

# Sandusky River Valley Beekeepers Association



April 2021

srvba.ohiostatebeekeepers.org

## Upcoming Events

### **Monthly Meeting—Monday, April 5, 2021** **Virtual meeting using ZOOM**

- When: April 5, 2021 at 6:45pm Eastern Time (US and Canada)
- Please register in advance for the meeting. Members will receive an email for meeting registration.
- After registering for the meeting, you will receive a confirmation email containing information needed to join the meeting.
- Topic: “Getting Ready for Spring” (making splits, dealing with weak hives, and spring inspections).
- Presenter: Dana Stahlman



Photo Courtesy of beehour.com

## Message from the President

Hello SRVBA Members!

Welcome everyone to the start of Spring. The weather has been for the most part pretty good. No late snow storms and the daytime temperature has the girls making cleansing flights and some are starting to bring in pollen.

One of our club members is having health issues. Please keep Ralph Billow and his family in your thoughts and prayers.



Join Sandusky River Valley Beekeepers Association:

1. Fill out membership form

<http://srvba.ohiostatebeekeepers.org/>

2. Mail form to: SRVBA, c/o  
Tami Wylie, 1000 CR 312,  
Bellevue, OH 44811

# Message from the President (continued)

## SRVBA Beginners Bee Class

The bee club is having three different beginning beekeeping classes this spring; Saturday, April 10; Saturday, April 17; and Saturday, April 24. This year, the classes are being held at Cherry City Honey Apiaries, (Gary and Tami Wylie's). We are having only 10 students in each class, and as of this date the first two classes are filled and we have four registered in the third class. Everyone must wear a mask including the instructors, and a six foot physical distance between each participant. We are asking that only the instructors for the day, and students, attend the bee classes because of state-mandated regulations.

This year we have teamed up with an organization called "Hives for Heroes." This is a non-profit 501c-3 organization based out of Texas, that works with disabled war veterans that are interested in being Beekeepers. Hives for Heroes have sponsored two individuals with our club. They will be attending the second class.

## ZOOM Meeting Guest Speaker

On Monday, April 5 at 7:00pm, we will be hosting our monthly Zoom meeting. This month's guest speaker is Dana Stahlman. Mr. Stahlman will be talking about "Getting Ready for Spring", making splits, dealing with weak hives, and spring inspections. Dana will end the meeting with questions and answers from the group. Dana is a good friend of mine and is from the Columbus area and is currently living in North Carolina.

## Dana Stahlman's Biography

Dana Stahlman is a fourth generation beekeeper who is from Ohio but currently resides in North Carolina. He is a certified Master Beekeeper through EAS (Eastern Apicultural Society) and former professional beekeeper, having experience in both migratory beekeeping and queen rearing. Dana was the founder of the Ohio Queen Project, has kept bees in Ohio and Georgia, was awarded Ohio Beekeeper of the Year in 1997, and the prestigious Ohio Beekeeper Lifetime Achievement Award. Additionally Dana is the author of "Beekeeping 101," a handbook for beginning beekeepers

# Message from the President (continued)

## IN THE HIVE

The month of April will really begin the bee season. Bee packages will be arriving from Georgia and California and a few Beekeepers will be offering Nucs for sale in the month of May. I've seen some drone brood in the frames. I also had a Beekeeper tell me that they've seen some overwintered drones. Which brings me to my next topic, with pollen starting to come in, and drone brood starting, it's making me think of swarm season.

You can almost predict when swarm season will start in your yards if you watch and study your hives. It takes a lot to happen for bees to swarm.



**Tom Rathbun**  
**SRVBA President**

The Queen will start laying her work force for the summer starting as early as February. Most importantly, it takes a good population of drones to make a swarm successful. When the Queen is laying eggs, and when she's running along the bottom of the frames, this is where she will start laying drone eggs. It takes 40 days for a drone to become sexually mature; twenty-four days as an egg and larva and roughly 16 days for the drone to become sexually mature. So once you start seeing drone cells you can almost figure when swarming will begin in strong populated colonies.

Is there ways to prevent swarming? Yes, there is if you're lucky enough. You can add another box with frames above the brood chamber, but if you have two deeps already as brood chambers, you might not want to do this. You can go through your second box and remove some honey frames and replace them with a few drawn wax frames, and a few new waxless foundation frames. This will give the bees and the Queen more room to lay. Another, you can always make a split, but to do so you will need a second Queen and time to slowly release her into the queenless hive. You will still have a strong chance that the bees might not accept her.

Before making a split check your weather, especially the long term outlook. If you're going to let the bees make a new queen and it's going to be cold, windy, and rainy, I'd wait on making the split. The queen will not conduct mating flights in bad weather. A queen needs to mate with up to 12-15 sexually mature drones to be a successful well-mated queen.

With queens, it only takes 16 days for the queen to emerge from her cell. If she is not mated by day 40 of her life, she will not get mated and will become a drone layer in your hive, which isn't good for the colony at all.

Stay safe and enjoy the bee yard!

Tom Rathbun

SRVBA President

# **Message from the President**

## **(continued)**

### **THE BEGINNERS DEPARTMENT**

**By Ralph Ziegler**

### **MODERN BEEKEEPERS**

**Walter T Kelley**

**April 1952**

If you installed your bees during the early part of April and have kept sugar syrup in the feeders ever since, they will by now be well started in drawing out the foundation into a beautiful new comb. Have you looked into them lately?

Many beginners, after having their bees, become afraid of them and never attempt to open the hive again to inspect them. Apparently, when they see the bees taking over with such a possessive attitude they hesitate to dispute ownership of the equipment.

Of course there are both right and wrong ways to approach and open a beehive, and use of the latter is usually rewarded with a number of painful stings. One should always approach a hive from the side or rear not at the entrance. To approach from the front would be comparable to loitering in a main alleyway at a busy manufacturing plant. You would be slowing down production and would be asked, in no uncertain terms, to move on. Standing before a beehive would be obstructing the main flyway and slowing down production. Is it any wonder, then, that the bees should ask you to move on in a manner that makes up in certainty what it lacks in courtesy. So, always approach a hive from the side or the rear!

To attempt opening a hive without the use of smoke is inviting disaster. From a bee's viewpoint, to enter a hive without first making your presence known is unethical, and the offender is not considered worthy of further courtesy. Ignorance is no excuse to a bee!

Fire up your smoker until it produces an abundance of heavy white smoke. Then blow a few good puffs into the entrance and, inserting a hive tool under the inner cover, blow several puffs inside without raising the inner cover enough to let any bees escape.

Bees have an instinctive fear of fire, and smoke frightens and disorganizes them. They immediately set about to gorge themselves with honey so that everything would not be lost if matters should come to the worst and it became necessary to "abandon ship."

They become docile and easy to manage and can be "pushed around" without offering any resistance after eating so much. Within a few minutes after smoking a hive the cover may be safely removed and the frames containing the combs may be lifted out, one at a time, for inspection and observation. Any further control desired may be had by blowing smoke over the top bars of the frames. Use no more smoke than needed to control the colony; too much smoke enrages bees.

