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President's Report
from Blake Shook

Honey Bill, Rain and More Rain

I have to admit, I feel like a bit of a hypocrite. Last year all I could do was stare at the weather radar, hoping, somehow, a cloud would form, and it would start to rain. This year, I’m also staring at the radar, but this time, praying it will stop raining so the bees can get out and gather nectar. Many people find themselves watching the stock market like a hawk, as it dictates what their financial future will hold. As a beekeeper, I find the stock market app on my phone is rarely used, but I am pretty sure I have worn a hole in the screen where my radar app sits. For the beekeeper, watching the weather is like watching the stock market. As the rains come and go, our financial future hangs in the balance.

The amazing thing about being a migratory, commercial beekeeper, is how we depend on good weather all over the US. Currently, we are facing a major drought in California where I pollinate almonds, snow in North Dakota where we produce honey and flooding in Texas, where we also produce honey. As frustrating as the weather can be, it is a factor that we simply cannot control. So, we do our best, make sure our bees are taken care of, and leave the rest up to God.

So, as all my beekeeping friends and I keep reminding each other, let’s not focus on what we can’t control, but put our efforts into making sure our bees are fed properly, have varroa under control, etc. Despite the rain, I still believe this will end up a pretty decent year for honey production in Texas. Perhaps not a record production year, but the rain has really helped extend the honey flow, and keep flowers blooming. Some of my best hives have brought in 10-12lbs per day when the weather was good! Sometimes when we have years this wet it can affect the moisture content of your honey. I would suggest buying a refractometer to make sure your crop is at least 19.5% moisture or below.

As many of you most likely know by now, our honey exemption bill has passed both the house and senate with no resistance, and overwhelming support. The senate vote was 30-0! The bill is (at the time this article was written) heading to the governor’s desk for signature, and we have no reason to think it will not be signed. A huge thank-you to Leesa Hyder, and many others who have worked to make this possible for small scale beekeepers.

I have to get back into the bee yard…I look forward to seeing many of you at our summer clinic in just a few weeks!
Vice President’s Report

from Chris Moore

46.3 Percent Annual Bee loss in Texas?? Really??

Q - Have your bees been dying like in the news?
A – Yes, since 2006, we have lost 40% to 72% annually

Q - Why, What’s causing them to die?
A - It’s a very complex problem

The problem –

1. If you are a commercial beekeeper, meaning that is your main source of income, then, in most of the US, you can’t keep bees in one location and make a living. We have to move them to make multiple incomes, either other honey crops or pollination services.

2. Stress - Putting bees on a truck and shipping them is hard on the bees.

3. Exposure – The more locations you have, the greater risk of chemical exposure. I have been moving bees (which we do at night) and on more than one occasion had a mosquito spray truck turn out ahead of me (when I immediately turn into the wind and take the long way).

4. Pesticides – In the past pesticides immediately killed insects. Now, many pesticides are made as bait, so insects can take the pesticide bait back home and share it. How does it work?
   a. It either weakens their immune system, so they die of something else (Bees are now dying from common viruses) and/or
   b. It weakens their nervous system, so they get lost or just forget what they are doing or where they live (Bees are now disappearing from the hive) and/or
   c. It makes them sterile and they can’t produce offspring. (Stored sperm in queens are now being found dead).

4.5. Pesticide Applications – Seed Treatments, Soil Treatments, Systemics.

5. Fungicides - Used widely on fruits, vegetables, and many flowering plants pollinated by bees. Some Fungicides now have added IGRs (Insect Growth Regulators) which, while the fungicide itself does not kill the bee, the larva, being fed pollen containing the IGR laced pollen, dies. (We are now seeing more dead larva and bees that start to emerge then die)

6. Nutrition - Just like us, Bees need a balanced diet. We have three challenges:
   a. Every day we loose wildlife habitat to development.
   b. While pollinating in Agricultural areas, bees have a limited diet.
   c. Drought conditions – No rain, No flowers. When the bees do not get a good balanced diet they become weak and do not live as long, disrupting the population dynamics of the hive.

7. Varroa are parasitic mites that host and spread over 80 different bee viruses as they feed on the bees and larva. So we have to try to control a bug on a bug. Treatments are extremely limited and not 100% effective. To make matters worse, some varroa treatments interact with fungicides or other chemicals and kill the bees.

8. Small Hive Beetle – A beekeeping pest that also hosts and spreads viruses.

9. Nosema – An obligate, fungus-like, intra-cellular parasite that reduces a bee’s life up to 78%.

Yes, our bee losses are that high. In 2006 CCD (Colony Collapse Disorder) claimed 72% of our bee colonies and the survivors were weak. Imagine finding 2 out of every 3 hives dead, finding that the bees just absconded leaving good brood and honey.

I came real close to walking away from beekeeping. Hobbyist/Small Scale Beekeepers have less of a risk of exposure to some of the above problems but be careful. Many homeowner pesticides & fungicides have the same active ingredients. Always be careful where you place your bees, check surrounding areas for potential exposure and be careful what you use to treat for unwanted pests around your apiary, including Varroa.

The following is an extract from Honey Bee Expert Maryann Frazier, senior extension associate in the Department of Entomology at Penn State University (PSU). She works
collaboratively with other members of PSU’s Department of Entomology to understand how pesticides are impacting honey bees and other pollinators.

“Pesticides may be necessary in today’s cropping systems but large monocultures have resulted in the need for significant use of insecticides, herbicides and fungicides,” Frazier says. “New chemistries, such as neonicotinoids have their advantages but the persistent use of synthetic pesticides, especially in bee-pollinated crops and/or crops visited by bees to collect nectar or pollen, such as corn, has resulted in significant pesticide exposure to bees.

“Over the past seven years our lab has analyzed over 1,200 samples of mainly pollen, wax, bees and flowers for 171 pesticides and metabolites. We have found 129 different compounds in nearly all chemical classes, including organophosphates, pyrethroids, carbamates, neonicotinoids, chlorinated cyclodiene, organochlorines, insect growth regulators, fungicides, herbicides, synergists, and formamidines. Further, we have identified up to 31 different pesticides in a single pollen sample, and 39 in a single wax sample. An average of 6.7 chemicals are found in pollen samples. However, the pesticides found most often and at the highest levels are miticides used by beekeepers for the control of varroa mites.”

The Fraziers, Jim & Maryann, will be our keynote speakers at this year’s TBA Convention. October 29-31 in Belton, TX.

In her talk, Frazier will discuss these results and additional studies and concerns about “the synergistic effects of pesticides, systemic pesticides and sub-lethal impacts, including those on immune function, memory and learning and longevity, as well as the question of toxicity associated with adjuvants/inert ingredients.”
How your hive location may determine the flowers your bees forage.

Most of us remember the classic Aesop's Fable entitled “The City Mouse and the Country Mouse”. The Country Mouse visits her cousin, The City Mouse, and must decide whether to stay in the lap of city luxury or go back to her own simple, homespun country lifestyle. While thousands of versions of this timeless fable have evolved world-wide, one theme is consistent – both city and country mice have lifestyle advantages and disadvantages.

Like Aesop's mice, both country and city honey bees have lifestyle – or “hive-style” – advantages and disadvantages. As I speak to groups across Texas, I always ask for a show of hands from those who keep bees in rural areas and those in urban areas. Rural beekeepers are always the majority, sometimes 80% of the class. But the popularity of urban beekeeping is growing rapidly, possibly due to the local food movement and concern over disappearing bees. Urban beekeepers sometimes view themselves as disadvantaged. But that’s not always the case.

THE CITY BEE

Let's consider the city bee. Contrary to conventional wisdom that cities are rapidly converting vegetation to concrete, new studies show that a surprisingly high number of native plant and animal species are thriving in urban environments. This phenomenon is referred to as “The Central Park Effect” because so many insects and birds find refuge in this green island surrounded by the metropolis of New York City. Insects may benefit from urban neighborhoods in a similar way. Year-round irrigation provides blooms in all seasons and hives are in close proximity to flowers. Yard work is limited to one’s own property while bees take advantage of blooms cared for by neighbors. Nearby parks and open spaces may provide additional forage. And while pesticides and insecticides are an “urban staple”, there is speculation that urban bees may actually be healthier than rural bees because they do not face the threat of harsher agricultural chemicals.

On the other hand, city bees face some disadvantages. They may have a somewhat limited pallet of popular, standard landscape plants. Some of these species of plants are hybrids (many rose varieties for example) which are developed by the nursery trade to please the human eye but lack bee benefits such as fragrance or access to nectar. Another disadvantage for our city bee is the green lawn which is basically an empty pantry to her. Lawns, or turf grasses, cover more square feet in the U.S. than any one agricultural crop and are maintained with insecticides and herbicides. A new beekeeper told me a story of how she fondly remembered seeing bees buzz through her family’s grass lawn where weeds were permitted to grow. “But these days”, she said “there’s no life in our lawns.”

How to Please the City Bee: GLOSSY ABELIA

If your bees forage in urban or suburban areas, they probably collect nectar and pollen from many popular landscape plants including Hollies, Crepe Myrtles, Mimosas, Privet and Magnolias. According to Michael Parkey, a Dallas landscape architect specializing in native and well-adapted Texas pollinator plants, a less common but excellent landscape plant for urban landscapes is Glossy Abelia. It is well-behaved, long-blooming and easy to care for.

Glossy Abelia (Abelia x grandiflora) is a perennial shrub that is well-adapted to the soils and climate of much of Texas though its origin is China. A semi-evergreen shrub, Abelia's fragrant white flowers perform from spring into fall, attracting many pollinators. Abelia does best in sun to partial shade where it can reach a height and width of 6 feet. When severely pruned as a hedge, Abelia loses its attractive features - continuous blooms and graceful arching branches. It grows best in fairly rich soil with good drainage and benefits from a little extra water during dry periods. If these requirements are met, it's very easy to care for.

A perfect fit for urban landscapes, Abelia is a tidy, well-behaved
shrub for privacy hedges, planting along fences, a backdrop for garden flowers or any place you want a splash of flowering shrubs. You will find different varieties of Abelia in garden centers, including those with pink flowers and shorter, compact varieties. However, my favorite is *Abelia grandiflora*, the taller variety with graceful arching branches and white flowers. It’s lovely planted near a window or patio where you can enjoy watching a parade of honey bees, butterflies, hummingbirds, dragonflies and bumble bees.

