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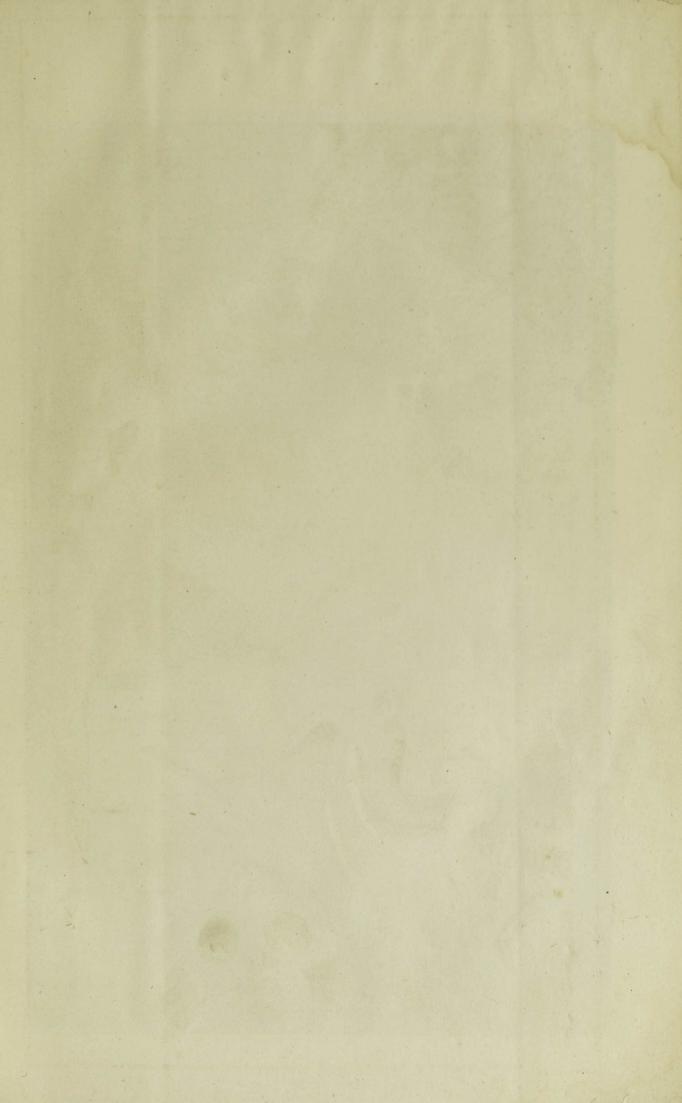
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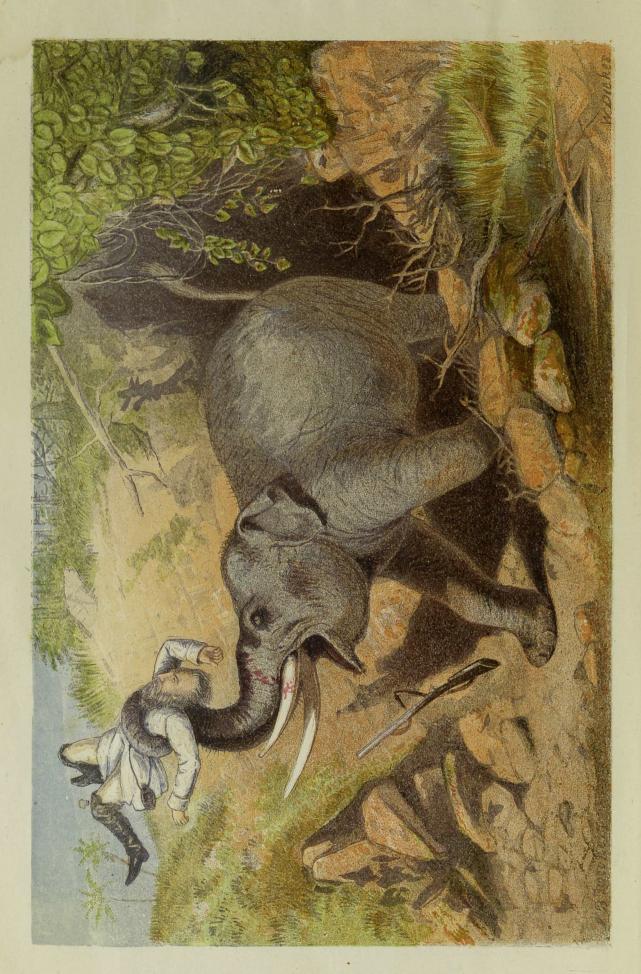
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PALEOTHERION.

MAMMOTH.

DINOTHERION.

MASTODON.

THE ELEPHANT.



MILODON.

and cool the mighty leaves whose impress is now and then found in coal, leagues below the earth's present surface;—when indeed what now are grim coal-fields, the lurking places of "darkness that may be felt," and of deadly gases hungering for flame, were broad forests, mellow and blooming,— the elephant was common all over the world.

Out of the river we have named Thames has he many a time slaked his hot thirst, and up the slope known to moderns as Ludgate Hill, has he strolled leisurely, browsing among the great trees. The remote and barren North, where now eternal snow is, at that period yielded him pleasant pasturage; where the fur-clad sledger now guides his sure-footed antlered steed, then flowed soft rivulets in which he cooled his parched hide; and where hills and mountains of ice, nurtured by bleak winds, grow and flourish apace, then sprouted juicy palms and tender grasses for the maintenance of the giant herds there abounding.

It must have been so; for beneath the pavement of every city in the world, in beds of streams, on river banks, and in remote caves, the bones of this ponderous animal have been discovered; and although there exists between the ancient fossil and the living animal with which we are acquainted, a difference of structure, the presence of certain organs undoubtedly associated with peculiar instincts are exhibited as prominently in one as the other;—instincts, the means of gratifying which it was absolutely essential should be co-existent. But it would be a waste of words, and an insult to the reader's understanding, to enter upon an argument to prove that herbivorous quadrupeds could not possibly exist without herbs, or to show the impossibility of juicy leaves and succulent herbage growing amid the withering frost of the northern hemisphere.

Indefatigable labourers in the field of science—Darwin among the number—agree that the climate of the far North is now as it ever was; and that that fact not at all precludes the possibility of such mighty quadrupeds as the elephant and rhinoceros there abiding. certain regions of North America, the subsoil is perpetually frozen (as in the neighbourhood of Bear Lake, where the summer thaw never penetrates deeper into the soil than twenty inches); yet this frozen substratum does not of itself destroy vegetation, for dense forests flourish on its surface. At the present day, we have growing in Siberia, where the temperature of the air is invariably below freezing point, and the earth like iron, the birch, fir, aspen, and larch. As far as quantity alone of vegetation is concerned, the frozen carcases and ice-bound relics of various animals might have existed where the remains are now discovered. The kind of vegetation at present existing is almost immaterial, because, as there is evidence of physical

changes, it may be fairly supposed that the species of plants may likewise have changed.

The nearer we approach the Arctic circle, in greater abundance are vestiges not only of elephants, but of tortoises, and crocodiles discovered. On the borders of Siberia they are so commonly found, and in such prime condition, as to constitute a considerable article of commerce, and one of sufficient value to be worth monopolizing by the reigning Czar. Such of his subjects who live in these isolated regions, hold a fabulous belief concerning this seemingly inexhaustible wealth of ivory. They say that before man came on the earth, the tremendous beast whose remains are these, burrowed mole fashion underground. The Chinese patronize a similar superstition, and the subterranean relics discovered throughout China are said to belong to Tyn-schen, "the mouse that hides."

Writers of various periods have advocated the opinion that the remains of elephants discovered in Siberia, were conveyed thither by the mountain streams of India; but the fact of tusks and bones being found in large quantities along the banks of the Don, the Volga, and other rivers flowing from the north, goes far towards upsetting the theory respecting their water passage. "There is not," says M. Pallas, a renowned traveller, and a great authority on this subject, "there is not in all Asiatic Russia, from the Don to the Tanais, a single stream or river, on the banks or in the bed of which are not found some bones of elephants, or of other animals equally strange to the climate."

In 1799 was discovered, in the dominions of the Czar, a tremendous elephant—perfect as when, a thousand years before, death had arrested its breath—encased in a huge block of ice, transparent and clear as crystal. A fisherman of Tongoose, named Schumachoff, was the fortunate discoverer. This man, like his neighbours, was accustomed when the fishing season was at end, to employ his time in hunting along the shores of the Lena for elephant tusks, for the sake of the government bounty; and while so employed, and when he had, in the ardour of his pursuit, passed several miles beyond his companions there suddenly appeared before his wondering eyes the miraculous sight above alluded to. Unfortunately, however, Schumachoff was a man of dull and simple mind, and instead of turning his discovery to profit, by proclaiming it to the world, or to that part of it with

which he had dealings, he did nothing but gaze of ally on the embalmed mammoth, between which and himself the stood but a few hummocks of spiky ice. It was on account of this barrier that he excused himself when the business came to light; but the real barrier that stood in the fisherman's way, was one more formidable than a hill of bayonets as high as the Alps—his superstitious fears. For five successive seasons from the time when he first dis-



covered it, did Schumachoff make stealthy journeys to his crystallized monster, never finding courage sufficient to approach it closely, but simply standing at a distance, once more to feast his eyes on the wonder, and to carry away in his thick head enough of terror to guarantee him nightmare for a whole month of nights. At last he found the imprisoned carcase stranded on a convenient sand-bank, and boldly attacking it, broke the glittering casing, and roughly despoiling the great beast of its splendid tusks, hurried home and sold them for fifty roubles, leaving the well-preserved bulk of elephant meat, a thousand years old, yet juicy and without taint, to be devoured by wolves and bears, or hacked to bits by the

natives as food for their dogs. It was not till full two years after this event, that a celebrated naturalist got wind of the above particulars, and at once visited the spot. Too late, alas! what was the carcase, huge as it was, to the many pairs of hungry jaws that had assailed it through two seasons of starving frost! The elephant was picked clean, an entire fore-leg even had disappeared, and nothing remained but the tuskless, three-legged skeleton. The eyes, however, were still in the sockets, and the brains entire in the skull.

