## Northern Virginia Honeybee Annual Cycle

## THE ANNUAL BEEKEEPING CYCLE IN NORTHERN VIRGINIA

#### Purpose

The purpose of this document is to distill the locally-oriented wisdom and experience of a number of beekeepers who have worked with honeybees in Northern Virginia, and to share that experience in the form of a calendar. The contributors to this description of the annual cycle of beekeeping speak in common, day-to-day terminology, and do not use technical language except when it is essential to accuracy. Where there is a consensus among experienced beekeepers, a uniform approach is described. Where there is no consensus, different approaches are described. Candid disagreement must be expected on some issues.

#### How to Use This Calendar

This calendar is a suggested checklist of events in the beekeeper's year. Weather conditions, hive locations, hive equipment, and the type of bees will influence actions and events throughout the year. (For example, a beeyard that is 400 feet higher than the Potomac River may have later and earlier frosts, and may have a weather pattern that delays the bloom and nectar cycle by 10 days, as compared to the tidal Potomac shores.) Each month in the calendar includes an overview of what will probably take place in the beehives that month. For each month, there are also suggestions on various tasks the beekeeper should perform in that month, and other items deemed useful.

The reader should use the calendar in the same fashion that he/she uses a long-term weather forecast. Expect each forecast to be more-or-less accurate and more-or-less prone to error. Use the predictions and the lists of tasks and events as reminders and suggestions. Where the "forecast" is off, use your good judgment to decide whether to follow the advice for that month.

## January

#### The Hive

This month the queen is surrounded by thousands of workers. She is in the midst of the winter cluster, where the temperature at the center is about 88 degrees. At the periphery of the cluster, the temperature will drop to 42 degrees on the coldest nights. The worker bees continuously move in and out of the center of the cluster. The bees in the cluster flex their wing and thorax muscles to generate heat, and they consume honey that was stored in the previous year. The cluster will continuously move upward into new honey if it is available. On a day that reaches 45 degrees or more in the hive, the bees may be able to move the cluster upward or horizontally into new honey, or they may be able to move honey toward the cluster from other parts of the hive.

On a warm day (50 degrees or more) the worker bees will leave the hive to take a cleansing flight, during which they defecate away from the hive. The workers will wait weeks for a warm day if necessary before flying. The queen will usually begin laying a small number of worker eggs in the 3rd full week of January (about 28 days after the winter solstice), and some worker brood will begin to appear at the center of the cluster at that time.

#### Food Consumption & Storage

A strong hive may consume 15-20 lbs of honey in January if the weather is consistently cold or wet. Stored pollen will be in demand in the hive after brood rearing commences in the third full week. On a warm day, a few bees may fly out and collect small amounts of pollen from witch hazel and winter aconite. Bees may visit a gardenia in bloom in a garden. These pollen sources are miniscule compared to the bounty waiting later in the year.

## Events to Watch For in the Hive

If there is a heavy **snow**, make certain the entrance to the hive is cleared to allow for proper ventilation. Check the **weight of the hive** by placing one hand under the back of the bottom board and lifting it up. If it feels as if most of the honey is gone, you may need to start feeding the hive this month. Once you start **feeding**, you must continue feeding until the bees are gathering pollen and nectar on their own. Unless you are confident that a hive is starving, do not open a hive at less than 55 degrees Fahrenheit (without wind chill.)

## Tasks to Be Performed

This is a great time to catch up on reading those bee books you received as holiday gifts, or that you requested on inter-library loan. Don't forget to attend your next club meeting and start ordering, assembling, and repairing the equipment you might need for this coming season. If you have not done so, go ahead and order that package of bees or a nucleus hive, if needed, from a reputable supplier.

# February

#### <u>The Hive</u>

The cluster is still tight on most days. The cluster will break and move on those days where the temperature exceeds 57 degrees in the hive. The queen remains in the cluster, and as the days lengthen, she will begin to lay a few more eggs each day. There are still no drones in the hive. Workers will take cleansing flights on mild days. About the 20th of February, maples begin to blossom and to supply nectar and fresh pollen that are extraordinarily valuable to the growth of the hive. The maple blossom continues to mid-March. In areas of higher elevation, the maple blossoms start and end 7-14 days later. Alders may bloom in some locations and provide valuable variety in pollen proteins.

