Proceedings of the Fifth Annual Meeting of the Section on Apiary Inspection

The Fifth Annual Meeting of Apiary Inspectors was called to order by the Chairman, Dr. E. F. Phillips, at the Southern Hotel, Columbus, Ohio, Monday evening, December 27, 1915.

The meeting showed the largest attendance of any yet held. This was undoubtedly due to the fact that it did not conflict with the meeting of any other section and was held at the hotel headquarters of the Association.

The principal things brought out in the address of the Chairman and in the other papers presented were fully discussed and led to the following action by the Section:

It was moved by Dr. Headlee and carried by vote, that it is the sense of this Section that the Association of Economic Entomologists admit apiary inspectors to associate membership. Dr. Headlee was appointed to confer with the Association on this matter.

A motion by Dr. Headlee was carried by vote that this Section go on record in favor of apiary inspection work being placed under central authority and under the direction of one having had a broad entomological training.

It was moved and carried by vote that the Section adopt the suggestion of the Chairman that inspectors report disease conditions of apiaries along state boundaries to Dr. E. F. Phillips at Washington.

Upon motion by Mr. Millen a committee was appointed to draw up a uniform system of reporting apiary inspections. Mr. Shaw, Professor Dean and Mr. Millen were appointed on this committee.

By vote of the Section, Dr. T. J. Headlee was recommended to the Association of Economic Entomologists for Chairman of the Section and Mr. N. E. Shaw was reelected Secretary.

THE FUNCTION OF THE APIARY INSPECTION SECTION

By E. F. PHILLIPS

It is obvious that the formation of a section in the Association of Economic Entomologists for consideration of the problems in apiary inspection was a long step toward the proper recognition of the place of beekeeping in economic entomology. If we look back only a few years we will realize how impracticable it would then have been to get together a group of the economic entomologists of the United States who had any interest in beekeeping.

For a society to undertake improvement in the apiary inspection service is a large problem, in spite of the fact that we all realize the need of improvement in many places. We can scarcely hope to correct such defects as may exist without in some way reaching the men at work in the field and I would therefore respectfully commend for your deliberation the best means of reaching these men. It is impossible to get all the inspectors and deputies together once a year for a conference because of the great distances to be traveled and the lack of funds to pay their expenses as an official trip. Furthermore, most of the men engaged in the work are not members of the Association of Economic Entomologists and many, not being trained entomologists, are not eligible to membership under the present requirements. It is a pertinent question whether the Association should assume to have a section for such a special phase of economic entomology without making a special requirement to fit that section. Theoretically, it may be admitted that the standards for admission should be kept high, practically, it is a pity for an organization to limit its usefulness by keeping out men who need the help that they might well get from the organization. There is also room for debate on the question whether an organization is strengthened by artificial barriers of admission or whether its entire strength does not lie in its usefulness. The associate list might profitably be increased, in so far as this section is concerned, to include all apiary inspectors who care to join.

It is not easy to say what is the greatest need in apiary inspection but, after having traveled with a number of the inspectors, I should incline to the view that a reduction in the waste of time and more system in the work are most needed. To spend too much time in helping the individual beekeeper and to visit longer than necessary is a too common fault. In fact, some inspectors do little more than to make a series of visits to the members of the beekeepers' association every year, thus giving time to men who scarcely need the inspector and depriving others of less opportunity. There is often much waste in flitting from place to place. There is little this section can do to put a stop to these unwise things except to give public utterance to a condemnation of the practice.

As is well known, the Bureau of Entomology has for several years advised placing the apiary inspection under some already existing office, usually with the State Entomologist. It can be stated without fear of successful contradiction that in states where there is a competent experienced supervisor, the results are vastly better than in states where the inspector is a free lance. One important consideration is the keeping of adequate inspection records and these will not be properly kept unless there is an established central office. Case

after case could be mentioned of earnest effort which has come to no permanent good because of lack of supervision. I commend to this section the desirability of definite public utterance on this question for the guidance of the appointing powers and state legislatures.

At a conference of apiary inspectors held at the invitation of Mr. Frank C. Pellett, Apiary Inspector for Iowa, in Keokuk, Iowa, on September 8, 1915, Mr. N. E. France of Wisconsin called attention to a lack of coöperation among inspectors of adjacent states and made certain suggestions for overcoming the deficiency. To bring this before the section I desire to present the question for consideration.

The brood diseases of bees do not respect state boundaries and it would be well for an inspector to know of cases of disease found in counties that adjoin his state. This could be done simply by correspondence between the inspectors but this probably will not be done in many cases unless some regular system is devised.

As the inspectors know, the Bureau of Entomology notifies the inspector when a sample of diseased brood is received from the territory under his supervision. If it is the wish of the inspectors, the Bureau will gladly extend this by receiving reports of inspection along state lines and notifying the adjoining inspector. This will be rather easily done in conjunction with our maps on the distribution of the diseases.

