appears to lose its stain even more rapidly than does the tissue. Sometimes Gram's or Weigert's method shows them perfectly, but while the iodine appears to have a deterrent effect upon the decolorization of the microbes, the stain is not properly fixed by its means. And while again I have obtained good results by staining with methylene blue dissolved in anilin oil, a momentary passage of sections so stained, through a mixture of anilin oil and xylol and so through xylol into Canada balsam, yet even here the color appears to fade out rapidly so that in a few days the micro-organisms are unrecognizable. Eventually the thought struck me that bleaching in the sunlight might be a possible means. By this process there would be no diffusion currents set up, and if, as my previous work had shown, the bacilli took up the stain with rapidity then the deeply stained sections would have so much of the dye in the bacilli that, upon bleaching out, the bacilli would be left stained when the tissue itself had become colorless.

My laboratory assistant, Mr. E. W. Hammond, prepared a large series of sections in this way and obtained some excellent results. He found that, as I suggested, strong staining with carbolized fuchsin followed by bleaching for a short time each day for a period of a fortnight or more, demonstrated the hacteria admirably. While the process is a slow one it has the undeniable advantage that each day the mounted section can be ex-. amined to see how far the process of bleaching has progressed. By this means I was able to find out that in the Pictou cattle disease the microorganisms, while present scattered through the new fibrous tissue, are present also in large numbers within the liver cells, and in the liver of a rabbit which had been inoculated with the micro-organisms isolated by me, although the animal died before any marked cirrhosis had developed, the liver cells were seen to contain these

microbes in very great numbers. As to how the micro-organisms enter these cells, that is a point on which at present I can throw no light, but the appearances given as will be seen in a specimen under the mcircscope in the l'athological Exhibit, is that these cells contain large numbers of extremely minute diplococci.

Recently, within the last month, a remarkable case of cirrhosis with pigmentation unaccompaied by diabetes has again drawn my attention to the bacteriology of atrophic cirrho-Dr. Maude Abbott, who is worksis. ing in my laboratory at the Royal Victoria Hospital, showed me some sections of the abdominal lymphatic glands, stained by Weigert's fibrin stain in which, under high power, I noticed a peculiar fine granulation, and upon examining under the 18th inchimmersion, these fine granules resolved themselves into minute diplococci.

Examining the liver stained the same way, I there noted large numbers of the same micro-organism, and since then I have gone through all my five cases of cirrhosis, which I have had during the last three years; through specimens of four well marked cases of hobnailed liver received from Professor Hektoen, of the Rush Medical College, Chicago, and through a series of sixteen livers, some of well marked atrophic cirrhosis, others of milder stages of cirrhosis sent to me by Dr. Flexner from the Johns Hop-So far in every case kins Hospital. of well marked portal cirrhosis, whether of the small shrunken type or of the large hobnailed type, whether associated with jaundice without ascites or with ascites without jaundice, I came across constantly one characteristic form of micro-organism, obtaining the best and most permanent results by the method already mentioned, of staining in carbolized fuchsin and bleaching or partially bleaching inthe sunlight.

This micro-organism is extraordinarily minute; by the trained eye,