

Bee friendly

A Newsletter of the New Mexico Beekeepers Association

www.nmbeekeepers.org

Fall 2020

Chain Link: Bees IN, Bears OUT

The Non-Electrical Option for Caging Colonies from Brutal Bears

By Melanie Kirby, Zia Queenbees, Fulbright scholar, NMBKA member and former board officer

[THE FIRST PART OF THIS ARTICLE IS ADAPTED FROM AN ARTICLE ORIGINALLY PUBLISHED IN BEE CULTURE IN JANUARY 2010 AND THE SECOND PART AN UPDATE 10 YEARS LATER FOR THIS NEWSLETTER.]

They're waiting for when you drive away with their forks, knives and napkins--okay, substitute claws, jaws and fur! You pull away from your bee yard with the intention of going back in a couple of weeks. You return to mayhem and destruction. No one warned you that Pooh was a messy Marvin with no manners and a voracious appetite for brood! And Pooh will come back... as long as the buffet is available and access is feasible.

When researching what style of bear proof-fencing to install, don't forget to consider chain link. It requires neither electricity nor imported tiger scat. Your apiary can be well contained and "constructive." Designing a cage that allows for multiple hives and placement while allowing access by beekeeper and beekeeping tools requires only two fundamental things: a

shovel and elbow grease.

When my farm partner and I used to run bees in Michigan, apiaries there were very susceptible to bear damage. One apiary came with an electric fence

from a prior garden. The fence kept shorting out as wild berries grew up around the enclosure. He even placed pieces of insulation to space the wires out from the plants. But wouldn't you know, those darn ants would move blades of grass and short the system. Electric fences require regular maintenance and checking. Despite having this apiary on a friend's property who resided a mere 30 yards away, the system wasn't secure. And there was a bill for the electricity--a plug-in with a meter.

So, he chose to build his first apiary with chain link. He found used chain link through a local fencing company for a discount. Theory and Reality have it that as the bear tries to grab, pull and climb the fence, their claws are pinched and voilà--they cease attempting to enter. When we teamed up 16 years ago, I helped him build the second chain-link right next door to the first one. We used 4 x 4 x 8 foot cedar posts. The enclosure is rectangular--8 ft. x 8 ft. x 16 ft. long. Posts are placed 8 feet apart (one on each end



Melanie in 2010 with Baby Blossom posing between the two chain link cages. Blossom is now 11!

BEARS KEEP OUT!!—CONT. ON PG. 3

Bears!

Melanie Kirby and Clara de la Torre bring attention to the bees' formidable enemy.

Pages 1 and 5

Mites!

Les Crowder brings his perspective to controlling mites while loving bees.

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Sting!

Brave beekeepers step up to show us what it looks like to get stung in the face. It's not pretty.

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NMBKA
New Mexico Beekeepers Association

Fall 2020

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

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Photo: Stephen Black

Message from the President

By Stephen Black, President, Board of Directors, NMBKA

Hello fellow beekeepers! It's hard to believe that fall is here, and our beekeeping season is coming to a close, and already our bees are preparing for winter. While beekeeping here in New Mexico can be particularly challenging, especially during a dry summer, I hope your bees have brought you much pleasure.... and perhaps even some honey!

This summer, your NMBKA board has been busy on several fronts. We have updated our mailing list, established a budget, formed a new Membership Committee, and have recently issued a contract with a professional website developer. While all of the current board members are actively involved, I would like to recognize and thank our current Vice President Bob Reneau for an extraordinary effort on our membership database (currently consisting of over 1,000 persons) and his leadership in defining the contract for the our new website. The updated website will be a big improvement over the current version, and it should be fully operational by the end of this year!

We are continuing to monitor the prospects for our ability to hold a in-person Winter Conference, or alternatively we will hold a virtual conference as have many other beekeeping organizations throughout the country. We plan to send out a survey to the membership in the near future regarding the options being considered.

On a personal note, for the first time in my three years keeping bees, I have been able to harvest a small amount of honey and have been proudly sharing

it with family and friends. Earlier this year I put up a couple small native bee houses and have been successful in attracting a number of different species to the garden.

I have also been involved in two recent cutouts which have reminded me that:

1. Cut outs are hard
2. Every cut out is different
3. The homeowner must be willing to do or pay for the repairs
4. Bees get angry when they think you are destroying their home and can sting you through your suit
5. It's definitely a two person job
6. You'll always forget to bring something you need
7. Despite the hard work, sticky mess, and bee stings, it is a rewarding experience and typically results in a new colony for your apiary.

One result of the most recent cutout I did with fellow Santa Fe beekeeper Ryan Miller was the we may have inspired a new beekeeper....the tenant who first discovered the bees entering his house and called beekeepers to rescue them rather than having them exterminated. He watched the process and is now is interested in getting the hived bees back in the spring. These two recent bee rescues could not have been done without the bee vacuum we used that was adapted and built by board member Frank Gibbons.

Finally, a reminder that NMBKA Board Meetings are held via Zoom on the fourth Thursday of the month and all of our members are invited to participate. If you are interested In joining a monthly meeting, please send me an email at info@nmbeekeepers.org and we will reply with a Zoom invite.

BEARS KEEP OUT!—CONT. FROM PG. 1

and one in the middle) on both sides. Fencing is secured to posts with 1½ inch staple nails.