The cluster will remain centered around the small brood nest, which migrates upward as the lowest rows of capped brood hatch. The cluster will not quickly move up into new areas of honey after the brood nest forms, and mild days are important to the bees' ability to move honey/pollen toward the cluster.

## Food Consumption & Storage

The bees will consume about 20 pounds of honey stores and nectar from maples.

## Events to Watch for In the Hive

On a day that exceeds 55 degrees, open the hive and quickly check for sufficient food supplies, for signs of disease, and to see if the queen is laying. Place a pollen patty near (but not directly on top of) the brood nest. More colonies are probably lost during this time of year than during all other winter months. A colony that is rearing brood will consume about 7 pounds of honey and nectar per week, and if the weather turns bad, a colony with small food reserves can quickly starve to death. Never allow the food stores to drop below 15 pounds. If they have less than 15 pounds of honey, start **feeding** stored honey or thick sugar syrup (one part sugar to one part water.) Remember, once you start feeding, you need to continue feeding until the bees no longer consume the syrup, or until the end of April.

#### Tasks to Be Performed

Consider whether to sign up for that "Advanced Beekeeper Course." Attend bee club meetings and get equipment ready for spring. At this time of year, you may be advised to "reverse" the brood boxes on a hive with two brood boxes. It is too early in the year to perform this task with safety, so delay this task until you are confident that warmer weather has arrived. The first week of February may be a good time to add a pollen patty or candy board to a hive that is raising brood. If you enter

the hive, you may consider moving a frame of honey from the outside of the hive to an area much closer to the brood nest. Do not place a frame of frozen honey immediately adjacent to the brood nest, however.

Decide now how you are going to deal with the issue of swarms in April, May and June. Read and study the options, and seek advice. Prepare a bait hive now if you are going to use it later in the spring. If you are going to use more equipment to hold queen cells and deal with swarms, then take steps to obtain that equipment.

# March

#### <u>The Hive</u>

The days become longer and the queen steadily increases her rate of egg laying. The brood nest will expand and very slowly migrate upward into areas where honey has been consumed. More brood means more honey, nectar and pollen are consumed. A few drones begin to appear at the end of the month. The bees will continue to consume honey stores. They will also bring in a fair amount of nectar and pollen, but not as much as is consumed.

Note: Fairfax, March 2010. Bees bringing in large quantities of greenish pollen starting March 13, probably from American Elm.

#### Food Consumption & Storage/ Nectar and Pollen Sources

The hive may consume as much as 7 lbs per week (net of inflow) when cold, rain, snow, or icy conditions prevail. Prevent starvation by making certain that food supplies are sufficient. Maple nectar and pollen continue to be very important to population buildup. Willows and \*\*\*\*\* willow may bloom in wet, sheltered valleys. In some parts of Northern Virginia, plantings of ornamental and exotic shrubs will supply small amounts of pollen. Crocus, daffodil, and other flowering bulbs will supply some pollen. Boxwood, quince, hackberries, forsythia, and elms will supply variety in the pollen sources. Some early dandelions may bloom at the end of the month.

#### **Events to Watch For in the Hive**

Wet, cold, ice, snow, wind and blowing rain describe those parts of March that are not sunny and 50 degrees. Make sure the hive does not tilt backward. It should slightly tilt forward to shed rain from the bottom board.

The brood nest is now 6-8 inches across, and may extend across several frames. As much as 75-100 cells of drone brood may be seen at the end of the month.

If using a screened bottom board, you should resist the urge to remove the insert. Leave it in until consistent warmer weather arrives in late April. In late March, you may consider reversing the deep brood supers, or the medium supers that some beekeepers use for brood. This will allow for a better distribution of the brood, and stimulate the growth of the colony. If the brood nest extends across the brood supers, do not reverse until there is a large enough population to keep both halves of the brood nest from death due to chilling.

