the 29th of September, 1832, he found these larvæ "very plentiful in Hyde Park, where they committed extensive ravages on the foliage of the trees."*

The full-grown larvæ, on account of their very conspicuous dress of yellow, striped with small parallel black lines, are readily perceived on the trees which they are ravaging; but, in most cases, the leafless condition of the trees is the first thing to excite attention, even before the cause is discovered; for the branches of such as have been attacked will usually be found deprived of their leaves on one side, while the other side still retains them. The latter circumstance arises from the methodical plan pursued by the larvæ when engaged in feeding. In their smaller state, they associate in large numbers, marshalling themselves together in the order of a file or regiment, and in this organized manner commence eating those leaves that are nearest to them; for, instead of wandering like other caterpillars, in different directions, they endeavour, as far as practicable, to pursue a straight line of march. From the paucity of the moths to be seen, it is probable that few of the larvæ arrive at their perfect state, being perhaps destroyed by insectivorous birds. It has been long ascertained that they constitute a great portion of the cuckoo's breakfast, a discovery that proves the recent conjecture of Mr. Jesse correct, in thinking that this bird feeds early in the morning.† When a full-grown larva is touched, it knocks its head about in all directions, as though attempting to repel the liberty taken, with a blow, and not unfrequently opens its mandibles or jaws, as though it would inflict a bite.

The caterpillar, previous to its change to a chrysalis, a transformation that takes place in October, forms for itself in the earth a sort of cup or pupa-case, composed of clay, intended as a place of rest and concealment during the time it remains in the latter inactive state. On the first day after the chrysalis is formed, it is of a light green colour and very soft, but gradually assumes a darker appearance, and at length is dark brown and hard. A chrysalis which I had in my possession exhibited the singular circumstance of having three pair of feet-like protuberances; the first pair being the largest, the second somewhat smaller, and the third the least of either.

The moths, themselves, generally appear in May, but under favourable circumstances come forth as early as the middle of April. They are very beautiful creatures, their general colour being silvery grey, and having a large round spot of light yellow on each wing. When engaged in copulation, (which occurs about the third week in June,) they conceal their heads, legs, and antennæ, and fold their wings in such a manner, I have observed, as to bear so great a resemblance to a piece of whitish bark, that a person, even though he were an entomologist, might regard them as such; and, on being disturbed at such a time they drop from the leaf on which they rested, on to the ground, without altering their simulated appearance. About five days after fecundation, the female deposits her globular eggs on the leaves of such trees as nature has ordained to be the food of her offspring:—a providential foresight common, it may be remarked, to all insects. Each egg is about the size of a common pin's head, and if examined, will be found very like a minute model of the human eye. Having laid her eggs, she then, as is the case with every insect after the performance of such a task, expires almost immediately.

* *Field Naturalist*, vol. ii. p. 43.

† "I have often watched the cuckoo, but never yet saw it in the act of procuring its food, a circumstance which almost makes me think that he feeds late at night only, or very early in the morning, when moths are most abundant."—*Jesse's Gleanings in Natural History*, (second series,) p. 6.

THE RHINOCEROS.

(*Continued from page* 281.)

The rhinoceros utters a note like the grunt of a boar; which increases to a shrill sound when he becomes enraged or hungry. He will consume 124 pounds of vegetable food in the course of the day, and drink in proportion. Dr. Parsons tells us that the rhinoceros he saw, from the time of his being first taken to the time of his landing in England, cost one thousand pounds.

In a state of nature, the rhinoceros commonly lives in solitude, moves slowly with his head hanging down, and often uproots vegetables by ploughing the earth with his horn. The latter is solid, and when turned in the lathe, is fashioned into a drinking cup; and the ancient creed is, that if any noxious fluid were poured into a cup of this description, it would instantly *foam* and *boil over the brim*; although we believe this superstition is associated with the African species. The flesh of the rhinoceros, though coarse and fibrous, is said to be similar in its flavour to pork, and better than that of the elephant.

