THE HONEYBEES’ OWN TROUBLES

By FRANK STIRLING

Honeybees, like everything else, have their troubles. Sometimes it is a lack of care on the part of their owners, but more frequently there are pests and enemies such as bee diseases, moths or wax worms, wild animals and ants, which make raids upon the colonies from time to time.

One of the most serious pests, especially in tropical and subtropical countries, are ants. The small black fire ant, the giant red ant and the wood ant frequently attack colonies of bees and sometimes destroy them entirely before the beekeeper discovers them.

A very striking incident of this nature was brought to the writer’s attention several months ago when a large apiary on Biscayne Key, in Dade County, was attacked and seriously ravaged by the large red ant (Camponotus abdominalis, Fab.).

On this key or island, lying four or five miles off the mainland and across Biscayne Bay from Miami, Mr. C. E. Bartholomew was engaged in beekeeping and was operating some eight or nine hundred colonies of bees. The honey plants on this particular key are varied and many; shrubs and other plants such as mangrove, sumac, palms of many kinds, especially the scrub palmetto, are found in abundance. In and around the base of the scrub palmettoes many colonies of these red ants had made their homes, evidently attracted by the nectar produced by the blossoms of the palmetto and by the trash and litter commonly found around these plants.

These ants very soon discovered the whereabouts of the apiary and began to make nightly raids upon different colonies of bees.
Mr. Bartholomew at once began to combat these ants by the use of all methods known. For instance, the hives were placed on stands several inches above the ground and the legs or supports of these stands placed in cans containing water and oil. However, this procedure did not prove successful, for the ants would carry small particles of trash and sand and would bridge across the water in the cans and thereby gain entrance to the hives, where they would not only carry away the honey stored by the bees but would kill and feed upon the bee larvae. They would then back up into the empty cells of the honey comb with their heads at the entrances and bite off the legs and wings of the bees as they passed over, and otherwise worried and annoyed the bees until they left the hive. During one night these red ants completely cleaned out and destroyed as many as thirty-seven colonies, and during a period of a few weeks something over two hundred colonies of bees were destroyed.

An attempt was made to hunt up the nests of the ants and to destroy them with gasoline, but there were too many so that this remedy was impracticable. “Tanglefoot” was placed around the legs of the stands, but this three inch band of “tanglefoot” was successful only for a short time as the ants soon learned to cross over it.

Corrosive sublimate, mixed with axle grease and painted on the legs of the stands, was tried. This method was at first successful, for the ants would approach, examine it and then scamper off back to the scrub palmettos; they would not linger a moment. But in about two weeks they became used to it and would wade right across it, wet or dry, paying no attention whatever to it. However, this method may be quite successful where the ants in the surrounding neighborhood are less plentiful.

Pans were then filled with oil (distillate) and the legs of the stands placed in the pans. This was satisfactory in so far as the pans and oil were concerned, as no ants succeeded in crossing, but they required constant attention to see that there was always oil in the pans and that no weeds or grass grew against the stands to serve as bridges for the ants. Seven colonies were lost where a single blade of grass came in contact with the stands so as to bridge the pans.

So it seemed that no means could be provided to control the ants as every method used by beekeepers elsewhere had been tried out and failed.

It became apparent that some other scheme must be tried in
order to save the apiary. Luckily, on this island, it is possible to get tide-water at a depth of about three feet, so a moat about two feet wide and four feet deep was dug all around the apiary, and when this ditch was kept clean from trash it gave perfect protection. The ditching, however, did not prove entirely infallible, for four colonies were lost on account of a bridge across the moat made by a sweet-brier vine.

ENTOMOLOGICAL TRAINING AT THE UNIVERSITY OF FLORIDA

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are who are competent to respond to these calls. Federal and state governments offer work of a more or less attractive nature, especially in plant quarantine departments, and those available for this class of work are fewer than the demand. Right here in Florida, for example, the State Plant Board and other agricultural agencies find much difficulty in maintaining a high degree of efficiency in their personnel, and if there is to be any great expansion we will have to go outside of the State to replenish our forces instead of being able to secure good material from our own state. This is not as it should be and reflects upon us.

The University of Florida should be turning out men fit to successfully cope with graduates of other institutions of like nature in their chosen entomological profession, whether it be for agricultural or horticultural work, teaching, advising, policing or any of the related commercial lines. It impresses me that this applies more particularly to those men leaving the College of Agriculture than to any of the other colleges for, after all, Florida is essentially an agricultural and horticultural state. The College of Agriculture should rank favorably with or exceed the great institutions of similar nature in other states. Its entomological work should be materially strengthened. There are vast opportunities here for the development of a Department of Entomology which are almost unparalleled in these United States. Our State College of Agriculture should not only be a Mecca for young students just beginning collegiate work but for advanced students as well. I am only too well aware that to accomplish such a great project will require time, patience and last, but not least, money. However, this is no reason why we should not look to the future, make suitable plans and then try to accomplish them, even though the beginnings be small.

The speaker has been informed that the budget which has