#### Tasks to Be Performed

On a sunny day early in the month, when there is little wind and the bees are flying, have a quick look inside the hive. A temperature above 54 degrees should do for this task. Remove frames for a quick inspection. Inspect for disease and see that the queen is laying. Eggs laid in January and February will all be hatched into new workers by March 20, and the population will be much higher than in January. Add a pollen patty if you have not yet done so.

Look for drone brood along the bottom edges of frames with brood. Remove some drone brood with a cappings scratcher and look for Varroa mites. If you find Varroa in 30% or more of the drone brood cells, then research how to perform a mite count, and whether to treat for mites. Check for remaining honey and pollen stores. Food stores can run dangerously low until a heavy nectar flow starts. It may be necessary to continue feeding the hive.

Find out if your club has any volunteer activities that need doing. Write an article for the newsletter. Volunteer to serve as a mentor for a new beekeeper in your area. Help the 4H Beekeeping club with a project.

# April

## <u>The Hive</u>

On cold days, the bees continue to form a cluster. The brood nest may be as much as 10 inches in diameter, however, and all the bees may be needed to prevent brood death due to chilling on the coldest nights. The brood nest continues its slow migration upward into empty honeycomb. The bees continue to bring pollen and nectar into the hive. The queen is laying several hundred eggs per day at the beginning of the month, and the population is growing fast. At the end of the month, the queen will lay 800-1000 eggs per day. The worker population will double this month. Drones will number above 200 by month end.

A congested hive in April will lead to swarms in the last week of April and early May. Congestion exists where the combination of honey, pollen, brood and bees fills 80% or more of the available space. In a congested hive (for reasons about which there is no consensus) the worker bees begin to raise new queens in April. This is done by building "swarm cells" – peanut-like wax cells that often hang down between brood supers, or on the face of brood frames. From egg deposition to hatching is 16 days for a new queen. A hive that is storing honey by April 20 is a hive to watch for swarming.

#### Food Consumption and Storage/Nectar and Pollen Sources

Henbit, wild mustard, dandelions, redbuds, pears, cherries, "Japanese" magnolias, plums, shadbush, chickweed, and many ornamental shrubs will provide substantial amounts of pollen and sufficient nectar for brood production on sunny days. Many hives that have consumed sugar syrup in March will cease taking it in early April. By mid-April, apples, peaches, crab apples, American holly and autumn olive may begin to supply ample amounts of nectar and some very strong hives will begin to make and cap honey. At the end of the month, nectar flows will be strong from many sources.

#### Tasks to Be Performed

Pick up and install packages of bees or nucleus hives. Packages are delivered in Northern Virginia each week during April and early May. Nucleus hives may be available, but they should have been requested or ordered in the prior year.

Generally, it should be understood that swarms are not good for honey production. Hive bodies should be reversed when the likelihood of 4 or more days of consistent cold (45 degrees or less) weather has passed, or around April 1 in most years. This will reduce congestion by encouraging the queen to expand egg-laying upward and outward into empty brood frames.

Remove any feeders where the syrup becomes moldy. Remove a feeder when 1 quart is not consumed in 1 week.

Place a bait hive for swarms nearby if you have decided to use such a hive.

Be prepared to place a queen excluder and honey supers on top of the hive by the 4th week in April. On a warm and still day, do a complete inspection of the hive. Can you find any evidence of the queen? Are there plenty of eggs and brood? Is there a compact pattern to her egg laying? If not, locate a new queen and replace any weak or failing queen.

The final touches should be put on new hives and supers that will soon be full of bees and honey. Package bees should be installed as early as possible this month to take advantage of the heavy nectar flows at month end. Watch out for evidence of swarming (queen cells; live queen with no fresh eggs; queen that is reduced in size to fly with swarm). Remove frames with queen cells to a nucleus hive (with at least 2 frames of bees) or cut the queen cells from the frames and use them to requeen weak hives, or destroy them.

#### May

#### The Hive

Now the hive is really buzzing. The nectar and pollen should begin to come into the hive thick and fast. This is the peak of the egg laying season for the queen. The hive should be bursting with bees. The brood nest will extend across 7-8 frames and may reach into 2 full brood boxes in the strongest hives by month end.