Possibly this will not give as much information as the inspectors would like to have and it may be considered desirable to devise some other method of giving the information. In any event it would seem desirable that the prevalence of the disease be indicated and not merely a notice sent of the existence of the disease.

It would probably be desirable to have records of all cases of disease kept in some central office but this is beyond the needs of the case in point.

There is need of greater publicity of the work of the apiary inspectors, if for no other purpose to stimulate interest in the control of disease. Such publicity would do much to point out any waste of funds and I would suggest the desirability of gathering together every year the records of inspection in all the states where this work is done. To give the number of apiaries visited, the number that are being visited for the second time that season, the number that have been visited previous seasons, the amount of disease found, the money expended, as a total and per colony, and all available data as to any reduction in the prevalence of disease would do much to point out deficiencies and to stimulate to better work. It would, in fact, be the application to inspection of the methods of modern efficiency. Such a summary might be prepared by the Secretary of this section and published in

tabular form in the JOURNAL OF ECONOMIC ENTOMOLOGY. There would be cases of injustice in comparing cost of inspection per colony and each inspector should be permitted to add a brief statement of any reasons which might exist for unusual expense. Under this heading, a preponderance of small apiaries or difficulties of travel might be stated. An inspector who had a hard time in explaining why it costs twenty-five cents or more per colony might be stimulated to inspect more the following year. Some inspectors do considerable extension work and there should be a careful estimate of this expense to be deducted from the regular inspection expense with a statement of the number of days spent in each kind of work. This might bring out the fact that in some cases the inspection is being neglected and the time spent on certain lines of extension work which the conditions do not justify.

It is perhaps impossible to make a definite statement as to what constitutes inspection of a colony or apiary. If an inspector goes into a region where little or no disease exists and visits an apiary of 100 colonies belonging to a good beekeeper, he may not open a single colony or he may examine a few weak ones. He may be justified in reporting no disease in the apiary but if he reports having inspected 100 colonies, his record for the year is not comparable with that of another inspector who must examine every colony. It might be well to make a record of the total number of colonies and of the number actually examined. In some cases this would perhaps give an entirely different complexion to the report. Such a distinction is entirely warranted as giving a basis for judging whether the inspector is doing all he should. Of course it is assumed that all the reports of inspection of individual apiaries are truthful, which assumption may stand until there is evidence to the contrary.

In presenting these points for your consideration it may be well to summarize briefly the points mentioned.

1. Extension of the influence of this section.
2. Reduction in the waste of time in inspection.
3. Declaration of the need of a central office for the state inspection service.
4. The need of information concerning disease in adjacent states.
5. Summary of records of various state inspection service for comparison as to cost per colony and general efficiency.
6. Definition as to what constitutes inspection.

These suggestions are made because, with the impossibility of central control, there will certainly be a waste of funds in places unless it can be remedied by publicity. In certain cases of waste that have come to my attention it is clear that the inspector is acting in ac-

cordance with his best judgment and in an earnest effort to help beekeepers. If this section can provide a safer basis for judgment it will be conferring a great benefit on beekeepers who are suffering from neglect.

SOME DIFFICULTIES IN GROSS DIAGNOSIS OF THE INFECTIOUS BROOD DISEASES OF BEES

By ARTHUR H. MCCRAY, M. D., *Apicultural Assistant, Bureau of Entomology, U. S. Department of Agriculture.*

The beginner in diagnosis rarely appreciates the difficulties in recognizing and differentiating disease, consequently many mistakes are made and there results a lack of confidence in his own ability. Certainly this is deplorable. In this paper it is aimed to point out certain difficulties in the gross diagnosis of the infectious brood diseases of bees in such manner that the inexperienced inspector may profit thereby and it is hoped that those of greater experience may find something of value in the recital of some of the difficulties which have been encountered in the examination of over 4,500 different specimens of bee comb and brood representing every section of the United States.

DEAD, NOT LIVING, LARVÆ MUST BE STUDIED

The few published characteristics of living diseased larvæ are not readily applicable to gross diagnosis, especially in the field, consequently attention must be directed for the present almost exclusively to dead larvæ.

VARIATIONS IN THE SAME DISEASE

The various factors entering into a description of the dead brood in any one of the three known infectious brood diseases of bees are not constant, thus resulting in different appearances in different cases of the same disease. It is this variation that makes a differential gross diagnosis at times difficult or even impossible so that laboratory aid must be sought.

CONSIDERATION OF THE VARIATIONS AT LENGTH

It will be well to consider some of the more striking variations at greater length. Many lay great stress upon the value of odor in American foulbrood and European foulbrood. There is no doubt that most of the cases of American foulbrood, probably all, have at some time in the course of the disease a characteristic odor. The same cannot be said of European foulbrood for the odor here seems accidental and is not always present, more-