

# Bee friendly

A Newsletter of the New Mexico Beekeepers Association

[www.nmbeekeepers.org](http://www.nmbeekeepers.org)

Winter 2020

## 2021 Virtual Conference, Feb. 6

### Register Today!

Please join the New Mexico Beekeepers Association for an all-day virtual conference featuring a series of informative and inspiring talks on the latest in beekeeping research, philosophy and practical management tips for your beekeeping. The conference will also include an on-line auction to be opened on Jan. 7. Register and check out the auction on the [homepage](#).



Randy Oliver  
Grass Valley, CA



Margarita  
López-Uribe,  
Penn State



Robyn  
Underwood,  
Penn State



Keith Delaplaine,  
U of Georgia



Ramesh Sagili,  
Oregon State U

Where here at NMBKA have embraced the chance to be creative in how we hold our conference during these unprecedented times. By now, probably all of you have attended virtual conferences and Zoom meetings and thus know the drill. Our speakers come from both the east (Pennsylvania and Georgia) and the west (California and Oregon) and all are highly distinguished. I (Kathy Grassel) have been able to hear all of them this past year by attending other

bee association's virtual conferences. A quote to arouse your interest: On hearing Dr. Ramesh Sagili begin his talk on bee nutrition at the WASBA conference, he said, "We know more about nutrition for grasshoppers than bees." I knew right then that I wanted him for our conference. The others, too. Randy Oliver will be telling us about not just what to treat varroa WITH, but WHEN. Margarita López-Uribe and Robyn Underwood are taking their research findings straight to the bee-

keepers through the Penn State Extension outreach. Look for our local panel to join them. And Keith Delaplaine truly shocked me with his observations about worker bee mutiny against their queen. It's going to be that kind of conference. We're also holding an online auction that will start a month leading up to the conference. We have fantastic donations from queens to bee suits to complete hives. Finally, check the last page for the speakers' titles and times. "See" you all in February!

#### **Website!**

Finally a modern website for NMBKA. Drive the new model!

Page 4

#### **Neonic pesticides!**

NMBKA gets behind promising legislation to finally do something about bee-killing neonics.

Page 8

#### **Harvest!**

After some really hard work, beekeepers earn the reward of honey.

Page 13



## Winter 2020

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

### NMBKA 2020 Board:

#### Officers:

##### President

Stephen Black, Santa Fe

##### Vice-President

Bob Reneau, Santa Teresa

##### Acting Treasurer

Bob Reneau, Santa Teresa

##### Secretary

Kathy Grassel, Albuquerque

#### Members-at-Large:

Anita Amstutz, Albuquerque

Frank Gibbons, Santa Fe

Allison Moore, Albuquerque

#### Layout, production:

Kathy Grassel

Website: [www.nmbeekeepers.org](http://www.nmbeekeepers.org)

Copyright © 2020

All rights reserved.

Send comments and letters to

Kathy Grassel, Editor

[kathy.grassel@gmail.com](mailto:kathy.grassel@gmail.com)



*Courtesy of Anita Amstutz's bees*

## Message from the President

*By Stephen Black, President, Board of Directors, NMBKA*



**G**reetings! I hope each of you has had an enjoyable beekeeping season and by now have successfully tucked your girls away for the upcoming winter season.

This fall I was lucky enough to witness something in one of my hives that I had never seen before. A waggle dance....and not just one bee performing the waggle dance....two bees about an inch or so apart performing a synchronized waggle dance! It was an extraordinary thing for me and my neighbor beekeeper to see (so there WAS a witness!), and one I will cherish for a very long time.

The isolation of the coronavirus is somewhat offset by opportunities to “travel” to locations around the country, and “meet” with people from around the globe. I have participated in beekeeping conferences in Georgia, Washington State, and Texas, which had featured speakers on subjects such as queen rearing, use of small UAVs (unmanned aerial vehicles, aka drones) to find and record Drone Congregation Areas, and murder hornet capture in the Northwest US.

Due to the ongoing restrictions on in-person meetings, we are well underway with the planning of our winter conference, which will be virtual, utilizing Zoom. One advantage of holding a virtual conference is the fact that we can invite reputed speakers without having to pay travel costs and therefore we plan to invite four differ-

ent speakers. Check out the front and last page for more details ..... and put February 6th on your calendars!

By the time this newsletter is published, our new website will be up and running (see pg. 4), so please take a moment and check it out at [nmbeekeepers.org](http://nmbeekeepers.org). It has been a Herculean effort, primarily taken on by our NMBKA Vice President Bob Reneau. Bob has spent many hours and days working the details with our website developer React Republic, creating improved functionality and an updated look and feel.

With our Winter Conference coming up in early February, you will see that it's a long day, so we decided to have our business meeting as a separate event. It will be held a week or so after the conference (on Zoom) and NMBKA members will get the chance to hear in some detail about the status of various board efforts during the past year.

As we approach the new year, two of our current board members will be stepping down and so we will be seeking nominations for two additional board members. Please consider nominating yourself or a fellow beekeeper to join the board and help us continue to improve and evolve. Send your nominations or suggestions to [info@nmbeekeepers.org](mailto:info@nmbeekeepers.org)

Lastly, a reminder that NMBKA Board meetings are held monthly, 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 us an email at [info@nmbeekeepers.org](mailto:info@nmbeekeepers.org) and we will reply with a Zoom invite.

