

## BEEKEEPING UNDER THE ARCH

This is NOT a how to, but more of a what/when to do thing. I used paragraphs rather than point form to give an idea of a continuum, so a specific date to do something is not as important as the bees needs as prescribed by the weather.

Bill Turner, January, 2011

Keeping bees within the range of the chinook has effects throughout the year. The weather is everything and the management you practice will be dependent on it. Maybe the best way to look at what needs to be done is to look at the four seasons in general, with the months acting as guidelines. Hopefully this would give some idea what may have to be done with a degree of latitude. The weather being everything.

The following 6 points can give a good starting place to consider when inspecting the hives.

Queen	Food: honey and pollen	Protection
Brood	Disease Treatment	Equipment

**FALL:** Truly this is the start of the northern beekeeper's season if they wish to be beekeeping in the spring. Take heart in the fact some do not make it. If you meet their fall needs, the number of hives lost should be small and be sure to feel good when they all make it! It is a good idea to unite weak hives to ensure the survival of one, rather than losing two. Weather at this time is so variable year-to-year that good flight times one year may not apply the following year. To err on the side of caution with your management plans might help the bees to finalize their winter preparations.

### September

You want a young queen. You do not have to see her, but there should still be large amounts of brood and eggs as these will be your winter bees. Older queens tend to have less eggs and mainly older brood. The honey crop is off and there may be a chance for a nectar flow still, but in most years, the pollen and nectar which comes in is best left to the bees. They will use it to fill the upper super. This will see them move to lower supers.

Varroa mites and the Nosema twins are likely present, so their treatment should be considered. Even if you don't treat, a good supply of sugar syrup and pollen patties will ensure adequate food supplies for winter. Bees that have to forage live a shortened life and do not make good winter bees. With cooler nights the bees will draw away from the entrance and mice looking for better homes can enter, so get the hive reducers on early. Mice guards help too. Other large cracks may need to to be closed to avoid robbing by other bees and wasps. Use masking tape as duct tape removes paint. Hives should be tilted forward to ensure any moisture produced runs out.

## October

The queen will curtail most egg-laying this month. The top super should be virtually full of honey with a small amount of open comb at the bottom of the centre frames as bees need a place to congregate and will not move on to fully packed frames during extreme cold. Towards the end of the month the reducer should be turned over so dead bees may fall to the bottom and not obstruct the entrance. Flipping the inner cover will give the bees greater space to cluster, allowing them to retain heat better and access more frames later in the New Year. Placing an empty super above with some insulation in it will also help to retain heat and aid moisture laden air to escape by the upper exit. Dry sugar can be placed on the inner cover as emergency food at this time.

## November

At this time a decision needs to be made on how much winter wrap is required. If overdone, the bees may not realize a cleansing flight is possible during a short chinook. A tar paper wrap will allow for a heat buildup when the sun is out and act as a wind break. Inspections at this time may be required if skunks or bears are a problem. On occasion a moose can upset them too.

**WINTER:** This should be a time of little activity if the bees were prepared well in the fall. Chinooks and bright sunny days with little wind and as low as -10C can see some fliers out for their cleansing flight. Some will become chilled and not make it back to the hive. Others become disorganized by the reflected polarized light off the snow that they fly upside down and crash land. Although both groups of bees are lost, they are the ones carrying the waste products and possibly disease, so it may be best that they didn't return to the hive. Numerous brown spotting indicates cleansing flights have occurred. As the days lengthen the queen will begin laying a small patch of brood replacing some of those lost. Normally, little food is consumed at this time, but this will change.

## December

If you feel compelled to inspect them during this month chose your day carefully. Sunny with no wind would be best. The shorter the time you are in the hive the better. If there are few bees on the top frames and capped honey is seen, everything is probably good. Lifting the back of the hive will give some idea how much food is present. On the other hand, the presence of large numbers of bees in the upper box may require closer inspection. Smoking or gently separating the central frames will allow you to check for capped stores. Also some clusters will move to one side of the hive. Either way you want your cluster to be centered with stores on both sides of the cluster.

## January

This month can see an increase in brood to a point that food stores become critical. A hive worth trying to save may be helped by putting dry sugar on the inner cover around the opening. Equipment can be repaired at this time while new supplies can be ordered. Bee orders for spring should be concluded at this time.

## February

The cluster is usually well into the top super by now. Depending on the weather there will likely be a well defined brood nest. Feeding may become an issue. Dry sugar does not encourage brood rearing, but liquid will. The best pollen stores are likely in the bottom super and because of the cold the bees seem reluctant to go there. Patties placed above the cluster may help maintain colony health without increasing brood rearing. Stay warm and get your equipment ready.

**SPRING:** With the warmth and increased daylight, this season brings on big changes in the hive. Brood rearing and food consumption will rise throughout this time. Winter wraps should be left on the hives as long as possible, at least until they become too great an inconvenience.

