

THE GUIDE TO KNOWLEDGE.

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No. XIX.

SATURDAY, OCTOBER 13, 1832.

PRICE
ONE PENNY.

THE WONDERS OF ANIMATED NATURE.



OF THE ELEPHANT.

OF the ELEPHANT, there are several varieties, but all agreeing in their generic and specific distinctions. In size and strength they surpass all quadrupeds, and in sagacity are only inferior to man.

To describe their exact size is very difficult, as they have been seen from *seven* to fifteen feet high; and no description can convey a just idea of their magnitude, unless the animal itself has been presented to the view. This wonderful quadruped is a native of *Asia* and *Africa*, but is most numerous in the latter. They are found chiefly between the river Senegal and the Cape of Good Hope, and here they abound more than in any other part of the world. In their natural state, ELEPHANTS delight in frequenting the banks of rivers and moist situations, environed with the thickest woods. They always disturb the water before drinking; and often

fill their trunks with it, spouting it out in the manner of a fountain for amusement or revenge.

Though the ELEPHANT is the strongest as well as the largest of all quadrupeds, yet in a state of nature it is neither fierce nor mischievous; but mild and peaceable in its disposition, it neither exerts its force nor strength. In its native deserts this animal is seldom seen alone, but appears to be particularly social and friendly with its kind, the oldest of the troop always appearing as the leader, and the next in seniority bringing up the rear. This order is, however, merely observed when they are upon the march in search of cultivated grounds, where they expect to have their progress impeded by the proprietors of those lands they are going to lay waste. The largest Elephants are found in India. Its colour is that of the mouse. Its skin is so hard, that a sharp sword cannot penetrate through it, especially on the back; the most tender part being under the belly. Although its eyes are peculiarly small,

yet they are completely expressive of what the creature feels; and when tugging them upon an affectionate master, it is astonishing to observe how much tenderness they reveal. Its sense of smelling is also very delicate, and it evinces a great fondness for odoriferous flowers. Its hearing is likewise remarkably acute; and no animal is so exquisitely affected by the touch. It has four teeth in each jaw, with which it grinds its meat like meal; besides these, it has two others, which hang out beyond the rest; these two are ivory. In the male they grow downwards, in the female, upwards. Those of the male are the largest; those of the female are smaller, but sharper. One of them it keeps always sharp, to revenge injuries; and with the other it roots up trees and plants for its food. The tooth of the male grows to about ten feet in length, and are frequently found to weigh upwards of three hundred pounds weight. The teeth of the female are considered the most valuable. Those they lose once in ten years; which, falling off, they carefully bury them in the earth, (as is thought) on purpose that men may not find them. Its legs are massy columns of three or four feet in circumference, and five or six in height. Its body is remarkably round and bulky, and nearly destitute of hair. But the most singular and peculiar characteristic of this extraordinary animal is its proboscis, or trunk; and of all the instruments which the superabundant wisdom and goodness of the Creator has bestowed on the various forms of animal life, this is perhaps the most complete and the most admirable. It is composed of nerves, membranes, and sinews, and is the organ of smelling, and also serves him as a hand, to receive his food. It is crooked, grisly, and flexible; and has the power of contracting, lengthening, and turning in every direction. With this instrument, the animal can lift from the ground the smallest piece of money, select herbs and flowers, and grasp any thing so firmly that no force can tear it from its grasp. Besides the above peculiarities of the Elephant, it has several others that are well-deserving of our notice. Its legs are high and very strong, the joints of which they can bend at pleasure. Its feet are round, like those of a horse, and very broad. It is a great lover of wine, and will drink (if fame be true) about fourteen gallons at a time, of either wine or water. It goes with young about two years, and brings forth but one at a time, and that about the size of a calf, and grows to thirty. If it receives no hurt it will live from one to two hundred years.

