

### THE TIME FOR PUTTING BEES INTO WINTER QUARTERS.

Dr. Mason had put bees into the cellar on Oct. 19, and others later: and there was no particular difference in regard to the amount of stores consumed, or in the wintering of the bees. The average consumption of stores was six or seven pounds per colony.

E. R. Root said that their colonies consumed, on an average, about 12 pounds per colony.

Prof. Cook had done considerable weighing of bees. Out of doors the consumption of stores per colony averaged about 15 pounds: in the cellar, 8 pounds. He knew that bees could winter well in a light cellar, but as a general thing he did not think they would.

Dr. Mason knew that light was injurious. He had had bees continue to leave their hives on account of the light, until the hives were depopulated.

Dr. Miller had had bees remain quiet in the cellar with the sun shining upon the hives. If the bees are uneasy, the light will disturb them; otherwise it probably will not. He did not advise light in a cellar.

Prof. Cook—This may not be exactly the place to talk of hives, but I have noticed that bees have wintered the best in the "New Heddon Hives," and I have wondered if others have noticed it. I have been at a loss to account for this, as it has been without exception. Sometimes I have thought that it might be because the combs were  $1\frac{1}{2}$  an inch above the bottom-board: and again, I have been inclined to attribute it to the fact that the upper story was filled with honey, while the lower one was empty.

Frank A. Eaton had never succeeded in wintering bees in the cellar until he began raising the hives from the bottom-boards.

R. L. Taylor—My experience with the Heddon hive has been similar to that of Prof. Cook's; but I do not attribute it to the same cause as he does. I think that it is caused by the space between the upper and lower cases. As cold weather comes on the cluster contracts. With large combs small clusters of bees become isolated and chilled; they may not be killed outright, but their vitality is impaired. With the Heddon hive the centre of the cluster is where break comes in the frames, and all the bees can readily keep in the cluster.

Dr. Tinker—Mr. Taylor may be stating facts when talking of single-walled hives, but with properly constructed chaff hives his views would be untenable.

R. L. Taylor—In breeding up bees in the spring, I have decidedly the best results with the

new Heddon hive, as compared with the Langstroth-Heddon hive.

### EVENING SESSION.

The first question brought up for discussion was

#### SECTIONS OPEN ON ALL SIDES.

Dr. Tinker led the discussion, and spoke in substance as follows: Open side sections afforded better ventilation. If the surplus apartment is divided into too small apartments the ventilation is deficient, and more time is required for ripening the honey; hence not so much honey is secured. The combs are built out square and true to the edges, and the sections filled full. Italian bees, with closed-side sections, often draw in the comb—make it thinner—as they approach the uprights to the sections, connecting the combs to the uprights by merely a narrow ledge. With open-side sections this is avoided.

A. I. Root had noticed this drawing in of the comb as it approached the sides, but did not think that this was always the case. He recounted the experiments of Mr. A. Rice in the house apiary. He placed small sections inside of ordinary brood-frames, hung them the usual distance apart, and the bees filled them most completely. Later he tried the ordinary sections, wide frames and separators. After trying them he was led to exclaim; "I wish that the little scamps would fill out the sections as well as they used to in the old brood-frames!"

R. L. Taylor asked, why not get rid of the Italians, keep such bees as would fill out the sections whether open-sided or not?

Dr. Tinker admitted that black bees and some hybrids would give no trouble in this direction.

Frank A. Eaton—There is one objection to open-side sections, and that is in crating, the corners catch and tear the combs.

Dr. Miller had produced and shipped thousands and thousands of pounds of comb honey, and the sections were well filled, and bore transportation without loss from breakage, and they were close-sided sections.

#### HOW CAN SAFETY BE SECURED IN THE MATING OF QUEENS.

A. I. Root said that the appearance of hives had much to do with it. King birds sometimes probably catch them. Sometimes queens cannot fly. They leave the hive and cannot get back. To know whether a queen can fly, toss her up in the air.

Prof. Cook had scarcely lost any queens until the present season, when the loss was nearly one-half. Previous to this season the hives had stood in the shade of evergreens. These trees