Bayou Bee Bulletin Number 6 – November 2015

Beekeepers are preparing their bees for the winter and should be checking if there are adequate stores. Goldenrod flows were cut off short due to a storm at the end of the flow and predictions for this winter are grim. Weather forecasters predict a cold wet winter. Colonies lacking food reserves will result in losses of those colonies. California almond pollination continues to be strong. They should be getting rain with the strong El Nino. Due to the protracted drought this past year, they need a lot of rain to recover.

In 2011 we lost one of our USDA/ARS research centers but retained the full funding of the Weslaco Lab. After a lot of hard work by the American Honey Producers Association pushing for another lab in California, a new USDA/ARS lab has been created and it’s targeted starting date is April 2016. They are co-locating with the existing university lab at US Davis but in a separate facility. They will start in a temporary building with hopes to be in a permanent building soon. This lab has strong potential with tremendous industry support such as the almond industry. On November 3rd I attended the stakeholders meeting with colleagues of our industry for input regarding the focus of this new lab’s research. The suggestions were varroa and pesticides as number one and two as well as queen health. The American Honey Producers promoted sustainability as a main focus for our industry.

Back here at the Baton Rouge lab there is a large turnover of personnel. Tom Rinderer’, the laboratory’s director is retiring a the end of this year. Although hiring is finally moving along we are going to miss some of our friends who have provided such good research and have been so closely involved with our industry. We hope to continue this trend with the new personnel. This facility is in the forefront of our industry.

Despite LSU changing the time of their football game with South Carolina, due to flooding in that state, to the same day as our Field Day, we still had a good attendance. Many of the attendees had a good time. Queen rearing and breeding were just some of the topics discussed and presented. The lunch provided was outstanding.

We hope to see you our 54th annual convention on Friday, December 4th and Saturday, December 5th at the Hilton Garden Inn, 400 Main Street, West Monroe, Louisiana. This is a great time to share ideas with other beekeepers and learn from great speakers. Chris Hiatt, Executive Board Member of American Honey Producers will give an update on the American Honey Producer and talk about his operation. Randy Oliver will discuss Beekeeping through the Eyes of a Biologist. We also have Dr. David Tarpy, Professor of Entomology and the Extension Apiculturist at North Carolina State University. We should be able to accommodate the small and the commercial beekeepers at this event.

We are promoting the “member-get-a-member” campaign. If you know anyone who would like to be a member of the Louisiana Beekeepers Association, they can join via our website, labeekeepers.org.

Joe Sanroma, President of the Louisiana Beekeepers Association
In this newsletter:

- **Special Announcement regarding Articles of Incorporation**
- **Editor’s Comments**
- **Dates and Events to Remember**
  - 54\(^{th}\) LBA Convention this December 4\(^{th}\) and 5\(^{th}\)
- **54\(^{th}\) LBA Annual Convention**
  - Agenda (draft copy)
  - Winners of the 4-H Essay Contest & Winner’s Essay
- **Internet sites you might find useful**
- **Articles of Interest**
  - The Story Continues: Saving a Late-Season Small Hive or Swarm – how to do it without spending a lot of time feeding and caring for the bees – Tim Haley
  - How Does a Honey Bee Queen Avoid Inbreeding in Her Colony? [American Bee Journal – April 2015]
  - Test given to the Central Louisiana Beekeeping Club (CENLA) this November 5th
- **Renew your LBA membership**
- **Commercial Business Advertisements**
- **Listing of the LBA Board of Directors**
- **Listing of LA Honey Bee Clubs and their presidents’ contact listing**

**Special Announcement regarding Articles of Incorporation**

The Articles of Incorporation of the Louisiana Beekeepers Association (LBA) have not been changed since 1933. The articles are being amended to reflect today’s purpose of the association. These changes will be voted on at the annual membership meeting. The meeting will be held Saturday at 3:00 p.m., following the Annual LBA Conference, in the Hilton Board Room at the Hilton Hotel in West Monroe, Louisiana. All members are requested to attend.

