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SPEAKERS

Jamie, Stump The Chump, Guest 2, Amy, Guest

Jamie 00:05
Welcome to Two Bees in a Podcast brought to you by the Honey Bee Research and Extension Laboratory at the University of Florida's Institute of Food and Agricultural Sciences. It is our goal to advance the understanding of honey bees and beekeeping, grow the beekeeping community, and improve the health of honey bees everywhere. In this podcast, you'll hear research updates, beekeeping management practices discussed, and advice on beekeeping from our resident experts, beekeepers, scientists, and other program guests. Join us for today's program, and thank you for listening to Two Bees in a Podcast. Hello everyone! In this episode of Two Bees in a Podcast, we will be chatting with Dr. Tammy Potter, who is the Apiary Inspection Program Leader in Kentucky. She'll be chatting with us about women in beekeeping and some of the other programs in which she's involved. We'll follow that discussion with Dr. Potter with a discussion with Dr. Jennifer Tsuruda, who's from the University of Tennessee. She's going to be talking about her experiences as an extension specialist in Tennessee. And of course we're going to finish today's podcast with a question and answer section all about honey bees where I try to answer the questions that you asked us about your beekeeping issues. In this segment of Two Bees in a Podcast, Amy and I are joined by Dr. Tammy Horn Potter. She is the Kentucky State Apiarist as well as a board member for the Eastern Apicultural Society Project Apis m., the American Beekeeping Federation's Foundation for the Preservation of Honey Bees, and the Honey Bee Health Coalition, the latter of which she serves on the steering committee. Tammy, you've actually done quite a few things. Thank you for joining us on Two Bees in a Podcast.

Guest 01:54
And thank you for having me. I'm really flattered to be a guest on your program.

Jamie 01:58
Yeah, we I've been excited since I saw that we requested you to be interviewed. I'm happy about this. I saw you give various lectures at various meetings over the years. I've really enjoyed them, and I look forward to talking about what we're going to talk about today. Amy, what do you think about this? Have you read up on Dr. Potter to see what she's been up to?

Amy 02:19
I have and because I'm a woman, I really love all of her work, and I really am I excited to talk about women in beekeeping today.

Jamie 02:27
And that's absolutely where we're headed, but before we get there, what I want to hear, because we always do this with our guests, is we want to tell our listeners about the background of our guests, and how our guests got into bees or beekeeping in the first place. So that's just how I want to lead off this conversation. Can you tell us a little bit about yourself and your journey into beekeeping and where you are today?

Guest 02:50
I like to tell people that that I'm a person whose hobby became a career. Because when I first went to college, I was determined never to do anything with science, math or agriculture. And so in my first career, I was an English professor. And I took a long time to become a beekeeper. I ended up in 1997 finishing my dissertation and spending some time at home in Kentucky, and my grandfather found that he needed an extra pair of hands in the bee yard. And that's really all I was. I didn't know a honey bee from a yellow jacket. So when we started, just our first hive inspection, it was just an amazing experience for me because of the specificity that the hive is organized in terms of a division of labor. And then that just, after that day, I just kept volunteering to help my grandfather with his bees for the rest of the summer. And learning more that flowering species, and learning more about the division of labor in the colony, and the challenges that bees face. So that was - pretty much my interest was at a superficial level I would say, but I started writing about honey bees as a professor, an English professor. That led to my first book, Bees in America: How the Honey Bee Shapes a Nation, which is very much a social study of how our country has embraced the honey bee as an image in religion, in music, in art, and in our work ethic. From that particular book, I became fascinated by the women beekeepers that I didn't have enough time to explore in Bees in America. And so then I wrote Beeconomy, What Women and Bees Can Teach Us About Local Trade and the Global Market. In that book, I wanted to go around the world and see how women in different environments take care of bees, look at the hive structure and architecture, learn the plants. And I really also wanted to focus on queen production because it seemed to me like the queen production industry tends to get overlooked. So that book is really focused on that aspect. Finally, I've had a dog legged career, I like to say, I started working with coal companies in 2008, to develop habitat on surface mine sites in eastern Kentucky. And so that led to the third book Flower Power, establishing pollinator habitat. I tell people I wrote a bee trilogy of the past, present and future, and it's like Star Wars, except I don't have the royalties that George Lucas gets for his trilogy but one book led to another.

Jamie 06:29
The way that I think I first was introduced to you, is I saw you giving a talk, and I cannot remember where, but I saw you giving a talk on your work with reclaimed lands from coal mining. So that's the image that was seared in my head was your contributions to all of that field. And so what was the book that you said that represented that?

Guest 06:49
That book just came out last year. It was published by Wicwas Press, called Flower Power, Establishing Pollinator Habitat.

Jamie 06:58
Incidentally, for our listeners, every book that you mentioned, [and] your website, etc, we'll make sure and link in our show notes so that all of you guys and gals out there can see what it is Dr. Potter has published, you can check up on her works, and read more about it.

Amy 07:12
Yeah, definitely. I love, Tammy, that you are talking about how you turned your passion into a career. I feel like that's just what beekeepers do. I feel like it's a very specific niche and you really have to love it to be in it, and I think that's amazing. I know right before we started recording, you were telling me about your husband, and how he wasn't a beekeeper, but he kind of married into it. And on your honeymoon you guys were keeping bees, right? He learned to light a smoker on your honeymoon.

Guest 07:38
He was a very good sport about it, and as I was telling Amy, he had already proposed and I already had a ring on my finger, when he asked if he needed to be a beekeeper to be married to me. And no, Jamie! I told the most bald faced lie I have ever told in my life. I said no, of course not baby, you do not need to be a beekeeper to marry me. And so he does get high points for being a good sport. We did go to one of our bee yards on a surface mine site. And he learned how to light a smoker and he's been at it ever since.

Amy 08:24
That's so funny.

Guest 08:25
He is the beekeeper's keeper now.