We placed ceiling posts/rafters approximately every 2½ feet. Additional fencing was secured over the top. This allowed us to put pallets on top of the fencing and more hives: a double-decker chain link bear-proof apiary. We even ran some mating nucs up on top one season with good take. We didn't have to travel with cells as the cell builders and breeders were inside the cage. Each enclosure holds 12 hives--6 down each side with entrances facing outwards with a row running down the middle for access and a gap for standing on the side between each set of two. Revisions were performed from backside of each hive. All hives were on half size pallets up off the ground.

To overwinter in northern Michigan, we push four hives flush back to back, side to side and wrap them in 2

inch thick insulation or, as dollars may dictate, black roofing paper. One large piece of insulation covers all four colonies as a group. We make sure to cut entrance holes in the insulation and to leave a small crack in upper cover for ventilation. They do get



The high-rise hierarchies are reminiscent of art deco. There's Mark Spitzig the "superintendent" checking the weight.



Walkway between rows gives access to the back of each hive for revision. Hives on pallets are tipped slightly forward to aid in water runoff.



Forefront view of staple nails on end post. Excess chain link is thrown over the top to serve as roof for double decker use.

buried in snow but with screened bottoms on top of pallets, they are insulated from the gales of November, December, January, February, March, April..... I joke that the Upper Peninsula of Michigan experiences 9 months of winter and only 3 months of warm-- spring

in June, summer in July and autumn in August. It's not far from the truth most seasons! With the intense but short bloom, it is no wonder that the bears look to fatten up on brood before the extended cold season. Any hive or boxes we left out of the chain link cage would be munched the first night.

BEARS KEEP OUT!—CONT. NEXT PAGE

BEARS KEEP OUT!—CONT. FROM PAGE 3

UPDATE:

From Michigan to New Mexico

Now that we've been keeping bees in New Mexico for 15 years, we have learned the hard way, again and again that bears can be pesky here in the Land of Enchantment as well. Our first big lesson which has encouraged us to be proactive vs. reactive when dealing with bears was in August of 2011 when the Las Conchas fire ravaged through the Jemez mountains near Los Alamos. This was a severe drought year that prompted our decision to keep the majority of our hives down in the valley along the northern Rio Grande instead of moving them up to the highlands for the summer. Despite the drought, farmers were still able to irrigate for alfalfa so we had a dozen apiaries spread throughout the Española, Alcalde and Velarde valleys.

Because of the fire, we were asked by several tribal members of San Ildefonso and Santa Clara Pueblos to share some comb, pollen, and honey samples with a couple of researchers from the USDA Carl B. Hayden Bee Research Lab based in Arizona for residue testing. I recall their visit vividly as I was in my third trimester pregnant with my son and it was late summer and hot!

When the researchers arrived, we took them to the first apiary and noticed that the hives there were spread all over--toppled and messy, which was not how we left them. We put everything back together as best we could... well, truth be told, my farm partner and the researchers did because I was totally uncomfortable about to pop sitting in front of the air conditioning in the truck! We went to each of our valley apiaries and bears had hit each and every single one. We lost 40% that year due to bear damage in August- even before the apples were ready.

All in all, we lost over \$10k in equipment and close to half our bee stock, which to us is priceless and devastating. This was a super disheartening and also an expensive lesson to learn. But due to this, we have since strategized placing bear fencing around every apiary, regardless of location. However, every once in a while, one of us decides to put bees into position prior to fencing. Most times, it is okay as long as we can move the bees out prior to bear appearance or put up a fence before they make an appearance. But then, all it takes is one painful and expensive reminder to again vow to put fencing in place. This is the case that happened to me this July with an apiary I have in Dixon near the Rio Embudo. Not only did I lose 3 supers

full of honey, the queen was killed and their home was decimated.

Over the past 15 years, we've had to deal with bears here in New Mexico on at least 5 separate occasions. They are around, and they are persistent. So, the Moral of the story is, bears, like bees and other animals, are opportunistic. And if a buffet is available, they will go back again and again until it is exhausted or impenetrable. If you find that you have bears frequenting your apiary zones, or are considering placing bees in bear country, spare yourself the pain and heartache and install bear-proof fencing! Remember, Pooh is messy and ready to fatten up and will continue to come back again and again. Hot wire fencing works well with adequate weed control and proper voltage (either electric plug in or solar powered). And chain link works great. The NM Department of Fish and Game does offer a solar-powered, hot wire bear fencing program for NM Beekeepers. Visit <http://www.wildlife.state.nm.us/home/contact/location-map/> to find your local office and contact them for details.

Melanie Kirby is a Native New Mexican who has been keeping bees for over two decades. She, along with Mark Spitzig, established Zia Queenbees Farm in northern New Mexico in 2005.



Dual Queen towering totem hives: tall bait for a hungry bear behind unreliable fencing.



Electric fencing can easily be shorted out by grass and foliage.

Yet Another Bear Invades an Apiary

By Clara de la Torre, Santa Fe beekeeper



Due to our location south of Santa Fe in the La Cienega valley--a good 20-30 miles from the nearest mountains--and our newness to beekeeping (this being our second summer) my sister and I had errantly believed we were in a bear-free neighborhood. Consequently, we didn't have electric fencing or a rooftop apiary. Our hives were in a lower field, down by a creek/riparian area. We'd seen bobcat and coyotes in the area, and the prints of raccoons, but never bear.

On the morning of Saturday 9/5/20 I was to do a beekeeping introduction/bee experience for two of my friends, Jennifer and Kevin Box. It was to be their first time with bees. We did a mini class up at my house, suited up, and descended to the lower field. There, we found the wreckage of the previous night's bear attack--one Langstroth and one Top Bar were ripped apart.