### How to Please the Country Bee: ROUGHLEAF DOGWOOD

If your bees forage in a rural area, they may collect nectar and pollen from some of the thousands of species of native plants that have flourished and interacted with one another in Texas for millennia. Some of these may be Buckthorns, Sumacs, Asters, Dogwoods or Clematis to name just a few.

The **Roughleaf Dogwood** (*Cornus drummondii*) is particularly suited for rural properties because of its unruly tendency to sucker from rhizomes and form thickets, expanding bee habitat the natural way. It can be pruned into a small tree, but thickets are attractive if you have the space. In mid-spring, bees forage the flat white clusters of flowers as long as they bloom. This small ornamental tree is common in east and north central Texas and grows south to just north of San Antonio. It thrives in various conditions, including shade or sun, various soils and either dry or poor drainage. In nature it typically occurs as a small tree under a large shade tree and provides berries for many species of birds in the fall. Roughleaf dogwood is used in rural landscapes from upscale Hill Country Resorts to wildscaped yards.

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### THE COUNTRY BEE

Now let’s consider the country bee. The country beekeeper may have more control over what’s planted in the bee’s forage area. Certainly there’s more space to install bee habitat such as wildflowers. The country bee can benefit from larger masses of one variety of trees or shrubs that are allowed to spread or to reproduce by seed or suckers – nature’s way of expanding pollinator habitat. In addition, rural landscapes typically have large tracts of flowering “weeds” such as dandelion, clovers, poison ivy or goldenrods growing on roadsides and fields. The country bee may benefit from a variety of flowers found on land that has different ecosystems such as around ponds, creek beds, wetlands, pastures, wooded areas with messy vines, fence rows and ground covers that would be mowed in urban areas.

On the other hand, country bees face some distinct disadvantages, most of which are related to land use around the hives. If bees live near commercial farm land, crops may be planted in large monocultures. Monocultures are large tracts of land planted with one single crop. The crop may bloom only two weeks out of the year but yield nothing the rest of the year for bees to forage. The greatest threat to the country bee living near farm land is exposure to toxic agricultural chemicals, especially crop dusting by air. Lastly, a disadvantage to the landowner who keeps bees is the cost, time and effort required to plant in large spaces, control invasive species without toxic chemicals and maintain property and equipment.

The Flowers of Glossy Abelia

*Flowers of Glossy Abelia*

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It’s worth mentioning that the more well-known Flowering Dogwood (*Cornus florida*) is also a good nectar source for bees but is more limited in its range than the Roughleaf Dogwood, suited more for the Piney Woods and Post Oak Savannah regions of east Texas. The Flowering Dogwood is wonderful on smaller rural properties planted in masses under shade trees.

In the movie Vanishing of the Bees Simon Buxton poses this challenge: “The future of beekeeping is not an additional beekeeper with 60,000 hives, but 60,000 new beekeepers with one hive each.” As urban beekeeping continues to gain in popularity, let’s hope both city and country bees can capitalize on lifestyle – or “hive-style” – advantages that help us meet this challenge.

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Your questions, comments or photos are welcomed. Please send to Becky Bender at RBenderRN@aol.com. More information on bee plants may be found on Becky's website: [www.BudsAndTheBees.com](http://www.BudsAndTheBees.com).
Making Increase

The Continuing Journey of Two Second-Year Beekeepers
from Roger and Sue Farr, Caddo Trace Beekeepers Association

“Beekeeping isn’t difficult!” That’s what we thought back in March. We had just inspected our three hives and found two thriving hives and one struggling. We fed them with 1:1 sugar syrup, Nosema medication, pollen patties, and “Honey-B-Healthy” feeding supplement since the spring plants were late. We felt confident that we had done everything correctly. Then… snow and a 20°F cold front roared in.

We visited our hives again a few milder days later. We opened the smallest hive and saw dead bees everywhere with all the classic signs of starvation. We reviewed our beekeeping methods and concluded that we should have replaced this queen last fall. She was weak and late in starting her spring egg-laying. There were not enough nurse bees emerging to both keep all the brood warm and get to the honey stores one frame away.

We learned that lesson and began another: queen rearing. We waited for warmer weather and installed the Nicot Queen Rearing Nicot box into our stronger hive so that the girls could clean and prepare it for the queen to lay in. We installed the system, pictured, on one of our medium brood frames and the queen cup holders on two other frames. Roger quickly put the queen inside the Nicot box to confine her to only laying eggs in the 110 cups, since we planned to raise only 20 queens in this first batch. We began the 24-hour wait for her to lay, confident of success. After all, “Queen-rearing isn’t difficult!”

Then the storms came. For three days, we waited for the rain to stop and wondered if we had killed the queen and delayed our stronger hive. In a cool mist, we both held our breaths as we pulled out the frame with the Nicot box. Did the bees accept the cups? Did the queen lay any eggs? Would we even be able to see the eggs? We nudged aside all the bees in the Nicot box and saw eggs! There weren’t 110 full cups, but we saw at least 20 eggs. We carefully removed the queen from the Nicot box by removing the small queen excluder that covers the box. We placed the Nicot
box back into the breeder hive and began the four-day wait to see if the eggs would hatch and whether the nurse bees would feed them with royal jelly.

Day 5 of our queen-rearing experiment dawned clear and warmer. We steeled ourselves for the worst case scenario, non-acceptance by the nurse bees, and thought about starting again from scratch. However, we were elated to find nurse bees feeding about 40 hatched eggs! We replace the Nicot box frame in the first, breeder, hive and removed the queen from the second, cell-builder, hive. We set up a 5-frame nuc and added the queen from the cell-builder hive, three frames of emerging brood and nurse bees, one frame of pollen, and one of honey. Since the cell-builder hive was queenless, we planned to wait about 2 hours for the bees to react. We opened the breeder hive, removed the frame with the Nicot box, covered it with a towel, and walked to our garage workbench. We then removed the viable cups and placed them on the Nicot holders for placement in the cell-builder hive. We started with 110 cups: the final statistics were 42 viable larvae with royal jelly, 4 un-hatched eggs, and 64 totally empty cups. We counted this success for being first-time queen-rearers! We chose the 20 best cups and placed them on the holders previously attached to the frames. We again covered them with a towel and returned to the hives.

The now 2.5-hour queenless cell-builder hive was becoming noisy and agitated. We put the two frames, each with 10 queen cups with larvae, into the brood area. We placed the pollen patties on the top bars, filled the hive-top feeder, and closed up the hive. We had passed one critical milestone and had viable larvae, but their acceptance and development was still in doubt. Now we prepared to wait the recommended three days to see if the bees would draw out the queen cups.

Then, the storms came. Again. For five cold, rainy, windy days of the wettest spring in recent memory in northeast Texas, we waited. Finally, we opened the cell-builder hive and saw... ten drawn-out cups on one frame and six on the other, a total of sixteen viable queens. The cells were not all drawn out to the same degree, probably because we had to leave the queen in the box for two additional days, but we decided to use them all. We cleaned up the frames and replaced them in the cell-builder hive, thinking, “Queen-rearing isn’t difficult!” We marked our calendar...
Making Increase (continued)

for Day 14 to remove the “ripe” queen cells, make up nucs for delivery to our first customers, and bank some of the queens by installing “roller” cages so that they could emerge from their cells protected from sister queens.

Day 14 arrived, so we checked the queens before we made up nucs. We found ten nicely drawn and capped queen cells and two “wild cells” where the normal peanut was encased in drone comb. Since we were shooting for eight hives of increase, we split the hives as follows:

• One 5-frame nuc with three frames of brood, one of pollen, and one of honey from our strong
• Two 5-frame nucs with similar frames from our cell-builder hive
• One 3-compartment queen castle, each with two frames of brood from our strong hive and one frame feeder
• Four “roller cages” replaced in queenless cell-builder hive

We gave each new increase hive one ripe queen cell, one pollen patty, and 1:1 syrup feed in an appropriate feeder. We chose to feed the pollen patties because the flowers were late. We were amazed to see that they consumed most of the syrup and one hamburger-size patty each week. We planned to wait three days to make sure that the queens emerged and were maturing in their new homes.

Roger passed the Texas Master Beekeeper, Apprentice-level examinations and returned home to see the end caps of five of the six queen cells in the three nucs and the queen castle chewed off nicely to show their successful emergence, pictured. Two of the four queens emerged in the roller cages; we realized, in hindsight, that two were misshapen and would not emerge. We also found one capped supercedure cell. We apparently forgot to place a queen cell in one of the increase hives; we did not find the Nicot cup, and we did not find a queen. So, we gave them one of the queens from the roller cage. We used the supercedure cell frame to make a new increase hive and used the last roller cage queen to convert our cell builder back to a normal hive. All of our hives were now queenright, with no banked queens. We fed each hive, and the bees continued being busy. We just had to wait for the
queens to mature, go out on their mating flights, avoid the hungry mockingbirds, and begin laying in their new hives. We were just about “home” with our queen rearing adventure and increase making; “Queen-rearing isn’t difficult!”

We waited one more week until Day 31 of our adventure. We had followed the Nicot instructions and done our best to be successful. Now, it was time to see if we had laying queens in all of our increase hives. We opened the hives and discovered that only three of the queens had successfully mated and were back in the hives. The other five hives were queenless. (“Perhaps the queens are still out mating, since everything else is late,” we said, hopefully, to each other.) We topped off the feeders and waited another week to see if they were producing brood.

Day 38 was warm and sunny, and we confidently walked to our apiary to see what we had. The news was not good: of the eight increase hives, only three had laying queens. The others were nearly dead and queenless. We only had a not-so-great 3/8 or .375, batting average on producing laying queens. It was time to notify our customers that we did not have extra hives for sale. Fortunately, we had only presold three hives since we were new to this endeavor.

Day 42 was the day to check the three presold hives to make sure everything was progressing well, and the new queens were laying in good patterns before we delivered them. Bad news struck again! Two hives were picture perfect, but the third had absconded! They had appeared happy four days earlier, but now there were only a few random bees walking over a frame or two. It was time to call one customer and let him know that we only had one hive available, not two, as ordered. Days 43 and 44 were delivery days. We deepened existing relationships, made new friends, shared cool drinks, and watched each hive settle down in its new home to do what bees do.

