

Bee friendly

A Newsletter of the New Mexico Beekeepers Association

www.nmbeekeepers.org

Spring 2021

Get Your Bees Off to a Good Start in Spring

By Mark Sommer, Co-Director, NMBKA Certified Bees Program

Spring management “can be” critical to having a successful beekeeping season-- “can be” because bees often manage without us doing any management, but as a beekeeper, you are probably managing your colonies. Presumably you’re managing bees to get a crop of honey, for their pollination, other hive products or you’re just trying to help them survive. For whatever reason you manage bees, it’s important to give them a good start early in the season.

When the temperature allows, you will want to open your hive(s) and do a first inspection. This inspection may be short and meant to just give you an idea of how well the colony or colonies overwintered.

Make sure you do not open your hive(s) too early in the spring. Remember, you are breaking any propolis seal the bees have put in place to keep out cold. The bees probably will not seal their hive against cold after this inspection since propolis won’t be

readily available and bees cannot fly for long on very cool days. Spring can still have cold wintery nights and it’s important to leave bees sealed against very cold winter nights.



*Working the bees at the Zia Queenbees farm in northern New Mexico.
Photo Melanie Kirby*

In northern New Mexico, the time to open your hive is when your days and nights are warming consistently. Often this is late February and early March. Temperatures at night should be consistently in the 40s and days close to or

above 60. You do not want to chill the brood on the first inspections, so keep the hive opened for as brief a time as possible. In southern New Mexico, there are often mild winters and bees are managed year-round. Talk to your successful local beekeepers in your area to find out when they’re opening their hives.

Things to look for during your first inspection are:

Did the colony survive? Just because you see bees in the hive does not mean they survived. Make sure there’s a laying queen and the bees you see are not robbers. If you’re a novice beekeeper, this is where having a more experienced beekeeper friend comes in handy. Bees bringing in pollen is a good sign. Covered and uncovered brood is also a good sign.

Are they bringing in pollen?

Pollen is the protein needed for raising brood. It’s a sign they are raising brood, but it’s not the only sign. Inspection of the brood is important.

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Randy moved to Utah, but he’ll always be part of New Mexico.

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Find contacts from all over the state. Don’t let that swarm get away!

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Spring 2021

Our newsletter is a quarterly publication of the New Mexico Beekeepers Association (NMBKA).

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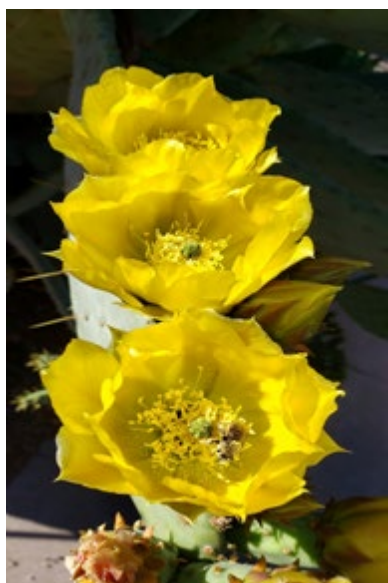
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Allison Moore, Albuquerque
Melanie Kirby, Santa Fe

Layout, production:
Kathy Grassel

Website: www.nmbeekeepers.org

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Send comments and letters to
Kathy Grassel, Editor
kathy.grassel@gmail.com



Message from the President

By Stephen Black, President, Board of Directors, NMBKA



It's finally spring again. During this time of COVID, spring couldn't come fast enough for so many of us, for more reasons than just beekeeping. For me, as I suppose with many of you, spring is an exciting and hopeful time. I have missed spending time in my apiary with the bees and I look forward to trying to raise my own queens this season. With the new, Messenger RNA based vaccines currently in distribution, we can all have hope for our lives soon returning to normal.

I hope you all were able to participate in our first virtual NMBKA Winter Conference. While we did not get a chance to mingle with our beekeeping friends, we were able to see and listen to five world-class beekeepers/entomologists, sharing the results of recent research on the health and behavior of honeybees. There was an abundance of unseen work and preparation that went into the conference; it would not have come off as well as it did without the support and efforts of your board members. In addition, the silent auction we held was a huge success, bringing in almost \$3,600, due to the generosity of our many donors.

We are already starting the planning process for the summer conference, which at this point will likely be virtual again. While our winter conference was focused on more scientific and intermediate beekeeping information, we plan to include more beginning beekeeping subjects as well.

See inside this newsletter for reviews of each of the speaker's talks from the perspective of participants, written by board members.

I want to give special thanks to two of our board members, Kathy Grassel and Frank Gibbons, who are "rolling off" the board after three years of superb service. Frank and his wife have moved to California where he is building top bar hives for his new apiary and Kathy will continue on the newsletter and conference NMBKA committees.

With spring comes our NMBKA Board member elections and we are pleased to announce the three new board members, bringing our total back up to seven. Welcome Melanie Kirby, Amy Owen, and Tom Soltero to the board! It's going to be a great year for NMBKA!

In the spirit of Citizen Science, I have signed up to be part of the Bee Informed Partnership's (BIP's) Sentinel Apiary Program. The goal of the Sentinel Apiary Program is to become an early warning system to alert beekeepers of potential problems due to increases in Varroa and other hive health issues.

I have known about the program for a while and noticed that the Southwest region (Utah, Arizona, Colorado, and New Mexico) had only one Sentinel Apiary in Arizona; so I decided to sign up to represent Northern New Mexico.

As part of the program, I will be required to send samples of my bees to the University of Maryland each month during the six-month beekeeping season, where they will be tested. I hope to both learn more about the health of my bees as well as support our NM beekeeping community.

SPRING MANAGEMENT—CONT. FROM PG. 1

Make sure the brood they're raising isn't all drone – a sign you have a laying worker or an infertile queen.



What you DON'T want to see: A drone layer and supersedure cells. Photo Kathy Grassel

Is the brood nest scattered? If so, move the bars or frames so that the brood nest is together and has some honey/pollen stores on either side of the nest. It is much harder to keep brood warm if nest is scattered in the hive.

What's the brood pattern look like in the brood nest? As in all inspections, you want to be sure the brood pattern is fairly dense - not a shotgun pattern. A poor pattern may mean you need to replace your queen or there is some other problem like disease. Chalk-brood can be a problem in the cold weather and you can see the mummified larva in cells. There may be other disease problems, but these are not in the scope of this quick article. Instead, please see: <https://www.ars.usda.gov/is/np/honeybeediseases/honeybeediseases.pdf>

If your colony is disease free but doing poorly consider combining the colony with a stronger colony.

What kind of resources are available to the colony? A colony low on resources may need feeding. Pollen can be sparse during the spring and a pollen substitute may be in order.

Usually, however, there are early pollinating trees like elm available.

If honey stores are low, the bees may need supplemental sugar water. The ratio of sugar to water during early spring should not exceed 3 to 1 and generally 4 to 1 is more than adequate. Overfeeding sugar water when they have plenty of stores can leave the queen without places to lay and the goal of the colony is to grow and split into one or more swarms. When bees are back-filling the brood nest with nectar and you are feeding, that is a sign they are being overfed. Do not overfeed your bees.