The surviving bees were in two modes: the majority were hunkered down at the hives; the others were going to war. We had bees bouncing off our veils. Closer examination revealed that most of the Langstroth frames had been broken into shards, and that, between the two hives, at least 90% of the comb eaten. We smoked the

hives, beginning our rescue mission. Within moments the bees calmed down, and ceased their attack. It was heartbreaking. Hundreds of bees were drowning in honey, others were dying from being smashed; others were stunned and exhausted on nearby foliage--if you put out a honey-infused glove, they'd climb right on to be carried back to the hive.



It took most of the day to salvage what we could, save as many bees as possible, ensure we had queens (amazingly, both had survived), and to relocate the hives. At various stages throughout the day my sister and I had the assistance of Doug Miller, Jennifer and Kevin Box, and Craig and Chris Noorlander of Papa Bear's Honey.

To do the actual relocation, Kevin built a "bee stretcher" out of 2x4's

and a piece of plywood. We set each hive atop and secured it with a ratchet strap. The result was very little jostling.

The hives ended up at the far end of our property, closer to the house, in a fenced area next to two loud German Shepherds. We know it wasn't the best relocation location--two miles away, or farther, would have been.

Going forward I will most likely implement a rooftop-style apiary, where the hives are on a metal platform over nine feet off the ground with a removable staircase (detached at all times, except when in use by us). If built properly, this platform could serve as a carport.



Working toward a viable bee/mite relationship

By Les Crowder, beekeeper, author, farmer

Hello beekeepers. Here in Texas most of the bee clubs are opposed to "treatment-free" beekeeping and believe in the Mite Bomb concept, that if you don't use a mite control method the bees will die, and as they descend into death they will be heavily infested with mites. When bees in the area sense the declining hive's weakness they will begin to rob it and get infested with mites that they will take home to their hives.

If one believes that honeybees cannot live without our chemical "protection," then the fate of all honeybees in the world rely on us beekeepers. The only honeybees with a future are the ones we contrive to protect with a constantly changing chemical/mechanical/temperature scheme that we can use to battle our enemy, the Varroa mite. The belief is that mites and bees can simply not coexist on the planet. Honeybees cannot develop mite resistance. Mites are terrible destructors that are stupid enough to always and every time kill their host. They cannot reduce their reproductive rate to make them able to survive on *Apis mellifera*; they are only capable of suicidal explosive reproduction on *Apis mellifera*. A parasite that kills its host is soon extinct due to the loss of habitat; it destroys its only habitat. We may find out something about that as humans if we continue to poison and destroy our only habitat.

Treatment-free beekeepers have a different belief system. They believe there is ample evidence that bees and mites let on their own will develop a host/parasite relationship that allows both to survive. Honeybees have several traits, such as grooming mites off each other, or Varroa Sensitive Hygiene



(VSH). Some bees are more inclined to put natural breaks in the brood cycle that allow bees to be more mite resistant. Left on their own or by actively breeding for these traits, or using feral colonies that have been bred with mites (all bees in the USA and most of the world are bred with mites), we can use and even encourage mite resistance in the bees we keep.

I like to point out that when we keep bees we are now keeping mites. Mites have variable reproductive rates. When they were parasites of the Asian honey bee *Apis cerana*, mites could barely survive because that bee's development time (the time from when the egg is laid till when it emerges as an adult) is 19 days, three days shorter than *Apis mellifera* workers. In the Asian honey bee the mites could only reproduce in the drones with the longer development time. A break in the drone brood cycle is much more common and less detrimental to colony growth. But a break in drone rearing does not stop

Varroa from reproducing in *Apis mellifera* because the mites are able to make the switch and reproduce in *Apis mellifera* workers. When mites made the switch to *Apis mellifera* they were too virulent; they out-reproduced their host and killed their host. A parasite that kills its host is a dead parasite. Only mites with a lower rate of fertile reproduction would survive in a natural system because the more virulent reproducers die when they kill their host. They weed themselves out. When we intervene with a miticidal treatment we are attempting to save mite susceptible bees and virulent mites--attempting because mites develop resistance to our miticides.

There are feral bees and places where miticides are difficult for beekeepers to acquire that could put the possibility of mite/*mellifera* coexistence to a test. Feral bees in upstate New York have been found to develop mite resistance. www.entomologytoday.org/2015/08/20/new-york-honey-bees-evolved-resistance-to-disease-after-exposure-to-varroa-mites/

Bees in Puerto Rico have been found to be mite resistant. Google "Bee Culture, Puerto Rico's African Honey Bees Selected Gentle Already Varroa Resistant" to read the November 2017 article in *Bee Culture*.

If temperate New York and tropical Puerto Rico have bees that can resist Varroa, we should be working towards developing a beekeeping system that encourages a viable bee/mite relationship. We should absolutely not be putting toxic pesticides in our beehives to kill mites! There are people that believe that low levels of toxicity

CONTINUED NEXT PAGE

are safe. But I am a cancer survivor that was exposed to “safe” levels of ethylene bromide as a teenage beekeeper that later got banned because it is carcinogenic. Many of us are beginning to want less toxicity in the world.

Is it possible your treatment-free bees could be mite susceptible and could the mite population rise dramatically, particularly in the fall, and weaken your bees? Might they then get robbed out and spread mites to neighboring bees? Of course. And letting that happen would not be very good beekeeping practice. But it is also irresponsible to blanket treat and contribute to the saving of mite susceptible bees and virulent mites.