That queen-rearing adventure is closed. We’ve learned a lot, made friends with two great couples, and added two new families to the hobby beekeeping ranks. We will try to raise queens again, both with the Nicot system and with supercedure cells, but we will do some things differently. Here are some lessons we learned:

• Don’t start so early in the season. The unpredictable early spring weather caused us to lose one hive and reduced the available resources to make increase hives.
• Give the increase hives more resources. We had the most success when the hives had at least three frames of brood, as well as one each of honey and pollen stores. We lost all three of the colonies in our queen castle (3 compartments x 3 frames).
• Wait to count your queens until they are safely home, mated, and laying. We don’t know why only three of the virgins made it back home mated. Maybe it was the rain and inclement weather during breeding time, or perhaps it really was the hungry mockingbirds.
• Keep your expectations low and focus on gaining experience. Our mentor’s queen-rearing average is .800, so we have a lot to learn.

While queen rearing is not for everyone, we are glad we did it, and we certainly recommend it to second year beekeepers. Go for it, and have fun in the process!

Next up will be harvesting our first-ever spring honey crop. We’ll share what we learned, our successes and failures, and report on our production of hive products! Thanks for joining us on the adventure that is beekeeping!
Welcome Back! After last month’s armchair Apitour of the Ukraine, we will now be moving on to the beautiful and innovative beekeeping country of Slovenia.

When my husband and I went to Slovenia in 2006, the concepts of Apitourism and destination weddings didn’t even exist. We traveled the old fashioned way. We bought some guide books, got a map, made some hotel reservations, rented a car, and headed out for the open road. We didn’t even know that there were more kinds of bees than Italian and African in those days. But this little country has enlightened my whole way of traveling and beekeeping since then.

Hopefully, after you read this article it will help you to realize at least three major things that I think Slovenia has done for beekeeping: The first is to promote the Carniolan Bee; second, to develop apitourism and third to promote apitherapy, both of which are two new ways beekeepers can add value to their beekeeping activities and income to their bottom line.

Geography, Geology, and Regions of Slovenia

Slovenia is a prosperous country in southeastern Europe bounded by Italy and the Adriatic Sea to the west, Austria to the north, Hungary to the northeast, and Croatia to the south.

To understand where the Carniolan Bee developed, it is important to understand the geography of Slovenia. Four major European geographic regions meet in Slovenia:
1) The Alps—including the Julian Alps, the Kamnik-Savinja Alps and the Karavanke chain, as well as the Pohorje massif—dominate Northern Slovenia along its long border with Austria;
2) the Dinarides (Postojna is a mountain pass through these mountains) which form a mountain chain in Southern Europe extending 401 miles along the coast of the Adriatic Sea (northwest-southeast), from the Julian Alps in the northwest down to the Šar-Koraba massif, on the Macedonian/Albanian border where the mountain direction changes to north-south,
3) the flat Pannonian Plain to the east and Northeast, toward the Croatian and Hungarian borders, and
4) Slovenia’s Adriatic coastline which stretches approximately 29 miles (from Italy to Croatia), http://en.wikipedia.org/wiki/Dinaric_Alps.

The following ethic distribution map actually shows the Old German Gottschee or modern day Kočevje area (the red spot inside Carniola which is brown) as an autonomous proposed district. This is the area where the Slovenian Carniolan bee had its most prolific distribution.

In 1906 the ethnic Romanian Austro-Hungarian lawyer and politician Aurel Popovici unsuccessfully proposed the reorganization of Austria-Hungary as the United States of Greater Austria. Popovici’s proposal included Gottschee as a separate autonomous district within the proposed state of Carniola.
Slovenia is in a rather active seismic zone because of its position on the small Adriatic Plate, which is squeezed between the Eurasian Plate to the north and the African Plate to the south and rotates counter-clockwise. Thus the country is at the junction of three important geotectonic units: the Alps to the north, the Dinaric Alps to the south and the Pannonian Basin to the east. Scientists have been able to identify 60 destructive earthquakes in the past. Additionally, a network of seismic stations is active throughout the country. Many parts of Slovenia have a carbonate ground, and an extensive subterranean system has developed.

The term “Karst topography” refers to that of southwestern Slovenia’s Kras Plateau, a limestone region of underground rivers, gorges, and caves, between Ljubljana and the Mediterranean. However, the majority of Slovenian terrain is hilly or mountainous, with around 90% of the surface 200 m (656 ft) or more above sea level. Slovenia’s highest peak is Triglav (2,864 m or 9,396 ft. Most of Slovenia’s watershed drains towards the Black Sea.

BEEKEEPING TOURISM - THE APICULTURE TRADITIONS OF THE UKRAINE AND SLOVENIA - PART II

from Cynthia Schiotis – Alamo Area Beekeepers Association

Geographic Factors that Affect Bees

Over half of the country (3,909 sq. miles) is covered by forests. This makes Slovenia the third most forested country in Europe, after Finland and Sweden. The areas are covered mostly by beech, fir-beech and beech-oak forests and have a relatively high production capacity. Remnants of primeval forests are still to be found, the largest in the Kočevje area. Grassland covers 2,159 square miles and fields and gardens 368 sq. mi. There are 140 sq. mi. of orchards and 83 sq. mi. of vineyards.

Protected areas of Slovenia include national parks, regional parks, and nature parks, the largest of which is Triglav National Park. There are 286 Natura 2000 designated protected areas, which comprise 36% of the country’s land area, the largest percentage among European Union states. Additionally, according to Yale University’s Environmental Performance Index, Slovenia is considered a “strong performer” in environmental protection efforts.

Slovenia is located in temperate latitudes. The climate is also influenced by the variety of relief, and the influence of the Alps and the Adriatic Sea. In the Northeast, the continental climate type with greatest difference between winter and summer temperatures prevails. In the coastal region, there is sub-Mediterranean climate. The effect of the sea on the temperature rates is visible also up the Soča valley, while a severe Alpine climate is present in the high mountain regions. There is a strong interaction between these three climatic systems across most of the country.

Precipitation varies across the country as well, with over 138 inches in some Western regions and dropping down to 31 inches in Prekmurje (Far Eastern Slovenia). Snow is quite frequent in winter and the record snow cover in Ljubljana was recorded in 1952 at 57 inches.

Compared to Western Europe, Slovenia is not very windy, because it lies in the slipstream of the Alps.
Biodiversity

Slovenia signed the Rio Convention on Biological Diversity on 13 June 1992, and became a party to the convention on 9 July 1996. It has subsequently produced a National Biodiversity Strategy and Action Plan, which was received by the convention on 30 May 2002.

Slovenia is distinguished by an exceptionally wide variety of habitats, due to the contact of geological units and biogeographical regions, but also due to human influences. Around 12.5% of the territory is protected with different protection categories, and 35.5% within the Natura 2000 ecological network. Despite this, because of pollution and environmental degradation, diversity has been in decline.

The forests covering 58.5% of the territory are an important natural resource, but logging is kept to a minimum, as Slovenians also value their forests for the preservation of natural diversity, for enriching the soil and cleansing the water and air, for the social and economic benefits of recreation and tourism, and for the natural beauty they give to the Slovenian landscape. In the interior of the country are typical Central European forests, predominantly oak and beech. In the mountains, spruce, fir, and pine are more common. Pine trees also grow on the Kras plateau, although only one third of the region is now covered by pine forest. The lime/linden tree, also common in Slovenian forests, is a national symbol. The tree line is at 5,575 to 5,900 ft.

In the Alps, flowers such as Daphne blagayana, various gentians (Gentiana clusii, Gentiana froelichi), Primula auricula, edelweiss (the symbol of Slovene mountaineering), Cypripedium calceolus, Fritillaria meleagris (snake’s head frillitary), and Pulsatilla grandis are found.

Slovenia has many plants of ethnobotanically useful groups. Of 59 known species of ethnobotanical importance, some species such as Aconitum napellus, Cannabis sativa and Taxus baccata are not allowed to be collected and used as per the Official Gazette of the Republic of Slovenia.

The country contains 24,000 animal species, accounting for 1% of the world’s organisms despite its small size (0.004% of the Earth’s surface area.) According to recent estimates, Slovenia also has up to 50 wolves and about 450 brown bears. There are thirteen domestic animals native to Slovenia. Among these are the Carniolan honey bee, and the Lipizzan horse.

The Carniolan Bee and Slovenian Beekeeping Traditions

Modern day Slovenia was formed from the borders of the original Austrian Hapsburg lands. The Carniolan bee came from the region of Lower Carniola (2C) in Carniola. However, there are also many Carniolan bees in the Gorenjska or Upper Carniola region as well (2A). Slovenes are so proud of their bee that they had it patented.

The English translation is in bold letters.

Zone 1 Littoral; Primorska in Slovene Language
Zone 2 Carniolia; Kranjska.
Zone 2a Upper Carniola; Gorenjska.
Zone 2b is Inner Carniola; Notranjska,
Zone 2c is Lower Carniola /White Carniola; Dolenjska in Bela Krajina
Zone 3 is Carinthia; Koroška.
Zone 4 is Styria (southern parts) or (Spodnja) Štajerska.
Zone 5 is Prekmurje which originally belonged to the Hungarian crown/not Austrian Crown

The Carniolan honey bee (Apis mellifera carnica, Pollmann) is a subspecies of the western honey bee that has naturalized and adapted to the Kočevje (Gottschee) sub-region of Carniola in Slovenia, the southern part of the Austrian Alps, the Dinarides region, the southern Pannonian plain and the Northern Balkans. It is native to Slovenia, southern Austria, and parts of Croatia, Bosnia and Herzegovina, Servia, Hungary, Romania, and Bulgaria. These bees are known as Carniolans, or “Carnies” for short, in English. At present this subspecies is the second most popular among beekeepers after the Italian bee.

The subspecies was initially introduced into the US in 1877, where it gained a reputation for gentleness and good overwintering characteristics. In the US, one of the most successful efforts to promote the Carniolan strain has been the selected strain of “New World Carniolan” honey bees maintained by Sue Cobey and a supporting group of commercial queen producers in California. In 2008 and 2009, fresh honey bee semen from A. m carnica was obtained from the Institut fur Bienenkunde in Kirchchain, Germany. The semen was transported to the US and used to inseminate virgin US “Carniolan” queens (2008) and F1 queens (50% US “Carniolan”: 50% A. m. carnica) (2009). In 2011, Sue Cobey and Brandon Hopkins travelled to the Slovenian Alps and collected additional A. m. carnica semen.
Sue Cobey in Slovenia

Some of this semen was frozen (cryopreserved) for later use and some aliquots were returned to the US in the fresh state and used to inseminate F2 queens (75% A. m. carnica: 25% US “Carniolan”). This genetic material was incorporated into the New World Carniolan program and is currently available through collaborating queen producers. http://www.douglasfarm.com/carniolan.htm, http://apisenterprises.com/papers.htm/BC2003/Carniolan.htm.

