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Clinch Valley Beekeepers
meet every 3rd Thursday
at 7:00 pm at:
Treadway Fire Hall
189 Highway 131
Treadway, TN 37881



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Volume 14, Number 7

July 2023

Sherri Hudson, editor

SPECIAL EDITION

Beekeeping for Profit:
A Guide to Making Money with Bees



Save The Bees:
They Help Keep
The World Sweet.

"The keeping of bees is like the direction
of sunbeams."

Henry David Thoreau



NEXT MEETING

Date

FRIDAY July 21, 2023 - 7pm
Treadway Fire Hall
189 Hwy 131
Treadway, TN 37881

Food Theme COOKOUT POTLUCK

Down South, a "cookout" means grilling food outside.

The cookout menu features foods like hot dogs, hamburgers, and other easy foods. A "cookout" involves fast cooking over a direct heating source, like a gas grill.

A potluck is a communal gathering where each guest contributes a different, often homemade dish of food to be shared.

CVBA will supply the hamburgers, hotdogs, and buns. Please bring salads, side dishes, chips, & desserts to share with others.



BRING YOUR FAMILY/FRIENDS

Newer beekeepers are encouraged to participate by asking questions and sharing experiences.

TOPICS LIST

Honey
Pollen
Propolis
Wax
Equipment Comparisons: pros/cons
Swarms
Managing Honey Production
Summer Management



LAST MONTH

** Due to the Cookout, this month the meeting will be on Friday evening, same time & place.*

The June meeting opened with prayer by association president, Jr. Snelson.

There were 24 members and guests in attendance.

Financial report was given by treasurer Lynda Eskola and approved.

Lloyd reminded up that the July meeting will be on Friday evening due to the cookout.

David told us that there won't be a single speaker/topic. We will be having a round table. Read more about that below on this page.

Lloyd talked about store bought honey vs. local raw honey.

He reminded us that the library is open. Also, if there is anyone with media checked out, they should return them or check them back out, the next month.

T-shirts and caps are in the works.

Is It Really Honey?

There has been a lot of attention lately to the issue of adulteration among imported honeys. Here are two articles that shed some light on the subject:

- [Tests Show Most Store Honey Isn't Honey - Ultra-filtering Removes Pollen, Hides Honey Origins](#)
- [National Honey Board: Honey is Made from Nectar, Not Pollen](#)



Speaker

July is round table time. What is the meaning of round table meeting?

Britannica Dictionary definition of ROUNDTABLE:

a meeting at which people discuss something and everyone has an equal chance to express an opinion.

Seasoned beekeepers are encouraged to participate by preparing mini (5 min.) lectures, comments, and perhaps bring samples of equipment for comparison.





HAPPENINGS

As you read this newsletter, you can see that we go through many photographs for each issue. We would love to have **YOUR PHOTOS** of your bee yard in all seasons, or as you are inspecting. Send them as attachments to: cvbanewsletter@gmail.com If they have people in them, please identify with names.



QUEEN REARING COURSE

By member: Leigh Ann Brink

Our Queen Rearing Course was a buzzing success! Special thanks to David Winters of Winters Apiaries, our local Queen Breeder & speaker.

3 Bulls Farm of Bulls Gap for our venue. Not many places would even consider hosting an event with honeybees flying around. Your horses are beautiful also.

Last but not least, David Sams, you found a wonderful venue, brought 2 colonies so, we would have a live demonstration of how-to setup a starter and finisher colony and a frame of brood for people to have an opportunity for hands on grafting.



My first Queen using the mini mating nucs. Once she returned from her mating flight, I put her in a queenless hive. They are on round two.



BEE FUNNY

What goes zzub-zubb when it travels?
(answer on last page)



MESSAGE from the SECRETARY

Hello Everyone,

Keeping the educational portion of Clinch Valley Beekeepers Association meetings fresh and engaging can be a challenge. Balancing topics interesting to both new and experienced beekeepers is sometimes difficult. It is helpful that our members participate.

We would like to know what topics you would like to learn about. Talk to David Sams about your ideas. If you would like to be a speaker or know a speaker, we would be grateful for your input.

Order your FREE milkweed seeds today for fall shipment.

Summer Festivals: CVBA receives many requests to participate in community events, yet we are not able to fulfill them all, nor can we adequately staff 2023 events with the current number of volunteers **WE NEED YOUR HELP!**

We need volunteers to help load up the equipment into my truck at the Treadway Fire House before each festival then deliver the equipment to the festival and help set up.

We need volunteers after the festival to take down and load up the equipment and return it to our storage building in Treadway.

We need a minimum of 2 folks to work in the booth in 2-hour blocks (you can sign up for as many blocks as you want).

You will engage with festival attendees and tell them about CVBA offerings and encourage new members.

October Festival Schedule

Sneedville - Mountain Memories

Sat. Oct. 7 - Sun. Oct 8

10am - 6pm

Rogersville - Heritage Days

Sat, Oct 14 - Sun, Oct 15

10am - 6pm

Morristown - Mountain Makin's

Sat. Oct 28 - Sun. Oct 29

8am - 5pm

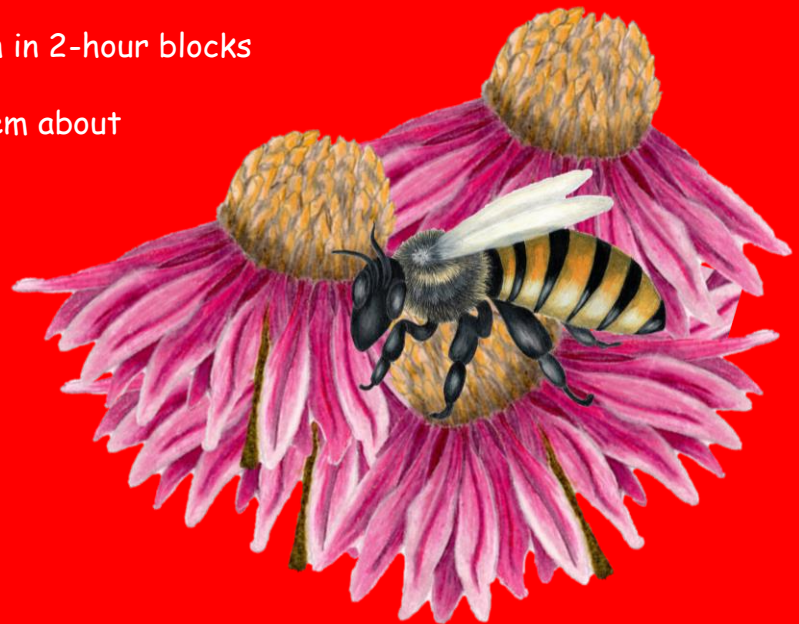
CVBA's has participated in these festivals for many years. Our booth is a great activity for both new and experienced beekeepers to share information about honeybees & beekeeping. There will be honey tasting and an observation hive for questions and answers. Members can sell their honey and honey crafted products. We also take the opportunity to tell folks about Clinch Valley Beekeepers Association. Plus, the festivals are just plain fun!

I will have a sign-up sheet at the next meeting, or you can email me at: cvbanewsletter@gmail.com

Speaking Engagements: CVBA gets many requests from schools and community organizations to provide speakers about honeybees, but we often cannot fulfill these due to lack of volunteers. If you like talking about honey bees, please sign up to be on our speaker list by emailing cvbanewsletter@gmail.com

Please return library materials! Many items are missing from our library. Please return your CVBA library items by bringing them to the monthly meeting or mailing them to: Clinch Valley Beekeepers Association, PO Box 736, Sneedville, TN 37869 Thank You!

Sherri





UPCOMING EVENTS

Greene Co Fair

July 24-29.