Another caveat of feeding this time of year is that you can attract robber bees. If possible, feed your bees with an inside feeder. With a Langstroth hive, this can be accomplished with a top feeder. With a top bar hive, you hopefully have a feeder location that is on the opposite side of the entrance used by the bees. Feeding at the opening of the hive is much more difficult for the bees to protect against robbing bees. In either case, you want to reduce the entrance to the hive, so it can be better guarded. Once robbers know of a source of honey or sugar water, they'll keep coming back even after you quit feeding.

Remember that the goal of the bees is to build up for a swarming. To this end, they need room to expand their brood nest. So as the weather warms, you want to give them room on the edges of the brood nest by adding empty frames of bars where the queen can lay. In the early spring you are cautioned against doing this too early as you can leave the brood nest subject to chilling during the cold nights. Be sure the nights are not getting too cold to avoid chilling and that there are

enough bees to keep the brood warm during cold nights.

If you are using a Langstroth hive, you can move empty frames (with brood type foundation if you use foundation) on either end of the brood nest, but not on the edges of the box. Instead of opening horizontally to the edge of the box it would be better to put an empty frame in the box above their brood nest where they have their honey stores.

As the days and nights warm during spring, it will be possible to insert bars or frames into the middle of the brood nest. The brood must stay warm and that's the guiding principle.

If you are using top bar hives, you can put an empty bar on the edge of the brood nest. Hopefully you have empty brood comb to put on the edge of nest so the bees do not have make new comb. If you do not have brood



What you DO want to see: Multi-colored stored pollen from many sources. Photo Melanie Kirby.

comb, you should probably be feeding your bees, so they have enough resources to build that new comb.

SPRING MANAGEMENT—CONT. ON PG. 4

SPRING MANAGEMENT—CONT. FROM PG. 3

If you have a colony that is small or weak, you hopefully have more than one colony and you can combine colonies. You can use the newspaper trick for this purpose. Make sure you take the queen out of the weak colony before you do this. Another possibility with a weak hive is to add brood from a much stronger hive to that hive to help boost their numbers.

Finally, as spring progresses, you should be looking for queen cups and queen cells. Queen cells are a sure sign the bees are getting ready to swarm. It's time to split your colony!

A queen cup is a slightly drawn out cell that is larger than its surrounding cells and is most often found on the edge of existing brood cells – often the edge of the comb. Queen cups can be around anytime during the year. Queen cells are queen cups that have an egg in them and are being drawn out into that familiar peanut shape. Again, at swarm time these queen cells (future swarm cells) will be found on the edge of brood. If you find a queen cell in the middle of your brood, it's likely a supersedure cell, not a swarm cell. That's not time to do a split.

There are many methods for doing a split. A split is a division of the hive meant to provide an artificial swarm. Why not just let your bees swarm? There are many reasons to not let your bees swarm. First, if you're in a populated area, that swarm may end up in someone's wall or ceiling. As a responsible beekeeper, it is your duty to be sure that your bees do not become a nuisance. Another reason to not let them swarm is simply because you lose your bees and a viable colony. Swarms have a poor survival rate. By

splitting, you increase their ability to survive and grow your apiary.



Amy Owen splitting a top bar hive at the Open Space beeyard. Receiving hive is behind. Photos by Sarah Simms.

When you start seeing queen cups is not necessarily the time to do a split. It can be tricky finding the exact right time to do a split. If you split your hive too early, you can end up with two weak colonies. If you wait too long, you lose your bees to a swarm.

When there's a honey flow, bees are doing well, hive is getting crowded and queen cups are starting to be filled, that's a great time to split. Seldom do all these things come together so perfectly. Often you see one or more.

A honey flow means that outside

resources are prime for a colony to divide. Bees will be trying to take advantage of this time to divide, but you need more than just this sign as a clear indicator that the bees will swarm on you.

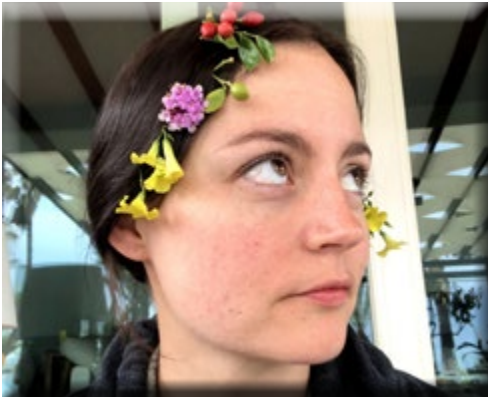
If your bees are thriving and growing to the point that they are getting overcrowded, the bees will look at this as a sure sign that they need to divide. With or without loaded queen cups, they will surely seek to divide in this condition. If you have a Langstroth hive and they are not creating queen cups, you may have already noticed the overcrowding and moved some bees into a new box which you added. That is not a guarantee they didn't notice the initial overcrowding and begin the process of dividing. Keep an eye out.

If your bees are making queen cups and beginning to fill them with eggs and growing them out to queen cells, this is definitely a time to divide the colony. Simply crushing the cups will not prevent them from swarming. You should divide the colony.



Combs with capped brood, honey, nurse bees, go into the receiving hive.

Welcome New 2021 NMBKA Board Members



Vice-President

Amy Owen is a NM Certified Beekeeper, has co-led the ABQ Beeks group, maintains hives for the NMBKA certified beekeeping program, provides teaching and mentorship, and is a regular speaker at local bee events. Amy has a master's degree in social work, and has done work on various community projects and has worked as a therapist. She lives with her husband, two children, and honey bees in Tijeras, NM. Recently, she began the small business Desert Hives. Her business aims to improve honey bee health by promoting best beekeeping practices. This includes quantitative testing and IPM strategies to control and prevent disease.



Secretary

Tom Soltero is from Las Cruces and recently relocated to Albuquerque to work at University Hospital. Tom has experience with organic farming and managing small apiaries, specializing in structural and swarm removals. His experience with cutouts prompted his interest in serving as an advocate and educating people what bees are doing. Tom has served on boards and volunteer groups, church, and the national ski patrol at Sandia Peak. Until his move, Tom was secretary for Paseo del Norte bee club in southern New Mexico.



Member-at-Large

Melanie Kirby is a Native New Mexican queen breeder with over 24 years of professional experience. She is a consilience researcher, extension educator, and journalist. Melanie participates in collaborative projects and community organizations. She also serves as the State Director for the Western Apicultural Society and as the State Delegate for the American Beekeeping Federation. She is also a founding member of the American Honey Bee Germplasm Repository Program, Slow Food- Slow Bees global initiative, and is a recent Fulbright-National Geographic Fellow. Melanie cofounded Zia Queenbees in northern NM which has been serving beekeepers across the region since 2005.

A chat with Randy Swartz

Where in New Mexico were dismayed when we learned that Randy and family were moving back to Utah, but thanks to the virtual nature of our world now, we have kept in touch and hope to keep it up. Even at this distance, Randy has maintained his involvement with ABQ Beeks by keeping the books and maintaining its website. For those of you who don't know Randy, here's an interview that will make you want to be on a first-name basis with Randy forever!