# Message from the President (continued)

## MODERN BEEKEEPERS

Walter T Kelley

April 1952

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The condition you will find within the hive will depend upon the length of time the bees have been hived and upon the faithfulness with which you have kept syrup in the feeders. A hive started from a 3 pound package consumes at least a pint of heavy sugar syrup a day for the first 7 to 10 days. After that, they gradually take more until a full quart will hardly last them 24 hours.

Most beginners make the mistake of discontinuing feeding entirely too soon. They seem to think that when the flowers begin appearing in the fields the bees can get all the food they need for them and feeding is no longer necessary. Nothing could be further from the truth because, first of all, not all flowers produce nectar and some of the early spring flowers secrete only a very thin watery nectar that is very low in sugar content. The weather becomes a limiting factor in early spring even if there is plenty of nectar available: bees seldom leave the hive whenever the temperature falls below 60° degrees.

Much food is required for brood rearing, and increasing the strength of the colony is often sorely taxed to provide enough nectar to satisfy the hungry brood in springtime. It should be remembered that a newly installed 3 pound package is comparable to only a rather weak colony and as such must be fed until all the frames are full of brood and syrup or honey.

Usually they must be fed for 4 to 6 weeks and each colony should consume about 50 pounds of sugar in the form of heavy syrup. If there is any one thing that is absolutely essential to succeeding with package bees it is feeding. Many other things may be substituted, neglected, or even omitted entirely, but as long as feeding is faithfully done the colony will get along all right.

Reprinted by Tom Rathbun

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SRVBA-OSBA

Modern Beekeeping

April 1952

Walter T Kelly

Author Ralph Ziegler

The Beginners Department

129-137

# Ohio.....Contribution to Beekeeping

Written by: Linda Miller, Secretary SRVBA

## The Curious Life of Henry Quirin

### “Queen Breeder of the World”

Since beginning beekeeping I have heard stories about the Bellevue “bee man,” Henry Quirin. It was said that when he would be seen on the streets he was often mistaken for a transient and people would offer him a few coins for a meal. He would kindly thank them and move on. Henry was small in stature. He was usually dressed rather shabbily and only got one haircut a year, at the start of the bee season. Most people never realized he was one of the wealthiest men in the area.

Henry Quirin was born in Groton Township, Erie County, in 1872. He was the son of Nicholas and Barbara (Gross) Quirin, and one of six children. He was raised on a modest farm at the corner of State Route 4 and Strecker Road where his father owned about 40 acres of tillable land. This spot would later be known as Honey Corners. From humble beginnings, Henry began his bee business. At the time of his death in 1959 he had grown his estate to a value of near one million dollars.

When Henry was 10 years old, his father had become ill and developed a craving for honey. He would send young Henry to a neighbor to purchase the “amber fluid” to satisfy his father. After making frequent trips to retrieve the honey he became intensely interested in the science of honey bees. Henry is quoted as saying, “I remember I wanted to get a colony right away, as soon as I learned how they lived, but my father objected that I might get stung.”

Henry persisted however, and by the time he was 12 years old he took a gold dollar he had earned himself and purchased his first colony of honey bees.

Henry’s formal education never went beyond the fourth grade but he set out to learn all he could about the tiny workers. He got all the bee culture books he could find and soon taught himself every aspect of keeping bees. He discovered that the real problem was obtaining queens and soon started experimenting how to raise his own.

By 1891, when Henry was 19 years old, he discovered a novel way to commercially produce queens. Using an old chicken incubator, he was the first beekeeper to perfect a way to raise queens in such a way. “It is no easy matter to control 500 queens in one incubator, every one of whom is born a scrapper, so it is necessary to cage each one, as soon as hatched, in little wire bottles. In short time they are moved to roomier quarters, and after 10-12 days are ready to ship,” he later said.

Henry was very particular about choosing the queen he would graft from. They had to be prolific, gentle and splendid honey gatherers. Once he found the perfect queen, he said, “I would not sell her for \$200!”

# Ohio.....Contribution to Beekeeping

Written by: Linda Miller, Secretary SRVBA

## The Curious Life of Henry Quirin, “Queen Breeder of the World”

### Page 2

He soon began placing ads in bee magazines and newspapers across the United States. Letters of inquiry began pouring in. He also became a favorite among commercial beekeepers because they could order queens in large quantities. At the peak of his enterprise he could produce as many as 1,500 queens a week.

Within a short period of time his queens became so well known for their excellence that he began shipping to far corners of the world including, but not exclusive to, New Zealand, Australia, Japan, China,

West Indies and all across Europe. He soon became known as the “Queen Breeder of the World,” His specialty was Golden Italian and Leather Colored bees. In a good season, he expected to raise 5,000 queens.

During the winter months, Henry would busy himself making his shipping cages. The cages were fashioned in three inch wooden blocks with one open side covered with screen. For shipping he would place an adequate amount of food for the queen and about a dozen “escorts.” He could ship via postal service for eight cents per queen.

Over the years many tried to discover his secret to raising such an abundant amount of queens. Reporters would come to his apiary hoping to discover his method but would usually end up being free labor for the day. When asked how many employees he had he would simply reply, “50,000,000.” He rarely hired help because he couldn’t find anyone that would share his passion for the honey bee.

In 1906, he owned 15 or more farms where he kept his apiaries. They were mostly located in Erie, Huron and Sandusky counties. By that time his “secret” had been discovered and competition increased. When profits decreased he gradually turned his main focus to honey and comb honey production, still managing 450 colonies.



# Ohio.....Contribution to Beekeeping

Written by: Linda Miller, Secretary SRVBA

## The Curious Life of Henry Quirin,

### “Queen Breeder of the World”

#### Page 3

Henry may have had only a fourth grade formal education but made his way in the world quite well. He invested wisely in stocks, securities, and property. In 1925, he purchased the Woodward-Ellis Mansion at 400 Southwest Street in Bellevue, Ohio where he lived until his death in 1959.

Henry was once quoted as saying, “Bees are smarter than most people. They don’t have any divorces, any wars, or any depressions.” I tend to agree. He was known about town as eccentric, a bit of a recluse, preferring the company of his bees over people. I have days like that, too. I find comfort in watching the bees go about their work with purpose and joy, the gentle hum of the bee yard drowning out the static of the outside world, and creating its own bubble of peace with nature.



## QUIRIN The Queen BREEDER

Has a strain of Italian bees in which prolificness and honey-gathering are developed to a high degree. His location furnishes a continuous honey-flow throughout the season, while the broad, extended prairie surrounding his yard allows of no undesirable drones in bee-trees. He expects to keep on hand from 600 to 1,200 queens, and be able to fill orders by return mail, guaranteeing safe arrival, at the following prices ;—

	Before July			After July 1st		
	One	Six	Twelve	One	Six	Twelve
Select.....	\$1.00	\$5.00	\$9.00	.75	\$4.00	\$7.00
Tested.....	1.50	8.00	1.00	1.00	5.00	9.00
Select Tested.....	2.00	10.00	18.00	1.50	8.00	15.00
Breeders.....	4.00			3.00	15.00	
Straight five-banded breeders	6.00			5.00		
Two-frame Nucleus, no queen,	2.50	14.00	25.00	2.25	12.00	22.00
Full colony, on eight frames,	6.00	30.00		4.00	22.00	

Send for Circular giving many particulars that lack of space forbids mention here. **FOLDING CARTONS** at only \$4.00 M, so long as present stock lasts.

