

medicine in 1835, observed the same cysts in a subject he was dissecting. Suspecting it to contain some animal, he borrowed a microscope from a friend, and with it, he was able to demonstrate the existence of an entozoon. He read a paper on the subject before the Abernethian Society, which was afterwards published in the transactions of that body. He also took some of the muscle of this subject to Mr. Robert Owen, the comparative anatomist, who also discovered the animal, which he thought a new one, and called it *Trichina Spiralis*. He was the first to publish an account of it, which he did, in the *London Medical Gazette* for April, 1835. He described it as destitute of an intestinal canal and generative organs, and consequently gave it a very low place in the scale of animal life. Dr. Farre afterwards proved it to be possessed not only of an intestinal canal, but also of generative organs. He was thus able to place it into the class of nematoides. The attenuated end of the worm was at first taken to be the tail, but this was afterwards shown to be the mouth. Their origin was a long time veiled in mystery. Many considered them as evidently of spontaneous production. In fact, they were cited as proof positive of the possibility of spontaneous production. It does not appear what view these anatomists took of the necessity of generative organs, which were shown to exist, in an animal produced spontaneously. Virchow, and some others, though not able to explain the manner of their origin, yet rejected the idea of their spontaneous production, and insisted on the old law of "*Omne vivum ex ovo*." Leuckart found that on feeding trichinosed flesh to other animals, they became free from their capsular envelopment, and grew to thrice their original size in three days after entering the intestine, and finding some fully developed tricocephalus dispar in some of the animals so fed, he considered them an inferior grade of development of the tricocephalus dispar. He and others entertained this opinion until 1860 when he discovered their complete sexual development, and the fact, that they produced living young. He thought that like tænia they must first be ingested in some other animal. In 1845, Herbert had discovered their presence in the muscles of

the cat, and in 1846 Prof. Leidy, of Philadelphia, discovered them in the hog. Hence their direct connection with the food of man was demonstrated. In 1853 Herbert had already discovered that the animal became free in the intestinal canal, and reproduced young, which again commenced their migrations into the muscles of the individual.

The animal itself belongs to the class of nematoides. It varies in length from $\frac{1}{2}$ to $\frac{1}{4}$ of a line, according to some, others make it larger. Dalton in a paper on the subject, in the transactions of the N. Y. Academy of Medicine for 1865, gives its length as 1-36th of an inch, and its width as 1-100th of an inch. The body is pointed at one end and thick at the other. The tapering end is the mouth. This was at first thought to be the anal end, but it was afterwards discovered that the anal opening was at the larger end of the body. From the mouth a straight tube, the œsophagus, extends to the stomach, which is a mere enlargement of the tube. From the stomach the intestine as a straight tube leads to the anal opening. Having no necessity for masticatory and respiratory apparatus, the animal is without either of them. While encysted in the muscle, the parasite is sexless, but on being ingested for three or four days in the stomach of some warm blooded animal, the sexual organs become developed with the full growth of the animal. The male is the smaller of the two, laying besides the intestine is the semeniferous tube, which extends towards the stomach, but opens behind with the intestine in a common anal orifice which is guarded by two little projections. The female is considerably larger than the male, and more numerous in proportion of 7 to 1, according to some observers, and as much as 20 to 1 according to others, laying beside the intestine, the female has another tube, enlarged toward the posterior end of the body, and smaller anteriorly where at about the anterior third of the body, it has a small opening, the *vulva*. This tube is the receptacle of the ova, which are there developed before being extruded from the mother. It will hence be seen that the animal is viviparous and produces, according to Virchow, 200 young; Gerhard says 400, while Leuckart makes