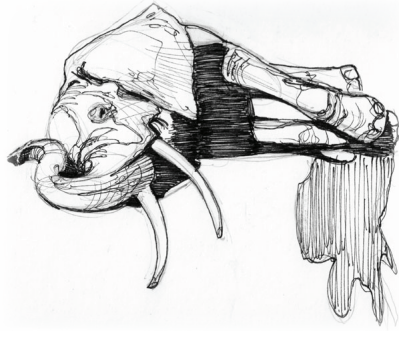


In family behavior elephants are remarkably cooperative. When one is sick, the others bring her berries, leaves and branches to eat. They will try to raise the sick one back to her feet. Undoubtedly, protecting the young arouses the strongest emotion within the matriarchal family, because the scream of a calf will create a rush of relatives to the rescue. Rumbling in infrasound, one female will call more distant relatives to help. Such rumbling is the strongest of all infrasonic calls. By their helpful behavior, elephants demonstrate close kinship ties.



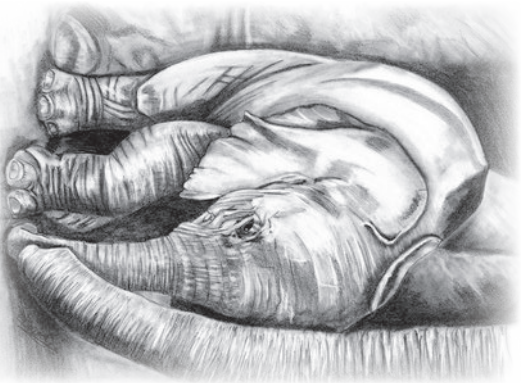
ELEPHANTS

There are two elephant species. While one variety lives in Africa, the other inhabits Asia. Considerably larger and more aggressive, both males and females of the African type have tusks. In Asia the species is smaller and females have no tusks. Carrying out heavy labor in many countries, most Asian elephants have been domesticated. Consequently, circus and zoo elephants are inevitably from Asia. Since African elephants refuse to be tamed, they will not work for man. Surprisingly, the two elephant species are entirely different.

In appearance an elephant—and especially its trunk—is impressive. Surely it is the largest and most useful nose in the world. Two fingers

at the end of it can pick up peanuts, crack the shells, and pop nuts into the mouth. In addition, an elephant can fill the trunk with water and give himself a shower. Showering the babies becomes a regular duty of the mother. The lengthy and powerful trunk is what you first notice about the appearance of the elephant.

Before 1988 people did not know that elephants could hear two octaves below humans and therefore could communicate in infrasound. Infrasound refers to sounds of low frequency, too low for the human ear. Normally, humans can hear sounds in a range of ten octaves.



Above that—higher frequency—is called ultrasound. Dolphins can hear four octaves above what humans can hear. Consequently, they hear in the ultrasonic range, which is a higher frequency. Over the last few years people have designed machines to record and reproduce ultra- and infrasound so humans can hear them.

Peculiar behavior suggested that elephants could hear what humans could not. Strangely a herd might engage in simultaneous and sudden, silent, and synchronized activities. From five miles away related families could arrive within minutes of each other at a watering hole. Suddenly a herd would take flight when a human ear had heard nothing. Since one hundred animals might suddenly stop, spread their ears, and freeze in their tracks for as long as a minute, it seemed they had heard something when no sound had been made. Freezing suggested listening. Freezing predicted sound. Freezing indicated hearing.

come to drink before the drifting sand covers the wells. Sadly, poachers have significantly decreased the population from hundreds to dozens. If the elephants become extinct, many other animals will die of thirst. Unfortunately, humans pursue elephants into the harshest, driest, and hottest habitat on earth. Leave the elephant kingdom alone!