Jamie 08:29
I'll tell you what I find really crazy about what we do. So I've been keeping bees since I was 12. Now, so that's been about 30 years, and it's so contagious, because it seemed like a while before people around me kind of caught on to it, but now it seems like just by me being a beekeeper, I think about all the people who have gotten into bees as a result of just me being a beekeeper. From back home, where I am now professionally as well, and you can claim the same thing. Heck, your husband's a beekeeper as a result of that. So if we can all kind of think about how the beekeeping disease, as it were, has spread from each of us individually becoming beekeepers. My father-in-law keeps bees now. It's just amazing to think about the spread as an individual and I know you've had that same influence on others too.

Amy 09:20

That's so fun. Okay, so let's get back to what we were talking about, and let's talk about Beeconomy. So what was the history behind Beeconomy? And what was your inspiration for writing it? I love that you were in English. You know, that was your profession before you became a beekeeper and you've kind of been able to tie the two of them together. It just seems like a perfect fit for you.

Guest 09:41
So with Beeconomy, I wanted to maybe put some distance between the issue of women's rights, which for many of us is a civil rights issue, and focus on the issue of women from an economic standpoint, and what I ended up doing with Beeconomy is basically making an argument that women tend to live longer than men, they make less than men, at least 30% less than men on average. That statistic is still in place, even though Beeconomy came out in 2012, that's not an outdated statistic. For many families, women end up providing the food production for both the younger generation and also the older generation as the older generation ages, and maybe needs more help. And so a lot of that labor falls on women to step up and provide. My argument is that in centuries past, women have been able to become beekeepers, and use beekeeping to supplement the family income, by either the sale of honey or beeswax or those value added products that are associated with hives. So from my standpoint, then, when I first started Beeconomy, I struggled with the decision of whether to just base it on the United States, or to approach it and include a global discussion, and I decided very quickly that I needed to just go ahead, the work would be the same.

Jamie 11:36
Yeah Tammy, that's exactly what I was about to ask you. In Bee Culture, it says Beeconomy explores the relationship between women and bees around the world, and it sounds like you're kind of heading in that direction. So please do tell us about that.

Guest 11:48
I decided that the first step was to learn much more about queen production. I interned for Big Island Queens back when it was owned by the Bashir family in 2006, and went to Africa to interview a beekeeper there who had kept bees for 40 years. The conversation in Africa was worth the price of the plane ticket, which was not cheap. She taught me a lot about the importance of smoking bees approximately 30 minutes before you go into them, how that's an important way to calm a hive, and I've never forgotten it. She also stressed the importance of having a lot of space between the hives, so the pheromones couldn't bounce off of each other, and it's still one of those things I like to stress to beginners. So, I worked in Hawaii as an intern, I went to Africa, I went to Australia in 2007. These are places where I was able to see women working different types of hives, for one. That was important to me, to get some visibility of all of the diversity of hives. I just didn't want to talk about moveable frame hives. Because in Africa, that technology is quite expensive, and also in Africa, women use honey in markedly different ways. They are primarily beer makers, and the country of Zambia, for instance, so it's not as if beekeeping as a one size fits all. Our approaches to beekeeping need to be flexible. That's what I've learned through the travel.

Amy 13:49

It's really neat. I was just wondering if I can travel with you, when we are able to do it after COVID. Will you take me with you and put me in your suitcase?

Guest 13:59
The whole COVID virus pandemic is such a mind-altering phenomena, because you have to realize that you yourself, now I myself can be a vector of this virus. We were talking about this before the interview started. That has curtailed my desire to travel as much as I'd like to, because, as I said, realizing that you yourself can be a vector of a virus, a contagious virus that doesn't have a vaccine, that doesn't have a cure, it puts the brakes on my desire to write another book, frankly.

Amy 14:49
So in in one of your books, in Bee Culture, there's an article that was written about you and Beeconomy and there was a statement that said there was an impact in potential of the female aspect intrinsic to beekeeping. And I know you kind of touched base on that a little bit early on. But can you discuss this a little bit further?

Guest 15:10
Well, I think one of the things that I learned, one of the biggest differences to me between, say, honey production and queen production, is that first of all, when I was in Hawaii, now this is 10 years ago, so things could have changed. But the queen catching crew had a lot of women on the queen catching crew. The way that they approached hives was different. There was a lot more patience, shall we say? You have to catch queens by their wings, so you can't wear gloves. A lot of the nucs were smaller than honey production hives. So a lot of times you don't need a smoker, or even a veil for that matter, at that time. It was a more liberating experience to be working on a queen catching crew with other women. Just seeing that you don't have to necessarily schlep boxes filled with honey from one place to another, and handle the hives as roughly as I had seen people [do]. You'll get some beekeepers, first of all, they haven't been on the hives for a while, so there's a propolis envelope that they have to crack, and when the hive tool doesn't go in between the supers as smoothly as they like, they'll start pounding the hive tool in between the supers, which of course just enrages the bees, but they're wearing gloves. As far as they're concerned, that's just, good, clean fun for them. But it was a totally separate style of beekeeping, and when I'm talking to women beekeepers, now, I stress that if they could just work, spend more time with nucs, get comfortable finding queens, get comfortable picking them up by their wings, getting through that phenomena that I call bee shyness, which is just simply a nice way of saying fear, then they find that their hives are much easier to work. And it could have been that if the queen catching crew had been all men, maybe I wouldn't have had that insight, Amy, to be quite honest with you. But at that point in time, it was primarily women. I haven't seen anything since then to to alter that perception, but one of the other things that my travel has taught me too, is that, like I said, in Zambia, women don't necessarily have to be beekeepers to make beekeeping economically productive. Their primary role is making honey beer. That is the contribution to the family economy. So I think that there's, like I said, a good deal of flexibility and creativity that women can bring to beekeeping that can help their family unit fill those gaps, whenever those gaps may be, either they're bringing in more money because somebody's been laid off, or they are providing food to the younger members or the older members. And that's been the way that women have had to operate. It's commonplace, for

instance, for a wife to follow her husband to a different city, if he takes a better job. Those are norms that most of the women, certainly in my generation, I hope not for yours, but for my generation, have grown up with, that your career is second to your spouse's.