Entries need to be submitted

Saturday July 22

Extracted Honey, Comb Honey,

Frame Honey, Beeswax Molds,

Beeswax Candles

Tennessee Beekeepers

Association's 2023 Conference

• Start: Friday, October 06, 2023

• End: Saturday, October 07, 2023

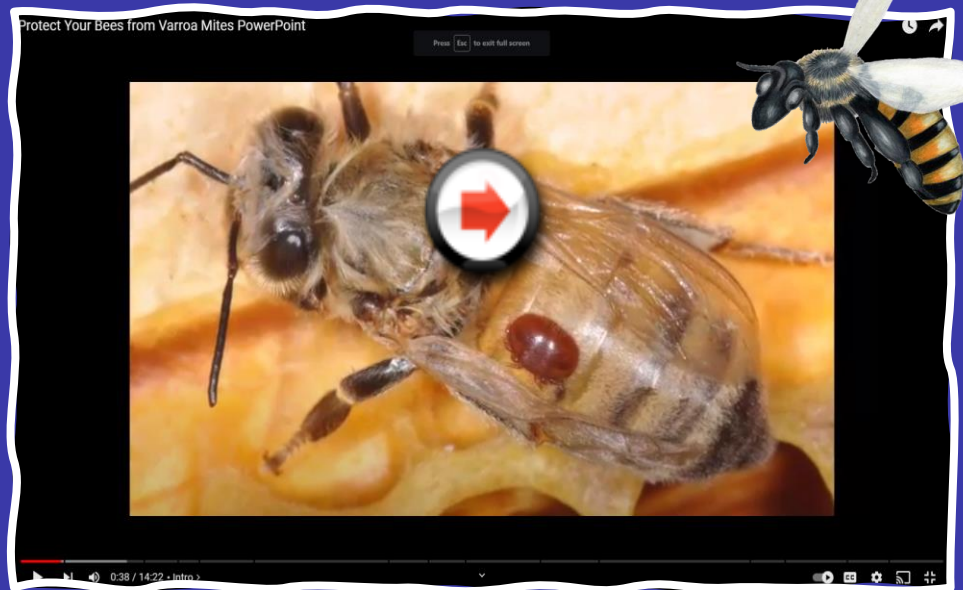
• Location: To Be Determined



SPEAKER NOTES

Protect Your Bees from Varroa Mites

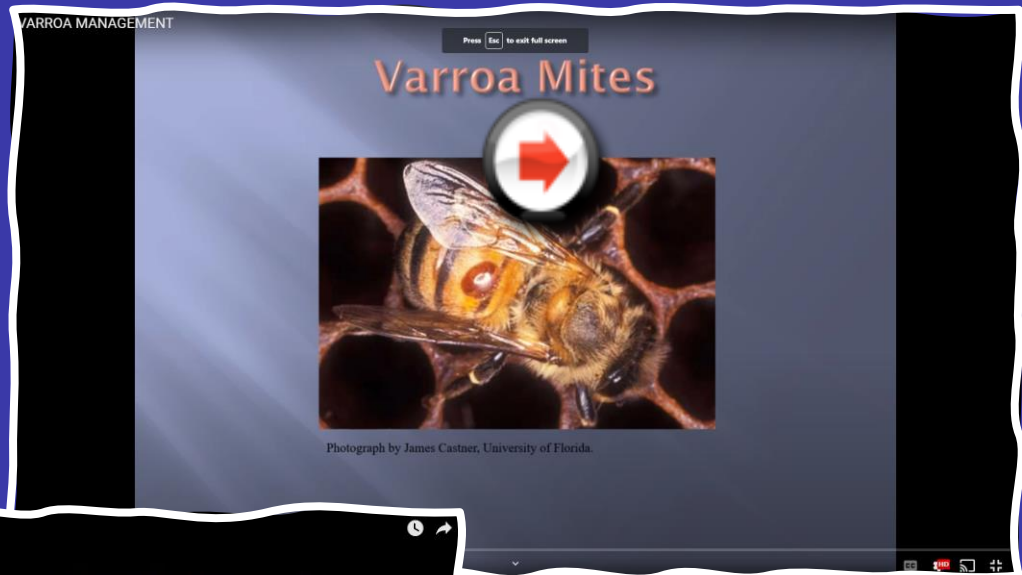
HoneyBee Health Coalition



June's speaker was our vice president David Sams.

The topic was Varroa Mite Management.

- Natural/Organic Chemicals
- Nonchemical Controls
- Synthetic Chemicals



Treatment of Varroa Mites



Treatment of
Varroa Mites
DadantBeekeeping

MANAGEMENT

August is a Critical Time for Mite Management

by Rusty Burlew



In late summer, the number of bees in a colony drops, but the number of mites continues to rise. If not treated, a colony will soon be swamped in a sea of mites.

In the temperate regions of the northern hemisphere, August is a critical time for mite management. Every year I find it hard to think about mites during spring and summer since they are nearly invisible. At that time of year, nearly 90% of all mites hide within the capped brood cells, out of our sight and mind. So, unless you are in the habit of plucking pupae from their cells, you hardly ever see a mite. Your sticky board counts are low, and your colonies are booming. Mites, it seems, are not the problem everyone talks about.



But it all changes in the eighth month. Sort of. It actually began to change at the summer solstice, back in June. That's when your colony growth rate began to level off. Although hardly noticeable at first, the queen lays fewer and fewer eggs per day as summer progresses. As a result, the colony gradually shrinks as the weather warms into July and August.

Mite populations rise as bee populations fall

But while the bee population declines, the mite population continues to rise. More gravid female mites roam the hive looking for soon-to-be-capped brood cells where they can lay their eggs. If there are not enough brood cells, the mites will even double up and share the ones available. And by August, the colony is tired of drones and is actively expelling them. The queen isn't laying many drones either, so, all the female mites opt for what remains: worker brood.

Left untreated, an average-sized colony that may have had 6 mites per 100 bees at the end of June, may find itself hosting 35 mites per 100 bees by September 1. That's a nearly seven-fold increase. Assuming you started the season with zero mites, the rate of increase is dependent on the number of mites that joined your colony during the spring and summer.

Mites can arrive in many ways but drifting bees, especially drones, probably bring in the most. A colony with ten introductions could end up with five times as many mites as a colony with two introductions, depending on when they occurred.

Winter bees can't afford to be sick

While a spring or summer forager may live a mere four to six weeks, a so-called winter bee (or diutinus bee) may live up to nine months. Since these long-lived bees care for the colony during the cold and confined winter months, they cannot be sick at the beginning, or the colony will not survive. To raise healthy bees in September and October, your colony needs to be virtually mite-free by the end of August, the very month that the mites-per-bee ratio explodes. So, if you are going to treat your hives, August is the month to do it.





MANAGEMENT cont.



Photo by Gilles San Martin from Namur, Belgium
[CC BY-SA 2.0], via Wikimedia Commons

Timing is everything

For many years, I read that any mite treatments should be completed by August 31. But lately, I've noticed that many groups are recommending an August 15 completion date for the best shot at healthy winter colonies. That means if you are doing a three-week course of something like ApiLife VAR, you should have already started. Many beekeepers like to treat the mites in August and then again in the dead of winter when little capped brood is present. A second treatment in winter may be especially important in very strong colonies that robbed other colonies in the fall. Robbers often attack a weak colony that is dying. In addition to bringing home the honey, they bring home the mites as well. But however, you decide to proceed, remember that timing is everything. The ultimate goal is to raise a crop of disease-free bees that can take care of themselves from fall until spring.

Rusty [Honeybee Suite](#)



HIVE CALENDAR

Adapted from the Cookeville Beekeeping Calendar
TN BEEKEEPING ANNUAL CALENDAR

Of course, all dates are approximate, and dependent on weather...

July is time to harvest Honey in TN - it is ready by now if it ever will be, and you need to get it off hives so that you can treat for Varroa mites. The market for local honey is quite good in our area with prices as high as \$1 per ounce in good sales locations - don't undersell your hard-earned honey! Advertise for free on LSN or on our club website Local Honey page or on other internet local honey sites.

July is robbing season in Mid TN - so take all precautions to avoid setting it off. It is also Small Hive Beetle and Varroa mite season - so do your inspections and try to keep your hives strong and healthy. Plan to complete varroa treatments before August 15 to ensure that the fall build up can proceed with healthy bees. It may be too hot for MAQS - formic acid - to be safely used so consider Apiguard (naturally occurring miticide) which works better when it is hot - but requires more than one treatment, or Apivar - amitraz synthetic - which only requires one but leaves synthetic chemical residue in the hive. You just have to learn about them and choose your poison.

Brood rearing is usually considerably curtailed during July and August because the normally hot dry conditions result in a dearth of nectar - although pollen may remain plentiful. Big strong hives may be quite aggressive - wear your veil when in the bee yard.

First year beekeepers may need to continue to feed in order to get hives sufficiently built out - especially if you already made splits - but beware of robbing if you are in the vicinity of any other beehives. Be careful not to spill feed and keep entrances as small as possible - refrain from using honey-bee-healthy or other "feeding stimulants" at this time, because they aggravate robbing. Consider fitting your hives with robber screens. You may consider moving hives and resources around a bit in order to equalize hive sizes and strengths - this activity can continue until mid fall, but it is best done in moderate steps.

Requeen between July 10 and August 21 if your existing queen has already performed through one or more intensive brood production periods. It is important that your queen is performing at her peak potential during the fall build up. Without a strong hive population going into winter, it will be impossible to build up sufficiently to exploit the short nectar flow that is available in the south. Some people believe that Queens which are mated after the summer solstice - around June 22 - perform especially well during fall build up because of the shorting of the days at that time. It seems too possibly be true.



MENTORING

We encourage everyone to have a mentor, especially if you are new to beekeeping. If you need a mentor, please let Jr. Snelson or David Sams know at the next meeting, and they will try to find one. Please consider being a mentor for our club! See the secretary to be put on the list



LIBRARY

CVBA encourages each person to further their education by reading books, checking out various websites, and watching the videos that are available on bees and beekeeping.

Check out the selection of books and DVDs we have available.

If you have a book or video checked out, please return it at the next meeting. Books can be returned to the Club Librarian, President, or Secretary.

If you have an idea for a book or DVD you think would be good for our library let us know.



REMINDERS

Tennessee law requires all colonies to be registered with the state. Use the links below or the QR code to register your apiaries.

