

quantity of the water, usually 500 cc., is filtered through sand and the sand with the organisms retained in it shaken up with a definite quantity of distilled water, 1 cc. of this is then placed in a glass cell, leaving a superficial area of 1,000 square millimetres and a depth of 1 millimetre. By examining under a microscope, into the eye piece of which a diaphragm has been fitted covering exactly 1 square mm. with the objective employed, each microscopic field represents a fixed unit of measurement with reference to the original water, and the number of each different organism per cc. can be calculated from the average number present in each field. As a rule the genera only are determined. This method is not applicable for determining the number or character of the bacteria.

During the period from March to November, 1891, the presence of the following organisms was noted. The numbers represent the number of different genera found in one sample and not of individual organisms per c.c. :

Month 1891.	Mar.	Aprl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
Sample from :									
Reservoir . . . . .	*	6	12	16	*	8	8	5	9
Settling Basin . . . . .	5	3	15	9	*	10	5	*	8
St. Cunegonde . . . . .	4	1	31	18	13	11	5	5	12
St. Lawrence . . . . .	*	3	3	12	18	14	5	5	9

\* Not estimated.

Of these, the following genera were the most frequent :

DIATOMACEÆ. — *Acanthos*, *Amphora*, *Asterionella*, *Cyclotella*, *Diatoma*, *Eucyanea*, *Epithemia*, *Fragilaria*, *Gomphonema*, *Melosira*, *Navicula*, *Nitzschia*, *Pleurosigma*, *Stauroneis*, *Surirella*, *Stephanodiscus*, *Synedra*, *Tabellaria*.

CYANOPHYCEÆ. — *Anabana*, *Aphanizomenon*, *Oscillaria*.

OTHER ALGÆ. — *Chara*, *Cladophora*, *Colosporium*, *Conferva*, *Cosmarium*, *Palnella*, *Pleurococcus*, *Pediastrum*, *Vaucheria*, *Volvox*, *Penium*, *Protococcus*, *Seredesmus*, *Tetraspora*, *Zygonium*.

FUNGI. — *Crenothrix*.

RHIZOPODA. — *Actinocyclus*, *Actinophrys*, *Aurelia*, *Gromia*.

INFUSORIA. — *Burgaria*, *Carchesium*, *Dinobryon*, *Epistylis*, *Euglena*, *Heteronema*, *Monas*, *Paramecium*, *Trachelocerca*, *Trachelomonas*, *Vorticella*.

SPONGIARIA. — *Sponge spicules*.

VERMES. — *Anguicula*, *Monostylus*, *Rolifer*, *Stylonychia*, *Stentor*.

CRUSTACEA. — *Alona*, *Cyclops*, *Daphnia*.