Jamie 19:27
Tammy, I have like a zillion thoughts about this, and I will have to have you on again to talk about it. There's been a couple of eye-opening things that happened to me, number on, 18 years ago, I got married, it brought a woman into my life who I'm hanging around all the time. She also has a PhD.

Guest 19:51
Amanda is most impressive. Yeah, she's remarkable. Good judgment, Jamie.

Jamie 19:59
I did a great job, she really fell down on her choice of selection. But nevertheless, I very vividly remember, when we moved to Florida, she's a smaller woman. She worked for the Florida Department of Agriculture with a bunch of men. And the idea was like, Well, you know, we can move these boxes for you. And I remember very vividly her being nine months pregnant, and yeah, maybe she couldn't have picked up that full medium super of honey. What she did is she just took an empty medium super with her, and she took all the frames out of it, put it in that box, and then went down to the next box. And so she outthought them, and was able to do the work regardless. And the second thing, and this has really been the more impactful thing with me with regard to women, like I said, I could go on for days about this, but my wife and I, we have two sons and we have two daughters. And I have caught myself many times saying the things that are very stereotypical to say, with sons and daughters, and the further I get along into it, the more I feel like I'm having to work as a father to tell my daughters, you can do anything, do not listen to this nonsense about things that men do, and things that women do. Just, it's nonsense, you girls can do anything, and as the father of daughters, it's really begun to impress upon me how important it is just to start with the mindset that you are capable of doing anything, you can be accomplished in the stems, the science, technology, engineering, mathematics, whatever you want to do, you are able to do. And it's funny, because these are things that weren't on my mind, before I started raising daughters and I feel like it's sad that I have to tell them that, because I feel like maybe society may not share that. You mentioned the 30% pay raise, it would bother me if my son and my daughter have exactly the same job, but my son makes 30% more. It would bother me. These things are troubling to me, and I feel like as a father, who's raising two young daughters, at the moment, it feels like it's necessary to start at the beginning and say, you are capable, you can do these things. I could go on for days about this. But those two occurrences, being married and seeing Amanda do these great things when she was super pregnant and out in the field and all this stuff, and then seeing my daughters with regard to my sons and having to work my way through that, striving to be an appropriate parent. I don't know, these things have really impacted me recently. So I think the work that you're doing is kind of important in that regard. So with that monologue myself, I want to ask you what suggestions, recommendations, do you have for female professionals in general, but females in beekeeping specifically?

Guest 22:57

Well, one of the things I stress in my talks is that I've started one career defined by what I didn't want to do, I didn't want to do math, I didn't want to do science, I didn't want to do agriculture, and I didn't have a hierarchy, I hated all three of them. Now, I do math, science and agriculture every day, and I love it. I just love what I do. And I love what I do, because in some ways my career is a compilation of both the practical aspects of beekeeping, and then also, working with the state to try to create more economic opportunities for beekeepers in our state. So I'm constantly writing grants. We've been able to get like five grants, while I've been the state apiarist, possibly six, and so that requires skills, and writing skills, math skills, all of those kinds of reporting skills, all of those things that you're well aware of, I'm in awe of your new labs on the way. But no skill goes unused, in my world anyway. I have to use them all, and I wouldn't be as effective as an apiarist if I didn't have that previous career as an English professor, but I had to be flexible and gain the skills that I needed to be the state apiarist and I was willing to take a pay cut. I was an intern when I was 36 years old, working for Big Island Queens, just to learn the basics of the queen production industry. I think that is an important thing to say, that it's okay to volunteer and do these kinds of things, even though you don't get paid, if it helps in the long run get to where you want to be as a beekeeper, which is what in 2006, in Hawaii, I did. And then I continued to go back to Hawaii, and work for Big Island Queens, to the extent that I could help, for three more years. You're always learning at that point, if you're working in industry, you will pick up things, small things that you don't think about, and no one ever writes about in an article, because it is so small, you don't think about these things. You know, the smoking bees 30 minutes before you go into, perhaps, a super aggressive hive, for instance, or when it's August out, and there's a nectar dearth and the bees are cranky, smoking bees, approximately 30 minutes before you go into those hives is an enormous game changer, if you as a beekeeper understand what's going on. I think I'm drifting into monologue mode here, so cut me off.

Jamie 26:18
That's perfectly okay. I just wanted to listen to you talk. I wonder, what is the list of recommendations you have for females getting into beekeeping? I just look at it and I'm so encouraged and excited when we have our bee colleges, as an example, Amy, I don't know if you have the official statistics, but wouldn't you guess that about half of our attendees are female?

Amy 26:45
We've got a good 50/50 ratio, I would say, yeah.

Jamie 26:48
And then I look at our lab for graduate students, and I look at other labs for graduate students around the country. It feels like there's a lot of females getting into bee research and bee science. I look at a lot of the recent hires in the last decade around the country, for professorships, and there's a lot of females getting into those positions. So I'm wondering, what specific recommendations do you have for women who just want to keep bees?

Guest 27:16

And I would, I would go one step further, Jamie, what I'm seeing too in the industry is that more women are taking leadership roles. A data company here in Frankfort has just hired its first female manager. Joan Gunther is the first female president of the American Beekeeping Federation.

Jamie 27:37
Good points, good points.

