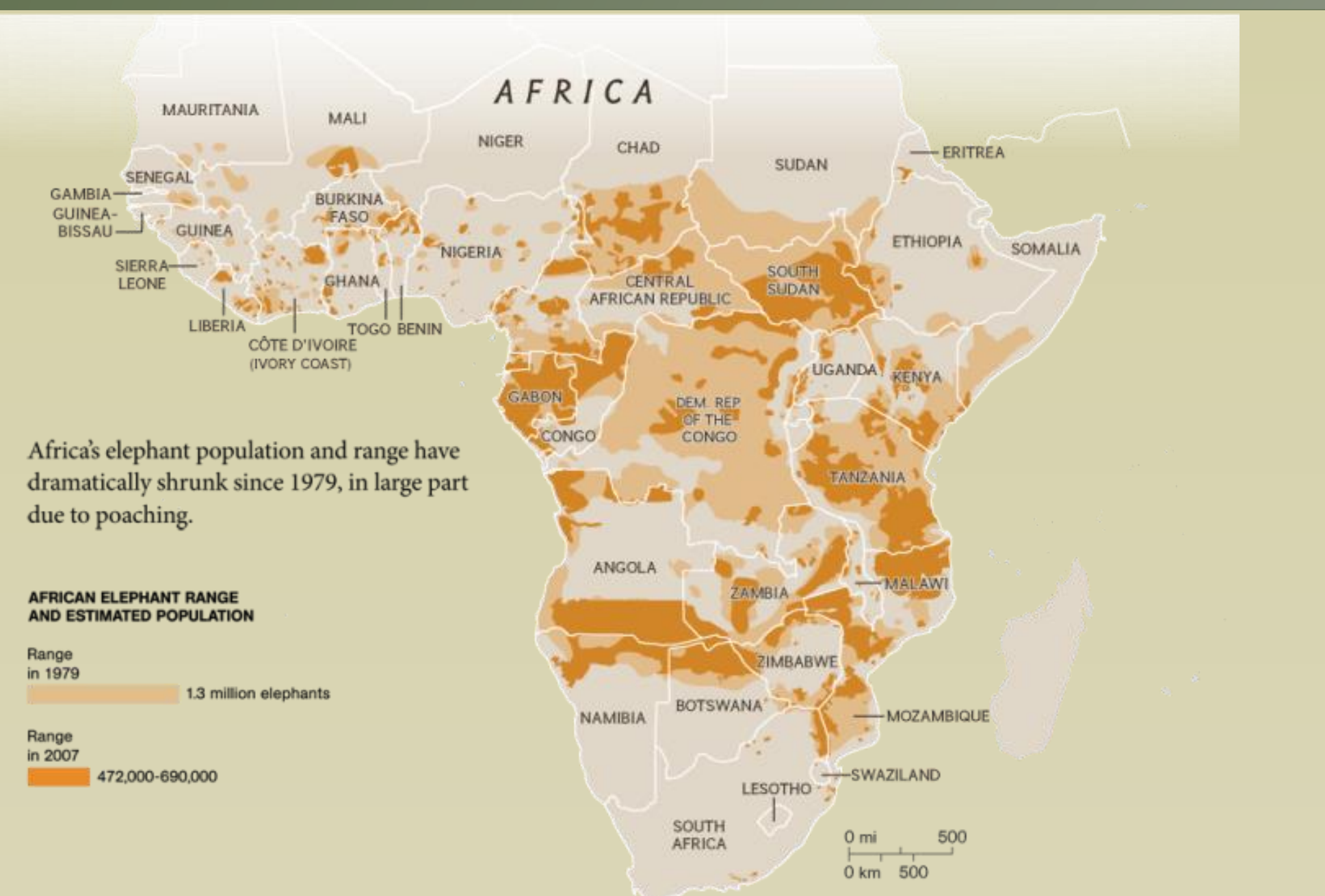
Visual communication – uses large ears or trunk as a signal to other members in the heard that something in the environment may be amiss