#### Food Consumption and Storage/Nectar & Pollen Sources

This month Tulip Poplar, Black Locust, Wild Blackberry, Privet, Persimmon, yellow rocket, and Sweet Clover will bloom. Alsike Clover, Crimson Clover, Ladino (White Clover), Black Gum, poison ivy, Vetch, Holly, and Raspberries will also bloom this month. At the end of the month, hawthorn hedges will add their nectar.

A strong hive may collect and store as much as 7 lbs of nectar per sunny, bright day. The bees will combine the nectar with enzymes they produce, and place the nectar in honeycomb cells to evaporate the nectar and age it into honey. Honey will be capped when it reaches 83-84% sugar. A strong hive working on a good nectar flow in May can cap as much as 80 pounds of mature honey during this month.

#### Events to Watch For in the Hive

If the queen has over-wintered with the hive, then watch for signs of swarming. Look for queen cells. Make certain that the queen has enough room to lay 800-1000 eggs per day, and that she may do so for the entire 21 day cycle for production of a worker. This will mean that a queen in peak fertility will need at least 1 deep and 1 medium super for brood production. (Many beekeepers provide 2 deep brood boxes for this purpose.) If the brood production area has become honey-bound (more than ½ the brood frames are more than ½ full of honey), then provide a larger brood nest or remove honey frames and substitute foundation.

Watch for a failing or disappeared queen. If all the brood is drone brood, then the queen is failing, or has disappeared and been replaced by laying workers. If this occurs, you should combine the queenless hive with a queenright hive or take other steps to requeen the hive.

At the end of May, look out for wax moths. These 1/2 inch wide, gray moths sneak into the hive at night and lay eggs in corners and other places where the bees are unable to remove the eggs. The adult moths will be harassed and forced to leave a strong hive, and eggs will be covered with propolis if not removed. In a weak hive, the eggs will hatch and begin a path of destructive chewing and defecating through the brood combs. Combine weak hives, reduce the size of the brood box, or reduce the entrance to discourage moth entry to weak hives.

## Tasks to Be Performed

Inspect the hive weekly. If you reversed the brood boxes earlier in the year, you may need to do so a second time in May or June. Consider doing so if the lower brood box is nearly empty of brood and the upper brood box is crowded. Attend your bee club meetings and useful workshops you can find. Make certain that each hive has more than enough supers to store the honey harvest. Make notes of which flowers/trees/shrubs bloom at which times. Order labels, bottles and caps. Buy, reserve or borrow extracting equipment for late June or July. Order queens for July hive splits. Put out a wax moth trap; for directions, click <u>here.</u> Note however, that <u>a MAAREC publication on wax moths</u> states "so far a trap effective against the wax moth has not been developed".

On strong hives, remove the mouse guard if you have not yet done so, unless you are using a mouse guard made of 1/2 inch hardware cloth, which does not obstruct air or bee movement.

#### June

#### The Hive

Hives that haven't swarmed will be boiling with bees. The brood nest will extend across two supers. The population of the strongest hives exceeds 50,000 workers. The queen's rate of egg laying may drop a little this month. The queen is moving around the brood nest, laying eggs in cells that have been cleaned from prior use.

## Food Consumption & Storage/Nectar & Pollen Sources

Sumac, clovers, strawberries, wild blackberries, speedwell, linden trees, chestnut, chokeberry, huckleberry, grape, holly, blackhaw, honeysuckle, and many ornamentals will provide nectar flows. June is generally a good month for honey production in Northern Virginia, but most of the nectar flows are over by the end of the month. A strong hive may cap as much as 30-40 pounds of honey in June, if good nectar flows are nearby and moisture is sustained in the soil. If soil moisture persists into July, you may want to plan on a small second harvest later in the summer.

#### Events to Watch For in the Hive

Heat can be a serious challenge for the hive at this time. Look for bees bringing in water and placing it around the hive to evaporate for the cooling effect. Watch for swarm cells. Watch for wax moths, ants, mice and small hive beetles attacking the combs. If a hive is so weak in June that it can not defend itself against beetles, ants or moths, then you should consider combining it with a much stronger hive.