How did you decide to return to Utah?

When my employer said I could telework from anywhere, we decided to move back to UT – the beehive state. My wife JoAnn and I grew up in Northern Utah. After graduating from college, employment took us to Southern CA, Las Vegas, NV and Rio Rancho, NM (total of 31 years). JoAnn's parents live in St. George, UT. As they get older, we wanted to get closer to them. We now live 45 min from them. We also like Cedar City because of its proximity to several National Parks and wonderful trout fishing. We plan to retire here in a few more years.

Did you take your hives with you?

No. We are renting a home (while building a new home). Our lease does not allow us to have bees. I sadly left my bees in NM with a good friend.

If not, will you be keeping bees in your new digs?

Yes, as soon as we move into our new home, I will start beekeeping again.

How long have you been beekeeping?

13 years

How would you classify yourself? Commercial? Sideliner? Hobbyist?

I classify myself as a small-scale beekeeper that sells just enough honey to pay for my hobby.

What has been your favorite memory of beekeeping?

That was when I first started beekeeping. I purchased two nucleus Langstroth hives. Unfortunately for me, when I first started beekeeping there were not very many hobby beekeepers or willing mentors so I had never been given the opportunity to look inside a hive before. I had no mentor to show me the ropes. I read several books and watched videos but it was all just theory to me at that

point. During the first time I started my smoker and opened up the hive there was this moment when I stopped and just looked around at all the bees flying around me. I was scared to death but I was in awe. It was an amazing feeling. I don't have words to describe the joy and terror I was feeling. I gained a love and respect for the beauty of the hive that I still have. I had no clue about what I was doing then but it was an experience that I will never forget. To this day, I am still in awe of a hive full of honey bees.

What was the biggest beekeeping mistake you ever made?

When I first started beekeeping, I spent a lot of time looking for the queen bee. One time I searched through the entire brood box without seeing the queen. I was really discouraged. I was at the point of carefully putting the final frame back into the brood box. Just a moment after letting go of the frame I saw the queen crawling on the frame ledge. The frame smashed the queen onto the frame ledge. What a dork!

What is the funniest thing that ever happened between you and your bees?

Early on I had a Langstroth hive that was full of bees and it needed another super. I took off the telescoping hive cover and then lifted off the inner cover. The inner cover



INTERVIEW WITH RANDY—CONT. ON PG. 7

INTERVIEW WITH RANDY—CONT. FROM PG. 6

was covered in bees. Instead of shaking or brushing the bees off into the hive I just leaned the cover against the hive. Big mistake. Several minutes later I started to feel bees on my skin crawling up my leg and on my inner thigh. I looked down and could see thousands of bees walking on the ground and on my shoes. I knew at that moment there was a good chance of getting taught a lifelong lesson. I was right. I got stung five or six times before removing my pants to brush off another nine or ten bees off my legs. It was one of those TJ Carr, “Don’t ask me how I know” moments we all have experienced in beekeeping. The first time I heard TJ Carr say, “Don’t ask me how I know” as he was describing a beekeeping experience, I recalled my big mistake. I knew exactly what he was talking about. I can laugh about it now. I can only imagine how I looked running around the backyard with my pants around my ankles brushing off bees. “Don’t ask me how I know” experiences are always opportunities to learn valuable lessons in life and beekeeping.

What was the thing that got you into beekeeping?

In the spring of 2006, I was channel surfing one Saturday afternoon and happened upon a program on RFD-TV called, Honey Bees and Beekeeping: A Year in the Life of an Apiary with Keith Delaplane, PhD (Professor of Entomology at the College of Agriculture and Environmental Science, Athens Campus, the University of Georgia. Dr. Delaplane presented two wonderful sessions at NMBKA’s 2021 Winter Conference). I watched and recorded all of the episodes. I also bought the companion book to the videos. I gained a great respect for bees and the hive. I was amazed at what I was learning and knew that I enjoy beekeeping. I spent the next year reading several other books and learn-

ing all I could about becoming a backyard beekeeper. Even though I have never met Dr. Delaplane, I consider him my first beekeeping mentor.

What has been your management style for Varroa?

I prefer using the vaporization method with oxalic acid (OA).

How did you settle on this management style?

This method is less expensive and it is very effective in killing mites when done right. The disadvantage is it is most effective when there are few, if any capped brood. OA will not kill mites in capped brood. I am open to using other proven treatments and will continue to experiment. There is not just one answer for varroa other than being vigilant.

How was your season this last year?

It was a great year. The bees worked very hard. The honey the bees produced was loved by all. We brought several gallons with us to Utah. I can’t wait to compare NM Honey with Utah honey.

What floral bloom do you have in your new domicile?

Where I live in Cedar City looks somewhat like Northern Rio Rancho. I see rabbit brush, many cultivated alfalfa fields, many flowering weeds and desert plant that I don’t know the names of. I hear that Cedar City has a wonderful nectar flow.

Besides beekeeping, what takes up your time?

My sons and I have been working hard to restore a 1974 Toyota FJ40 Land Cruiser. We finally got it running and we enjoy driving it around

now. It has been a long process with many more tasks ahead.

How would you describe yourself in one word? (some examples: shy, loving, funny, crazy, responsible, religious, studious etc.)

Blessed.

How would your sons describe you in one word?

I asked them and all they could do was burst our laughing. I’m not quite sure how to take that, haha.

What all will you miss here in New Mexico?

I will miss the wonderful beekeeping community of New Mexico. There are so many good and selfless beekeepers who have helped to make my beekeeping experience a joy. I will also miss the beautiful sunsets of the western skies of Rio Rancho.

How is Utah, the Beehive State, different from New Mexico, the Red or Green state?

Where I live in Cedar City looks somewhat like Northern Rio Rancho. There are lots of rolling hills with juniper trees. To be a beekeeper in Utah you have to have a license and have annual hive inspections to help mitigate the challenges of keeping honey bees: honey bee diseases, pests and Africanized honey bees.

What have you done that you are most proud of?

Our family. I am married to my beautiful, loving wife JoAnn (35 years) and together we have four strapping sons. We are looking forward to many grandchildren.

Penstemons – Jewels of the Southwest Landscape

By Allison Moore, Landscape Architect and NMBKA board member



Penstemons are a native wildflower found throughout the southwest and make a colorful and beneficial plant to include in your garden, whether it's a

desert landscape, alpine rock garden or high desert meadow. Often showy and vibrant; their flowers glow like jewels and attract a multitude of pollinators from hummingbirds to sphinx moths and both native and honey bees. Pen-

stemons, also called Beardtongues, are one of the largest genera of flowering plants in North America with approximately 250 species – many of which grow all over the state of New Mexico. The name Beardtongue is derived from its most distinctive feature--a prominent staminoide or infertile stamen which gives each flower the appearance or impression of an open mouth with a fuzzy tongue, thus the common name Beardtongue.