Qualities of Carniolan Bees

Carnica bee on Hylotelephium ‘Herbstfreude’ with pollen basket

The Carniolan bee is favored among beekeepers for several reasons, not the least being its ability to defend itself successfully against insect pests while at the same time being extremely gentle in its behavior toward beekeepers. These bees are particularly adept at adjusting worker population to nectar availability. It relies on these rapid adjustments of population levels to rapidly expand worker bee populations after nectar becomes available in the spring, and, again, to rapidly cut off brood production when nectar ceases to be available in quantity. It meets periods of high nectar with high worker populations and consequently stores large quantities of honey and pollen during those periods. These bees are resistant to some diseases and parasites that can debilitate hives of other subspecies.

Anatomy and Appearance

Carniolan honey bees are about the same size as the Italian honey bee, but they are physically distinguished by their generally dusky brown-grey color that is relieved by stripes of a subdued lighter brown color. Their chitin is dark, but it is possible to find lighter colored or brown colored rings and dots on their bodies. They are also known as the “grey bee”.

Carniolan bees are nearly as big and long as the Western European black bees, though their abdomens are much slimmer. Furthermore, the Carniolan bee has a very long tongue (6.5 to 6.7 mm, which is very well adapted for clover), a very high elbow joint and very short hair.

Character and Behavior

Strengths

• Considered to be gentle and non-aggressive
• Can be kept in populated areas
• Sense of orientation considered better than the Italian honey bee
• Less drifting of bees from one hive to a neighboring hive
• When compared to the Italian honey bee, they are not as prone to rob honey
• Able to overwinter in smaller numbers of winter bees
• Honey stores are conserved
• Able to quickly adapt to changes in the environment
• Better for areas with long winters
• Fast rhythm of brood production and then brood rearing reduction when available forage decreases
• Low use of propolis
• Resistant to brood diseases
• For areas with strong spring nectar flow and early pollination
• Forage earlier in the morning and later in the evening, and on cool, wet days
• Workers live up to 12% longer than other breeds

Weaknesses

• More prone to swarming if overcrowded
• Low ability to thrive in hot summer weather
• Strength of broodnest more dependent on availability of pollen
• Unless marked the dark queen is difficult to find

Beekeeping Traditions in Slovenia

Beekeeping has a long and important history in Slovenia. The Austrian Empress Maria Theresa founded a beekeeping school in Vienna in the 18th century and she called the great Slovenian theorist and practitioner in beekeeping, Anton Janša (1734–1773) to be its first teacher. Slovenian Beekeepers have published their own professional magazine, Slovenski čebelar, [Slovenian Beekeeper] for more than 130 years.

Since 2009, Slovenian honey is a protected trademark according to geographical indication. The Slovenian beekeepers continue to use their original honey jar in the volume of 720 ml.
They offer different high-quality honeys selected from different locations and sources (flower honey, forest honey, acacia honey, linden honey and spruce honey) and the beekeepers ensure that their honey has come from each location. Slovenia holds its native Carniolan (*apis mellifera carnica*) bee in such high regard, that the country has become the only European Union Member State to have its bee protected. Special attention is paid to preserving and cultivating the pure Carniolan bee, which is regarded as part of the natural and cultural heritage of Slovenia.

Beekeeping in Slovenia has also become a form of folk art. Since the middle of the 18th century, the front beehive panels have been painted with different designs and colors to both help the bees locate their own hives among many similar or closely located ones, and also for the beekeeper to quickly remember individual hives, too. Painted beehives panels have now become “open-air art galleries” and are considered “original Slovenian tourist souvenirs.”

Slovenian Beekeepers recommend several sites for visiting beekeepers to see. “First and foremost they like to take guests to the Beekeeping Centre at Brdo pri Lukovici. Many local people and foreign guests also like to see the Beekeeping Museum in Radovljica which is unique in the world. Take your raincoat. You never know when it is going to rain here. Radovljica isn't too far away from Bled. Little did I know before our visit, of the rich beekeeping tradition of the Slovenian people influencing not only their agriculture but also their art and culture. There are a couple of beekeeping museums in Slovenia, but the most famous one is the one in Radovljica. In the early 1920s, some famous apiarists of the country decided they wanted to found an apiculture museum. However, it wasn't until 1959 that their original dream was completed.

The Beekeeping Museum is located in a baroque manor house in the middle of town. The town is small so you will miss it if you aren't really looking for it. The website for the museum is [http://www.slovenia.info/?muzej=10115](http://www.slovenia.info/?muzej=10115). They charge 3 Euros for each adult but you can get a family package for 7 Euros. The hours vary according to the day and the month so make sure you check before you go.

The Biological room shows the life of the bee, especially the Carniolan Bee which is the mainstay of the Slovene Beekeeping industry. A visit to the Museum of Apiculture can be concluded with a documentary – in Slovene and English – on the Carniolan honey bee, which is autochthonous (original to the area) in Slovenia.

As you progress through the museum you come upon some painted front-boards of the kranjic beehives which the Slovenes began using in the 18th century. The beekeepers thought that it would help the bees to locate their hives if the front panels were painted in different colors and designs. At first, the designs were based on religious themes. Later on they even had profane designs on them. This artistic tendency lasted about 60 years from 1820-1860. However, the painting of the Slovenes left a characteristic mark on all the Slovene area of the Alps.

The museum walks you through the early development of beehives from logs used by apiarists in wooded regions to straw houses in areas where corn was predominant as a crop. With the cultivation of buckwheat in the 15th century, beekeeping advanced considerably because the bees had a food source every autumn. Finally, beekeepers began using wooded boards to make their beehives. One of the earliest recorded mentions of a beehive made out of boards was in “1689 by Janez Vajkard Valvasor (1641-1693) in his book Die Ehre der Herzohtums Krain (Honour of the Duchy of Carniola)” Ida Grilsak, custodian. The use of horizontal beehives made out of timbered boards became common since the 18th century.

In the pictures, you can see some of the tools used for smoking the bees, a press for the wax, feeding devices for the bees, transport cages for the queens, and a backpack for carrying the beehives to their location in the meadows. Can you imagine transporting your hives on your back today? The Slovene beekeepers used this method of transportation since the 17th century.

There is also a picture of Anton Jansa (1734-1773) who was a teacher of apiculture from Vienna. He introduced the backpack transportation system to the Slovenes and he was also famous for being the first person to discover that the drone mated with the queen outside the bee-hive.

The final part of the museum shows the tasks of a beekeeper throughout the year and how he must be aware of the biology of the bee and the crops, plus extracting the honey and wax. Then there is a display of how all these products are made into medicines, cosmetics, candles, food, art work, etc. with samples for sale.

**Part III next edition**
Since its release in 1999, Honey Bee Biology & Beekeeping has become a...
Chief of Apiary Inspection - Texas Apiary Inspection Service

from Mark Dykes

Greetings from the Texas Apiary Inspection Service (TAIS).

We hope everyone is having a good spring so far. Wow, when it rains it pours! I think we are going to need boats soon to work the bees. This spring has brought plenty of rain and in some cases way too much. We have been getting reports of a poor spring harvest in some areas but in others the honey seems to be pouring in. I guess we’ll take the good with the bad. As I’m sure many of you have heard by now the White House has finally released The National Strategy to Promote the Health of Honey Bees and Other Pollinators. A link to the full report can be found on our website txbeeinspection.tamu.edu The goals of the report are quite lofty but we hope they can be reached. Time will tell exactly what it will mean for Texas beekeepers but we will keep you apprised as we learn more.

On another note the Bee Informed Partnership has released preliminary results from the recent national survey. First I would like to personally thank all of the beekeeper that took the time to complete the survey! This year Texas more than doubled the number of people responding to the survey! This is great news and I only hope we can increase that number even more next year. The results of the survey show that nationwide winter loss is slightly down (be it only a small amount) but unfortunately yearly loss is significantly higher than last year. The reasons behind these losses are not know. If you would like to look over the preliminary results you can find them on the website http://beeinformed.org/2015/05/colony-loss-2014-2015-preliminary-results/

I would like to continue this month with a review of the apiary laws of Texas. We will focus on the sales of bees in Texas. The current apiary law, Section 131. 023, states that in order to sell queens and attendants, packages or nuclei (nucs) the beekeeper must either be inspected by TAIS and have a current certificate of inspection or must provide a copy of an affidavit stating that the bees are disease free and that the candy fed to the queen is sterilized (see law for more detail). If you are purchasing bees in Texas I would highly recommend making sure your supplier is complying with the law. TAIS inspects many queen breeders each spring and provides them with current inspection tags. Look for these when you are buying queens. If the breeder does not provide one feel free to ask for one. If you have any questions about if your supplier has been inspected please contact TAIS at 979-845-9714 and we will be happy to help you. Also if you have any concerns about bees you have purchased please feel free to contact us as well. TAIS strives to help insure the health of the apiary industry in Texas.

I hope this insight into the apiary laws of Texas was helpful. We look forward to seeing everyone at the TBA Summer Clinic. Come by and say hi at the Texas Master Beekeeper Program booth. As always if you have any questions feel free to contact me at mark.dykes@ag.tamu.edu and keep on keeping those bees!

FAA Gives Farmers Approval to Spray Crops From Drones

From Catch The Buzz

A drone large enough to carry tanks of fertilizers and pesticides has won rare approval from federal authorities to spray crops in the United States, officials said Tuesday.

The drone, called the RMAX, is a remotely piloted helicopter that weighs 207 pounds (94 kilograms), said Steve Markofski, a spokesman for Yamaha Corp. U.S.A., which developed the aircraft.

Smaller drones weighing a few pounds had already been approved for limited use to take pictures that help farmers identify unhealthy crops. The RMAX is the first time a drone big enough to carry a payload has been approved, Markofski said.

The drone already has been used elsewhere, including by rice farmers in Japan. The FAA approved it for the U.S. on Friday.

“I certainly understand their cautious approach,” Markofski said. “It’s a daunting task given our airspace is complicated.”

The drone is best suited for precision spraying on California’s rolling vineyards and places that are hard to reach from the ground or with larger, piloted planes, said Ken Giles, professor of biological and agricultural engineering at the University of California, Davis. Giles tested the drone in California to see if it could be used here.

