

to our attention as it has never previously been before the Society. It may be hoped, that further and more general consideration of it may lead to some definite and useful conclusions.

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ART. 4.—NOTES, UPON THE MASSASAGUA, A SPECIES OF RATTLESNAKE. *By* AUGUSTUS SEWELL, ESQ.

[Read, 8th November, 1837.]

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The reptile which is the subject of this short memoir, appears to me to be a variety of the rattlesnake, which has, hitherto, remained unnoticed, or, at least, undescribed by naturalists; a fact, which may be accounted for, from the circumstance of its rarely leaving the marshes, which are its native haunts, and being thus commonly seen only by those whose pursuits carry them into such places, and by few of whom it would be regarded with any degree of interest or attention. The creature is known only by its Indian name, "Massasagua," and, although, not uncommon in the Western States generally, yet, is infinitely more numerous in Michigan, than elsewhere, that country, from the number of marshes which overspread its surface, appearing peculiarly adapted for its abode. And, herein, the habits of this reptile differ essentially from those of the true rattlesnake (*crotalus horridus*), which is found only in dry sandy or rocky localities, and, never, it is said, in the

vicinity of living water. There appear to be two varieties of the "Massasagua,"—one spotted on the back with brown spots or blotches, of irregular form, and the other spotted in a similar manner with black; the ground colour in both, being the same as the spots, but of a brighter hue. In the brown variety the colour of the belly is a pale brown, inclining to yellow: in the black species, the belly is of a blueish tinge. The black variety is quicker in its movements, and more irritable than the other, which appears to be of a sluggish disposition. A stick presented at the black one will cause it to dart upon the offender, while the brown one will take no notice of such feigned attacks. Both varieties appear to be equal in size, and the bite of both is equally dangerous. This snake is rarely found exceeding three feet in length. Its form is somewhat clumsy, being thick in proportion to its length. It is very numerous in the marshes of Michigan: so much so indeed, that the wild grass which grows there is commonly known as "Massasagua hay." When irritated, the reptile raises itself in a coil, elevating the head, and pointing the tail upwards, which vibrating rapidly to and fro, occasions that peculiar rattling sound which gives the traveller notice of the presence of a formidable foe. The bite of this snake is said to be generally fatal, unless remedies be promptly applied. Several cases have occurred, within my own knowledge, in which death ensued, within twenty-four hours after the infliction of the bite. The most common remedy for the bite of this dreaded reptile, is tobacco moistened with water or saliva, and bound over the wound, and which is said to be more efficacious than any other remedy in neutralizing the effects of the venom. Tobacco appears indeed, to be a mortal poison to the serpent tribe generally. The fangs of the "Massasagua," through

which the poison distils, are two in number, and are situated in the upper jaw, one on each side. When the reptile is in a quiescent state, these fangs lie backwards, and are only erected when the creature is excited. In making an attack, the snake darts forward, and snatching at the object of its aim, inflicts a small scratch, into which the venom flows. It is generally supposed, that for every year of the creature's existence, another joint is added to the *rattle*, which forms the extremity of the tail, but this appears to me to be an erroneous idea. I have killed small ones, whose rattles contained a greater number of joints than those of much larger size were furnished with. Still, it would appear, that the number of joints in the rattle bear some relation to the age of the reptile; for it is usually found, that the number of joints increase with the length of the snake. I once killed one that measured twelve inches in length, the rattle of which contained five joints, and I never heard of any being met with wholly destitute of the rattle. The probability is, that the joints of the rattle increase in number until the snake has attained its full growth, and, as the size of individuals of the same age varies, so, it is probable, the number of joints in the rattle may also. These joints are rarely more than a dozen or fifteen in number, and this fact at once, disproves the hypothesis of the number of joints corresponding with the years of the creature's existence; for, as snakes are remarkable for longevity, individuals would not unfrequently be met with, furnished with a much greater number. The snake, from which I took the rattles, now laid before the Society, was about three feet in length. At the approach of cold weather, this snake buries itself, in the marshes, to a depth below the action of the frost.