To go treatment-free is to be bold and competent. It means we have to notice if a hive is showing signs of mite levels that might turn your hive into the very “mite bomb” the pro-treatment beekeepers predicted. If you are new to beekeeping, you may need to do some mite counts. Going treatment-free means you have to try to acquire

bees raised by treatment-free beekeepers or get some feral bees that have some history of survival without treatments. It means you may have to de-emphasize honey production. We may want to let bees live in smaller hives and swarm or get divided more and give themselves more brood breaks.

<http://beeaudacious.com/audacious-idea-four-small-hive-beekeeping/>

Treatment-free isn't just buy some bees in a box and leave them alone. It means you are more aware of their lives and the biology inside the box. It is dancing with bees and mites and flowers and not just throwing chemicals (that the mites will eventually resist) at them on a calendar date. It is using nature's resistance rather than fighting it.

I have not seen a mite problem in one of my beehives in more than 10 years, but here is what I look for. I scan the bees on the combs for mites or deformed wings. If I see more than one mite I might do a mite count procedure; I have not done one in so long

I would have to look on the Internet and decide which. If the mite count was high I would smoke it with cedar/juniper bark (a treatment) to get rid of most of the mites and then requeen it as soon as I could. I keep bees in small top bar hives and often have a hive with a few queen cells so I would kill the susceptible queen and put in a queen cell. That causes a bit of a brood break. I view miticide treatments as temporary shortsighted survival techniques. Breeding mite resistant bees is the only real long-term solution. Google "Bee Culture, Breeding Mite Biting Bees to Control Varroa" to read the March 2016 article in *Bee Culture*.

Les Crowder is the author of Top-Bar Beekeeping: Organic Practices for Honeybee Health. This article is reprinted with his permission from his FB group page. Les has been New Mexico's honeybee inspector and past president of NMBKA. He now lives in Texas, near Austin.

Santa Fe County Approves Pollinator Resolution

By Stephen Black, NMBKA president

Recently, the Santa Fe County Commission approved “A Resolution to Protect and Enhance Pollinator Species and Their Habitat Throughout Santa Fe County.” The resolution encourages residents to make their property pollinator friendly by adding pollinator friendly plants and avoiding the use of all pesticides known to kill pollinators.

The resolution will also hopefully help Santa Fe County staff expand efforts to improve pollinator habitat throughout the county, as well as guide future decisions regarding the allocation of resources to various pollinator

projects across the county.

Perhaps not coincidentally, our own Kate Whealen, who leads the Sangre de Cristo Beekeepers of Santa Fe and surrounding communities, and our current NMBKA President Steve Black, recently contacted the County Commissioner Anna Hansen, who introduced the resolution, and met, virtually, about a recent pesticide poisoning of six beehives in Santa Fe.

The hives of multiple owners, located in the same neighborhood, perished overnight with clear indications of pesticide poisoning. While it is difficult to easily determine which pesticide was

the culprit, it is a stark reminder of the vulnerability of our bees to poorly applied chemicals.

The hope is that the resolution will increase awareness throughout the community of the need to protect pollinators from dangerous pesticides and promote pollinator planting throughout the county.

The complete resolution can be found at:

<https://www.santafecountynm.gov/> and search "Ordinances and Resolutions".

Vitex agnus castus -- the Chaste Tree

By Allison Moore, Landscape Architect and NMBKA board member



Fall is here but we are still experiencing warm days full of sunshine and hopefully a rain cloud or two.

As the seasons transition so does the New Mexico landscape and our gardens. Summer is all about perennial color whether its vibrant wildflowers and cacti or drought tolerant garden classics like Flowering Catmint and Agastache. Many of these perennial flowering plants provide local pollinators with plenty of pollen and nectar throughout the summer months.

As the temperatures slowly drop so does the emphasis on perennial color and instead the focus shifts to shrubs and trees –think purple flowering asters and yellow blooming chamisa along the roadways and meadows, and the Aspens and Cottonwood trees brightening up the mountains and riparian areas.

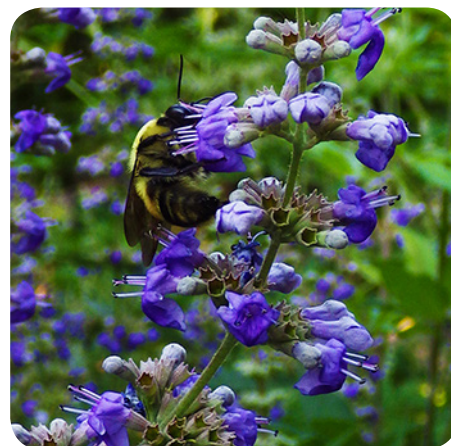
With that focus in mind I would like to turn our attention to a tree that is noteworthy for many reasons. *Vitex agnus castus*; the common name is Chaste tree although *Vitex* tree is also frequently used, too. I like to think of it as a four-season tree because it offers something unique for each season. In late spring the trees produce long spikes of lavender blue flowers as well as aromatic dark green palmate (meaning shaped like a palm or hand) leaves. The flowers continue into summer and sometimes the heat of the summer will intensify

the amount of flowering much to the delight of pollinators and humans!

