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**Scott: Teacups can take place anytime, even if they're not thinking about creating a new queen? Or do they start when they're beginning to get worried about their existing queen?**

**Laura:** I've had hives make one or two teacups and never do anything with them. It does tend to lead towards making a new queen eventually, but it could be a month later before they put the egg in it. Just because you see a teacup, it doesn't mean that it's "in play", unless you see an egg in that teacup. That's the key. Once they put an egg in it, then it's "in play".

**Scott: Okay. When it's "in play", is that when you consider it a queen cell?**

**Laura:** That's when it's the beginning of a queen cell. It's still technically a teacup, it's just the very beginning of a queen cell. When you would call it a queen cell, it's either partially or all the way filled. Technically the first step is having an egg in a teacup and having them start to build those walls out and add royal jelly.

**Scott: When they start making it bigger, and if there's an egg or larvae in it, then you know that it's "in play"?**

**Laura:** Yes. They're making a new queen. Game on. They're definitely making a new queen.

**Scott: What are the three different kinds of queen cells and where do they appear in the hive?**

The first one, and the most common one, is a swarm queen cell. On a top bar hive, those are going to appear on the outside edge of the comb in the hive. It'll appear vertically going up and down on the outside edges of the comb if it's a swarm cell. That means that the hive is anticipating a swarm. They're making preparations to swarm, the queen is aware that those queen cells are being made and has at least authorized them to some degree.

**Scott: With a swarm cell, when the new queen is born, will it leave the hive or will the old queen will take off instead?**

**Laura:** It's always the old queen that takes off. The old queen might not wait for the new queen to be born. Often, she'll swarm if she knows the hive is well on their way. She could choose to swarm at any moment. There could not even be a capped queen cell. They could be 90% of the way to capping a queen cell, or they could wait until the new queen is almost born. Anywhere in that period of time, the queen can decide to leave in the production of a new queen.

**Scott: Why does the old queen leave the hive? Is it because she knows they're going to be better off, or because she knows there's going to be competition?**

**Laura:** No, she knows that the hive is strong, that she's made her preparations, and that there's a new queen on the way. Once she knows that the hive is likely to survive if she's not there, she'll leave.

**Scott: Okay, so it's not out of spite that the queen leaves. It's because she's doing her job, she's helping them to raise some queens, she knows that they're going to OK and just leaves them alone. She'll take some of the exiting bees with her and leave some bees there to grow on their own with their new queen."**

**Laura:** Yes, that's what needs to happen. The new queen is going to come out of the queen cell. The bees knows the process and what needs to happen next. We don't really know, emotionally, what she's feeling, but once that queen is confident that they're on their way, that the bees are going to be fine in making a queen, she'll go. It can be at any point. There could be a three-week period where there's a potential for them to swarm while the queen cell is being capped. It takes longer to make a queen than it does to make a worker bee. It'll be a longer period of time to go from egg to her emerging.

**Scott: When talking about splitting the colony and the three different types of queen cells, do you only really split when you see the swarm cells?**

**Laura:** I only split when I see swarm cells. You can think of a swarm being the hive having a baby. That's the only time they're going to swarm. The supersedure cells mean that the hive is not happy with their existing queen. The emergency cells mean there was a catastrophic incident involving the queen and they're making a new queen. You only want to do a split when the hive is strong and in the process of making a new queen.

**Scott: So, you've talked about swarm cells. What about the other two types? Can you tell me a little bit more about the supersedure?**

**Laura:** The supersedure cell means that the hive is replacing the queen, but they don't necessarily want the queen to know. They're deposing her of her position. This can happen for quite a few reasons. She can just be a low-functioning queen. She could have not been bred well. She could be out of eggs. She could be old. There are a lot of reasons. It basically is as if the queen can't do her job anymore, but she still thinks she can do her job. The hive is saying, "You know what? No. You can't do your job anymore. We're replacing you." An old queen isn't going to swarm. She's going to be replaced in that same hive.

**Scott: When she's replaced by this supersedure queen that emerges, what happens to that old queen?**

**Laura:** Usually, there is a queen battle which means that the queens will fight each other. Queens are the only bees that can sting and survive. Their stinger's a needle, so one of them will kill the other one. The survivor one is the one that's the new queen. Generally, the younger one is going to win that fight. Queen battles are fascinating. There's this thing called "piping" that occurs. I've heard it once where it basically sounds like a long horn blow, and that's one of the queens trying to intimidate the other queen in the hive.

**Scott: Going back to the supersedure, you said that the location of those are in the middle of the comb, hidden away so that the queen doesn't see it?**

**Laura:** Yes. It would be hidden away in some way because they don't want the queen to know that it's there, and they're not typically a lot of them. You don't often see large numbers of supersedure cells. Alternatively, the bees could just decide kill the old queen instead of hiding the new queen cell.

**Scott: For an emergency, what constitutes an emergency queen cell?**

**Laura:** Something catastrophic happened to the queen that was unanticipated. If they already have a teacup available, they'll move an egg into that teacup. If they don't have that ready and they need to start making a queen right away, they'll create an emergency cell. The eggs are only viable to be made into a queen during a three day period. They essentially have a three-day window, if the queen dies, to make one of those eggs into a queen. If they don't have time to make a teacup and if they weren't prepared to make a queen ahead of time, they will simply make a queen cell out of an existing cell if they have to.