**QUIRIN-THE-QUEEN-BREEDER, Bellevue, Ohio**

# Stahlman Beekeeping Notes for 2021

Dana Stahlman is a fourth generation beekeeper from Ohio, but currently resides in North Carolina. Dana is a certified Master Beekeeper through EAS (Eastern Apicultural Society) and former professional beekeeper, having experience in both migratory beekeeping and queen rearing. He was the founder of the Ohio Queen Project, has kept bees in Ohio and Georgia, and was awarded Ohio Beekeeper of the Year in 1997. Dana was also awarded the prestigious Ohio Beekeeper Lifetime Achievement Award. Dana is the author of "Beekeeping 101," a handbook for beginning beekeepers.

Tom Rathbun

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## Issue # 9—February 28, 2021 "Looking forward to Spring"

The first full day of spring is the 20th.

At the spring equinox, the days and nights are approximately twelve hours long. It is a period of shifting weather between winter and summer. Often, drastic temperature changes occur.

Most of you receiving package bees will see them arriving the middle of this month (March) thru (April).

I would like to put some caution into your day about planning for beekeeping activities. Over the many years I have kept bees, one pattern seems to happen. We get good weather in early March and then cold seems to return. For new beekeepers getting ready for an early start, let me say, it could be one of the biggest mistakes one can make. I have seen snow when apple trees begin to bloom! There is little or nothing that we can do to overcome the issues involved with a winter storm. Look at Texas this past week. Normal temperature the last week of February was 50 degrees or more above the actual temperatures that froze pipes, shut down the electrical system, highways, and resulted in a number of deaths. If one tries to start bees just before a weather event like that [install bees in hives without drawn comb, and expect them to survive] – be ready for the disappointment to discover that bees die.

Thus, if buying package bees in March be prepared for bad weather even if it does not arrive.

At one time I raised and sold bees in packages. I worked in southern Georgia where the weather and climate was warm. Once in a while, a cold freeze would blow down from the North all the way into Florida. A person making a living selling bees tries to follow a schedule and takes orders from beekeepers far in advance of actually putting bees in packages.

This includes raising queens that go into those packages. In the bee business, once bees are shook/placed into a box and given a queen and a can of syrup, the clock for their survival begins. They have no shelf life! They can survive as long as they have food and are well managed for a very short period of time.

The person selling package bees has control over a few things involved in the sale of those packages.

1. The scheduled date the bees are to be picked up in a southern bee yard. These arrangements are generally made a year ahead.
2. The method of transporting the packages to the customer.
3. The method of distribution of the packages.
4. The price to be charged for packages.

# Stahlman Beekeeping Notes for 2021

## (continued)

The person or company providing the bees for the packages.

1. Should have an inspection report concerning the inspection of the hive the bees are taken from. This information is provided to the person picking up bees, for example in a Georgia bee yard the state of Georgia does issue a certificate to those selling bees.
2. North Carolina does as well. Rules regarding the purchase of bees – packages, queens, and bees on comb vary from state to state.
3. Generally, bees shipped in package are considered disease free. They should be treated for varroa and possible virus that are spread thru the distribution of bees.
4. The company selling package bees has an obligation to provide honest information regarding where the bees in the packages are from. For example, at the end of the almond pollination period, a number of hives in California are shipped back east. These hives are full of stressed bees. Think a three-day trip on a semi-truck load of hives set off the truck to be shook into package bees almost immediately.
5. Check on the reputation of the company your package supplier is buying packages from! The local seller of packages should be able to provide the answer to that question. You have a right to know!

What the person selling packages picked up and bought in a southern bee yard (package supplier) does not have control over!

1. When picked up at a southern bee yard, the general comment by those sellers is: When you drive out the lane the bees are yours. If anything happens during the trip to the north, the person buying packages for resale is responsible.

I can give you a number of ideas as to what can happen.

A person trying for the first time to haul a load of package bees (usually an inexperienced beekeeper) faces challenges. But these challenges are faced by all individuals who haul bees.

1. Weather conditions – It could be very hot and this is very hard on the bees in the packages. Bees clustered in the packages can handle cold much better than hot.
2. Exposure to wind blowing into the packages loaded especially in exposed locations on load.
3. Bumpy road conditions. This not only dislodges bees inside the package but causes loss of syrup in the feeder can inside the package.
4. Traffic slow moving. Bees require ventilation and if confined in a covered trailer for example, die quickly. [I remember a situation in which a beekeeper who took orders and deposits from customers picked up a load of 200 packages loaded into a U-Haul trailer, drove out of a bee yard in southern Georgia and by the time he got to Atlanta, all his bees in the trailer were dead.]
5. Failure of customers who buy package bees to pick them up on the delivery date! This is one reason many require a deposit when they take orders.

# Stahlman Beekeeping Notes for 2021

## (continued)

### As the Customer buying a package of bees:

If you have a scheduled pick-up date: Understand the information above.

### Weather determines work conditions in the bee yard.

**Commercial beekeepers do not work in cold weather** – not because they can't but because the harm caused to the bees. No one has control over the weather and it is common for those who take orders for package bees to notify their customers that adjustments need to be made before the bees can be shook into packages.

**As I have indicated Package bees have a very narrow shelf life.** If the vendor selling package bees picks them up and has them ready for distribution – you are responsible for picking them up on the scheduled date. It doesn't make any difference if it is raining, gets cold, or you have other things to do!

### What you should expect when the package is delivered to you!

**You should get what you pay for!** A package of live bees and a queen. The can of syrup should be nearly full. There may be a scattering of dead bees on the floor of the cage. That is normal.



### This is a good 3# package of bees.

Note: there's almost no dead bees on the floor of this package.

It looks like there are a lot of bees in this package. This is because the bees in the cluster have expanded due to being warm.

There are about 10,000 bees in a 3# package. A pound of bees contains approximately 3,500 bees.

### Problems you may encounter which is a reason for rejecting the bee order!

1. Dead bees in the bottom of the cage – If you cannot see the floor of the cage because it is covered with dead bees, it is the vendors responsibility to deliver live bees. Don't pay for dead bees. Negotiate with the seller on a fair price.
2. The bee cluster looks small – Check the center wood vertical bar shown above. A normal cluster will be gathered around the can and queen in the cage and take up about 1/3 to 1/2 of the space in the cage. In cold conditions this cluster will be located in the center of the cage and be a bit smaller than the photo shows.
3. Bees in the cage running frantically around making a loud buzzing noise. This is a bad sign of extreme stress on the bees in the package. Poor handling by the vendor. Could result in earlier death of honey bees put into a hive.
4. Another situation that rarely happens: The can in the cage is not placed in the cage so the pin holes in the can release the syrup in the can. Result dead bees.