# Is the Murder Hornet a Threat to New Mexico Bees?

By Frank Gibbons, Ph.D., NMBKA board member



**V***espa mandarin* is the scientific name for the Asian Giant Hornet aka Murder Hornet. As seen in the photos above, it is quite large. Female workers can attain a size of almost two inches long and a wingspan approaching three inches. Queens are a little larger. Drones tend to be smaller with thorax less pointed. The species is considered to be the largest of all known wasp species. These wasps are native to Asia with established colonies in China, India, Korea, Thailand and even parts of Russia. They seem to be most prevalent in Plant Hardiness zones 8 and 9 which include the Pacific Northwest, California and most of the south. Parts of New Mexico in the southeast and southwest counties are in Plant Hardiness zone 8. The first sightings in North America were in British Columbia and Washington State. How they arrived remains a mystery but chances are they hitchhiked on a cargo ship or plane as an individual fertilized female (a fertilized queen). This is probable since more than 19,000 cargo containers arrive daily at U.S. ports and it is estimated that random checks for evidence of pests occur on only about two percent of the containers flowing in. Genetic tests on the wasps found in Washington and British Columbia

indicate that the two groups were not related. Good news: The wasps didn't migrate. Bad news: At least two different queens arrived independently. Scientists believe that the wasps were transported as individual fertilized queens and not as a colony. These isolated colonies have been eradicated.

Asian Giant Hornets are called Murder Hornets because they have been known to kill people (rarely) and they can maraud and murder (attack phase) an entire honeybee colony in less than two hours according to the USDA. One hornet can kill as many as 40 bees per minute. They attack the bee by first decapitating it and then tearing it apart. The hornets then take the chewed parts back to their hive where they feed the chewed parts to the developing larvae. There is an interesting relationship that then occurs between adults and larvae. Murder Hornet adults with such thin waists cannot digest solid food such as bee parts and other protein sources. ([Smithsonianmag.com](http://Smithsonianmag.com)). Instead, the foragers collect the protein sources (e.g., honey bee parts and other solid organic material), mix it with their saliva, and then feed it directly to the larvae. The larvae digest the protein sources and then convert it to a liquid containing amino acids to feed the

adults. Workers bees can and do obtain energy from sugar sources such as honey, nectar, and jelly, and perhaps some protein from meat juices. Haven't you noticed how wasps like to hang around your picnic snacks? Most people who are killed by the Giant Hornet die from a severe allergic reaction; the amount of venom from a single sting can be seven times that of a honey bee. Imagine being stung several times by the same wasp or from several attackers. In reality, the hornets are not aggressive and will go to a defensive posture only when they or their hive is threatened.

The hive is generally below ground in hollowed trunks and rotted roots. They can also burrow into the ground using their large mandibles. Aerial nests are rare. A mature hive can be as large as a football at its peak in the summer and contain up to 10,000 adults. The life cycle of the colony is an interesting one with probably several queens emerging from winter hibernation. If they are from the same colony, one finally dominates the others and finds a new suitable place to build a nest that is made from wood mixed with saliva. She has no workers so she lays eggs, forages and tends the

MURDER HORNETS—CONT. NEXT PAGE

MURDER HORNETS—CONT. FROM PG. 3

larvae by herself until enough adults are reared to take over the hive duties. She then becomes a full-time queen and can lay 200 to 300 eggs a day. The colony grows to somewhere between 5,000 and 10,000 individuals throughout the summer. In late summer, she starts laying eggs that produce only queens and drones. Most foraging is done by solitary hunting until fall when “slaughter and occupation” foraging begins. This is when the hornets start taking over honey bee and other social insect colonies. This is the attack phase mentioned above.

Honeybee colonies in Asia have learned to defend themselves by “scorching” an invading hornet. When it enters the hive, the honey bees react by mobbing it and surrounding the invader as a cluster. Each bee starts

vibrating their wings, bringing the temperature inside the cluster up to 122 degrees F. The increased temperature and carbon dioxide levels soon kills the hornet. Even though this defense mechanism will work on one intruder, it probably wouldn't if there were multiple hornets attacking at the same time. The “scorching” counter attack behavior could also probably be learned in American bee colonies over time.

So back to the original question: Is the murder hornet a threat to New Mexico bees? Probably not, at least in the foreseeable future. First of all, there have been no sightings of the Murder Hornets in 2020. Secondly, the hornets seem to need a very temperate environment found only in the southwest and southeast parts of the state. Thirdly, their habits even in areas where they are established indicate

that they seldom venture further than a half mile from their nest while foraging. They do not overwinter as large colonies and typically, only a few queens survive hibernation from the original hive. We should also remember that honeybees are not their only prey. Then, there is the USDA New Pest Response Guidelines that hopefully will help us stamp out and isolate any Murder Hornets that are found in the US. Managing Entomologist at the Washington State Department of Agriculture Sven-Erik Spichiger is the entomologist leading the fight to locate and eradicate the hornets.

The resources used to write this article can be found on the internet. For further detail and updates, check out: *USDA New Pest Response Guidelines Vespa Mandarinia Asian giant hornet*

## Website! Out with the Old, In with the New

*By Robert Reneau, NMBKA board member*

Over the past several months we have been working diligently on a new website for NMBKA. On Wednesday, December 16th it became a reality. We had several objectives.