Online Apiary Registration Form:
[Apiary Registration](#).

Online request form for hive inspection:
[Apiary Inspection Request](#)



BEEKEEPING HISTORY

How The Bees Saved America

Historical Honeybee Articles - Beekeeping History

The brave patriots of the American Revolution were having a particularly hard time of it in the summer of 1780. General Washington and his ragged, half-starved soldiers were in camp just outside of Philadelphia, where it was certain that the enemy was getting ready to make an important move. Man after man had risked his life trying to get their secret, but so far no one had been able to give Washington the important news without which he dared not risk his small force in battle.

But the great Washington, himself, scarcely took the independence of the colonists more seriously to heart than did little Mistress Charity Crabtree. Despite her prim Quaker ways, no eyes could spark with greater fire at the mention of freedom than those that smiled so demurely above her white neckerchief and plain gray dress. Charity was a soldier daughter, and though his patriotism made her, and her brother John orphans, when the boy also left to fight for his flag, Charity did not shed a tear, but handed him his sword and waved him Godspeed. Though she was all alone now and only twelve years old, the little maid kept a stout heart. "If I hold myself ready to serve my country, I know the time will come," she said, as she walked back from the gate through the fragrant lane, Honeycombed with beehives. "Meanwhile, I must keep my bees in good order."

Charity's father had been a bee farmer, and he kept all these hives at the entrance of his lane, so the bees could search the highway for wildflower sweets. One of his last acts was to send a beautiful comb of their honey to General Washington, whereupon the General had smacked his lips and said: "Those bees must be real patriots. They give the best that is in them to their country."





BEEKEEPING HISTORY

cont.

Charity stopped now to notice how well the bees were swarming. They seemed particularly active this morning, but she was not afraid of these little creatures who do not sting unless they are frightened or attacked. "I shall have a great many pots of honey to sell this fall," she thought. "It is good Providence who inspires the bees to help me keep our little white house all by myself, until brother John returns." Then suddenly the little Quaker maid turned pale. She stopped for a second with her hand to her ear, and then she ran quickly to the highway. These were terrible times, when, at any moment, bullets might whizz about like hailstones, and every good colonist lived tensely, in fear the little American army would be captured and their brave fight for independence lost forever.

It was a man in citizen's dress who galloped down the road. His hat was blown off and he pressed his left hand to his side. When he saw Charity, he just was able to rein in his horse and, falling from his saddle, draw her close so she might catch the feeble words he muttered between groans. "You are Patriot Crabtree's daughter?" he murmured, and the girl nodded, as she raised his head on her arm. "I am shot, I am wounded," he gasped. "Leave me here but fly on my horse yonder to General Washington's camp. Give him this message: 'Durwent says Cornwallis will attack Monday with large army.' Do not fail him!" cried the man. "Be off at once! The enemy is pursuing close."

Poor Charity had just time to repeat the message and assist the fainting man to a grassy place under the elm tree's shade, when the air thundered with a thudding of hoof beats, and before the terrified girl could gain her horse, a dozen soldiers leaped over the garden wall at the back of the house. "For my country!" the plucky maid cried and leaped to the saddle. But even then, she realized that if once the British saw her they could easily remount their own horses, evidently left on the other side of the wall, and so capture her and prevent her from reaching Washington. As it was, they discovered the unconscious soldier, whom they quickly surrounded by a guard, then spied the fleeing girl and immediately gave chase. "Ho, there!" they cried. "Stop, girl, or by heaven well make you!" They crowded after her into the mouth of the lane, while Charity cast about hopelessly for some way of escape. Suddenly, with the entrance of the soldiers, the bees began to buzz with a cannon's roar, as if to say, "Here we are, Charity! Didn't Washington say we were patriots, too? Just give us a chance to defend our country!"

Like lightning, now, Charity bent from her saddle, and seizing a stout stick, she wheeled around to the outer side of the hedge that protected the hives like a low wall. Then, with a smart blow, she beat each hive until the bees clouded the air. Realizing from experience that bees always follow the thing that hits them rather than the person who directs it, she threw the stick full force at her pursuers.





MEMBERSHIP

Renewal Dues become payable
January 1st of each year.
Dues are not pro-rated.

Single membership \$10
Family (one vote per family)
\$15
Youth Single (No vote) \$5

See a CVBA officer to
complete
a new membership form or click
here to download a form.

Checks should be made payable
to CVBA. You can mail checks
to the address on the last page.
Please let us know if any of
your information has changed.
We want to make sure you can
stay connected with the club to
help you get the most out of
your membership!



BEEKEEPING HISTORY cont.

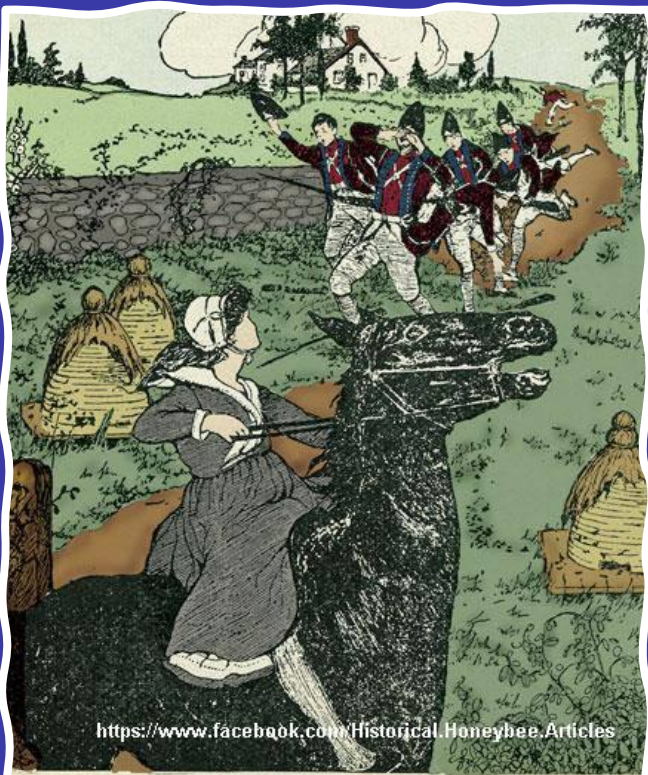
As Charity galloped off at high speed she heard the shouts of fury from the soldiers, who fought madly against the bees. And, of course, the harder they fought, the harder they were stung. If they had been armed with swords the brave bees could not have kept the enemy more magnificently at bay.

While Charity was riding furiously miles away, down the pike, past the bridge, over the hill, right into Washington's camp, her would-be pursuers lay limply in the dust—their noses swollen like powder horns. When the little maid finally gained admission to Washington's tent, for to none other would she trust her secret, the great general stared at her gray dress torn to ribbons, her kerchief draggled with mud and her gold hair loosened by the wind. But Charity had no time for ceremony. "I have a message for thee, sir," she said, standing erect as a soldier beside the general's table. "I have ridden these many miles while a dozen of the enemy have been kept at bay so I might bear it."

When she gave Washington the message, he sprang from his seat and laid his fatherly hand upon her shoulder. "The little Quaker maid has saved us," he said, and his voice rang while he looked deep into her gray eyes, lighted with honest loyalty. "I brought the message only as I was directed, sir," she said. "It was my bees that saved their country."

You can imagine Washington's surprise and that of his officers who crowded in with warm praise for the girl, when Charity told them of the story of the patriotic bees.

Washington laughed. "It is well done, Little Miss Crabtree," he cried, warmly. "Neither you nor your bees shall be forgotten when our country is at peace again. It was the cackling geese that saved Rome, but the bees have saved America."



<https://www.facebook.com/HistoricalHoneybeeArticles>

ONE THREW THE STICK PHIL. FORCE AT HER PURSUERS.





BEE INSIGHTS

Bee Anatomy

Honeybees are insects and have five characteristics that are common to most insects.

- They have a hard outer shell called an **exoskeleton**.
- They have **three main body parts**: head, thorax, abdomen.
- They have a **pair of antennae** that are attached to their head.
- They have **three pairs of legs** used for walking.
- They have **two pairs of wings**.



Honeybees are segmented in nearly all their body parts:

- three segments of thorax
- six visible segments of abdomen (the other three are modified into the sting)
- legs and antenna are also segmented.

Honeybees have an exoskeleton, which is rigid and covered with layers of wax, but have no internal bones like vertebrates do. The main component of exoskeleton is chitin which is a polymer of glucose and can support a lot of weight with very little material. The wax layers protect bees from desiccation (losing water). The advantage of chitin-containing exoskeleton also prevents bees from growing continually, instead, they must shed their skins periodically during larval stages, and stay the same size during the adult stage.

Bees also have an open circulatory system, meaning that they do not have veins or arteries, but rather all their internal organs are bathed in a liquid called 'hemolymph' (a mix of blood and lymphatic fluid).

Bees breathe through a complex structure of network of tracheas and air sacs. Oxygen is vacuumed into the body through openings on each segment (spiracles) by the expansion of the air sacs, then the spiracles are closed, and air sacs are compressed to force the air into smaller tracheas, which become smaller and smaller until individual tubules reach individual cells.