“A vehicle like this gives you a way to get in and get out and get that treatment done,” Giles said.

Brian Wynne, president and CEO of the Association for Unmanned Vehicle Systems International, said in a statement that the approval highlights other potential uses.

“The FAA is taking an important step forward to helping more industries in the U.S. realize the benefits (drone) technology has to offer,” he said.
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Greetings from Dr. Juliana Rangel at Texas A&M University
Assistant Professor of Apiculture, Department of Entomology, Texas A&M University

Howdy TBA members! Wow, this has been a wet spring. I have heard several reports from the Central Texas area regarding the unprecedented rainfall and cooler weather that we have had in the last two months. These torrential rains, cloudy skies, and cool days, have put our research efforts back by weeks and we are worried that our apiary might not be as strong as we hoped during the summer months. Our queen-rearing efforts have also suffered due to the poor weather conditions: Virgin queens have not had proper climate to go out and mate, and therefore they have been getting killed by workers in our mating nucs. We will continue to work around this issue and can only hope that our apiary, as well as yours, can recover from these rains that are washing off any nectar on flowers, and are not permitting bees to forage as long as they should.

On a happier note, I wanted to tell you about a wonderful event that we held at the Janice and John G. Thomas Honey Bee Facility (our research laboratory) at Texas A&M University. We had the delight of hosting for a third year in a row Ms. Sue Cobey, world renowned expert on the rearing and instrumental insemination of honey bee queens. This year, Sue graciously accepted to co-instruct The Art of Queen Rearing, an all-day workshop held on 2 May 2015, which was organized by myself, members of the Rangel Lab, and the Texas Apiary Inspection Service. We had a total of 55 participants in this workshop in which Sue gave a classroom lecture on queen rearing, queen care, and mating, followed by a queen-rearing “mini workshop” I presented. Then, we all went to the apiary and visited all the different hives where we are keeping honey bee queens at different stages of development. Participants learned queen biology facts from Sue, Liz, and myself, and learned important concepts such as “queen bank,” “mating nuc,” “drone source colonies,” “mating yards,” etc. After a delicious lunch, participants broke into groups and rotated between stations at the apiary and in the laboratory. The first session was a station where Liz Walsh and Lauren Ward taught participants how to graft queens using the Doolittle Method. The second session was led by Adrian Fisher and myself, and was held at the apiary, where participants had the chance to explore drone reproduction, drone marking and capturing, and even drone “popping,” a technique in which you apply pressure to a drone’s abdomen until his endophallus is everted (leading to his death from dismemberment). This technique is done to check whether the drones are sexually mature (if so, a pool of semen will be evident at the tip of the bulb), and to collect semen samples for artificial insemination of queens. The third station was inside the laboratory, where Sue Cobey gave a demonstration of how honey bee queens are instrumentally inseminated with the German Schley apparatus.

Overall, we received impressively positive comments on our activity, and were encouraged to provide similar training to other interested beekeepers in the future. Even if Sue is unable to join us in 2016, I am really hoping that our own staff will be able to provide additional training next spring.

I am off tomorrow (29 May) to the Caribbean Island of Dominica, where I will be a co-instructor of a Tropical Ecology course that has been taught by colleagues in the Departments of Entomology and Wildlife and Fisheries for over 20 years. It turns out that there is a beekeepers cooperative on the island, and we are going to be working with them and a student from the course on a project looking at the levels of Nosema in their managed honey bee colonies. So I expect to be able to return to the United States with some worker samples from Dominica to add to our knowledge of Nosema levels in other Caribbean countries.

Lastly, things are gearing up for the Texas Beekeepers Association Summer Clinic in June, and staff at the Rangel lab will be giving four different talks during the event, so we hope to see you there! Thank you for your continuing support and as always, if you want to reach me please email me at jrangel@tamu.edu, or follow us on Facebook at https://www.facebook.com/TAMUhoneybeelab

“One can no more approach people without love than one can approach bees without care. Such is the quality of bees...”

Leo Tolstoy
Photo Montage of Sue Cobey
Teaching The Art of Queen Rearing
May 2nd., 2015
Did anyone else get a little tired of all this rain? Probably anyone and everyone who has work that needed to be done! Too much of a good thing is bad and this pertains to rain as well. The fields at my house and surrounding areas are very muddy and almost every pond is overflowing. Don't get me wrong though, I am so grateful for this rain and know it will benefit us all year long. But rain is not the ideal weather for working bees and, as this is our busy time of year, it has been such a pain working hives and has even come to a standstill for many of you. Because of the damage that water has done to the soil, plants and equipment, we have had to work in deep mud 'ponds', and work even harder in making sure our bees have food to eat. (They have not been able to forage).

As I attend my events I try to bring bees to my presentations, and it has been a real struggle to work around this rain when filling or emptying my observation hive. But this spring season is coming to an end and summer weather will soon be upon us!

How has all this rain in Texas really affected our honey bees? First, how does it affect our crops and plants? Extremes are hardly ever good. So whether we are talking about extreme drought or flash flooding there will always be negatives. So lets look at a few positives of the rain; plants need water to grow. With all the H2O we have got recently our fall crops and flowers should be abundant! Stock ponds, watering holes, and lakes are filled and running over which allows for adequate watering for the foraging honey bees.

Now the negatives; the rain has also washed away the blooms on many plants, and have destroyed many trees. This all means that blooming time will be later in the year which naturally sets back the nectar flow. Excessive rain causes the nectar to get washed out or diluted. This, coupled with high humidity that accompanies rain, would cause the bees to have to work harder to ripen it into honey. I wouldn't use urban flowers to gauge the success or failure of a nectar flow... unless of course your bees are in an urban setting. But whatever impact the rain has on the nectar itself, the main drawback is that bees don't fly when it's raining!

This brings me to my next question...How has this rain affected the bees directly? I know my bees were stuck in their hives for several days at a time and many of you received more rain than we did. So if a flow lasts 4-5 weeks and during that period it rains half the time. Well you can do the math. It doesn't look very promising for our crop yields. We see that with all this rain we have lost many blooms (meaning no food to forage) and plants have been washed away (crops are ruined or set back in growth), and our bees have not been able to get out and stretch their wings for days in a row (decreases in egg laying and hive productivity). Again this trial will only last for a season and I believe that crops and bee hives will be better for it.

One more question. How has the rain affected beekeepers themselves? Well first, for some beekeepers, it has made them very stressed and a little angry because they have not been able to work the hives and get them ready for honey flow on time. I have heard many stories of work trucks, and semis getting stuck while trying to move bees in fields and apiaries. (Oh the joys of beekeeping!) Finally though, through the frustration, many beekeepers (manly men) have begun to see the positive side of all this rain. They now have a reason to buy that bass boat they’ve been trying to convince their wives was a necessity. Obviously it is now a needed piece of beekeeping equipment - to get around in some of yalls fields! Seriously though, through all the stress please remember to be smart and careful while moving and working bees in this muddy/ watery mess! And remember, Rain is a good thing!

Enough of weather talk...as for me and my travels, the last two months have been super busy. I traveled to Austin to visit the State Capital. I had the awesome privilege to speak before the house and senate committees. I was able to visit many of the Representatives and Senators of Texas, and share the importance of honey bees and beekeeping to our great state. This specific event opened my eyes to how great this program is. I realized that without the chance to be in this Honey Queen position I would not have the opportunity to experience some of these 'once in a life time' events!! So I just want to add a huge THANK YOU for your continued support of me and this program!

I also visited Montgomery County Fair, Farmer's Branch Library, Frisco schools and one of my most favorite events so far, the Pasadena Strawberry Festival. This event was a packed full weekend. Working all day, and speaking to thousands of people. The festival is known for its world record setting Strawberry Shortcake (which by the way is delicious) the first piece of cake was auctioned off for over $500 dollars and the last piece went for more than $1000! At this event we spent the day (actually 3 days!) explaining the important role that honey bees play in giving us delicious crops, like strawberries.

More events are scheduled for the upcoming months and I can't wait to tell you how they go. Please keep up with what I'm doing, by liking me on Facebook and following me on Twitter!
Dear Texas Beekeepers,

The year is truly flying by so fast! It seems like it should still be January or February – not May. And with the Summer Clinic almost here, I can only guess how fast the State Fair will arrive.

Tabitha has done an amazing job so far (of course!) and we are so proud of her! Our calendar is almost full for the year, so if you want to get any last minute events scheduled with us make sure that you email me ASAP! texashoneyqueenchair@gmail.com

As a reminder - Check us out on Facebook and Twitter to follow Tabitha's journey across Texas this year. In particular, there are some really great pictures from the Pasadena Strawberry Festival!

We look forward to seeing all of you soon.

Texas Honey Queen Chair
Rachael Seida
Our guidebook says we can extract honey this month. Yes, you can if your bees produced it between the downpours of rain! Reports from my contacts with Louisiana producers indicate that some honey has been capped but the moisture content is still above the 18% level required to prevent fermentation.

We usually talk about it being OK to extract a frame if 80% of the honey is capped. Given the usually wet spring and the apparently high moisture content being found in some honey, it may be prudent to leave the frames in the hive until they are completely capped. It may be mid-July or later before we are ready to start extracting this year.

Supplies of honey may be limited this year. Limited supply usually means better prices for your honey. If supplies do indeed prove to be less, don't short change yourself by pricing it too low. You and your bees worked hard to produce that desirable commodity. Let the market appropriately determine its price. An old adage is that your price is probably right if ten percent of your customers refuse to pay that price. Check with knowledgeable honey producers in your area or with your bee club to help determine the right price for your product.

One grey and cloudy but not rainy day last week, I was checking hives. Because of the weather, the bees were rather nasty. Though I was being very gentle and using smoke, the bees were much more aggressive than usual and gave me numerous stings through my suit, particularly on the back and shoulders. Be mindful of how weather can effect the temperament of your bees and protect yourself appropriately. Prolonged wet and stormy weather like we have enjoyed this past month can make your gentlest hive become testy. Know when to back away and come back another day.

I checked a hive that appeared to be doing very well the week prior. Last week, it already had several frames of beautifully capped honey. It had three supers and my eyes were gleaming as I pictured it becoming three full supers of honey. Twenty seconds after lifting the inner cover, my excitement turned to dismay. A worker climbed out between two frames, struggling to drag a dead drone with it. Within seconds, I saw another worker dragging out another dead drone. My honey supers had become a brood rearing area! The virgin queen must have returned from her mating flight and slipped through the queen excluder before her body became too large to pass. Now the supers above the queen excluder had frames of capped brood, except for the two outside frames which were filled with honey.