- Developing a modern and simple website to inform the public and serve our members.
- Moving to a hosting platform that is more responsive.

We believe that we have met those primary goals. The site is not perfect yet as we would like to add more pictures of our beekeepers in action and a few other improvements. However, because we need to start advertising the 2021 Annual Winter Conference, we decided to start with what has been created.

You may notice a few problems or have suggestions. Please call them to our attention. Do so via the “Contact Us” option in the footer, or drop an email to me at [vicepresident@nmbeekeepers.org](mailto:vicepresident@nmbeekeepers.org).

A few things that you may notice:

- Privacy - Only current paid members may see other members' information and share comments.
- Speed - The website with a new host will be much more responsive.
- Simplicity - The menu structure is much simpler and allows us to organize the information so users can access it quickly.
- Certified Beekeepers will have their own area, not visible to the public. Also, the Certified Beekeeping program application is only available

to members.

- Groups - Members after they log in will have access to Groups and a great forum to exchange ideas and share comments. These are not viewable by the non-members.
- Organizations - Much of the website is devoted to our affiliates and our beekeeping organizations across the state.
- Certified “Colonies” - A new program has been implemented across the state to organizations that qualify and want to be sub-organizations of NMBKA. You can find that information under Resources > Affiliates.
- Speakers Bureau - Choose from a listing of speakers from around the state for your events.

We hope you enjoy the new website!

# My First Experiences with Thermal Treatment for Varroa

By Stephen Black, Santa Fe beekeeper

**A**fter first getting involved in beekeeping three years ago, I rapidly became aware of the need to control Varroa in my new hive. Along with that knowledge, came a list of chemical treatments that could offer varying degrees of success, during different times of the year.

In my first year, I used Apiguard and in my second year I tried Apivar strips. While in all likelihood these miticides did provide benefit to my bees, I became interested in a non-chemical, thermal treatment, using a device known as the Mighty Mite.

While clearly not a device for all beekeepers, I was interested after



learning of its chemical-free method of heating the entire Langstroth hive to a temperature of 106°F, a temperature that kills both phoretic mites and mites

under capped brood, while reportedly being totally harmless for the bees.

I purchased the unit in 2019, but was unable to use it for the first time until this past year (as it is a gentle heater, it will only get the hive to temperature when the ambient temperatures are above about 70°F.)

I know the importance of mite testing both before and after any treatment one chooses to use for Varroa; however, while I treated both of my Langstroth hives two times this summer with the Mighty Mite, I only got mite counts on the second series of treatments. Full disclosure.... I choose to do a mite count only if I can find the queen to ensure that she does not end up in the alcohol wash, and the first time I treated, I failed to find her.

The second time I treated, I actually HAD to find the queen, because I volunteered to submit a sample of 200 live bees both before and after treatment, for a study being undertaken for the Center for Honeybee Research in Asheville, North Carolina. The study is looking at the potential benefits of thermal treatment (via the Mighty Mite) for reducing viruses in general, not just for reducing Varroa. Both hives that I sampled BTW, had mite counts well below threshold.

While there are thousands of beekeepers across the country who use the Mighty Mite successfully, there are remaining concerns in the beekeeping community regarding the potential



negative affect of heat on the queen bee fertility. And while the “jury is still out,” the Mighty Mite remains in my Varroa Destructor elimination toolkit.

Footnote: As it is too cold in the fall for the Mighty Mite to reach its desired temperature, I just did my first oxalic acid dribble....and I am hoping for the best!

## NMBKA to Conduct Statewide Beekeeping Survey

This year we plan to conduct a survey of our members throughout the state regarding their beekeeping practices as well as survival rates of their hives over the winter season. The resulting data will be shared at our 2021 summer conference. Please take part as this will provide valuable insight into various beekeeping practices in our state as well as comparing this year’s data to that gathered during previous surveys. Look for the survey in your inbox sometime in March. Thanks for your interest!

# Oh Wherefore Art Thou Bees?

By Melanie M. Kirby



**T**here is a saying that we will only know where we truly are and where we want to go, once we know where we have been. As a queen breeder and producer, I spend the bulk of my time plunging deeper down the rabbit hole, going “back in time” as I learn about the histories of various strains of bees (genetics) and how their migrations (environment) formed their characteristics and behavior (epigenetics).

There are close to 30 recognized subspecies of the Western honey bee. Similar to races of humans, they can interbreed with each other, but they are distinct with unique stories which has made them who they are today. According to [Han et al.](#), the initial historical migrations demonstrate that the ability of bees to move, adapt, and establish in a given area gave rise for specific ecotypes (subspecies) to develop. One way in which we recognize this is the ability of some strains being better adapted for warmer climates, or colder climates.

To better understand what bees we have here stateside and how we can better care for them, we’ll continue with a trip down a proverbial memory lane...

Western honey bees are not considered endemic or native to the Americas, though there is a [fossil record found in Nevada of \*Apis mellifera neartica\*](#). When the Spanish colonists arrived on this continent, they brought

seeds, and various livestock, including honey bees. The bees began to adapt and become prolific. Then as more European colonists arrived, additional strains of honey bees were brought in until the Isle of Wight disease (tracheal mites) caused a ban in the 1920’s on honey bee importations that still exists today (though some limited drone semen is permitted to be brought in by institutional research programs).