Penstemons grow in a wide variety of colors, sizes, and textures but have numerous qualities in common. They prefer well-draining soils (sandy or

rocky with no clay), are drought tolerant and should be watered deeply and infrequently, thrive in sunny and dry conditions and typically bloom spring to summer. Penstemons are also very low maintenance and only require deadheading once - typically in the late winter or early spring. Leaving the flower stalks and leaves up over the fall and winter may allow the plants to reseed and offer protection to the plant during the colder months.

The following Penstemons perform well in New Mexico and offer a spectacular display of flowers throughout the spring and summer months.

Firecracker Penstemon

Penstemon eatonii

Vivid red flowers contrast beautifully with large green triangular leaves, 2 feet wide x 3 feet tall approximately, blooms April to June, cold hardy to -15 degrees. Spreads by seed.

Pine leaf Penstemon

Penstemon pinifolius

Bright orange and red flowers top this shrublet with bright green needle-like foliage, 15 inches wide x 12 inches tall, blooms June to July, cold hardy to -15 degrees.



Hummingbird seeks sweet nectar from Firecracker Penstemon

Rocky Mountain Penstemon

Penstemon strictus

Handsome blue-purple flowers with a rosette of dark green, narrow leaves, 18 inches wide x 18 inches tall, blooms May to June, cold hardy to -15 degrees. This Penstemon spreads via stolons rather than seed.

Colorado Narrowleaf Penstemon

Penstemon linarioides

Light blue flowers rise above a mat of slender narrow silver-grey leaves, 12 inches wide x 12 inches tall, blooms sporadically April to August, cold hardy to -15 degrees.

Gorgeous, easy to grow Penstemon with tall spikes of pale pink flowers on pale greenish blue leaves and ...a sweet fragrance! 3 feet tall x 2 feet wide, blooms April to May, cold hardy to -30 degrees. Spreads by seed.

Parry's Penstemon

Penstemon parryi

Spectacular pink and red flowers top pale green stems and leaves, approximately 2 to 3 feet tall x 2 feet wide, blooms February to April, cold hardy to -10 degrees intermittently - this Penstemon is a low desert plant and will not tolerate extended cold spells. Spreads by seed.



Palmer Penstemon
Penstemon palmeri

Palmer Penstemon

Penstemon palmeri

PENSTEMONS—CONT. NEXT PAGE

PENSTEMONS—CONT. FROM PREVIOUS PAGE



Pine Leaf Penstemon,
Penstemon pinifolius



Rocky Mountain Penstemon
Penstemon strictus

Sources:

Lady Bird Johnson Wildflower Center website

The Xerces Society Guide; *Attracting Native Pollinators*; *Protecting North America's Bees and Butterflies*, Storey Publishing

Growing the Southwest Garden, Judith Phillips, Timber Press



Perry's Penstemon, *Penstemon parryi*



Firecracker Penstemon, *Penstemon eatonii*



Colorado Narrowleaf Penstemon
Penstemon linarioides

The Conference

Our virtual conference was recorded and the talks are posted on the website nmbeekeepers.org for your viewing, whether for the first time or for watching again. The board took on the task of writing up a summary of facts and impressions of the talks so you can add a written version to your knowledge base. It was harder than we thought. Where do you start with trying to capture all that detailed and fascinating information?

Randy Oliver: Treatments and Timing for Managing Varroa

Summary by Stephen Black

What a thrill to have nationally recognized beekeeper, Randy Oliver, here in New Mexico with us for our winter conference.... not really here but “virtually” here, courtesy of Zoom! We had planned on Randy traveling to Albuquerque for our 2020 Summer Conference but clearly had to postpone his visit until the recent winter conference.

As good beekeepers, we all know the importance of controlling Varroa, one way or the other, and that has been one of Randy’s main focus areas for many years. His first talk for us this conference was “*Managing Varroa: Understanding Mite Population Dynamics, Best Timings for Treatments, and Progress on Selective Breeding for Varroa Resistance.*” In the talk Randy shared with us that the degree of mite infestation you experience likely depends on how many months of brood in the season. He also talked about

how climate change and shorter winters will likely exacerbate the varroa problem.

Randy reminds us that beekeeping used to be much easier and that varroa infestation is a vector for viruses such as Deformed Wing Virus (DWV). While I have heard many talks on varroa mites, Randy’s talk was perhaps the most comprehensive.

He emphasized that you get the most “bang for the buck” by treating in the spring when varroa is increasing at the fastest rate. This was new information for me and contrary to what I had been told over and over—that the real concern was when mite populations really accelerate in the late summer.

While there are several methods to determine the mite count in your hive, Randy recommends the alcohol wash or Dawn detergent technique, details of which can be found at his website, scientificbeekeeping.com. Based upon his advice, I have recently switched

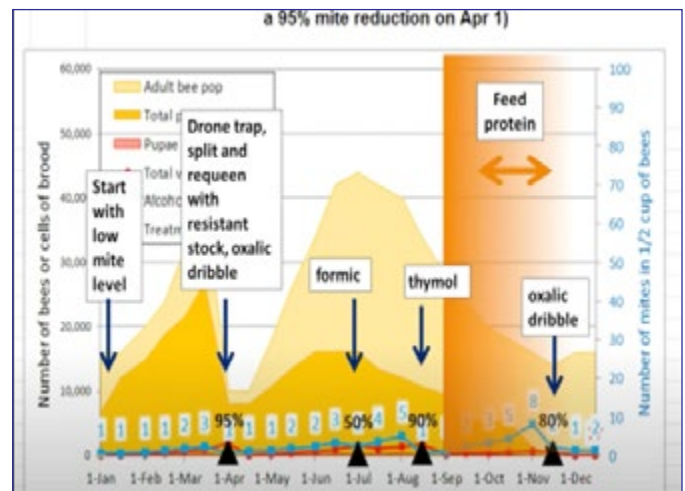
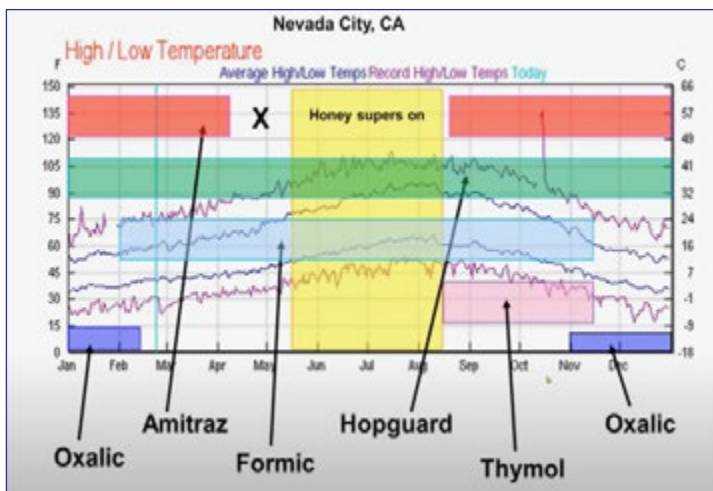
from alcohol, which is rather expensive, to Dawn, which is not.