# Stahlman Beekeeping Notes for 2021

## (continued)

### Taking care of your package once you have accepted it

1. You should have all bee equipment built and ready for honey bees before you pick up a package or a nuc.
2. Once you get the package home and wait to install the bees in a hive, make sure you keep the bees in shade and spray a water mist on them if they are making a lot of noise. A thin mixture of sugar and water brushed on the screen of the cage will also calm the bees. It is important that you do not get the bees wet.
3. I like to recommend that honey bees be installed into a hive in late afternoon. If done earlier in the day, bees sometimes drift or abscond (leave the hive).
4. Sometimes it is not possible to install them earlier and most of the time, it works out well. BUT, I like to avoid problems for new beekeepers.
5. Bees need food. The syrup in the can was there to help the bees get to your hive. You need a feeder.

### The selection of a method to introduce a package of bees to a hive needs to be made

Removing the syrup can should not be too difficult. One method is to slide it out of the cage by turning the cage up side down. Make sure you are prepared for the can to slide out quickly. As the syrup can is being removed prepare to notice that a wire or a thin strip of metal is attached to the queen cage. The queen cage should be removed and the syrup can then be replaced in the package. If it goes well not many bees will be released from the package.

There are several methods one can use to release the bees. **But before the bees are released from the cage, one must check to make sure the queen is alive in the queen cage!**

**If the queen is dead (not moving in the queen cage) call your package provider and ask immediately for a replacement queen.** There should be no issue with the package provider about replacing the queen at no charge. If the queen should die after the bees and queen are put into a hive, the package provider is not responsible for the possibility of the queen not being accepted by the bees. This is usually a management issue because mistakes are made [queen released too early] and issues such as killing the queen by removing frames to find her.

One good experiment a new beekeeper might do to increase knowledge in beekeeping is to buy both a package of bees and a nuc. A nuc is a small hive of generally five frames with bees and a queen. The frames are taken from the nuc and placed into a hive body. They have the advantage of already accepting the queen, have capped brood, some honey stores and pollen in drawn comb.



Visually this is what a package and nuc look like prior to being put into hives.

Next week I will show photographs of bees in packages being introduced into hives and tips on what a good nuc hive should look like.

# Stahlman Beekeeping Notes for 2021

## (continued)

I strongly believe that a good nuc supplier is harder to find than a good package supplier. Packages are produced in large numbers by a selected group of suppliers. Nuc's are produced locally.

Good reliable suppliers take care of their customers. If you have a queen problem and the supplier fails to address the problem, you have the choice of never buying from that supplier again.

When I buy bees I always want to know if they have been inspected, and if I am buying packages (I want to know the state of origin and the kind of queen I am getting). It is best if the queens are marked!

If I am buying nuc hives (I want to know the condition of the comb –[ Is it fairly new or is it old]? I want to know if the queen is the one that laid the eggs and is the mother of the bees in the nuc or was she added to frames and bees taken from other hives. How many frames in the nuc have brood on them? Can I inspect the nuc before I take it home!

Next week we will look at examples of how packages can be installed into equipment and some of the problems one might face just starting a new hive. Also included will be how someone with drawn comb and a hive or two can give a boost to a new package of bees.

Feeding bees at this time of year is important. One page in next week's issue will cover feeding bees.

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### Issue # 10—March 7, 2021 “Arrival of New Bees”

The issue of how to install a package of bees gets my nod as a controversial topic. Most advanced beekeepers are concerned with the time it takes to install a package and they just do it the quick easy way – dump the bees from the package directly into the hives after placing the queen cage between two frames close to the feeder (if it has a division board inside feeder). The division board feeder is now sold as a plastic feeder placed in the hive next to an outside wall.

If bees are dumped into a hive it becomes an interesting event with many bees becoming airborne (the area above the hive is full of bees). It may intimidate anyone who has not worked bees previously. This method also promotes drifting if several packages are installed at the same location. One can calm bees in a package if the package is well fed by brushing sugar water on the screen of the package with a brush dipped in the sugar water solution. Or a spray bottle will substitute if filled with a sugar water solution sprayed on the sides of the package but be careful not to get the bees very wet. The pictures below illustrate giving the bees some sugar water.

**(By the way this is done 10 to 15 minutes before the package of bees is opened)**



# Stahlman Beekeeping Notes for 2021

## (continued)

The key to getting the bees to stay in a hive after the bees are introduced to the hive is to remove the queen cage from the package cage and place it between frames in the hive as shown below: (Make sure the queen is alive and moving in the queen cage before proceeding).



New beekeepers should wear more protection than shown here. A jacket to cover the arms, and glove to protect the hands.

As one becomes comfortable working bees the gloves can be set aside. More experienced beekeepers will often work in hot weather without much protective gear.

Queen cages vary in design. Some are plastic and others are wood.



If the cage is wood, the cork in the candy end of the cage must be removed to allow the bees to eat the candy behind the cork. When the bees eat thru the candy (usually several days) the bees will be accustomed to the smell of the new queen and accept her as their own.



If the queen cage is not removed from between the frames in the hive after the queen is out, the bees will begin to build comb in the space between the frames and often fill up the space with burr comb.

Usually, one can begin to check to see if the queen has been released in three days. If she hasn't been released, check some frames to see if you can find eggs. Some times a queen from one of the hives shook for your package will be shook along with bees into the cage. If you don't see eggs then open up the hole in the queen cage with a nail or something to remove the candy blocking her escape from the cage. I will add taking care of queen bees in cages in next week's notes.

# Stahlman Beekeeping Notes for 2021

## (continued)

Dumping bees – Don't be timid in shaking them out of the package cage! Gently rock the package so bees fall out the opening onto the top bars of the hive.



After the bees are dumped, the cage (with some bees still in it) is placed on the ground under the entrance to the hive with the open top in the up position. It is quick, simple, and usually successful. Note the top feeder on the ground just behind the beekeeper! It will be placed on the hive after most of the bees have gone down into the hive. A little smoke at this time will also move the bees a bit quicker but they will move down into the hive in five to ten minutes if left on their own.

# Stahlman Beekeeping Notes for 2021 (continued)

Another method to get bees into a hive!



The easiest way to be comfortable installing a package of bees is to take four frames out of the middle of your hive. Set them aside because they will not be needed until you remove the package of bees that goes into this space.



Notice that one can place the package in the hive body in other positions - this placement is next to a side wall and the queen cage was placed on the top of the cage.

But the bees moved out of the package cage to the comb on the frames and the queen as can be seen, still had not been freed by the bees. The bees also started building comb in the space between the package and the frames in the hive. Note also the position of the plastic feeder. It is okay in this position.

It is very important to feed the bees when they are placed in their new home. Many types of feeders are available. In cold weather the bees are unable to get to food placed away from the cluster of bees. It is therefore important to use a feeder available inside the hive close to the cluster of bees - a plastic division board feeder or a feeder placed above the bees. Entrance feeders are okay in warmer regions with temperatures that allow bees to break cluster to gather the sugar syrup near the entrance to the hive.

**About feeding: Beekeepers usually use a mix of granulated sugar mixed with water in a ratio of 2 parts water to one part sugar. (Spring feeding)**

# Stahlman Beekeeping Notes for 2021

## (continued)



Have you ever wondered what would happen if the package cage is not removed from the hive?