In the fall the flowers continue until the frost and the leaves turn yellow. The spent blooms produce a seed head that looks like small clusters of beads. These seed heads are very decorative and provide a visual accent in the late fall and winter gardens especially when paired with native and ornamental grasses and shrubs. They are also a food source for birds throughout the winter months.

Vitex is often referred to as a specimen shrub or tree. The tree form is most common in the mid to southern parts of New Mexico although it can also be grown in parts of northern New Mexico, especially in sheltered locations with southwest exposure. There may be some winter dieback especially if temperatures dip below -10 degrees so it will often look more like a shrub than a tree.

Vitex is fast growing, responds well to pruning and often takes on beautiful sculptural forms with upward curving branches. This quality adds to its four-season appeal – creating a living sculpture in one's garden. *Vitex* trees typically grown 10 to 25 feet tall with a 10 to 15 foot spread. *Vitex* are not overly aggressive and can be easily



shaped to fit any size landscape, often fitting in spaces where shade is needed but there's not quite enough room for a large canopy tree. They are also extremely versatile and, although a native of the Mediterranean, fit in quite naturally in a native or xeric themed landscape as well as a high desert cottage style garden.

The berries of the *Vitex* tree have been used medicinally for hundreds of years to normalize and balance hormones for both men and women in either a tincture or capsule form. The common name Chaste tree originated from monks and priests who used it to suppress libido and was often called "chaste berry" and "monk's pepper". This intended use was not always successful since the berries can have a

different and completely opposite effect on individuals.

These days we can all enjoy the simple beauty and elegance of the *Vitex* tree whether it's the long lasting colorful flowers, the graceful trunk and branching growth habit or all the wonderful wildlife it attracts throughout the year.



VITEX—CONT. NEXT PAGE

Quick Fact Sheet

Vitex agnus castus, Chaste Tree

Specimen tree or shrub with purple/blue spikes of flowers, aromatic foliage, and attractive seed pods. Pink and white flowering varieties are also available.

Hardy to approximately -10 degrees. Zones 5 and 6 may experience severe to moderate winter dieback.

Mature size in warmer zones: 10 to 25 feet tall x 10 to 15 feet wide

Prefers full sun to partial shade and tolerant of most soil types

Heat and drought tolerant

Sources:

Growing the Southwest Garden by Judith Phillips.

Rosemary Gladstar's Herbal Recipes for Vibrant Health by Rosemary Gladstar

Shade Trees for New Mexico by Extension Horticulture Specialist, Department of Extension Plant Sciences and Agricultural Sciences, NMSU



NMDA to Study Pesticide Residues in Wax

Some much needed action is underway on two fronts in New Mexico about possibly restricting neonicotinoid pesticide use. NMBKA was recently contacted by Michael Dax, the national representative for Defenders of Wildlife, who has been in touch with Brad Lewis of the New Mexico Department of Agriculture and with state Sen. Mimi Stewart to introduce a bill in the coming legislative session. Michael Dax is inquiring if NMBKA has a stated position. Anita Amstutz who leads the outreach and advocacy committee on the board has prepared a detailed statement to present to the board for approval and distribution, stating that the Board of the NMBKA stands with pollinators and requests action to restrict or ban neonicotinoids.

Meanwhile, NMDA's Brad Lewis been in touch with the Albuquerque Beekeepers' (ABQ Beeks) Lu Lu Sage who has been collecting information and recruiting volunteers to collect wax from their hives in the Albuquerque residential area and environs. Sample-collecting containers and instructions for volunteers are shipped to Albuquerque staff who will disseminate the kits and collect them once wax has been collected. The NMDA apiculturist Tiffany Johnson along with Brad decided on collecting wax rather than bees because neonics remain detectable in wax for a very long time compared to titer concentrations on bees themselves. About 15 beekeepers are participating in the survey, including our own Lara Lovell who has been one of the beekeepers to contribute wax samples to the study from her hives and from those at Los Poblanos Historic Inn and Organic Farm. NMDA will conduct the analyses once the samples are returned. At this writing, the experiment is ongoing, but we expect to have some conclusions to report in the next newsletter.

What are Neonics?

Today, neonicotinoids are used in over 120 countries and have 140 different crop uses. They can be sprayed onto foliage or applied as soil drenches, but they are predominantly used as seed treatments. When used this way, neonicotinoids are taken up by all parts of the plant as it grows. This means these systemic insecticides are present in pollen and nectar that pollinators can come in contact with when foraging. In addition, they have been found on neighboring flowers and grass (even at levels higher than the crops they were applied to), in nearby waterways. They persist in the soil for long periods of time (<https://pollinator.cals.cornell.edu/threats-wild-and-managed-bees/pesticides/neonicotinoids/>)

The European Union issued a ban on neonics in 2018, forbidding their use in flowering crops that appeal to honey bees and other pollinating insects.

Build Your Own Dual-Purpose Observation Hive

By Frank Gibbons, NMBKA board member-at-large

The use of an observation hive can make the difference between a mediocre presentation on bees and a great one, especially when your audience is children. Everyone is fascinated by watching bees scurrying around inside of a hive. I have found them also very useful in static displays such as staffing a booth at the State Fair. When you have bees on display, the crowd always gathers with fascination, interest, and questions.

The observation hives I have designed and built are for the temporary showing of a frame of bees for educational purposes. They are not meant to be a permanent hive with access to outdoors. This article will outline the materials you will need, and step by step instruction to make an observation hive. For more detailed instructions, I can send you a copy of a presentation that goes into much more detail.

