

THE AFRICAN ELEPHANT

Gardeners of the Savannah

By Duncan Butchart

The African Elephant is the largest land mammal and perhaps the continent's most charismatic creature. Few animals are as closely linked to the welfare of mankind - for elephants have the potential to greatly modify the vegetation of landscapes, destroy the crops of subsistence farmers as well as create wealth through their valuable ivory tusks. There is little doubt that elephants have played a vital role in the economic history of the continent. Today, visitors to Africa's wildlife reserves and wilderness areas are captivated by the power and grace of these magnificent animals and by their apparent sensitivity and compassion.

Vital Statistics

There are two sub-species of African elephant - the (or bush) form, and the forest (or dwarf) form. Male elephants (bulls) are far larger than females (cows) and weigh up to 6300kg. Mature females range between 2000 and 3500kg. There is much less sexual dimorphism among forest elephants (restricted to the Congo Basin and Guinea forests) which range between 900 and 3500kg in weight. The longest tusks on record for a elephant are 3.5 metres, at a weight of 130kg! Forest elephants are often tuskless. The two forms inter-breed where forest and ecosystems meet. Elephants have four toes on their front feet, and three on their hind feet. Their thick hide sports sparse bristles and sensory hairs. The male's penis is invisible when retracted but extends for up to a metre when erect; his testicles are internal. The two teats are situated high on the underside, between the forelegs.



Born to Eat

Elephants feed for up to 16 hours each day and consume a huge amount of plant material. Individuals eat up to 300 kilograms of leaves, grass, bark, pods and roots per day. Over half of the food consumed is not properly digested and is deposited as fibrous dung within 24 hours. In this way, elephants break down and consume plant material, but also promote regeneration through seed dispersal, soil fertilisation and the "opening-up" of previously shaded areas to the light. Along with the minuscule but equally crucial termites, elephants are the "landscape gardeners of Africa". Although elephants may appear to be indiscriminate feeders, they are, in fact, very selective and favour particular plants at certain times of the year. In general, elephants eat a higher percentage of grass during the wet season, with foliage, roots and bark predominating in the dry months. The tusks and trunk are used to good effect when feeding, the former as stripping and excavating tools, and the latter as a prehensile grasper.

Elephant Society

It is most unusual to see an elephant alone. Mature females and their offspring (up to 14 years in the case of males) live in so-called breeding herds which have intimate knowledge of a home range in which they may move randomly, or in synch with the seasons. Adult males - and "teenagers" of 12 and older - typically range in pairs, threesomes or groups of a dozen or more. The main purpose of living in groups for these long-lived pachyderms may be to pass on individual experience and knowl-

edge (where the best feeding areas are at certain times of the year, for example), as well as to defend the newborn young. A single mother elephant is quite capable of defending her young 120kg calf from a lone lion or hyena, but these super-predators hunt in groups and would have little difficulty in seizing newborns which were not protected within a herd. Elephants can live up to 60 years, with females surviving long past their reproductive age. The old matriarchs make decisions on a daily basis as to where the herd will forage or move. Adult cows give birth to a single youngster (twins are a rare phenomenon) after a gestation period of 650-660 days, once every four or five years. She comes on heat again soon after weaning her calf at four years (although young can eat "solids" after two years), and is sexually receptive for only about a week. Male suitors are typically in a state of musth - a condition of high testosterone levels characterised by leaking temporal glands and dribbling urine - and often intimidate other bulls with their head held high and swaggering gait. Only if two musth bulls come together will a physical fight ensue. Mating - when it eventually happens - is extremely brief. Contrary to popular thought, copulation takes place on dry land, not in deep water.

Communication

Elephants "talk" to one another through various growls, snorts, squeals, trumpets and rumbles which convey a host of emotions and signals. Sub-sonic infrasound - inaudible to the human ear - was discovered only in 1987 and may be the most important means of communication.

Conservation

Elephant populations have undergone major fluctuations in recorded history, and have no doubt been subjected to highs and lows due to climatic cycles over the millennia. They were exterminated from North Africa by about the 4th century AD (due to hunting for ivory and climate change) and in Southern Africa during the 18th and 19th centuries. They are now absent north of the Sahel, but again flourish in South Africa thanks to natural recolonisation from the north and man's reintroduction programmes. Large numbers of elephants were killed for their ivory when trade of gold, slaves and spices flourished on Africa's east coast. Numbers throughout much of the continent then grew steadily between 1920 and 1970 (the era of colonialism and the formation of many protected areas) to an estimated high of some ten million, but crashed in the 1980s when the demand for ivory from the Far East was met by corrupt politicians, soldiers and traders, at a time when global policing was hard if not impossible. Factions in the Angolan civil war were known to be partly funded by ivory exports, and the same is probably true for countries such as Uganda, Sudan, Somalia and Mozambique. In south-eastern Zimbabwe and elsewhere, elephants were the innocent victims of callous land mine warfare.



Although the current continental population is estimated at less than one million (calculated at 582 000 in 1992), there are some protected areas in which elephants are considered to be too numerous. In fenced reserves elephants can quickly outstrip their resources and then have a major impact on other wildlife. In such cases, they have traditionally been "managed" (i.e. culled, with tusks, hide and meat being sold) but with the current global ban on ivory exports, the emphasis is nowadays on relocation and expansion of reserve frontiers.

Wildwatch- African Wildlife and Conservation