

germs of bacillus alvei present. I have other experiments going on as to the effect of formic acid; whether the vapor of formic acid will kill it or not, and what percentage might be used. I thought that might be a good stuff for mixing with sugar or anything that is fed them, especially as bees need formic acid; I have also tried the effect of naphthaline.

These experiments close the work which I have done this year. [Prof. Harrison's address was greeted with applause]

Mr. McEvoy—As far as my experience goes in the matter I never heard anything finer than that which Mr. Harrison has done, he has done his work very thorough; he has done a great deal to straighten this matter out. It was for a time thought that the bees never stored honey in a diseased cell until the honey itself was ripe. This gentleman has found both the pollen and honey diseased and the reason why is because it was stored in the dead cell; that is where he found it.

Could you explain why that did not break out again after you had put the diseased matter in the wax and the bees went to work?

Prof. Harrison—I have no explanation to offer of that; I did not examine the wax for it was made up into comb foundation; I regret that; I would like to find out whether the germ was alive at that time.

I think in your work, Mr. McEvoy, you entirely take away all diseased matter?

Mr. McEvoy—When the bees rush into these cells where the honey is and fill themselves with honey, of course I work to get that honey away.

Prof. Harrison—I rather think that only the case of the weaker colonies is the disenable to grow, or rather to spread; I offer no explanation. As you noticed, were made no suggestion at all in the report on treatment. I can offer no explanation of the fact of spores getting access to the hive from other sources outside.

Mr. McEvoy—The germs of the disease rise.

Prof. Harrison—They cannot rise of their own free will. The only way is by the atmosphere blowing in different directions. Unless the surface is perfectly dry the spores cannot lift. When we breathe we do not throw out germs for they are unable to leave a moist surface; that is why special attention is taken with consumptives. If the matter is dry and is blowing about and a person takes it into the lungs the disease is started.

Mr. Holtermann—Is not this the case, with the foul brood disease, first of all, is that exceedingly sticky substance, and the danger is not great and unless the

matter is broken off in the finest particles and hardens and dries it is not likely to be given off in the atmosphere?

Prof. Harrison—That is so. Another thing, I have a great many experiments, other than these, going on in the laboratory and I also class work with students, and a lot of this stuff has been lying around; some of the sugar which I have filled has been spilled over the laboratory from time to time, and in fact has been spilled all over the place from carelessness and I may say I have never, during the time this work has been going on, found stray colonies in the different media which I employ; when I say stray colonies I mean spores of the bacillus that have been wafted around in the air which would fall perhaps in some of the different media which I employed, which would be a good place for them to grow in.

Mr. McEvoy—Did you test to see if those would arise and spread in the air?

Prof. Harrison—I have tried nothing on that except the different media I have tried. I think the solution of it is altogether owing to the tenacity with which these things hold together.

I might ask if there are any other lines that the Association would suggest should be followed out.

Mr. McEvoy—I move that a hearty standing vote of thanks be tendered to Prof. Harrison, and also to Mr. Holtermann for bringing Mr. Harrison to the Association.

Mr. Best—I take great pleasure in seconding the motion.

The President put the motion which was carried with applause.

The President tendered the vote of thanks to Prof. Harrison.

Prof. Harrison—I thank you, gentlemen, for this motion and also for the hearty way in which you have shown your appreciation of what I have done.

Mr. Holtermann—As far as my part is concerned, I have been amply rewarded by the result of the work and I would like to say here, touching upon one or two of the remarks of Prof. Harrison, that the object of taking the buckwheat and clover honey was this, that I knew from painful experience that when the bees were working on buckwheat the stings were more painful than when working on clover. When the question was brought forward as to what influence formic acid might have upon the spores of the disease and the development of it, we acted in this way: we took the clover honey and the buckwheat honey directly from the hive, uncapped it, sealed it and sent it to Prof. Harrison. I thought there would be more formic acid generated when the bees were working on buckwheat