## March

If the weather cooperates, this is a time for some serious hive work. The bees will be in the upper super. Wraps need to be removed to access bottom supers. Bottom boards can be cleaned of bees. Propolis can be scraped from the shoulder of frames in these bottom supers so they are easier to work for the rest of the year. Burr comb on the top and bottoms of frames can also be removed. Be sure to keep the super that the bees are in as the upper super. This will keep the brood heat and heat of the cluster together. Empty supers placed above the bees just allow this heat to rise and be lost. Weather can play havoc with continuous brood laying at this time. Pollen patties ensure a continuous supply of protein and are best utilized when placed directly above the brood area. Feeding syrup at this time may be required too. Keep in mind that if you start with syrup, you must continue until a natural supply is available.

If the weather doesn't cooperate, it is still a good time to remove the bulk of the dead bees on the bottom board. Do this by removing the entrance reducer and using a long piece of wood. Do replace the reducer.

## April

The willows and aspen will be in bloom around this time. Both yield pollen, but only the willows yield any amount of nectar. A heavy frost or spring storm can interrupt or prevent this flow, so be prepared to help out. If the queen needs extra room for eggs she will move to the lower supers.

**Queen activity should be checked closely at this time.** Worker brood is the rule. Drone brood indicates a failing queen. The presence of drones at this time also means a queen needs to be replaced. Early replacement queens are available. What medications you may need this spring should be considered at this time. Dead hives should be cleaned of bees and sealed to prevent robbing. That extra equipment you have not assembled yet; this might be the time.

## May

If the weather cooperates, dandelions and caragana will be great sources of food this month. At some point, the bottom super should be pulled and placed above the present upper super. This will supply an increased area for an upper brood nest and also a measure of swarm control. Any honey and pollen frames from below should be placed in the new upper super.

Be sure to leave an open frame or two in the center for the bees to cluster on, as they can be reluctant to move on to full frames of capped honey. As the nights become much warmer the hive wraps can come off. About this time you might wish to equalize colony strengths by shaking bees off and moving brood frames from strong hives to weaker hives. Make sure you protect your queen(s)!

**SUMMER:** Feeding can stop if enough nectar is coming in. Early brood production should reach maximum at this time to ensure enough foragers to bring in the honey crop. Brood amounts and patterns need to be monitored, as older queens often fail at this time. Hive space can be at premium at this time. You want to watch for swarm cells and take swarm prevention measures if required. This can be a very dry time and may require you to supply water if close natural sources dry up.

## June

Queens can be under stress at this point because they are laying to their maximum. Hives that may have seemed slow on an earlier inspection can seem to explode by the next. Swarm prevention measures must be taken, but be careful to avoid splitting the brood too much as a cool night can result in chilled brood. Honey supers may be called for at this time for the storage of nectar. This could be the start of your honey crop. Congestion of the brood area needs to be avoided. Extra brood laying frames may also be called for.

If excluders are to be used you might wish to bait the bees to pass through them by placing a frame of developing (capped or almost capped) brood above it. If excluders are not used, be sure the super below the honey super(s) has many empty cells for the queen to lay her eggs in. This can help, but queens do like honey supers to lay in, particularly drone cells.

## July

The main nectar flow will begin this month. You must ensure there are ample honey supers on the hive. Remember that nectar requires a great deal of room to store and be ripened. Fall replacement queens should be available or you may wish to raise your own. Either way you should be thinking that a queen going into her second winter is a liability. A young queen will lay longer, ensuring more winter bees and add to cohesiveness of the hive with larger amounts of pheromones.

**If you are taking off honey, cleanliness should be everything.** I don't know anyone who likes bees' knees on their toast. Everything now depends on the weather now. Windy days can leave the bees somewhat testy. It also lessens the amount of nectar in the flowers. Rainy periods remove nectar and of course, the bees can't fly. But when things are right and the yard hums with activity, it must be heaven on earth.

**Did you check for swarm cells before you added more honey supers?** Also, how is the brood pattern holding up? Some queens curtail egg-laying if the brood area is becoming honeybound, so some frame rearrangement may be necessary to give her room to lay.

## August

I think this is the time the funs ends. Honey-filled supers are heavy, but think of it all done up in containers ready to be sampled. Once the flow stops, be careful when examining the hives that robbing doesn't start. This a great time to requeen. A young queen who has had her egg-laying somewhat restricted will take over a full sized hive and go a long way to ensuring your wintering success.

Feeding and medication should begin now. Is the hive in good enough shape to survive the winter? Does the location supply protection from the northwest winds? Can you orient hive openings to the southeast to maximize earlier warmth? Will cold air drain away from the hives (higher ground, not a valley)? Does this feel like you have been here before? It should because it is the start of a new bee year. Good luck!