Guest 27:39
I see it as a slow changing of the guard, if you will. But the first and foremost, the most important thing that women have to do, in my opinion, in addition to the normal, and this goes for both men and women. I mean, if they're thinking about having a hive and they don't have any experience being a beekeeper, they have to get that year of going to bee associations under their belt. That gives them time to explore their equipment, because what seems to me happens, it's like when you go to a shoe store, and you tell the salesperson, I have a size eight foot and the salesperson comes back with a size 10 shoe and says oh, you'll grow into it. Oh, just wear more socks. Oh, I'll give you 10% off. So the customer goes ahead and buys those shoes that will not fit his or her feet. Those shoes sit in the closet for five or six months, inevitably they get given to Goodwill. The desire then on the customer's part is lost, and I see the same thing happening with beekeeping. I see a woman show up at a beekeeping supply joint and they sell her the beginner's kit. The beginner's kit is fraught with all kinds of potential mistakes. Let's start with the hive tool, which is not a J hook. They end up chipping their woodenware in the frames if there's propolis there, it always contains a 10 frame deep. It always contains a pith helmet and a veil so the beginner can't possibly see an egg in a frame. These are all issues that I have with the beginner's kit. The only issue I don't have with a beginner's kit is when they include a book such as Keith Delaplane's First Lessons in Beekeeping. The book is fine I have no issues with the book or its author, but the way that that beginner's kit is typically designed is to give a beginner just these very basics, which always end up hindering a person from developing. For instance, and I'm a case in point, I'll be the first to admit, I had a pith helmet and that veil, and I didn't learn that I can do something differently regarding that veil until I went to Hawaii and we were just working with a baseball cap and a veil, and that was the most liberating experience for me, just being able to see an egg and not have to have this cumbersome equipment. It was an albatross. It was holding me back. The difference in hive tool, same thing, having a smoker with a taller bellows, you may spend like five bucks more, but the smoker is easier to light and it stays lit longer. Those little things can make a difference for somebody who's learning, it seems to me. Let's talk about those 10 frame deeps, which I think are just holdovers from the 19th century. If I could I would burn every one of them in the whole country. Now I'm on a soapbox, now it's no longer a monologue. Now it's a full fledged rant. I hate ten frame deeps. So one of the things that we have been in the process of doing, and I say we because my husband has really taken the lead on this. We do have polystyrene hives, because guess who else hates ten frame deeps? I mean, it took one season, one marital season, for him to agree with me that the 10 frame deeps had to go. And so we shifted our apiaries over to six frame polystyrene hives, and that's a big difference, I want all people to realize that this is not something that I think is gender specific. I think we do beginners no favors by making them either fear bees, because by July they go into a ten frame deep and it's just boiling over with bees. And the equipment is heavy, they're having to pick up 100 pounds or so. We don't do our industry any favors by turning those beginners off. Regardless of whether that

beginner is a male or female, there are different types of equipment, certainly much more so than existed when I was helping my grandfather. It's taken 20 years for us to get rid of the 10 frame equipment off of our farm because a lot of schools end up donating their ten frame hives to us when they realize nobody wants to take care of them. So we have a whole apiary that we call the orphanage that happens because people buy equipment that they're not suited for.

Jamie 33:46
Yeah, I think that's key. My father-in-law sells beekeeping equipment and he mentioned that he sells quite a lot of eight frame equipment which is still kind of big and heavy, but nevertheless, there's a noticeable trend in that direction. People can pick it up easier, people can move it easier, a lot of people have migrated away from deeps altogether and might use mediums exclusively, as an example. This is all good advice. I really appreciate everything that you shared I feel like we could go on for days talking about this we're gonna have to have you back on a future episode if that's okay with you.

Guest 34:19
I would love to. Like I said I'm delighted and flattered to be invited to be on this podcast and I hope you know how much everyone I talk to mentions it and they really do value what you're doing.

Jamie 34:34
Our only goal with it was to help beekeepers be better beekeepers. We get no financial kickbacks from this. There's no sponsors of the program we're allowed to have. We're really just doing this to get information out there and Tammy, it's people like you who has information we want to share with others, because we feel that every interview that we have, every time that we do something, people out there learn and change their beekeeping practices, and that's just what we want to see.

Amy 34:59
Yeah, and Jamie I also know, with COVID happening right now, Tammy was mentioning earlier about all the boards that she was on, all the organizations that she was involved in. And I was just wondering, Tammy, I know, you wanted to share a little something with the audience about some of the funding and what's going on with some of the committees you're on.

Guest 35:20
I don't think that it's any secret that the overall impact of this virus has been to have a drastic impact on the economy, and that trickles down to nonprofits too. I mean, all of the nonprofits are struggling for donations. Giving is 50% off, that's to be expected when you have the amount of people that we have in our country that have been laid off. And so, we're going to get through this, and it's not going to last forever, but I do like to just mention that, if you happen to have an extra $20 or $50 or what have you, it would help the nonprofits that I work on and others work on. I mean, these are a lot of volunteers are on these boards. It would help us provide scholarships to young people, it would help us provide resources, I mentioned that I'm on the Honey Bee Health Coalition, and we do try to make resources available to the beekeeping community for free. And so any donation at this point in time would help any of the nonprofits that are out there, and not just the ones that are serving as a board member for but others as well.

Jamie 36:55
Yeah, that's a good point, especially at Honey Bee Health Coalition. They're one of my favorites. I'm like always talking about them and their Varroa Management Guide and things like that. That's great. I appreciate the work that you do. Tammy, thank you so much for joining us today on our podcast. We've really enjoyed having you.

Guest 37:10
Delighted to be here. Thank you so much.

Jamie 37:12
Absolutely. Everybody, you've been listening to Dr. Tammy Horn Potter. She's the Kentucky State Apiarist and also board member of the Eastern Agricultural Society Project Apis m., the Foundation for the Preservation of Honey Bees, as well as the Honey Bee Health Coalition. She's been a great advocate for women in beekeeping all of the things that she mentioned today, we'll make sure to link in our show notes that you can read more about her and her efforts to move beekeeping forward. So thank you guys for joining us on this segment of Two Bees in a Podcast.

Amy 37:46
For additional resources visit the podcast page on our website, UFhoneybee.com.

Jamie 37:57
So Amy, in the past on Two Bees in a Podcast, we have spent a lot of time talking about extension. About what it is, about what extension specialists do. And I think we're gonna be able to dive back into that some today this should make you happy since you're a hundred percent extension.

Amy 38:08
I love extension. It's my favorite thing in the whole world.

Jamie 38:12
Well, before we give this interview, I'm curious, do you have a one sentence definition for extension for our listeners? Let's see.

Amy 38:18
Oh man, my elevator speech for extension. We're basically just people helping people and we're disseminating research. We're sharing the research from the universities to the general public.

