

in the open air before, and I was always under the impression that their so-called flight was nothing more than floating away on a line of web borne by the wind horizontally. A perpendicular ascent, or an ascent in a perfectly calm atmosphere, seemed out of the question. It now occurred to me to ascertain whether they are capable of accomplishing their method of journeying in the confined and unmoving air of a room. I placed my finger in its path, and in a moment it had crept upon it, and as I held it close before me it ran, as they always do, to the highest point, assumed the attitude usual with them before their flight, and rose slowly in a straight line towards the ceiling. As the sun shone through the window, the long thread at the end of which it hung was quite visible. The dark little insect at the end of the flashing line of brightness, ascending without an effort into the air, was a marvellous object. The flight must be exactly like a balloon ascent. The thread which the insect emits is lighter than the atmosphere, and floats upwards, bearing its tiny aeronaut with it. I should think the first part of this thread must be lighter than that to which the spider is attached, as I could see the line extending upwards quite perpendicularly.—W. A. O'CONNOR, in *Science Gossip*.

DESTRUCTION OF THE WALSH CABINET IN THE CHICAGO FIRE.—We have no reason to suppose that the great Chicago fire consumed any considerable number of noxious insects, with the exception of that very familiar and domestic species known, in scientific language, as the *Cimex lectularius*. If these had been the only insects destroyed, resignation would have been an easy virtue. But, as if it were ordained that no kind of interest should escape grief and loss from that great calamity, so the science of entomology was put under heavy contribution by the destruction, not only of many small amateur collections of insects, but also by the ruin of the large collection belonging to the Chicago Academy of Science, and over and above all, in value and importance, was the admirable cabinet of insects purchased by the State from the heirs of the late Benj. D. Walsh, of Rock Island, and which had been deposited in the Academy for safe keeping. The value of this collection consisted not only in the large number of species represented, but still more in the scientific accuracy with which they were labelled and classified. About a tenth part of this cabinet, which happened to be at the residence of the writer, consisting mostly of duplicates of Coleoptera and Lepidoptera, which had been set aside for the Industrial University, is all that is left of this famous Cabinet. When we consider the long years of patient toil and research of which this cabinet was the result, the thought of its irrevocable destruction becomes too painful to be dwelt upon, especially by the professed entomologist, to whom this cabinet was invaluable for purposes of reference.—*Prairie Farmer*.

Apiary.

A Review of Bee Culture During the Past Season.

The spring of 1871 was very disastrous to bees, and a large number of colonies died throughout the country. The warm weather in March induced keepers to set out their bees; but the weather was too cool for breeding, yet warm enough for bees to fly out and search for honey and pollen. The consequence was, colonies became depopulated and perished; many persons lost eighty per cent. of their stock. Then, again, the dry weather in some parts greatly affected the stocks that survived, causing swarms to issue so late in the season that they were unable to secure enough honey for winter use, and therefore had to be taken up or fed; and as but few attended to feeding, the fall found in such sections the number of colonies even less than in the fall of 1870.

In other sections, where the dry weather did not affect the honey harvest, the stocks that survived came on well, and more than made up the loss through depopulation in the spring. Taking the country throughout, I think it would be safe to say that an average amount of honey was taken.

ITALIAN BEES.

The Italian bees still retain their reputation as good honey gatherers, and the demand was fully equal to that in 1870, while the demand for queens was even more than we could supply. Some have written to say that they find it difficult to keep the Italians pure. This difficulty will become less every year, as the Italians are fast superseding the common bees; and I may just say here that there is no great object for bee-keepers to keep them entirely pure, unless they wish to raise queens for sale, as the hybrids are equally good honey gatherers with the pure Italians. There has been much controversy among the bee-keepers in the United States concerning the purity of drones bred by pure Italian queens which mate with common drones. The question still remains unsettled in the minds of many.

ARTIFICIAL IMPREGNATION.

The method of controlling impregnation, said to have been discovered by Mr. Ellen S. Tupper, Brighton, Iowa, is still doubted by many, and as yet has not worked the revolution in bee culture that was anticipated. Even if there have been cases of artificial impregnation, the chances for failure attending the various plans suggested are fully equal to those of natural impregnation by the flying out of the queen to meet the drones.

FOUL BROOD.

Foul brood, that dreadful disease, has at last made its appearance in several parts of Canada. Up to last year, so far as I have been able to learn, only one or two isolated

cases were known. When it first came under my notice, I urged the utter destruction of all colonies affected; but it was not done. During last year it has appeared in several places, and in one or two cases in a very aggravated form. I trust that those bee-keepers who have stocks affected will take every precaution that it does not spread; and this is very difficult, as robber bees will carry the affected honey from one apiary to another. The appearance of this disorder, and its increase in Canada, is a matter of deep regret. All other diseases or difficulties attending bee culture sink into insignificance compared with it.

HONEY EXTRACTORS.

Extracting honey by the use of the machine called "honey extractor" has been practised during the past year to a very considerable extent in the United States, and somewhat in Canada. There is no longer any question as to its advantages for obtaining honey where frame hives are used; yet care must be taken that the bees are not robbed, and, as a rule, it is not safe to take honey with the honey extractor after the white clover honey harvest is over.

FRAME HIVES.

The demand for frame hives is steadily on the increase, and in consequence many almost worthless hives are thrown on the market by parties sanguine of reaping a fortune by hive making. Good frame hives are almost a necessity, but poor ones should at all times be rejected. As bee-keepers become more acquainted with the nature and habits of the bees, the more readily will they see the necessity of frame hives, and the better will they be prepared to judge of the different patterns offered for sale.

Several new works have been promised, and were expected to appear last year, but have been unavoidably delayed. One by Rev. L. L. Langstroth, which sickness prevented being issued; also my own dollar work, which I fully expected to issue last year, has, like others, been laid on the shelf, but will appear as soon as possible, when due notice will be given in this journal.

The advancement in bee culture, as a whole, has, during the past year, been fully equal to that of any previous year, with a steadily increasing interest.

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Nothing is wanting but good hives, good pasture, cleanliness, and attention to insure a rich reward to those who engage in bee culture; but training is quite as necessary to the full comprehension of the occupation, as it is to the trade of a carpenter or shoemaker.

GERMAN BEE-KEEPERS' CONVENTION.—The seventeenth annual meeting of German Bee-keepers was held in the city of Kiel, in Holstein, on the 10th of September, and the three following days. The principal subjects of discussion were Living Bees, Bee Hives, Implements of Bee-culture, Honey, &c. Salzburg, in Bavaria, was chosen as the place of meeting in 1872. The city of Halle was named as a desirable place for the meeting of 1873.