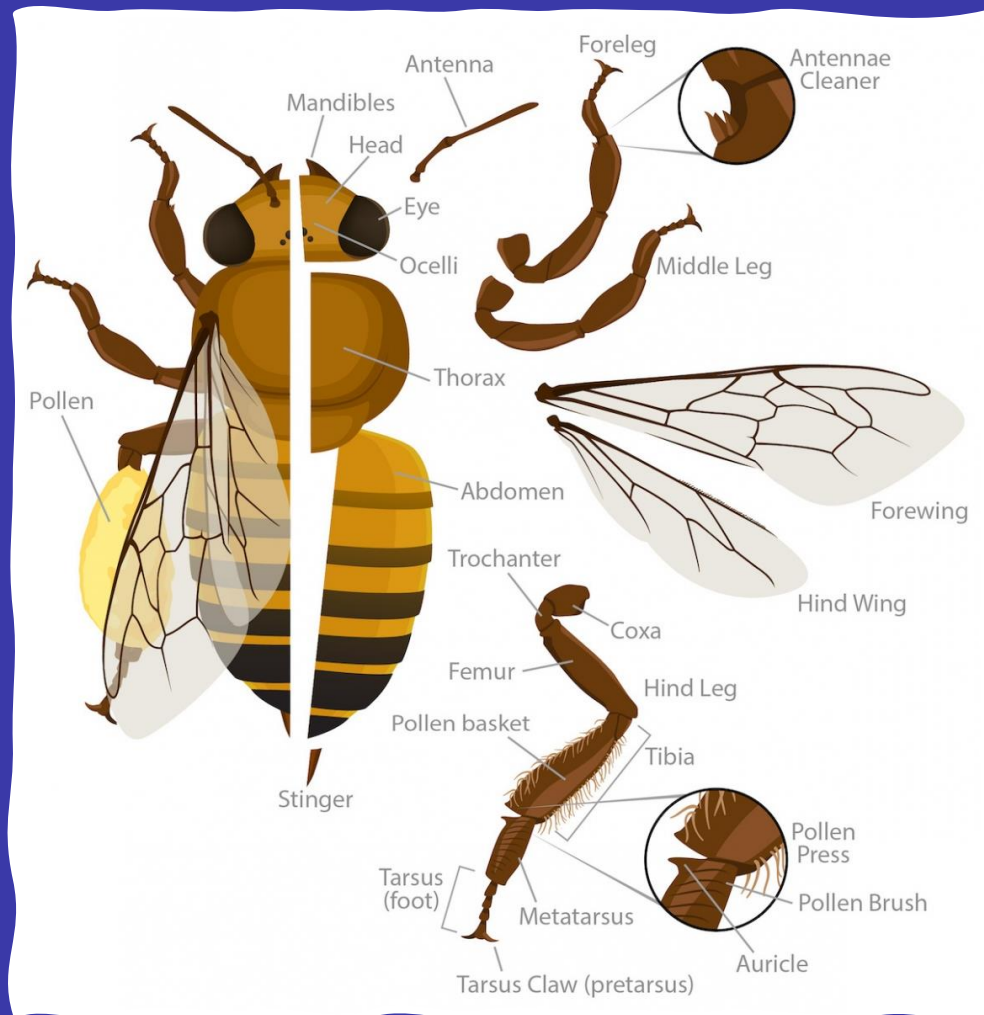
Internal Parts

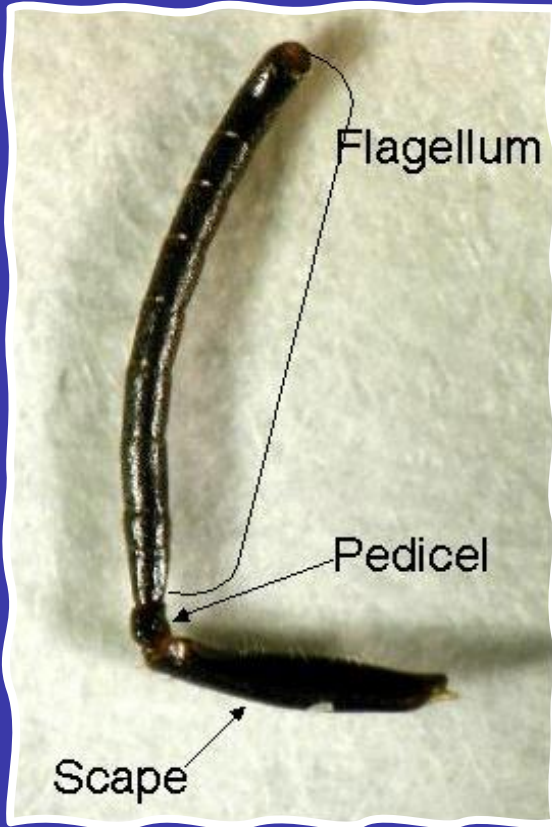
Head

The head is the center of information gathering. It is here that the visual, gustatory and olfactory inputs are received and processed. Of course, food is also input from here.

Important organs on or inside the head:

1. Antennae
2. Eyes
3. Mouth parts
4. Internal structures.





Antenna(e)

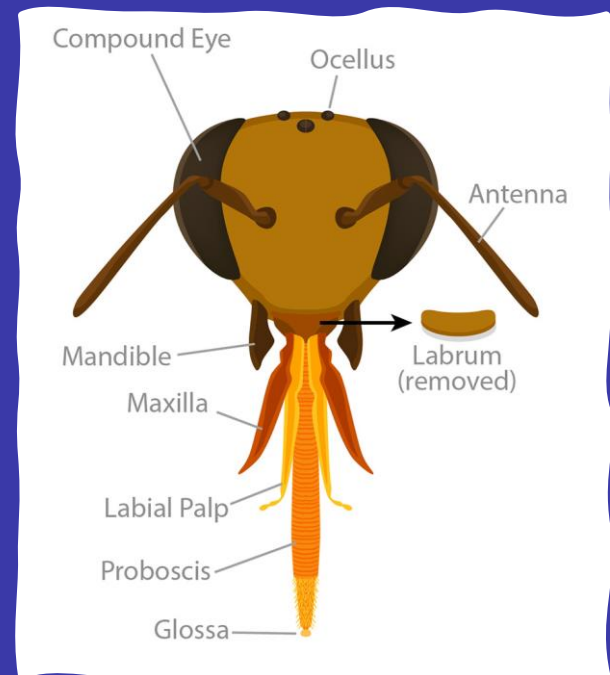
Because honeybees live inside tree cavities (natural) or hives (man-made), both of which have little light away from the entrance. Smell and touch therefore are much important for them than visual when inside the colony.

The honeybee antennae (one on each side) house thousands of sensory organs, some are specialized for touch (mechanoreceptors), some for smell (odor receptors), and others for taste (gustatory receptors). It used to be thought that honeybees couldn't hear any airborne sound because they do not have pressure-sensitive hearing organs (like our ear-drums or similar structures on the legs of katydids). Because of this, scientists were puzzled the ways through workers can perceive the buzzing sound produced by workers during waggle dances. About 10 years ago it was discovered that bees can indeed 'hear' airborne sound in close range, this is through sensing the movement of air particles by the hairlike mechanoreceptors on the antennae. This discovery helped the construction of robot bees that can be directed to dance (by a computer) inside a hive and guide workers to a specific location.

Eyes

Honeybees have two compound eyes that make a large part of the head surface. Each compound eye is composed of individual cells (ommatidium, plural ommatidia). Each ommatidium is composed of many cells, usually including light focusing elements (lens and cones), and light sensing cells (retinal cells). Workers have about 4,000-6,000 ommatidia but drones have more 7,000-8,600, presumably because drones need better visual ability during mating.

As in most insects, bees' eyes are not designed to see high resolution images like our eyes do, but rather they see a mosaic image but are better than us for motion detection. Bees also have three simple eyes that are called ocelli (singular: ocellus), near the top of their head. Ocelli are simple eyes that do not focus but provide information about light intensity.