Figures 1 and 2 below show what the finished product should look like. Figures 3 and 4 show that either a Langstroth or a TJ Carr topbar frame can be used. Figure 5 shows the various labeled components you need to cut out. Figure 6 is a schematic of how they fit together and Figure 7 is the finished project that is labeled like the schematic. Figure 8 is included to show the perforated aluminum used as a vent guard and Figure 9 is the # 8 hardware cloth.

Lumber required: One 1 x 6 x 6 1/2 ft board and one 5-ft 2 x 4 board.

The alphabetical parts listed below indicates the parts shown in Figures 5, 6, and 7.

Now it is time to cut out the parts.

Part	Number	Dimensions	Hardware
A	2	1 1/8 x 1 11/16 x 10 1/2	2 hinges 2 1/2 inches
B	2	3/4 x 1 1/2 x 20 1/4	1 handle
C	1	1 1/8 x 1 11/16 x 18	2 carriage bolts 1/4 x 3 1/2
D	4	3/4 x 1 13/16 x 11 1/4	2 wing nuts 1/4 inch
*E	2	3/4 x 1 3/4 x 17 3/4	#8 wire mesh or perforated aluminum
F	1	1 3/8 x 1 5/8 x 20 5/16	Flat hood wood screws 1 5/8 and 2 inch
G	2	5/16 x 3/4 x 1 5/8	Pan head screws #6 1/2 inch long
H	2	3/4 x 1 5/8 x 32	Glass plates 3/16 x 8 x 18
I	2	3/4 x 1 1/2 x 8 1/4	Wood glue
*J	2	3/4 x 1 3/4 x 17 3/4	Wood Finish (Shellac)

*E and J are the same size

Steps to assemble:

- 1) Cut out pieces.
- 2) Drill 7/8 inch diameter ventilation holes 2 inches down to center from top of part A.
- 3) Assemble Base (A + B + A) using 2 inch screws.
- 4) Attach bottom boards (B) to each side of base with 1 5/8 inch screws.

- 5) Assemble lower window panel (parts D, E, and D) for non-hinge side of case. Make sure the grooves for glass line up. Use 2 inch screws.
- 6) Insert glass pane and cover with part J (same size as part E). Use 2 inch screws.
- 7) Screw entire window panel to base above part B. Use 1 5/8 screws.
- 8) Prepare hinge side of case by drilling 7/8 inch ventilation holes in part E.
- 9) Attach sides D to E checking alignment of window grooves.
- 10) Insert glass and cover with part J. Use 2 inch screws.
- 11) Attach hinges after careful alignment.
- 12) Cover ventilation holes on Part E with hardware cloth or perforated aluminum.
- 13) Drill 7/8 inch ventilation holes on each end of top cover (F).
- 14) Assemble top cover (H + F + H) using 2 inch screws in each side.
- 15) Place part G into each corner of FH and glue.
- 16) Cover ventilation holes in F with hardware cloth or perforated aluminum.
- 17) Attach handle to top cover (F).
- 18) Cover side ventilation hole on base upright (A) with hardware cloth or perforated aluminum.
- 19) Attach stabilizers (I) to each end of case (A) using 1 5/8 inch screws.
- 20) Drill 5/16 inch holes through both J's and F while assembled. Use 1/4 inch 3 1/2 inch long and wing nuts to secure hinged window panel to F and non hinged J to secure for carrying.
- 21) Apply wood finish to all exterior parts.
- 22) Put aluminum foil, cloth, and water in bottom of hive.