But we need not travel to Russia to prosecute a successful search for elephant relics. Canterbury has produced them. In Kirkdale Cave, Yorkshire, Professor Buckland found them mixed with those of the rhinoceros, the hippopotamus, the horse, the ox, and the hyena; (this phenomenon has been attributed to the Great Deluge; the frighted brutes hiding from the overwhelming flood). Elephant remains have likewise been dug up in plenty in Gloucester, in brick-earth pits at Brentford, and in Gray's-Inn, London. The Sloane Museum possesses a magnificent tusk, found at the latter place, twelve feet deep in the gravel.

As lately as the seventeenth century, human anatomy was but little understood, and comparative anatomy still less. To our forefathers, a cartload of animal remains were but so many bones of contention; and an inquest of six months' duration held on them, did not produce as many conclusive facts as to the structure of the various owners, as would be derived in six hours by a modern Owen, with no more substantial ground to work on than the defunct's solitary tooth or toe-nail. There can be little doubt that much of the bygone superstition respecting "giants," sprung from the contemplation of the great bones occasionally brought to light. When, for instance, in the reign of James I. "big outlandish bones" were discovered at Gloucester, the King appointed Lord Cherbury to find out what he could respecting them. It would seem that to everybody in the realm at all competent to judge of a bone these relics were exhibited; but the verdict of the jurors was by no means unanimous. Some gravely opined they were the bones of a human giant, and advised their immediate re-interment with Christian rites; others, including Dr. Harvey, declared the bones to belong "to some exceeding great beast, as an elephant." Bishop Hakewell, who was one of those consulted by Lord Cherbury,

says:—"His Lordship showed me some bones, which he had collected; which were a huckle-bone, part of the shoulder-blade, some parts of a tooth, and the bridge of a nose, all of a huge bigness.

The bridge of the nose was what confirmed his lordship's and my opinion, that it could not be that of a man, for it did seem to be a bone very apt to bear up the long snout of an elephant.

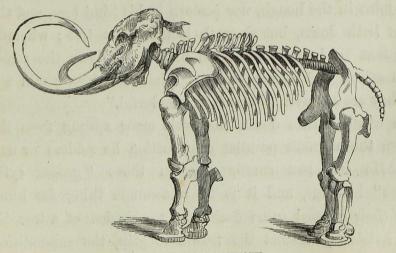
One of the teeth of this pretended giant, by the special favour of my lord of Gloucester, was examined by me. I found it to be a stony substance, both for hardness and weight; and it should seem, by his lordship's letter to me, that he himself was not confident that it was the tooth of a man."

In those "good old times," simple arithmetic must have been as unknown a science as comparative anatomy. The tooth above spoken of, supposing it to have been the tooth of an elephant, must have weighed, say ten pounds. Now the average weight of adult human teeth is a hundred and sixty to the pound, and taking the weight of a grown man to be two hundred pounds, a single tooth is about a thirty-thousandth part of his weight, so that the tooth of this Gloucester giant weighing ten pounds, his entire carcase would have turned the beam against a hundred tons,—the weight of about a hundred and sixty fat bullocks.

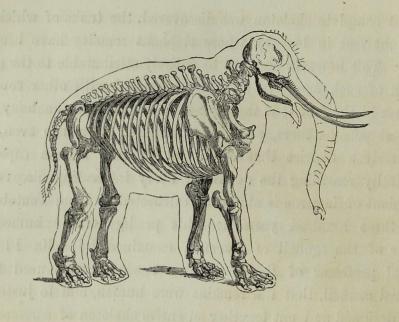
Nevertheless it was a common practice to ascribe to these colossal bones human origin. In the reign of Louis XIV. the subject gave rise to a dispute, which for tenacity and the amount of argument adduced on either side, is almost unmatched in the annals of controversy. The remains in question were discovered in a sand-pit in Dauphiné, by a surgeon named Mazurier. He falsely represented that the bones had been found in a sepulchre thirty feet long, and that covering the top of it was a stone slab, on which was cut the inscription *Teutobochus rex*, and further pretended that near the same spot were found medals, and other evidence showing the relics to be those of Teutobochus the giant king of the Cimbri, who fought against Marius. Cuvier mentions twelve pamphlets published during the controversy, but finally it was clearly demonstrated by Riolan, that the bones were those of an elephant.

Germany has produced more fossil bones of elephants than any other country; indeed, Blumenbach reckons two hundred places (including Tonna in Gotha, at which place, and at a depth of fifty feet, an almost complete skeleton was discovered, the tusks of which measured eight feet in length), where elephant remains have been discovered. This however may not be entirely attributable to the greater profusion of such fossils in Germany compared with other countries, but rather to the fact that the science of comparative anatomy found its earliest patrons there, and that a hundred years ago even, there was scarcely a district that could not produce a man capable of authentically recording the details of every interesting discovery.

The giant of Lucerne is almost as celebrated as King Teutobochus. Nearly three hundred years ago this prodigy was exhumed, and by order of the council of Lucerne, examined by Felix Platen, a renowned professor of Basle. Platen speedily announced to the astonished council, that the remains were human, and to justify this verdict, designed and put together an entire skeleton of corresponding dimensions, by which it appeared that the tremendous fellow must, when alive, have stood at least twenty-six feet high. So the good folks of Lucerne believed in and continued to pay homage to their giant patron, till a few years since, when there came along one of those ruthless demolishers of mystery and hole-and-corner mummery, Blumenbach by name, who visited the giant as it lay in awful state at the Jesuits' College, and in a less number of hours than it had been preserved centuries, pronounced it a sham, and without difficulty convinced the worthy citizens that they had been guilty of the grave error of mistaking elephant bones for human.



SKELETON OF MAMMOTH.



STRUCTURE OF THE ELEPHANT.

In ancient times the most whimsical notions were entertained respecting the structure of this ponderous animal. "Folks held to the fallacy," says Sir Thomas Brown, "that it hath no joynts, and this absurdity is seconded by another, that being unable to lie down it sleepeth against a tree, which the hunters observing, doe saw almost asunder, whereon the beast relying, by the fall of the tree falls also down itself, and is able to rise no more." Pliny, Aristotle, and other equally celebrated writers of a by-gone age, were alike faithful to this wooden notion. With the most perfect faith Pliny says, "In the island of Scandinavia there is a beast called Machlis, that hath neither joint in the hough, nor pastern in his hind legs, and therefore he never lieth down, but sleepeth leaning to a tree; wherefore the hunters that lie in wait for these beasts, cut down the trees while they are asleep and so take them: otherwise they would never be aken, they are so swift of foot it is wonderful."

There can be little doubt that this error sprung from the fact, that from the animal's peculiar construction he seldom or never lies down. He can rest comfortably on those "grosse cylindrical structures" his legs, and it is no uncommon thing for hunters to discover their colossal game dozing in the shadow of a tree, its body leaning indolently against the trunk. Again, the superstition may have derived support from the circumstance of trees and rocks

found bearing impressions of the animal's great sides. But the elephant has not been sleeping there, he has merely been following the dictates of his piggish nature, and enjoying a comfortable rasp



after his mud bath. Elephants have been known to remain standing after they have been shot dead: Captain Denman shot one that remained so.

In captivity elephants seldom lie down; indeed the keepers are accustomed to regard a beast found prostrate as one smitten with some disorder and at once place him on the sick list, regulating his diet and putting him to no kind of labour for a while. An elephant that belonged to Louis XIV. never assumed any other position than a standing one through five years, though at the same time it was evident it was reduced to adopt that course from other than natural

causes; for with the points of its tusks it had scooped two holes in the stone walls of its den, and into these holes it was accustomed to hitch its ivory appendages when in-

clined for a nap.

In one respect do the hindlegs of the elephant differ in their formation from those of

any other quadruped. Instead of bringing them under him when he lies down, he extends them *behind* him, as does a human being. The struggle which horses and oxen experience in rising from the ground is by this providential arrangement of the hind legs of the elephant avoided. He simply draws his hind feet gradually under him, and his enormous weight is levered up without a perceptible effort.

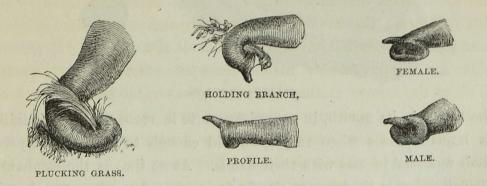
Owing to this beautiful arrangement of the bones and muscles, the elephant is rendered one of the most sure-footed of animals. Carrying on his back a heavily-laden howdah, he will descend precipitous slopes with the most perfect ease. He manages it in this way: kneeling down at the commencement of the declivity, he puts out one fore-leg and feels cautiously for a safe footing; if he does not find it naturally, he sets about making it artificially by hammering in the soil an indentation with his broad and heavy foot. One foot thus accommodated, the other one is drawn out with equal care, and provided for in the same fashion as the first. Then one of the hind-legs is cautiously drawn forward, and one of the fore-feet being released from the foot-hole, it is inserted in its place. It might be imagined that to afford time to the cunning elephant to go through these performances with the careful deliberation necessary to their perfection, travelling through a hilly country must be tedious work; this is, however, far from being the case: so rapidly does the sagacious animal perform the manœuvres above described, that in as little time as it has taken me to write this paragraph, the howdah and its occupants would have reached from the top to the bottom of a considerable hill.

He is a strict vegetarian, his intestines being formed exactly as are those of the horse; unlike the horse, however, he has not the long elastic neck so perfectly under the control of the possessor that he can erect it above his chest straight as a column, or lower it to the earth and browse without the least deflecture of his legs. Supported upon a short and stiff series of vertebræ, the huge animal can only move his head with constrained and pivot-like action. His sole dependence, therefore, is his trunk, and when we consider that with this member rendered incapable, the certain fate of the poor savage brute would be starvation, it ceases to seem wonderful that he should preserve the curious worm-like thing with such care in captivity: should the elephant's trunk get injured, he has to be fed for the remainder of his life. Mr. Williamson saw one whose trunk had been sliced with a bill-hook, and though the wound healed up, it was of no farther use to the poor brute, who was fed with grass and hay doubled

into bundles and thrust into his mouth. Some years ago, an elephant kept in a menagerie at Dublin was accidentally burnt to death, and when his remains came to be examined, no trunk could be found, so it was of course thought that it had perished in the fire, but upon closer examination it was found thrust two feet deep into the hard ground that made the floor of his den.

