condition is the better for perfect wintering stillness or humming? I champion stillness.

Will you kindly tell us how your hives were ventilated on that November evening, to which you refer and found your bees humming?

I suspect that your hives were not sufficiently or rather properly ventilated, and that they were gently fanning to drive the foul air out of their hives, or it may be that the draught through the cellar made them uncomfortable. No one can decide without knowing all the conditions, but I cannot think for one moment, that their contentment played any part at all in producing that hum But the very reverse.

In closing I will say that when hives are set in and ventilated for winter; no draught should be allowed through the cellar, it disturbs the bees and usually makes them hum. S. T. PETTIT.

Belmont, Ont, Jan. 1894.

P. S.—When I got home from Lindsay O. B. A. meeting, last week the mercury in my bee cellar stood 41°. I took my cap and coat off and moved about in the open air, until the insensible perspiration was pretty well suspended and I was just on the point of taking cold, then I took some pepperment candy into my mouth and a lighted candle in my hand (coal oil is very offensive to bees), and slipped into my bee cellar to make observations. I found a part of one row near the stone wall just a little noisy, but most of the bees were so far as I could detect, as Eliza Kellogg would put it, "as still as the breast when the spirit has departed" and I was happy.

S. T. P.

Underground Cellars.

BEES DIARRHEA, ETC.

After I had kept bees four or five years and tried to winter them in all kinds of cellars of various temperatures I bought a building and under it built a cellar 26x38 feet, inside the walls. The top of this cellar came even with the outside ground. This cellar was double-walled so that vegetables in it were safe from frost.

In the centre I began to dig again and built another cellar about 7x30 feet. Two-foot walls of solid masonry were put in and joists laid over the top and it was lathed and plastered on the under side of the joists. On the top of the joists it was floored and 6 or 8 inches of sawdust spread on the top of the flooring. This was a cellar within a cellar. I sought to obtain in this cellar the natural temperature of the earth. Then the cellar was divided into two apartments, separated by two doors 3 feet apart, one apartment was arranged to accommodate the hives and the other contained a stove to assist the earth in keeping up the required temperature and also ventilation.

The natural temperature of the earth is supposed to be between 44 and 45 degrees. One hundred and more colonies wintering in this cellar failed to raise this temperature two degrees or perhaps not one, in fact 115 colonies went through the winter in this cellar and the temperature did not go below 43 nor above 44 degrees from November 20th to April 15th. Not a variation of one degree in five months. I experimented with all kinds of ventilation and found that the bees would always winter when there was enough food and the covers were not sealed. An unsealed hive of bees in this cellar were as safe as a dollar note in a United States vault. But the trouble came in the spring in the bees being short lived. I believe the ventilation of the hives necessary to prevent excessive accumulation of moisture caused the bees to be cold and uneasy and keep up a constant activity that helped to wear them out and shorten their lives. If this was not the trouble then it may be that the air of the cellar, was so impure that their lives were shortened from a lack of oxygen.

The colonies did not dwindle out entirely but they got so weak that it was hard work to build them up in time for the clover harvest. After trying this cellar two or three winters and experimenting with higher temperature the better the bees stood the spring. In order to keep a temperature of 47 to 50 degrees it was necessary to keep fire in the stove nearly all winter and I came to the conclusion that it was cheaper and less labor in a cellar that was affected by the weather outside, than in the cellar where during warm spells the temperature remained at 44°.

In the summer of 1885, (I think it was in the month of August) during a long drizzling rain storm a man returned from the timber and told me that a bee-tree had been cut a day or two before, the honey all taken and the bees left to starve. Every comb had been removed and a piece of new comb the size of my hand had been built and brood started in it. The hollow was turned upward about like a "wet moon (!)" so the bees and comb were at the mercy of the storm. On first examination I noticed the same sour smell that is always present with a diseased colony in the cellar. They