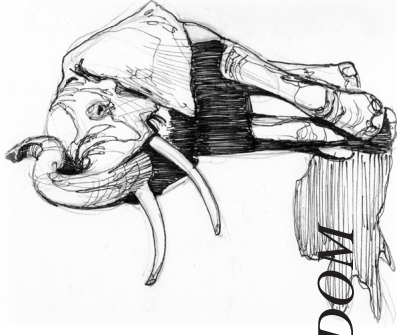


Asian Elephant

THE ELEPHANT KINGDOM

Elephants appear majestic. They are huge. Holding their tusks aloft in sniffing posture, few sights are as picturesque as elephants inhaling the intriguing smell of humans. Equipped with mighty, massive muscles in the trunk, an elephant can uproot an average tree. After the trunk, the ears are most notable. While excellent for hearing, the huge ears are also utilized as fans to cool the body. Unusually, the teats to suckle the young are located between the front, not the hind legs as with cows and horses. Elephants resemble mammoths. They appear mammoth.

Among elephant species may be found the largest and most stately four-footed animals in the world. Ranging from 2,000 to 4,000 kilos, elephants consume tons of food. Since most Asian elephants have been domesticated, few



remain in the wild. In India they were the animals of royalty. Rarely can one see the roaming herds in Asia which are common to Africa. While most African elephants live in game reserves and parks, the truly wild ones have disappeared because farmers hate them when they damage their crops. Poachers slaughter them for ivory. The truly wild elephant species have vanished from the planet.

Elephant behavior is astonishing. Throughout life elephants never forget a human who has hurt them. Throwing him with their trunks, they will hold a man down and stamp on him with both front feet. Normally elephants like humans. They never forget a kindness either. That is why friendly humans call the elephant the gentle giant. Undoubtedly massive, yet elephants normally behave as gently as kittens.

Elephant infrasound, which humans can not hear, is called rumbling. Elephant sounds which people can hear include barks and snorts, trumpets, roars and growls. Trumpeting indicates anger. While a snort exclaims, "Get off my grass!" a roar shouts, "Where are you?"

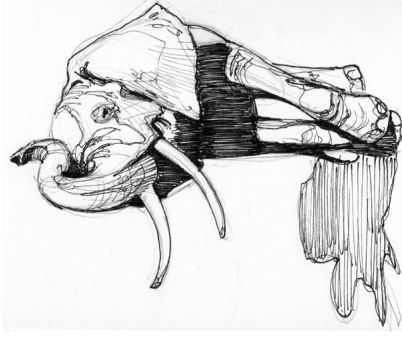
and a growl warns, "Be careful!" These sounds are for conversation when grazing together. Clearly the advantage of infrasonic rumbling is that it can be heard five kilometers away, even when in a forest.

Elephants need a kingdom. They like water in their habitat. In their desire to escape the slaughter of humans, some elephants have chosen to live in the Namibian desert. They dig for water. Employing tusks and trunk, they dig wells one meter deep in the sand. Since calves can not reach the water, adult relatives fill their trunks and pour water into the baby's mouth. After the elephants depart, many other animals



African Elephant

Asian elephants can be domesticated. Before railways they were the major means of transport. India became famous for her canopied two-seaters on an elephant's back, while the driver sat on the head. Normally they are the machines in Asian logging. Humans provide skill, elephants labor. Men cut the trees. Elephants haul them. In addition they dragged the immense rocks which were used in the construction of castles, fortresses and temples. One elephant equals fifty horsepower. They are powerfully built. Elephants are clever. If you can teach it, domesticated elephants can learn it.



IF YOU CAN TEACH IT!

Eagerly scientists wished to test the hearing of elephants. In infrasonic recordings of 400 elephant calls, the human ear could only hear 100. In another experiment, a man five kilometers from the water hole played the mating call of the female elephant, Zita. Two bulls, Pablo and Hannibal, were drinking at the water hole and playfully splashing each other while a woman video taped them. Although she could not hear the mating song when the man played it, Pablo and Hannibal did. They lifted their heads and stiffened, spread their ears and froze. Immediately both swung off in the direction of the recording to find Zita. Rumbling in the infrasonic range, elephants hear five kilometers away.

