

few minutes, will afford an abundant supply of sediment. The other plan is to open the tap to the full extent and allow it to run for a short time, so as to stir up whatever sediment may be in the pipe; then a tall glass cylinder is filled, and a watch-glass attached to a piece of platinum wire, by which it can be raised, is let down to the bottom of the vessel. The whole lightly covered is put aside for 24 hours to allow it to settle, and after this the water is siphoned off almost down to the watch-glass, which can then be raised without disturbing the sediment which it contains. This latter method possesses the advantage that the same quantity of water is always taken, and thus the amounts of sediment at different times can be compared; while it is almost impossible to fix a tap to run continuously at a given rate, owing mainly to variation in the pressure of the water in the pipes.

A little of the sediment obtained in either of these ways was transferred by a pipette to a slide, and examined with a Hartnack Objective No. 8 and No. 4 Eyepiece. This combination has a magnifying power quite high enough for diagnosing the most of the forms; though on one or two occasions a No. 10 Immersion was used.

The actual amount of suspended matter present in any definite quantity of the water varies very considerably, and depends upon several conditions, among which some of the most noticeable are the season of the year, the amount being greater in winter and spring than at any other time; the prevalence of stormy weather; the quarter of the city from which the water is taken; and the tap itself; for, if the water be drawn from a pipe which is seldom used, it is sure to contain more sediment than that from one in constant use, as it settles when allowed to rest for some time. There is no doubt also that organisms are often found in the mains which are not found in water taken directly from the lake. This, together with the fact that the number of individuals of some species is greater in the water of the mains than in that of the lake, may be explained on the supposition that the former habitat affords them a better food-supply, consequently they multiply more rapidly. The exclusion of light also seems favorable to the development of certain forms. Another marked result of these investigations has been the conclusion, that many of the forms seem to have a preference for certain times of the year, being much more abundant then than at any other