Of all animals, the Elephant, when once tamed, is the most gentle and obedient. Its attachment to its keeper is remarkable; and it seems to live but to serve and obey him, and when treated with kindness, it testifies its gratitude by fulfilling all the desires of its keeper, and caressing him with affectionate fondness; receives his commands with attention, and executes them with punctuality and zeal; bends its knees when he expresses a wish to ride, and willingly exerts its utmost strength, which, in drawing burdens, is equal to that of six horses; and, without fatigue, it can support about four thousand pounds weight upon its back.

Though this animal seems capable both of gratitude and affection, disappointment or injustice produces resentment and spleen; and, though faithfully attached to a kind protector, the least alteration in his behaviour would be indignantly received. Before the destructive use of fire-arms was known, the princes of the East placed their chief dependance in war on the number and discipline of their ELEPHANTS; but now, they chiefly use them for parade, or as beasts of burden. This animal, notwithstanding its enormous bulk, does not by any means want quickness in its movements. It trots with considerable agility, and can easily overtake a man at his greatest speed; but, as it cannot turn very readily, he is able at any time to escape from it by running to one side. Hunters

are able to kill it by attacking it from behind, or on the flanks.

The natural instinct of ELEPHANTS induces them to live in society; they consequently are observed in great numbers in the interior of the forests: these they seldom leave, except for the purpose of devastating the neighbouring plantations. Their troops or herds consist of from forty to a hundred, of both sexes, and all ages. They are conducted, as before observed, by the two oldest, one in front, and the other in the rear. When they leave the forests, if there is any appearance of danger, they observe a determined order of progress: the young ones are placed in the middle, surrounded by the old ones.

Some Elephants live in solitude, and entirely apart from society; these are called by the Indians *grondahs*. They are always males, which, it is believed, have been chased from the herds, by the jealousy of other individuals of their sex. They are, in general, excessively ferocious: they often leave the forests, attack mankind without the least provocation, lay waste the fields, throw down the huts of the peasants, and destroy the cattle. The farmers are frequently compelled to set guards against them, who are posted, for the purpose, in a kind of sentry-boxes, of great strength, formed of bamboo. When the men perceive one of these ELEPHANTS approaching they give the alarm to each other, and drive away the animal by making a great noise, and by firing at it with muskets. When these Elephants penetrate into villages they commit the most dreadful desolation. The Elephants that live in troops are not dangerous, unless they are irritated: a man may pass very near them without in the least degree attracting their notice.

The manner of taking and taming animals of so prodigious a strength, which seems to set all human power at defiance, deserves a few remarks. In order to take them wild in the woods, a spot of ground is fixed upon, which is surrounded with a palisade, made of the thickest and strongest trees, joined by cross-bars, which tend to increase their strength. These posts are fixed at such a distance from each other that a man can easily pass between; and there is only one great passage left open, through which the Elephant can easily come, which is contrived upon such a principle as to close upon him the moment he has passed. To decoy the animal into this snare, it is necessary to conduct a tame female into the woods, which its keeper compels to set up a cry that instantly attracts the attention of one of her male friends, and induces him to follow the alluring sound, until he finds himself entrapped beyond retreat. The deceiving object of his solicitude still continues to lament and cry, and he pursues her into a confined passage, that it is impossible for him either to proceed or return; but when he perceives her let out at a private door he begins to show violent marks of indignation at the deceit. The hunters, in the meantime, fix cords around his body, and endeavour to soften his anger by throwing buckets of water upon his back, pouring oil down his ears, and rubbing his body with fragrant leaves; two tame animals are then introduced to him, each of which alternately caress him with their trunks; afterwards a third is brought forward that has been taught to instruct the *new-comer*, upon which an officer of some distinction rides. The hunters then open the inclosure, and the tractable creature leads his captive along until they arrive at a massy pillar, to which, for about twenty-four hours, it is tied. During that period, its indignation begins to subside, and in the course of a fortnight it becomes completely tamed, acquires an attachment for the person who attends it, and thoroughly comprehends the different sounds of his voice.

Among the numerous anecdotes of the Elephant, the following are among the most interesting.

An ELEPHANT that was kept at *Versailles*, seemed to be sensible of it when any one attempted to make sport of him, and to keep the affront in mind till he found an opportunity for retaliation.