**Editor’s Comments**

Well the fall months are upon us and my bees have been working diligently at bringing in as much pollen and honey as possible. Those of us in CENLA are fortunate in this respect as the floral sources have been given a boost with intermittent rains following the record-breaking summer heat and dry spell. Those of you in the south and north probably have about the same or better results in your apiaries. Who knows what this winter will bring. Make sure your hives have enough winter stores to carry them over into spring!
Dates and Events to Remember

54th Louisiana Beekeepers Convention
The Louisiana Beekeepers Association (LBA) will hold their 54th annual convention on Friday, December 4th and Saturday, December 5th at the Hilton Garden Inn; 400 Mane Street, West Monroe, Louisiana 71292. A block of rooms will be held for LBA guests at a rate of $109.00 for a standard-double room (two queen beds) per night. Please make your reservations by calling 318.398.0653. Remember to mention the Louisiana Beekeepers Association to get the special rate.

Please join us for the latest research information from the USDA/ARS Honey Bee Breeding, Genetics & Physiology Laboratory. Also, some of the speakers are Chris Hiatt, Executive Board Member of American Honey Producers, Randy Oliver, Beekeeping through the Eyes of a Biologist, Dr. David Tarpy, Professor of Entomology and the Extension Apiculturist at North Carolina State University. There will be something for everyone from the small scale beekeeper to the lifetime beekeeper as well as the commercial beekeeper, so please join us in West Monroe. A registration fee of $20.00 per person or $30.00 per family is required if pre-registered* by November 13. You may register online at the LBA website: labeekeepers.org by using your credit card or PayPal or you may mail in the registration form that is located on the labeekeepers.org website and your check payable to the Louisiana Beekeepers Association to: David Ferguson, P.O. Box 716, Brusly, LA 70719. There will be a registration fee of $30.00 per person and $40.00 per family for those that register after the November 13 pre-registration cut-off date or at the convention. * Banquet tickets are limited due to “limited seating in the banquet hall.” If you plan to attend the banquet be sure to purchase your tickets to this event while registering for the conference.

Please contact Joe Sanroma at 318-346-2805 or Amy Weeks 318-325-6614 for additional information.


54th LBA Annual Convention - Draft of Agenda

    Friday, December 4th

7:15 Registration
8:00 Stanford Brantley, LBA Board - Call to Order - Invocation, Pledge of Allegiance Scout Troop ? Color Guard
8:05 Joe Sanroma, LBA President - Welcome/President’s Address/Introduction of Board Members
8:20 Chris Hiatt, co-owner of Hiatt Honey/Executive Board Member of American Honey Producers - AHPA Report
8:30 Chris Hiatt - Highlights of Hiatt Honey Company
9:10 Blake Shook, owner Desert Creek Honey - A Year in the Life of a Commercial Beekeeper
10:15 Break
10:25 Randy Fair/Tam Corbett, LBA Board - Door Prizes
10:35 Dr. Tom Rinderer, USDA-ARS Bee Breeding Staff - Current Research at the Baton Rouge Bee Lab
11:15 David Tarpy, Professor of Entomology and the Extension Apiculturist at North Carolina State University - Biology of Queens Part 1
12:00 Lunch
1:00 Randy Fair/Tam Corbett, LBA Board - Door Prizes
1:10 Allen Fabre, Administrative Coordinator of Nursery & Apiary Programs - Louisiana State Inspector Report
1:30 David Tarpy - Practical Applications of Queens Part 2
2:40 Nathan Crisp, State Statistician - National Agriculture Statistics Service (NASS) Report
Friday, December 4th
2:50 Break
3:00 Randy Fair/Tam Corbett, LBA Board - Door Prizes
3:05 Kristen Healy, Assistant Professor, LSU Department of Entomology - Mosquito Abatement Program Report
3:45 Sebe Brown - Report from Pollinator Cooperative Conservation Program (LPCCP)
4:30 Meeting Adjourned*
7:00 LBA Banquet and Program (ticket required)-
7:10 Stanford Brantley, LBA Board – Invocation
8:00 Mike Strain, Louisiana Agriculture and Forestry Commissioner
8:15 Kristen Healy - 4-H Essay Contestant Awards
8:25 Jennifer Brown, LBA Vice President - Announcement of Winners for Brood Box Decorating Contest
8:30 Buddy Woods, auctioneer - Live Auction LBA Live Auction
*The LBA hospitality room will be open for refreshments and visiting.

