careful work of Von Siebold, Leuckart, Küchenmeister, Van Beneden, and others. The working out of the life-history of the common tape-worms or of the liver-fluke are familiar cases in point.

Slow Death of the Theory of Spontaneous Generation.

Aristotle had excepted the higher animals from the possibility of spontaneous generation, Redi had destroyed the supposed case for insects in carcasses, even the spontaneous origin of endoparasites was becoming doubtful; in short, the flimsy evidence began to crumble away. This was partly due to the development of criticism, partly to the work of the early microscopists and anatomists, who showed how complex most of the lower animals are; and partly perhaps to a growing sense of the physiological gulf between the living and the not-living.

But Redi's experiments were held to controvert the Scriptures, and we find the Scotch priest Turbervill Needham trying hard (1750) to give experimental proof of the spontaneous origin of wheat-eels (small Nematode worms),—an attempt which Voltaire derided with bitter sarcasm. But no experimenter is to be despised, and Needham did good service in directing attention to a weak point in the case against spontaneous generation. He showed that animalcules (Infusorians and the like) appeared even in decoctions which had been boiled and corked up. As we should now say, this result was due to imperfect sterilization and imperfect corking of the tubes; but it was used by Buffon, who was much interested in Needham's work, to bolster up a pet theory of his, that life resided in indestructible organic molecules, and that these were liberated after death or in decomposition as the aforesaid Infusorians or animalcules.

On the other hand, the Abbé Spallanzani (1729–99), who made many interesting though often careless and ruthless experiments, criticised Needham's researches, and anticipated the modern practice of sterilization by showing that even minute forms of life did not develop in decoctions which had been *well* boiled and then hermetically closed up.