PROCEEDINGS OF LEARNED SOCIETIES.

WERNERIAN NATURAL HISTORY SOCIETY.

April 4.—Professor Jameson, President, in the Chair.

Professor Traill made a communication to the Society on the nature of the food of the genus *Trochilus*, or Humming-bird, accompanied with a dissection. The information communicated on this occasion was not to be considered in the light of a new discovery, as the Professor intimated he had made the observations many years ago. It was a favourite notion, he remarked, with Buffon and the older writers on natural history, that the food of these birds was scarcely less æthereal than their forms, and that they partook of nothing more substantial than the nectar of flowers. This opinion was first contradicted by Wilson, who, speaking of the birds in a state of confinement, had remarked, that although they did not refuse to partake of sugar and water, yet they frequently devoured insects. Dr. T. stated that he had opened the stomachs of a great number of these tiny creatures, and did not remember that he ever failed in finding insects, often many, and these of large size when compared to the size of the captor. They were usually winged insects; and the resort of the birds to honeyed flowers was naturally explained by the fact that to these many insects resorted for their favourite food. In the dissected specimen which the Doctor exhibited, the stomach had been opened, and there still remained *in situ* three insects of very considerable dimensions. The stomach was remarkably muscular, as was also the heart; and in fact the whole muscular system was exceedingly developed. This remark applied particularly to the muscles of the wing,—to its principal muscle, the pectoralis externus, which brings the wing down to the body, and scarcely less to the pectoralis minor, which elevates the member. The Doctor stated that he had removed the whole muscular apparatus from the body, and weighed it, and then weighed the rest of the frame, had repeated this observation upon a variety of other birds, and found that in none was the relative development apparently so great.

Dr. Traill added some further observations upon the anatomy of the tongue and the os hyoides. The long and extensile tongue is extensively bifid in a horizontal direction, one of the forked portions lying above and over the other. Both of them are tubular, an observation based upon his personal observation, and in contradiction to the denial of some respectable naturalists, whose error he con-

ceived arose from their observation having been on dry and not fresh specimens. The upper side of the tongue is rugous, and the point, especially of the upper part, almost horny. Hence, he esteemed its functions threefold: 1st, From that portion of the tongue which is nearest, the point being supplied with an adhesive secretion, a portion of its food, as in the Bee-eater, readily adhered to it; 2nd, in a degree prehensile, it somewhat discharges the functions of a hand; and 3rd, with the sharp hard point of the upper filament, it possesses the power of impaling and retaining its victims. With regard to the os hyoides, its cornea are, as in the Woodpecker, much elongated, and curved round behind the head; to this powerful muscles are attached, and hence the rapidity and vigour of the motions of the member.

MICROSCOPICAL SOCIETY.

April 22nd—Mr. Owen, the President, in the chair.

Seven members were elected. Dr. Lindley communicated a short account of his observations on the antheridia of *Polytrichum*, in the cells of which are contained microscopic animalcules of the genus *Vibrio*. This discovery, made by Unger, in reference to the antheridia of *Sphagnum*, and afterwards observed by Meyen, has been confirmed by the observations of Dr. Lindley, who gives the following description.

The antheridia contain a cellular mucous substratum of great transparency, and in each of the cells lies one coiled up *Vibrio*, which turns round and round within the cell with such rapidity, that it resembles a cyst in very active motion, the dark head of the *Vibrio* forming an eccentric point round which the rotatory motion takes place. As soon however as the *Vibrio* gets into the water, its tail becomes straightened, and then the true nature of the moving body becomes apparent. The paper was accompanied by living specimens of the object.

Mr. Bowerbank read a paper descriptive of four new forms of vegetable tissue, occurring in silicified wood from Antigua, &c.

The three first of these are from Dicotyledonous woods, and present some interesting varieties of reticulated vascular tissue. In one example the thread of the net-work is filled with numerous irregular vesicular cavities, not exceeding the $\frac{1}{15000}$ of an inch in diameter; and in a second the interstices appear to contain the remains of discoid organs like those seen in the vessels of *Ephedra*, to which genus the author thinks the fossil may probably be referred. The fourth form is from a silicified palm, and consists of

1840. "Wernerian Natural History Society." *Annals of natural history* 5, 290–291.
<https://doi.org/10.1080/00222934009496826>.

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