eases are produced directly by these forms, it is quite proper that we should be very careful that the water we drink is free from them if possible. If we look for natural water however which is absolutely free from Bacteria, probably we shall look in vain. But we must remember that all forms of Bacteria are not capable of producing disease, even if some are, or at any rate that they do not do so under ordinary circumstances, but only in particular and well-marked conditions of the organism or organ attacked by them. We must not be surprised then to find Bacteria in our water supply. I have observed even in fresh filterings all the common forms, micrococci, rod-like forms, vibrios, spiral forms, and zooglaea stages. But if the filterings be allowed to stand exposed to the air for a few hours, it is amazing how rapidly they increase in numbers, and after a day or two the whole becomes converted into one mass of Bacteria in all stages, growing at the expense of the other organisms, and eventually leaving nothing but the siliceous frustules of Diatoms, and whatever other matter like this defies their digestive power. Probably there is no place where they thrive better, and where they exist in greater numbers, than in the School of Practical Science; for they are certain to be found there in everything which is not positively destructive to them. There is no doubt then that their presence in such abundance in sediment which has been allowed to stand for some time exposed may be in great measure accounted for by germs getting into it from the atmosphere, as well as those already there multiplying.

Adopting the view held by Billroth, Nägeli, Cienkowski, Ray Lankester, and Zopf, that all the forms usually described under the generic names Micrococcus, Bacterium, Bacillus, Leptothrix, Cladothrix, Vibrio, Spirillum, Spirochaete, &c., are only development stages of Schizophytes, in opposition to that of Cohn and others, that they are distinct species without morphogenetic connection, all the forms observed have been referred to the two species, *Cladothrix dichotoma, Cohn*, and *Beggiatoa alba, Vauch.*

Concerning the first of these two Zopf remarks, that "what the common bread mould (Penicillium crustaceum) is among the aerial mould fungi, *C. dichotoma* is among the aquatic fungi, and therefore it might be quite properly denominated the 'water-fungus' ('Wasserpilz') par excellence."