In addition to actively managing mite populations, he is working a selective queen breeding program to create varroa-resistant stock.... bees that demonstrate strong uncapping behavior, removing infested larvae. While he records only slow progress, the result will be bees that require no treatment.... a most worthy goal!

Randy discussed most of the popular mite treatments and provided a chart which showed which treatment is most effective at which month in the beekeeping season. He also shared techniques of isolating the queen to force a brood break, making it easier to treat mites.

[Here](#) is a link to an Excel model that Randy developed which beekeepers can use to simulate various treatments in their own hives, throughout the beekeeping year.

RANDY OLIVER—CONT. NEXT PAGE



In his second talk, entitled “2020 Hot-Weather Trial of Varroa Treatments and Update on Extended-Release Oxalic Acid,” Randy described a recent comprehensive experimental comparison of various summer treatments including some that reportedly are not intended for use at temperatures above 85°F.

It amazes me that he performs these tests on almost 250 hives to get good statistics. For me, the unusual weather that he experienced during the experiment, hotter and drier, was an unsettling reminder of our rapidly changing climate.

He even talked about thermal treatment, which involves raising the hive to 106°F--a temperature that the bees can tolerate but one that will kill the mites. This was of particular interest to me as I own a Mighty Mite Thermal

Mite Killer, and so I was interested in comparing his results to mine.

I so enjoyed his talks as I see Randy as a ‘real human’, even sharing mistakes he made that might impact the performance of the treatments based on his misinterpretation of the label instructions.

He has been working on new ways to administer oxalic acid with glycerin on various sponges and towels. He likes extended release oxalic acid, which if it works will be effective on mites in capped brood, which would be a “game changer” for beekeepers.

In addition to a comprehensive discussion of all of the most popular and effective treatments, he discussed recent research on a variety of pollen substitutes and probiotics (direct fed microbials or DFMs).

Randy actually called on me several times during his talks.... not sure if he wanted to see if I was paying attention or not.... which of course I was! He also enjoyed sharing when he experienced unexpected results, which he reminded us, leads to “discovery.”

For me it was heartwarming to hear of his doing these experiments with his two sons and now one of his grandsons. I would not be surprised if they will become part of the next two generations of “scientific beekeepers”!

Randy, who is not funded by any beekeeping companies, depends on contributions for all of his research. NMBKA will make a contribution to Randy’s efforts this year and we plan to have him join us again at a future conference, hopefully in person.

Margarita López Uribe and Robyn Underwood

Beekeeping Philosophy and the Range of Options in Management Practices

Summary by Anita Amstutz

Two excellent bee researchers, Dr. Margarita López-Uribe, Assistant Professor in the Dept. of Entomology, and Robyn Underwood, Dept. of Agriculture, Assistant Research Professor, represented Penn State University.

Their area of inquiry encompasses how bee health and honeybee ecology management is impacted by different beekeeping philosophies of beekeepers. They studied how beekeeper attitudes or systems of thought act as a guiding principle in the role of beekeeping practices and hive management. They believe that identifying beekeeping philosophies is extremely important for beekeepers to make more informed choices about what

sorts of management practices they need to incorporate in their operations.

They set three research parameters:

Conventional: Anything legal to keep bees alive, including treatments that included antibiotics, synthetics or chemicals on the market.

IPM or Organic: intervention as needed to keep colonies alive while prioritizing bee welfare.

Chemical-free or Natural: hands-off philosophy and allowing bees to do what they know how to do without any interference.

With a survey, they studied practices

by asking four questions and assessing the results.

Their studies showed that Backyard Beekeepers show the greatest variation in management practices while most commercial beekeepers use organic management of intervention while prioritizing bee welfare.

Margarita's and Robyn's COMB project was a side-by-side comparison of beekeeping philosophies where they did careful monthly mite testing and regular IPM over three years with a select pool of beekeepers. COMB stands for Conventional and Organic Management of Bees. They found that mites which were managed using conventional or organic management had the most important predictor for

survival while the untreated colonies sustained huge losses.

Dr. López-Urbe's and Underwood's presentation was followed by a local New Mexico panel of beekeepers --Craig Noorlander from Edgewood, Kate Whealen from Espanola, and John Gagne from Santa Fe--who adhere to a spectrum of practices from conventional to organic to natural.

Practices discussed that ensured best survival were:

- Early season splits
- Re-queening
- Brood breaks
- Oxalic acid fogger

- Leaving plenty of honey for winter
- Rough-saw lumber to encourage propolis as a guard against disease
- Using chemicals twice a year to treat
- Moving bees away from agricultural/urban areas to "clean" or high-desert habitats

Panelists addressed sustainable heirloom stocks that have wintered more than one season—how longevity becomes an umbrella trait for pest/disease resistance, hygienics, gentleness, overwintering and productivity. They explored nutrition and genetics as critical for bee health and management to increase immune strength—how

nutrition can turn on or turn off genes for disease. It was noted that lack of diverse habitat and drought/climate change in New Mexico can ravage bee forage.

Finally, the issue of importing non-adapted New Mexico bee stock that is not resilient to climate and plant species was addressed. Feral hives and their genetic integration into New Mexico domesticated bees can evolve to tolerate viruses and mites, and with traits for spacing and best hive construction. When these enter the genetic pool of domesticated honeybees, there is a strengthening of traits for survivability.

The New Mexico Panel



Keith Delaplane: What Bees in Nature Can Teach Us

Summary by Allison Moore

Keith Delaplane is a professor of Entomology at University of Georgia studying social evolution, honeybee IPM, pollination and foraging ecology. He has been working with bees for over 40 years and has found them "...to be an infinite horizon. The more you learn the more the knowledge horizon is pushed further away. They (honeybees) are a deep mine of good things to know about life on this planet." His talk was titled "What Bees in Nature can Teach Us" and while the main part of the talk focused on the

natural behavior of the honeybee, there was also in-depth information about their origins, which gave one more context and a greater appreciation for *Apis mellifera*.

Some of the highlights included:
Honey Bee Phylogeny

The honey bee originates from one of the three divisions of life: *Eukarya* which is composed of plants, fungi, and animals. The other two being *Archaea* and *Eubacteria*. From Animals we move to Anthropods, then Insects; from there the divisions become more

specific and unique. These include *Apocrita* or wasp-waisted to *Anthophila* the true bees, and eventually to our recognizable genus *Apis* with a multitude of species. In parallel with the appearance of *Anthophila* the true bees, angiosperms or flowering plants start to grow and flourish on planet earth. These true bees are attracted to the new source of protein in the form of pollen. As they feed and fertilize the plants, the plants in turn respond with the production of nectar. As this relationship grows, both the plants and wasps respond in beneficial ways: the

plants change their morphology so pollen becomes knobbier and stickier and the bees become hairier and develop special apparatus to carry the pollen, including long hairs or combs and hind legs that can carry large amounts of pollen.

