

defined disease, but as one worthy of detention and observation ; that is to say, in the future it should not be necessary to make an absolute and possibly incorrect diagnosis, but it will be deemed justifiable to simply state that the case is suspicious, inasmuch as the bacteriological evidence is suspicious. As to this grouping of bacteria, there is already a fair consensus of opinion with regard to certain pathogenic forms ; for example, we recognize broadly a group of micrococci producing suppuration, of bacilli causing the development of tuberculosis in different animals, of spirilla inducing choleric form diarrhoea, of micro-bacilli of acute septicæmia in various genera of animals. But we still know very little about the relationship of the members of the various groups.

It has seemed to Dr. Wyatt Johnston and to myself, as well as to many other bacteriologists, that the best field for establishing the laws of grouping is to be found in a study of the innumerable slightly varying forms discoverable in ordinary water. From the very wealth of the bacterial flora in water, the subject of these bacteria in the water supply is in an absolutely chaotic state, so chaotic that now-a-days one can scarce name and describe a new species, for fear lest the slightly different characters given by some other observer in some other part of the world, as those of a species which he has isolated, be that of some variety of the same species. It has seemed to us that the only way of emerging out of this chaos is for a series of laboratories to work out each one of the group of microbes ; one laboratory, for instance, taking those producing green pigmentation ; another the red pigment bacteria ; another the *Bacillus Coli Communis* with all its varieties in contaminated water. By this means, working out a very large number of cultures isolated from regions all over the continent, the points of resemblance and of divergence of these cultures will best be determined, and as I say from the study of a large number of closely-allied forms, it will be that the laws of grouping can be determined ; in fact only