After removing the supers and setting them aside, I pried the queen excluder off the top of the Deep on the bottom that was supposed to be the brood box. Carrying the excluder to a tree about ten feet away, I banged it a couple times to dislodge the dead drones stuck to it. I was standing around, trying to figure out the best way to get the queen back down into the brood box and happened to look back at the tree where I dumped the bees. I noticed a little cluster of live bees at the base of the tree. Looking closely, I saw the queen climbing around in the grass stems. I happened to have my Kelly Queen Catcher in my work box and used it to capture the queen before she flew away. With the queen safely secured, I began to reassemble the hive. I put the queen excluder on top of the bottom Deep and the supers full of brood over the excluder. The brood should hatch and the bees will clean and then refill the cells with honey. After all was put back together, I set the queen cage on the landing board and opened the door. The queen crawled out and disappeared into the hive. Hopefully, I will find this hive in good shape when I check in another week or so.

Lessons Learned?? You never know where your queen may be. Always check for her on the underside of the Inner and Outer covers when you open the hive. If you see brood or dead drones above the excluder, you may need to find and relocate the queen. And don't count your honey till it is extracted and in the jar!
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Bee Losses Are Not Sustainable
from Michele Colopy, Pollinator Stewardship Council

The Bee Informed Partnership released its analysis of honey bee losses for 2014 yesterday, (http://beeinformed.org/2015/05/colony-loss-2014-2015-preliminary-results/) showing beekeepers lost 42 percent of their colonies between April 2014 and April 2015. The Associated Press noted “it’s not quite as dire as it sounds” because beekeepers can split their surviving hives, according to Dennis vanEngelsdorp of the University of Maryland.

Yes, it’s true, beekeepers can split healthy hives to make more colonies. But apiaries with 40 percent losses probably don’t have very many healthy hives and it’s not likely splitting weak colonies will succeed. Logistics aside, what is really missing from this picture is an understanding of the economic investment required to return the number of colonies to previous levels.

This is best understood from the vantage point of the beekeeper, in the context of almond pollination, the beekeeper’s primary economic event. One beekeeper explained it thus:

Do we count downhill such as 10, 9, 8, 7, 6, or do we count uphill such as 1, 2, 3, 4, 5? Well, it depends on “where you start,” or “where you are going.”

If we count downhill, a beekeeper begins the year with 2,000 bee hives for honey production. The beekeeper loses some during the summer, and gets the survivors ready for winter. The beekeeper loses more colonies over the winter, and takes the remaining 1,000 good hives to almonds for rent. So, the beekeeper’s losses are 50%.

If we count uphill, the beekeeper knows from past experience, to stay in business he/she needs to rent 1,000 hives to almonds. For the beekeeper to ensure 1,000 hives will be available to rent to almonds, he will need to start with 2,000 hives. This means 1,000 colonies will have to be split. The original colonies will need to be re-queened in order to begin spring with 2000 hives.

Therefore, when counting uphill, the beekeeper preparing for almond pollination needs 200% more hives than he/she intends to rent. This costs staff time and hard cash for queens. Splitting a colony also takes away from its ability to make honey, as the field force is reduced.

So where should the counting start? Do we examine the beekeeper’s primary economic event (almond pollination), and count the economic inputs it takes to get there? Or, do we examine the high number counting down towards the beekeeper’s primary economic event (almond pollination), even if this does not capture the beekeeper’s economic inputs?

A true and accurate mathematical analysis will reflect what is actually happening to the bees, and what beekeepers have to do to keep our agricultural system from collapsing. Counting downhill from ivory towers, beekeeping becomes an easy race, but you have to discount how you got to the top of the hill. Counting uphill shows the effort it takes to run the race. Counting downhill or uphill each year shows how the beekeeping race has changed, but fails to capture the big picture and the number of beehives which used to last three years now only last one year.

If other commodities were examined for their sustainability based on a similar survey what would be the response? If half of the cattle died every year, and the cattle industry had to double in size to generate the same number of cattle sales, what would be the repercussions, the regulatory response, and the support offered to the industry?

It has been acknowledged honey bees and other pollinators are integral to agriculture and our wild lands, and an affordable and sustainable food supply. Yet, we are not listening to the bees. Forty to fifty percent losses are not sustainable for either the bees or the beekeepers.

Summary of the total colony losses overwinter (October 1 – April 1) and over the year (April 1 – April 1) of managed honey bee colonies in the United States. The acceptable range is the average percentage of acceptable colony losses declared by the survey participants in each of the nine years of the survey. Winter and Annual losses are calculated based on different respondent pools.
WASHINGTON DC May 19, 2015 - Pollinators are critical to the Nation’s economy, food security, and environmental health. Honey bee pollination alone adds more than $15 billion in value to agricultural crops each year, and helps ensure that our diets include ample fruits, nuts, and vegetables. This tremendously valuable service is provided to society by honey bees, native bees and other insect pollinators, birds, and bats.

But pollinators are struggling. Last year, beekeepers reported losing about 40% of honey bee colonies, threatening the viability of their livelihoods and the essential pollination services their bees provide to agriculture. Monarch butterflies, too, are in jeopardy. The number of overwintering Monarchs in Mexico’s forests has declined by 90% or more over the past two decades, placing the iconic annual North American Monarch migration at risk.

That’s why last June, President Obama issued a Presidential Memorandum directing an interagency Task Force to create a Strategy to Promote the Health of Honey Bees and Other Pollinators. Today, under the leadership of the U.S. Environmental Protection Agency (EPA) and U.S. Department of Agriculture (USDA), the Task Force is releasing its Strategy, with three overarching goals:

- Reduce honey bee colony losses to economically sustainable levels
- Increase monarch butterfly numbers to protect the annual migration; and
- Restore or enhance millions of acres of land for pollinators through combined public and private action.

The Strategy released today and its accompanying science-based Pollinator Research Action Plan outline needs and priority actions to better understand pollinator losses and improve pollinator health. These actions will be supported by coordination of existing Federal research efforts and accompanied by a request to Congress for additional resources to respond to the pollinator losses that are being experienced.

Increasing the quantity and quality of habitat for pollinators is a major part of this effort—with actions ranging from the construction of pollinator gardens at Federal buildings to the restoration of millions of acres of Federally managed lands and similar actions on private lands. To support these habitat-focused efforts, USDA and the Department of Interior are today issuing a set of Pollinator-Friendly Best Management Practices for Federal Lands, providing practical guidance for planners and managers with land stewardship responsibilities.

The President has emphasized the need for an “all hands on deck” approach to promoting pollinator health, including engagement of citizens and communities and the forging of public-private partnerships. To foster collaboration, the interagency Pollinator Health Task Force will work toward developing a Partnership Action Plan that guides coordination with the many state, local, industry, and citizen groups with interests in and capacities to help tackle the challenge facing pollinators.

People of all ages and communities across the country can play a role in responding to the President’s call to action. YOU can share some land with pollinators—bees, butterflies, other insects, birds, bats—by planting a pollinator garden or setting aside some natural habitat. YOU can think carefully before applying any pesticides and always follow the label instructions. YOU can find out more about the pollinator species that live near you.

Today’s announcement marks an important step toward promoting the health of pollinators that are critically important to our economy, environment, and health.

Read the National Strategy to Promote Pollinator Health
https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator Health Startegy 2015.pdf

Read the Pollinator Research Action Plan
https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator Research Action Plan 2015.pdf

Read Pollinator-Friendly Best Management Practices for Federal Lands
www.fs.fed.us/wildflowers/pollinators/BMPs/

Access Appendices to the National Strategy
https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator-Startegy Appendices 2015.pdf

Originally posted by Dr. John P. Holdren, assistant to the President for Science & Technology and Director of the White House Office of Science and Technology Policy.
In Memoriam - Glenda Hutchinson

from Greg Hutchinson, her son

Glenda Hutchinson, of Dallas, died peacefully in her sleep on the morning of March 31, 2015. She was 76.

She was born near Buffalo, Texas on February 13, 1939. She lived in Waco from the age of 6 until she finished high school. She was graduated from University High School in 1958.

She was a true child of the 50s. During her teens, she worked as a soda jerk at a drugstore in downtown Waco. And like many of her generation, she was a huge Elvis fan. She saw him once in Waco, where he appeared in 1956.

After graduation, she moved to Dallas and was hired by Southwestern Bell to work as a long distance telephone operator. Soon after, she met Robert Hutchinson. And on June 26, 1960, they were married. In 2010, they celebrated their 50th wedding anniversary.

For over 30 years, she was half of the RD & G Hutchinson Honey Company. Many remember her as the “Honey Lady” of the Dallas Farmers Market. She was also an active member of Trinity Valley Beekeepers club.

She was a fan of author Larry McMurtry and his novel, Lonesome Dove. She made more than one trip to McMurtry’s bookstores in Archer City and to the filming sites of the Lonesome Dove movie.

She loved to travel. She also loved to follow politics.

Her other passion in life was her family. She was a devoted wife, adoring mother, and proud grandmother. During the time her children and grandchildren were growing up, she was a constant presence at school and church functions. She, in fact, made many trips to both San Antonio and Galveston to see her granddaughters perform in school-related competitions.

She was a Christian. Her children were raised in the Christian faith.

Vanilla Honey Drops

Ingredients

- ½ cup - honey
- 1 tsp - butter
- 2 tsp - cloves
- 1 tsp - vanilla extract

Directions

Place butter in a saucepan over low heat. Add the honey and stir frequently to avoid burning. Slowly increase to medium heat. Add in the cloves and vanilla extract and continue to stir. After approximately 15 to 20 minutes, or once the mixture reaches 300 degrees (use a candy thermometer if you have one) remove from heat. Immediately pour the mixture into silicone candy molds. Allow to cool and harden at room temperature. Once set, you can wrap them up individually using small squares of wax paper and store them at room temperature.
So far in 2012 we have delivered over $2,000,000 to beekeepers around the country!