Eusociality

Along with the evolution of the true bees to the modern day honey bees is the concept of complex eusociality. In the insect world, simple eusociality can be just a mother with many daughters, while complex eusociality has cooperative brood care and division of labor. Some of these divisions are defined by reproduction and non-reproduction.

Lessons that bees and nature can teach us in order to create highly diverse colonies.

- Multiple Mating - Humans select and breed queens for quality and specific genetic traits, but in doing so create a bottleneck effect in which there is a loss of some genetic material at the expense of other traits. Honeybees deal with this issue by the queen mating with multiple partners diversifying the genetic pool. Delaplane calls this "Elaborate bid for genetic diversity, not genetic narrow specialization." This diversity can happen at the stage when sexual cells are forming and the chromosomes exchange genetic information before they pull apart to form the egg and sperm cells, thus guaranteeing a lot of variation. Honeybees have one of the highest known recombination rates during this process.
- DCA - The drone congregation area can contain representatives from up to 200 colonies thus insuring a large gene pool for the queen. Cooperation rather than competition amongst the drones also contributes to the overall

success of a hive.

- Specialists – Worker bees cycle through long list of tasks in the hives often based on their age. They may start with interior hive tasks such as cleaning cells and then as they get older their tasks move outside the hive such as foraging. There are also specialist worker bees; a distinguishing characteristic is their hygienic behavior. Specialist bees are rare and highly beneficial to a hive.

This form of specialization, along with multiple mating and DCAs, are the honeybees' natural approach to genetic selection.

As humans we try to re-create genetic diversity through selection and breeding, including identifying those specialists. Delaplane conducted a study utilizing both approaches (Polyandry and Selection with both VSH and Wild type) and determined that the best results for hive health and comb production were from an interface of the two – diversity from the hives and genetic selection.

Other Lessons

Genetic variations in the hive through methods mentioned above are the main ways that honeybees address challenges. Other approaches include observations based on nature in which humans can encourage, facilitate and recreate to strengthen and improve hive health.

- Insulation - Hive insulation should be considered to protect against extreme weather. Based on the fact that original nests or hives were in tree cavities with thick inner and outer bark.
- Swarming – Swarming can interrupt the life cycle of pathogens and parasites and should be rethought as beneficial to overall health of hive
- Propolis – Helps to ward off invaders and is less conducive to pathogen growth. Different textures such as leaving wood

rough and not smooth may encourage propolis hoarding.

- Hive Densities – In the wild, honeybees' nests are typically spaced at one every one square kilometer. Increasing spacing between hives may reduce mite infestation.
- Genetic differences – Within one season it is possible to see genetic difference between bees and mites. When dealing with a dead out within an otherwise healthy apiary, suggest making up the dead out within the apiary for best results.
- Visual complexity – With hives, visual similarity encourages drift. Complexity through spacing and visual clues on hives yielded more honey in one study. This was especially true when hives were placed in a circle.

History and Context

Dr. Delaplane presented an alternate theory of distribution of honeybee which was published in 2013. *Apis mellifera* originates from central Europe and not Asia. From Central Europe it moves to Africa and then back up to Iberia (M Lineage) to produce *Apis mellifera mellifera* and *Apis ligustica*. And it also moves up from Africa back up to eastern Europe (C lineage) and produces *Apis mellifera carnica* and the modern day *Ligustica*. Through glacial movement in Europe these two lineages become reproductively isolated from each other. What is important to note is that they also move from temperate Africa to Europe with different weather patterns and climate. And most importantly *Apis mellifera* never had to contend with mites and does not have a natural resistance - unlike *Apis cerana* located in Asia.

Ramesh Sagili: Honey Bee Nutrition -- The First Line of Defense

Summary by Kathy Grassel

As beekeepers, it seems like we hear a lot about honey bee nutrition and the importance of pollen and nectar sources throughout the three seasons. Another thing we learn as beekeepers is that one of the stressors on honey bee health is loss of habitat caused by urban development and agricultural monocropping, to name two, resulting in undernourished and therefore weakened bees less capable of withstanding the other stressors such as varroa destructor, pesticides, and climate disruption. So we know a lot, right? Wrong! It turns out that while honey bees have been meticulously studied for at least 200 years, nutrition for those honey bees has only been studied for... wait for it... six years! This was the news from Dr. Ramesh Sagili, apiculture professor at Oregon State U. He's the one who began looking into honey bee nutrition those few years ago only to find a few meager studies in the literature. Not much to go on!

Dr. Sagili tells us what we know

generally, that optimal nutrition boosts the immune system and decreases susceptibility of pests and pathogens, and that detoxifying enzymes are critical to mitigate exposure to pesticides. We know that macronutrients contain the carbohydrates found in nectar and honey that give bees energy to fly and come back to the hive, and proteins found in pollen are building blocks for raising brood and crucial when the colonies are rearing long-lived winter bees. We know that all pollen is not created equal, its crude protein ranging from 10 to 40 percent.

Consider the need for both pollen diversity as well as pollen abundance—quality and quantity. A certain carrot hybrid (a major crop raised in Oregon), for example, is not quality pollen even while abundant. Same with pollen from wind-pollinated plants. Meanwhile, blueberry, containing good quality pollen, is not abundant enough. Bottom line, you can't expect to put bees in a certain location and get the diversity a bee requires. One

source is not enough, even if abundant and of good quality.

Dr. Sagili turned to the micronutrients in pollen: vitamins, minerals, and lipids, focusing on lipids. Lipids are fats (triglycerides), phospholipids, steroids (sterols) and waxes. It's the sterols that Dr. Sagili has honed in on for his studies. The role of sterols in insects (not just honey bees) is that they are precursors of molting hormones, which means insects cannot progress through its stages (egg to larvae to pupae) without it. They have to get sterol from pollen; they can't make it on their own. The nurse bees consume the sterol-containing pollen and deposit it in the cell of the developing larvae. If the pollen is lacking in sterol, the larvae desiccates so is unable get to the next stage; it dries up and dies. Bees will cannibalize these larvae. Dr. Sagili showed a slide of sterol-fed larvae and starving larvae. He added that beekeepers should be aware that pollen substitutes that do not contain an ample amount of crude protein are not