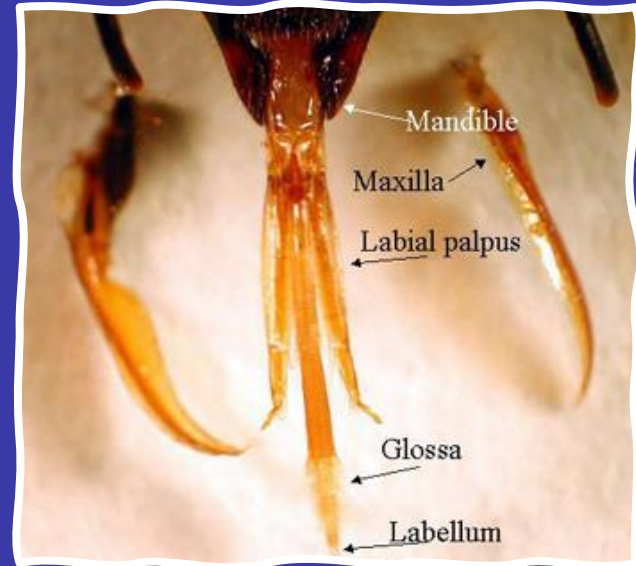




Mouth

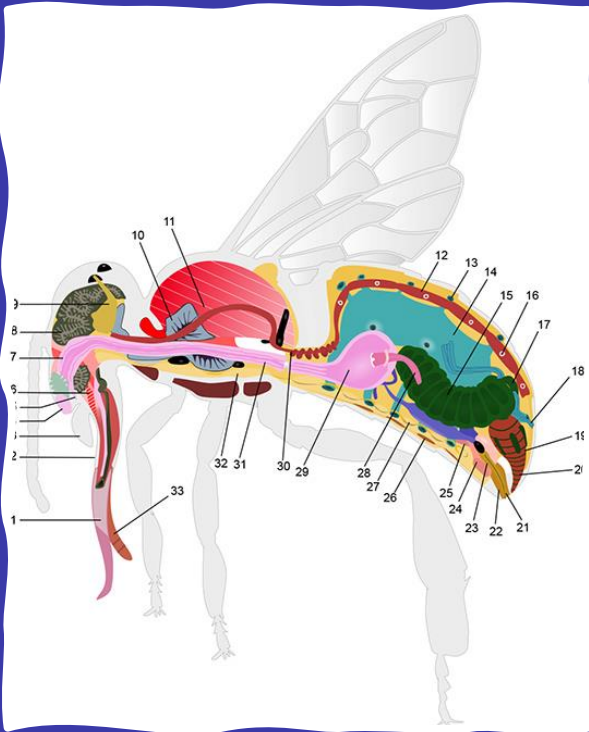
Honeybees have a combined mouth parts than can both chew and suck (whereas grasshoppers can chew, and moth can suck, but not both). This is accomplished by having both mandibles and a proboscis.

The mandibles are the paired "teeth" that can be open and closed to chew wood, manipulate wax, cleaning other bees, and biting other workers or pests (mites). The proboscis is mainly used for sucking in liquids such as nectar, water and honey inside the hive, for exchanging food with other bees (trophallaxis), and for removing water from nectar. The workers can put a droplet of nectar between the proboscis and the rest of the mouth parts to increase the surface area, and slowly moving the proboscis back and forth.



Internal Parts

1. Proboscis - Straw-like mouthparts of a bee used to drink fluids.
2. Maxillae - The outer sheath of the proboscis which surrounds the labium.
3. Mandible - A pair of jaws used to chew pollen and work wax for comb building. They also help with anything that the bee needs to manipulate.
4. Labrum - A movable flap on the head that covers the opening of the food canal and proboscis
5. Food Canal - Like our mouths, this is the opening by which the bee will take in food. Bees' food is almost always liquid in the form of nectar or honey.
6. Pharynx - Muscles used to move the labium and suck up nectar from flowers.
7. Esophagus - The hollow tube through which ingested fluids pass to the honey stomach and later the midgut.
8. Hypopharyngeal gland - Gland that produces some of the compounds necessary for making royal jelly, used to feed the larvae.



9. Ileum - A short tube connecting the midgut to the hindgut. The Ileum also often houses microbes, which aid in digestion.
10. Malpighian Tubules - A set of small tubes that are used to absorb water, waste, salts and other solutes from body fluid, and remove them from the body.
11. Rectum - The rectum acts like our large intestine and is the bees primary location of water absorption for the gut after digestion and nutrient absorption.
12. Anus - The exit of the digestive system, used to excrete food waste (poop) while in flight.
13. Stinger - Also called "sting" is used to puncture the skin and pump venom into the wound. In worker bees the stinger has a barbed end. Once pushed into the skin the stinger remains in the victim. The venom sac will remain with the stinger. If left in the body the stinger will continue to pump venom from the venom sac into the victim. Queen bees have a longer and un-barbed stinger. Drones (males) do not have a stinger.



14. Stinger Sheath - The hardened tube, from which the stinger can slide in and out.
15. Sting Canal - The sting is hollow, allowing venom to pass through the stinger. This is also the canal via which an egg is passed when the queen lays an egg.
16. Ileum - A short tube connecting the midgut to the hindgut. The Ileum also often houses microbes, which aid in digestion.
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18. Rectum - The rectum acts like our large intestine and is the bees primary location of water absorption for the gut after digestion and nutrient absorption.
19. Anus - The exit of the digestive system, used to excrete food waste (poop) while in flight.
20. Stinger - Also called "sting" is used to puncture the skin and pump venom into the wound. In worker bees the stinger has a barbed end. Once pushed into the skin the stinger remains in the victim. The venom sac will remain with the stinger. If left in the body the stinger will continue to pump venom from the venom sac into the victim. Queen bees have a longer and un-barbed stinger. Drones (males) do not have a stinger.
21. Stinger Sheath - The hardened tube, from which the stinger can slide in and out.
22. Sting Canal - The sting is hollow, allowing venom to pass through the stinger. This is also the canal via which an egg is passed when the queen lays an egg.
23. Venom Sack - Holds the venom produced by the venom gland and can then contract to pump venom through the stinger.
24. Venom Gland - The gland which produces venom that damages tissue if injected into the body.
25. Wax Glands - Worker bees start to secrete wax about 12 days after emerging. About six days later the gland degenerates and that bee will no longer produce wax. The queen is continually laying eggs to maintain colony size and to produce more new workers that produce wax.
26. Ventral Nerve Cord - Like the nerve cord in our spine, which holds bundles of nerve fibers that sends signals from our brain to the rest of our body.
27. Proventriculus - A constricted portion of the honeybee foregut or honey stomach, which can control the flow of nectar and solids. This allows honeybees to store nectar in the honey stomach without being digested.
28. Honey Stomach (Foregut/Crop) - A storage sac, used in honeybees to carry nectar. The honey stomach is hardened to prevent fluids from entering the body at this location.
29. Aorta Blood Vessel - located in the back of a bee that carries blood from the heart to the organs.
30. Esophagus - Part of the bee digestive system that begins below the mouth and connects to the honey stomach.
31. Ventral Nerve Cord - Same as 27. This is a large bundle of nerves from the brain that sends signals to the rest of the bee's body.
32. Labium - In bees a tongue-like appendage used to help drink up nectar. Like our tongue bees can taste with this organ. The labium fits inside of the maxilla (2), kind of like a straw.

Source:

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HONEYBEE LUNCH

POLLINATORS are a diverse group of species that includes birds, bees, butterflies, bats and beetles. They are critically important to life and their numbers are in steady decline as a result of habitat loss, pests, pathogens, pesticides and other stressors.

Elderberry

(*Sambucus canadensis*) is a small tree or large bush, depending on who is describing it.

It is as tough as a weed and fairly drought-tolerant.

It prefers temperate climates, is common in central Europe, but the best berry producer is the Canadian subspecies.

And once established, it's hard to remove. The native North American variety feeds migratory birds and pie-making humans.



Elderberry honey is darker than golden, very thick, and has a rich – but not overwhelming – taste and scent. To me, it epitomizes what most people think honey should be. Not mild like my favorite (sweet clover) but not as powerful as buckwheat honey which (to me) is almost medicinal in potency. It's great when gobbled by the spoonful, but also very nice when drizzled on fresh peaches and blueberries.

I even sometimes touch up a salad with some of the extraordinary elderberry honey.



- **Latin Name:** *Sambucus canadensis*
- **Common Name:** Elderberry
- **Type:** Deciduous shrub
- **Height:** 5 to 12 feet
- **Spread:** 5 to 12 feet
- **Pollination:** Self-fruitful, but bigger crops with two cultivars for cross-pollination. This applies to both the American, *S. canadensis* and European, *S. nigra* species. The American elderberry can be eaten straight off the bush, but it's not all that tasty raw..

- **Wildlife Benefits:** Fruits are attractive to wildlife.

American elderberry, *Sambucus canadensis* and European elder, *Sambucus nigra*, are closely related. The Royal Horticultural Society currently lists American elder as *Sambucus nigra* var. *canadensis*.

CULTURE INFORMATION:

- **Sun:** Full sun to part shade
- **Water:** Wet to medium that drains well
- **Zone:** 3 to 9
- **Care:**
- **Plant:** Spring
- **Fertilizer/pH:** 4.8
- **Groom/Prune:** During the first two seasons, elderberry plants should be encouraged to grow vigorously with little to no pruning required. After the second year, pruning should be done annually in early spring. All dead, broken, and weak canes should be removed.
- **Pest/disease Control:** No serious insect or disease problems. No serious insect or disease problems. Some susceptibility to canker, powdery mildew, leaf spot, borers, spider mites and aphids. Branches are susceptible to damage from high winds or from heavy snow/ice in winter. Plants will spread by root suckers.
- **Propagation:** Gardeners can propagate elderberry (*Sambucus* spp.) simply by taking a cutting and rooting it in the soil. Softwood cuttings are best for propagating elderberries, thanks to their new growth that is just beginning to harden and mature. Take your cuttings in June, July or August and root them in the soil right away.