That is exactly what happened in this hive. The bees built comb above, down into the cage, and around it. This is a real mess to straighten up.

The best time to remove the cage is just as soon as the bees are out of it. If installed one day, the bees should be out of it the next day.

**Regardless of the method used, it is important that a beekeeper realize this is a critical time in the life of this colony.**

**Normal progress is measured in the ability of the queen to begin laying eggs. In the event that a queen does not immediately begin egg laying, the new hive is in trouble!**

**More on that next week!**

**A quick review on feeding bees.**



Perhaps the worst way to feed bees is by open feeding. It may help in an emergency if used for a short period of time. This happens to be a bucket with some honey in the bottom of the bucket.

It promotes robbing and it feeds all comers – It will attract bees far and wide. If you have neighbors with bees, guess what! Their bees are being fed as well.

Many commercial beekeepers feed dry sugar in open containers in bee yards. I had one experience with open feeding in Georgia many years back.

# Stahlman Beekeeping Notes for 2021

## (continued)

I was fortunate to work with a large commercial beekeeper who had a deal to buy candy canes by the box full from a company making candy canes. Red and green and other colors as well. They were broken rejects placed in boxes on pallets to be gotten rid of.

Candy canes were dumped in 50-gallon drums with open tops. Imagine 200 to 300 hives in one location along a swamp. Rain would soften the sugar in those canes, wrappers would float to the surface and sticks would be placed in each barrel for the bees to climb up and out of the barrel. I regret that I did not take a photo of the set up but I can say the bees were busy gathering sugar. There were several thousand queen mating nucs in the area as well.

No matter how much experience in beekeeping one has there is always something more to learn!



Feeding bees is an essential part of raising honey bees.

Without food any animal will die. Honey bees in an area with low density of colony populations can usually survive from year to year without feeding. However, placing more colonies in an area places each colony with what economist would call diminished returns.

One of the biggest changes in beekeeping I have seen over my life span is the loss of food habitat for honey bees.

If you are starting beekeeping, you can easily find out how much competition for food your hive or hives will have. On a warm day before any bees are put into hives on your apiary site -- set out a small bowl with a small batch of sugar (maybe add 1/2 cup and add a little honey to it and just a little water) sit back and wait. All it will take is one bee to find it!

# Notes From Stahlman Beekeeping (continued)

## Issue # 11—March 13, 2021 “Is the new queen laying a good brood pattern?”

If one starts with a new package of bees or a nuc, it is important to check on the progress of the queen. For the package introduction, the first thing to check after the bees have been installed is to answer the question – has the new queen been accepted by the bees?

Those who start with a nuc should not have to worry about that question!

Because the queen plays such an important role in the success of a colony of bees, it is important to inspect a new hive several times after the bees have been introduced. The biology of the life cycle of the honey bees is important for every beekeeper to understand and without new bees to replace the old bees in a hive, the hive is doomed.

It all starts with the queen! Her job is to lay eggs – lots of them. Bee books will vary in the number of eggs a queen can lay in a single day but there must also be a large population of nurse bees that can provide the 92 to 94 degrees F. required for the proper growing temperature of the brood. We can not expect a small population of bees to care for a large number of eggs a queen can lay in a single day.

Under normal circumstances a colony with a basketball sized cluster of worker bees can support a queen laying 1000 eggs a day. It takes 21 days for a worker bee to develop from an egg to a worker bee adult and chew its way out of a capped cell.

I have seen figures that a queen can lay 1500 to 2500 eggs in a single day. One thing we all know is the expansion of a colony of bees in the spring happens so fast that the bee keeper often finds the bees swarming before management of swarm control is taken by the beekeeper.

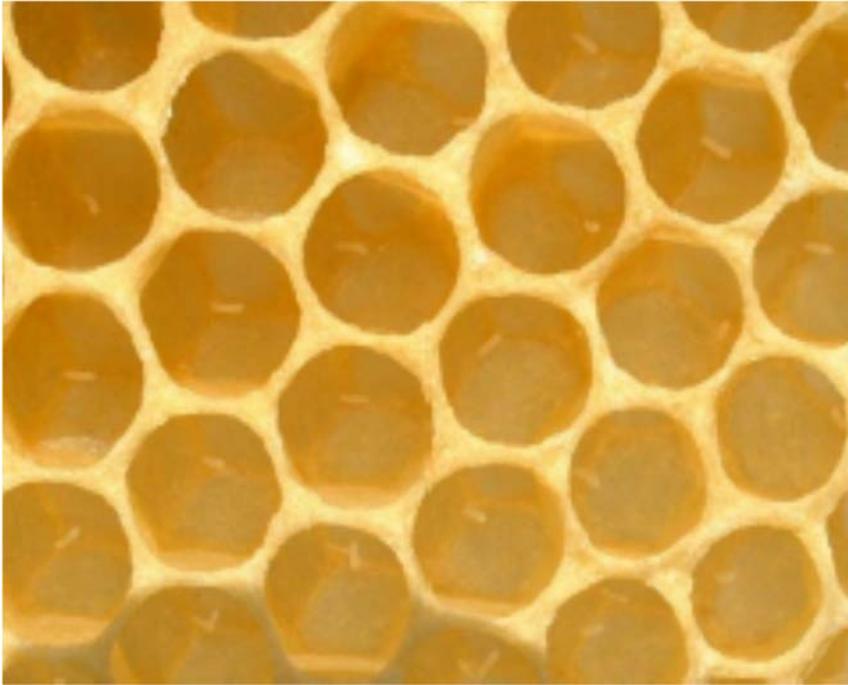
I would like to break this population growth down into something we can see.

Without eggs, a hive will have no future generation of bees! Thus, the first step for every beekeeper is to determine if the **queen is laying eggs**.

Several things that make this easy:

- Queens that are marked are easy to see.
- Knowledge of what eggs look like is mandatory.
- Understanding the biological development of egg to adult is imperative.
- Being able to determine the area where the queen is laying eggs is important.