Saturday, December 5th
7:15 Registration
8:00 Randy Fair, LBA Board - Welcome
8:05 Kyle McCann, Farm Bureau Associate Commodity Director, Director of National Affairs
- Farm Bureau’s support of the LBA
8:20 Michael Bush, author of The Practical Beekeeper - Natural Cell Size
9:20 Randy Fair/Tam Corbett, LBA Board - Door Prizes
9:25 Michael Bush - Swarm Preventions and Splits
10:25 Break
10:30 Randy Fair/Tam Corbett, LBA Board - Door Prizes
10:35 Blake Shook - Queen Rearing
11:20 Billy Hummer, owner of Hummer and Son Honey - Announcement of Honey Judging Contest Winners
11:25 Jennifer Brown - Announcement of Raffle Winner
11:30 Lunch
12:30 Randy Fair/Tam Corbett, LBA Board - Door Prizes
12:40 Randy Oliver, Independent Beekeeping Researcher - Having a Plan B for Varroa Management?
1:40 Randy Fair/Tam Corbett, LBA Board - Door Prizes
1:45 Randy Oliver - Understanding Bee Biology Over the Course of the Year
2:45 Conclusion of the 54th Annual Louisiana Beekeepers Association Convention
3:00 Adjourn*

*Louisiana Beekeepers Association Memberships Annual Meeting to follow in the Hilton Board Room. ALL members are requested to attend.

4_H Contest Award Winners

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<thead>
<tr>
<th>Contestant Name</th>
<th>Placement</th>
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<tbody>
<tr>
<td>James Sanders</td>
<td>First</td>
<td>Lasalle</td>
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<tr>
<td>Anne Mertens</td>
<td>Second</td>
<td>Natchitoches</td>
</tr>
<tr>
<td>Callie Tregre</td>
<td>Third</td>
<td>Lafourche</td>
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James’ winning essay:

2015 Honey Bee Essay Contest

<table>
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<tbody>
<tr>
<td>Contestant</td>
<td>James Corley Sanders</td>
</tr>
<tr>
<td>Address</td>
<td>300 Happyville Road, Trout, LA 71371</td>
</tr>
<tr>
<td>Phone</td>
<td>318-992-8382</td>
</tr>
<tr>
<td>Birthdate</td>
<td>August 4, 2004</td>
</tr>
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Planting for Bees from Backyards and Up

It is estimated that there are currently between 3500 to 4000 species of bees living in North America. Honey bees were imported to North America by Europeans in 1622 and appear to have thrived for over 350 years. Bees pollinate an estimated 15-20 billion dollars’ worth of crops each year in the United States.¹ Half of the world’s plant species depend upon animals to pollinate them and bees are the most efficient. Over 100 crops in the United States require pollinators.² Bees help plants produce seeds and food for 25 percent of the bird population.³ In order to produce just one pound of honey, a hive of honeybees must tap 200,000 flowers and travel over 55,000 miles to gather the necessary nectar. The average worker honey bee will make only 1/12th of a teaspoon of honey in her lifetime, making honey a truly precious natural commodity.⁴ Because of the importance of the honey bee many studies have been done and it’s
been noted that recently the honey bee population has started to decline—colonies have dropped from 4 million to 2.5 million. The main reasons include loss of habitat, mite infestation, and use of pesticides.\(^4\)

Because bee keeping has become difficult due to lack of native plants for forage, communities need to do everything that they can to make bee friendly habitats.\(^5\) Individuals can use their backyards to provide bee habitats by planting certain flowers. Other areas that could be used include school grounds, golf courses, city parks, and roadsides. Native plants are considered the best source of food for bees.\(^6\) Provide a range of plants that will offer a succession of flowers, thus pollen and nectar for the whole growing season. Native plants are four times more attractive to bees than exotic plants. Favorite colors that attract bees are blue, purple, white and yellow. Flowers should be planted in clumps by species. Different sizes of flowers allow for different sizes of bees and different bee tongue lengths.\(^7\)