Wild elephants sometimes go blind, but guided by the trunk, they are still enabled to gather food, to travel over unequal ground, and to avoid ditches and hollows. So exquisitely fine is this organ of touch, that the blind brute by extending it before him as far as possible, and letting the finger-like appendage attached to the end of it skim along the ground, is enabled to travel through leagues of forest with perfect ease.

Opposed to this finger is a smaller protuberance, which may be called a thumb; and if the objects he is collecting to eat be too insignificant to be worth the trouble of being passed separately to the mouth, he holds them one by one behind this thumb till he has gathered a mouthful. If it be grass on which he is dining, he will twist the end of his trunk round a tuft, pluck it up, and after beating it against one of his fore-legs till the roots are free from earth, pass it into his mouth.

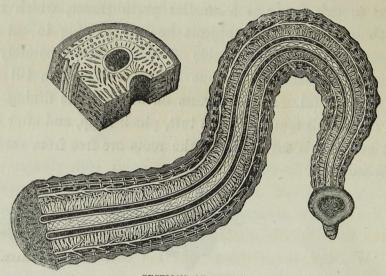


When he finds a cocoa-nut, he first kneads it under foot to remove the outer bark, then after plucking off the coarse fibre with which the inner shell is surrounded, passes the dainty into his maw, evidently much enjoying the sweet liquid that exudes as he crunches up the nut, shell and all.

The elephant's trunk is not composed of a mere series of muscular rings, as its appearance would lead one to suspect. It is one of the most marvellous constructions in creation, and one that manifests completely the wondrous wisdom of the Maker of all things. Possessed

of it the elephant, despite enormous bulk, ceases to be unwieldy; it is a magic wand that at once lifts him from the grovelling condition of his even less bulky brethren, the rhinoceros and hippopotamus.

A curious delusion respecting the habits of the elephant existed till within a very few years, viz. that the young ones imbibed the milk of the mothers' teats through their trunks. It was such a plausible theory, that, on the strength of their own sagacity, and the authority of such renowned naturalists as Buffon and Perrault, writers of all countries shut their eyes to facts and their ears to reason, and clung to it most pertinaciously. The young elephant, however, does not imbibe the mother's milk through its trunk; if it uses it at all during the process of sucking, it is simply to knead the udder while



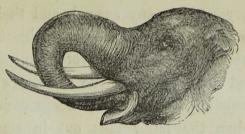
SECTIONS OF TRUNK.

the teat is in its mouth, in an endeavour to increase the flow of milk, as human babies when they grow old enough to be able, will press their mothers' breasts with their hands. At no time is the elephant's disinclination to lie down so clearly demonstrated as when the dam is suckling her calf. In a wild state she will rather extend her legs and assume a stooping and evidently inconvenient posture. When in captivity, should the dam be tall, the keepers construct a little platform for the baby elephant to stand on while it is sucking.

Damp, worm-like, disagreeable-looking thing as it seems, it has three distinct and perfect uses. First of all it is an organ of smell, an elongated and curiously elastic nose in fact, and without doubt of incalculable value to the animal in selecting food above his range of vision, and adding considerably to his ability to scent at a distance

savage beasts, or his still more formidable enemy, man. Two canals are continued from the nostrils, which are reflected round the nasal bones and then proceed straight to the termination of the trunk. The canals are separated by and embedded in a fatty elastic membrane, containing thousands of minute muscles. Of these there are three sets: an outer longitudinal, composed of four layers; an oblique set, which are variously directed; and a third set which radiate from the tubes to the circumference. They are very small, and supposed to number as many as forty or fifty thousand.

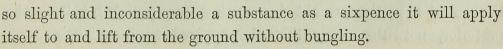
Besides an organ of smell, the proboscis of the elephant serves as a sucker by which it can quench its thirst at a pool too shallow even for the neat-mouthed horse to advantage himself of. There is, however, no passage through the trunk to the mouth, so that when the former is drawn full, its contents are transferred to the animal's throat by



FEEDING.

turning the little mouth to the great one and squirting the liquid therein. Whether the elephant, having satisfied his thirst at a

river he has travelled twenty miles to reach, provides for an after-draught by filling this convenient vessel before he starts for home, is more than I can say; neither do I find it anywhere recorded whether or no the animal can, with his trunk filled with water, at the same time use it as deftly as though it were empty, or trumpet with it, as is his wont when pleasurably or otherwise excited. Last, but by no means least, is the wonderful little apparatus that terminates the trunk; boneless, yet mobile as the thumb of a weaver. A pin is not too small an object for this delicate member to grasp, and even



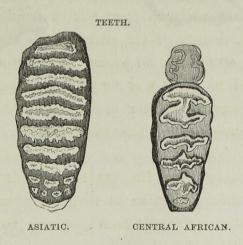
From the elephant's upper jaw extend two enormous teeth, fixed in sockets in the front of the mouth, but which, correctly speaking, are neither incisors nor tusks, although by this latter term they are universally known. However, they do not perform the usual functions of teeth, and are not situated as tusks usually are. French naturalists of the modern school call the weapons in question Defenses, a term applicable solely to their use, and evading the question of position. The French title is correct, inasmuch as it exactly defines the use of the ivory protuberances. Although often nearly ten feet in length, and sharp enough to pierce easily the toughest hide that ever enveloped a carcase, the elephant-except he be a "rogue" (of which class of elephant kind mention will presently be made)seldom or never uses his tusks except in self-defence. These tusks, as well as those of other Pachydermata, grow upon a simple pulp, such as that which forms the teeth of the bottle-nose whale. They are formed of ivory without any enamel, and their growth is only limited by the abrasion to which they are subject.

In most carnivorous as well as herbivorous animals, the succession of teeth is provided for precisely in the same way as with ourselves, namely, by the formation of a new tooth below each of the deciduous ones; so that when the latter falls out in consequence of the absorption of its fangs, the former is ready to take its place. The germ of the second tooth is at first imbedded in the jaw-bone in the immediate vicinity of the roots of the one it is destined to replace, and as its growth advances, the old and used tooth is gradually removed to make way for the new-comer. The steps of this process are exactly similar to those by which the milk-teeth of a child are changed, and the details connected with it are familiar to us all.

In the elephant, however, the succession of teeth is effected in a very different manner; the place of the first formed being supplied by others that advance from behind as the former become used. "Animals exhibiting this mode of dentition," says Rymer Jones, from whose garner of anatomical curiosities these particulars are chiefly culled, "have the grinding surfaces of their molar teeth placed obliquely, so that if they were to issue altogether from the gum, the anterior portion would be much more prominent than the posterior, notwithstanding that the opposed teeth act upon each

other in a horizontal plane." The consequence of this arrangement is that the anterior portion of these teeth is ground down to the roots and worn away sooner than the posterior portion. Moreover, the posterior part of the tooth is considerably wider than the anterior; so that as the succeeding tooth advances from behind, there is always sufficient room to receive it, and in this way by the time the first tooth is quite destroyed and falls out, a new one from behind has already taken its office. There is therefore no absorption of the roots of these teeth, but they are ground down from the crown to the stump. The new tooth that thus advances from behind, is always of larger dimensions than that to which it succeeds; because the animal itself has grown in the interval, and the jaws have become proportionately developed.

The elephant may in this way have a succession of seven or eight teeth on each side in both jaws, or from twenty-eight to thirty-two in all; and nevertheless seeing that the anterior ones successively fall out, there are never more than two visible at once above the gums on each side, or eight in all; generally indeed there is only one visible at a time. Every successive tooth is composed of more laminæ than that which immediately preceded it, and a longer time is required to perfect its growth.



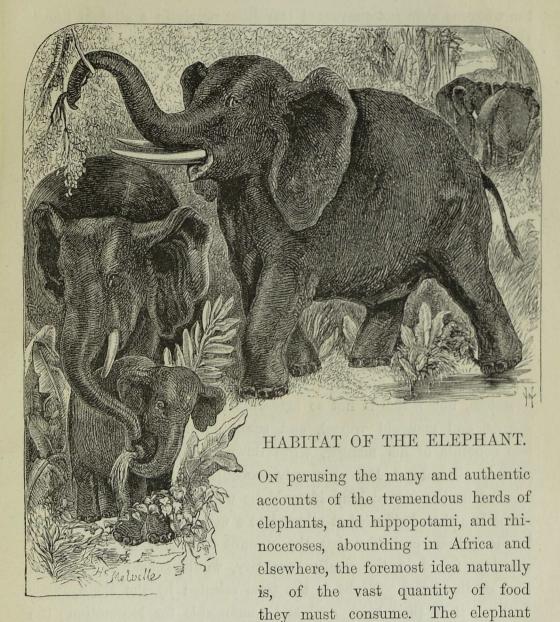
John Hunter, whose indefatigable labours embraced this among a thousand other subjects, bears corroborative testimony to the above. He says, "Elephants do not shed their teeth as other animals do that have more than one; for those that have more than one tooth can afford to be for some time without their teeth: therefore the young tooth comes up in very nearly the same place with its predecessor, and some exactly underneath; so that the shedding tooth falls sometimes before the succeeding tooth can supply its use. But this would not have answered in the elephant, for if the succeeding tooth had formed in the same situation with respect to the first, the animal would have lived for some time entirely deprived of a tooth on one side, or at least if it had one on the same side in the opposite jaw, that one could have been of no use; and if this process took place in both sides of the same jaw, and in either jaw, the animal would have been entirely deprived of any use of the two remaining."

SKULLS.



AFRICAN.





that was shot at Exeter Change, was partly weighed, and it was estimated that its entire weight was five tons and a half. An hippopotamus that was cut up, pickled, and exported for anatomical purposes, weighed three tons. The fairly estimated weight of the rhinoceros is three tons and a half. Indeed, Darwin roughly estimates each of the ten largest quadrupeds of Africa to weigh, on an average, two tons and a quarter. In a single day's march, Dr. Smith counted about a hundred and fifty rhinoceroses, several herds of giraffes, and a host of hippopotami, of which his party killed eight; yet, says the Doctor, "the country was thinly covered with grass, and bushes about four feet high, and still more thinly with mimosa trees; so that

the waggons were not prevented travelling nearly in a straight line." It should be recollected, however, that the underwood which the bulky animals consume, contains much nutriment in a small bulk, and that, thanks to the rich rank soil on which it grows, the green boughs are replaced within a very short time of being cropped.

