

and usually only occur at the beginning of an industry before competition has entered; after this a tireless and relentless struggle for existence must be looked for, and intelligent, well directed methods must be adopted, or failure is inevitable. Bee-keeping may be said to have passed the primitive stage, and is now an industry in which more or less competition will prevail, and success will only attend those who strive to overcome all difficulties. No, every point of advantage and adopt those methods which have been approved by experience and experiment. Much loose talk is indulged in by Bee-keepers regarding the stability of Bee-keeping as an occupation owing to the product honey being used as a luxury. Oranges, Bananas, Rasins, and other products too numerous to mention are used by people of northern latitudes as luxuries, and the increase of importation of those articles is greater than the increase of population. There appears no valid reason why the consumption of Honey should not conform to the same law. During the last decade bee-keepers as a class, have not been as successful as we could wish. The last five seasons have been noted for the scanty flow of nectar; the pecuniary returns have been reduced to a minimum; the Bees have consequently been neglected and in that part of the Country called the Northern States, fewer number of colonies than there were 25 years ago. The are probably a greater number of specialities in bee-keeping than formerly, but among the farming community the number of colonies seem to be decreasing every year.

The fact that great numbers of colonies perish nearly every winter in the northern States has induced some writers to assume that Bees are not fitted or intended by nature to live in latitudes having almost Arctic severity; that their natural home is in the sunny south where the northern blizzard and snow-banks are unknown. We have localities no doubt where the soil is so barren that it will not support a nectar yielding flora, in such places the bees could not thrive whether the winters are cold or warm. Insects are very much like other animals in this respect they flourish wherever they can find suitable food in sufficient quantity for their needs. Even within the Arctic zone where it is popularly supposed "cold desolation reigns supreme" animal life is wonderfully prolific. These are mainly representatives of oil and fur bearing species, but members of the *Articulata* are also present, for we read that Lieut. Peary saw a humble Bee in Northern Greenland and found the labor of insects at the edge of one of the largest glaciers of

that abode of snow and ice. Capt. Peary the famous English navigator also found six species of insects on the island Melville, a point about 2000 miles due north of the northern boundary of Montana, Russia a land proverbial for its cold winters produces large quantities of honey and wax.

When we consider these facts, it seems absurd to suppose that that the magnificent tract of Country extending from Maine to the Rockies is not capable of supporting bees. We have here a country upon which nature has bestowed with a lavish hand a wealth of fertile soil and luxuriant vegetation which equal the most favored regions the globe. In view of the favorable conditions present for the support of animal life, it seems fair to presume that the winter mortality among bees in the northern United States is the result of crude and improper methods of protection and not of climate conditions. The cause of winter losses has been discussed by Bee-keepers from almost every conceivable standpoint, cold, impure air, moisture, pollen, lack of water, bacteria, have each in turn been held responsible for the trouble and yet the bee fraternity is not a unit in explaining the matter. This is not surprising, for the method of reasoning adopted has been mostly of the pre Baconian era of philosophy when causes were assured and facts were fitted in as found convenient. This method works well until we come in contact with a fact that is one of the stubborn kind; one that will not fit, no matter how it is turned or twisted, it will not even do for an exception to the general rule, but is continually intruding at every point and there is nothing for us to do but to assume another cause which in turn is overthrown by some other obstreperous phenomenon. The results of such a method of investigation are utterly unreliable as may be illustrated by the following incident.

Some years ago a gentleman who had lost nearly his whole apiary, wrote an article in which it was urged with considerable zeal, that winter losses were caused by the bees gathering and storing the juice of fruits which in turn caused the store of honey to ferment, thus naturally producing disease. This view had been so ably held by the gentleman that I resolved to test the matter. I therefore extracted all the honey from several hives and fed the bees a mixture of honey and cider, nine parts by measure of the former and one of the latter. Now if those bees had had any respect for human logic, they would have promptly died during the winter, but they did not. The fact is the case failed to fit when put to the test. Other experiments when put to the test