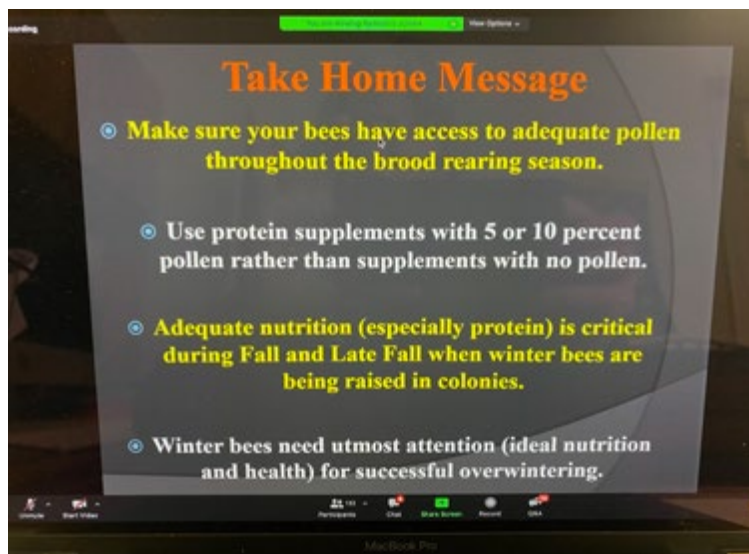


Another area of interest to Dr. Sagili and his Oregon State team is a supplemental forage study underway in ag intensive areas of Oregon. He cites hybrid carrots, where there is not enough pollen for bees, even while commercial beekeepers bring their hives for pollination on this hybrid crop. In a push to diversity habitat, they're working with farmers to devote a small portion of their acreage (say, one-half acre for every ten) to bee-attracting plantings next to their farm or orchard. He says it has to be a win-win or farmers will turn away. Farmers are concerned that the bees will be distracted by more desirable blooms and ignore the carrots, which the bees pollinate now only be-

cause there's nothing else there. A promising argument to satisfy the farmers has been that with non-nutritious pollen, the queen slows down her laying, resulting in less brood, so there are fewer bees to forage on their crops. Dr. Sagili says this kind of work is catching on now across the country, such as with almond growers, there being a push for them to plant for bees before and after almond bloom.

doing your bees any good and bees will ignore it if lacking in actual sterol-containing pollen. Dr. Sagili's studies showed that bees were able to detect the presence of sterols in the diets and were selectively choosing them. One option in the lineup for the bees was a well-known commercial pollen supplement, which the bees totally ignored.

Dr. Sagili says an underappreciated aspect of the importance of optimal bee nutrition, especially protein, is that period of



time in late fall when the raising of winter bees is underway. Nurse bees are still consuming pollen, but can

now store it themselves as they are no longer providing for larvae. This is not the time to ignore a nutritional dearth and it's crucial to know when (i.e., which months) these bees are requiring the dietary requirements to get through the winter successfully. Winter bees must have larger intrinsic protein stores, a high fat body content, and high vitellogenin. Take home message: For successful overwintering, adequate nutrition, especially protein, is critical during late fall when winter bees are being raised.

Keith Delaplane: Mutiny and Other Things that Can Go Wrong

Summary by Frank Gibbons

Dr. Delaplane began his presentation by reminding us of the importance of the altruism that exists in a honey bee colony. All of the bees must cooperate to maintain a healthy functioning body. In the honey bee community, there is only one female who is responsible for reproduction. This means that all the other females must be willing to not only sacrifice their lives if necessary, but also to give up their own reproductive tendencies. They become the nurses, the housekeepers, and the food gatherers. This arrangement came about through evolution and cooperation of the members.

A considerable amount of the presentation was devoted to explaining the evolution of *Apis mellifera*. It started when life-giving chemical elements came together to form nucleotides that developed into chromosomes, that gave rise to single celled organisms,

and then into multicellular beings, and finally very complex individuals like *Homo sapiens*. This brings to mind the phrase, "Ontogeny recapitulates phylogeny." The honey bee seems to have gone a further step into what is called the superorganism, which is many individuals functioning together as one cohesive unit in nature. This process occurred over many millennia. A necessary part of this evolutionary process was the idea of cooperation by the subparts, or in the case of honeybees, thousands of individuals. Even in the human body, all the parts and systems must cooperate and function together to keep the organism alive and healthy. This is especially true in superorganisms. Each sub unit (queen, workers, and drones) must be altruistic and work for the good of the colony. Once this selflessness breaks down, the integrity of the superorganism is compromised, and the chance for mutiny becomes a possibility.

The talk reviewed the genetics of *Apis mellifera* from a simple family practicing haplodiploid monandry to what we have today-- a large colony produced by a haplodiploid polyandry relationship. In other words, the original colony probably consisted of a mother with a 2n chromosome number and one father with only a 1n number, to eventually a mother (queen) who had become promiscuous. The earlier condition produced fewer offspring, closely related, which promoted nepotism. Later in evolutionary time, the queen started mating with multiple drones, which reduced the genetic relatedness of the sisters, but resulted in a greater strength and survivability for the hive. With their genetic diversity came physiological changes, and the incidence of nepotism declined as well. The other key component that evolved with this change in behavior of the queen's propensity to mate with multiple partners was the division of

labor that occurred with the worker bees. (Division of labor among social animals can also occur spontaneously.)

Even though the development of the honey bee into a superorganism has been successful, it is not perfect. There is the case of parasitic bees in Cape Town, where worker bees have developed the ability to lay fertilized eggs by parthenocissus. While this is useful to this variety of bees, they have a tendency to invade other non-Cape hives and eat their queens. They, as workers, can then produce another queen which drastically changes the genetics of the colony. Since the new queens produced by the Cape bees are not as good as naturally fertilized virgin queens, the new hives do not flourish and eventually die. This parasitism is another form of mutiny. This may be the next step in evolution: social dissolution or social parasitism.

Another downside of the honeybee superorganism paradigm is the one queen per colony rule, which actually limits the size and strength of the colony. Dr. Delaplane contrasted honey bees to ants and termites, which can have numerous queens in the same colony, resulting in huge colonies. He cited the fact that if you consider all of the land and aquatic organisms and compare their overall mass with that of all the ants in the world, the biomass of the ants is greater. This is amazing but true.

One very important idea that came out of this talk is that of supersedure queens. Traditionally, they have been regarded as not as good as queens reared by breeders for special traits, because they may possibly be parasitic and not altruistic.

One of the reasons for the failure of superseded queens could be the result

of royal sub-family drone genes carried by specific males which destine the egg to become queens. The larvae can dupe the workers into feeding them royal jelly and becoming queens. This invariably leads to inferior queens that do not promote strong colonies.

This talk was extremely interesting and informative. I think there were several take-home points that Dr. Delaplane highlighted:

- 1) Workers are always poised for mutiny.
- 2) Queens and workers disagree on sex ratios in the hive.
- 3) Queens don't tolerate rivals to the cost of the colony.
- 4) The only option higher than super organisms may be parasitism.
- 5) Supersedure queens may be parasitic.

"Holy Pollinators!"



This is Kathleen Unsworth (l.) and her friend Piper Case (r.). Kathleen's is one of the first classes of girls who were able to join the Boy Scouts of America, renamed Scouts BSA, and achieve the rank of Eagle Scout. Eagle Scout is the organization's coveted highest rank. For her Eagle Scout project, Kathleen built a pollinator hotel and also put in plantings at her church. She named the project "Holy Pollinators." Kathleen's parents, fellow scouts, bee lovers, and all our pollinators thank her! This bee hotel so publicly displayed will be a wonderful educational display for people to learn about our many different native bees and their habitats.

In Tandem with the Conference: Our Online Auction

By Stephen Black, Auction Coordinator

We are still tickled about the fun we had in addition to the success of our first-ever virtual auction.