A PAINTER wished to make a drawing of this animal in an unusual attitude, with his trunk elevated, and his mouth open. In order to keep the Elephant in this position, the artist's servant threw fruit into his mouth, but more frequently only made him believe that he was about to do it. Although this greatly irritated the Elephant, he did not attack the servant, but, as if sensible that the painter was the instigator of the deception that had been practised upon him, he directed his eyes towards the latter, and threw out of his trunk such a quantity of water upon him as completely destroyed the drawing.

This Elephant generally availed himself less of his strength than of his ingenuity. He once unbuckled with the greatest calmness and deliberation, a strong leathern strap, which had been fastened round his legs, and as his attendant had tied the buckle round with packthread, and secured it with many knots, the animal very deliberately unloosed them all, without breaking either the strap or the packthread.

ACOSTA relates the following circumstance. A soldier in *Lochin* threw, in sport, the shell of a cocoa-nut at an Elephant. The Elephant felt the affront, but dissembling his resentment, picked up the shell. Some days after, seeing the soldier walking along, he stepped up to him, and returned the compliment, by throwing the same shell in his face. He then walked off, seemingly much pleased at having thus retaliated the affront he had received.

Another soldier refused to give the road to an Elephant and his conductor, at which the Elephant was highly affronted. Some days after meeting the soldier upon the banks of a river, at a time when he had not his keeper with him, he seized him with his trunk, ducked him several times in the water, and then let him go.

In *DELHI*, an Elephant passing along the streets, put his trunk into a tailor's shop, where several people were at work, one of them pricked the end of it with his needle; the animal passed on; but in the next dirty puddle filled his trunk with water, returned to the shop, and spouting every drop among the people who had offended him, and spoiled their work.

An Elephant in *Adasmeer*, in India, often passed through the bazaar, or market, and as he went by a certain herb-woman, always received a handful of greens: at length he was seized with one of his periodical fits of rage, broke his fetters, and running through the market, put the crowd to flight, and among others this woman, who, in haste, forgot a little child she had brought with her. The animal recollecting the spot where his benefactress used to sit, took up the infant gently on his trunk, and placed it in safety on a stall.

Mr. Bussy informs us, that an Elephant having once killed his keeper in a fit of resentment, the wife of the man, who was witness of the terrible scene, took her two children and laying them down at the feet of the animal, said to him—"As you have killed my husband, you may now kill me and my children also." The Elephant immediately grew calm, and, as if struck with remorse, took up the eldest boy with his trunk, placed him upon his back, and from thence forward would suffer no other person to ride him.

The engraving represents an Elephant, attacking a *Rhinoceros*.

OF THE RHINOCEROS.

Of this animal there are two varieties, one with a *single* horn, the other with *two*, on its nose. Next to the elephant, it is the

most powerful of all quadrupeds; and the most bulky except the *Hippopotamus*. Its length is commonly twelve feet, its height six or seven, and its circumference is nearly equal to its length. It is a native of the same countries, and inhabits the same forests as the elephant.

Many fabulous accounts have been given of this animal respecting its fierceness, as well as his strength. The one which was shown in London, in 1739, never was out of humour but when ill used; appeared both submissive and attached to his keeper; and seemed perfectly to understand the meaning of his threats. The appetite of this animal, though very young when it left *Bengal*, was so astonishingly great, that it is said the expense of his food and passage amounted to nearly a thousand pounds. The skin of this animal is so hard as to resist the sword and spear, and the shot of hunters. He is a mortal enemy to the *Elephant*, whom he seldom meets with without a battle; and aims chiefly at the belly, being the softest part, which, if he miss, the elephant is too great a match for him with his trunk and teeth.—(See the engraving.)

The horn of the *Rhinoceros* sometimes measures nearly four feet in length, by six or seven inches at the base, which is usually of a brown or olive colour. The form of the head greatly resembles that of the hog, but the ears are larger, and stand erect: the eyes, though small, are bright and piercing, and the legs remarkably strong and thick. Like hogs, it is fond of wallowing in marshy places, and lives entirely on vegetable food. The horn is said to possess great medicinal virtues.