There is reason to believe that our ideas respecting the quantity of food required by the giant quadrupeds are much exaggerated; as truly says an acute writer, it should be remembered, that the camel, an animal of no mean bulk, has always been considered an emblem of the desert. As regards the elephant, he is as dainty in the selection of his food as the best of us. Certain sweet tasting fruits and blossoms are his delight. He chooses the mohonono, the mimosa, and other trees, which contain much saccharine matter, mucilage Applying his trunk to the stem of a lofty palmyra, he and gum. sways it gently to and fro to shake off the delicious seeds, which he picks up and eats singly. It is by no means a fair test, to catch an elephant, bring him to a climate which might have suited his ancestors, but which is not so agreeable to him, feed him on hay, carrots, and mangold wurzel, and summing up the weight of the late contents of his manger, write down, "the elephant consumes so-and-so in a day." It is extremely probable that if a day's provender selected by the animal himself could be weighed, it would be found to be less than half of that allowed to a menagerie elephant; and it is more than probable that the amount of sugar, and gum, and mucilage found in the smaller quantity, would considerably exceed that of the latter. Night is the time selected by the elephant for feeding; it is then more cool and comfortable for locomotion; the buds and leaves are saturated with dew, and are thus doubly grateful.

The elephant of Ceylon is supplied much more plentifully with food than his African brother. Tennent says: "The food of the elephant is here so abundant, that in eating he never appears to be impatient or voracious, but rather to play with the leaves and branches on which he leisurely feeds. In riding by places where a herd has recently halted, I have sometimes seen the bark peeled curiously off the twigs, as though it had been done for amusement." The same authority relates, that the natives of the peninsula of Jaffna always look for the periodical appearance of the elephants at the precise moment when the fruit of the palmyra palm begins to fall to the

ground from over ripeness. In like manner, in the eastern provinces, where the custom prevails of cultivating chena land, by clearing a patch of forest for the purpose of raising a single crop, after which the ground is abandoned, and reverts to jungle again, although not a single elephant may be seen in the neighbourhood during the early stages of the process, the Moormen, who are the principal cultivators of this class, will predict their appearance with unerring confidence so soon as the grain shall have begun to ripen; and although the crop comes to maturity at a different period in different districts, the herd are certain to be seen at each in succession, as soon as it is ready to be cut.

Acute as is the elephant's sense of hearing, it will hardly account for the celerity with which the existence of danger becomes known far and wide amongst them. This indeed constitutes one of the greatest difficulties with which the elephant hunter has to contend. Attack a herd to-night, and no matter how quietly the slaughter is consummated, by sunrise to-morrow all chance of more elephant sport in that neighbourhood is at an end. Somehow or another, news of the presence of the man with the terrible gun gets wind, and straightway ensues an elephant gathering and flitting. He has the contempt for short distances that might be expected of a brute of such magnitude, and it is nothing for his bulky legs to trudge him along fifty miles in a single night. Other wild and herbivorous animals seldom think of selecting a haunt, without an abundant supply of water in the immediate neighbourhood, but to the elephant, a score of miles between his "bite and sup" is the most ordinary condition of things. Indeed they almost invariably choose for their resort the most lonely and secluded depths of the forest, at a very great distance from the fountains at which they drink. According to Cumming, in hot dry weather, the elephant drinks nightly; but in cool and cloudy weather, only every third or fourth day. About sundown, says the renowned lion-killer, "the huge creature leaves his midday haunt, and commences his march towards the fountains, which are probably from twelve to twenty miles distant. This he generally reaches between the hours of nine and midnight; when, having slaked his thirst, and cooled his body by spouting over it large volumes of water, he resumes the path to his forest solitudes. Having reached a secluded spot, the full grown bulls lie down on their broadsides, about the hour of

midnight, and sleep a few hours. The spot which they usually select is an ant-hill, and they lie around it, with their backs resting against These hills, formed by the white ants, are from thirty to forty feet in diameter at the base. The mark of the under tusks is always deeply imprinted in the soil, thus proving that they lie on their sides." It is, however, only in such solitary places where the elephant has never been hunted or otherwise disturbed, that he will confide the length and breadth of his great carcase to the earth. In elephant districts common to the hunter, the animal sleeps as he stands, ready at a moment's notice to flee. There can be little doubt that the elephant accommodates his habits pretty much to circumstances. has been already remarked, he feeds by night and rests by day, and no doubt such is the rule; but in regions where he may lie down without fear, he will crop a meal night or day, just as it suits his fancy. Mr. Cumming says of the African elephant: "In remote districts, and in cool weather, I have known herds to continue pasturing during the whole day."

The mode by which one of a herd conveys to his fellows intelligence of the approach of danger, is by uttering a low, suppressed sound, made by the lips, somewhat resembling the twittering of a bird, and described by the hunters by the word "prut." Sir Emerson Tennent, who was the first to notice this last-mentioned peculiarity, further makes mention of a very remarkable noise uttered by elephants when their alarm was too great to be expressed by the stealthy note of warning just described. "On these occasions," he says, "the sounds produced, resemble the hollow booming of an empty tub when struck with a wooden mallet or a muffled sledge." Major Macready, who heard the sound by night amongst the great forests of Bintenne, describes it as "a sort of banging noise, like a cooper hammering a cask;" and Major Skinner is of opinion, that it must be produced by the elephant striking his sides rapidly and forcibly with his trunk. Mr. Cripps informed Tennent, that he had more than once seen an elephant, when surprised or alarmed, produce the sound by striking the ground forcibly with the point of the trunk, and this movement was instantly succeeded by raising and pointing it in the direction whence the alarm proceeded, as if to ascertain by the sense of smell, the nature of the threatened danger. As this strange sound is generally mingled with the bellowing and ordinary trumpeting of

the herd, it is in all probability a device resorted to not alone for warning their companions of some approaching peril, but also for the additional purpose of terrifying unseen intruders.

Considering his bulk and weight, the facility and noiselessness with which the elephant can when it suits him glide through the bushes is truly wonderful. Suddenly disturbed by the hunter, he will burst away with a roar and a rush, crashing and rending all before him: on he goes till hidden from view by a clump of dense underwood, and then the clatter so suddenly ceases, so breathless a stillness succeeds the uproar, that any one unacquainted with the ways of the elephant would make quite sure that behind that bush the great beast was hiding; impressed with the idea, the green hunter creeps silently up to the hiding-place—to find it perfectly innocent of elephant; the cunning brute without so much as snapping a twig has got away, and could he be seen, is doubtless a mile away, congratulating himself on his good fortune.

Thoroughly inoffensive as is the elephant, great respect is invariably paid him by all the beasts of the forest; no one disputes his path. The lion has no objection to step aside that the elephant may pass; the leopard at the sound of the tremendous footstep skips up a tree, and snugly ensconced amongst its branches, grins down on "the lord with the trunk." The author of "Lake Ngami" draws a graphic picture of the approach of a herd of elephants to drink at a pool. "If the spring or pool, as the case may be, be of small extent, all the animals present will invariably retire from the water as soon as they are aware of the presence of the elephant, of whom they seem to have an instinctive dread, and will remain at a respectful distance till the giants have quenched their thirst. Thus, long before I have seen, or even heard the elephants, I have been warned of their approach by the symptoms of uneasiness exhibited by such animals as happened to be drinking at the time. The giraffe, for instance, begins: to sway his long neck to and fro; the zebra utters subdued plaintive cries; the gnoo glides away with a noiseless step; and even the ponderous and quarrelsome black rhinoceros when he has time for reflection will put up short in his walk to listen; then turning round, he listens again, and if he feels satisfied his suspicions are correct, he invariably walks off, usually giving vent to his fear or ire by one of his vicious and peculiar snorts. Once, it is true, I saw a rhinoceros

drinking with a herd of seven male elephants, but then he was of the white species; besides, I don't believe that either party knew of the other's proximity."

The disinclination of the elephant to make his way through the merest fence is somewhat singular. The natives of Ceylon are accustomed to erect round their rice patches a fence of slight sticks, about six feet in height, and though the wild elephant is remarkably fond of green rice, never on any occasion, except there be a rogue about, is the fence broken. Pathways about twenty feet wide are left between the fences, and through these, in the night, the wild herds pass to drink at the water-tanks without doing the least damage; yet that the ponderous brutes have every inclination to feast on the dainty grain is sufficiently proved by the fact, that as soon as the crop has been cut and carried home, the abandoned enclosures are eagerly entered by the elephants, who resort to glean amongst Even when wounded by the hunter, the infuriated beast will hesitate to charge his assailant through a hedge, rather preferring to run along the barrier in search of an opening. Tennent says, "It is possible that in the mind of the elephant there may be some instinctive consciousness that owing to his superior bulk he is exposed to danger from sources that might be perfectly harmless in the case of lighter animals, and hence his suspicion that every fence may conceal a snare or pitfall. Some similar apprehension is apparent in the deer, which shrinks from attempting a fence of wire, although it will clear, without hesitation, a solid wall of greater height. the same time, the caution with which the elephant is supposed to approach insecure ground, and places of doubtful solidity, appears to me, so far as my observation and experience extend, to be exaggerated, and the number of temporary bridges annually broken down by elephants in all parts of Ceylon is sufficient to show that, although in captivity, and when familiar with such structures, the tame ones may, and doubtless do exhibit all the wariness attributed to them, yet in a state of liberty, and while unaccustomed to such artificial appliances, their instincts are not sufficient to ensure their safety A fact illustrative at once of the caution and the spirit of curiosity with which an elephant regards an unaccustomed object has been frequently told to me by the officers engaged in opening roads through the forests. On such occasions the wooden 'tracing pegs' which

they are accustomed to drive into the ground to mark the levels taken during the day, will often be withdrawn by the elephants during the night to such an extent as frequently to render it necessary to go over the work a second time in order to replace them."

The belief that the elephant attains the age of two or even three hundred years is still prevalent amongst the Singhalese; but it is a tolerably well ascertained fact that the duration of elephant life is only equal to man's own existence, viz. about seventy years. Of course there have been exceptions. As we have our "Old Parrs" and "Daddy Jacksons," so have they their long-lived ones. For instance, amongst the papers left by Colonel Robertson (son to the historian of "Charles V."), who held a command in Ceylon, in 1799, shortly after the capture of the island by the British, was found a memorandum showing that a decoy was then attached to the elephant establishment at Matura, which the records proved to have served under the Dutch during the entire period of the occupation (extending to upwards of a hundred and forty years); and was said to have been found in the stables by the Dutch on the expulsion of the Portuguese, in A.D. 1656.

