

hasty and incorrect diagnoses. I acknowledge freely, for example, that even without experimental inoculation one is generally able to determine by bacteriological methods whether a given case is or is not one of diphtheria ; where the true disease exists, there the number of colonies developing at the end of twelve to twenty hours is relatively enormous ; whereas, in a case where the bacillus present is not pathogenic the number present upon the surface of the medium is very few.

But making all acknowledgments of this nature that can be made, I still believe that what I say is worthy of earnest consideration and constant remembrance on the part of the bacteriologist. Not until some absolute method for distinguishing between various species of bacteria has been elaborated, will bacteriologists be able to make an absolute diagnosis in this most important class of doubtful and suspected cases. And for my own part I am inclined to believe that no such method will ever be devised. What I say may, to some at least, appear heretical, nevertheless it is my opinion, and I find that it is the opinion of most of the bacteriologists whom I have met that with increasing knowledge there is increasing difficulty in sharply defining the various species of bacteria. That this should be so seems to me to be only natural, for what are bacteria but the very simplest forms of life with which we are acquainted, of shape so simple that throughout the whole of the group we have but a passage from sphere to straight rodlet, to curved rodlet, to spirillum, forms without sex and multiplying in the main by fission or division.

As Weissman has remarked with regard to a similar simple form, suppose that an amoeba attached to some small particle in a current gains or protects itself by a thickening of its ectoderm along the surface exposed to the current, then if that amoeba divides, each of the two amoebæ will possess the same characteristic of the slightly thickened ectoderm, and remaining in the same region or under the same conditions, all the descendants of this one amoeba