POLLINATORS GARDEN

POLLINATORS are a diverse group of species that includes birds, bees, butterflies, bats and beetles. They are critically important to life and their numbers are in steady decline as a result of habitat loss, pests, pathogens, pesticides and other stressors.

The Monarch butterfly is in a critical situation. Since 1992, their population and their vital host plant, milkweed, have declined by 90%. Milkweed is crucial for monarch caterpillars as their sole source of food and habitat. However, habitat loss from land development and the use of herbicides and pesticides are causing milkweed to vanish rapidly.

Free Milkweed Seeds

The TDOT Pollinator Habitat Program is taking action by providing **FREE MILKWEED SEEDS** to Tennessee residents. Join our mission to rebuild their habitat, ensuring essential food and shelter for the monarch butterfly. Together, we can make a difference in their survival.

We accept seed orders throughout the year. Shipments will be made during the fall season, specifically between August 1st and October 1st. For orders placed after October 1st, the seeds will be shipped during the subsequent fall season.

To ensure successful germination, it is recommended to plant the milkweed seeds before October 15th. The winter cold is essential for the germination process of milkweed seeds. Please find detailed information below regarding planting and maintenance guidelines to contribute to this cause.

ORDER FREE SEEDS



Red Milkweed - *Asclepias incarnata*

For Small Gardens

- Red Milkweed - *Asclepias incarnata*, also called swamp milkweed, is an erect, clump-forming, native perennial which is commonly found in swamps, river bottomlands and wet meadows. Stems exude a toxic milky sap when cut. Flowers are followed by attractive seed pods (to 4" long) which split open when ripe releasing silky-haired seeds easily carried by the wind. Flowers are very attractive to butterflies as a nectar source. Red milkweed is an important food source for the larval stage of Monarch butterflies.

Common Milkweed - *Asclepias syriaca*

For Large Areas

Common Milkweed - *Asclepias syriaca* is a native perennial which occurs in fields, open woods, roadsides and along railroad tracks throughout much of North America. Stems and leaves exude a milky sap when cut or bruised. Flowers give way to prominent, warty seed pods (2-4" long) which split open when ripe releasing their numerous silky-tailed seeds for dispersal by the wind. Seed pods are valued in dried flower arrangements. Flowers are a nectar source for many butterflies and leaves are a food source for monarch butterfly larvae (caterpillars).



APIARY in the NEIGHBORHOOD

This feature is for CVBA members to show off your apiaries. Send me your photos and videos of your apiary with a short description and we will publish it here.

This month we visit member **Boyd Gibson's** apiary located in Tazewell in Claiborne County. Article written by Boyd.



I have had bees for about 5 years. I first started with bees to help in pollination. I have a small orchard of trees that are mostly apple. I do have thornless blackberries and raspberries. After learning more about bees and honey, discovering the nutritional part of it, I started using honey, apple cider vinegar and now am off almost all medication.

I built the cover over my bees to protect them from the elements like snow and direct evening sun.

The slabs are there for direct evening sun and to block the security light. I also built my own hive boxes out of poplar lumber. I have not had any problems with mites or hive beetles.

I have small areas of clover, and other flowering plants that bees like.





RECIPES from the HIVE

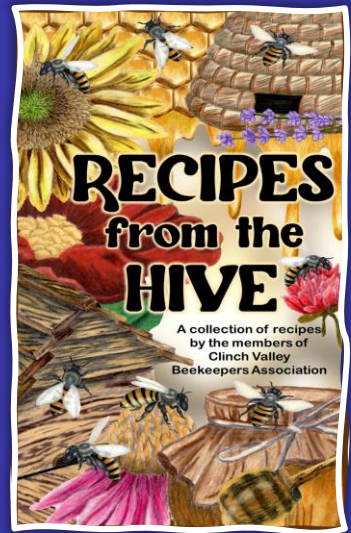
FRESH GINGER LEMONADE / MINT ICE CUBES

2 cups filtered water
12-18 leaves of fresh mint
1 cup honey (chocolate, peppermint, or lemon balm are my favorites)
2 cups club soda, chilled
1 cup freshly squeezed lemon juice (about 5 whole lemons)
1 whole lemon (washed and sliced)
filtered water
ice cube trays

- Add one or two fresh mint leaves to each section of an ice cube tray.
 - Cover with filtered water and freeze.
 - Meanwhile, in a saucepan, bring 2 cups water, honey and ginger to just under a boil (I don't like to boil my honey).
 - Remove from heat; cover and steep for 10 minutes.
 - Strain, discarding ginger.
 - Cool.
 - Pour into a pitcher; stir in soda and lemon juice.
 - Refrigerate until ready to serve.
 - Serve over ice.
- Garnish with lemon slices and fresh mint, if desired.
- Store in refrigerator for up to 3 days.
 - But don't worry, it won't last that long.



from member
Sherri Hudson
page 23



EASY HONEY SLAW

cabbage, or carrots
mayonnaise or olive oil
apple cider vinegar
honey

from member
Deborah Stahl
page 35

- Grate the cabbage, or carrots.
- Add vinegar, mayonnaise or oil, and honey to taste.
- Toss and serve.
- For a tastier slaw, mix grated cabbage and carrots together.
- You can also add raisins and/or pineapple, my favorite.



VIDEO SHOWCASE

How to Harvest Honey

Maddie Moate



HONEY CHICKEN WINGS

3 lbs. chicken wings
 $\frac{1}{4}$ cup soy sauce
1 cup honey
2 tablespoons oil

- Place wings in a large baking dish.
- Mix honey, soy sauce and oil and heat until mixed well.
- Pour mixture over wings.
- Bake at 350° for 45 minutes.
- Baste while baking.

From former member
Teresa Lamb
page 3





BOOKSHELF

Natural Beekeeping: Organic Approaches to Modern Apiculture

by Ross Conrad (author)

Whether you are a novice looking to get started with bees, an experienced apiculturist looking for ideas to develop an integrated pest-management approach, or someone who wants to sell honey at a premium price, this is the book you've been waiting for.

Now revised and updated with new resources and including full-color photos throughout, **Natural Beekeeping** offers all the latest information in a book that has already proven invaluable for organic beekeepers. The new edition offers the same holistic, sensible alternative to conventional chemical practices with a program of natural hive management, but offers new sections on a wide range of subjects, including:

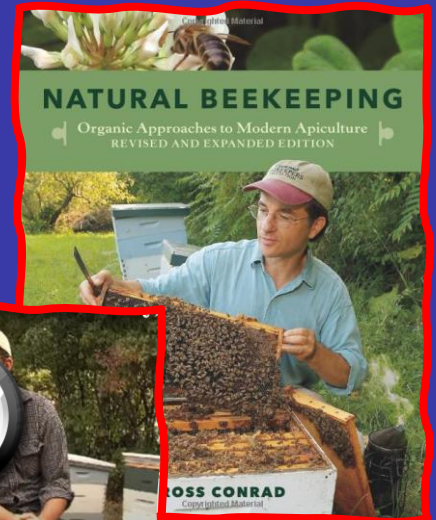
- The basics of bee biology and anatomy
- Urban beekeeping
- Identifying and working with queens
- Parasitic mite control
- Hive diseases

Also, a completely new chapter on marketing provides valuable advice for anyone who intends to sell a wide range of hive products.

Other chapters include:

- Hive Management
- Genetics and Breeding
- The Honey Harvest
- The Future of Organic Beekeeping

Ross Conrad brings together the best "do no harm" strategies for keeping honeybees healthy and productive with nontoxic methods of controlling mites; eliminating American foulbrood disease without the use of antibiotics; selective breeding for naturally resistant bees; and many other detailed management techniques, which are covered in a thoughtful, matter-of-fact way.



POETS STAGE

On Falling in Love

at the British Beekeeping Association's Annual Meeting

author Brian Bilston

Oh, Beth, where is thy sting?
 You make me buzz with joy and beat my wings
 to a love-song I have never heard.
 I hum along to all the words
 as I listen to your annual lecture.
 I imagine our long tongues sucking nectar,
 while we pollinate the crops and flowers.
 I could sit here for ten thousand hours
 dreaming of the honey we two might make.
 So when you're through, let's make a break
 for it and leave this colony behind.
 Let's not succumb to the hive mind
 as it bumbles on about this and that.
 Because you're my buzzword,
 you're where it's at - for beauty is in the eye of the bee holder,
 and you're the bee's knees, ankles, hips, & shoulders.



BUZZ ART GALLERY

LIVE Watercolor:

HoneyBee!

Let's Make Art



Get out your watercolors and brushes and paint a beautiful honeybee.