• Migration

Long distance travel during dry season migration: 480 – 650 kilometers & can maintain a constant speed for 3-4 miles at a time. The species migrates toward areas with greater seasonal resource availability between June and November. They are active for long periods of the night and during twilight hours, making them crepuscular and partially nocturnal. On average the elephants only sleep ~2 hours a night, especially in breeding herds to ensure safety of other members

• Locomotion

Graviportal locomotion with gravigrade foot posture (walking on the tiptoes), however functionally plantigrade as their feet fall relatively flat on the ground. African elephants have relatively long, widened columnar limbs with joints that are flattened and flex during the swinging phase of locomotion.



Africa's elephant population and range have dramatically shrunk since 1979, in large part due to poaching.

AFRICAN ELEPHANT RANGE AND ESTIMATED POPULATION

Range in 1979: 1.3 million elephants

Range in 2007: 472,000-690,000

HABITAT & DISTRIBUTION

- Occur in Sub-Saharan Africa including Uganda, Kenya, Tanzania, Botswana, Zimbabwe, Namibia, Zambia, and Angola
- The African bush elephant can be found in African habitats ranging from deserts to rain forests
- Native habitats include rainforests, woodlands, savannahs, scrub forests, and occasionally deserts and beaches
- Protected sanctuaries have become one of the main habitats for this species with an increase in poaching threats
- Habitats typically range in elevation from 0-4,000 meters

ADAPTATIONS

The African bush elephant has developed many adaptations to deal with the extreme heat of African habitats. These include limiting activity levels to cooler periods of the day, a thick layer of skin to protect them from the heat and sun, and consuming up to 50 gallons of water/day.

The trunk is comprised of 16 separated muscles with a forked tip to allow for many functions such as: breathing, eating, drinking, smelling, and gripping (elongated muscle that is a combination of the upper lip and nose termed the proboscis allows it to function like both a nose and mouth).

Pillar-like legs are positioned directly under the body and an inflexible ankle is found to have a potentially spring-like motion to support graviportal locomotion and heavy weight

Forked trunk for dexterity and multiple functions



Reproduction

- Polygynous mating system – males are constantly in search of breeding females, with peak reproduction during rainy seasons
- Iteroparous – Meaning that they can reproduce multiple times throughout their lifetime
- Musth period – males secrete a fluid from two glands between the ear and eye that produces high levels of testosterone and aids in establishing a reproductive hierarchy
- Calving – female African elephants have an intercalving period of 4-5 years
- Gestation and lactation – average gestation period of 18-22 months, the longest gestation period that occurs in mammals. Lactation lasts up to 4 years before calf training is initiated

Feeding & Diet

Herbivorous mammal with a diet high in cellulose that consumes large volumes of leaves, fruits, and grasses.

Feeding is accomplished by detaching or grasping vegetation with the end of the trunks and placing piles into the mouth.

Large tusks (specialized incisors) are used to dig up roots when other vegetation is limited, loxodont dentition is used to accommodate crushing/grinding of vegetation

Must consume up to 150 kg per day to maintain their large body mass



CONSERVATION & MANAGEMENT PRACTICES

Currently there have been approximately 415,000 individual African bush elephants recorded across 275 survey areas continent-wide in Africa. The population density of a herd is generally determined by habitat degradation or limited resource availability. The conservation status of the African bush elephant is listed as endangered at the global level. African bush elephant populations have declined by 30% in the last seven years, due to a poaching crisis that started in 2006. In addition to poaching, habitat loss and fragmentation (development of roads, pipelines, railways, and human settlements) have been a leading cause of African bush elephant mortality. The primary issue that is resulting in habitat degradation for the African bush elephant is loss of natural forests and grasslands due to pressure from human population growth. Management organizations train and equip law enforcement teams so they can enforce effective and regular antipoaching patrols. Additionally, many organizations establish protected areas within elephant ranges to improve management effectiveness in the existing protected areas