

of all flesh before spring, the "cause of mortality" cannot be laid at his door; and he can then rest easy in his conscience for the true philosopher always gracefully submits to the inevitable.

S. COUNTELL, LINDSAY, ONT.—The chief cause of bees dying in winter is their inability to evaporate the water from their bodies. This inability to evaporate may be caused by a lack of heat sufficient to render the air permeating the cluster dry enough to absorb their moisture, or by the extreme humidity of the air surrounding the cluster, or by both. The lowest temperature of the cluster which may be borne with safety is an important matter, but I am not aware that it has been accurately determined. If the moist air surrounding the cluster is not gradually carried off it has the effect of cooling the cluster because water is a better conductor of heat than air and the more water air contains the faster a warm body in contact with it will be cooled by conduction. It is safest to have good strong stocks in the fall covered with heavy quilts of wool to keep the bees cosy and comfortable. If they are wintered outside the bees should be packed in such a way that the packing will be found to be dust dry in early spring. A plentiful supply of food is of course assumed and for this purpose nothing is better than their natural stores, honey and pollen.

R. MCKNIGHT, OWEN SOUND.—When bees are properly prepared for winter and put away in a properly prepared indoor repository, the chief cause of mortality is old age, unless the pollen theory has more mortality in it than I believe it to have. When the above conditions are complied with there is no more risk of loss among bees in winter than there is among other stock put into winter quarters in good condition and kept in favorable circumstances. It is appointed unto all men and all sublunary creatures once to die—bees not excepted—the natural life of some species is longer than that of others. Bees are among the short lived of animated things and some of them will die during the winter, no matter what means are employed to prolong their lives, but if "properly prepared" and kept in properly arranged bee houses they will generally live out their allotted days—under such conditions there is little fear of mortality from causes other than that of old age. In outdoor wintering it may be difficult. The vicissitudes to be endured consequent upon climatic changes and other causes may induce epidemic diseases. Sudden extremes of temperature may induce dysentery, from which bees become debilitated and die. Those kept in single-walled hives, and wintered on their summer

stands suffer most from these extremes and are consequently more liable to disease and death. This trouble is combatted to some extent by the use of chaff hives or some substitute, but all these are more or less expensive so that he who intends to make bee-keeping a business will find it cheapest in the end to use single walled hives and build a properly constructed bee-house.

BY THE EDITOR.—If the stores used are good and the colonies are placed in a damp repository, the stores will gradually become poor by the incorporation of moisture. If the bees cover all the combs and are able to keep up enough heat in the hive to prevent the condensation of moisture and pass it off, they can then get rid of the moisture in their bodies, but if they are not able to do so more or less trouble will follow. We consider cold and moisture two of the principal causes of winter losses. Moisture does not affect a colony injuriously if it is sufficiently strong to keep up the amount of heat necessary to evaporate all the excess of moisture from their bodies and from the combs.

SUNDRY SELECTIONS.

WINTER LOSSES IN HALDIMAND.

Canoga Advocate.—We are sorry to learn that the beekeepers of this and surrounding counties have met with heavy losses in wintering, some having lost every colony, others nearly all. A few however, we are pleased to learn, have been more fortunate, and have lost comparatively few. So far as we have been able to learn, the loss in this county will be from 50 to 75 per cent.

M. EMIGH, HOLBROOK.—Here is my report for the past winter. On November 11 I set 180 colonies in my bee cellar. Yesterday (April 21) I took them out and there were just two dead colonies in the lot. I tried several experiments in preparing for winter last fall, and if agreeable to you I will try to give a report to your readers during the coming season. In the fall of 1883 I put in 150 colonies and only lost one. In the fall of 1882 I set in 150 and took out 150 alive. I have about come to the conclusion that