**Scott: For the emergency, where are the locations of those?**

**Laura:** Those are going to be wherever eggs are. Wherever you would find room in the comb is where the emergency cells are going to be found. They look like tears falling down the hive. Again, they like having their insurance policy. They want to have as much of a chance as possible of replacing a queen that unexpectedly is no longer viable or no longer with them.

**Scott: As far as a timeline and what to do, what should I do if I don't see any eggs in the hive?**

**Laura:** It's a waiting game. You know they're making new queens. You know they're active and they're in the process of that. You know that something happened to the queen no more than five days ago if there are eggs and a little longer if you only see

larva. It takes seven to nine days for the bees to cap a cell with larva. If you're seeing larva, you know that she was there nine days ago. If you're seeing really small larva, you know she was there five days ago. You can get an idea of when she stopped laying. The queen cells can be made very quickly. They can take a week to make them or they can get them done really fast if they're putting their minds to it. Again, you don't necessarily know how long it's been, but you know that they made those queen cells in a hurry.

**Scott: What about if you see some swarm cells and some emergency cells at the same time?**

**Laura:** This means they were on the way to making a swarm cell, so they already had it half-filled, but then something happened to the queen. The other bees are like, "We need to get this done now!" As insurance policies, they made more than one. Maybe they had swarm cells that they were planning on building and they decided to build them there, but other bees were like, "Let's just do a couple of other ones just in case" to make sure they have a new queen. Even if that means more than one queen is born at the same time. However, only one queen will live to be the leader of the colony.

**Scott: If the queen swarms and takes half the hive with them, what should you do?**

**Laura:** It's a natural reproduction of a hive. Your options are to locate the swarm, to capture it in either a separate hive or to try putting it back in the same hive and just see if they stay.

**Scott: Why might you want to prevent swarming?**

**Laura:** First time beekeepers often are really intimidated by swarms and don't want to deal with them. People in the city often don't want to deal with swarms because they don't know where it's going to go. They might not be home when it happens or even know. Then it goes into their neighbor's tree. There's a lot more hassle there. I generally encourage allowing a swarm for people who live in the country. We need feral bee populations. Most likely, in the country, they're going to find some natural space to swarm into.

In the city, we're a little more cautious about it. If you're in a tight urban area, you might clip the wings of the queen so that when she does try to swarm, she'll just fall to the ground outside of the hive. Some people are hesitant to allow their colony to swarm, because it might mean that they have to buy another hive. Whereas, some people, like to have multiple hives. There are a lot of factors involved that people don't necessarily want to deal with when it comes to swarming. That being said, bees are more likely to swarm if there's a lot of food out there and not a lot of other bees.

**Scott: It sounds like a little bit of an art and a science to figuring out what to do with the bees after they've swarmed.**

**Laura:** That's all of beekeeping –an art and a science– and your own personal preference. A lot of beekeepers, especially those who keep large apiaries, just consider it to be a part of the apiary building process. They love swarm season. It means that their bees are strong and they're going to get more colonies, basically for free! A lot of beekeepers who have more than one hive love swarms.

For the hobby beekeeper, it can be more of an issue, however, there are always local beekeepers around who are willing to capture a swarm for you. Always. You don't have to keep a swarm for yourself. You can call somebody else and they'll come get it. That's totally fine. It's free bees to them. That means getting in touch with your local beekeeping association or finding a list of people to call when there's a swarm and just putting the word out when it happens.

**Scott: That sounds like something good to be prepared for if you are an urban beekeeper. You should know in advance who might be a good person to call.**

**Laura:** Right. You know it's eventually going to happen. So, you should have a plan.

**Scott: Back to the three different types of queen cells. Is there anything else to wrap that discussion up? We talked about queen cells, teacups, swarming, urban, rural...**

**Laura:** I think that the biggest thing is that the bees are smart. Bees do what bees do. They're going along their natural process. You're fostering them and allowing them to go through this natural process. You are allowed to observe it, and you don't have to feel like you're doing anything wrong when you see a swarm. This is perfectly normal bee behavior that are not negative things. It is a positive thing, and this is what bees do. This is part of their life and part of their natural cycle. Being able to track it and observe it and hopefully capture some of the swarms or make sure some of those swarms go to good homes is a great thing.

**Scott: Just because they swarm, it doesn't mean that you're doing a bad job or that they hate the style of your hive. It's not like your hive is too humid or too hot or just not a good environment.**

**Laura:** It means they like your hive! "Absconding" is a different story, however. When bees don't like their hive, they abscond. This is when the bees decide to leave. The entire hive leaves all at once. That's a sign that something's wrong. However, swarming is a sign that something is good and it is going right.

**Scott: If all of your bees suddenly absconded, it's probably because they didn't like something about the environment.**

**Laura:** Yes. That's an environmental factor. If they did swarm, which means half the hive left and they're making a new queen, that means that they were strong and felt strong enough to divide themselves in half to make more bees.