Flash forward to today, we have mass movements of bees from coast to coast for pollination events and for filling the demand of beekeepers across the country. American bees are now very much a reflection of its modern-day peoples—a melting pot of races and characteristics. All these movements have impacted the bees’ abilities to succinctly adapt to local conditions. And with producers breeding off of the same limited “root stocks” season after season, this has created inbreeding.

How does this play out on the regional level? Well, when one orders bees from a bee producer or flipper (importer of bees), they are receiving bees whose genetic stories may not be familiar with their location. To add more confusion, a lot of these producers are migratory so their bees may have “originated” in one state but mated out with drones from other states as they gather for various pollination events in high-production zones. Given the reality of open-mating (meaning queen bees mate naturally with any drones who find them first in a particular area high in the sky), then the selection process becomes less controlled.

Producers vary in their philosophies and practices. Some are very keen to only produce a certain kind and may strictly specialize in instrumentally in-

seminated (I.I.) queens which is under their full control. Others may integrate some I.I. queens into their breeding program to use as Mother breeders for rearing daughters or drones and then allowing their virgin queens to open mate with an influx of drones they have reared and/or with neighboring stock. Since open mating allows for drones from miles away to find virgin queens, then a certain level of chance is accepted and the results not constant. This yields some positive and negative effects. On the positive side, this allows the bees to naturally mate with whatever random mix of genetics is present at any given time which can add some genetic diversity. On the negative side, when the surrounding drone stock is not of desirable traits, then the spread of undesirable genetics is perpetuated.

What many new beekeepers may not realize is that the origin and rearing of the bees they purchase has a lot to do with what sort of abilities the bees have. For instance, if bees are bred in an area where there are not pest/disease resistant strains, then the bees that they get will have inherited the traits, or lack thereof, of their parents. Add on the constant applications of treatments for controlling pests and pathogens, and the bees that are produced may also have compromised immunities and be crunched. And while treatments can be helpful—such as a band-aid, if the wound can’t heal on its own—meaning if a strain can’t fully adapt and develop resistance on its own, then no matter how many band-aids you put on it, it is still a festering wound. And one that can begin to rot and cause additional problems to the surrounding areas.

IMPORT OR NOT?—CONT. NEXT PAGE

IMPORT OR NOT?—CONT. FROM PG 6

Such is the case here in New Mexico. We do not have many local producers and so influxes of packages are brought in every year from high-production zones. These high-production zones expose the bees to pests and pathogens from all the various producers surrounding them. As a result, they are having to run a chemical treadmill to keep their bees alive, healthy, and productive. Once the bees leave their ops and are distributed en masse to other states and regions, those bees are bringing everything they've been exposed to with them. Additionally, once they are adopted into new homes, the new owners may not stay on the same chemical treadmill and so these imported bees will eventually succumb to various pests/pathogens that they have not had the ability to develop natural resistance, spread these negatives, and most times, do not survive the new climate of the location they've been brought to.

It's a vicious circle really... unsuspecting stewards wanting to keep bees and hoping they will be able to keep them alive naturally. But, basically subjecting their bees to go "cold turkey" and face the onslaught of issues without having the tools (genetic, mechanical, or otherwise) to protect themselves, all the while spreading the issues that were imported. And it is these issues that are concerning and require us to reevaluate how and why we bring bees in. Do we bring bees in because our area cannot produce enough bees when we want them regardless of the local circadian rhythms, or is it that folks are not willing to wait for local bees? Do we bring bees in because it is cheap and easy, or do we bring them in to add beneficial diversity to our genetic pool? Do we bring bees in because it is trendy, or do we bring them in to support local pollination and biodiversity needs?

The answers to these questions may

be different for each of us. I can only really share my experience and perspective. I was born and raised here in New Mexico and left for 8 years after my undergrad degree to learn and work for several commercial beekeeping operations. I returned in 2005 and with a farm partner, established a small queen breeding farm in northern New Mexico. He and I began selecting from bees that he started with from Michigan, which were varroa resistant stock lines originating from producers in the Midwest and northern California. We decided early on that we didn't want to be breeding bees that we would have to be constantly treating and crutching with chemicals and so we started breeding off of the survivors and nurturing the best tool of all that only Father Time can test and Mother Nature can approve--genetic selection. We also researched locations and settled into the northern Rio Grande valley and Sangre de Cristo mountain range in an effort to better saturate naturally resilient and hardy stock to support open-mating efforts.

Due to the location and climate of where we breed bees, we like other producers are at the mercy of the local weather conditions, so our in-state production schedule is necessarily based on the timing of the seasons. This timing doesn't always match with every other part of New Mexico. The lower elevations have spring commencing a good month or two earlier. And so those interested in getting NM bred bees must be willing to wait and respect the local natural calendar. Those who don't care or won't wait, may choose to purchase imported bees from regions with an earlier rearing calendar. And while this just seems a simple act of the laws of supply and demand, the repercussions of what folks choose to do has an extensive ripple effect.

In 2010, we started going out to NorCal to conduct breeding ex-

changes with producers interested in integrating our bees into their breeding programs. When we first started rearing early season bees out there, we kept and monitored them for several years before sharing them with NM beekeepers. We chose to do this to be mindful and not accidentally import any negatives that could affect our area. All in all, it has taken over 20 years of hard work, patience, and diligence in nurturing the cross-collaborative breeding programs that we facilitate.

