

is driven from the anterior part of the dorsal vessel by a series of vertical, moniliform, muscular hearts, the current rushing towards the tail, where it enters the great dorsal vessel by anastomosing branches, and helps to propel its contents towards the head. Most of them are hermaphrodites. The eyes, when present, are formed of a simple expansion of the optic nerve, covered by a transparent cornea, without any of the usual lenses or humours.

The class *Annulata* is divisible into three orders: 1st, *Abranchia*; 2nd, *Dorsibranchiata*; 3rd, *Tubicola*.

### 1st Ord. ABRANCHIA.

This group is distinguished by the absence of external branchiæ, respiration being effected partly by the surface of the skin, and partly by internal vascular sacculi opening by external spiracles. It contains, as tribes, first, the *Annulata Suctoria* or leeches; second, the *Annulata Terricola* or earth-worms; and third, the little-known *Nemertina*, a marine group of very long, slender, smooth worms, without antenna, feet, or other appendages to the skin, and very indistinctly annulated. To this group has been provisionally referred the Silurian genus, *Nemertites*.

#### Genus. NEMERTITES (*Mac Leay*).

*Gen. Char.*—Body very long, linear, slender, of nearly uniform thickness throughout, without distinct articulations.

Only one species of this supposed genus of *Nemertina* has occurred, and it is very doubtful whether it and the so-called *Gordia* of the American Taconic slates may not belong more properly to the vegetable kingdom. (See the genus *Palæochorda*, M<sup>c</sup>Coy, Pl. 1. A.)

#### NEMERTITES OLIVANTII (*Murch.*)

*Ref.*—Murchison Sil. Syst. t. 27. f. 4.

This body occurs usually in long loop-like folds, about half an inch apart, and three or four inches long. The diameter of the smooth subcompressed body is rather more than half a line; the length many inches, but unknown.

*Position and Locality.*—Not uncommon in the fine olive slates of Llampeter, Pembrokeshire.

### 2nd Ord. DORSIBRANCHIATA (*Cuv.*)

This group is almost equivalent to the *Annellida Errantia* of authors; it is composed of centipede-like worms, having the body entirely naked, and possessed of great powers of locomotion; the head is distinct and provided with eyes, jaws, antennæ, &c. The group is characterized by the almost uniform distribution of the gills in tufts over the remainder of the segments, which are very numerous and equal among themselves; one pair of gills on the outer edge of most of the rings; at the base of each branchial tuft is a retractile bunch of stiff bristles for locomotion, enclosed at the base in a thick, fleshy, lobe-like foot, and often a short, slender, fleshy, articulated process above and another below, called "cirri."

The two Cambrian genera, *Nereites* and *Myrianites*, apparently the first created beings of their class, belong to this, the most highly organized, group of all the *Annulata*.

#### Genus. NEREITES (*Mac Leay*).

*Gen. Char.*—Body very long, of nearly equal width throughout, of upwards of one hundred nearly equal and similar segments; each segment with a thick, short, ovate, lobe-like foot, surmounted by a slender cirrus exceeding the foot and the segment in length (or the distance between one cirrus and the next).