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aber and how much e-whether the bee hat responds as if a and it would do a ether it does more it gains anything ce, and whether it ings that have hap ast life. Now, you e a colony of bees one side the bees retion. It is pretty iat the reason they me place is because ut as young bees, in a you see on sunny young bees fly out around in front of early efforts, when I they carefully obs.Any change in the red by the bees, and lly. If you move a two they will stop

the place where the This is often some e to the beekeeper. ake a few shifts he e slowly so that the w location. These rely that the bee has arns to know by de 3 activity. There is e fact that bees re gs and that is that bees to forget; some h they learn in this ey can be brought to r instance in swam ees has been in t ek to a certain loc swarm and are pa or find a place f atural conditions I longer come back to the new. That 1 or have quit co tion. But even be at we can do espe s showing that the

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have a memory. For instance if a colony of bees is chloroformed until the bees are stup fed and drop to the bottom board, and then they are allowed to revive and become active again, that is, they are chloroformed not suffciently to kill them-if then they are allowed to come to they have forgotten all those things which they learned through previous experience, they can then be moved a foot or two away or any distance from the old place and on flying out they return to the new location and do not return to the place to which they formerly returned and which they learned to know through memory. The same thing can be done by tobacco smoke and by immersing them in water to the point where they are almost dead. These things show us if we can teach an animal to forget certain things we are thereby proving that the animal had something which it had actually remembered.

I want now to show a few slides. You will readily recognize the fact that there are a great many things in bee behavior which cannot be shown on slides or in a picture at all. I thought it would be well to show a few illustrations which I have on the anatomy of the bee so that rou will know a little better the things which it has to do.

(Dr. Phillips then interested and deghted the audience with a large number f excellent slides showing the anatomy f the bee, which he explained as the bdes were shown.)

## NOTES FROM THE GERMAN PAPERS

oney and Wax Amongst the Romans In early times, according to Menzel, e Romans did not pursue an orderly ethod of bee-leeping. They contented emselves with the product of wild es that were quartered in holes in eks or in trees. A great consumption honey or wax was in consequence recorded. Gradually, as the seeking of pleasure and pomp of the Romans reached an ever-increasing degree, the use of wax and honey came into importance, and was employed in the most manifold kinds of ways.

They offered honey to the gods, and gave it as a gift to friends and favorites. It was presented to the guest and never failed at a meal, where it was served in the comb or in liquid form.

In addition to milk, it was used in many kinds of foods. They added it to wine; mead and vinegar were made from it, and even the bodies of the dead were embalmed with it. With honey the baker flavored his cakes. Alone or in conjunction with other things they used it in medicine.

Wax played a part of not less importance, both in the simplest household as also in the demands of luxury and pageantry, in private and public life, and in the cult of the gods.

Moreover, there was a demand for it in taking the impressions for written notices in tablets of wax. The manysided uses that wax was put to in Roman households was also the reason why in their later days the Romans. as no other people, carried on the industry of bee-keeping to such an extent. This extensive use could not be satisfied by the quantity produced at home, and all lands must have contributed to supply the need-be it through commerce, through tribute or rent-namely, those of Greece, Southwest Asia, and North Africa, where the bees flourished, and being well attended to, were in consequence good friends of man.

## The Origin of Honey Dew

According to the theory of Büsgen, honey dew is only the product of the aphis. Prof. Dr. A. Heinz of Agrau states in the *Illustr. Monatset*, the following facts based upon his observations:

Honey dew results on leaves that are strong growing, yet not too old, when