The area we rear bees in NorCal is on a nature preserve far away from the high production zones. It is up in the coastal mountains where nutritious forage is available and due to its elevation, though not as high as northern New Mexico, is still high enough to compare to the lower elevations of central and southern NM. By design, by choice, and by circumstance we are still a 2-person operation that continues to strive for quality over quantity. The hope is that as more folks become knowledgeable about where bees come from and how they are produced, they will become inspired to either on their own or as a collective, work to breed bees locally to avoid importing negatives that can and do affect all of our bees.

So the choice is ours. We must ask ourselves, what kinds of bees do we want and why? The answer is subjective, but one that I hope every beekeeper will really take some time to ponder and to determine if their decisions are for the greater good or...not. Do you want to be a part of the solution, or perpetuate the problem?

*Melanie Kirby is a Native New Mexican and has been keeping bees professionally for 24 years. She is a researcher, a writer, an educator and mother. She can be reached at [survivorqueenbees@gmail.com](mailto:survivorqueenbees@gmail.com)*

# New Mexico Set to Tackle Neonicotinoids

By Michael Dax, Defenders of Wildlife



Over the past 70 years, pollinator populations including native bees, honeybees and other pollinators have declined precipitously

across the country, and unfortunately, that decline has only accelerated in recent decades. In 2015-2016, over 40% of honeybees in the U.S. died.

As a result, many native bees are faced with extinction. In 2017, the rusty patched bumble bee, native to the Midwest, became the first bee to be listed under the Endangered Species Act, and now the U.S. Fish and Wildlife Service is considering whether monarch butterflies are also deserving of ESA protections.

There are a number of factors that have helped drive this downward trend. Habitat fragmentation, disease, invasive predators, and climate change, which has wreaked havoc on seasonal weather and flowering patterns, have all contributed to this decline. The use of pesticides in commercial agriculture and for residential lawns and gardens is another major contributor, and neonicotinoids, the most widely used class of insecticides, are one of the worst culprits.

Because of this, neonicotinoids have increasingly drawn the ire of pollinator advocates. As New Mexico takes steps to fight the climate crisis, restore habitat, protect wildlife migration and other actions that will maintain our status as the Land of Enchantment, there's no place for neonicotinoids in that future.

Led by Sen. Mimi Stewart and the [Wild Friends program at UNM](#), the New Mexico legislature has passed legislation in recent years that has helped draw attention to the essential role that pollinators play in healthy ecosystems. A 2016 memorial created the first Bee Aware Day, and the following year, a subsequent memorial created a voluntary plant labeling program at local nurseries and helped create pollinator friendly gardens at the roundhouse. Then in 2019, the legislature approved a pollinator protection license plate whose proceeds assist the Department of Transportation plant pollinator friendly plants along roadsides and within median strips.

Now, New Mexico is set to take the next step. As much as we all need to do our part by planting more pollinator-friendly plants and avoiding use of harmful chemicals in and around our homes, it's time take the more difficult steps of banning and restricting harmful pesticides like neonicotinoids.

In late 2019, the New Mexico Department of Agriculture completed a small study to determine the presence of neonicotinoids in thirteen bee colonies in Bernalillo County. Using wax samples that were voluntarily harvested and submitted by local beekeepers, the study surprisingly found little to no trace of neonicotinoids or other pesticides in the sampled hives.

In the short-term, this is good news. However, the study was limited in scope and additional studies would likely be required to get a fuller picture. Additionally, [some recent studies](#) have indicated that neonicotinoids are often undetectable but contribute to increases in bees' susceptibility to diseases and viruses that may have otherwise been benign. As a result, these diseases or viruses aren't blamed for colony deaths even though the

presence of small amounts of neonicotinoids served as a pre-existing condition that ultimately contributed to the die-off.

But even if neonicotinoids aren't currently a major factor for bees and other pollinators in New Mexico, the science is clear, and we shouldn't wait for an emergency scenario before taking action.

In a normal year, getting a bill through New Mexico's legislature is rife with challenges. Even a "long" 60-day session can mean there's little room for error, but the upcoming 2021 session is set to be unlike any session ever. Between a socially-distanced setting along with the fact that most legislators will likely be focused on short-term needs tied to the ongoing pandemic and economic fallout, we face an uphill battle.

That means it will be even more important that supporters of a pollinator-friendly future speak up and make their voices heard. [Contact your legislator today](#) and tell them to support pollinators and oppose the use of neonicotinoids!

*Michael Dax is the New Mexico Representative for Defenders of Wildlife, based in Santa Fe. Before moving to New Mexico, Michael worked in Grand Canyon and Yellowstone National Parks as a trail groomer and tour guide. Michael earned a master's degree in environmental history from the University of Montana where he began work on his book, Grizzly West, which focuses on the attempt to reintroduce grizzly bears to the Selway-Bitterroot Wilderness in Montana and Idaho.*



# Interview with Sen. Mimi Stewart

By Anita Amstutz, *Think Like A Bee*, NMBKA board member

Anita Amstutz, the NMBKA board's chair of its pollinator advocacy committee, recently had the opportunity to interview Sen. Mimi Stewart. The senator will be introducing legislation in this 2021 session that beekeepers will be watching closely, a bill that at minimum will bring attention to harmful effects of pesticides on pollinators—particularly the neonicotinoid class of insecticides. The following is a summary of Anita's interview with the senator, highlighting her background leading up to her becoming an architect of environmental protection through the legislative process.