# Notes From Stahlman Beekeeping (continued)

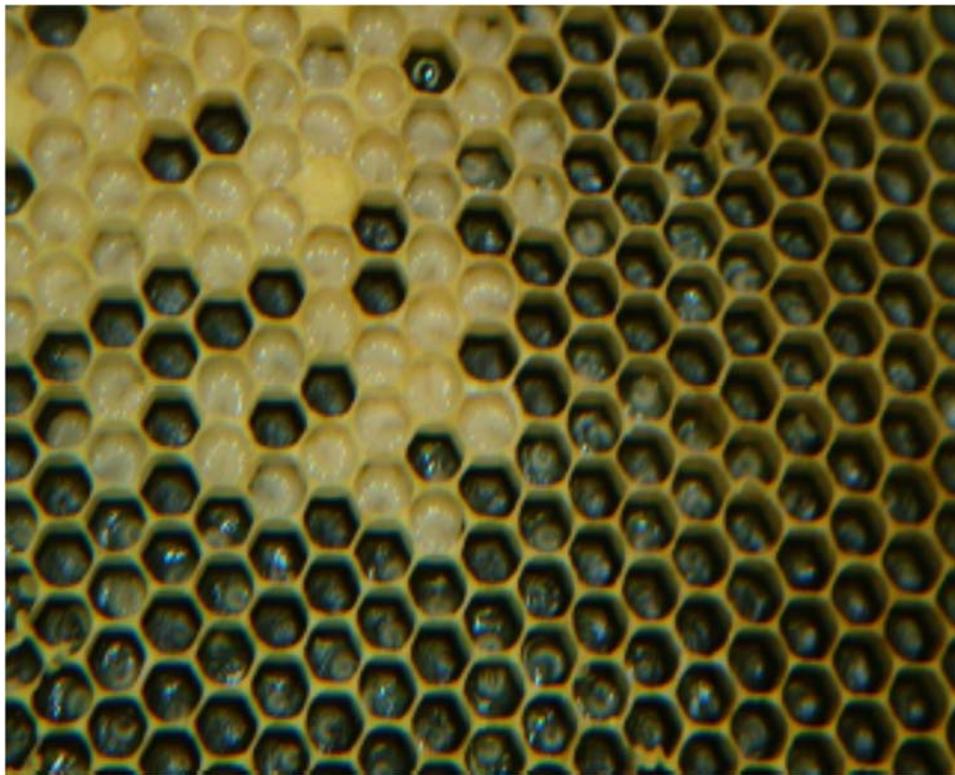


Eggs are somewhat hard to see especially if the foundation is natural beeswax.

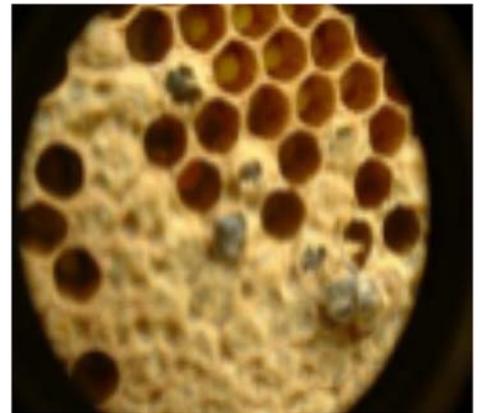
The queen is usually found in the area where brood is located. This is the brood nest.

Each egg will be fed by nurse bees when it hatches and become a small worm called a larva.

The larva shown below develop rapidly and are fed a high protein diet called bee bread. I heard a noted bee scientist describe the growth process something like " imagine a baby elephant growing into a fully developed elephant in (6) days.



If one sees eggs, the larval stage will follow in three days and by day 9 the bees will be sealing the cell with a wax cap.



21 days later young adult bees will emerge from the cells.

The brood should be solid with very few cells open.

I always look at the number of frames that have brood on them to determine the value of the queen. Anyone keeping more than one hive will note that not all queens are equal. A good queen should have at least 8 frames of brood or more.

# Notes From Stahlman Beekeeping (continued)

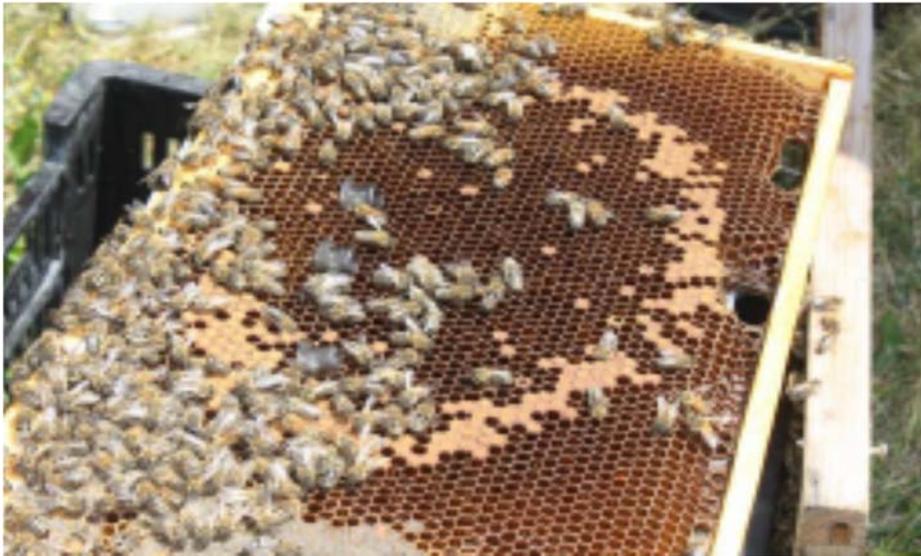
This first brood cycle can easily be demonstrated by the pictures that follow:



This is a very good frame of capped brood. Most of the brood on this frame is about the same age. One can still see some developing larvae (the white colored cells on the left side of this frame).

Otherwise, the developing brood on this frame are from approximately 10 days to 21 days old.

Do you have any idea of the number of new bees that will emerge within the next few days? Each square inch will produce 25 bees in this cycle. There are approximately 153 square inches of brood on this frame!  $153 \times 25 = 3,825$  bees on just one side of this frame.



The outer ring of brood on this frame clearly shows the end of the cycle of brood on this frame. Once the first cycle of young bees is added to a colony's population, the queen returns to the empty cells to lay another round of eggs.

This is repeated throughout the summer into the fall.

A hive could possibly have 80,000 bees. As some bees die, others take their place.

The problem with beekeeping is sometimes a package or a nuc is sold with a queen that is untested. An untested queen could be a good laying queen but the reverse is possible – she could be a virgin or a poorly mated queen. Looking at a queen can not determine how good a queen is. A large queen with a big abdomen is usually considered an outstanding egg laying queen at first sight – the thinking is she is well mated. But during my time of keeping bees, I have seen large queens fail and I have seen some small queens do a very good job of laying eggs. I still prefer the larger queens.

# Notes From Stahlman Beekeeping (continued)

## Some Problems with the queen in a new hive

The critical period of time for successful introduction and evaluation of the queen starts with the first week bees are put into a hive.

If a queen is not accepted and the beekeeper ignores opening the hive, the following pictures will give you an idea of what happens five weeks later when the hive is opened!



This was an actual case of a beekeeper buying a package of bees and asking me why there were no bees. He said he fed them and the bees were flying in and out of the hive. I asked how long has it been since he opened the hive. His answer, "I put bees in the hive about a month ago and fed them but I did not open them because I thought everything was okay!" I was called because there was no activity of bees going in and out of the hive.

It is obvious that the bees tried to draw comb and they did store some of the food he was feeding them. But most of the bees in a package will be dead in five to six weeks after they are put into a hive. The bees put into this hive had no chance of survival. They for some reason had lost their queen before she started laying eggs. **This is an example of mis-management of a new hive of bees.**

Honey bees have a survival instinct. If they have eggs, they are capable of raising a new queen. They may even abscond (leave the hive) – some bees start looking for a new location the minute they are put into a hive. That is the reason experienced beekeeper with other hives usually place a frame of brood in a hive just started. Bees rarely abandon brood. Drawn comb with some honey will also hold new bees placed in a hive.