BEEKEEPING INSURANCE SERVICES

APICULTURE INSURANCE PROGRAM
A Subsidized Program for Beekeepers

Offering All Forms of Insurance Including:
- USDA Apiculture
- Automobile
- Property
- Life Insurance
- General Liability
- Home & Farm Insurance

We are Proud Members & Supporters of:
- American Beekeeping Federation
- American Honey Producers Association
- California State Beekeepers Association
- Florida State Beekeepers Association
- Texas Beekeepers Association
- North Dakota Beekeepers Association

Kevin Rader: krader@beekeepingins.com
Noel Epstein: nepstein@beekeepingins.com

www.beekeepingins.com
888-537-7088
New Rule Does Not Protect Pollinators
from Michele Colopy, Pollinator Stewardship Council

Thursday, May 28, the EPA announced a new rule for foliar applications of acutely toxic pesticides on honey bees contracted to pollinate crops. The new rule will prohibit the foliar application of acutely toxic pesticides to a crop while it is in bloom, and honey bees are hired to pollinate the crop. The EPA states this new rule creates a “pesticide-free zone.” This will create neither a pesticide-free zone, nor protect honey bees and native pollinators from the impact of bee toxic pesticides. This new rule implies needed protection, where it is not needed. Growers who invest in renting bee hives for crop pollination understand the value of honey bees. Specialty crop growers will not intentionally harm the livestock that helps create their crop. Crop pollination contracts have had guidelines written into them protecting honey bees. The EPA is trying to narrow pollinator protection to specialty crop areas only, and throw the rest of the ecosystem “under the bus.” Pollinators must be protected all year long in every setting, in order to be abundant and healthy for the essential pollination moments.

It is the neighboring fields to specialty crops, crops that are part of creating a honey crop, and mosquito control programs that continue to put pollinators at risk. The new pollinator protection statement for this New Rule states:

“It is a violation of Federal law to use this product in a manner inconsistent with its labeling. FOR FOLIAR APPLICATIONS OF THIS PRODUCT TO SITES WITH BEES ON-SITE FOR COMMERCIAL POLLINATION SERVICES: Foliar application of this product is prohibited from onset of flowering until flowering is complete when bees are on-site under contract, unless the application is made in association with a government-declared public health response. If site-specific pollinator protection/pre-bloom restrictions exist, then those restrictions must also be followed.”

The prohibition still contains “unless” and relates mostly to mosquito control programs and public health emergencies. We can protect public health and protect honey bees. Mosquito control pesticides should be applied when they are most effective at night, when honey bees are not active. This risk and other risks to pollinators are tasked to the State, as they develop individual State Pollinator Protection Plans. These local plans to be developed by local stakeholders may provide “customized mitigation measures” to protect honey bees and native pollinators from pesticide-related risks.

The New Rule mentions other short-comings of protecting pollinators from pesticides, stating the need for additional research on the impact of tank mixes of pesticides with fungicides, specific native pollinator studies, systemic pesticides, insect growth regulators, and “prolonged residual toxicity” of pesticides. While the New Rule will remove the 48 hour notice to move bees when applying neonicotinoid pesticides on crops under contracted pollination services on the Federal pesticide label; some state pollinator plans still contain the 48 hour notice to move honey bees as a mitigation measure. This New Rule will affect current pollinator plans as states cannot create laws that are less stringent than federal laws. EPA is leaving it to the States to create local mitigation solutions when pollinated crops are not the problem.

This New Rule misses the mark completely, as the big problem continues to be tank mixes. Due to a lack of science and scrutiny by EPA, farmers are operating in the dark about tank mixes. Most damage happens to bees from adjacent croplands, and bees not under pollution contracts exposed to tank mixes of pesticides. Farmers are not provided with information on pesticide labels of the synergistic effects of tank mixes. Farmers are not given the information of how to protect the bees, as tank mixes are not regulated. A farmer can perform their due diligence reading the pesticide label of a fungicide, an herbicide, an insecticide, and individually all three products might be slightly toxic or moderately toxic, but combined, the synergism that occurs is unknown. The synergism of tank mixes is apparent when honey bees are killed. This and other exposure routes cannot be addressed through the 15 year cycle of pesticide registration reviews or bee kill incident report data.

A “pesticide-free zone” cannot be called that when only one third of pesticide applications are addressed. The new rule prohibits use of the foliar application of pesticides while the bees are in the blooming crop; but what about the residue levels of systemic pesticides in the soil and water.

Honey bees engaged in honey production are not addressed in this new rule. Fifty percent of the American honey bee stock will be in numerous upper Midwest states in the summer, making a honey crop off of alfalfa, sunflowers, and wildflowers. If this new rule is as Jim Jones, EPA Asst. Administrator states a “function of where the bees are,” then the new rule must protect bees wherever they are located. Pollinators must be protected all year long in every setting in order to be abundant and healthy for the essential pollination moments.

The New Rule will be open for public comment for thirty days. This New Rule will impact seventy-five active ingredients in pesticides (insecticides and herbicides only, not fungicides) and potentially impact one thousand pesticide labels. The active ingredients affected will be those causing acute risk to honey bees on an acute contact basis. New pesticide labels due to this new rule will not be in the marketplace until 2017. The Pollinator Stewardship Council will be submitting our public comment to the EPA docket; and we will reach out to our beekeeping supporters to submit their comments as well, to EPA, and individual members of Congress. For the beekeeping industry to be able to pollinate one third of the American food supply, to be able to produce a honey crop for individual consumption, as well as for the food industry, we must be able to protect our honey bees at all times, in all crops.

EPA’s Proposal to mitigate Exposure to Bees form Acutely Toxic Pesticide Products http://www.regulations.gov/#/documentDetail;D=EPA-HQ-OPP-2014-0818-0002
Texas Beekeepers Association Membership Application

New / Renewal (circle one)

First Name: ___________________________ Last Name: ___________________________
Address: _____________________________________________________________________
City: __________________ State: _________ Zip: __________________
Phone: ________________________ Email: ________________________________

Membership category: Century Club $100
Individual $35
Family $50
Association $50

Donation: Honey Bee Research Fund
Texas Honey Queen Fund
Legislative Fund
Stae Fair Honey Booth Fund

Total Enclosed __________________________

Remit to: Shirley Doggett
Membership Coordinator, 400 County Road 440, Thrall. TX 76578
### Listing of Local Beekeepers’ Associations in Texas with TBA Delegate and Regular Meeting Information Shown for Each

Please forward any changes and/or additions to John J. Talbert, Executive Secretary, [john@sabinecreekhoney.com](mailto:john@sabinecreekhoney.com)

<table>
<thead>
<tr>
<th>Association Name</th>
<th>Contact Person</th>
<th>Phone Numbers</th>
<th>Website</th>
<th>Meeting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alamo Area Beekeepers Association</strong></td>
<td>Rick Fink</td>
<td>(210) 872-4569</td>
<td><a href="http://alamoabees.org">alamoabees.org</a></td>
<td>3rd Tuesday on odd # months; at Helotes 1st Baptist Church, 15333 Bandera Rd., Helotes @ 7 pm</td>
</tr>
<tr>
<td><strong>Austin Area Beekeepers Association</strong></td>
<td>Lance Wilson</td>
<td>(512) 619-3700</td>
<td><a href="mailto:lw@ausapts.com">lw@ausapts.com</a></td>
<td>3rd Monday of each month, Old Quarry Library, 7051 Village Center Dr., Austin TX 78731 @ 7 pm</td>
</tr>
<tr>
<td><strong>Brazoria County Beekeepers Association</strong></td>
<td>Larry Hoehne</td>
<td>(979) 848-8780 or (979) 236-1385</td>
<td><a href="mailto:bcbassociation@gmail.com">bcbassociation@gmail.com</a></td>
<td>2nd Monday of each month @ 7pm, Brazoria County Extension Office, 21017 County Road 171, Angleton TX 77515</td>
</tr>
<tr>
<td><strong>Brazos Valley Beekeepers Association</strong></td>
<td>Chris Barnes</td>
<td>(979) 220-0004</td>
<td><a href="mailto:info@bvbeeks.org">info@bvbeeks.org</a></td>
<td>3rd Tuesday of each month, Brazoria County Extension Office, 21017 County Road 171, Angleton TX 77515</td>
</tr>
<tr>
<td><strong>Caddo Trace Beekeepers Association</strong></td>
<td>Roger Farr</td>
<td>(979) 436-5310</td>
<td><a href="mailto:rffarr@gmail.com">rffarr@gmail.com</a></td>
<td>2nd Monday of each month; Titus County Agrilife Extension Bldg, 1708 Industrial Rd., Mount Pleasant TX 75455</td>
</tr>
<tr>
<td><strong>Central Texas Beekeepers Association</strong></td>
<td>Michael Kelling</td>
<td>(979) 277-0411</td>
<td><a href="http://centraltexasbeekeepers.org">centraltexasbeekeepers.org</a></td>
<td>Monthly on the 4th Thursday (except November and December), at the Washington County Fairgrounds, Brenham @ 7 pm</td>
</tr>
<tr>
<td><strong>Coastal Bend Beekeepers Association</strong></td>
<td>Pete Hartje</td>
<td>(361) 229-0512</td>
<td><a href="mailto:phartje@juno.com">phartje@juno.com</a></td>
<td>3rd Thursday of each month at 6:30pm, City of Corpus Garden Senior Center, 5325 Greely Dr., Corpus Christi, TX 78412</td>
</tr>
<tr>
<td><strong>Collin County Hobby Beekeepers Assn.</strong></td>
<td>John J. Talbert</td>
<td>(214) 532-9241</td>
<td><a href="mailto:john@ubakeeckhoney.com">john@ubakeeckhoney.com</a></td>
<td>2nd Monday of each month; Collin College Conference Center, (Central Park Campus) 2200 West University Drive, McKinney, TX 75071 @ 6:30 pm</td>
</tr>
<tr>
<td><strong>Concho Valley Beekeepers Association</strong></td>
<td>Mel Williams</td>
<td>(325) 668-5080</td>
<td><a href="mailto:boneybeemanwilliams@gmail.com">boneybeemanwilliams@gmail.com</a></td>
<td>3rd Tuesday of each month Jan-Nov, Texas A&amp;M Research and Extension Center, 7887 US Hwy 87 N, San Angelo @ 7:30 pm</td>
</tr>
<tr>
<td><strong>Dino-Beekeepers Association</strong></td>
<td>Lee Borough</td>
<td>(817) 964-0238</td>
<td><a href="mailto:dino-beeclub@hotmail.com">dino-beeclub@hotmail.com</a></td>
<td>2nd Tuesday of month, Glen Rose Citizens Center, 209 SW Barnard St, Glen Rose, TX 76043</td>
</tr>
<tr>
<td><strong>East Texas Beekeepers Association</strong></td>
<td>Richard Counts</td>
<td>(903) 566-6789</td>
<td><a href="mailto:dickcounts@bigplanet.com">dickcounts@bigplanet.com</a></td>
<td>1st Thursday of each month; Whitehouse United Methodist Church, 405 West Main (HWY 346), Whitehouse @ 6:45 pm</td>
</tr>
<tr>
<td><strong>Erath County Beekeepers Association</strong></td>
<td>James K Gray</td>
<td>(254) 485-3238</td>
<td><a href="mailto:grayjamesk@jkgray.com">grayjamesk@jkgray.com</a></td>
<td>2nd Saturday of the month, Feb, April, June, August, October and December, Fayette County Agriculture Building, 240 Svoboda Lane, La Grange, TX 78945</td>
</tr>
<tr>
<td><strong>Fort Bend Beekeepers Association</strong></td>
<td>Jeff McMullan</td>
<td>(281) 633-7029</td>
<td><a href="mailto:jeffmcmullan@comcast.net">jeffmcmullan@comcast.net</a></td>
<td>2nd Tuesday of each month (except December), at the Bud O’Shieles Community Center, 1330 Band Road, Rosenberg, TX 77471</td>
</tr>
<tr>
<td><strong>Fredericksburg Beekeepers Association</strong></td>
<td>Joe Bader</td>
<td>(830) 537-4040</td>
<td><a href="mailto:jochbees@gmail.com">jochbees@gmail.com</a></td>
<td>724 Cypress Bend Dr., Boerne, TX 78006</td>
</tr>
<tr>
<td><strong>Harris County Beekeepers Association</strong></td>
<td>David DeLong</td>
<td>(832) 347-8989</td>
<td><a href="mailto:honeybee@harriscountybeekeepers.org">honeybee@harriscountybeekeepers.org</a></td>
<td>3rd Tuesday of each month, Harris County AgriLife Extension Office, 95 Frederick Rd., Fredericksburg, TX 78624 @ 6:30 pm</td>
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<tr>
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<td>Joe Bader</td>
<td>(830) 537-4040</td>
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<td><a href="mailto:honeybee@harriscountybeekeepers.org">honeybee@harriscountybeekeepers.org</a></td>
<td>3rd Tuesday of each month, Harris County AgriLife Extension Office, 95 Frederick Rd., Fredericksburg, TX 78624 @ 6:30 pm</td>
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</table>
Local Beekeepers’ Associations in Texas

