

## SOME ASPECTS OF AMERICAN FOUL BROOD

By Robert Davidson.

The subject of Foul Brood has a forbidden atmosphere about it, which leads to ignorance and by each beekeeper spreading the gospel that he burns, or that he is not bothered with the disease, leads the beginner to have a wrong impression of what is generally done, or to believe that a fire is a sure method of cleaning up.

The majority of beekeepers will be against any discussion about the methods of eliminating this disease, but in fairness to beginners, who know little of burning or of treating, and to some who are not beginners, I consider that not enough thought is given to the individual variations in the methods in general use.

To start with, take the ever popular burning method (popular with the other fellow's gear); a pit, or trench, about twelve inches deep, is dug, a good fire is started in it, and the diseased frames stacked on top. To be a success the job should be done when all field bees are in the hive, so that they can be stupefied with cyanide gas before the burning is started. At the finish of the "BURN," the empty supers are piled up, about six high, on top of the fire and left until a good flame is roaring out of the top, when they are pushed over, and any flames knocked out. An old super is usually sacrificed as the bottom one. The lids are well scorched by placing them on top of the fire, and the same treatment is handed out to the bottom boards. Some of the more cautious beekeepers may burn the lot, but the above is the method in general use. Briefly:—The frames are all burnt; the honey runs into the trench in the ground, and the supers, bottom boards and lids are scorched and used again.

There are one or two aspects of the above method which are open to doubt. In digging the trench or pit, the softest ground is picked, and what is the condition for infection if the honey is ploughed up at a later date? It is certain that if much honey is in the frames it cannot be heated hot enough as it runs through the fire. The other

items of possible, or in the case of the bottom board I would say probable, infection are the lid, supers and bottom board. There are a number of beekeepers who are strong believers in scorching, but on questioning their method closely one finds that their scorching is done very thoroughly with a blow-lamp, with tin rebates removed, that the supers are thoroughly cleaned while being scorched, and that they are painted afterwards. Another question that can be asked is the destination of any bees that are left lying about and which may come to life next day.

Before going into the weaknesses of any other method, I wish to draw attention to what, to my way of thinking, is the worst feature of American Foul Brood: that is the necessity of there being a fairly heavy concentration of the disease microbes before the brood becomes infected. This measure would permit all gear to be slightly infected, and the beekeeper, thinking that his "METHOD" of dealing with the disease is good, might be puzzled with a severe outbreak which may only come from a source of mild infection.

All beekeepers know that it is against the law to shift gear infected with American Foul Brood, and those who do must have some method of treatment which they are certain is right, but they open up a big risk as to accidental infection due to neglectful storage or accidental exposure.

Infected gear is often treated with more or less success, so why not discuss treatment and bring it out into the open? One hears of gear being boiled in coppers, usually with the added stipulation that it must be kept under the boiling water for twenty minutes. One aspect of this treatment I would like to know more of is how long it takes the centre of a one inch board to heat to boiling point, when the board is immersed in boiling water? As the foul brood germs are carried in the honey, and the honey mixed with water can penetrate to the centre of the wood, it is very necessary that the centre of the wood must be maintained at boiling point for the stipulated twenty minutes. Then the twenty minutes as stipulated is cast

in doubt by scientists saying that foul brood germ can live through that time, at that temperature; but do they live in sufficient numbers to reinfect? This is the point I wish to make: is it not possible for a treating method to spread infection and make its concentration below that necessary to reinfect, except when added to by some fresh source?

About now the beginner will be where he was before he started to read this, but here is some good advice, and no question about it being good. If you burn and burn everything, make sure that the hot honey runs into a pit that will not be disturbed. If you burn and save the supers and lid, be sure to burn the bottom board, and do not use the lid to stand the infected supers on—use an old bottom board for this and burn it afterwards. If you contemplate any other method use superheated steam, and get a beekeeper who uses this method to tell you the real catches. Do not boil in a copper. Do not immerse the lot in some creek which has legendary healing properties. With wax so difficult to quit the man who makes the complete burn takes no risks, and has very little work to do beyond making the new gear.

I know from experience that the question that troubles most Southern beekeepers is:—What precautions should a beekeeper of Scotch descent rightly use? Here they are as I see them. First paint all recovered gear a distinctive colour, a coloured corner would be enough, and confine this gear

to apiaries where F.B. is constantly showing up. If the disease is spread throughout your apiaries the sooner you start a complete burning programme the better. The second precaution is confined to the apiaries where F.B. shows up, and it is to number all supers on hives, and only use these supers on their own hives. Thus there would be four supers for number ten hive and so on. At extracting time, extract and return to the same hives; this means leaving hives for one day with just the lid to build comb in, but it is very necessary. Lastly, if you think your method is correct and thorough, and that any infection that is showing up is from an outside source, try switching a complete batch of these "treated" supers to an apiary that has never had American Foul Brood.

### BOOK REVIEW

#### "Bees, Flowers and Fruit."

This addition to the list of books by Herbert Mace tells the fascinating story of the honeybee in nature. It describes the structure of flowers, their significance in the reproduction of plant life, and the intricate variations in the process of fertilisation by wind, water or insects. The beekeeper who is interested in nature will find it most helpful in studying his bees at work. "Bees, Flowers and Fruit" is published by The Beekeeping Annual Office, Harlow, Essex.

## HOLDAWAY'S QUALITY BEE SUPPLIES

We are now able to supply your requirements of  
BEE WOODWARE for the coming season.

OUR MOTTO: Quality and Service; First Quality Products.

Satisfaction Guaranteed.

Remember HOLDAWAY'S when you need Supers,  
Frames, Tops, and Bottom Boards, etc.

Only Selected Timber Used.

### H. R. HOLDAWAY & SON

Phone 5415.

WHANGAREI

P.O. Box 271.