Sen. Stewart

**F**or 30 years, Mimi Stewart was an elementary special education teacher. Her expertise was teaching reading to students, and later to educa-

tors, about the science of how students learn. She decided to run for office and won a seat in the NM House of Representatives. That was 26 years ago.

After a number of years, Mimi started putting environmental bills into her newsletter and platform, educating her base as she learned about climate change as the American Southwest got hotter and drier.

Town halls and forums reminded her that she could do more. The base always was ahead of the politicians, ecologically speaking. Mimi continues to see more groups becoming active in our state and country promoting better policies. She is gratified to see climate change in the public dialogue now.

After 20 years in the House, she was appointed in 2014 to the Senate, then elected to the seat in 2016 and re-elected in 2020.

*Environmental mentorship leading to legislative work*

**T**wenty-five years ago, Sen. Stewart joined the National Caucus of Environmental Legislators ([ncel.net](http://ncel.net)) and was part of its inception along with founder Leon Billings of Maryland. NCEL empowers a nonpartisan network of legislative champions in collaborative efforts to protect and improve the natural and human environment. They've studied everything from plastics and coral reefs to wildlife conservation. She is also part of the National Conference of State Legislators that meets every summer. Sen. Stewart studied wildlife trafficking, wildlife corridors, pollinators and diseases/pesticides and then began to work at passing bills.

*Years-long involvement with [Wild Friends of New Mexico](#)*

**A**s a former educator, Senator Stewart found a natural fit in working with the Wild Friends students around wildlife. She began to carry their wildlife conservation bills and memorials. With help from educators at the UNM Institute of Public Law, students do the research and learn how to write the legislation. Sen. Stewart would sit with the students and support them as they presented the bill and testified in committees, letting them be the experts. Her goal was to teach them how to lobby and advocate for their issues—how to speak to people in power. A bill that stands out for her was when New Mexico joined other western states in a wildlife compact, ensuring that states with bad actors involved with poaching or killing animals without a license wouldn't be able to get a license in New Mexico.

She is also proud of New Mexico's first wildlife corridor, put in place on

I-40 heading eastward out of Albuquerque, designed with fencing and lighting so wildlife could pass underneath the highway and avoid collision and death. The NM Game and Fish Department is now working with the NM Department of Transportation to study best places for corridors with every new highway construction.

The last four years working with Wild Friends featured memorials and bills highlighting the importance of pollinator protection, culminating in passage of a bill creating the issuance of a pollinator license plate designed by the Wild Friends that New Mexicans can buy through the NM Motor Vehicle Department.

*Goals for the upcoming session—opening day January 19*

**S**en. Stewart is currently the Senate majority whip. She foresees that the upcoming session will be pro-environment with many newly elected legislators on board. It will be a challenging session because of COVID-19. Legislators will use a hybrid model, beginning with face-to-face sessions and moving to committee work off-site and then reconvening as possible.

Sen. Stewart will be working with New Mexico conservation groups on possible initiatives that include community solar, water agreements, methane rules, outdoor recreation and education, neonicotinoid pollinator protection bill, and groundwork toward a green constitutional amendment.

Anita Amstutz has a popular blog post and non-profit called [Think Like A Bee](#). Thanks to Anita, Albuquerque has been designated a Bee City USA, the first in the Southwest.

# Mutual Respect is Key to Success

By Les Crowder, NMBKA president emeritus

I feel the need to explain why I keep bees the way I tend to keep them. When a swarm of honeybees landed in my mom's backyard, something timeless rang a powerful bell deep in me. That experience is written up in my book. Strangely enough I was briefly vividly reminded of another time when I was less than 10 years old when that feeling struck, nothing to do with bees until much later. My dad basically lived in a very small travel trailer on the Navajo reservation. He lived there without electricity or running water and built earthen dams across gullies to store water and reduce erosion. He had lived without electricity or running water most of his life and it was easy and "normal" to him. On the reservation at that time there were still many people living in little one-room round houses called hogans. They spoke Navajo and a little English. My dad and I were in a hogan one evening with great grandmother, grandmother, two adult daughters, an adult cousin and a bunch of kids from infant to about my age. We were all eating mutton stew and fried bread and they were getting more and more talkative. As I listened to the strange sounds they were making--the Navajo language uses very different sounds from English--I suddenly felt like time stopped and something struck a deep chord within me. I realized that the English sounds that I had been raised were not right or wrong, just different. My "people" made up a system that works for them and Navajo people made up a system that works for them. It was the beginning of my realizing that there is no them and us, just one complicated us. If I could be smart enough, I could understand the Navajo sounds and the English sounds.



This attitude is a small revelation with profound implications. It eventually leads to less superiority/inferiority and more mutual respect. Instead of "us" teaching "them" how to talk or live or what to believe, we meet as mutually respectable entities and get to know each other. This revelation has obvious implications on human-to-human relationships where we separate ourselves over race, class etc.; I take it even further. We depend on and love to share our lives with many plants and animals that we do best to treat with some respect. I enjoy entering into a relationship with honeybees that treats them with some respect and lets them live much as they choose. I let them make their own comb whatever cell size they want. If they want to raise drones they are free to do so.