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ANSWER to BEE FUNNY

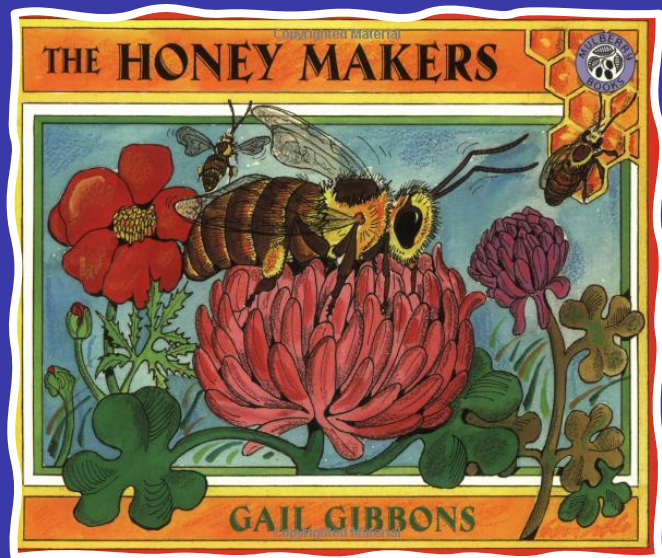
A bee flying backwards.



KIDS CORNER

The Honey Makers

by Gail Gibbons (author, illustrator)



Get the buzz on bees in this classic nonfiction picture book by Washington Post/Children's Book Guild Award winner Gail Gibbons! Ever wondered how a jar of honey is made?

Thousands of bees visit more than one million flowers to gather the nectar that goes into a one-pound jar of honey. Every page in this picture book reveals how these remarkable insects work together to create this amazing food.

With detailed illustrations and diagrams, Gail Gibbons offers a classroom-ready nonfiction picture book that makes complex scientific concepts understandable and entertaining for young readers.

Busy Bees! | Bumblebees and Honeybees Amazing Animals | SciShow Kids



You see them when it's warm outside, hanging out in flowers and working away. Bees! Check out what these buzzing insects are up to, and how you can tell the difference between a bumblebee and a honeybee.



BEE MARKETPLACE

Beekeeping for Profit: A Guide to Making Money with Bees

by: Adam Sayner

Are you wondering how to get into beekeeping for profit?

The best way is to start slowly with a few hives and learn all you can about beekeeping.

Don't increase your beehives too quickly.

Instead, have fun, enjoy your bees and take your time learning the craft of beekeeping.

Once you have some experience and understand how to manage your bees, you are ready to become a successful beekeeping business owner.

In this article, we explore different ways to make money with beekeeping and how much you can expect to make.

7 Ways to Make Money Beekeeping

Beekeeping can be a fun and rewarding hobby that provides natural honey and helps with your plant pollination.

However, once hooked, many backyard beekeepers wonder, "how does honey make money?" and "can beekeeping be profitable?"

Beekeeping can be profitable, and while selling honey can make money, this is not the only way to profit from beekeeping.

Clinch Valley Beekeepers Association

T-shirts are available;

S, M, L, XL sizes - \$10

XXL and larger sizes - \$12

Hats - coming soon

Recipes from the Hive -

\$10 each to members

\$13 each non-members

shipping \$5

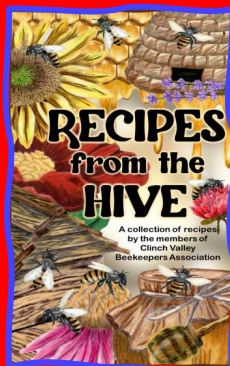
The club has a full line of bee equipment for sale.

**** See Jr** for an inventory and price list.

Available at regular meetings.

Take home a treasured collection of recipes from many outstanding beekeepers, cooks, and crafters.

This attractive book makes an ideal gift or keepsake!



This feature is available **FREE** to any CVBA member who has honeybee products to sell/trade/give away.

Advertise your honey, beeswax candles, honey soaps, salves, hive equipment, etc.

Send me the info along with a photo and contact info.



Here are some of the ways that beekeepers make money.

1. Bee Products

The first way you can make money is by selling the things that bees produce.

Although most people immediately think of honey, bees produce several other substances that can be harvested and sold.

• Honey

There is always a demand for natural, locally produced raw honey, and the production costs are low.

If you have specific nectar sources near your hive, you could package, market and sell honey with unique flavors.

You can charge more for natural honey than the mass-produced product in grocery stores and could charge up to \$1 per ounce). Bear in mind you probably won't harvest honey in the first year as your bee colony needs time to get established before they produce excess honey.

The amount of honey a hive produces varies from year to year. It's affected by the weather, nectar availability and health of the colony.





BEE STORE

cont.

- **Pollen**

Bees collect pollen from flowers and bring it back to the hive. It's their primary source of protein, and they need pollen to feed the colony.

Pollen is also a health supplement for humans, and as only small amounts are available, it has a higher market value than honey and usually sells for \$3 to \$5 an ounce).

A beekeeper needs to install a pollen trap at the entrance to the hive to harvest and sell pollen.

Pollen harvesting can only be done for short time periods, a few days a week, to ensure you leave enough pollen for the bees.



- **Propolis**

Bees use propolis, a sticky resin-like substance, to seal cracks and disinfect the hive.

It is also a human health supplement in demand for its medicinal uses and more valuable than pollen.

A beekeeper can sell propolis for \$6 to \$8 an ounce.

Propolis is harvested from the hive using a propolis trap, and although you only get small amounts; a healthy colony will provide a steady supply.



- **Royal Jelly**

Royal Jelly or bee milk is a white, protein-rich excretion that comes from the glands of worker bees.

All bee larvae are fed royal jelly for their first three days of life.

But larvae chosen to become queens are given royal jelly throughout their development, and queen bees eat royal jelly their entire life.

Royal jelly is precious as so little is made, and harvesting is difficult. For centuries it has been used for its health benefits and can be sold for \$6 to \$8 an ounce.



- **Beeswax**

Beeswax is another popular bee product that beekeepers can harvest and sell.

You can sell beeswax as is or try your hand at making value-added beeswax products like lip balm or candles.

How much you get for your beeswax will depend on your location, but around \$10 per lb. is a common retail price.

If you make your own beeswax candles, they can easily sell for over \$20 and there's a thriving market for them.



"Honeybee World"

8 original watercolor pencil art note cards/envelopes by:

Sherri Hudson

On the back of each card, you will find a fact about honeybees.
\$20 per set + \$5 shipping/handling

Send check to:

Sherri Hudson

124 Shortt Road

Treadway, TN 37881





• Bee Venom

The use of bee venom to treat arthritis and other conditions is relatively new and still being studied. Known as bee sting therapy, it is a form of apitherapy that involves bees stinging specific areas of the body.

It's an exciting new area of study, and as the science develops, it may create a lucrative new market for beekeepers.

If you are interested in offering bee sting therapy, you need to consider the liability issues before you begin.

Many beekeepers have a waiver that they ask the venom users to sign before they administer any treatment.



2. Pollination Services

Renting your bees out for pollination services can be very profitable.

Some beekeepers earn a full-time income from pollination services alone and manage hundreds of beehives at a time for large farms.

To do this, they require lots of equipment, beehives and experience.

However, smaller farms and horticulture businesses often only need a few hives to meet their pollination requirements, making it possible for smaller bee farmers and part-time beekeepers to offer pollination services.

Depending on your area and the season, the price you can charge when renting out bees for pollination services varies.

In general, farmers will pay up to \$150 for pollination services.



3. Beekeeping Equipment

If you are handy with a saw and drill, there are several products you could build and offer to other beekeepers.

There is a demand for products that don't come with the original hive, such as slatter racks, bee feeders, entrance reducers, bee escapes and many more.

Market your products through local beekeeper associations, and if you have a high-quality product and happy clients, you can create a profitable side business.

4. Beekeeping Education and Advisory Services

As you gain more experience and become a seasoned beekeeper, you can share your knowledge and generate income by offering training and advisory services to new beekeepers.

The first year of beekeeping can be overwhelming as there is a great deal to learn.

Having someone on hand to provide training and give advice when problems arise will help them succeed.

It's possible to offer classes and advisory services even if you have a full-time job.

Schedule beekeeping classes and demonstrations for weekends, and clients who want your advisory services should only need a couple of hours with you a month.

Once you have done an initial client visit, you can also provide a lot of advice and assistance remotely.

5. Bee Removal

Experienced beekeepers can also offer local bee removal services. You can profit and increase the number of hives you have with no cost for the bees.

Be removal costs an average of \$450 but can range from \$150 to \$1500 or more if the bees are inside a structure and difficult to access.





6. Apiary Maintenance

Experienced beekeepers can make a profit by maintaining beehives for others for a fee. There are many instances where horticulturists or farmers want beehives to aid the pollination of their crops but don't have the knowledge or time to manage them properly. They are more than happy to pay a beekeeper to look after their bees and maintain the hives.

7. Selling Bees

Selling bees is a great way to become a profitable beekeeper.

Using your hives, you can produce replacement bees and starter hives and replacement bees for other beekeepers.

It takes a while before you can do this, as you need the knowledge and bee numbers, but then it can be very profitable.

Here are some of the ways you can sell bees.

- **Bee packages:** A bee package with one queen and 3 pounds of bees sells for about \$175.
- **Nucleus colonies:** A nucleus or nuc is several honeycombs in a box with bees and a queen. The existing honeycomb gives the bees a head start when installed into a new hive. A five-frame nuc with a queen sells for \$200 to \$250.
- **Established beehives:** These sell for between \$250 and \$350.