We had 43 distinct donations that included quite a variety of quality items; beekeeping equipment and tools, bee packages and queens, hive products, bee art, beekeeping mentoring, NM Protect Pollinators license plates, and even a gift certificate for a beautiful B&B in Santa Fe. This was our first Virtual Silent Auction, and the degree of success surprised even us! On behalf of the NMBKA Board and the entirety of our membership: THANK YOU!! We are happy to report that we raised \$3,600 in our first virtual auction!

First, our generous donors:

Amy Owen
Bill Page
Carol Horwitz
Craig Noorlander
Holly Wright
Jason Fink
Jean O’Gorman
Kate Whealen
Kathy Grassel
Ken Hays
Lara Lovell
Larry Barrick
Mark Sommer
Marty Carr
Melanie Kirby
Ryan Miller
Steve Black
Steve McWilliams
Susan George
TJ Carr

And congratulations to our winning bidders:

Allison Moore
Andrew Hageman
Annette Colbert
Beth Sommer
Bob Reneau
Brittany Chavez
Christine Reecer
Christopher Salcido
Connie Shulas
Douglas Binder
Glenn Wagner
Holly Wright
Jessie Brown
Juliann Salinas
Kathy Grassel
Konnie Nelson
Kurt Ferreira
Louis Mallette
Lynette Ewer
Melanie Kirby
MiKayla Henry
Ryan Miller
Sarah Simms
Suzanne Norman
Vicki Parag

Our lucky bidders were geographically diverse. The top bar hive went to Colorado, the industrial extractor to Ruidoso, Vivaldi boards to Grants, other items to Bernalillo, Corrales, Belen, Santa Teresa, Santa Fe, Placitas, and Albuquerque. We mailed, shipped, and delivered some things, and held two pick-up events in Albuquerque at the CBeeks storage space for centralized pick-up convenience. It was like a reunion festival for many people who hadn’t seen each other for the entire Covid year. Following on the next two pages are some photos that we managed to grab of lucky bidders picking up their items.

Diversity of donations: Among the 43 items were three honey gift boxes from Ken Hays, a custom stainless steel top bar hive tool from TJ Carr, and a five-frame Lang nuc from Steve McWilliams.





Kurt Ferreira wins the super high-tech Buzz Box: Technology inside the hive.



Lynette Ewer (l) wins a virtual queen raising class, while Annette Colbert takes home a Vivaldi board, crafted by Taylor Owen.



Sarah Simms scores a Jason Fink top bar nuc.



Larry Barrick (r) parts with his beautiful custom hive (center and below) going to the home of the lucky Reecer family.



Connie Shulas is delighted with her Pollinator Protection custom license plate.



Andy Hageman surprised his wife on Valentine's Day with this artwork by Holly Wright. He's the beekeeper and she's the gardener.



Vicki Parag gets a grab bag of hive essentials: smoker, gloves, brush, and hive tool.



Mark Sommer built this top bar nuc and his wife Beth won it!

.... and finally, there was the Extractor



When we were soliciting for donations to the auction, Kate Whealen called Steve Black about a beekeeper in Ojo Caliente who had a used extractor to donate. Steve, who has a truck (of course), picked up Kate to make the trip. Little did they expect when they arrived that the extractor was industrial and weighed a ton—well, over 200 pounds, but with the help of the owner, his son, and Steve, it got loaded on the truck. From there it came to Albuquerque where more brawn was recruited to unload it into the CBeeks storage space where all the auction items were being stored. It wouldn't fit through the door, so a caretaker of the building (a historic gas station from the 40s) came over and opened the overhead bay door. In its day, it would have cost upwards of at least \$4,000 and been a worthy purchase by a commercial beekeeper or a co-op. Steve wondered what we would do if no one bid it. It turned out that there were several bids on the extractor, described with full disclosure on the auction site. Stainless steel... heavy... industrial ...used... And the winner was Glenn Wagner from Ruidoso who borrowed a truck and drove to Albuquerque on a stormy day to pick it up. Enjoy the photos of the experience.



Report a Swarm

We have provided a list of our beekeepers that are available for collecting bee swarms in different areas of New Mexico. Give a beekeeper a call as soon as possible! This listing is also on the website nmbeekeepers.org. Click on Resources and select Report a Swarm. Any beekeeper group or individual beekeeper may ask to be included on the website list by contacting NMBKA at info@nmbka.org

What is a Swarm? A swarm is formed when a queen bee leaves the original colony with a large group of worker bees, usually in the spring and early summer, but can occur through fall. Swarming is a natural form of reproduction for honey bees. The bees can stay in the cluster for a few minutes to a few days, so call a beekeeper quickly.

Albuquerque Area:

Albuquerque Beekeepers (ABQ Beeks)

Website: <https://abqbeeks.ning.com>

Facebook: <https://www.facebook.com/groups/1894495293914135>

Alamogordo & Ruidoso Area:

Sacramento Mountains Beekeepers

Facebook Page: <https://www.facebook.com/groups/483236118374096/>

Point of Contact: Rob Sheplar, (575) 687-2343, rob@theriver.com

Belen/Valencia County Area:

Raymond Espinosa (505) 861-1693, antiguasdelnorte@att.net

Bosque Farms Area:

Ken Hays (505) 869-2369

Carlsbad Area:

Efrain Nieto (575) 302-0737

Clovis Area:

High Plains Beekeepers

Facebook Page: <https://www.facebook.com/groups/1670238479881226/>

Point of Contact: Paul Hopkins (575) 799-9642. Email: ephopkins@plateautel.net

Cotton City/Hildago County Area:

Southwest NM Beekeepers

Facebook Page: <https://www.facebook.com/groups/2299960260060163/>

Point of Contact: Kyle Josefy (575) 496-1037

Farmington Area:

Jim Marquis (505) 861-2360

Hobbs and Lovington Area:

Kirk Gilbert (575) 318-9387

Las Cruces Area:

Paseo Del Norte Beekeepers Association

Website: <https://pdnbeekeepers.org/reportaswarm/>

Points of Contact: Las Cruces: Tom Soltero (505) 934-2178

Mesilla Valley Top Bar Beekeepers

Facebook: <https://www.facebook.com/groups/946568402534332>

Point of Contact: Anita Feil
Email anitalfeil@gmail.com

El Paso: Josh Meier (830) 357-8207

Email: josh@pdnbeekeepers.org

Red Rock/Grants County

Red Rock Honey Company

Point of Contact: Lynn Whatley (505) 269-8199

Roswell/Artesia Area:

Pecos Valley Beekeepers Association

Point of Contact: Hugo Hernandez (505) 410-1781, email: hhera01@gmail.com

Kevin Thatcher (575) 973-7422

Santa Fe Area:

Sangre De Cristo Beekeepers

Website: <https://sdcbeeks.org/report-swarm/>

Point of Contact: Kate Whealan
Email: katewhealen@earthlink.net

Santa Teresa and El Paso Area:

Paseo Del Norte Beekeepers Association

Website: <https://pdnbeekeepers.org/reportaswarm/>

Point of Contact: Josh Meier (830) 357-8207

Silver City/Grant County Area:

Grant County Beekeepers

Website: <https://www.grantcountynmbeekeepers.org/bee-removal>