Watch for supers above the queen excluder where all the center frames in the super are full of capped honey. Move the full center frames to the outside edges of the super, and move less full frames to the center. This will assist the bees to fill and cap all the frames completely.

#### Tasks to Be Performed

Inspect the hives weekly to make certain the hives are healthy and the queen is doing her job. You do not need to see a queen if you see a good pattern of eggs, wet larvae (or "worms") and capped brood. Supers full of honey may be removed at any time you are prepared to begin extraction or keep them in the freezer. (You do not want to store supers of honey for more than a day or two at room temperature, due to ants, spiders, wax moths, and dust.)

Make sure your bees have a source of water within 200 feet of the hive. You may increase your hives by splitting strong colonies after the harvest. There is a slight chance of a need to add more honey supers this month. Keep watching for swarming which may still occur.

Decide if your hives are going to have an upper entrance. If so, you may want to drill a 1 inch

circular hole in a super (not close to a handle), which hole can be guarded by the bees in summer and plugged with a cork during the winter. Some beekeepers screen over the hand hole in the inner cover, and then prop up the hive cover slightly to provide ventilation, but not enough to permit access to rodents and large insects.

Confirm queen orders for July hive splits.

#### July <u>The Hive</u>

On hot and humid nights, you may see a curtain of bees cooling themselves on the exterior of the hive. Swarming is still possible, but it becomes less likely as the month advances. The Varroa parasitic mite continues to increase its population at the expense of the bees, and it will require some type of treatment or management, soon. The bees continue to raise 3000-5000 replacement bees per week in July, and may consume a larger amount of honey and pollen than is collected if the month is dry. The stronger hive populations will peak at 50,000-60,000 worker bees.

## Food Consumption & Storage/Nectar & Pollen Sources

Late June and July are harvest times for the Northern Virginia beekeeper. After supers and frames are removed for extraction, the best practice is to return the supers and frames to the hives for cleanup. The bees may manage to store 5 pounds or more of honey during July, but they will eat more than they collect if the month is dry. Continue inspections of the hive to make sure the hive is healthy. Catalpa, bee bee tree, linden, milkweed, butterfly weed, horsemint, fireweed, and globe thistle will bloom. Heartsease and smartweed bloom this month, starting in damp bottomlands. Cucumber, melons, some soybean varieties, sunflowers, some vetches, verbena, and clover will supply supplemental nectar or pollen, where cultivated. If you can find a field of alfalfa, soybean, or buckwheat in bloom, these plants are major nectar sources and produce distinctive honey flavors.

#### Events to Watch For in the Hive

Watch for bees fanning droplets of water to cool the hive. Especially around the harvest, watch for robbing activity near the entrance. Look for a falloff in egg production, as the brood nest shrinks gradually down to about 60-75% of its peak size.

#### Tasks to Be Performed

Make sure the water source for the bees is clean and accessible. Harvest honey. Return wet supers to the hives. After the supers are cleaned of honey by the bees, remove excess supers and stack them with moth-repellent PDB crystals. Watch for signs of robbing and take steps to discourage robbing if it starts. Select perfect frames of comb for honey competitions. Attend the club picnic. Learn how to filter and bottle honey for the most competitive local and state fair honey judging. Decide if, when and how you are going to treat for Varroa. Order any supplies or equipment that you need for mite treatments.

If you are going to make splits to overwinter, the first half of July is the last time to do it. You will need to be prepared to feed any split during the dry months of July and August. About half the time, you will need to feed splits in September and October as well.

lose interest in feeding them. Outside activity slows down as the nectar flow decreases and stops. Much of the flight activity is water-gathering, pollen collection, and orientation of new bees. On hot evenings and nights, the bees may drape the front of the hive, making them especially vulnerable to skunks.

## Food Consumption & Storage/Nectar & Pollen Sources

Smartweed, ironweed, Joe Pye weed, milkweed, thistles, heartsease, chicory, clethra, pepperbush, dandelion, blueweed, and some asters and daisies may provide a small nectar flow. Clovers, soybeans, alfalfa, sunflowers, and common vetch continue to offer nectar, but there are few concentrated plantings of these cultivated crops in Northern Virginia. Cucumbers, melons, carrots, and pumpkins need honeybees for pollination this month. Net honey production is unlikely in August due to heat and drought. The hive may consume 10 pounds of stored honey or syrup during a dry August.