How Much Money Can You Make From Beekeeping?

How much money you make from beekeeping depends on how many hives you have and how much honey you harvest.

But there are even more factors that can affect your profit, including how much time you have available, the weather conditions, your location and your beekeeping knowledge.

You will need to experiment and find which ways to earn money beekeeping work best for you.

You will more than likely have to diversify and use a combination of different bee products and services to earn a good income.

As you gain experience and knowledge, more money-making opportunities will become available, and you could even get full-time employment as a beekeeper on a bee farm.



How Much Money do Beekeepers Make a Year?

There are two ways of making money as a beekeeper. Finding employment as a beekeeper is the first, and the other is by becoming a bee farmer and obtaining colonies, raising bees and harvesting honey yourself.

According to the Economic Research Institute, the [average salary for a beekeeper](#) in the United States is \$47,899 a year and \$23 an hour.

A beekeeper's salary may range from \$35,523 to \$58,231, depending on experience and location.

How much beekeepers make a year with their hives varies considerably and depends on their goals.

What is The Potential Profit Per Hive?

Realistically, you can get anywhere from 30 to 60 lbs. of honey per hive a year. However, a strong, healthy colony may produce up to 100 lbs. of honey per year.

Natural, local honey sells anywhere from \$5 to \$15 depending on your location and the quality of the honey. It's not unreasonable to expect to sell your honey for around \$16 per lb.

Using these figures, you would make \$300 to \$600 per hive a year selling honey.





How Many Beehives Make a Living?

If you are a beginner beekeeper who wants to make beekeeping your full-time income, you are going to have to work out the answer to this question for yourself.

Not everyone has similar income requirements or beekeeping goals, and the number of beehives required to make a living varies drastically from one beekeeper to the next.

Some beekeepers only need a few hives to make a living as they are good marketers and understand the retail market well.

Many experienced beekeepers will only have a few hives but make money selling beekeeping equipment and providing training.

Other beekeepers focus exclusively on raising and selling bees and create profitable businesses this way.

If you aim to profit solely from honey production, you will need lots of beehives, equipment, land and bee management.

How Many Beehives Can One Person Manage?

Now that you have an idea of the profit you can make per hive, let's look at how many beehives one person can manage.

The answer varies and depends on several factors, including time, experience, hive location and your goals.

If you focus solely on raising bees for honey production, it's difficult for one person to manage numerous hives.

Honey production is more time-consuming and requires more equipment than raising and selling bees.

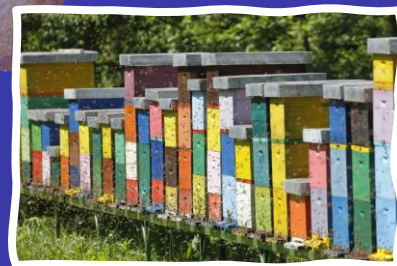
The following figures should give you some idea of what is possible when beekeeping for profit.

As a part-time hobby, one person can manage up to 25 hives without careful planning or time management.

An experienced beekeeper, focusing on raising honeybees to sell, can manage anywhere from 100 to 150 beehives and still have a full-time job.

If you are maintaining bees for others or renting your bees for pollinating services, you can also manage a significant number of hives part-time.

Full-time beekeepers can manage anywhere from 400 to 600 bee colonies but will require seasonal workers to help harvest honey.



Is Commercial Beekeeping Profitable?

Beekeepers with 300 or more hives are considered commercial beekeepers, and their beekeeping businesses can be very profitable.

Many commercial beekeepers migrate their colonies to provide pollination services to farmers while simultaneously providing their bees with abundant nectar sources for honey production.

According to the Grand View Research 2021 [Honey Market Analysis](#), the global honey market size was USD 9.21 billion in 2020 and is expected to grow at a compound annual growth rate of 8.2%.

The high demand for nutritious food products is driving the growth as people become more aware of the benefits of maintaining healthy lifestyles.

For the same reason, natural, raw honey sells for anywhere up to \$25 a lb.





Beekeeping Costs

When you start beekeeping for profit, approach it in the same way as any other business venture. One of the first things you need to consider is the cost of beekeeping.

Beekeeping has several costs, including the initial costs to create a hive, ongoing maintenance, packaging and marketing costs.

Start-Up Costs

The start-up costs for beekeeping are not very high compared to many other businesses and well worth it when you consider all the benefits of beekeeping and the potential profits. Many of the initial items you buy will also last for many years.

Many experienced beekeepers advise new beekeepers to start with two hives in their first year. Doing this provides an opportunity to fix many of the problems beginner beekeepers experience and increases the chance of getting at least one colony through the winter.

It is also easier for beginners to start with nucs instead of just a bee package, but this is slightly more expensive.

In general, depending on what type of equipment you buy and how you get your bees, the start-up costs will range between \$400 and \$650 for one beehive and around \$300 for every additional beehive.

This amount covers the cost of buying beehives, safety equipment and bees, but you also need to consider the other miscellaneous expenses.

The cost of beekeeping for your first year with one hive is between \$500 and \$725 and includes:

- A complete hive with all components at between \$150 to \$275
- A bee package at between \$125 and \$200 or nucs that range between \$180 and \$250
- Protective gear at a range of \$90 to \$120 per person
- Basic tools for around \$45
- \$75 for miscellaneous costs in your first year. Including mite treatments, sugar and pollen for feeding and books.

Beekeeping for newbies has more information on the starting costs of beekeeping in your first year with a handy cost estimator.



Maintenance Costs

Beekeeping maintenance costs are not high and will fluctuate from year to year depending on the weather, nectar supply and age of your hives.

Potential maintenance costs include painting and repairing hives, mite treatments for your bees, materials for winterizing the hives if required and sugar to feed your bees if there is a shortage of nectar.

Sales and Marketing Costs

If you plan to sell honey and other bee products, you will need to source packaging.

You will also need to take into consideration printing costs for labels and any promotional leaflets you make.

If you want to promote your services or sell products online, you will need a website and web hosting.

The rental of a stand at a farmers' market also falls under your sales and marketing costs.

Lastly, don't forget to include the costs of your time and labor.





Beekeeping Regulations

Before you begin beekeeping for profit, it's important to research any regulatory requirements in your area.

To find out, search under "apiary license" or "beekeeping license." on your local Department of Agriculture website.

You may also need to look at the local zoning or homeowners' association regulations in your area.

Pros and Cons of Beekeeping for Profit

Beekeeping for profit has many advantages not only for you but also for your garden and the environment. Here are a few of the pros of beekeeping.

Pros

1. Fresh Honey

Having an ongoing supply of natural raw honey is one of the biggest pros of beekeeping.

2. Useful Byproducts

Beeswax, pollen, propolis and royal jelly are all popular bee products that you can utilize or sell to generate profit.

Having such a wide range of potentially profitable products makes beekeeping an excellent choice for homesteaders who want to make their homestead profitable.

3. Improved Crop Yield

Honeybees play a significant role in the pollination of many fruit and vegetable crops.

Introducing a beehive to your garden or farm will increase the pollination rate and yield of your plants.

4. Low Maintenance

Bees are hard workers that don't require constant monitoring.

A well-managed colony of healthy bees will produce honey and bee products without needing much from you.

On average, you could spend around an hour a week managing and maintaining your bee colony in summer, although they may need more assistance in winter.

5. Multiple Income Streams

Beekeeping provides several diverse opportunities for you to earn an income, not just by selling honey.

Having such a diverse range of options means you can appeal to a broad range of potential customers. It also means you can experiment and find something you enjoy that is profitable.





Cons

With all the pros, it's hard to imagine why any homesteader wouldn't start beekeeping for profit. However, as with most livestock, raising bees also has some cons to consider.

1. Start-up Costs

The initial cost of getting started can be intimidating, especially if you do not have money to spare.

2. Difficult First Year

The first year of beekeeping involves a steep learning curve, and you will usually not get any honey. Be patient. Your bees have to do a lot of work in the first year to get established and store honey for winter.

3. Diseases

Bees are susceptible to pesticides, diseases and parasites, and it takes consistent, weekly monitoring and management to keep them healthy and productive. It is a good idea to speak to other beekeepers in your area to find out what problems they have experienced and learn how to help your bees and keep them healthy.

4. Stings

Bee stings are painful, and if you're allergic can be deadly.

However, bees don't sting unless provoked. If you learn how to manage your hives properly and use proper safety procedures, stings will be rare.

5. Regulations

In some areas, there are regulations governing the raising of bees and selling of honey. You may need to license your beehives or include specific information on your honey.

Be sure to do your research before you begin beekeeping to avoid a potential fine.

Final Thoughts

Beekeeping is ideal for homesteaders who want to increase their vegetable garden yields and earn money.

Start slowly, learn the craft of beekeeping and keep an open mind on how to make money as a beekeeper. Explore all profitable beekeeping opportunities that come your way.

A diversified approach is the key to being successful when beekeeping for a profit.