Jamie 38:29
That's right. Well, that's pretty good. Not bad. Thank you. Well, the reason I'm asking you about it is because we're interviewing an extension specialist today. She is Dr. Jennifer Tsuruda who's an assistant professor and apiculture specialist in the Entomology and Plant Pathology Department at the University of Tennessee. Jennifer, thank you for joining us on Two Bees in a Podcast.

Guest 2 38:49
Thank you for inviting me. I'm happy to be here.

Jamie 38:52
We're going to talk to you a lot about what you do at the University of Tennessee and what it means to be an extension specialist etc. But before we get there, our listeners like to know how the interviewees that we have get into bees, and that's my question. Tell us a little bit about yourself, how you got into beekeeping, and what ultimately took you to the University of Tennessee?

Guest 2 39:13
Well, I have one of these interesting backgrounds where I never would have thought I would get into bees or beekeeping. I don't come from a family of beekeepers. My dad is a retired veterinarian, small animal veterinarian. But when I was growing up my interactions with bees were when I would be out at recess playing out in the field and making little daisies or clover, then we call them daisy chain bracelets, but they were clover bracelets and getting stung by the bees as we collected the clover and so I had a really negative relationship with those bees initially. Then when I went through school, I was interested in biology and then I went to UC Davis for my undergraduate degrees, and they had a really interesting program there of animal biology that consisted of faculty mentors from entomology, nematology, wildlife, and animal science. So that was one of the two majors on campus that required a senior thesis. I thought, gosh, what am I? What am I doing? Why am I picking one of the hardest? Or the ones that have the most requirements? It ended up being fantastic. Most of the other students were working in more animal science areas and working with horses and large animals, but I didn't know at the time what an impact it would have been for me to be there, and to work with Robert Paige who's now a retired Provost from Arizona State University and one of the leaders in my mind, legends of beekeeping and bee research. That was a great opportunity for me. I started as an undergraduate just working in the lab. And then I stayed in there after I finished my senior thesis and worked in the lab as a technician. And then I thought, well, I really enjoy this, can I make a career out of this, and I stayed on to do my masters and my PhD with him. And then from there, I went to Greg Hans lab, who's also a Robert Paige alum at Purdue University. He has since retired which is awesome. Good for him. And I spent about five years there doing a really long, extended postdoc position, where I learned about the genetic bases for behavioral resistance to Varroa mites, which was a really awesome project that many institutions were working on together. And then from there, I went to Clemson University and was their apiculture specialist for about five years, working again with beekeepers, and also other stakeholders that interact with bees. And then this opportunity opened up at the University of Tennessee, for faculty level 100% Extension specialist position which is pretty rare these days. And so it's been a great opportunity to work with the stakeholders as well as an academic department on both extension and research. So education at its finest.

Jamie 42:06
So Jennifer, that's a really cool pedigree. I've never had the privilege of meeting Rob Paige. He's one of those people that I've always wanted to meet. And just like what you said, one of the people that just everyone seems to know if you know anything about bee research, I don't think I was aware that you did your degrees there. That's pretty cool. Did you enjoy your time there?

Guest 2 42:23
Oh, I love it. I mean, I loved it.

Amy 42:27
Jamie, she's not gonna be like, No, I hated it.

Jamie 42:30
He might not be listening to our podcast. I'm just guessing here. But yeah, that's cool. And then you went on to Greg Han, I know you did that. I had met Greg a number of times. So that's cool. And you were at Clemson now at Tennessee. That's neat.

Guest 2 42:44
Yeah. And I think one of the really valuable things in my upbringing as a bee researcher, is how all of these individuals, these mentors and advisors, I'm so thankful and grateful to them, because they really helped shape my way of thinking as a scientist. And it's really hard, as I'm finding out in extension, to influence the way people think. So they've really reared me well. Tell them to actually change behavior is a whole different level of impact. Looking back, I can see what great educators and teachers they were, because it brought me to where I am today.

Amy 43:26
That's so funny. That's something I should have put into my elevator speech is trying to change behavior.

Jamie 43:35
Jennifer nailed that. You just screwed up, edit it out, and then record yourself saying it. We could just edit Amy out at this point.

Amy 43:44
Story of my life. Thanks a lot, guys. Gee. Thank you. Okay, let's get back to what we were talking about. So we actually interviewed Malcolm Sanford who was in Jamie's position before Jamie was in his position, his predecessor, and he was I guess the last person that had 100% extension, and was talking about how it's very unique to be 100% extension these days at a university. So I think that's really awesome.

Guest 2 44:14
It is really great, and a lot of it has to do with this wonderful group of really passionate beekeepers, and it's a growing area, and so they need a lot of assistance, and they're really interested in having more research and opportunities. And I think it's a great time to be in beekeeping and bee research right now.

Amy 44:34

I know that during COVID, since COVID has started, the extension world hasn't really slowed down much at all. We are still releasing content. We're still writing research updates. We are still active on social media, and we're still trying to communicate. We're just having to be kind of creative, I guess, with some of the programs that we have. So can you talk a little bit about how COVID has impacted your programs and maybe some of the beekeepers in your area.

Guest 2 45:02
Sure, and you've hit the nail on the head. I mean, I've been busier than ever, it's just in a slightly different way than I would have been if it had been a normal year. We do have limitations, obviously, on gatherings, and so we aren't having our Master beekeeping classes, which are in person. We have limited opportunities for research and hiring. There's a big impact there, and that's happening everywhere. It's not just at my university. It's changing the way we're doing things, but I think you also highlighted the importance of the silver lining, if we're ever looking for a silver lining, it's that now we're allowed to kind of explore some other creative avenues. Things that we may not have been willing to try before under the normal circumstances. Now we're forced a little bit into new opportunities and adopting technology. You're doing these podcasts, and Dr. Ellis and I work on this stay at home beekeeping webinar, there's a lot of opportunities for us to interact with stakeholders beyond what we've traditionally done. Yeah, I think it's been great. And it also, I think having this challenge allows us to improve ourselves, it's an opportunity for us to literally think outside the box or think outside the hive a little bit. It's great. One thing that I do have to think about more often now is the need to mention regional and national differences. You're sure that when you're doing the class here, you're talking within this region, but the state itself has a lot of variation with it. But with the stay at home beekeeping series, we have people from all over the world joining them. Even people in the southern hemisphere, and so, thinking that they're going in the opposite seasons as us. That's a real shift in thinking for us. But it's a great opportunity for everyone to be better beekeepers right now too, because we do have more opportunities to be closer with our bees. We're lucky that agriculture hasn't been shut down. There have been impacts on commercial beekeepers, and pollination contracts, which is really unfortunate, and we really need to get things under control to help that industry as well.