In elephant countries, too, the natives have as little belief in a dead elephant as the most ignorant Cockney amongst us in a dead donkey; and it really is an extraordinary fact that no one has ever yet met with the skeleton of the elephant, throughout the mighty Singhalese forests. Tennent quotes an instance of a gentleman residing for thirty-six years without intermission in the jungle penetrating valleys and tracing roads during his trigonometrical pursuits, who never found the skeleton or body of an elephant that had died a natural death. This does not appear to be the case in Africa, for Beaver, in his "African Memoranda," relates that the skeletons of old elephants that have died in the woods are frequently found. It has been suggested that the bones of the elephant may be so porous and spongy as to disappear in consequence of early decomposition, but, as Tennent observes, this remark would not apply to the grinders or to the tusks. The last-mentioned authority states that the Singhalese have a superstition relating to the closing life of the elephant; they believe that on feeling the approach of dissolution he repairs to a solitary valley, and there resigns himself to death. While hunting in the forests of Anarajapoora, the native who accompanied Mr. Cripps, observed, when they came to a secluded spot, that they were now in the immediate vicinity of the spot where the elephants came to die, but that it was so mysteriously concealed, that although every one believed in its existence, no one had ever succeeded in penetrating to it.

The excessive fondness of the female elephant for its calf has been much more frequently asserted than proved. Living together in herds or families, the sucklings draw their nourishment from the first ample udder that presents itself, and without the least consideration as to whom it belongs. Sure it is that the mother elephant suffers these liberties contentedly; but, as says White, the Selborne philo-



MODE OF SUCKLING.

sopher, this indiscriminate suckling of the young of one animal by another may have selfishness rather than tenderness for its source; the pleasure the older animal experiences in having its teats drawn, more than compensating for the inconvenience. Modern sportsmen and travellers who have had frequent opportunities of observing the habits of the wild elephant, agree in denying to the animal even an average share of maternal affection; quoting in support of this view instances in which, when pursued by the hunters, the elder brutes have abandoned the young ones and made good their own flight in spite of the clamorous and imploring bleatings of the helpless little things. Furthermore, it has been asserted by a sound authority, and the assertion has never, to my knowledge, been contradicted, that if a wild elephant gets separated from its calf but for the space of forty-eight hours, she will take no further notice of it, although the

youngster by all sorts of cries and coaxing tricks manifests a know-ledge of its dam and its anxiety to renew the acquaintance.

At its birth the elephant is from thirty to thirty-six inches in height, and for the first day or two, very weak and incapable of any further exertion than that which is necessary to reach the mother's teat. Weaning a young elephant is a terrible job. How the poor elephant mothers manage with their rebellious young ones in a wild state is not known, but judging from the behaviour of the latter in a domesticated condition, she must have a harassing time of it. An English traveller who was an eye-witness to an elephant-weaning at Ava, thus describes the operation :- "About two-and-thirty females with their young ones were driven into the enclosure, and shortly after there also went in four great male elephants, the riders of which had in their hands a long rope with a noose in the end. After many unsuccessful efforts they succeeded in snaring one of the calves by the hind leg. This was a difficult matter to accomplish, for besides its own opposition, it was protected by the adroitness of several of the grown females, who crowded round it. So outrageously did the calf struggle, that the big males had frequently to beat him, and I observed that once or twice they lifted him literally off his legs with their tusks, but without doing him any material injury. The cry which he emitted on these occasions differed in no way but in degree from the squeak of a hog in pain or fear." Ultimately the bereaved calf was borne off by two of his full-grown male relations, and condemned to solitary confinement till he became reasonable.

The similarity of feature existing among herds of wild elephants goes far to prove that they do not associate promiscuously, but rather congregate in families. In a herd of twenty-one elephants, captured in Ceylon in 1844, the trunk of each exhibited the same peculiar formation. In another lot of thirty-five prisoners the eyes of all were of the same colour. Indeed there is generally to be found among the members of one herd some peculiarity of feature that distinguishes it from any other. These various herds are generally on friendly terms, and will occasionally mingle till a body two or three hundred strong is formed; but should there occur the slightest cause for alarm, the leader of his family will sound his trumpet, and what was a minute ago a promiscuous mob is now so many distinct squads, each without the least sympathy for the rest. It may be

fairly assumed, however, that in order to maintain the vigour of a herd an occasional alliance out of the family circle is allowed, though it is very certain that the elderly members keep a severe eye on the young sweethearting bucks, and never a one of them dare bring home the female of his choice without first securing the consent of a majority of his relations.

To such extreme lengths is this system of caste carried, that should an unfortunate animal by any chance lose all his relations, he is for ever cut off from the society of his kind, and doomed to a life of loneliness. The most modern and learned writers agree that the above-given reason is sufficient for the perpetual banishment of an elephant from among his species; but this view I can hardly understand. It seems strange that even brutes in a natural condition should conspire to act so unnaturally. The outcast is generally a bull—a fine handsome fellow with a sleek coat and magnificent tusks. We see no reason why he should be banned, but what do we know of elephant economy? The solitary one may have been a tyrant leader against whom his subjects have rebelled—he may have been a wicked wretch who has slain his nearest kin. What do we know of these things?

There he is, however, and he is to be met wherever elephants do congregate. In India he is called Goondah or Sawn, and in Ceylon Hora, which signifies "rogue." The rogue's tusks are against all elephants, and the tusks of all honest elephants are against the rogue—not to ill-use him, but to compel him to keep at a respectful distance. So long as he "keeps himself to himself" he may browse in the neighbourhood of his fellows-he may even bathe and drink at the same pool,—but closer familiarity is strictly forbidden. Even should the "rogue" be trapped with an honest herd, and driven with it into the "corral," and the great beasts one and all lie trembling with terror and trumpeting their lamentations, still the rogue must keep aloof. Family pride is stronger than family misfortune. Let not Hora deceive himself by hoping that in the great calamity that has fallen on his relations his iniquity will be forgotten. Nobody sympathises with him; nobody comes to him to clasp trunks and otherwise according to elephantine nature express condolence. Let the rogue dare even approach the family circle, and in an instant every member of it will forget his grief

and combine with his friend to keep off the intruder. But, as has already been observed, little love goes begging between the expelled and his expellers. The rogue's fierce hatred for his kind is not quenched because he happens to be taken prisoner with them. Emerson Tennent, who has observed the habits of the elephant in every phase of its existence with greater care and attention than any other writer, was once present when an animal of this sort was driven with others into a corral in Ceylon. He says, "Amongst the last of the elephants noosed was a rogue. Though far more savage than the others, he joined in none of their charges and assaults on the fences, as they uniformly drove him off, and would not permit him to enter their circle. When dragged past another of his companions in misfortune, who was lying exhausted on the ground, he flew upon him and attempted to fasten his teeth in his head. This was the only instance of viciousness that occurred during the progress of the corral."

The inhabitants of villages in the neighbourhood of elephant haunts will always willingly lend their services at a hunt if there be a rogue about. And not without reason. Rendered savage and morose by his companions giving him "the cold shoulder," the "rogue" becomes less timid of mankind, and breaks through the fences the native erects round his crop of green rice and his plantation of young cocoa-nuts, demolishing the labour of weeks in an hour or so. The outlawed rascal thinks nothing of sauntering in broad daylight among the rice reapers, catching up a sheaf and marching off with it into the jungle to munch at his leisure.

Every herd or family of elephants has its leader. It however by no means follows that the biggest animal in the flock is selected to fill this responsible office; for though it generally happens that he is a bull, and a "tusker" to boot, comparatively small creatures, and not unfrequently females, are found in command, so that after all it is more likely that the elephant endowed with the greatest amount of pluck and cunning assumes the part as its right. The amount of devotion and loyalty the band evince for their chief is wonderful. They obey his merest gesture, submit to his chastisement, and protect his life at the risk of their own. If he should be a tusker and a particular object of respect to the hunters, and hard pressed by them, his subjects will surround him and catch

in their own carcases the bullets intended for his. They have even been known when their king has been badly wounded to club shoulders and shuffle off with him to the depths of the jungle.

That the chief is as devoted to his subjects as they to him cannot be better illustrated than by the following evidence of an European sportsman of undoubted credit. Being in the vicinity of a "tank" at which elephants came at night to drink, the gentleman in question resolved to hide and watch their manœuvres. Within five hundred yards of the tank was a thick forest; it was night and brilliant moonlight, and the watcher climbed into a thickly foliaged tree. "After waiting about two hours," says he, "an unusually large elephant issued from the dense cover and advanced cautiously across the open ground to within a hundred yards of the tank, where he stood perfectly motionless. So quiet had the elephants become, although they had been roaring and breaking the jungle throughout the day and evening, that not a movement was now to be heard. The huge vidette remained in his position still as a rock for a few minutes, and then made three successive stealthy advances of several yards, halting for some minutes between each, with ears bent forward to catch the slightest sound, and in this way he moved slowly up to the water's edge. Still he did not venture to quench his thirst, for though his fore-feet were partly in the tank, and his vast body was reflected clear in the water, he remained for some minutes listening in perfect stillness. Not a motion could be perceived in himself or his shadow. He returned cautiously and slowly to the position he had first taken on emerging from the forest. Here in a little while he was joined by five others, with which he again proceeded as cautiously, but less slowly than before, to within a few yards of the tank, and then posted his patrols. He then re-entered the forest and collected around him the whole herd, which must have amounted to between eighty and a hundred individuals, led them across the open ground with the most extraordinary composure and quietness till he joined the advance guard, when he left them for a moment and repeated his former reconnaissance at the edge of the tank. After which, and having apparently satisfied himself that all was safe, he returned and obviously gave the order to advance, for in a moment the whole herd moved into the water with a degree of

unreserved confidence so opposite to the caution and timidity which had marked their previous movements, that nothing will ever persuade me that there was not rational and preconcerted co-operation throughout the whole party, and a degree of responsible authority exercised by the patriarch leader.

"I watched them with great interest till they had satisfied themselves as well in bathing as drinking, when I tried how small a noise would apprise them of the proximity of unwelcome neighbours.