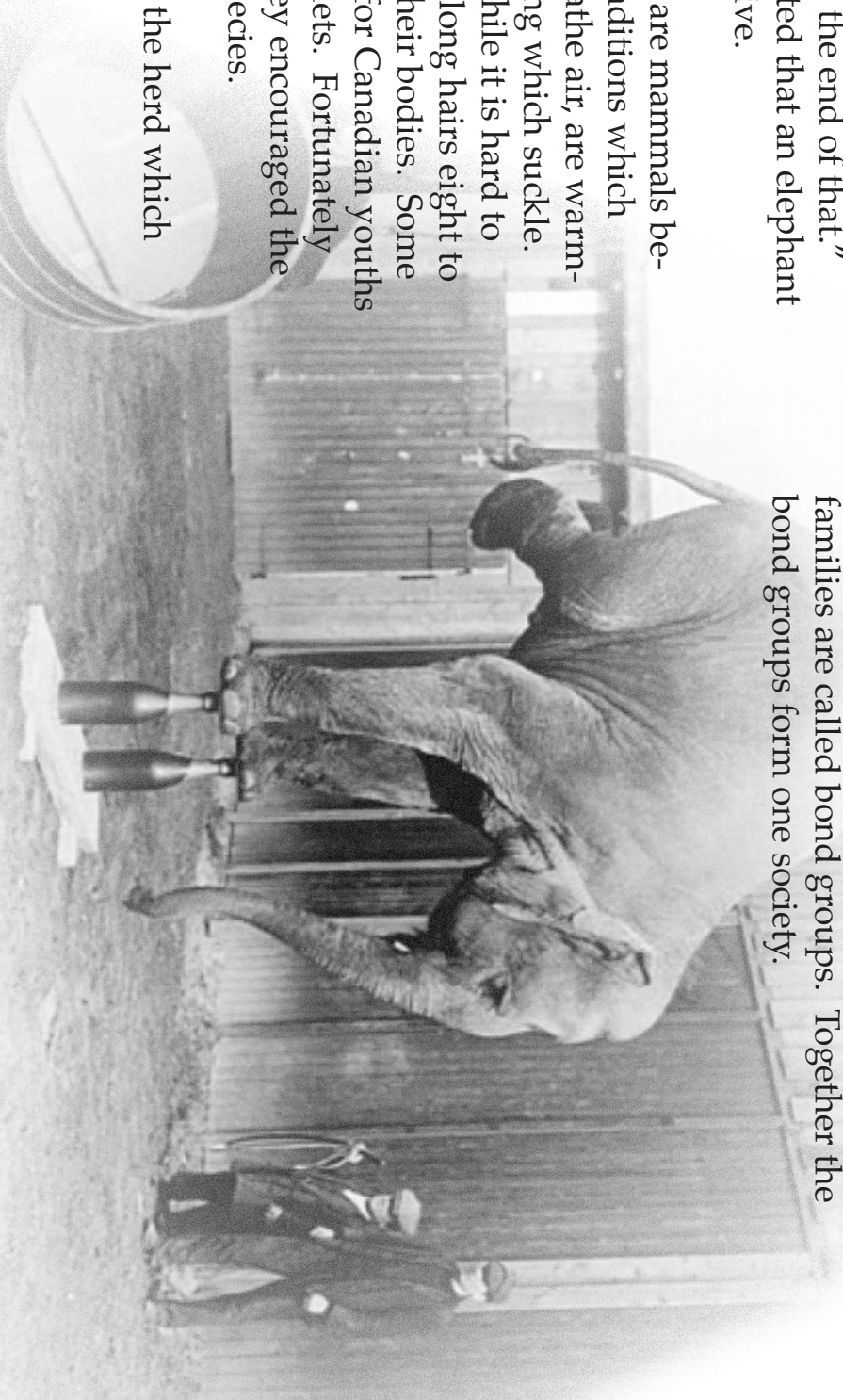
Elephant behavior demonstrates that they can be forgiving. In India a trainer beat Puka, his domesticated elephant, for being overly play-

ful. When the trainer's baby was crawling on the verandah, Puka grabbed and swung the child high in the air with his trunk. Puka held him there. In desperation the trainer patted and stroked his friend begging, pleading and wailing, "Puka please! My love! Puka forgive!" Slowly and gently, Puka lowered the infant to the ground. Crying loudly the toddler shouted for another ride. Puka ambled away. He rumbled, "Hopefully that is the end of that." Puka's behavior demonstrated that an elephant may not forget but can forgive.

