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V. *On the fascinating Power of the Rattle-Snake, with some Remarks on Dr. BARTON'S Memoir on that Subject* *.
By Professor BLUMENBACH. From Professor VOIGT'S
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Part II. 1798.

IT has been asserted of many animals, both warm and cold-blooded, and particularly of different snakes, poisonous as well as harmless, in the old † and new world ‡, that even when at some distance from other animals, especially those which serve them as food, they have such a fascinating power over them, that they are forced to approach them just in the same manner as if attracted by them.

The rattle-snake has been particularly celebrated on account of this property, which has been denominated its fascinating power; and naturalists have endeavoured to explain it on the following principles. Many suppose that the small birds, squirrels, &c. which have been seen to fall from the branches of trees, as it were spontaneously, into the mouth of the rattle-snake, must have been previously bitten by the snake; and that, weakened by the activity of the poison, they were incapable either of flying away or of remaining longer on the tree. Some suppose that the rattle-snake, under cer-

* A Memoir concerning the fascinating Faculty which has been ascribed to the Rattle-Snake and other American Serpents. By Benjamin Smith Barton, M. D. and Professor of Natural History and Botany in the University of Pennsylvania. Philadelphia, 1796. 70 pages 8vo.

† M. le Vaillant says, in his *New Travels into the interior Parts of Africa*, that the fascinating power of many serpents is generally believed by the Hottentots, as well as by many of the Negroes and Moors. B.

‡ Dr. Barton says, page 19, that he never found any traces of this assertion among the Indians of South America. I however remember to have read of a like idea in the account of many voyages to that quarter of the world. Thus Dobrishoffer, for instance, asserts, in his *History of the Abipons*, that all the Spaniards and Indians in that part of Paraguay unanimously ascribe a like property to the snake called *ampalabas*. B.

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tain circumstances, emits from its body a stupefying vapour; and that it is this which produces the effect. Others are said to have remarked that this terrible animal, on such occasions, makes a noise with the rattle in its tail, a singularity which exclusively belongs to it, and that there is reason to suppose that the whole charm is to be ascribed to the terror produced by the sound of that organ. Against these three ways of accounting for this phenomenon Dr. Barton makes the following objections: In regard to the first, the common symptoms after the bite of the rattle-snake are very different from those which have been remarked in small animals supposed to have been fascinated. Besides, this pretended fascination can be destroyed, and the animal saved, if the snake be immediately killed near it; and in the last place, this so called fascinating power is ascribed to many serpents that are not poisonous, as for example the *coluber constrictor*.

He endeavours to weaken the second mode of explanation by remarking, that many observers have seen nothing of that mephitic evaporation of the rattle-snake; that small birds, when enclosed in a box with the animal, have remained lively and well; and that the rattle-snake often lies whole days under bushes and trees; while thrushes and fly-catchers nestle in them without any danger*.

As Dr. Barton's argument against the third manner of accounting for this property is particularly and solely directed against a passage in my Manual of Natural History, I shall first quote the passage itself, before I offer any remarks on his objections.

“ That squirrels, small birds, &c. fall down spontaneously from trees into the mouth of the rattle-snake, lying below them, is an undisputed fact, and is the less surprising, as the like phenomena have been remarked in regard to other snakes, and also toads, hawks, and cats; all of which, in

* It is a pity that Dr. Barton did not compare with his observations Kalm's account in the Swedish Transactions for 1752, and the valuable essay of Michaelis on this subject in the Gottingen Magazin for January 1, 80.

certain circumstances, as appears, have the power of drawing towards them small animals, merely by fixing their eyes stedfastly on them. In regard to the rattle-snake, this effect is produced by the rattle in its tail, the hissing noise of which makes squirrels, &c. whether through curiosity, mistake, or terror, seem to approach the animal as it were spontaneously. At any rate, I know from the information of intelligent eye-witnesses, that it is a common stratagem of the young savages in America to conceal themselves in the bushes, where they imitate the hissing noise of the rattle-snake, and by these means attract squirrels, which they are then enabled to catch."

Dr. Barton's objections to this passage are as follows: "1. This fascinating power is by no means peculiar to the rattle-snake." This is literally what I said myself, with the addition, that the effect is produced by the rattle. This lazy animal, when lying on the ground, might certainly employ that singular organ for enticing animals, as well as the cerastes employs its horns for the same purpose, at least according to common report.

2. The author says he has been assured by some persons that "the rattle-snake, during the time of its supposed fascination, does not employ its rattle." It is very probable that the case here may be altered by circumstances. Dr. Barton, however, was told the contrary by other persons. A Mohican Indian informed him that the rattle-snake fascinates squirrels and birds by means of its rattle; and by its noise can bring down animals from trees. An interpreter, who enabled him to carry on a conversation with a Choctaw Indian, told him the same thing; and the experiments of M. Vofmaer are well known.