FIG. 1: THE FINISHED PRODUCT



FIG. 2: THE FINISHED PRODUCT



FIG. 3: FITTED WITH LANGSTROTH FRAME

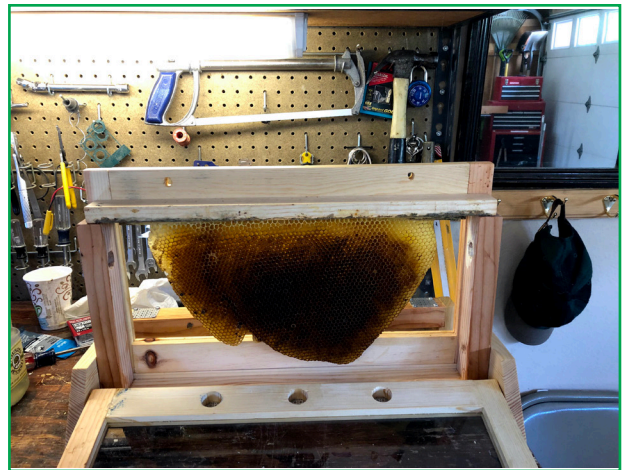


FIG. 4: FITTED WITH TOPBAR FRAME

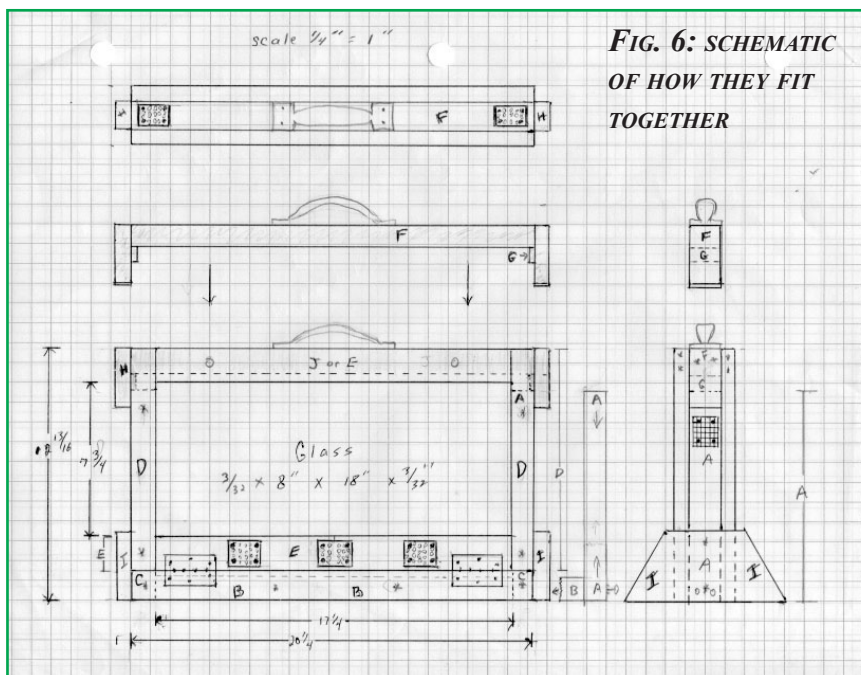


FIG. 8: PERFORATED ALUMINUM

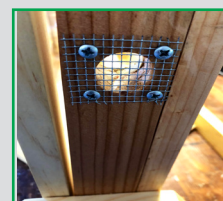


FIG. 9: #8 HARDWARE CLOTH

Stings!! Not for the faint-hearted

Consider two types of beekeepers: Those who have been stung
and those who will be stung



I want my mama

#%+!\$*%^#)*



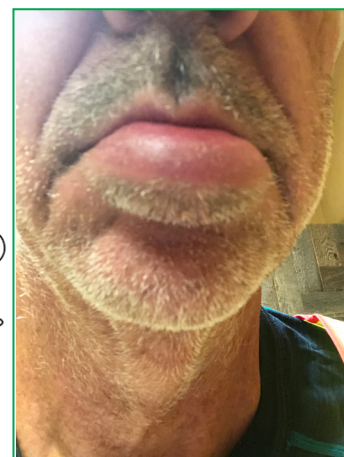
*Neighbor
wants free honey
hahahaha*

*Float like a
butterfly. Sting like a
bee. Uh-huh*



*Off to
work. Oh yeah I
can drive*

*Should I
sell my stock in
Benedryl?*



Bees in a Mood

By Kathy Grassel, NMBKA board secretary

My curiosity began last summer during an especially long drawn-out awful two weeks bookending either side of the Fourth of July. The pyrotechnics began in earnest across the street, in the alley, in my neighbors' backyards, and in the vacant lot next door and increased in intensity as the Fourth drew closer, barely receding until the last bit of potassium nitrate, charcoal and sulfur was expended more than two weeks later. The night of the Fourth started before sundown. My dog sought out makeshift foxholes around the house and trembled in terror, daring to emerge only when intermittent lulls in the cacophony promised some hope of peace. While I've never been close to a war zone, nor am I a dog, I too am affected by these peace-shattering bursts—maybe because there is no rhythm to them. Each feels like an ambush. Pow! Crack boom! I really don't like fireworks.

With that preamble, it was last summer that I got to wondering if the bees were at all affected, knowing they do not possess the sense of hearing as do humans, non-human mammals (bats are killed by sonic shock), avians (birds suffer blunt-force trauma colliding with cars, trees and buildings to get away), and other fauna. Google searches yielded no results except for a story of the guy who used fireworks to take out a bees' nest and burned

down his garage instead. I have read of bees reacting to lawn mowers, tractors, chain saws, weed eaters and the like, alerting the guards who then set out on stinging missions to drive away the offending machines. Humans lamely conclude that it's the vibrations causing the disturbance. Maybe. Maybe not.

This summer I settled on a simple experiment to begin to find out. I would do my hive inspections on July 5th, the morning after a particularly intense night of blasts and explosions and rocket launches, probably because of COVID-cancelled public displays resulting in myriad backyard fireworks parties. My task was to answer the question: "Do sustained fireworks affect the temperament of honeybees?" --fireworks being the independent variable, and temperament the dependent variable. I am intimately familiar with the temperament of bees in my three hives, so my control, while not ideal, was a record of how my bees behaved during previous inspections of spring and summer.

I donned a veil, approached the first hive, puffed a bit of smoke, removed the top cover, and BAM! Hit in the hand, ouch! Man, that hurts. Back to the house to deal with the sting and put on more PPE. More smoke, finished the inspection, but it was clear the bees wanted me out of there. Hive #2: Calm, okay, did a quick inspection, closed up, only to have several follow me from

the back of the yard to the house, closing in on me inside the house. I traced my steps back to the hive, and they fought me the whole way back. Hive #3: The mother hive next to the house, like pets, rarely needing smoke even. Inspection went fine—bees barely noticing me. Obviously it was going to be hard to come to conclusions without a bigger sample size. I went about my morning, did laundry. Bringing the laundry out to hang on the line, several guards from my #3 nicey-nice hive followed me to the clothesline and started bumping me around the head. I tried to ignore them but they persisted. So, defeated, I put on a veil to finish hanging the laundry. That's a first.

