

the number of bacteria found in the Quebec water, for example being stated as 1045 per cc. as compared with 90 on the occasion when I examined it.

DESCRIPTION OF SPECIES OF BACTERIA FOUND—QUALITATIVE BACTERIAL ANALYSIS.

From a sanitary point of view the most pressing questions in connection with my analysis of the Montreal water supply were those bearing upon the possibility of pollution. This can be determined as a rule better by quantitative than qualitative work, and I found that the study of the problems of this nature took up so much time that very little was left for the determining of the species of bacteria present.

Although I isolated over fifty different forms from the water, I was not able in all cases to study them thoroughly enough to identify them with existing species described by others. This identification is a matter of extreme difficulty except in the case of well known and easily recognized forms, and the difficulty is increased rather than diminished by the fact that some workers have published as new species forms which were already described, or described them in so vague and unsatisfactory a manner that it is impossible, from the meagre details given, to tell whether they are new or not. Microphotography does not seem to have greatly helped matters, and with the pigment producing (chromogenic) bacteria, it is impossible to tell from the descriptions given what the shade of colour really is and in how much its tint depends upon the medium employed.

For these reasons, although I detected and described several forms which I consider to be new species, I have hesitated to publish them for fear of adding to the existing confusion.

It seems to me that the great tendency which these organisms have to form varieties and races makes it really of less importance except in the case of pathogenic forms to multiply the number of new species by emphasizing minute points of difference than to study their points of resemblance, and so form them into definite groups in which, while the members might differ slightly from one another, their main characteristics