happen to lie near their burrows. They have three distinct methods of conveying objects to their holes. That usually resorted to, at any rate by those in confinement, is to suck into their mouths a portion of the object and then draw back by contracting the muscles of the body; another mode is to take hold of the edge of such objects as leaves or pieces of paper by folding the upper lip over the edge and holding it between the two lips; the other way is perhaps the most remarkable, and consists of pressing the mouth tightly against smooth objects, such as small stones embedded in a gravel walk, or even of a flat leaf occasionally; then by drawing back the pharynx a vacuum is created and the object is withdrawn with great force, on exactly the same principle as the toy made by schoolboys of a small piece of wet leather with a piece of string through the centre, and which, when trodden down evenly and tightly around the edges on a flat even stone will raise a very great weight. Occasionally, too, no doubt small pieces of leaves and other small objects are drawn back to their holes by sticking to the mucous covering of their bodies. After the first segment the body rapidly increases in size until it reaches the average dimension; but in a full grown worm, particularly at the season of reproduction, when it becomes a highly important organ "a part of the body, into which more or fewer of the segments, (according to the species) between the twenty-fourth and thirty-sixth inclusively, enter, is swollen, of a different colour from the rest, provided with abundant cutaneous glands, and receives the name of the *Cingulum* or *Clitellum*." This singular organ has sometimes given rise to the erroneous opinion that if worms were accidentally cut in two the two parts would come together again and join, or that the two portions would live, the head end forming a tail, and the tail end growing a new head. The absurdity of these views is however apparent when it is remembered that the nervous system consists of two cerebral ganglia or nerve centres, both of which are placed in the anterior end of the animal, they are lodged in the third segment, and are connected with the double chained nervous cord which extends through the whole length of the body beneath the intestine. The circulatory system consists essentially of a dorsal trunk situated, over the intestine, which carries the blood from behind forward, and a ventral or sub-intestinal one conveying the fluid in the opposite direction. The blood is red but has no corpuscles, and is quite different from that of vertebrates. The circulation may be easily observed. If a small worm is taken out of the ground for a short time and kept in water, it will void the earthy contents of its body, and will become sufficiently transparent to show the circulation, if slightly compressed between two slips of glass and examined with an ordinary magnifying glass.

The Oligochæta are hermaphrodite, the two sexes being united in the same individual, but two individuals pair together, the sexual elements are developed in certain anterior segments.

Earthworms do not possess any special respiratory organs, but breathe principally by the skin and partly by the vascular system on the walls of the intestine.

In vol. III. of *Field and Forest* (1877) there is an elaborate description of the muscular system of *Lumbricus*, written by Dr. A. C. Stokes. This article is of great value, as it is a record of extensive and careful original observations. At page 138 we find: "Down the back of the creature in the middle line, one in each intersegmental ring, is a row of circular openings. On the inner surface of each segment, therefore, below the longitudinal muscle, is a muscle parallel with the length of the worm, and extending from the lower edge of the orifice above to the upper edge of the aperture below. The two ends are thickened vertically and slightly broadened, whence they gradually narrow toward the centre. What the use of these openings may be it is impossible to conjecture. They seem to have no connection with any of the internal organs, but to form a direct communication between the external air and the general cavity. The function of the muscles is evident. By their contraction they must widen the orifices, naturally found closed and invisible until pulled open by needles on the stage of the microscope, in imitation of the muscular action."

I must confess that I have been unable to detect these orifices; but as they are mentioned by other observers, this must have been owing either to want of skill on my part or to imperfections in my instrument. Is it not possible that these orifices may act as reservoirs for air, and that it is owing to their presence that earthworms can exist for