There are numerous plants and lists of plants for year round bee forage which can easily be found online and the key to a successful habitat is to ensure that there are flowers for every season.\(^8\) According to Mr. Timothy Haley, beekeeper and entomologist, the LSU AgCenter is a great resource for people who are interested in creating a bee friendly environment.\(^17\) After consulting with two local garden clubs in my area (Busy Bee and Town and Country), I discovered that a list of bee friendly flowers and shrubs was available for planting in my own back yard. It does not take much space to create a bee garden full of beautiful flowers. Native plants are best but any flowering plant will help. Several species should be planted to ensure flowers will be available throughout the seasons. Bees need a source of clean water so a fountain or small pond is helpful. The area needs to be pesticide free.\(^9\) Margie Morphis, master gardener/beekeeper, recommended several native plants that could be used to lure bees into anyone’s back yard. Some of the top plants in my area that attract bees include dandelion, snapdragons, fennel, and sunflowers. According to Mr. Charles Harper, a beekeeper since 1970, for my area the main bee friendly wildflowers/plants are Chinese Tallow, buttercup, hen bit, yellow top, and white Dutch clover.\(^16\) They both suggested planting several plants and fruit trees with different size flowers and blooming times so a food source for the bee would be in place when the bee first comes out of the winter nest.\(^19\) Some of the schools in our area have planted wildflowers along the fence rows. They provide a beautiful landscape and a forage area for bees. Areas that are mowed by the town are mowed less and cut higher to encourage clover blooms. According to the 2015 Old Farmer’s Almanac a new trend is to rent bee hives to pollinate crops and to leave a small portion of harvestable vegetables for foraging pollinators and create bee hotels from fallen limbs.\(^9\) Every small action helps ensure a good population of natural pollinators for our fruits and vegetables.\(^10\)

In 2012 Louisiana Governor Bobby Jindal signed a bill into law that created the “Save the Honey Bee” license plate.\(^5\) The funds generated will be used as financial aid for graduate students working on honey bee research projects at the USDA Honey Bee Lab. New information could provide answers to help stop the decline in bee population.\(^6\) The state of Louisiana and the Department of Transportation and Development have developed a statewide plan for planting and preservation of wildflowers along the state’s rights-of-way. Since wildflowers need several hours of sunlight the areas along the roadsides, welcome centers, and scenic byways are excellent choices.\(^15\) With the creation of wildflower meadows the foraging area for honey bees will be greatly expanded. Mowing will be timed to enhance
wildflower population. These areas will increase the diversity of nectar sources available to local bee hives.

On June 20, 2014 President Obama issued a directive to federal agencies to create a federal strategy to promote honey bees. It will address direct exposure by spraying and residual pesticide effects on honey bees. This program will monitor and advance the science of assessing the risks posed by pesticides. In the future it should lead to a safer environment for the honey bee.

Thanks to efforts in our community, bee habitats should improve over time. When everyone becomes aware of the importance of honey bees and how little it takes to help with the habitat, it leads to a better life for the bees and not only more honey for us, but more food as well.

Bibliography

1. The Humane Society of the United States. How to “Friend” Your Native Bees. Digitally accessed on 01/01/2015 at website:

2. The Xerces Society for Invertebrate Conservation. Nests for Native Bees. Digitally accessed on 01/01/2015 at

3. Honey Bee Fact sheet. Digitally accessed 01/01/2015 at


5. Louisiana Department of Public Safety Office of Motor Vehicles. 11/15/2012. Section V Motor Vehicle License Plate Classification & Effective Requirements. Number 148.00


7. The Xerces Society for Invertebrate Conservation. Invertebrate Conservation Fact Sheet Southeast Plants for Native Bees. Digitally accessed on 01/01/2015 at

8. The University of Georgia College of Agricultural and Environmental Sciences. Pollination: Plants for Year-round Bee Forage. Digitally accessed on 01/01/2015 at

9. The Old Farmer’s Almanac, Number 223, (p12, 16). Dublin, NH, 2014


11. Louisiana Master Gardener Blog. EPA Advancing Pollinator Science and Sharing Information with Growers and Beekeepers July 1, 2014 by bhfletcher. Digitally accessed at

12. Louisiana Department of Transportation and Development. Policy for Roadside Vegetation and Management. pp 21-23


15. Lady Bird Johnson Wildflower Center. The University of Texas at Austin. (January 2015). Digitally accessed at


17. Timothy Haley, beekeeper/entomologist. Personal communication via email.

18. LSU AgCenter. Entomology: Pollen the Golden Bounty. Digitally accessed on 01/12/2015 at:

Biographical Sketch

My name is James Corley Sanders and I am a fifth grade male student at Fellowship Elementary School in Trout, LA. I was born on August 4, 2004 and I am 10 years old. I live at 300 Happyville Road, Trout, LA 71371. My home telephone number is 318-992-8382.

This is my second year in 4-H. I currently serve as both President and activities coordinator for my school club. I have enjoyed learning about many different things including pet care, fitness, photography, environmental issues, nutrition, and gun safety. I feel that 4-H has given me an opportunity to not only learn but to make a difference in others’ lives. I look forward to being an active member for many years to come.