The two-horned *Rhinoceros* is a very scarce animal. It is found only in Africa; and was a long time supposed to be merely a fabulous creature, till observed by DR. SPARRMAN, at the Cape of Good Hope, and described in his travels. The two-horned *Rhinoceros* has never yet been brought into Europe. Indeed, the history of its tribe is not yet freed from difficulties.

ANCIENT ARGUMENT IN FAVOUR OF UNIVERSAL KNOWLEDGE.

THE great ALFRED, the patriot king of England, had a saying, "That he reputed a man freeborn, and yet illiterate, no better than a beast, a brainless beast, and very sot." Nor would he admit any one into office in his court, however deserving their pretensions in other respects, who was not learned.

APOPHTHEGMS.

It ought always to be steadily inculcated, that virtue is the highest proof of understanding, and the only solid basis of greatness; and that vice is the natural consequence of narrow thoughts, that it begins in mistake, and ends in ignominy.

Honour and justice, reason and equity, go a very great way in securing prosperity to those who use them; and, in case of failure, they secure the best retreat, and the most honourable consolation.

Solon being asked why, among his laws, there was not one against personal affronts, answered,—that he could not believe the world so fantastical as to regard them.

A passionate temper renders a man unfit for advice, deprives him of his reason, robs him of all that is great or noble in his nature, makes him unfit for conversation, destroys friendship, changes justice into cruelty, and turns all order into confusion.

To be able to bear provocation is an argument of great wisdom; and to forgive it, is a proof of a great mind.

What men are deficient in reason, they usually make up in rage:

OF THE FOUR NEW PLANETS—VESTA, CERES, PALLAS, AND JUNO.

WITHIN the present century four new planets have been discovered, which had escaped the notice of astronomers on account of their smallness: their orbits are between those of *Mars* and *Jupiter*.

The nearest of these to the Sun is called *VESTA*, and it is calculated that her mean distance from him is 222,000,000 of miles. She is very small, but no accurate admeasurement has yet been made of her diameter, some estimating it at only 80, and others as high as 4000 miles. It seems scarcely probable, that a globe, not more than eighty miles in diameter, would be visible, even with a telescope, at the distance of so many millions of miles.

Vesta performs her revolution round the *Sun* in five years and twenty-three days. As no observations have been made on her diurnal rotation, or the inclination of her axis, the length of her day and night is unknown.

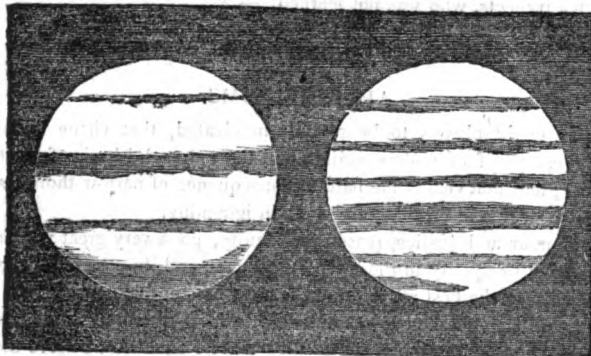
Vesta was discovered by DR. OLBERS, of Bremen, March 29, 1807. The next of these planets is *Ceres*, which is 265,000,000 of miles from the Sun, and performs her revolution round him in four years, twenty-one days and a half. Her diameter has been estimated at 160 miles. It is hardly possible to suppose, that so small a globe can be inhabited.

CERES was discovered Jan. 1, 1801, the first day of the present century, by M. PIOZZI, of Palermo, in Sicily. This planet was so named in honour of *Ceres Ferdinandex*, King of Naples.

PALLAS, discovered by DR. OLBERS, March 28, 1802, is exceedingly small, being, according to *Dr. Herschel*, not more than thirty miles in diameter, though, by others, she is estimated at 110. She is 265,000,000 of miles from the *Sun*, and makes a circuit of her orbit in the same time as *Ceres* does.

