

opinion that the selling of a glucose, or other artificial product, under the name of "honey" or "Canadian honey," no matter what explanation may appear on the label, ought to be put a stop to; and if Canadian honey has any ambition to secure a reputable place in foreign markets, it is time for Canadian bee-men to bestir themselves.

Yours truly

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In our last issue we noted the comment of the Editor of the "British Bee Journal" on Dr. Phillips' circular, "Brood Diseases of Bees," issued by the Department at Washington, and Dr. White's designation of the disease known as "black brood" as European foul brood. It is only fair to Dr. Phillips to give his reply to the criticism, which appears in a recent number of "Gleanings in Bee Culture":

Dear Mr. Root—I notice that the writer of the editorial in question says that "European foul brood," or "black brood," is of recent occurrence in England. I should hesitate very much in making exception to a bee-keeper of the high standing of Mr. Thomas Wm. Cowan, but in Cheshire's portion of the paper on "Foul Brood" in the "Journal of the Royal Microscopical Society, 1885," part of the description of "black brood" much better than it does the rosy type of disease which we call "American" foul brood. Cheyne, who really did the work, describes the sample used by him as watery, which does not apply very well to the rosy type of the malady.

Mr. Cowan says: "There are two forms of foul brood, a mild and a virulent one * * * but we are not told in any of the scientific literature with which I am familiar in which one of these we are to look for *Bacillus alvei*, nor do I know of any ground for the belief that the two diseases are but varieties of 'foul brood caused by one specific bacillus.'"

Attention is also drawn to the fact that American foul brood is of much more general occurrence than European foul brood, a fact which no person

will be inclined to call in question.

The possibility that Dr. White has cultivated a non-pathogenic saprophytic bacterium under the supposition that it is the pathogenic bacillus of American foul brood is suggested; but since Dr. White is the first and only bacteriologist who has attempted to investigate the non-pathogenic micro-organisms of the apiary, this may well be considered a criticism of small weight. Other investigators have been satisfied to leave the normal invisible flora of the apiary unknown, and we are justified in the belief that on this very rock have they been shipwrecked. At any rate, Dr. White expresses the belief that the results of Howard, Mackenzie and Harrison are false because they did no work in non-pathogenic forms.

According to Dr. White, *Bacillus larvae* is found universally in diseased larvae of American foul brood, and in not a single instance has he found it in the numerous normal combs which he has examined, nor has it been found on healthy adult bees or in the intestine of normal adults. He assures us that it is universally present in every case of American foul brood examined by him since he first used the media made of bee larvae, and never present in any of the normal material examined. This to a bacteriologist or even to a layman is rather good evidence of the pathogenic nature of the bacillus in question.

The principal criticism in Mr. Cowan's editorial I shall quote: "It appears to us that the most important test has been omitted; and until that has been made successfully our judgment must be suspended. The test we allude to is to prove that the disease can be reproduced in healthy brood from a pure culture of Dr. White's *Bacillus larvae*." This test has never been made by Mr. White, and the desirability of such a test is, of course, evident. The criticism is, however, somewhat misleading, for the reader might be led to the belief that such a test is usually applied in the study of micro-organisms supposed to be pathogenic. I believe I am safe in saying that this test cannot be applied in many cases, nor is it considered necessary in all cases by bacteriologists.