Internet Sources you may find useful

- Slideshare.net’s files:
  - All About Honeybees:
  - Beekeeping with Josh Gomez:
  - Pollinator Disappearance: Bees by Mahout Engerant:
  - Beekeeping 201 by Dawn Cogan of Science-Based Art of Alaska, LLC:
  - Beekeeping for Dummies:
  - Beekeeping Secrets:
  - Guide to Bees and Honey:
  - Bees:
  - Week 4: Queens, Hive Splitting and Swarms:
  - Beginning Beekeeping for Kentuckians by R.T. Bessin and L.H. Townsend:

- Articles of interest for this BBB

The Story Continues - Saving a Late-Season Small Hive or Swarm – Tim Haley

My story last month concerning the capture of a small hive late in the season and it’s joining with an established strong hive, has drawn some interest and comments. As an update, with my October 22nd visit, the young hive placed on top of the existing hive had drawn out and completed brood production on 2 ½ sides of two frames and is building on a third frame and populating it with honey.

October 22nd visit
At this visit the SHB and West traps were treated and the new queen’s progress noted. She and her workers have completed the 2nd side of the frame the small hive was originally attached to (photo 19). Though the brood pattern looks spotty what can’t be seen in the photo are the numerous cells filled with eggs and larvae – not yet capped.
This is a shot of the second side of the frame shown in photo 13, page 5 [See last month’s BBB]. New brood has been added where the old leaves of comb had been removed a few weeks back (October 3rd visit). These bees may have some hygienic traits – note the empty spots in the solid brood pattern on the right. Many of the cells outside the solid brood have eggs and brood in them.

A second frame is being built up and at this time is filled with brood on one side (photo 20).

Note the open cells within the solid brood pattern. These cells were empty but the cells between the two pockets of solid brood had eggs and larvae in them. This speaks of hygienic behavior in this hive.
A third frame is being filled with honey (photo 21). As the super above was completely filled with honey as noted at the last visit (October 3rd), the empty frames in this super are now being built up and used for storing honey which can be seen glistening in the cells on the right side.

Photo Number 21

In two months this queen and her small cluster of bees have managed to complete 2 ½ frames of brood, and that is in the fall of the year!

### How Does a Honey Bee Queen Avoid Inbreeding in Her Colony?

American Bee Journal        April 30, 2015

Matthew Webster and Andreas Wallberg at Uppsala University, have studied recombination in honeybees. *Credit: Petra Korall*
Recombination, or crossing-over, occurs when sperm and egg cells are formed and segments of each chromosome pair are interchanged. This process plays a crucial role in the maintenance of genetic variation. Matthew Webster and Andreas Wallberg at the Biomedical Centre, Uppsala University, have studied recombination in honey bees. The extreme recombination rates found in this species seem to be crucial for their survival. Like other social insects, honey bees live in colonies consisting mainly of closely related members of the worker caste. High genetic diversity among the workers is important for the whole colony's survival. There are several theories as to why: for example, a genetically variable workforce may be best equipped to perform the diverse tasks required in the colony, and diverse colonies may also be less susceptible to disease. But how can the queen, the colony's only fertile female, prevent inbreeding and maintain genetic variation?

The queen bee solves the problem in two ways. One is through polyandry. She mates with a score of drones and uses their sperm to fertilize the eggs randomly so that workers often have different fathers. The second is through extremely high rates of recombination.

By sequencing the entire genome of 30 African honey bees, the research team has been able to study recombination at a level of detail not previously possible. The frequency of recombination in the honey bee is higher than measured in any other animal and is more than 20 x higher than in humans.

Recombination affects how efficiently natural selection can promote favorable genetic variants. In line with this, the researchers have found that genes involved in the new adaptations to the environment in honey bees also undergo more recombination. But recombination is not entirely risk free.

"Recombination is not only beneficial for bees. When parts of chromosomes broken and exchanged, errors can sometimes occur during their repair due to a process called "GC-biased gene conversion", says Matthew Webster.

This process leads to gradual fixation of mutations that may be harmful to the honeybee. Although a similar process occurs in humans, it is more than ten times stronger in honeybees. Over time, recombination is expected to lead to a deterioration of the gene pool, a process that seems to have accelerated in bees.* The extreme recombination rates - crucial for maintaining genetically diverse honey bee colonies - come with a high price.

"There are no free lunches. Not even for a honey bee", says Matthew Webster.