Of the Indian rhinoceros lately living in the Garden of Plants at Paris, MM. Frederic Cuvier and Geoffroy St. Hilaire have published an interesting memoir. "This rhinoceros was but young, and contrary to the commonly received opinion, was habitually of a very gentle disposition, obedient to his keeper, and receiving his care and attention with a real affection. However, he would occasionally be seized with fits of fury, during which it was not prudent to come near him. No cause could be assigned for these violent

paroxysms: one might say that a blind impulse or desire to regain a state of liberty, (which he had never enjoyed,) excited him to break his chains, and escape from the bondage in which he was retained. Bread and fruits, however, always pacified him; and the claims of hunger always silenced those of liberty; so that this resource against his fury was always kept in reserve. He knew those persons who most indulged him in his *gourmandise*, and they were received with the liveliest manifestations of affection: the moment he saw them he stretched towards them his long upper lip, opened his mouth, and drew in his tongue. The narrow stall in which he was confined did not allow him to manifest much intelligence; and his keeper took no other pains than to induce him to forget or misconceive his own strength, and to obey: but from the attention which he paid to every thing which was passing around him, and from the readiness with which he distinguished individuals, and recognised those circumstances which seemed the preliminaries of his receiving something agreeable to him, one can readily judge that his intelligence would have acquired a greater developement under more favourable circumstances. But his immense force, and the apprehensions constantly entertained that in one of his fits of passion he would break down his apartment, insured for him the most indulgent treatment; nothing was required of him without a reward, and the little degree of motion which was allowed him, was an additional reason for requiring from him no other actions than to open his mouth, turn his head to the right or to the left, hold up his leg, &c."

This specimen was received in Paris in 1815. His height at the highest part of his back was 5 ft. 6 in., or upwards of double the height of the young animal at the Surrey Gardens: his length was nearly 8 ft. or 3 ft. more than that of our specimen. The skin was of a deep violet grey colour, which seemed almost black, when oiled or greased; and this kind of lubrication was performed twice or thrice a week, to prevent the skin drying and cracking. At certain parts, as the outer side of the limbs, the knees, and on the head, the tubercles of the skin had acquired such a length, as to resemble horny threads, closely arranged in a parallel manner one against the other; and it is these papillæ which some authors have termed excrescences. He collected together the smallest morsels of food with his movable upper lip to carry them to his mouth; and when he ate hay, he formed it with his upper lip into little bunches, which he afterwards introduced between his teeth by means of his tongue. His horn was short and blunt, and he made use if it to strike against objects when he was enraged. One might see that he was borne by an instinctive impulse to make use of that part in preference to every other when the employment of his strength was required.

The tractability of the rhinoceros has been confirmed by observers in the native country of the animal. Bishop Heber saw at Lucknow five or six very large rhinoceroses, of which he found that prints and drawings had given him a very imperfect conception. They are more bulky animals, and of a darker colour than the Bishop supposed; though the latter difference might be occasioned by oiling the skin. The folds of their impenetrable skin also surpassed all which the Bishop had expected. Those at Lucknow were quiet and gentle animals, except that one of them had a feud with horses. They seemed to propagate in captivity without reluctance. They had sometimes howdahs, or chaiselike seats on their backs, and were once fastened in a carriage, but only as an experiment, which was never followed up. The Bishop, however, subsequently saw a rhinoceros, (the present of Lord Amherst to the Guicwar,) which was so tamed as to be ridden by a Mohout quite as patiently as an elephant.

BIRDS' NESTS.

WHO has not admired the cell of the bee among the many wonderful works of that creature, whose labours almost rival the proud ingenuity of man. There is, probably, nothing more extraordinary in the animal world than the construction of this said cell, the exquisiteness of which has not been overlooked by naturalists; yet we fear that thousands who gaze with wonder at models in public galleries, are unacquainted with the wonderful labours in progress within a bee-hive. How can we reconcile this seeming inconsistency—this overweening fondness of man for his own works!

Yet a bird's nest presents a phenomenon nearly as wonderful as the cell of the bee; and this position has hundreds, nay, thousands of illustrations in the architecture of birds. We will take, for example, the pendulous nest of the Indian Baya Bird, of which much more seems to have been written than correctly understood. The materials of this nest are usually fibres of the fronds of the palmyra, cocoa-nut palm, and wild date of India, sometimes mixed with grass, and occasionally made entirely of grass; these are neatly interlaced, and form a texture of extraordinary strength. The nest is suspended, as represented in fig. 1, if from a palm, from the tip of a frond, and if from any other tree, from the extremity of a slender branch, those overhanging water being always preferred. The nest will be seen by the section, fig. 2, to consist of *only one* chamber, with a long tubular passage leading to it; although it