

GENERAL.

FOR THE CANADIAN BEE JOURNAL.

Confusion Worse Confounded.

FOUL BROOD.

A LITTLE learning is said to be a "dangerous" thing, and I suppose it is about the same with science, for science is of course a species of learning. Now, it has struck me very forcibly lately, that the apiarists from Cheshire and Cowan, in England, to Corneil, Jones, McEvoy, and all the rest of us here know just about enough of the scientific origin of the propagation and cure of foul brood to render our position "dangerous." Theoretically the foul brood question is at the present time badly tangled. While this is unfortunately true, our course *practically* is, I think, quite clear. Mr. Corneil's paper on "foul brood" at our late convention, which was an able paper, and with most of which I agree, undoubtedly had a rather confusing and discouraging effect on the minds of those present who were specially interested in the foul brood question—some of them from dear experience. If Cheshire and some other authorities are right that the foul brood microbe lurks nearly everywhere—inside the bee and outside, and inside the hive and out—and that the disease may be carried even from flower to flower by the bees and communicated in that way, and carried by the wind, etc., etc. If this be all *practically* true the outlook is rather gloomy. And now comes another authority through the last number to hand of the *British Bee Journal*, who projects another black cloud above the horizon. This is Dr. Lortet, whose paper is translated from the *Revue Internationale* and given with apparent endorsement by the B. B. J. Dr. Lortet says the foul brood bacteria infest the digestive canal of the adult nurse bees, and that they communicate the disease to the larvae. He says the disease is always communicated to the brood in this way: that is from the diseased workers to the brood. He says the adult bees can stand the foul brood bacteria for some time without succumbing, but the larvae are speedily killed by them, as they resolve themselves into virulent granulations or spores, owing, he thinks, to the action of the albumenoids, and thus destroy the larvae. Dr. Lortet says he has been experimenting extensively and his "mind is therefore quite free from doubt" that "it is the adult bee which is first infected" with the disease and communicates it to the brood. He says "the culture and transformations of the foul brood bacterium cannot take place in the honey." Now, I am not

aware that anybody claims it can. We merely claim that the honey is the principal medium of the transmission of the disease. Dr. Lortet admits that "in diseased hives the honey and wax are always more or less infected on the surface by bacilli, virulent granulations, excrements, etc." Now, in regard to Dr. L's theory that the adult bees themselves are first diseased and then transmit it to the brood, this seems to clash with the facts. Messrs. Jones and McEvoy claim that they have been curing foul brood for years by simply removing all honey brood and comb from the diseased colonies and placing them in clean hives, without any specific treatment of the worker bees or queen whatever. They differ somewhat in their methods of accomplishing this, but the principle is the same, viz: "the removal of all the honey, comb and brood from the diseased colony." Now, it does appear to me that if Dr. L's theory is true, the worker bees, being diseased ought to transmit the disease afresh to the new brood which they proceed to raise after being transferred from the diseased combs and hive to the new and clean hive. But according to the uniform testimony before us, the disease never breaks out afresh from within after the above change has been properly made. The apparent exceptions are invariably traced to imperfect manipulation or re-introduction of the disease from without. The facts are therefore directly against Dr. L's theory, which he, however, regards not as a theory but as an actual fact, about which his mind is "quite free from doubt," he assures us. While he intimates that some adult bees "may resist the virulent stage of the malady" the bees never recover unless medicated, and finally perish of the disease "after a more or less protracted interval." Now, if this be so, those diseased adult bees which receive no medication under our plan of treatment, ought surely to start the disease in the brood again after removal, and the fact that they do not seems to me to upset this theory, for I can regard it as nothing but a theory. There is a redeeming feature about the paper under review. Dr. L has a remedy which is sure and safe. He does not propose to cure the diseased brood, but the adult bees. The remedy is *naphthol beta* in small quantities and dissolved in sugar syrup. The editors of the B. B. J. says that as this substance "is perfectly harmless, there is no danger in its application."

It is well that this whole subject is being so thoroughly investigated and discussed. Out of the present chaos order will ultimately come. Meanwhile let us over on this side the "big,