Origin: UPPSALA UNIVERSITY

* Why this occurs was not explained in the article.
While contemplating what to present at the November 5th 2015 CENLA Beekeepers meeting and perusing the literature in preparation for this winter’s Beginning Beekeeper’s Class (BBC), starting in early February 2016, I was somewhat at a loss as to what to talk about. With that dilemma in hand I decided to punt and give a twenty question test. It was so well received by the members attending that night I thought I’d share it with you. [I’m sure the spitballs thrown at me during class and the slashed tires on my truck had nothing to do with the test.] [Answers are given at the end.]

Questions

General Question Section
1. What species of European honeybee was probably first introduced into the North American continent? By whom and why?
2. What species of European honeybee supplanted the first introduced species?
3. What bee was first introduced into South America, in order to bring their beekeeping industry “up to par” with the rest of the world? This bee was followed up by the introduction of another species, into Brazil as a means of providing the beekeepers with a “functional” honeybee in the 1950’s. What is the common name of this second introduced bee?
4. What is the agenda of any insect, much less a honey bee colony?

Entomological Section
5. What are the three characteristics of a “social insect”?
6. How many castes are there in honeybee colony?
7. The scientific naming and classification of the European honeybee, what is the Classification scheme? Who first set up such a classification scheme – his name?
8. Do honeybees have a complete or incomplete metamorphosis?
9. Which individuals in a honeybee colony are the most anatomically complex and have the most cognitive powers and why?
10. What does “queenright” mean?
11. In queenless colonies the pheromonal suppression exhibited by the queen’s pheromones is lacking with the result that the workers will begin doing what? Are they good at it and what sort of signs can be seen within the comb of such a hive?
12. What is supersedure? What causes it? What sort of queen cells are produced during this event?
13. What is swarming and what causes it?
14. What are swarm cells and where can they be found in a hive? Why do they occur?
15. What are the three most important things to consider when establishing an apiary?

Management Question Section
16. List six things to do in preparation for fall and winter conditions in your apiary.
17. List three things to do in preparation for spring apiary development & management.
18. What attributes of a hive are a prerequisite to splitting a hive?
19. What should you be doing this fall and winter if you are planning on establishing an apiary or begin beekeeping?
20. If you had to name four things you shouldn’t do or should do before starting into the hobby/business of beekeeping, what might you write down?

Questions and Answers
1. What species of European honeybee was probably first introduced into the North American continent? By whom and why?
   1.a. Apis mellifera mellifera (the German black bee)
   1.b. By the colonists in or about 1622 on the coast of Virginia. Probably for pollinating the tobacco being grown.

2. What species of European honeybee supplanted the first introduced species?
   2.a. Apis mellifera ligustica, the Italian honeybee.

3. What bee was first introduced into South America, in order to bring the beekeeping industry “up to par” with the rest of the world. This bee was followed up by the introduction of another species, into Brazil as a means of providing the beekeepers with a “functional” honeybee in the 1950’s. What is the common name of this second introduced bee? Is there a problem with the common name given this bee?
   3.a. The Italian.
   3.b. The “Africanized Killer Bee,” Apis mellifera scutellata Problem: The introduced bee was an African bee and not an “Africanized” bee – the latter synonym would suggest that the bee was introduced into Africa and became “Africanized” before it migrated north into the North American continent.

4. What is the agenda of any insect, much less a honey bee colony?
   4. To survive – to reproduce and survive until the next season (i.e., survive the winter months).

5. What are the three characteristics of a “social insect”?
   5.a. Cooperative brood care.
   5.b. Reproductive division of labor
   5.c. Overlapping generations

6. How many castes are there in a honeybee colony?
   6. Three - queen, workers and drones.

7. The scientific naming and classification of the European honeybee, what is the Classification scheme? Who first set up such a classification scheme – his name?
   7.a. Kingdom: Animal; Phylum: Arthropoda (crayfish, millipedes, centipedes, spiders, INSECTS); Class: Insecta; Order: Hymenoptera; Superfamily: Apoidea; Family: Apidae; Genus: Apis; Species: mellifera; Subspecies: ligustica
   7.b. Carl Linnaeus: Systema Naturae, January 1, 1735. Actually he wasn’t the first to
set up a classification scheme for plants and animals. The Greeks were way ahead of him.