Amy 47:13
But there's a meme that's online, talking about how beekeepers, in general, have been practicing social distancing all their life, so this is just a perfect opportunity for them to continue doing what they've been doing. So good job, guys and gals.

Jamie 47:33
I was going to ask you what a meme is, a may-may. I never understood what those were. Jennifer, I think when we talk about extension, a lot of people sometimes get lost, right? Amy gave us that great different definition. Early on, we've been talking a little bit about it. But you work in a land grant institution, I work in a land grant institution, we have a previous podcast episode on this, but for the benefit of maybe new listeners, the fact that you work in a land grant and that I work in a land grant means that our respective institutions have responsibilities in teaching, research, and instruction. Instruction is what people think of when they think of professors. Someone teaching students. Research is what you think of when you think of science, solving problems. But extension, just like what

you've mentioned earlier, it's solving problems and trying to change behaviors. People who are at land grant institutions and have responsibilities in extension are often called extension specialists. I'm a professor and extension specialist at the University of Florida, you're a professor and an extension specialist at the University of Tennessee. One of the things that means is that you and I will have email inboxes that are much larger than the average individual's email inbox. I'm curious with regard to your extension programming in Tennessee, what are some big issues? What's blowing up your email these days? What's the kind of things that people are always asking you about?

Guest 2 48:58
Yeah, thank you for hitting on that point so that I don't have to say it myself. But yeah, I think our email and phone call logs are a lot different than people with other types of appointments, and that's great because people think of us as resources, important resources for their problems, which is awesome. Right now what I'm seeing, and it's partially just because of media exposure, but there's still interest in Asian giant hornets. And now we dealt with European Hornets -

Jamie 49:30
You just said that phrase whose name must not be spoken.

Amy 49:34
Okay. I still receive calls and emails every day.

Jamie 49:39
I'm surprised it's not an acronym by now AGH or something like that.

Guest 2 49:45
You can edit this part out, but I find it very hilarious that Asian Giant Hornets, their acronym is AGH, and the European Hornet is EH, and the other one we have an issue with down here is The Southern Yellow Jacket, which like if you just look at the acronym, its SYJ, they're all these negative sounds, it's so funny!

Jamie 50:11
I don't like any of our bee acronyms, I can't stand parasitic mite syndrome, I just wish that people would stop acronyming things.

Guest 2 50:17
And American Foul Brood versus Africanized Honey Bees.

Amy 50:23
You know what, I'm probably not gonna cut that out of the podcast. That's okay.

Guest 2 50:30
You know, these weird little things that happened in my head and the extension line. But okay, getting back to it. But now we have this new insect that's - not new, but we have an emerging insect for this

time of year, which we expected, that is now showing up, at least in Tennessee right now, is the cicada killer. And again, a very large stinging insect with somewhat similar markings to a non entomologist, they may look very similar. And so we're having to do a lot of identification there, and this is one of the other facets of extension is that we have extension agents in every single county across the state. So we're trying to rebuild those connections and make sure that people understand that they can go to their county extension office for identification purposes. So you can email them photos, and we have, if they can't identify it, we have a distance diagnostics program, where those photos can get submitted and then someone, an entomologist, can look at the photos and do the identification for them. So that helps with dispersing some of the emails and calls, but also builds that local bond there, which I think is really important for us to foster.

Amy 51:37
Awesome. So this is kind of a side story. I saw my first cicada killer yesterday, a live one, pulling, actually carrying a cicada up a tree. And it kind of freaked me out when I saw it. And I then I was just fascinated and I just kept watching it. I could not believe how strong they look, while they're pulling the cicadas up. But that was pretty intense. That was my fun side story. For what I saw yesterday.

Guest 2 52:02
I'm really excited because next year, we're expecting our 17 year periodic cicadas to have a bit of like, I forget what brood year it is. There should be high numbers of them next year emerging. So I'm wondering if we're gonna have a bunch of really happy cicada killers out there.

Amy 52:19
Probably. So speaking about Tennessee, I heard that you guys had some high loss rates in recent years, as far as honey bee colonies go. Now that you've been there a year and a half or two. Do you have any ideas of what's going on with the high loss rates? Do you think that this is just specific to Tennessee? Or do you think that this is specific to I mean, the entire nation?

Guest 2 52:43
That's a great question. So yeah, I've only been here, this is my second season here. But it's not too different from the area in South Carolina where I was before this. We've had over 70% losses within the last five years, in two out of the last five years or so.

Amy 53:02
Over 70%!

Guest 2 53:05
Obviously, that's not sustainable, and that has a huge impact. That's one great thing about starting out here is, you know, just by chance, those numbers should go down. I'm hoping I can make an impact here. But one thing I've noticed in the last year and a half, it's still a little bit early to make a big statement. But I do see issues with rural management and I think that is true all across the nation and probably a little bit internationally as well. I think we have a little bit of a conflict and a challenge of having a lot of new beekeepers start out, and there's this learning curve getting them up to date with

rural monitoring and treatments. It's tough when you're a beginning beekeeper to know all of the resources and best management practices. That's where our Master beekeeping classes come in and making sure that they have that science and research-based information to make the best decisions to be successful as beekeepers. Amy, I know everyone gets tired of hearing about Varroa. But I always say if you want me to stop talking about Varroa, let's get it under control, and then we can move on to something else.

Amy 54:12
That's fair.

Jamie 54:14
You and I have shared the stage on The Stay At Home Beekeeping series, it's been run out of Auburn University, Jeff Williams and others. They're a really good program, and while you were on that, you mentioned that you are recording presentations for virtual field day. How's that been working? And how are you handling recording those demonstrations?