3. In regard to the stratagem of the savages, Dr. Barton knows nothing of it; and others, of whom he made inquiry, were equally ignorant on the subject. He is therefore inclined to believe that I have been imposed on, or that this story perhaps has taken its rise from the following circumstance:

cumstance :—The young Indians place a reed crosswise in their mouth, and by a tremulous motion of the lips imitate the cry of young birds, by which means they entice the old ones, so that they can then easily shoot them. In this manner the butcher bird (*lanies excubitor*), concealed in the thickest bushes, imitates the cries of young birds, and thus often catches the old ones, who approach deceived by the similarity of the sound.”

As far as I know, Dr. Mead, about fifty years ago, when controverting the idea that Providence had furnished the rattle-snake with its rattle to give warning to travellers, was the first who asserted that it serves the animal to terrify squirrels and small birds, which are then so stupified by the sight of an enemy so terrible to them, that they at length drop down and become its prey, and that this is what the Indians call fascination. He himself observed, that when a hawk was perched on a tree in a garden, the small birds in the neighbourhood were so stupified that they fluttered about within a small circle, but were not in a condition to escape from the claws of the ravenous animal. This accords perfectly with what Dr. Barton says himself, in general, that nature has taught different animals what kind of animals their enemies are, and that if small animals are attracted by the rattle-snake it may be owing to fear. In regard to the pretended effect of the noise occasioned by the rattle, nothing can agree better than what Dr. Barton says himself in regard to the stratagem of the young Indians with a reed in their mouth.

I shall here observe, that I obtained my information from Major Gardner, who, with his family, resided many years in East Florida. He is a very intelligent naturalist, an accurate observer, and certainly would be very far from imposing upon me.

Dr. Barton, after endeavouring by the above objections to refute the before-mentioned three methods of accounting for the fascinating power of the rattle-snake, gives himself a
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fourth method : the sum of which is, that those birds which under certain circumstances, as has been asserted, flutter into the mouth of the animal, are in general those which nestle on the ground, in bushes, or on low trees, and which having eggs or young in their nests, expose their lives through love for their brood on the approach of this dangerous enemy.

With this method of explaining the phenomenon I have been acquainted since 1785, from the before-mentioned Essay of Michaëlis, who, among many ways of solving the problem, gives the following :

“ Others believe that it is owing merely to the care of the old ones for their young, which throw themselves between the latter and their enemies, and by these means become a prey to them. One of my friends, Mr. David Colden, at Flushing, an amateur of natural history, and son of Governor Colden, whose service to science is so well known, assured me that he had several times seen birds fascinated by snakes, but always found the nest of the bird either with eggs or young ones in the neighbourhood, which made the spectators give up the idea of fascination. But Mr. Michaëlis adds, I know some instances where no nest could be in the neighbourhood, and where, though the snake was at first at a great distance from the bird, it nevertheless fell towards it.”

I would however add another mode of explanation from Dr. Barton's work itself, where he assures us that the result of his inquiries, whether the rattle-snake creeps up trees or not, induces him to believe the latter to be the case. He had an opportunity of seeing many of them, but he always observed them on the ground. They never move, like the most part of the other serpents, in a spiral manner, but straight on ; and this is the reason why they cannot ascend trees. The rattle-snake is also one of the laziest of all the serpent tribe ; under these circumstances it seems very natural that such a lazy animal should be endowed with the
fascinating

fascinating power of bringing down from trees small animals, which otherwise would have nothing to fear from a snake that cannot creep upwards.

VI. *Account of a new Method to cure and prevent the Plague, as practised at Smyrna. Published by Count VON BERCHTOLD. From the Verkundiger, Nov. 8, 1798.*

COUNT LEOPOLD VON BERCHTOLD, well known by his zeal for promoting every thing that can tend to public utility, when at Hamburgh, in the month of July last, presented, among other works, to the society for improving the arts, a small treatise, written by himself, on the cure and prevention of the plague*. The society, in compliance with the benevolent wish of the author, has published the following extract from it, which on account of its general importance to mankind, and particularly to Britain, as a commercial nation, we hope our readers will thank us for laying before them.

In the preface, Count von Berchtold pays a handsome compliment to the humanity of Mr. Baldwin, the English consul, who during a long residence in the Turkish empire made very accurate observations on the nature of the plague, and endeavoured to discover some efficacious means of guarding against that dreadful and destructive scourge. After long labour he at length found that this effect may be produced by olive oil. Persons infected by the plague, and given over by the physicians, were perfectly cured by

* The title is as follows: Description of a new Method to cure and prevent the Plague, which was employed with the best Success in the Hospital of St. Anthony at Smyrna. Collected in that City, and published by Leopold von Berchtold, Knight of the Military Order of St. Stephen in Tuscany. To be distributed Gratis, for the Benefit of those Nations which trade in the Levant. Vienna, 1797. 28 pages octavo. rubbing