I had but to break a little twig, and the solid mass instantly took to flight like a herd of frightened deer, each of the smaller calves being apparently shouldered and carried along between two of the older ones."

The elephant is by no means particular as to the quality of the water he drinks; indeed, it may be said that he seldom or never imbibes it in a pure condition, it being his habit to plunge headlong into the tank or stream, and bathe and drink at the same time. In the dry season, and when the usual water-courses are exhausted, the elephant turns well-borer—scooping a deep hole in the light soil, and depending on its being filled by a neighbouring spring. The animal, however, is cunning enough to be aware that if he sank his well with perpendicular sides, his great weight would crush them to the bottom as soon as he approached to drink; so he constructs it with such a gradient that the water can be safely reached with his trunk, without endangering the construction by his ponderous weight.

THE WAR ELEPHANT OF THE ANCIENTS.

During the earlier periods of the Mogul Empire, it was the ordinary practice to enlist the strength and sagacity of the elephant for the battle-field; indeed, scarcely more than two centuries ago, the chief in India who possessed the greatest force of elephants was almost sure of victory. It was not alone the irresistible power of the elephant to break the ranks of the enemy that made it valuable to an army. Describing the elephant of war, the author of the Ayeen Akbery says: "Five plates of iron, each one cubit long and four fingers broad, are joined together by rings, and fastened round the ears of the elephant by four chains, each an ell in length; and betwixt these, another chain passes over the head, and is secured beneath; and across it are four iron spikes, with katasses and iron knobs. are other chains with iron spikes and knobs, hung under the throats and over the breasts, and others fastened to the trunks; these are for ornament, and to frighten horses. Pakher is a kind of steel armour that covers the body of the elephant; there are other pieces of it for the head and proboscis."

When Timour, or Tamerlane, invaded the dominions of the Sultan Mahmood (A.D. 1399), the elephants of the latter were his greatest obstacle. He surrounded his camp with an enormous ditch, and a rampart of bucklers; buffaloes were tied together round the rampart, by the necks and feet, with brambles upon their heads, to be set on fire when the elephants approached. The forces of the Sultan when he set out to give Timour battle, consisted of ten thousand horse, forty thousand foot, and elephants armed with cuirasses, and poisoned daggers upon their trunks. In the wooden towers upon their backs were cross-bowmen, and archers who could fight under cover. On the sides of the elephants were flingers of fire and melted pitch, and rockets shod with iron. The dread of this array in the army of the invaders was extreme. Upon the backs of the elephants were carried kettle-drums of brass; and these united to the din of cymbals, and bells, and trumpets, dismayed even the most dauntless. Timour fell upon the earth in

prayer: he that a month before had murdered a hundred thousand captives in cold blood, besought God to give him victory. It was the inscrutable will of Him to whom the Mongol prayed, that his prayer should be answered. In the words of the Persian historian, Sherefeddin—"The elephants of the Sultan threw his own left wing into disorder; the right was repulsed, and Timour himself led his troops against the centre. The elephants fled before the sabres of the horsemen. The expert swordsmen aimed at the trunks of the



terrified animals, and many of them were strewed over the field with the slain. The alarm which the supposed invincibility of the elephants had produced was dissipated for ever. Timour's grandson, only fifteen years of age, wounded an elephant, and drove the animal before him into his grandfather's camp. The next day the invader sat on the throne of the Indian monarch, and received the homage of his new subjects. Twelve rhinoceroses and a hundred and twenty elephants were paraded before him."

In the hands of Timour, however, the captive war elephants were made to do stout service and to win for the bold Mongol many bloody victories. In less than two years the conqueror was in Syria, and in the battle before Aleppo the main body of his army was covered with a rank of elephants, to serve as a rampart. Their towers were filled with archers and flingers of Greek fire. The triumph of the elephants in this battle was a signal contrast to their defeat at Delhi. Remembering the terrible wounds inflicted on their trunks by the swordsmen, the cunning animals learnt to coil up that precious apparatus out of harm's way, and rushing upon the main body of the Syrians broke it up, and trampled it under foot like stubble. Marco Polo's account of the battle in which Kublai Khan first conquered the elephants affords some curious illustrations of the ancient Indian mode of employing this giant quadruped in war.

"It happened that in the year 1272 the Grand Khan sent an army into the countries of Vochang and Karazan, for their protection and defence against any attacks that foreigners might attempt to make. . . . When the King of Mien (Ava) and Bangala, in India, who was powerful in the number of his subjects, in territory, and in wealth, knew that an army of Tartars had arrived at Vochang, he took the resolution of advancing immediately to attack it, in order that by its destruction the Grand Khan might be deterred from again attempting to station a force upon the borders of his dominions. For this purpose he assembled a very large army, including a multitude of elephants, upon whose backs were placed battlements, or castles of wood, capable of containing to the number of from twelve to sixteen in each. With these and a numerous army of horse and foot, he took the road to Vochang, where the Grand Khan's army lay; and encamping at no great distance from it, intended to give his troops a few days of rest. The King of Mien, learning that the Tartars had descended into the plain, immediately put his army in motion, took up his ground at the distance of about a mile from the enemy, and made a disposition of his forces, placing the elephants in the front, and the cavalry and infantry in two extended wings in their rear, but leaving between them a considerable interval; here he took his own station and proceeded to animate his men and encourage them to fight valiantly, assuring them of victory, as well from the superiority of their numbers, being four to one, as from their

formidable body of armed elephants, whose shock, the enemy, who had never before been engaged with such combatants, could by no means resist. Then, giving orders for sounding a prodigious number of warlike instruments, he advanced boldly with his whole army towards that of the Tartars which remained firm, making no movement, but suffering them to approach their entrenchments. They then rushed out with great spirit, and the utmost eagerness to engage; but it was soon found that the Tartar horses, unused to the sight of such huge animals, with their castles, were terrified and, wheeling about, attempted to fly, nor could their riders by any exertions restrain them, whilst the King, with the whole of his forces, was every moment gaining ground. As soon as the prudent commander perceived this unexpected disorder, he without losing his presence of mind, instantly adopted the measure of ordering his men to dismount, and their horses to be taken into the wood, where they were fastened to the trees. Being dismounted, the men, without loss of time, advanced on foot towards the line of elephants, and commenced a brisk discharge of arrows. So incessant were the discharges, all the weapons being directed against the elephants, and none against the soldiers in the castles, that the animals were soon covered with arrows, and suddenly giving way, fell back upon their own people in the rear, who were thereby thrown into confusion. Smarting under the pain of their wounds, and terrified by the shouting of the assailants, they were no longer governable, but without guidance or control ran about in all directions, until at length, impelled by rage and fear, they rushed into a part of the wood not occupied by the Tartars. The consequence of this was, that from the closeness of the branches of large trees, they broke with loud crashes the castles that were upon their backs, and involved in the destruction those who sat in them. Upon seeing the rout of the elephants. the Tartars acquired fresh courage, and filing off by detachments with perfect order and regularity, they mounted their horses and rejoined their several divisions, when a sanguinary and dreadful combat was renewed, ending in a complete victory by the Tartars."

Whether true or fabulous, the story of Semiramis, Queen of Assyria, and her elephants, is sufficiently curious to bear relating though it be for the hundredth time. At war with the Indian

monarch Stabrobates and about to invade his dominions, her Assyrian majesty to make up for her lack of elephants, and to strike with terror her enemies, who had reason to believe that the huge animal existed only in India, caused to be slain three hundred thousand black oxen, and their skins to be stitched together and stretched upon light frames, resembling the elephant in shape, and within each of the sham elephants was placed a camel and a man to guide its locomotion. The day of battle arrived and the armies approached each other, the fictitious elephants going before Semiramis' host. Stabrobates had however received private information of the cheat, and instead of exhibiting alarm at the approach of the giant column, charged with his horsemen fearlessly at it. However he was not quite so successful as perhaps he imagined he would have been. The horse has a natural antipathy for the camel, and when the fierce phalanx neared the invisible skin-bearers, the war-steeds scented them, and, starting back, broke and fell into the greatest confusion. Semiramis had probably counted on this, and at once charging the disordered cavalry drove them back on the main army. Stabrobates was amazed, but boldly led on his infantry, and placing his elephants in front against their fictitious resemblances, charged. The movement was triumphant. The antipathy of the elephant for the camel, the terror of this animal, and its utter moral as well as physical helplessness in such assaults is well known. The elephants bore down the wretched and passive counterfeits, trampled them under foot, pierced them with their tusks and tossed their carcases in the air. Thus the tide of battle was turned in favour of Stabrobates, and Semiramis and her army were routed entirely.





FROM A PHOTOGRAPH BY MAYALL.

HOW HE IS TRAPPED AND TAMED.

The African ivory trade dates from a remote period. When Rome was at the height of her barbaric splendour, she drew largely on Africa not only for cargoes of living elephants for the amphitheatre, but also for immense quantities of ivory, which was even more highly valued then than now. Scarcely an article of luxurious furniture was made without ivory entered into its construction. Africa supplied the precious commodity—was drained of it—till it became so scarce that the Romans altogether abandoned the African coast, and sought tusks in another hemisphere.

In no way does man so grossly abuse the authority given him over the beast of the field as when he subjects them to unnecessary pain. When he is so guilty for the satisfaction of his avarice, or his revenge, or his ambition, it is altogether shameful and despicable; but when without reason or excuse of any sort, but merely for the gratification of his monstrous appetite for sanguinary spectacles, and the sight of living bodies mangled and bruised and horribly lacerated, he pits fang against fang, and talon against talon, and, safely removed from the contending brutes, looks coolly on, he is guilty of a savagery worthy only of his Majesty of Dahomey. Moreover, in the case of the elephant, much training and persuasion must be necessary to induce him to fight at all. With animals of a naturally pugnacious disposition, such as lions, and bears, and tigers, to put them in a pit together is sufficient to insure a battle; but with the pacific elephant, who has neither the desire to destroy life which belongs to the carnivorous animals, nor the means of gratifying the desire did he possess it, the case is altogether different.