## Events to Watch For in the Hive

Watch for a failing queen, especially a queen that is more than 1 year of age. Egg laying should continue at the rate of 400-500 eggs per day, and the brood nest should be at least 14 inches across. Watch for wasps and hornets attacking the hives to steal away live bees for the purpose of feeding their brood. If you may have harvested too much of the hive's honey, examine the hive to make certain there is at least 10 pounds of capped honey before you go on vacation.

## Tasks to Be Performed

There is not much chance of swarming this month. Do not expend much energy catching a swarm that escapes in August, as it will not build up enough to survive the winter. Watch out for robbing. Re-queening of all hives with queens from the prior year is done in this month or in early September. Queens may be a little less expensive this time of year, especially if they were reserved in April or May. Watch for wax moths and small hive beetles; ruthlessly combine hives that are too weak to defend against them now. Take losses now, rather than in the winter.

The bees that are born in August will have to carry the hive through the early winter. Make certain that the hive has enough pollen and honey to generously feed new brood. Skinny August bees will not make it to February.

Many chemical mite treatments should be applied in early August, if they are going to be used. Carefully read the instructions and consider the temperature forecast before any treatment is applied, however. Honeybees may not be able to tolerate harsh chemical treatments combined with high temperatures. However, it is also not wise to allow Varroa mites to parasitize the bees that you hope will carry the hive into early winter.

## September

## <u>The Hive</u>

The hive population is dropping. The queen's egg laying is significantly reduced, and the drones may begin to disappear at the end of this month. Nectar and pollen sources usually reappear after Labor Day. Frost may occur after September 20, and the bees will begin to cluster when the temperature inside the hive drops below 57 degrees.

## Food Consumption & Storage/Nectar & Pollen Sources

Asters, daisies, ragweed, clovers, tickseed, and goldenrod may provide substantial sources of nectar if the month has adequate rainfall (4-6 inches) spread over the entire month. Strong hives may make 20 pounds of honey during September. (In some years, 30 pounds of production has been recorded in September.) In years with drought conditions, September can be disastrous for

the hive, with the bees consuming the honey and pollen that should be saved for winter.

## Events to Watch For in the Hive

The brood nest may be about 10 inches across. The queen is active, but laying less than 400 eggs per day. At the end of the month (when colder weather is likely) the workers cease feeding the drones. A few drones will remain at the end of the month, but not many.

#### Tasks to Be Performed

Feeding of syrup and pollen substitutes may be essential if the month is dry. In a good year, it may also be time to do that final harvest for the season. Remember to leave at least 40 pounds of honey for each hive to get through the winter. Remove the queen excluder if you left it on the hives after the harvest. Check on the queen. If you are going to use it, feed and medicate with Fumagillin in syrup to fight nosema towards the end of the month. (Only the first 2 gallons of syrup per hive are medicated if you are using it.) Add chemical mite treatments if you did not do so in August and if you are using those treatments.

Now is the time to use menthol crystals for tracheal mite control, if you are going to do so. Nighttime temperatures are cool enough, and daytime temperatures may fit the instructions. If it is dry, or you made up splits in July, feeding continues until the bees will take no more syrup.

Attend bee meetings and state and local fairs and festivals. Give honey to your bee neighbors, and make sure they understand how good the bees are for gardens, flowers, and the growing environment in general.

## October

## <u>The Hive</u>

The bees are settling down for the winter. Varroa mites should be under control. The bees are reducing entrances and drafts with propolis and consolidating stored honey from the outer reaches of the hive to the center. The brood nest is about 8 inches across and egg laying has slowed to 200-300 per day. On cold nights, the cluster forms around the queen, and may remain tight until temperatures rise. Drones are gone by month end in almost all hives.

#### Food Consumption & Storage/Nectar & Pollen Sources

It is unlikely that the frost will hold off enough to permit much nectar-gathering. In some years, the frost does not come until after October 10 and some gathering of nectar may occur. Asters, daisies, and goldenrod may provide substantial amounts of pollen for winter brood.

