NOTES.

On Deglutition in the Fresh-water Snake.—In some snakes, notably in the constrictors, the process of deglution has been watched, the means accounted for; but I do not find that any record of the mode of swallowing in our fresh-water snake, Tropidonotus picturatus, has hitherto been made. It is indeed hardly probable that this reptile has ever fed under close observation, it may therefore add a mite to the sum of knowledge if we make use of opportunities afforded by an individual in captivity to render an account of it. It differs much, I may say essentially, from that natural to the constricting snakes. In the Boas and Pythons the process is said to be wholly dependent on the action of the jaws. They consist of six longtitudinal arches of bone closely beset with backwardly curved teeth, one pair forming the edges of the upper jaw, another pair the palate, the third the lower jaw, all loosely connected and each served by muscles of its own, capable of pulling it forward or backwards. The snake having taken its lifeless victim in its gape prepares to swallow it, unfixes one of its six jaws and pushing it forward a little refixes it, then releases the next jaw and carries it forward, thus it puts in motion the whole of its jaws in succession, the first still advancing as the others follow: the result obviously being that in the words of our authority, Professor Owen, 'by their successive movements the prey is slowly and spirally introduced into the wide gullet.' But careful observation has so far failed to detect similar movements of the jaws in the fresh-water snake. Seizing a frog by any part of the body it proceeds at once to swallow it alive and it is in the neck that the first movement to that end is perceived: commencing at the head on one side it is seen to rise rapidly forward step by step, while on the other side it is falling similarly backwards. The purpose seems to be that of suction. By the frequent repetition of the act the prey is drawn in to a slight degree and then the advantage obtained is secured by the simultaneous advance of the jaws on the body of the victim: thus little by little the prey disappears in a straight line inwards. As soon, however, as a sufficient surface of its body has passed beyond the jaws it is subjected to the direct application to it of the muscular walls of the neck, and it is carried or rather stroked downwards more actively if not more expeditiously. The muscular movements

become more distinctly undulatory the wave proceeding from one side to the other. The elevators of the ribs on one side are vigorously raising each rib in succession from the head backwards for some little distance: the retractors of the ribs on the other are successively depressing them, and a sliding grasp is thus brought to bear upon the substance within which becomes constantly more effectual as more surface and more augularities are presented to it. At length the prey enters wholly within the gullet: the peristaltic action has now full effect upon it and it is passed rapidly down in a direct course till it reaches the stomach.

C. W. De Vis.

TUESDAY, 10th June, 1884.

L. A. Bernays, Esq., F.L.S., etc., in the Chair.

The following donations were announced:—

1. Illustrated Catalogue of Locomotives, Baldwin Locomotive Works. Philadelphia, 1881. From A. Norton, Esq.

2. "The Midland Medical Miscellany," Vol. 3, No. 28. Leicester, &c., 1884. Anon.

3. "Atti della Società Toscana di Scienze Naturali." Processi verbali, Vol. IV. 13 gennaio, 1884. From the Society.

4. "Bericht des Vereines für Naturkunde zu Cassel." XXIX. und XXX. Kassel, 1883. From the Society.

5. Proceedings of the Linnean Society of New South Wales, Vol. IX., Part 1. Sydney, 1884. From the Society.

6. "Transactions de la Société Royale des Arts et des Sciences de Maurice," Vols. XI-XIII. Mauritius, 1883. From the Society.