

ence to the matter, since this controversy began. Let Prof. Cook "rise and explain."

"The sting-trowel theory:" no, Dr., it is not a "scientific pleasantry," and whether true or not I don't believe it will do the juveniles half as much harm as some other things that are taught in Sunday school papers and library books, particularly the pernicious doctrine that very good children are apt to die young. A child of mine once got so possessed with this idea that he did not want to be good, for fear early piety might be the death of him! Don't be alarmed, the "sting trowel theory" won't hurt the boys and girls one bit. The Dr. cannot remember that any proof of this theory has ever been brought forward, and I am sure I cannot remember any proof having been adduced against it. But there has been considerable fun made of it. I do not expect to convince the Dr. by any proof that I am able to furnish. I can only say that in watching the bees when capping honey, I have been led to the conclusion that the sting and its accessories, especially the little brushes, one on each side of the dart, are used in the finishing-off process. We know that, somewhere toward the close of the operation, they inject an infinitesimal quantity of poison into the honey, which gives it its keeping qualities. Possibly this small modicum of poison is incorporated with the capping wax. It has been demonstrated that extracted honey does not attain full ripeness until it is capped, and that it does not keep well unless the bees are permitted to finish their job. I shall be very glad if the Dr. or anybody else will show that my theory is illusory. Meantime it is a very harmless one, and will do no harm either to young or old.

WM. F. CLARKE.

St. Thomas, Feb. 23, 1888.

For the Canadian Bee Journal

The Temperature of Bees for Outdoor Wintering.

IN my neighborhood we have had some very cold weather this winter, and thinking on account of the extreme cold that colonies of bees wintered out-doors on their summer stands, must be in a very chilly state, I tested the matter with a thermometer. I was agreeably surprised to find the temperature of a colony of bees in a hive registered away up to the fifties. I procured the temperature from different hives on different occasions. I put the thermometer under the chaff cushions over the cluster of bees. There was one thickness of 8c. per yard cotton between the bees and thermometer. The following is the result of the test:

On the morning of Jan. 21, 16° below zero in the open air, in the hive 51° above.

Jan. 25, 20° above zero, 56° in the hive.

Jan. 27, 8° below zero, 55° in the hive.

Feb. 10, 13° below zero; tested two hives this morning, one registered 52° and the other 46°.

Now what I want to know is, what do those colonies register over the cluster or in the cluster, that are wintering in the cellar?

R. T. WOOD.

Thistle town, Ont., Feb. 13, 1888.

Why did you not put a thermometer right down among the bees, and get the temperature of the cluster? We have taken it frequently in this way, but just now we forget the exact degree, but think it ranged from 75° to 90°, according to the size, strength and compactness of cluster. There are very cheap thermometers to be had for this purpose. Probably your doctor would loan you his—the kind used for taking the temperature of his patients. This little glass tube, about the size of a pencil, can be slid down carefully between the combs in the center of the cluster and in a few minutes the ordinary temperature of the cluster can be ascertained. The experiment will not endanger your colony to any appreciable extent and it is worth trying.

FOR THE CANADIAN BEE JOURNAL.

Bees Flying a Long Distance for Stores.

IN *Gleanings*, Nov. 15, '87, page 853, D. M. Edwards says, "I see in a late number of *Gleanings* that some of the fraternity do not think bees will fly very far for stores. I have had some experience in that line and will give it for what it is worth. In the first place, my apiary and the Pafford & Edwards apiary are about eight miles apart, and the bees always work as strong half way between the two apiaries as they do near home. These two apiaries were started in 1883 with black bees, and have been Italianised since, and when we knew there were no other Italians in the country, we have found them working five miles from home."

The point he seems to be trying to make is, that Italian bees will do well, even when obliged to fly from two to five miles for stores. This may be so in Texas, but they would starve here in Michigan if obliged to go that distance. I have hunted bees successfully for a number of years and have never yet found them more than three miles from their home, and seldom more than half that distance; and I have several times hunted within two or three miles of large apiaries, without getting bees from the apiary,