The number of elephants shipped annually from Africa to Rome to be trained to fight each other in the circus was immense. At the dedication of his theatre, Pompey exhibited the incredible number of five hundred lions, and eighteen elephants, and a host of armed men all at one time together in the circus. In the second consulate of Pompey (B.C. 54) a number of elephants were opposed in the circus to Getulian archers; and this exhibition, according to Pliny, was distinguished by several remarkable circumstances. One of the elephants, although furious from a wound, is recorded to have seized upon the shields of his adversaries and to have thrown them in the air with a peculiar movement, doubtless the effect of training, which caused the shields to whirl round before their fall to the earth. On this occasion, too, an elephant having been killed by a single blow of a javelin through the eye, his fellows rushed forward in a general charge to save him, and coming with great force against the iron railings of the circus, broke them down and injured several of the spectators. Dion, the historian, relates that on one occasion when several elephants and other brutes were contending together in the arena, the spectators so compassionated the poor animals raising their trunks to heaven and roaring piteously, as if imploring aid of the gods, that they

rose from their seats, and disregarding Pompey's magisterial presence, demanded that the elephants might be spared. Again, when Cæsar returned to Rome, twenty elephants were exhibited fighting for their lives against a host of spearmen; on this occasion the spectators were protected from danger by the width of a deep ditch that surrounded the circus.

We have no need however to refer back to so remote a period as the Roman era for accounts of elephant baiting. In India the "sport" was always a favourite one. Bishop Heber says: "While at the court of Baroda, the rajah was anxious to know whether I had observed his rhinoceros and his hunting-tigers, and offered to show me a day's sport with the last, or to bait an elephant for me-a cruel amusement which here is not uncommon. . . . At the palace of Jyepoor we were shown five or six elephants in training for a fight. Each was separately kept in a small paved court with a little litter, but very dirty. They were all what is called 'must,' that is, fed on stimulating substances to make them furious; and all showed in their eyes, their gaping mouths, and the constant motion of their trunks, signs of fever and restlessness. Their mohouts seemed to approach them with great caution; and on hearing a step they turned round as far as their chains would allow, and lashed fiercely with their trunks. I was moved and disgusted at the sight of so noble creatures thus maddened and diseased by the absurd cruelty of man, in order that they might for his diversion inflict fresh pain and injuries on each other."

Bernier, who was an eye witness to an elephant fight that took place at Ava, thus describes it:—

"A wall of earth is raised three or four French feet wide, and five or six high. The two ponderous beasts meet one another face to face on opposite sides of the wall, each having a couple of riders, so that the place of the man who sits on the shoulders with a large iron hook for the purpose of guiding the elephant, may immediately be supplied if he should be thrown down. The riders animate the elephants either by soothing words, or by chiding them as cowards, and urge them on with their heels until the poor creatures approach the wall and are brought to the attack. The shock is tremendous, and it appears surprising that they ever survive the dreadful wounds and blows inflicted by their tusks, their heads,

and their trunks. There are frequent pauses during the fight; it is suspended and renewed; and the mud wall being at length thrown down, the stronger or more courageous elephant passes on and attacks his opponent, and, putting him to flight, pursues and fastens upon him with so much obstinacy that the animals can only be separated by means of *cherkys*, or fireworks, which are made to explode between them; for they are naturally timid, and have a particular dread of fire, which is the reason why elephants have been used so little in warfare since the introduction of fire-arms.

"The fight of these noble creatures is attended with much cruelty. It frequently happens that some of the riders are trodden under foot, and killed on the spot, the elephant having always cunning enough to feel the importance of dismounting the rider of his adversary, whom he therefore endeavours to strike down with his trunk. So eminent is the danger considered, that on the day of combat, the unhappy men take the same formal leave of their wives and children, as if condemned to death. They are somewhat consoled by the reflection, that if their lives should be preserved, and the king be pleased with their conduct, not only will their pay be augmented, but a sack of peyssas (equal to about two pounds sterling), will he present to them, the moment they alight from the elephant. They have also the satisfaction of knowing that in the event of their death, their pay will be continued to their widow, and that their sons will be appointed to the same situation. The mischief with which this amusement is attended, does not always terminate with the death of the riders. It often happens that some of the spectators are knocked down, and trampled upon by the elephants in the crowd; for the rush is terrible when, to avoid the infuriated combatants, men and horses in confusion take to flight. The second time I witnessed this exhibition, I owed my safety entirely to the goodness of my horse, and the exertions of my two servants."

To return, however, to the coast of Africa, and the ivory trade. The Romans having ceased their traffic, the mighty elephant was left unmolested, and once more increased and multiplied. The native having lost his customers, and requiring for his own purposes no more ivory than could be made into a charm, nor fantastic ornament for himself or his squaw, hunted the animal rarely, but when European energy once more penetrated the savage elephant regions, and made

overtures for renewing the ivory trade, war was again declared against the tusk bearers, and has continued ever since.

Except in a few districts of Africa, the flesh of the elephant is not eaten; with regard to the flavour and digestibility of the meat, it is hard to decide, as scarcely two Europeans out of the numbers who have had an opportunity of tasting it, agree on the subject. Tennent says: "The flesh is occasionally tasted as a matter of curiosity; as a steak it is coarse and tough; but the tongue is as delicate as that of an ox, and the foot is said to make palatable soup." Major Denham says: "The flesh looks coarse, but is better flavoured than any beef I found in the country." Le Vaillant having, in the course of his explorations, dined off baked elephant's foot, lauds it as a dish dainty enough to be set before a king. "Never," says he, "have our modern Luculluses been able to produce on their table such a dish as I have before me. In vain their gold reverses the order of the seasons; in vain they lay every country under contribution, their luxury has not reached this point." Bruce asserts, that the Abyssinians subsist for long periods on elephant's "They cut the whole of the flesh from the bones, into thongs, like the reins of a bridle, and hang them like festoons upon the branches of trees, till they become perfectly dry, without salt; and then they lay them up for their provision in the season of the rains."

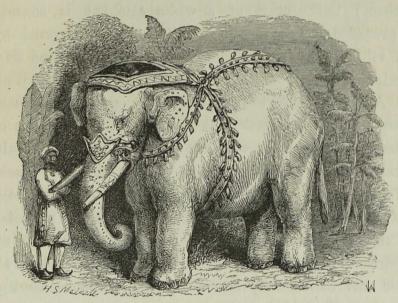
It is certain, however, that if elephants were sought for their flesh alone, of every hundred now made to bite the dust, ninety nine would escape. In Great Britain alone, the annual consumption of ivory, is about one million pounds, and as the average weight of a tusk is sixty pounds, the number of male elephants alone annually sacrificed must exceed eight thousand. This, however, by no means represents the entire number slaughtered. From Ceylon, for instance, the yearly importation of ivory, does not exceed a quarter of a ton, which, despite the comparative lightness of the tusks of the Ceylon elephant, would not involve the destruction of more than eight or ten each year; but then a large quantity of Ceylon ivory finds its way to China, to say nothing of the demands of the Buddhist priests, in whose temples may be found tusks of the handsomest and best description. Besides his ivory, his living muscles and sinews are required by man, to whose cunning wiles thousands of these giants of the forests annually succumb, and become docile beasts of burthen.

The existence of the elephant in a captive state is much more prosaic and common-place than it used to be. Once upon a time when Eastern splendour was at its highest, and to be a Mogul was to be the most terrible man on the face of the earth, the elephant was the most indolent and magnificent and pampered brute owning man's supremacy. Slaves were retained to wait on him, the fat of the land was spread before him, and when he wrathfully trumpeted, people covered their heads, and hid from his anger. If the animal had the good luck to be afflicted with a sort of leprosy, so that his hide became white or cream-coloured,* his fortune was made everlastingly. In the seventeenth century, there existed in Siam a white elephant that kept three nations at constant war for its possession for nearly a century, and caused the death of five kings and thousands of soldiers. Tachard, who saw this pampered beast, says that it was very small and old—three hundred years old he was informed. This same Albino that might have dyed its white hide red a thousand times over in the blood that was shed on its behalf, was attended by a hundred men, who fed him out of vessels of gold, and waited on him in the splendid pavilion in which he was housed.

Fitch thus describes the treatment of some of these sacred elephants, as witnessed by him beyond the Ganges: "Within the first gate of the palace is a very large court, on both sides of which are the houses for the king's elephants, which are wonderfully large and handsome, and are trained for war and for the king's service. Among the rest he has four white elephants, which are so great a rarity, no other king having any but he; and were any other king to have any, he would send for it, and if refused would go to war for it, and would rather lose part of his kingdom than not have the elephant. When any white elephant is brought to the king, all the merchants in the city are commanded to go and visit him, on which occasion each individual makes a present of half a ducat, which amounts to a good round sum, as there are a good many merchants, after which you may go and see them at your pleasure, though they stand in the king's house. Among his titles, the king takes that of king of the white elephants. They do great honour

^{*} Mr. Dalton, the author of many favourite boy's books, says in his story of The White Elephant, that "it is not white, but a light mahogany colour;" a shade or two deeper, perhaps, than her Majesty's cream-coloured horses.

and service to these white elephants, every one of them having a house decorated with golden ornaments, and getting their food in vessels of gilt silver. Every day when they go to the river to wash, each goes under a canopy of cloth of gold, or silk, carried by six or eight men, and eight or ten men go before, each playing on drums, shawms, and other instruments. When each has bathed and has come out of the river, he has a gentleman to wash his feet in a silver bason, and this officer is appointed by the king. There is no such account made of the black elephants, be they never so great, and some of them are wonderfully large and handsome, and full nine cubits high."



WHITE ELEPHANT.

In the Birman empire the white elephant has a comfortable time of it—at least if handsome lodging and sumptuous food can insure comfort, which, after all, is more than doubtful. It will be better perhaps to speak of the Birman white elephant as "happy as a king." Major Snodgrass in his narrative of the Burmese war, says: "So completely influenced and guided are the Burmese by signs and omens, that an unusual grunt from the white elephant was at all times sufficient to interrupt the most important affairs, and cause the most solemn engagements to be broken off."