I have taught myself (actually the bees have taught me) how to move to avoid crushing them. I have changed the design of my beehives to avoid crushing bees. I find it makes a big difference in the behavior of the bees. I can generally wear a long sleeved shirt and jeans and leave my gloves in the pickup and work through many beehives, harvest honey, make divides, etc. and the bees stay calm. I rarely get a sting. And I hardly crush any bees. Respect is mutual. There is no them, only us. Some of us have six legs.

*Les Crowder is a bilingual farm worker, beekeeper and teacher. He graduated from the University of New Mexico in 1981 with a degree in biology/Spanish. Les began keeping bees (he often states they began keeping him) in Bernalillo, New Mexico, 40+ years ago. He began looking for ways to raise bees without antibiotics in his teenage years and has been breeding honeybees for disease and parasite resistance since then. Les was president of the New Mexico Beekeepers Association for many years and is a Lifetime Member recipient, has been a honeybee inspector for the New Mexico Department of Agriculture and has taught beekeeping in many parts of the world for more than 30 years. He is the coauthor of "Top-Bar Beekeeping" (Chelsea Green Publishing 2012). He continues to teach and advocate nontoxic management of beehives. He is married to Erron Neil-Crowder and lives near San Antonio, TX. Les works with beekeepers through the [Bee-Mindful](#) website.*

# Mahonia -- an Evergreen with Year Round Appeal

By Allison Moore, Landscape Architect and NMBKA board member



Winter is here and our thoughts are turning inward toward a warm house, a cozy place to relax and read, and the upcoming

New Year. Our gardens have also gone inward with plants experiencing their natural dormancy and concentrating their energies in the roots below the surface. Most of the annual wildflowers and perennials have died back and the deciduous shrubs and trees have dropped their leaves revealing bare branches. The evergreens in the landscape stand out especially now and include the Piñons, Ponderosas, Juniper and Spruce trees as well as their smaller shrub forms. All of these are what we think of as the classic evergreens with their tufts of needles, resin based fragrance, and often some sort of pinecone.

There is another type of evergreen that is not as common here in New Mexico but is just as valuable to include in your garden and that is the broadleaf evergreen characterized by a leaf rather than a needle. The genus Mahonia is one such broadleaf evergreen that is native to the southwest and is available in several different varieties – each with a distinctive overall shape, leaf size, and required growing conditions. It is part of the Barberry family (*Berberidaceae*) and native to western North America. Although most often used as an ornamental plant in the landscape, Mahonia is also valuable as a source of food and nectar for wildlife and is recognized by pollination ecologists as attracting large numbers of native bees.

In general the Mahonia species have the following characteristics: spiny foliage that acts as a natural privacy

barrier, evergreen leaves that often turn color in the fall, attractive berries, and early blooming fragrant flowers for pollinators.

There are three varieties to consider for the New Mexico garden:

## *Mahonia aquifolium*, Oregon Grape Holly



This is an upright broadleaf evergreen shrub with glossy, dark green leathery leaves. The leaves are sharply



toothed similar to those on a Holly shrub and can turn a reddish-bronze to purple color as the temperatures



drop in the winter. Clusters of bright-yellow, bell-shaped flowers appear in March-April and are followed by small blue, grape-like fruits. Mature height and spread is approximately 4 to 6 feet. It spreads by underground rhizomes which can be removed or pruned back in order to control growth and maintain a certain size.

Oregon Grape Holly is a great choice as a background or understory shrub in the landscape. It can be planted behind summer flowering perennials and shrubs to provide late fall, winter and early spring interest and fill in the blank spots until those other plants have leafed out. Oregon Grape Holly also acts a natural understory plant and does well under taller trees providing another layer of habit for wildlife. And lastly the spiny leaves can act as a natural barrier for access or privacy screen.

Growing Conditions: Prefers shade to partial shade, hardy to 7,000 feet, and drought tolerant once established. Plant out of drying winter winds.

## *Mahonia repens*, Creeping Mahonia

*Mahonia repens* can be found growing along hiking trails up in the mountains and has many of the same characteristics as Oregon Grape Holly but in the form of a groundcover. Creeping Mahonia grows approximately 12 to 18 inches tall and wide with visible woody stems, holly-like dark green-blue leaves, and bunches of yellow flowers in the spring turning to small dark blue berries. The leaves are not as glossy as Oregon Grape Holly but will also change color in the winter. Creeping Mahonia is a wonderful low growing plant for those places in the garden that receive both shade and sun and require a natural looking

MAHONIA—CONT. FROM PREVIOUS PAGE

cover. It does well under Aspen trees providing living mulch for the root system, as well as in rock gardens filling nooks and crannies. Creeping Mahonia will spread by rhizomes similar to Oregon Grape Holly.

Growing Conditions: Prefers sun to shade, hardy to 9,000 feet, and drought tolerant once established.

***Mahonia fremontii*,  
Fremont's Mahonia**

This Mahonia shrub is also called Desert Holly and, unlike Oregon Grape Holly and Creeping Mahonia, prefers sun and dry conditions. It grows 6-8 feet tall and wide with an upright erect growing habit – almost like a small tree with multiple trunks and branches. The leaves are small, holly-like and pale blue with



fragrant yellow flowers in the spring followed by bright red berries later in the summer. The leaves display a more subtle color in the fall and winter with muted lavender and red colors. Fremont's Mahonia can be used alone as



a dramatic focal point in the landscape combined with natural boulders, or in a group where it can be used as a natural privacy barrier or even windbreak.

