their life histories were worked out. The appearance of parasitised larvæ was similar to that of the specimens, found in Spring, containing other Myxosporidia S.L. The life history of the organisms is, in brief, as follows: a *spore* is taken into the alimentary tract of a very young larva. From this escapes an amœboid *germ*, which passes between the cells of the mesenteric epithelium, and thus gets into the body cavity. Here it attacks, and enters, a cell of the fat body, where it grows with great rapidity, soon bursting the cell and living free life in the body cavity of its host. It is now termed a *trophozoite*, and consists of a multinucleated mass of protoplasm. As the trophozoite matures, a small clearly constricted globule of protoplasm collects around each of the numerous nuclei, to form a spherical *sporont*. The single nucleus of the sporont undergoes three (or more in some species) divisions, thus forming eight nuclei, which in time become the centres of eight small bodies known as *sporoblasts*. Around each of these sporoblasts is secreted a thick shell, which activity is accompanied by a complicated internal development. This converts the sporoblast into a mature *spore*, which is capable of spreading the infection, which liberated in the water by the death and subsequent decay of its host.

It is believed that infection by this class of parasite can be accomplished only in the earliest stages of larval life, before the peritrophic membrane lines the entire surface of the mesenteron. The latter, it would seem, is the only part of the alimentary tract which would not resist the attacks of an unarmed germ. A fuller account of this exceptionally stout peritrophic membrane, and its development, has been published by the writer ('13). In this paper, also, the three Glugeid species discovered as parasites of Simuliid larvæ were described.

It will be seen, from the above descriptions of the various parasites of Simuliid larvæ found around Boston, that they are very conspicuous, and would readily attract the attention of an observer. Notwithstanding this fact, there are no other records of their occurrence in North America. This would appear to indicate that, in those sections of the country where species of Simulium are most abundant, these parasites do not exist, for in these places careful studies of the larval stages have been made by several observers. A Glugeid was described from the European