Obviously elephant species are mammals because they meet the five conditions which define mammals. They breathe air, are warm-blooded, and have live young which suckle. All mammals grow hair. While it is hard to see, they do grow scattered long hairs eight to ten centimeters apart over their bodies. Some years ago it became stylish for Canadian youths to wear elephant hair bracelets. Fortunately they are banned because they encouraged the slaughter of the elephant species.

Basically the social group is the herd which

forms the extended family. When the vegetation is wonderfully lush, the herd may move together. Usually however, elephants travel in family groups of ten to fifteen. They are nuclear families. Consisting of a grandmother, a few sisters, their children and possibly some cousins, one nuclear family is related to all others in the herd. Seven to ten of these small groups form one herd. In scientific language these families are called bond groups. Together the bond groups form one society.

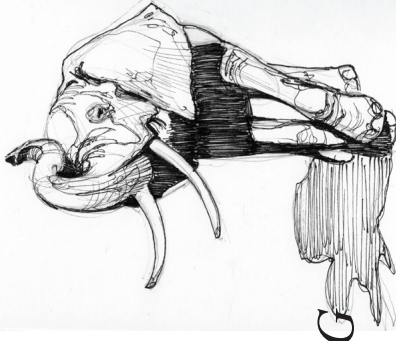


tion. Upon occasion, two young brothers will cooperate to drive the old chief away. Wandering alone and usually bad-tempered, the former patriarch becomes a rogue elephant because he has been rejected by his subjects. Such social behavior is unfortunate.

Domesticated elephants often have been enlisted in human wars. In India armies regularly boasted an elephant cavalry which could be employed to batter down the gates of fortresses. Frequently forts were equipped with long protruding iron spikes to prevent battering. When the African general, Hannibal, invaded the Roman Empire about 2,000 years ago, the very sight of the elephants terrorized the European soldiers. Mounted on their stately beasts, Indian kings enjoyed the excitement of tiger hunting. It was a royal sport. Possibly elephants were first domesticated for warfare and hunting.

WARFARE AND HUNTING

In appearance the elephant is unusual. His size is awesome. Weighing up to 4,000 kilos, an elephant moves without making a noise. He walks as quietly as a mouse. When moving within a meter of a hunter, an elephant will not be heard. Did you know an elephant sleeps standing up? Probably it is too much work getting 4,000 kilos down for the night and up again in the morning. Numerous African countries have adopted the animal as a national symbol, and in Swaziland the queen mother



is called the she-elephant. In appearance, the elephant is the symbol of massive muscle and majestic might.

Elephant families are matriarchal. The nuclear family or bond group is headed by a matriarch and consists of females, except for male calves, which stay with their mothers until able to wander alone. They are one-parent families. Normally mothers have help in child-raising

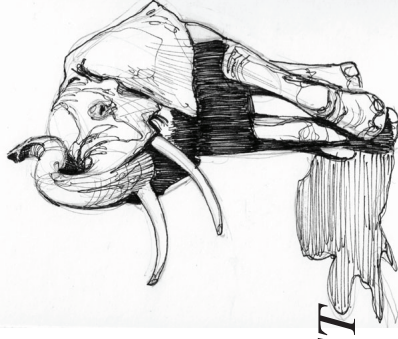


from female relatives. Grazing in twos but rarely more, males are generally loners. In many societies males provide protection, but because of their immense size, elephants have few enemies. Less protection is necessary. As a matriarchal society, the oldest female or grandmother will become matriarch of the nuclear family.

Normally females do the talking while the males listen. Mating calls of females occur in the infrasonic range. Since it always takes the same form, it may be called a song. Mating songs may last for thirty minutes. By using infrasonic rumblings, family groups keep track of each other, and mothers, sisters, and baby sisters communicate about the welfare of calves. Belonging to one herd, family groups talk over long distances. They coordinate movement. By talking and listening matriarchal families, which may be five kilometers apart, can agree to meet at the watering hole.

