source of water-supply for the city of Edinburgh, objection was made to the water on account of the presence of certain organisms in it, and especially of the small crustacean (*Daphnia*) commonly called the Water-flea. It was pointed out at the time by those conversant with such matters that these crustacea are usually present in all impounded waters, and we shall see that the organisms found in the water of St. Mary's Loch are those which are characteristic of all freshwater lakes in this country, even of those which are reputed purest. Their presence does not, therefore, in itself constitute any objection to the water.

"The water of St. Mary's Loch was examined by the Lake Survey on two occasions, early in May, 1905, and in the middle of January, 1906. In May the water was fairly clear, and there were only a few species of animals and some microscopic plants found in it. There were four species of crustacea: *Diaptomus gracilis*, Sars, *Cyclops strenuus*, Fischer, *Daphnia hyalina*, Leydig, and *Bosmina obtusirostris*, Sars; one rotifer, *Notholca longispina*, Kellicott; and three diatoms, *Asterionella formosa*, Hass., *Tabellaria flocculosa*, Kütz., and *T. fenestrata*, Kütz., var. *asterionelloides*, Grun. No other organism was at all abundant.

"All the species above enumerated are among the commonest of lacustrine organisms, and it would be difficult to find a loch in Scotland in which all of them are not present.

"In January the condition of the water was very different. The quantity of life was immensely greater, and rendered the water of a dull yellowish colour, and so turbid that bright objects could only be seen at a depth of about 3 feet. All the same species were present, but some of them were more abundant than in May, and many species were present which were not found in May. The crustacea were the same, but the larvæ of the copepods were very abundant, and some of the *Cyclops* were carrying eggs. Of rotifers four additional species were found: *Anurea cochlearis*, *Conochilus* sp., *Polyarthra platyptera*, and *Triarthra longiseta*. The contrast was greatest in the vegetable life. One greenish alga, forming little clusters easily visible to the naked eye, was mainly responsible for the turbidity of the water.

"This 'flowering of the lake' in winter is not unfamiliar in Scotland, and has been seen in Loch Earn, etc. It takes place when the temperature is low (in St. Mary's 38 Fahr.). As the increase of life is not due to high temperature, occurring, in fact, when the lochs are coolest, it may be supposed that pollution of the water by sewage may have something to do with it. At any rate, both St. Mary's Loch and Loch Earn receive a good deal of sewage. These facts concern the open water of the loch, which alone is of much importance in relation to water-supply for towns. The life of the margin of St. Mary's, and of the mud on the bottom, was also studied.

"The life of the margin, chiefly found among the mosses and other aquatic plants, is much more abundant than that of the open water. It