## Events to Watch For in the Hive

Watch for robbing on warm days. Wax moths work diligently to enter the hives at night and lay eggs until a hard frost kills the adult moths. Look for continued egg production and capped brood, as new bees are needed to keep the population strong for the winter.

#### Tasks to Be Performed

Combine weak hives. Watch out for robbing this month. Finish feeding for the winter. Remove all honey supers not intended as a source of honey for the winter. Remove Apistan or other chemical strips if you used them, assuming you have had them in for 42 days. Attend your bee club meeting. Install mouse guards, after making sure there is no mouse inside the brood boxes. Reserve packages or nucleus hives for next April. Install the plastic insert on the bottom of the screened bottom board if you use screened bottom boards. If you use solid bottom boards, decide whether to reverse the boards to utilize the small entrance on the "winter" side of the bottom board.

## November <u>The Hive</u>

The cold weather has arrived and will send the bees into a cluster that is broken open only when the temperature inside the hive rises above 57 degrees. The bees take cleansing flights on warm days. The cluster moves very slowly into empty honey cells and toward food sources when temperatures inside the hive exceed 42 degrees.

## Food Consumption & Storage/Nectar & Pollen Sources

This is the month to make certain of sufficient winter stores. On a warm day, heft the hive and add honey frames or supers to bring each hive up to 40 pounds of stored honey. It is probably too cold to feed syrup. If the summer and fall were drought-stricken, and you have a starvation problem, consider feeding a pollen substitute in the form of a patty.

## Events to Watch For in the Hive

Stay out of the hives in November unless there is an emergency. The queen should stop laying by the end of November. The population is steady, with a few bees lost each day.

## Tasks to Be Performed

Learn how to make candy boards and pollen patties in case they are needed in January and February. Order bee gifts for yourself and friends for the holidays. Take your long-suffering spouse out to dinner to say thank you for tolerating the bees all year. Store and organize extra equipment for the winter. Keep snow and ice from blocking entrances and ventilation holes in the hives. Reserve packages or nucleus hives for next April if not already done.

## December

#### The Hive

The bees are in a tight cluster now. Egg laying has halted. There will be flights on sunny days with temperatures over 50 degrees. Weeks after the winter solstice, the queen's egg laying will recommence, but not this month.

#### Food Consumption & Storage

The hive may consume 10-12 pounds of honey during this month, depending on the weather. Mild weather may actually cause more honey consumption due to increased movement.

#### Events to Watch for in the Hive

You should stay out of the hive this month. Make sure the entrance and ventilation holes are not blocked. Make sure the mouse guard is not chewed through. Plug any large holes in the brood boxes to prevent drafts.

#### Tasks to Be Performed

Read a good book on beekeeping; study the latest research reports on bee health. Review what worked well and what you might want to change next year. Request catalogs.

DCmetro Beekeeper Wiki Home Welcome to our Wiki! It's not the first, it won't be the last. It probably won't be the BEST; but we hope it won't be the WORST. Here's some that precede us: *What started it:* <u>http://simple.wikipedia.org/wiki/Beekeeping</u> *A WikiBook:* <u>http://en.wikibooks.org/wiki/Beekeeping</u> We will strive to build on and link to the existing material on the web rather than just re-melting the same crystalized mass. We will present material that we hope is pertinent to specifics of our mostly urban and suburban small to moderate scale beekeepers. We embrace our fellow rural beekeepers and honey producers but recognize that the feeding, available forage, as well as environmental, and political environments among these groups is quite different. What "works" inside the Beltway, the Potomac/Anacostia basin, the broader Piedmont and Coastal plain of our region may not work in an adjacent sub-region. Our focus will be the collection and dissemination of first hand experience and knowledge of our members.

Who are "DCmetro Beekeepers"?

We're starting out as a small group of BANV (<u>www.beekeepersnova.org</u>) who want to share our mistakes and build better practices for what happens around HERE. And we have this notion that this Wiki technology can help us and YOU get there. Our name is part of our goal.