

### BLACK OR EUROPEAN FOUL BROOD

In a private letter, Mr. Byer says: "You say that it would appear that European foul-brood is getting a start in Ontario—page 246. I fear that a lot of the bee-keepers around Trenton, Brighton and Arnprior will think you are indulging in a little sarcasm." We regret to learn from so good an authority that this disease has become so bad in the district named. Our brother bee-keepers so afflicted have our deepest sympathy. We certainly had no idea that it was really so bad. We regret also that there is nothing that we can advise, because we have as yet had no experience with it. We have, therefore, in this article, endeavored to give all the information available on the subject. The public interest might have been better served had our readers in the afflicted district, who have suffered from the disease, acquainted us with the condition of affairs sooner.

Our thanks are, therefore, specially due to Mr. Byer for giving us such information as we have in a private letter written just previous to his taking a holiday. It appears that the idea has been generally entertained that this dead brood was starved brood. In fact, we have held this opinion ourselves. Or this point Mr. Byer says:

"As to whether this dead brood is always 'starved brood,' is a question. Personally, I do not believe that nearly all this dead brood is starved. A simple experiment: Remove the queen from a colony that is affected badly with this dead (starved?) brood and introduce another one. In many cases (not all) just as soon as the larvæ are developing from the eggs laid by the new queen, this dead brood will disappear. As the same strain of bees are feeding this larvæ as was the case before the old queen was taken away, certainly poor feeding of the larvæ was not responsible for the trouble. The trouble in cases like this would appear

to be that the eggs of the old queen were lacking in vitality, just the same as eggs of hens; while they may be fertile enough to develop the chicks to the hatching period, yet from lack of vitality, they soon die after that time. Mr. John Timbers first called my attention to this matter, and from what I have since noticed I am convinced of the truth of his contention. Try this experiment in a colony that is affected with a lot of this dead brood, and see if it does not work out as I have described."

This idea of Mr. Timbers, and endorsed by Mr. Byer, is directly in line with what is said and written by others, viz.: that the removal of the queen will as a rule remedy the trouble. If we remember rightly this idea was expressed by Mr. S. D. House at our convention in Toronto two years ago. The same idea is stated by Mr. E. W. Alexander in one of his articles on bee diseases, which we subjoin to this article. Note particularly what he says, and see how closely it accords with what Mr. Byer reports:

"These (the queens) are to be introduced to your diseased colonies on the twentieth day after you have removed their old queen, AND NOT ONE HOUR SOONER, for upon this very point your whole success depends; for your young queen must not commence to lay until three or four days after the last of the old brood is hatched, or 27 days from the time you remove the old queen. If you are very careful about this matter of time between the last of the old brood hatching and the young queen commencing to lay, you will find the bees will clean out their breeding-combs for this young queen, so that she will fill them with as fine, healthy brood as a hive ever contained."

Now, with the weight of Mr. E. W. Alexander's evidence, together with that of Mr. House, (if we remember rightly), it would appear that this idea is pretty conclusive. If it is conclusive, it appears to us that it proves more than it is in-