

WINTERING BEES IN CANADA

BY

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INTRODUCTION.

This bulletin discusses a vital factor in the building up of the beekeeping industry in Canada—the preservation of the bees during the winter. There die in Canada every winter large numbers of colonies which a little care and forethought would have saved. Many more are seriously weakened, also for the want of timely and intelligent preparation. It is far better to exercise this care than to find empty and depleted hives in the spring, and make the bees that survive spend the best part of the summer filling them again. The remarkably high yields of honey in many places in Canada, and the good price that honey now brings, offer a strong financial inducement to prepare the bees for winter with the most intelligent care. To put off the preparation of the bees for the winter until cold weather has arrived is to court disaster, because exposing the bees to cold early in winter and disturbing them during cold weather are injurious.

The long and cold winter in many parts of Canada is not so hard on the bees as might be imagined, and in some respects wintering is easier than in a mild country like England, or in the Southern States. This is because the bees rest more completely during the winter in Canada. Few conditions are more trying to bees than those encountered in the British Isles during February, March and April, when they wear themselves out and die by hundreds in raising a little brood and flying out to visit the early flowers in the chilly changeable weather. The same conditions occur on Vancouver Island. In most parts of Canada, however, the winter rest continues until some time in April. Then come quickly the long warm days; the bees breed up fast, and the colony becomes strong in a remarkably short time.

We have, however, learned several things about wintering bees in Canada, the neglect of any one of which will bring ruin and death to the colony. One of the most important of these requirements is strong that is to say, populous colonies, consisting mainly of young bees; another is an abundant supply of wholesome stores in the combs; and a third is adequate protection from the cold. The successful wintering of bees in Canada depends mainly upon these three points.

Bees do not hibernate in the true sense. When it grows cold, they form a compact cluster, and the bees in the heart of the cluster prevent the escape of heat by muscular activity which is derived from the consumption of food. The bees on the outside of the cluster act as insulators to prevent the escape of the heat, and are warmed themselves. Phillips has shown that bees begin to cluster when the temperature in the hive falls to 57° F. The temperature of the air inside the hive during winter should therefore be below, but not far below 57 degrees.

As a result of the consumption of food, waste matter collects in the intestine. Healthy bees discharge this waste matter only during flight, but in many parts of Canada the winter is too cold for bees to fly for four, five, or even six months. This long period makes it of the greatest importance that the bees be well protected from the cold that they will not need to consume much food, also that the food be perfectly wholesome and as free as possible from indigestible matter. If the colony is small,