# Notes From Stahlman Beekeeping (continued)



If I open my new hive, I should see some of the following things:

Are the bees drawing new wax on the foundation put into the new hive?

Look very carefully for eggs. If the bees are drawing foundation on a frame like this, the queen will move onto the comb and begin to lay eggs almost immediately.

If you see eggs laid in almost every cell, you can assume the hive has a queen!



This is what new beeswax foundation looks like as it is being drawn. One must look harder at new wax comb because the light background often makes seeing eggs difficult.

The egg is the little speck of white at the bottom of the cell shown by the blue arrows. It takes a good eye to see eggs.



This is what one will see three to four days after the queen begins to lay eggs.

Larva is easier to see. This is the second step in the development of a worker bee.

If one sees both eggs and larva like shown here, one can assume the queen is in the hive and is doing well.

But things can go wrong. If the queen happens to be killed while a beekeeper is manipulating frames, the bees will within hours begin to look for a larva of suitable age to feed to become a new queen.

# Notes From Stahlman Beekeeping (continued)



This is a new hive but if we look closely, we will see something we would not expect in a new hive



The bees have started building a queen cell near the top bar of the frame.

If a queen cell is being built in a new hive, it requires a careful check to see if any others have been started. A cell such as this is surrounded by cells with pollen and honey being stored. There are no eggs or larva anywhere near this single cell. It is a sign that the bees need a queen. Normally emergency queen cells will be found where young larva is found.

**A new hive should not be building queen cells.** Either of two things are happening in the hive.



1. **The queen is missing or has died.** (This is the most serious situation a hive can find itself in and if no eggs or larva of the right age are available, the hive will be unable to raise a replacement queen.)

2. **The bees are planning on replacing the queen in the hive.** The queen may be laying eggs but this is called supersedure. For some reason or other the bees have detected a flaw in the queen's ability to lay eggs or that she is injured.

3. Thus, the bees set about raising a few queen cells, not many, and the new queen will replace the old queen. This happens often and for some period of time the new queen and the old queen may be found in the same hive at the same time.

# Notes From Stahlman Beekeeping (continued)



If you are looking at only drone brood and maybe scattered eggs (often more than one egg to a cell) the hive is in trouble.

In cases such as this, the hive has laying worker bees. Laying worker bees can only produce unfertilized eggs which result in drones developing from their eggs.

It is very hard to requeen a hive with laying worker bees. I will address this problem in later articles but for right now, I would suggest moving some worker brood from another hive (the reason to have two hives). The bees, if the population is large enough, might

raise a new queen from the brood given to them. The problem is: The colony will have been set back so much that, the bees will be unable to build up and survive the coming winter season without a serious effort on the part of the beekeeper to save it.

The final step in the first cycle of brood rearing is capped brood.



All the capped brood on this frame will add to the colony's bee population. It takes approximately 8 to 10 weeks for a new hive to have the population needed to gather a good honey crop.

This is a photo of a new hive with many of the older bees from the package still making up the bee population in the hive. **These new bees are essential for getting this colony off to a good start.**

# Notes From Stahlman Beekeeping (continued)

## Issue # 12—March 20, 2021 “When is it time to make a split? ”

Hives that survived winter are in various conditions from very weak to very strong. While some beekeepers' will be looking to split hives to replace those that died, others will be dealing with very strong hives and feeding such hives only encourages them to build populations faster than normal.

Later this spring I will address the problem of swarming, but right now the beekeeper with a strong hive must be considering what management technique to use to prevent their hive from swarming. It is a good problem to have.

Strong overwintered hives provide the beekeeper with opportunities that new beekeepers do not have.

- Strong hives can be split to make up colonies that have died. (No need to buy package bees to put into a dead-out hive).
- Some beekeepers can make up nucs to sell to beginning beekeepers at this time of the year. (A topic that might take up a complete note later on this spring).
- The opportunity to make a hive increases also comes to mind.

There are several principles of beekeeping management I learned many years ago. To my family (commercial beekeepers) a weak hive was a welfare hive. Hives of bees in my family were expected to produce income.

I see beekeepers today facing the dilemma of what to do with a weak hive. They can be time consuming and often will lag behind other hives during the beekeeping season regardless of what is done to save the queen. A weak hive with a good queen can be strengthened by taking a few frames of brood from a strong hive to help it build bee population. **I used the term "good queen" to justify taking from a strong colony to justify the effort to save the weak hive.**

Most often trying to save the queen in a weak hive is just an effort to save a bad queen. The end result is often no improvement.

This question came into my mailbox this week. I have been writing about making splits because many of the issues on the web blogs are posting questions about strong hives and swarming. But this question helps me start a series of notes that will be timely in the up-coming weeks.

*Hi Dana,*

*Quick question*

*Should I be combining my weak hive into a strong hive now before I do splits later or combine a weak hive to a split hive later?*

*JD*

Many beekeepers are finding this situation as they check bees now. This will be the starting point for the material I have been working on regarding making splits.

# Notes From Stahlman Beekeeping (continued)

**Do not make splits from weak hives! Splits should be made from strong hives.**

To answer J D's question, I am not sure how many hives are weak but this is what I think. The weak hive is weak for a reason. Is it mites or the queen? Or could it be something else?

The first step before doing anything is to check for disease – especially American foulbrood. Check bees for mites: with a weak hive it is hard to get a good sample of bees but one might use the sugar roll test – this does not kill bees and will give a reasonable idea if the Varroa mite population is high.

In my situation I always take weak hives and add them to stronger hives rather than take frames from stronger hives to give to weak hives. There are exceptions to this -- for example I have a hive I believe is so strong it may swarm. Rather than split it into two weaker hives, I use the queen in the weaker hive to build up the weak hive with a bee population from the stronger hive.

This is a simple process of moving the weak hive into the location of the strong hive. The strong hive is moved to a location within the same bee yard. There are no frame exchanges made. C.C. Miller used this technique often to build up hives. It has worked well for me.

My father always called weak hives "welfare hives"! They take a lot of effort to save.

It is important to follow up the progress of the weak hive several days later. It should be fed with sugar syrup to encourage egg production from the queen and feed the new bee population. With more bees in the weak hive, the brood nest should grow in size. The queen can be evaluated several weeks later to make sure the brood nest area has grown. The heat generated by the bees is very important at keeping the brood nest warm (92-94 °F). If the brood nest (egg laying by the queen) has not improved – it is time to purchase a new queen for the hive.

On the other hand, time can be saved by placing the weak hive directly above the strong hive. Kill the queen in the weak hive and unite them into one stronger colony. Some people will place a sheet of paper between the two groups of bees – this does reduce some fighting that may occur.

This one hive can be split later resulting in getting back to two hives of bees. The advantage of making a split later -- this strong hive will make a honey crop while if the split is made just before a honey flow – the two colonies created by the split will actually gather less honey. More hives does not mean more honey.

It would be possible to take a hive ready to swarm and split it using as many queen cells as one could find to make five or six new hives or more! But each of those new hives will produce no spare honey, require feeding and each queen produced from those swarm cells will need a hive of her own.