Growing Conditions: Prefers sun, hardy to 6,500 feet, and drought resistant.

*Sources:*

*Growing the Southwest Garden*, Judith Phillips

Lady Bird Johnson Wildflower Center, [www.wildflower.org](http://www.wildflower.org)

Southwest Colorado Wildflowers, [swcoloradowildflower.com](http://swcoloradowildflower.com)

Gardening 101: Mahonia aquifolium, Oregon Grape Holly, [Gardenista.com](http://Gardenista.com)

# Honey!!

[See next page for how we got this far]



*L top: Amy Owen, Desert Hives  
L bottom: Kathy Grassel, Grasselroots  
Middle: Anita Amstutz, Think Like a Bee  
R top and bottom: Steve Black, Blackelmore*

# The Hard (but Rewarding) Work of Honey Harvest

## Top Bar Crush and Strain



Anita Amstutz at work crushing comb with a potato masher. You can also use your hands. Honey filters through a colander and paint strainer fabric into a 5-gallon food-grade bucket. Wax is saved to make candles or balm.

Kathy Grassel's honey harvester. Design by TJ Carr and built by Jason Fink. You can use up to three honey buckets with pouring valves called honey gates. Top bucket with slurry is angled allowing the honey to flow out and thru a colander and mesh fabric into a receiving bucket. Contact Jason at [mandofink@gmail.com](mailto:mandofink@gmail.com) about this woodenware.



Anita's honey strains through a 600-micron nylon filter. It can be paint strainer or cheesecloth. Check out Anita's blog at [thinklikeabee.org](http://thinklikeabee.org)

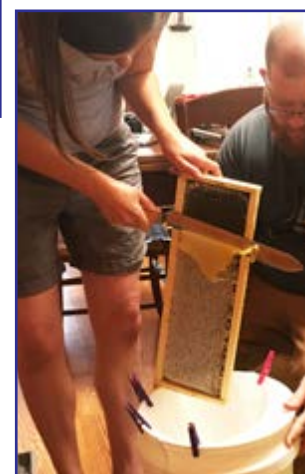
Kathy filtered twice to capture remaining wax bits. Wax will rise to the top of bottled honey and is harmless to consume, but finicky consumers may be put off.



## Langstroth with Extractor

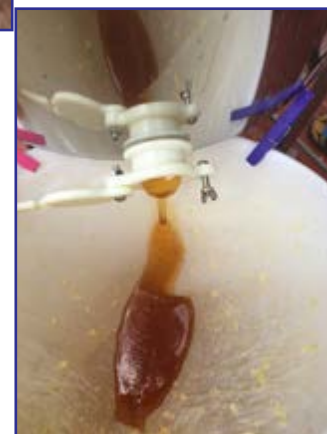


A family affair. Amy Owen with a perfect frame of capped honey. Son Teddy is on hand to assist. Below Amy uncaps the honey with a specialized knife into a waiting bucket with filter. Husband Taylor holds it steady.



The uncapped frames are secured into the extractor as they are uncapped, and then the honey is spun out. A food-grade bucket goes under the extractor spigot to receive the honey.

Amy uses clothes pins to attach the filter to the sides of the bucket to keep the heavy honey from pulling the filter down. Good idea! Check out Amy's website at [www.deserthives.com](http://www.deserthives.com)



## Virtual Conference schedule for Feb. 6, 2021. Zoom hosted by Steve Black and Bob Reneau. Register at [nmbeekeepers.org](http://nmbeekeepers.org)!

- 9:00am**     **Randy Oliver**, *Scientific Beekeeping*, Grass Valley, California  
"Managing Varroa: Understanding Mite Population Dynamics, Best Timings for Treatments, and Progress on Selective Breeding for Varroa Resistance"
- 10:15am**   **Margarita López-Urbe, Ph.D., and Robyn Underwood, Ph.D.**,  
Penn State Extension, and a local panel Craig Noorlander, John Gagne, and Kate Whealen  
"Beekeeping Philosophy and the Range of Options in Management Practices"
- 11:30am**   **Keith Delaplane, Ph.D.**, Professor of Entomology, University of Georgia  
"What Bees in Nature Can Teach Us"
- 12:45pm**   **Ramesh Sagili, Ph.D.**, Oregon State University  
"Honey Bee Nutrition: What We Know and Need to Know"
- 2:00pm**     **Keith Delaplane, Ph.D.**, Professor of Entomology, University of Georgia  
"Mutiny and Other Things That Can Go Wrong (Besides Mites)"
- 3:15**         **Randy Oliver**, *Scientific Beekeeping*, Grass Valley, California  
"2020 Hot-Weather Trial of Varroa Treatments and Update on Extended-Release Oxalic Acid"

## Become a Member of NMBKA

**J**oin 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 our programs including the Certified Beekeeper program and this newsletter. Annual dues are only \$30 for the family.

Membership includes admission to the Winter Conference, Summer Technical Conference and any other program. Plus it's the right thing to do to support beekeeping in New Mexico.

You can join or renew on our website [www.nmbeekeepers.org](http://www.nmbeekeepers.org). Or if you prefer to join or renew by mail, please request a membership form on the website, complete, and mail along with \$30 to:

NMBKA  
PO Box 7188  
Albuquerque, NM 87194

Thank you! We can't do it without you!