Conclusion: I decided on two ways to take this. First, yes, honey bees react negatively after a night of sustained explosions on Independence Day night. Or, second, yes, honey bees react negatively after a night of sustained explosions on Independence Day because the Inspector Herself reacts negatively--very negatively--to sustained explosions on Independence Day night. Which is to say, my attitude is as much an independent variable as fireworks themselves. As beekeepers we learn early on that bees pick up on moods. Bee behavior is a manifestation of mood.

I may carry over my July 4th experiment to coming years, try to improve on experimental rigor, explore ways to control the many variables that affect the outcome, but probably not. Do I really want to put my bees through the added disturbance of inspections after such a night? I'm resigned to the reality that all of us here at the house and yard--dog, bees, birds, and I--will just endure another Fourth, knowing that we'll all calm down later.



4th Annual Pollination Celebration 2020 goes virtual

By Anita Amstutz, Think Like a Bee, NMBKA member-at-large

It was an all-star line up for the first-ever virtual Pollinator Celebration with the City of Albuquerque!

As a member of the Xerces/Bee City USA initiative, the Open Space Division was able to collaborate with multiple departments this year to bring amazing and fun pollinator experiences and interactive programming for children and families. There were also some amazing musicians such as Seth Hoffman, zooming in from Haifa, Israel, and our very own concert with local artists, BeBe Lá Lá.

Colleen Langan McRoberts, Open Space Superintendent with Parks and Rec, kicked off the week by introducing our event. We began with the enchanting mystical world of the native bee of which New Mexico is host to over 1000 species, according to specialist, Dr. Olivia Carril. Sara Van Note of Wild Friends New Mexico live-streamed her interview with Carril, as we viewed the glowing colors and fascinating accessories of native bees, learning about their habits and specializations with native plants here in the high desert.

The BioPark's entomologist Jason Schaller and Curator of Plants Maria Thomas gave a guided tour of the botanical gardens' unusual native pollinators and their favorite companion plants. Maria and Assistant Curator of Horticulture Alissa Freeman took us on a special trip in the gardens to learn about the co-evolution of plants and pollinators in "It Takes Two to Tango"!

Anna Walker, Species Survival Officer for Invertebrate Pollinators, talked about the decline of pollinators and what we can do to help them as ordinary citizens, such as planting native non-GMO plants in our yards, and reducing or eliminating chemicals.

Amy Owen, well known as former ABQ Beeks coordinator and now owner of Desert Hives (<https://deserthives.com>), gave a "Hands in the Hive" tour at the Open Space bee yard, showing us the cycle of honeybee communities, their social behavior, task specialization, unique traits and qualities of *apis mellifera* and what is impacting their health these days.

Lara Lovell, well-known and beloved potter and beekeeper extraordinaire, showed us her backyard full of flowers and demonstrated a simple bee art project.

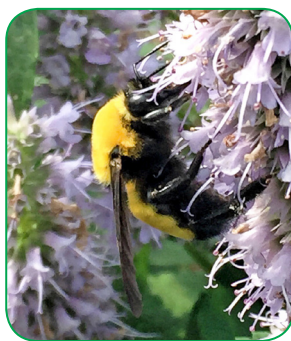
Anita Amstutz, founder of Think Like A Bee, advocacy and education agency, <https://thinklikeabee.org>, took us into the South Valley to meet a very special farmer, Lorenzo Candelaria. We learned about the Rio Grande watershed we live within, and why conserving our watershed is of utmost importance in these times of drought, pollution, and shrinking habitat for pollinators.

In "Pollinators on the Nightshift," Kaitlin Haase, Xerces Southwest Pollinator Conservation specialist, took us on a night tour, filled with dark wings and dark feet. Who knew there were pollinators that stay up till the wee hours of the morning to do their hard work?

Finally, permaculturist Peter Callen took us on a virtual tour at the Open Space Visitor Center, showing us what it takes to transition to native plants and the pollinators they support.

Thanks to the incredible tech support staff at the City of Albuquerque, we were able to pull off this experiment with on-line learning and virtual tours for an action-packed week. We all agreed that the collaboration between nonprofits and the City of Albuquerque departments made it stronger and a success. We look forward to 2021 as a hybrid!

To see all the videos, please visit: <https://www.cabq.gov/bees>



Lifetime Achievement Award goes to Jessie Brown Congratulations Jessie!

It's impossible to enumerate all of Jessie's accomplishments that rocketed NMBKA into prominence. From teaching classes at schools, garden clubs, girl scouts, pollinator events, and expos all over the state, Jessie put a face on the association. She organized conferences, bringing nationally-known bee experts, scientists, and authors to New Mexico. She joined with the NM Department of Agriculture to conduct studies on bee health at apiaries around the state. And then there was her 2015 TEDx talk, "The Buzzing Joy of Backyard Beekeeping," still out there on YouTube. Jessie was president of NMBKA for five years, providing us with a lifetime of insight and inspiration as we go forward. Congratulations, Jessie, on this most deserved award.



Become a Member of NMBKA

Join the NMBKA Hive for \$30! Help support NMBKA by becoming a paid member. NMBKA is an all-volunteer not-for-profit organization, so all of your contributions are going toward supporting New Mexico bees. Dues are \$30 for the year.

Members receive perks like admission to events, website listings and newsletters. Plus it's the right thing to do.

You can join or renew through PayPal on the website www.nmbeekeepers.org. Click on the membership tab. Or if you prefer to join or renew by mail, please fill out the information below, include dues and mail to:

NMBKA
PO Box 7188
Albuquerque, NM 87194

Thank you, current, renewing, and future members! We can't do it without you!