[NOTE: from Wikipedia:  
Linnaean taxonomy can mean either of two related concepts:

a. The particular form of (taxonomy) set up by Carl Linnaeus, as set forth in his Systema Naturae, (1735) and subsequent works: In the taxonomy set forth by Linnaeus there are three kingdoms, divided into classes, and they, in turn, into orders, families, genera (singular: genus), and species (singular: species), with an additional rank lower than species:

b. A term for rank-based classification of organisms, in general. That is, taxonomy in the traditional sense of the word is “rank-based”. This term is especially used as opposed to “cladistics systematics”. Cladistics systematics groups organisms into “clades”. It is attributed to Linnaeus did not invent the concept of ranked classification (it goes back to Plato and Aristotle): nor give it its present form. In fact, it does not have an exact present form, as "Linnaean taxonomy" and as such does not really exist; it is a collective (abstracting) term for what actually are several separate fields, which use similar approaches.

Linnaean name also has two meanings: depending on the context, it may either refer to a formal name given by Linnaeus (personally), such as:, or a formal name in the accepted nomenclature (as opposed to a modernistic clade: name).]

8. Do honeybees have a complete or incomplete metamorphosis?
8. Complete. Definition: insects in which an individual passes through four complete developmental stages: egg, larvae, pupa and adult.

9. Which individuals in a honeybee colony are the most anatomically complex and have the most cognitive powers and why?
9. The workers: Anatomically: three-chambered stomach; pollen basket; venom gland with barbed stinger; glands that produce brood food (incl. royal jelly); beeswax, pheromones, have ovaries (can produce brood – because they receive both male and female compliment of genetic material from the queen – egg + sperm (drones only receive the sperm). Cognitive: ability to exchange information, learn, make decisions and navigate.

10. What does “queenright” mean?
10. There is a queen in the hive.

11. In queenless colonies the pheromonal suppression exhibited by the queen’s pheromones is lacking with the result that the workers will begin doing what? Are they good at it and what sort of signs can be seen within the comb of such a hive?
11.a. The workers will begin laying eggs.
11.b. They often lay multiple eggs within a cell or singly in an irregular pattern.
12. What is supersedure? What causes it? What sort of queen cells are produced during this event?
12.a. Queen replacement through supersedure cell production.
12.b. The queen is failing (her pheromone output is off) or is lost and the workers build supersedure cells.
12.c. This can happen anytime during the season and these cells tend to occur on the comb face, not along the comb edge. They also may result in poor queens – reason: their construction may occur during resource-poor times of the year.

13. What is swarming and what causes it?
13. Generally following the winter solstice and not necessary when food reserves are at their best, temperature swings stabilize in the hive (often these swings are tolerated during the winter months), colony populations increase and are associated with increased food consumption and heat generation. These activities are aimed at colony-level reproduction – fission or splitting called swarming. It generally involves queen cell production (swarm cells) – in various stages of production. It happens on a warm day, generally in the afternoon, during good nectar flow. The workers become frenzied and begin jostling and biting the old queen. Finally, the old queen flies out and takes 20–50% of the bees with her – mostly those found in the hive at the time (nurse bees). A second or third swarm can follow with the old queens’ daughters leaving – this is often common in populous hives.

14. What are swarm cells and where can they be found in a hive? Why do they occur?
14. These are queen cells produced in response to the hive preparing to split/reproduce. They are more numerous than supersedure cells; occur at various stages of maturity, are associated with early spring nectar flows and are often found scattered within the brood comb and not necessarily along the edges as is found in supersedure conditions.

15. What are the three most important things to consider when establishing an apiary?
15. Location, location and location. Year-round food and water sources; accessibility to the hives/apiary during poor weather conditions; neighbors – are they going to be a problem?; sunlight vs. shady conditions; etc.

16. List five things to do in preparation for fall and winter conditions in your apiary.
16.a. Rotate the brood boxes.
16.b. Examine the colony for brood production, health, number of bees, food, etc.
16.c. Reduce the hive entrance.
16.d. Make sure they have enough food and if necessary feed or plan on feeding them.
16.e. Do triage – strong hives are a no-brainer in keeping but a weak hive should be looked at and evaluated as to why it’s weak and whether it is worth keeping/feeding/ tas carrying over the winter. Should you combine it with a stronger hive? Maybe, but maybe not.
16.f. Treat for varroa mites and any other medicinal items if you haven’t been doing so already.