Occasionally every society behaves cruelly. Elephants are no exception. When the dominant male or king of the herd becomes old, he is challenged by youths ambitious for his posi-

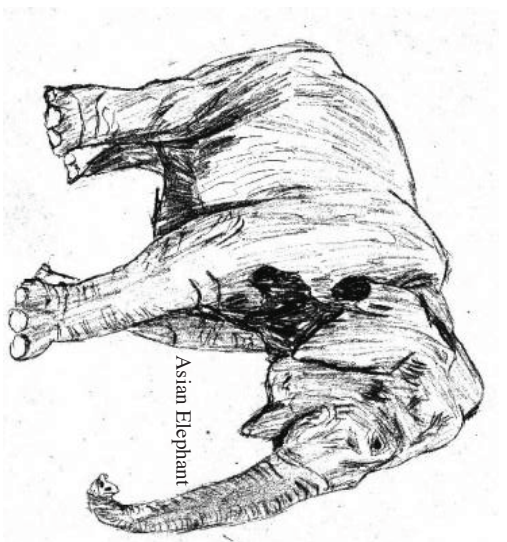
which are regions of mixed trees and grass. In the Skeleton Coastal Park of the Namibian desert, water holes may be seventy kilometers apart. Feeding grounds might be sixty kilometers from water. Although elephants can go without drinking four days, they must not become lost temporarily or they will dehydrate. Rumbling in infrasound over long distances assists families to find water and each other. Believing that these animals have developed special skills for survival, scientists fear that if they become extinct, no other elephants could repopulate. Since they dig water holes which other species use, if the former disappear they will take into extinction a whole animal world. An elephant kingdom is in decline. Will we witness its fall? The Skeleton Coast of Namibia provides a unique habitat and kingdom for the elephants of the desert, because it is their last refuge from mankind.



ELEPHANTS ON THE SKELETON COAST

When the social group gathers together, a dominant male becomes patriarch. The society is hierarchical. Lords and ladies must be respected and obeyed by youths. Whenever two elephants meet, both know which is superior. Grazing bond groups keep relationships friendly through constant communications. After temporary separation, bond groups greet with intense excitement, rumbling, whirling in circles and trumpeting. Stranger groups merely demonstrate politeness as if one murmurs, "Good Morning" and the other replies, "How are you?" There is little more. When the chief grows old, he will be challenged by young males. Quickly a new king will take over leadership of the herd. Matriarchs of the bond groups resemble the Canadian provincial premiers with considerable power, while the king elephant is governor-general or ceremonial head of the social group.

In appearance elephants are unique when com-



pared with other animals. The teats are different. Teats which suckle the young are located between the front legs. Clearly they are unlike cows and horses, or sheep and goats, which have become domesticated mammals. The tusks are different. Who else owns such mighty ones? Weighing up to 350 kilos, the tusks may be used to strip bark from trees, dig for water or as defence against predators. The tragedy is different. Unfortunately tusks have become the elephant's tragedy because humans seek ivory and slaughter the animals for it. Banning trade in ivory becomes essential to prevent extinction. While elephants are endangered, they appear uniquely different.

When elephants expel their old leader, they behave cruelly. The rogue's friends have left. His teeth are rotting. He eats slowly. Around the game lodges in Africa, lonely old rogues eat vegetable garbage and visitor handouts. Pulling down trees across the road, one old rogue named Pickles constantly blocked traffic. Pathetically Pickles seemed to be crying out, "Look at me! I'm still young enough to topple trees." Expulsion of old rogues seems to be cruel behavior.

Elephants must be caught to be domesticated. Occasionally, covered pits are dug into which they fall. At other times they are driven by fire, noise or gunshots toward an enclosure which is constructed strongly of stone. In a third method trained elephants may be used to attract a wild one. While domesticated animals keep a wild one interested, humans can fasten chains on its legs and tie it to a tree where it is held during the furious anger which follows its capture. Tanning permits humans to train the animal to work for them.

Elephants in Namibia live in a desert habitat. Normally elephants inhabit forests or park lands