Guest 2 54:33
It's been interesting, so I'm going to age myself a little bit. I bought my first selfie stick. That's been fun for recording out in the field.

Amy 54:43
Jamie, do you know what that is?

Jamie 54:45
I do and I've resisted ever even thinking about purchasing one. I'm sorry to hear that Jennifer.

Guest 2 54:52
It is just nice to be able to have your phone further away from your face. I think that's the biggest benefit of it, is that it's not right up close against your face. But I think, again, that's allowing us to be a little bit more creative, we can share these presentations across the state, across the nation, across the world. We have a broader audience again, we can reach more than just the people who were willing to drive in for the day. It's also that people can enjoy these presentations and educational talks from the comforts of their home rather than being out in this hot and humid weather right now. It's also great because we have the opportunity to show the progression of a field. I'm usually talking about pollinator plots are supporting pollinators out in the landscape, and so I can show videos and photos of those plots over time, rather than just, okay, we're here right now, and I can describe what it looked like two months ago. So really being able to show them how these plots progress has been, I think, in my mind, really beneficial, because we want people to understand that they should be changing over time and they should have a lot of diversity as well. But we want to make sure that those bees and other pollinators and beneficial insects are being supported throughout as much of the warm season as possible. We're trying to promote a diversity of bees and beneficial insects, but also this silver lining of being able to use this technology and use more video, I think, than just standing out in the field and everyone kind of awkwardly looking around. So it's been great. I think it's great. It's definitely a challenge. Because we're

not, I'm not used to recording my own videos of myself. I'm used to recording other things and sharing that. But it has been a nice opportunity to collaborate with other people as well, including some of the horticulture, faculty and extension agents. So it's been, I think positive, it's an opportunity, and hopefully these will be changes that we can choose to keep going on with programming in future years. Assuming that we get a little bit more back into in-person programming later on. We can still adopt this technology to have speakers from other places. Yeah, Jennifer, it's funny you say that, because I was thinking about asking you the question, where do you think extension is heading but you basically just answered it, I definitely see it going more virtual. You talk about videoing things and sharing those from the field. We've talked about the stay at home beekeeping series, heck, my team's doing this podcast, I mean, all these things that we're doing, to try to reach people without necessarily having to be face to face with them in a classroom setting or, or a field day setting. So, it's neat to see that universities like University of Tennessee and others are still investing in extension programs for bees, and not just bee research and bee instruction. It's great to know that there's people like yourself, who are out there helping beekeepers and others address the issues that they have. And I think one of the other benefits that we don't oftentimes talk about is that we have more diversity in how we reach our audiences, because we know that people have different learning styles. Now we're hitting them with many different facets of learning and education. I think we can have a really positive impact if we're trying all of these new different ways and having a portfolio of presentation styles.

Jamie 58:19
I agree completely. Jennifer, thank you so much. You've been you've been great to have on Two Bees in a Podcast today. I really appreciate your time.

Guest 2 58:26
Well, thank you. It's been wonderful. And we'll see you with the next stay at home beekeeping program.

Jamie 58:30
Absolutely, guys, that was Dr. Jennifer Tsuruda, Assistant Professor and Apiculture Specialist from the Entomology and Plant Pathology department at the University of Tennessee, discussing today what it means to be an extension specialist and some of the issues that we see our beekeepers facing. Thanks again, Jennifer.

Stump The Chump 58:52
It's everybody's favorite game show, Stump the Chump.

Amy 59:03
Okay, it's that time the question and answer, the stump the chump time, Jamie, you ready?

Jamie 59:09
I am ready to be the chump today, Amy? All right. And every day, every second of every day.

Amy 59:17

We have a ton of questions from our listeners. And we'll just go through a couple of them today. So when moving the hives, is it true that you need to move them two feet a day or two miles away? Two inches, two feet?

Jamie 59:30
You know that's a very common question that I get, and then that saying, two feet a day or two miles away? Yes. That's a saying that often goes with it. It's based on the premise that worker bees have honed in to where their hive is located. It's by this tree, it's by this stump, it's by this bush, it's by this fence etc. And so if you move though, that specific colony 15 feet away, the worker bees when they go out to forage from that colony, are going to go back to the original spot, not the new spot. That's what a lot of beekeepers say if you just move your feet colony a couple feet every day, then you'll be okay.That is true. If you're going to move your bees within your yard, it's best to just move the hive, two to three feet every day. And if you've only - but here's the deal, Amy, it's kind of a tricky question. Because if if I've got a backyard full of colonies, let's just say for the sake of argument five, if I'm going to move one of those, it's really not that necessary to move it a few feet a day, because your workers are just going to drift back into the colonies that are already there. I don't think that that's a problem. And if you've only got one colony in your backyard, I've found that it's actually okay to move it five or more feet, because, yes, they do kind of locate the spot where that hive was, but they also recognize the hive for what it is. If it's the only white box in that area, and you move it five or 10 feet, they're going to also go to that area and look for the nearest white box. I would argue that when I've moved hives, if I'm moving five or 10 feet and it's the only hive, then it's not really a problem, if I'm moving them across my yard, and I happen to have seven acres, so across the yard could be a couple 100 yards, I will typically move them away for a few days and then move them back. And that's usually the lesser of the two evils. What do I mean by that? If I've got some beekeeper friends in the area, I'll ask them, Hey, can I put my hive in your yard for a week, and then I'll move them back. And that kind of goes to that two mile away thing. You know, bees are pretty forgiving. I don't usually worry about it too much. But if I'm going to move just a few feet to the backyard, then I'll move on that two to three feet a day. But if I'm going to move them drastically, 15 yards or more, I will try to take the hive away for a week before I bring them back. I know that's a long ramble. Yeah, that's kind of the thought process that I go through when I asked myself how far should I move it? It seems like that this might be a lot of work, but what about moving it across your yard 15 yards? Or is 15 feet or so and then leaving an empty super in the location that it used to be? Would that be an option and just dump in the bees? Or no? Some people do that. I just think that that certainly can work, but you've got to go back to the same problem when those bees back into where the new spot is for them to hive.