17. List three things to do in preparation for spring apiary development & management.
17.a. Monthly checkups at a minimum should be carried out through the winter and by late winter and early spring begin feeding if necessary.
17.b. To begin feeding you will have to haven made/purchased pollen patties!
17.c. Have extra supers on hand and if you plan on splitting, then extra hives.

18. What attributes of a hive are a prerequisite to splitting a hive?
18. - Strong, well populated hive (40,000 + bees);
   - Generally a good nectar/pollen flow will help else you will be supplement by feeding the split hives;
   - Large numbers of brood, pollen and honey reserves.

19. What should you be doing this fall and winter if you are planning on establishing an apiary or begin beekeeping?
19. - Ordering equipment, supplies, queens;
   - Rebuilding/repairing existing hives;
   - Getting involved with existing beekeepers and going out with them to get hands-on experience;
   - Reading and working at learning the art of beekeeping.

20. If you had to name four things you shouldn’t do or should do before starting into the hobby/business of beekeeping, what might you write down?
20.a) Avoid getting the cart before the horse – work with other beekeepers; go out into the apiaries and work the bees and see if this is what you want to do; join a beekeeper club/organization; read and get informed.
   b) Start small and master the art/trade before expanding.
   c) Work with other beekeepers and avoid the pitfalls of doing the wrong things by watching, listening and learning and doing.
   d) Be flexible and adapt your actions and strategies to make things work for you.

PLEASE RENEW YOUR LBA MEMBERSHIP!
LBA memberships have almost doubled over the last two years. The LBA is excited about this growth and sincerely appreciates your membership support. If you have not completed and submitted your membership renewal for 2016, please use the membership application at the end of this newsletter and send your renewal to our treasurer as soon as possible. Please don’t delay any longer and renew your LBA membership today.

Please feel free to make additional copies of this Bulletin and provide them to others interested in beekeeping and our organization. Reading the information provided below by our membership chairman will help you join us in our recruiting efforts by participating in our “Clubs Get A Member Campaign.” Prizes are awarded to the top Club annually! The new campaign begins November 1st, 2014 and ends October 31st, 2015. Need to talk to David about this.

There are many challenges facing beekeepers. Our organization provides a voice to Louisiana beekeepers and lets state government know that we are an important part of Louisiana’s agricultural industry. There is strength in numbers, so help us help you through your membership support!
To register or renew your membership, go to the LBA website:
On the left side of the page select the icon, "Join/Re-New the LBA".
At the top of the next page, select one of the two icons, "Join LBA" or "Renew".

The winner for the member get a member for 2015 is Dr. Rhea Jones from the Beekeepers of Tangi-Tamington Club.

Commercial Business Ads Information

The Louisiana Beekeepers Association would like to thank all of our sponsors for their business advertisements. We encourage our membership and visitors to our web site to consider the fine products and/or services they offer when selecting a vendor to fulfill their business and/or personal needs.

Over the past five years the number of our newsletter advertisers has steadily increased. In appreciation for their support the LBA has offered vendor booths to these advertisers at our annual State Convention free of charge. Vendor displays have also increased, providing our guests with a convenient venue for purchasing the beekeeping products they might need. These vendors in turn contribute door prizes and auction items to the LBA, making the event more enjoyable for our guests. Those who pre-purchase supplies through the vendors can have them delivered and avoid shipping charges.

Advertising is an important marketing tool for beekeepers and your beekeeping business is important to the Louisiana Beekeepers Association. Give us an opportunity to provide a portion of your advertising needs in 2015.

Remember, for only $25.00 annually you can advertise your company products in six issues of the Bayou Bee Bulletin. Your business ad will also be carried on our web site, labeekeepers.org. Remit your advertising fee to LBA Treasurer, Mr. David Ferguson, P. O. Box 716, Brusly, LA 70719 and forward your company’s camera ready, 4 inch by 3 inch jpeg ad image to Mr. Tim Haley, LBA Newsletter Editor, at: tamh212@suddenlink.net
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<table>
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<th>Name</th>
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<th>Phone</th>
<th>Email Address</th>
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## LOUISIANA BEEKEEPERS ASSOCIATION
## BOARD OF DIRECTORS FOR THE YEAR 2015

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<th>Email Address</th>
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**LOCAL BEEKEEPING CLUBS**

**and**

**CURRENT PRESIDENTS/CONTACTS**

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<thead>
<tr>
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<th>Club Name</th>
<th>President</th>
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