JUNO, discovered September 1, 1804, by M. HARDING, of *Lilienthal*, near Bremen, revolves at about 290,000,000 of miles from the *Sun*, and is 5 years, 182½ days performing her course. She appears like a star of the eighth magnitude, but the measure of her diameter has not yet been ascertained. Her orbit lies between the orbits of *Mars* and *Ceres*

OF JUPITER.



FROM the contemplation of these diminutive planets, we turn to the mighty *JUPITER*, which, from his immense bulk, is very probably named after the *fabulous* king and father of the *gods* and *men*.

This immense planet is 89,170 miles in diameter, and is about 1400 times larger than the *Earth*. His mean distance from the *Sun* is computed at 490,000,000 of miles, and he moves in his orbit at the rate of about 25,000 miles an hour, or about one-fourth of the velocity of *Mercury*.

But while his motion in his orbit is thus comparatively slow, his diurnal rotation on his axis is amazing, being not less than 26,000 miles an hour.

The time of *Jupiter's* revolution in his orbit, is 11 years, 315 days, 14 hours; and on his axis 9 hours, 56 minutes: his year is therefore 12 of ours, but his astronomical day is not half so long as that of the *Earth*.

JUPITER, when viewed through a telescope, appears to have a luminous atmosphere, in which spots and streaks are seen, the latter of which are denominated *Belts*. That these are formed in some fluid substance is evident, from their frequently varying their number, their form, and their direction. Sometimes several belts are seen across the body of the planet; sometimes these coalesce into one broad belt; sometimes the belts are in a diagonal* direction, but this is a rare occurrence.

If we may hazard a conjecture, it seems probable that this luminous atmosphere is intended by its GREAT CREATOR to supply the want of light to *Jupiter*, occasioned by his great distance from the *Sun*; for as the *Sun* appears to *Jupiter* forty-eight times less than he does to us, his light must be so small in proportion, and if the satellites of *Jupiter* reflect only the light they receive from the *Sun*, the assistance they afford must be trifling indeed.

If, on the contrary, we suppose *Jupiter*, *Saturn*, and *Uranus*, to be thus provided with a supply of light in addition to that which they receive from the *Sun*, the spots and belts on their surface will be rationally accounted for, as well as the brilliancy of their satellites, which are at too immense a distance to be completely illuminated by the *Sun's* rays. The openings in the atmosphere of *Jupiter*, by which his opaque body is partially seen, assume the form of belts, probably, in consequence of the great swiftness of his rotation on his axis.

The form of *Jupiter* is that of an oblate spheroid, his equatorial diameter exceeding his axis by six thousand miles; this, however, is so small in comparison with his bulk, as to detract but little from his rotundity.

The axis of *Jupiter* is nearly perpendicular to the plane of his orbit, so that he has no variety of seasons; this is another proof of infinite wisdom in the arrangement of the planetary worlds, for had his axis been much inclined, vast tracts round the poles would have been deprived of the *Sun's* influence for six of our years together.

Jupiter is attended by four secondary planets, or satellites, which revolve round him as their primary, and with him round the *Sun*; the first of these, which is rather more distant from him than the *Moon* from the *Earth*, performs its revolution in 1 day, 18 hours, 27½ minutes; the second, about 420,000 miles distant, revolves in 3 days, 13 hours, 13¼ minutes; the third, about 676,000 miles distant, in 7 days, 3 hours, 42½ minutes; and the fourth, about 1,200,000, in 16 days, 16 hours, 32 minutes.

Imagination cannot picture to itself a more magnificent and sublime object than *Jupiter*, when viewed from his satellites. The *Earth* appears exceedingly large and splendid to the inhabitants of the *Moon*, it being forty-nine times the bulk of that satellite. But what must this be compared with the view of *Jupiter* from the nearest satellite; the distance is but little more than that of the *Moon* from the *Earth*; yet, the bulk of *Jupiter* is 68,000 times that of the *Moon*.

The satellites of *Jupiter* are, at certain times, hidden from the view of the *Earth* in two ways; either by their passing through the shadow of their primary, which constitutes an eclipse of the satel-

* *Diagonal*, drawn across a figure, from one corner or angle to another.