Amy 1:02:37
Just gonna keep going back.

Jamie 1:02:39
What I do, my general rule of thumb is, if it is the sole colony, within about 15 or so feet then I'll just move it however far I want to within that 15 foot radius. And if there's a few colonies there then I don't care if the bees drift back to the old site, because they're going to end up in those old colonies and I

don't consider that a wash. But if it's one colony, if I only have one colony and want to move that thing, 20/30 or more feet, then I'll usually take it away for a week before bringing it back.

Amy 1:03:11
That's so funny. I feel like we should change the segment to be called "It Depends."

Jamie 1:03:16
There's so many potential reasons, but I guess if I had to boil it down to something, two feet a day or two miles away. It sounds like the questioner answered their own question with a statement that they put in.

Amy 1:03:29
Yeah, that's fair. Okay. The next question we have is how can we incorporate - I got a call the other day from this individual - and she was asking how to incorporate integrated pest management in a top bar hive. She's using a top bar hive, but she's having issues with small hive beetles and so she's wondering how can she incorporate IPM into top our hive or basically anything that's not Langstroth hive.

Jamie 1:03:52
That's an interesting question, and it's based on the premise that IPM may be difficult to do because most IPM strategies are built for Langstroth hives. And I would argue that there's only a few exceptions that I can think of. What I would argue is that a top bar hive is sometimes called the Kenyan top bar hive. Those of you who are listening to us and not knowing what we're talking about, you can look that up online. Kenyan top bar hive or top bar hive. Most everything that you would do in a Langstroth hive for Varroa, you could do in a top bar hive for Varroa. You can put screen bottoms on top bar hives, you can hang the treatments in top bar hives, you can use tolerant or resistant queen lines in top bar hives. I would argue for Verona it's tit for tat you can do essentially in top bar hives what you can do with Langstroth hives. I think the only pest or pathogen that I think you might struggle with, specifically in a top bar hive, could be small hive beetles, because as an example, some of the traps that are often recommended, better beetle blasters or variations thereof, they hang between frames, and if you know much about a top bar hive, hanging between a frame is still possible, but the lid of a top bar hive rest physically on top of the frame, so there's no gap for those traps. I can see small hive beetles being an issue because it's very difficult to trap them, but I think if you take a frame out of a top bar hive, you can still put a lot of the standard beetle traps in place of a frame in a top bar hive to capture small hive beetles. Otherwise, you're just going to have to keep those top bar hives strong. For small hive beetles, specifically, there's often a sliding wall you will put on the outermost edge of the cluster of the top bar hive. You don't want to give the bees more space than they're able to protect. Making sure you have a good strong hive managing the other diseases and pests, and making sure that they're only given the space that they can protect will go a long way for beetles, otherwise you just do what you would normally do in a Langstroth hive.

Amy 1:05:56

Yeah, that makes sense. My third question is also about small hive beetles. And the question was, are there any essential oils that we should not be using in the hive? Anything that would essentially attract small hive beetle but not be detrimental to bees? And this person had used Bay oil?

Jamie 1:06:13
That's an interesting question because there's a huge grassroots movement to put essential oils in hives, and I don't really want to get into the therapeutic issues related to it, or people who are using essential oils, but I will say that I have yet to see convincing research, that any reason, any essential oil, aside those that are already approved for use in hives confer any benefit at all. What do I mean by already approved in hives? Thymol is already approved in hives, but not as a raw essential oil, but in products like Apiguard or ApiLifeVar. My point to you is, is I wouldn't recommend putting essential oils in colonies outside of the registered products anyway because the research just hasn't supported their use. If it's not a registered product, there's no data support for the use of those products. I would say something like Bay oil, why use it in the first place? There's no documented benefit to honeybees. And I would argue that for any essential oil, there's a lot of people who like to use wintergreen or peppermint, but there's no documented benefit of these things to bees. So the questioner is kind of asking it from the perspective, if I put this stuff in there, is it going to attract small hive beetles? My counter is, why put this stuff in there in the first place? There's not a lot of work done showing these things being attracted to or repellent to small high beetles. I actually did a project when I was a postdoc, and an undergraduate student, looking at some of the ApiLife Var products and some other things that that people were using at the time for controlling small hive or sorry, Varroa. And those included things like thymol, camphor, eucalyptus, oil, menthol that are in ApiLife Var. Apiguard is based solely on thymol. And I would argue that you can use those things for Varroa the way that they say, and that you shouldn't have concerns about whether or not they're going to be small hive beetles that accompany that. So yeah, that's also a long rambling answer to say that I can't think of good reasons to put essential oils in colonies beyond those essential oils that are already part of registered products.

Amy 1:08:24
And that goes back to what we always say: the label's the law, and I don't know if there is -

Jamie 1:08:30
Absolutely, there's no label for any of this, exactly. And what I can tell you, what's happening is that people, there's this movement towards essential oils as holistic medicines for humans and other things like that. And that's kind of bled its way into - because the problem is there's just no data to support it beyond the data to support the registered products that already have these things in there. And I'm not aware of any of these essential oil based registered products that are attractive to small hive beetles or amplify small hive beetle problems.

Amy 1:08:31
Great. All right. Well, thank you so much, and everyone keep the questions coming. We have lots of questions that we still have to talk about. I feel like Jamie and I want to do more segments and longer q&a segments, just as far as best management practices go. Hi, everyone. Thank you so much for listening to this week's episode of Two Bees in a Podcast. We would like to give an extra special thank

you to our audio engineer James Weaver, and to our podcast coordinator, Jacqueline Allenje. Without their hard work, Two Bees in a Podcast would not be possible.

Jamie 1:09:37
For more information and additional resources for today's episode, don't forget to visit the UF IFAS Honey Bee Research and Extension Laboratory's website, UFhoneybee.com. Do you have questions you want answered on air? If so, email them to honeybee@ifas.ufl.edu or message us on twitter, instagram, or facebook @UFhoneybeelab. While there, don't forget to follow us. Thank you for listening to Two Bees in a Podcast.