

or without bottom as may be desired, placed inside the old Jones hives, thus leaving a space from 2 to 3 inches clear round about the nucleus boxes, not forgetting cover for entrance between outer and inner hives. This space is filled with cork or dry sawdust, I prefer cork as it is the better absorbent but have some packed with each; if cork cannot be procured I would advocate the use of dry cedar to that of sawdust. I may here state that I have made arrangements for a supply of cork sawdust for next season at a reasonable rate. I place clean quilts on the tops of nucleus using the half stories of the Jones hive with cotton tacked on lower sides and two laths across the same to prevent the cotton from sagging, fill same with sawdust and place on top, the whole fitting snugly together. Having my hives ready I proceed to prepare the bees. Never being bothered with swarming my colonies are pretty strong as you may suppose when, during the honey flow they have from 22 to 25 frames and the queen doing her utmost to keep up the full complement of bees, not satisfied with the lower story in which to work she sometimes pays a visit to the upper story and half fills a few frames about the centre with eggs. I do not use perforated zinc, think it hurtful and a hindrance to bees with well filled sacs to pass through. I use all worker comb for upper story. It is no loss to a bee-keeper to have a few frames with a little brood and honey to help a weak colony or form a nucleus. I formerly placed drone comb in the upper story but found the queen had a rather inordinate desire for laying eggs in drone cells, hence the change. When the honey flow begins I commence to divide up these large colonies, find a place for the brood in the upper story. I have one colony set apart for queen raising, all are fertile and ready for the new colonies. I make as even a division as possible but with such a crowd of field workers it is hard to keep the balance even, I take off the upper story and divide the brood adding what may be in the upper story, setting the frames well apart, say 8 or 9 frames. If there is a fall flow the bees will bulge them considerably and as the season advances and the brood hatches out, shorten up by using the division board until they are on the desired number of frames, then place in winter hives allowing them 25 lbs. or more of honey to winter upon also some pollen. They are now ready for winter, either to be left on summer stands or taken into the cellar. If taken in take off the half story and sawdust, put cloth on and keep at a temperature of not less than 40°, towards spring, say about middle of March, let the temperature rise to 60° this will encourage brood raising. Hives thus packed

will resist the cold better than a single walled hive and brood rearing will not be checked by chilly nights. Towards the last of April they should be set out in order to catch the soft Maple bloom which is the first they have in this country, not the willow as I see mentioned by some. By the first week in May the hive will be crowded with bees and brood and ready to be transferred into their summer hives; by the last week in May you may look for swarming, that is if the season is favourable. To prevent swarming I watch the strongest colonies and as soon as I observe queen cells being formed and 12 frames in the hive I at once put on the upper stories with 10 or 12 frames as the strength of colony requires, lowering the frames until they almost touch the frames in the brood chamber, the closer the better; the bees will soon find their way to clean up and make any repairs necessary to placing honey in upper story. The only stimulant I give them is a little extra heat towards the end of March and April regulating the temperature inside with that outside. Some days in March and April I have seen outside temperature rise to over 70° while that of the cellar would not be over 46° unless artificially heated. I have a large number of combs containing honey and pollen taken from the hives in the fall these I replace in the spring. I leave all the pollen I can for wintering providing there is plenty of wholesome honey along with it, and bees placed in a dry cellar with a temperature from 40° to 60°. The hives with nucleus boxes remain packed, I have them winter and summer, and find in them a great convenience for forming nuclei after the honey flow is over.

My method of taking honey has already appeared in the JOURNAL and need scarcely be mentioned except that I have practised this method for four years with success, extracting only from the upper story and only when the honey is capped, frames containing from 8 to 14 lbs. of honey each. I calculate on from 50 to 100 lbs. per colony each time the extractor is used. I never disturb my bees unnecessarily, if there is a flow from fruit blossom I wait till the harvest is gathered and ripened before extracting. The two past seasons I have extracted but twice at the end of Clover and Linden flow. This year Linden yielded very little but Burdock and Thistle made up the deficiency to a great extent.

My apiary is nicely sheltered being in a valley of the western tributary of the Don, sheltered by bush and high banks on all sides but south east. I winter in cellar and summer stands and so far have been successful.

JNO. MCARTHUR.

Toronto, Feb. 2nd, 1887.