It was in the Birman empire that Mr. Crawford saw a white elephant, that had his ween or minister; his ween-dauk, or deputy

to that officer; his secretary, and other officers forming a complete staff; besides which, the products of one of the finest districts in the kingdom were set aside for his maintenance. The last-mentioned authority says, in relation to this wealthy beast: "I had here as well as in Siam an opportunity of ascertaining that the veneration paid to the white elephant is greatly exaggerated. The white elephant is not an object of worship, but is considered an indispensable part of the regalia of sovereignty. Royalty is incomplete without it; and the more there are, the more perfect is the state of the kingly office considered. Both the court and people would consider it as peculiarly inauspicious to want a white elephant, and hence the repute in which they are held and the anxiety to obtain them; the capture of a white elephant is consequently highly rewarded. The present one was first discovered by four common villagers, each of whom received two thousand five hundred ticals in money, and offices, titles, and estates. While we were at Ava, a report was brought that a white elephant had been seen; but it was stated at the same time, that its capture and transport on a sledge over the cultivated country, could only be accomplished by the destruction of ten thousand baskets of rice. His majesty is said to have exclaimed, more with the enthusiasm of an amateur than the consideration of a patriot king: "What signifies the destruction of ten thousand baskets of rice, in comparison with the possession of a white elephant?" and the order was immediately issued for the commencement of the hunt.

White, brown, or grey, however, the elephants of ancient Asia led a life that all other quadrupeds might have envied; and whether they were worthy through leprosy to be set up as idols, or, retaining their natural colour, fit for no more honourable occupation than dawdling along in the sacred processions of the Buddhist priests, or to take some easy part in the gorgeous pageantries of some native prince, they were nothing less enviable than sleek, well cared for, indolent beasts. Their harness-chains were of gold, studded with pearls, silver bells surmounted their heads, and tinkled delicious music to their broad-flapped ears; young maidens spread the path to be trod by their awkward feet with gay flowers, and they were clothed in garments of woven gold and scarlet.



ELEPHANT WITH HOUDAH.

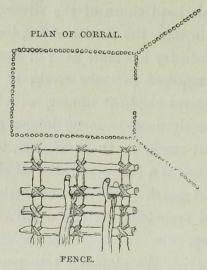
In modern times, however, the elephant has fallen from his high estate. His long holiday has expired; his sides are stript of the cloth of gold, and his head shorn of the silver bells, and he owns no more fantastic chain than the matter-of-fact iron links that secure him in his stable. Industry has more need of him than Luxury, and his vast strength is required to make roads, to draw loads, and to clear forests. The ancient elephant hunter, with his peddling system—his pitfalls, and female decoys—is no longer equal to the task of supplying the elephant market. In these days, the ponderous quadrupeds are snared a score at a time—nay, the whole of the elephantine inhabitants of a great patch of forest, numbering frequently more than a hundred, and embracing half a dozen distinct families, are captured at one sweep.

In nearly all countries, the elephant trap used is constructed on pretty much one and the same principle. In India, it is called a *Keddah*, and in Ceylon, a *Corral* (from the Portuguese *curral*, or cattle-pen). One of the latter, witnessed by Sir Emerson Tennent,

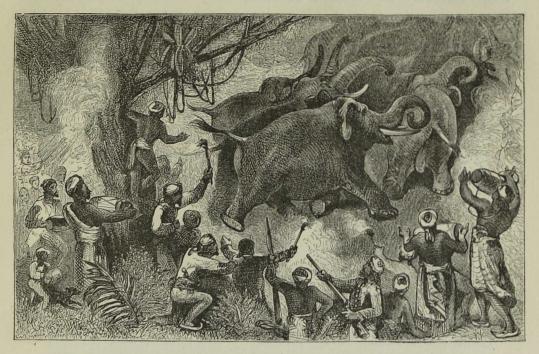
and described by him in his "Ceylon," affords the very best description of the way in which this wholesale snaring is managed.

The period selected for a corral is that which least interferes with the husbandry of the district, so that not until the rice is sown does the business begin. There is a twofold reason for this arrangement. Firstly, the labour of sowing at an end, the natives, of whom large numbers are necessary to secure the success of an elephant hunt, have leisure; and secondly, as the government pay only those who assist in the erection of the corral, &c. it is essential to pick a time when personal interest will induce the native farmers to volunteer their services; for the chance of their sown rice springing up, and ripening into maturity, depends pretty much on the number of wild elephants allowed to remain at large in the neighbourhood.

The corral is an enclosure, straight-sided, and about half as wide as it is long—500 feet by 250, say. A hurdle-like lattice is formed of big poles lashed together with "jungle rope," (the flexible stems of certain parasitic climbing plants). This enormous hurdling is securely fixed in the ground, its height from the surface being about fifteen feet; the interstices of the lattice being wide enough for a man to glide through. Great forks of green timber are driven aslant outside the hurdles, and secure them against outward pressure. From each angle of the end by which the elephants approach, two lines of strong fencing are continued on either side, and cautiously



hidden by the trees. So, should the herd swerve to the right or left instead of entering by the open passage, they would find themselves stopped, and forced to retrace their steps to the gate. The position chosen for a corral is always some old and frequented route of the elephants in their periodical migrations in search of water; and such trees and brushwood as are included within the hurdles are left undisturbed—especially on the side the elephants are to approa



DRIVEN INTO THE CORRAL.

As many as two or three thousand natives are employed to "beat up" the game. According to the size of the patch of forest, and the number of elephants known to be contained in it, so the beaters fetch an entire circuit round the devoted spot. At first they make no great display, only just enough to induce the great, timid beasts to move slowly in the direction it is required they should take. Perhaps an entire month is so passed; in the course of which, the living ring has contracted—a mere foot at a time—to half its first dimensions. Then the elephants become alarmed, and the beaters become bold. Ten paces apart all round the ring great fires are lit, and kept burning night and day; and anxious "headmen" gallop about perpetually to see that not one of the legion of beaters flags in his duty, for if the imprisoned brutes once discovered an outlet, the portals of the "corral" might yawn in vain for that season. "Two months," says Tennent, "had been spent in these preparations, and they had been thus far completed on the day when we arrived, and took our places on the stage that had been erected for us,

overlooking the entrance to the corral. Close beneath us a group of tame elephants, sent by the temples and the chiefs to assist in securing the wild ones, were picketed in the shade, and lazily fanning themselves with leaves. Three distinct herds, whose united numbers were variously represented at from forty to fifty elephants, were inclosed, and were at that moment concealed in the jungle within a short distance of the stockade. Not a sound was permitted to be made, each person spoke to his neighbour in whispers; and such was the silence observed by the multitude of the watchers at their posts, that occasionally we could hear the rustling of the branches as some of the elephants stripped off their leaves."

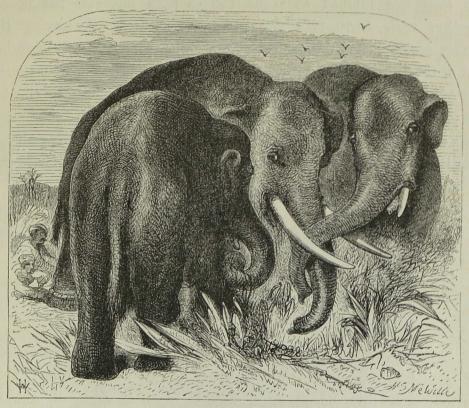
"Suddenly the signal was made, and the stillness of the forest was broke by the shouts of the guard, the rolling of the drums and tom-toms, and the discharge of muskets; and beginning at the most distant side of the area, the elephants were urged forward toward the entrance into the corral. . . . Dry leaves and sticks were flung upon the watch-fires till they blazed aloft and formed a line of flame on every side, except in the direction of the corral, which was studiously kept dark."

Their great heads fairly turned by the flames, and shrieks, and thunder of savage music, the leviathan herd rush headlong to the only spot that promises quiet and seclusion—the pitchy-dark entrance to the corral. The great tusked leader leads the way, and presently the corral gates are closed on the whole number. Then, as the striking of a single match, great bonfires surrounding the trap suddenly flare up. The effect is terrific.

"The elephants first dashed to the very extremity of the enclosure, and being brought up by the powerful fence, started back to regain the gate, but found it closed. Their terror was sublime; they hurried round the corral at a rapid pace, but seeing it girt by fire on every side, they attempted to force the stockade, but were driven back by the guards with spears and flambeaux; and on whichever side they approached, they were repulsed with shouts and discharges of musketry. Collecting into one group they would pause for a moment in apparent bewilderment, then burst off in another direction as if it had suddenly occurred to them to try some point which they had before overlooked; but again repulsed, turned to their forlorn resting place in the centre of the corral."

As no more was to be done that night, the company occupying the stage retired. At daylight when Sir Emerson Tennent visited the corral, he found the captives dead beat and subdued, and huddled together in a group, while "the enclosure on all sides was surrounded by crowds of men and boys with spears or white peeled wands about ten feet long."

Meantime preparations were being made to conduct into the corral the trained tame elephants who were to act as Delilahs to the entrapped Sampsons. One of these crafty females was named Siribeddi, and was allowed to be the cleverest brute in Ceylon, and certainly she was guilty of nothing on this occasion to damage her reputation.



TAME AND WILD.

Having entered the corral noiselessly, she moved slowly along, with a sly composure and an assumed air of easy indifference; sauntering leisurely in the direction of the captives and halting now and then to pick a bunch of grass or a few leaves as she passed. As she approached the herd, they put themselves in motion to meet her, and the leader having advanced in front and passed his trunk gently over her head turned and paced slowly back to his

dejected companions. Siribeddi followed with the same listless step, and drew herself up close behind him, thus affording the nooser an opportunity to glide under her and slip the noose over the hind foot of the wild one. The latter instantly perceiving his danger, shook off the rope and turned to attack the man. He would have suffered for his temerity, had not Siribeddi protected him by raising her trunk and driving the assailant into the midst of the herd.

Again the terror stricken elephants gathered in the centre of the corral, when two more decoys were sent to Siribeddi's assistance, and between them they managed to single out the biggest fellow of the captive company. This time the nooser was more successful; the loop was hitched over the brute's hind leg, and the nooser together with Siribeddi's two assistants sheered off, leaving the former accomplished animal (to whose collar was attached the other end of the looped cable) to secure her prisoner to a tree apart from the rest of the herd. Calm as a human pig-jobber, who hauls by the leg the poor porker to the slaughter-house, and with as much indifference to its squeals and struggles, Siribeddi hauled off her lumbering charge—tail first—toward the proper tree. Giving her end of the rope one



SIRIBEDDI'S EXPLOIT.

turn round the trunk of the tree, she endeavoured to haul the beast at the other end, close up; this however was beyond her strength, so one of the tame ones who from a distance had been critically observing the performance, and saw Mrs. Siribeddi's dilemma, came

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