Heart of Texas Beekeepers Association  
Gary Bowles - (254) 214-4514  
gbowles@peoplepc.com  
Meetings: 4th Tuesday of each month  
(except December) at Vegas Buffet,  
505 N. Valley Mills Dr., Waco, TX 76710  
Dinner at 6 pm, Meeting at 7 pm

Houston Beekeepers Association  
Rita Willhite - (832) 654-7317  
rr.willhite@yahoo.com  
7806 Braeburn Valley Dr. - Houston, TX 77074  
www.houstonbeekeepers.org  
Meetings: 3rd Tuesday of each month; Bayland  
Community Center, 6400 Bissonnet St.  
Houston @ 7:30 pm

Lakes Area Beekeepers Association  
James Laughlin - (936) 368-7188  
jaycll61@yahoo.com  
1299 FM 3017, San Augustine, TX 75972  
Meetings: 1st Tuesday of each month  
San Augustine Chamber of Commerce Building  
San Augustine, TX 75972

Liberty County Beekeepers Association  
Cameron Crane - (409) 658-3800  
info@libertycountybeekeepers.org  
2300 Belevedere Dr., Baytown, TX 77520  
www.libertycountybeekeepers.org  
Meetings: 1st Tuesday of each month at 7pm  
Business meeting at 6:30pm  
Liberty Agrilife Extension Office  
501 Palmer Avenue, Liberty TX

Marshall Beekeeping Association  
Beth Derr - (936) 591-2399  
derrbe@netscape.net  
210 Meadowlark Dr. Jefferson, TX 75657  
Meetings: 2nd Thursday of each month at 5:30 pm  
Centrall Marshall Fire Station  
601 S Grove St., Marshall, TX 75670

Metro Beekeepers Association  
Roger Eavatt, President  
eavartrog@yahoo.com  
www.metrobeekeepers.net  
344 NW King St., Burleson, TX 76028  
Meetings: 2nd Monday of each month; Southside Preservation Hall,  
1519 Lipscomb St., Fort Worth TX

Montgomery County Beekeepers Assn.  
Anita Stepp  
mocobees@gmail.com  
www.mocobees.com  
Meetings: 3rd Monday of each month at  
Montgomery County Extension Office, 9020 FM 1484,  
Conroe TX @ 7 pm

Northeast Texas Beekeepers Association  
David Oliver - (817) 992-4517  
david.oliver@utsouthwestern.edu  
631 VZ CR 4124, Canton, TX 75103  
Meetings: 2nd Tuesday of each month; @ 6:45 pm  
Russell Memorial United Methodist Church  
Deen Building, George Hall  
201 South 4th Street (Farm Road 47), Wills Point, TX 75169

Pineywoods Beekeepers Association  
Terry McFall - (409) 384-3626  
tdmcfall@hotmail.com  
1700 FM 252, Jasper, TX 75951  
Meetings: 2nd Thursday of each month  
Chamber of Commerce Building,  
1615 S Chestnut, Lufkin @ 7:00 pm

Red River Valley Beekeepers Assn.  
Doug Hill  
1701 Fairfax  
Wichita Falls, TX 76301  
Meetings: 3rd Tuesday of each month  
(except December) Bolin Science Hall, Room 209  
Midwestern St. University  
Wichita Falls @ 7 pm

Travis County Beekeepers Assn.  
Tanya Phillips - (512) 560-3732  
tinfo@traviscountybeekeepers.org  
9874 Wier Loop Circle, Austin, TX 78736  
www.traviscountybeekeepers.org  
Meetings: First Monday of the month at 7pm  
Zilker Botanical Garden, 2220 Barton Springs Rd., Austin, TX 78704

Trinity Valley Beekeepers Association  
Bob Richie - (214) 793-1516  
rgr Richie@sbglobal.net  
8266 Barbaree Blvd., Dallas, TX 75228  
www.tvbees.org  
Meetings: 2nd Tuesday of each month  
(except August), Continuing Education Center,  
C.C. Young Facility, 4847 West Lawther Dr.,  
Dallas, TX 75214 @ 7 - 9 pm

Walker County Area Beekeepers Assn.  
Mark Short - (281) 387-8124  
msbort5150@yahoo.com  
34 Davis Road, Huntsville, TX 77320  
Meetings: Last Thursday of each month  
at Walker County Extension Office, #1 Tam Rd.  
Huntsville @ 7 pm

Williamson County Area Beekeepers Assn.  
Jimmie Oakley - (512) 388-3630  
jimmie.oakley@gmail.com - www.wcaba.org  
425 Sapphire Lane, Jarrell, TX 76537  
Meetings: 4th Thursday of each month  
(except December) 1st United Methodist Church -  
McKinney Ministry Center, 410 E University Ave.  
Georgetown , TX 78626 @ 7 pm
### Directors -at-Large and Local Associations Served:

<table>
<thead>
<tr>
<th>Area</th>
<th>Name</th>
<th>Email</th>
<th>Address</th>
<th>Beekeepers Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lisa Dittfurth</td>
<td><a href="mailto:dittfurths@gmail.com">dittfurths@gmail.com</a></td>
<td>12992 CR 577 Anna, TX 75409</td>
<td>Collin County Hobby Beekeepers Association, Metro Beekeepers Association, Trinity Valley Beekeepers Association, Red River Beekeepers Association</td>
</tr>
<tr>
<td>2</td>
<td>Leesa Hyder</td>
<td><a href="mailto:lhyder@swbell.net">lhyder@swbell.net</a></td>
<td>82 Sandpebble Dr. The Woodlands, TX 77381</td>
<td>Central Texas Beekeepers Association, Montgomery County Beekeepers Association, Walker County Beekeepers Association, Brazos Valley Beekeepers Association</td>
</tr>
<tr>
<td>3</td>
<td>Mark Hedley</td>
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<td>8247 FM 502 Rochelle, TX 76872</td>
<td>Concho Valley Beekeepers Association, Dino-Beekeepers Association, Heart of Texas Beekeepers Association, Rio Grande Valley Beekeepers Association, Coastal Bend Beekeepers Association, Erath County Beekeepers Association</td>
</tr>
<tr>
<td>4</td>
<td>Eddie Collins</td>
<td><a href="mailto:eddiecollins@brookshires.com">eddiecollins@brookshires.com</a></td>
<td>10965 Ardis St. Whitehouse, TX 75791</td>
<td>Caddo Trace Beekeepers Association, Marshall Beekeepers Association, Northeast Texas Beekeepers Association, Pineywoods Beekeepers Association, East Texas Beekeepers Association, Lakes Area Beekeepers Association</td>
</tr>
<tr>
<td>5</td>
<td>Cameron Crane</td>
<td><a href="mailto:cameron@cameroncrane.com">cameron@cameroncrane.com</a></td>
<td>2300 Belvedere Dr. Baytown, TX 77520</td>
<td>Liberty County Beekeepers Association, Harris County Beekeepers Association, Fort Bend Beekeepers Association, Brazoria County Beekeepers Association, Houston Beekeepers Association</td>
</tr>
<tr>
<td>6</td>
<td>Tammy Barr</td>
<td><a href="mailto:tammybarrbrands@hotmail.com">tammybarrbrands@hotmail.com</a></td>
<td>182 Cardinal Lane Fredericksburg, TX 78624</td>
<td>Concho Valley Beekeepers Association, Dino-Beekeepers Association, Heart of Texas Beekeepers Association, Rio Grande Valley Beekeepers Association, Coastal Bend Beekeepers Association</td>
</tr>
<tr>
<td></td>
<td>Lance Wilson</td>
<td><a href="mailto:lance@apartmentexperts.com">lance@apartmentexperts.com</a></td>
<td>17021 Conway Springs Court Austin, TX 78717</td>
<td>Alamo Area Beekeepers Association, Austin Area Beekeepers Association, Travis County Beekeepers Association, Fayette County Beekeepers Association, Fredericksburg Beekeepers Association, Williamson County Area Beekeepers Association</td>
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