I read of one individual who grew 36 hives out of one hive in one season. He used 5 frame nuc boxes to start each new split. It has been done and it is possible. Each new split [nuc] contained one frame of brood, a frame of honey & pollen, and three new frames of foundation. It required a lot of work (spent energy), (money – for equipment such as frames and sugar), and in the end (no honey but a lot of hives needing attention). About 2/3 of the splits did make it thru the winter and presented the problems all beekeepers face in the spring of the year – a few real strong hives and a number of weak hives. That was done in the 1890's. It might still be possible today – hope for good weather, good queens, treat for mite issues, and of course have the time and money to do it. With the average loss of bees overwintering during current times, one could sell a number of nuc's and still make some money – but not a fortune.

# Notes From Stahlman Beekeeping (continued)

**Back to the real world:**

**Individuals thinking about making splits must consider the goal they hope to achieve.**

The easiest way to make a split is to take a strong colony of bees and divide it in two equal parts. It should be done before a hive begins building queen cells. [Once a hive starts queen cells, it is hard to prevent the swarming impulse to go away].

There are many beekeepers who have developed personal ideas on how this should be done. I am going to describe two. For a new beekeeper, this is the most confusing thing about beekeeping – ask one beekeeper how to do something and you get one answer. Ask another and you get a different answer. The bees don't have to think about what is happening – they have survived for a million years because instinct has prepared them for such event. Bees normally split several times during a bee season – we call it swarming.

Larry Connor in his book "Increase Essentials" says, "If you find a colony with swarm cells use them." Otherwise, you have two other choices: One is to buy a new queen for the planned split you make or let them raise a queen of their own.

**To begin: we must have a strong hive of bees!**



This is a double deep hive. It is full of bees.

This is the upper box and below is the bottom box of bees.

The queen is in one of the two boxes.

To new beekeepers this is equal to about 4 nuc's that one would buy.

When split, each of these boxes will be full of bees. I generally would not split a hive unless it has at least 8 frames of brood. The outside frames may be filled with honey.



A hive this strong without a plan for swarm management will swarm. Thus, the beekeeper can split a hive to prevent the hive from swarming. Splitting the hive may result in some loss of a possible honey crop. Other options could be considered if one is not interested in making a new hive. Checkerboarding is an example of one management tool which will be discussed in an up coming topic in these notes. As we get close to the honey flow season, I will share other methods to get a good honey crop including making splits that are strong and are capable of getting a honey crop.

# Notes From Stahlman Beekeeping (continued)

Two methods for splitting a hive during the spring season:

- (1) Starting a split with a new queen or with a queen cell.
- (2) Making a walk away split (let the bees raise a new queen).



The first method requires a beekeeper to buy a queen or use a queen cell to start a new colony. Usually, a queen cell this early will be a swarm cell.

This is referred to as a **full colony increase**. The beekeeper must pull frames from each box until the queen in the hive is found and if using queen cells -- isolate frames with swarm cells in the box without the queen.

The advantage of using a queen in the new split is the recovery time saved by introducing a laying queen into the new hive. Once the new queen is accepted a new hive will soon catch up with the split that has the queen in it.

I feel that it is best if the new queen is introduced to the hive created in a new location - not the original hive stand. The reason behind this that most of the old bees return to the original hive stand. In the case of using swarm cells to make up the hive, I see no difference in the hive location. If using swarm cells - a hive can have 20 or more swarm cells, and many, but not all, need to be cut down and removed. The made-up hive with swarm cells might still swarm especially if left where all the foraging bees have returned.

A new hive will be more accepting to the new queen if the hive has a large population of younger bees staying with the brood. Don't wait a day or two to introduce the new queen. If some delay in introducing a new queen occurs, the bees will begin building replacement queen cells and once that action is taken by the bees, they often reject the new queen given to them.

**See comments at the end of this article on one method to get young bees into a hive box to be split.**

The split hives should be equalized. In other words, the brood in the hive should be split equally between the two hives created. The bee populations in each hive will explode quickly and a new second chamber should be added almost immediately.

One factor to consider is moving the newly made up hive several miles away from the original hive location. Most of the flying bees from the split hives will return to the original hive location. Make sure the moved split has plenty of bees. If there are not enough bees to cover the brood - cold weather can result in brood not covered by bees dying. That is called chilled brood.

The best time to make splits like this is after a honey flow. In fact, if a late honey flow is available, a split can be made earlier and a split will easily build a bee population to gather a good honey crop.

# Notes From Stahlman Beekeeping (continued)

**The Walk away split – sometimes called a dirty split:**

**To make a walk away split:**

- All that is required is one strong hive and equipment for a second hive.
- It does not require finding the queen in a hive.
- It is quick and easy.
- The brood chamber must have eggs and larva in both boxes.
- The beekeeper knows that one of the deep hive bodies will have a queen in it but will not know which hive that is! A check several days later will reveal which hive is building emergency queen cells – that is the hive without a queen.
- The hive without the queen will raise a queen of its own. (At least they will attempt to raise a queen).

Problems as I see making a split in this fashion:

- The hive without a queen will be in crisis mode. It will try to raise a new queen but it will be the weaker of the two hives created. Some might say it is good because that hive will go thru a brood break which might be a method of mite control.
- If the queen is in the hive on the original bottom board that hive will receive all the flying foraging bees, and will be much stronger than the weaker split hive.

This results in making two hives – one weaker than the other. The hive without a queen will face a reduction in bee population. The weaker hive should survive in good shape if they can make a new queen and by fall build into a nice colony of bees. It should not be counted on to make a honey crop.

**Now for an idea to get young bees in one of the boxes to be split:**

**When one is examining a hive to be split by pulling and looking at frames, move all frames that have open brood to the upper box above a queen excluder. Make sure the queen in the hive is located in the lower box along with frames of mostly capped brood. Young bees will move to the upper box where the open brood is located. These are nurse bees.**

**Young nurse bees are less aggressive than older worker bees. I have had a lot of fun over the years doing bee beard presentations. There is a trick to get bees that are less aggressive from a hive. This is it!**

# Classifieds

## Packages, Queens & Nucs – Tom Rathbun/Southridge Apiary

Package (3 lb) Honey Bees for Sale      **\$119.00**

Extra Queens (each)      **\$32.00**

Please place order at [www.olddrone.net](http://www.olddrone.net)

Select the desired date for pickup, and Tom Rathbun's house (Clyde Ohio) for pick-up.

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Contact Tom Rathbun at 419 603-1749 to order.

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Cherry City Honey stocks and sells new bee hive equipment. Due to our location in the Clyde-Bellevue area, it's approximately a one hour drive to the nearest bee equipment supply store. This drive is inconvenient, time consuming and expensive.

Also, online orders from distant suppliers often require purchase of larger quantities to obtain fair pricing and shipping/freight rates for new equipment are expensive.

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We don't ship because the high shipping rates makes new bee equipment unreasonably costly. We can arrange for local delivery in the Bellevue-Clyde area. We accept cash or credit cards for payment.

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# Classifieds

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- 8 drawn frames
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