Clinch Valley Beekeepers Association

Volume 14, Number 6 June 2023 Sherri Hudson, editor

EMAIL
WEBSITE
FACEBOOK

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

IN THIS ISSUE

"Hope is the only bee that makes honey without flowers."

Robert Green Ingersoll

NEXT MEETING

Date

June 15, 2023 – 7pm
Treadway Fire Hall
189 Hwy 131
Treadway, TN 37881

Speaker

David Sams will talk about varroa mite & hive beetle prevention and treatment. David is the vice president of our association and an experience beekeeper.

*** This will be a very important lesson for all new beekeepers and a useful reminder for experienced keepers.**

Food Theme

POTLOCK!

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

Other names for a "potluck" include potluck dinner, pitch-in, shared lunch, spread, faith supper, carry-in dinner, covered-dish-supper, fuddle, Jacob's Join, bring a plate, and fellowship meal.

The word *pot-luck* appears in the 16th-century English work of Thomas Nashe and used to mean "food provided for an unexpected or uninvited guest, the luck of the pot". The modern execution of a "communal meal, where guests bring their own food", most likely originated in the 1930s during the Great Depression.
Some speakers believe that it is an eggcorn of the North American indigenous communal meal known as a potlatch (meaning "to give away").

LAST MONTH

The May meeting opened with prayer by association president, Jr. Snelson.
There were 32 members and guests in attendance.
There was no financial report given.

Jr. asked if there was anyone interested in bee removal. Give him a call if you are interested.

He also asked if there was anyone interested in overseeing the food. Their duties would be to let the secretary know what the food theme of the month will be, to make sure there are drinks, utensils, etc. (paid for by the association) and along with other members clean up the kitchen area. If you are interested in helping with this duty (can be a group) please let the secretary Sherri know.

Next, he talked about the observation hive which is available to those who have an educational opportunity. David will go to David Winters for another package for this hive.

Bobbi let us know that we are working on the association t-shirts. We will have more on this at the next meeting.

With no further business, the meeting adjourned.
We enjoyed some delicious soups, salads, sandwiches and yummy desserts from our "Super S" supper.
Thank you to all who brought dishes and those who served and cleaned up after the meal.

VIDEO SHOWCASE

10 Plants To Attract Bees To Your Gardens
When You Garden

In today's video, here are easy plants that attract bees to your garden. We have gathered a list of top plants that can attract or save the bees that attracts them to the garden.
Certain flowers attract bees more than others, so, it can be confusing to see which plant attracts bees the most.

LAST MONTH cont.

PREPARING PACKAGES

Several members traveled to David Winters' to "shake bee" and prepare packages for association members. While they were there, there was a swarm. Member Greg Hann, Leigh Brink, and David Sams successfully collected the swarm.

AND THE HIVE GROWS

The hive of new beekeeper Jessica Morgan is making great strides. Queen Sunshine has a lot of capped honey and brood, so Jessica added the second super to her sunny bright hive. Wonderful job Jessica!

MESSAGE

Hello Everyone,

Hope you all have been checking your hives. Does your queen have plenty of brood, pollen, and honey? Are you feeding them? Have they swarmed?
Tell me what you are doing in your apiary, so I have something to write about.

I want to thank those who have stepped up and sent me pictures and descriptions. It's more interesting to have a newsletter with articles and photos of members.

Buzz Gallery needs artwork and Poets Stage needs poetry/short stories about honeybees. It would be wonderful if members art, poems, and stories were showcased in these features. If you, someone in your family or friends have art, poems, and stories created for/about honeybees send photos/text and descriptions to me.

Want to thank Karen Fletcher for becoming the Librarian.
At the next meeting check out the variety of material that can be checked out and returned.

We need someone or a group to take charge of the food. Choose a food theme, purchase (paid by association) drinks & utensils, make sure the kitchen is cleaned up with the help of all members.
If you are interested in volunteering talk to me.

Sherri

SPEAKER NOTES

Dale Hinkle, certified master beekeeper from Maryville, talked to us about

Rearing Queens.

The idea of raising your own queen isn't one that comes to mind early for the new beekeeper. But as your experience grows it will soon become evident that there are many benefits to doing so. You'll be able to build your own hives, sell queens as a side business and requeen your own hives when necessary.
So how exactly do you go about this? Let's discuss!

Healthy, fertile queens are capable of laying eggs almost constantly. During peak season, a quality queen can lay over 3,000 eggs per day - that's more than her own body weight in eggs in a day!

Although queens can live seven or more years, their productivity typically declines after the first year or two. Some beekeepers only replace queens when the queen is lost or failing, while others find it advantageous to replace their queens annually. Commercial beekeepers replace queens as often as twice a year. Queen health and quality can be controlled, to an extent, by the beekeeper. Queen rearing can be carried out at any scale, large or small, and can be a rewarding and fun activity for beekeepers. The successful production of queens requires an understanding of key aspects of queen development.
All fertilized eggs have the potential to become a queen or a worker, while unfertilized eggs become drones. Eggs hatch into larvae about three days after being laid. All larvae are fed royal jelly exclusively for the first three days after hatching. The term hatch or hatching is only used to refer to bee eggs hatching into larvae, the term emerge is used for when a bee emerges from its cell as an adult.
Royal jelly is a sweet, protein-rich secretion exuded from the hypopharyngeal glands of worker bees. These glands are located along the sides of a worker's head and are largest in nurse bees between 6 and 12 days old. As workers grow older, the hypopharyngeal glands shrink and become increasingly less productive. Nurse bees consume large quantities of pollen and nectar to produce the copious amounts of royal jelly required for queen production. Colonies with greater access to resources can rear

larger numbers of well-provisioned queens. Every larva receives about 10,000 nurse bee feeding visits during development - this means that each larva is fed on average every 43 seconds!

It is possible for all female larvae under three days old to become a queen, though larger, more vigorous queens are produced with the youngest larvae, less than one day old. Larvae selected to become queens receive more royal jelly throughout development, thus younger larvae have a greater opportunity to receive optimal nutrition and meet their full potential. In contrast, worker-destined larvae transition to a 'worker jelly' diet on the third day. Worker jelly is a mixture of royal jelly, pollen, and nectar. Larvae exclusively fed royal jelly develop into reproductive queens while larvae fed worker jelly become sterile workers.

When the colony makes a new queen naturally it is either to reproduce by swarming, a collective decision that the queen is unfit and needs to be replaced (supersedure), or because the queen is missing or is dead. Several factors influence the selection of queen-destined larvae. Nurse bees do preferentially select their full sisters to become queens when possible. Preference will also be given to the most well-nourished larvae. Beekeepers can manipulate their colonies in order to create this state of emergency and provide selected larvae, from the stock of their choosing, to become queens.

Queen honeybees have the shortest development period of any of the castes. About nine days after being laid as an egg the developing queen's cell is capped, the larva spins a cocoon and pupates. With a total of about 16 days from egg to queen, rapid development is not only helpful to the beekeeper, but is a fascinating evolutionary adaptation. When multiple queen cells have been provisioned in a colony, the first queen to emerge will seek, sting, and kill her sister queens before they try to do the same. If multiple queens emerge, they will fight until only one remains, thus it is advantageous for a queen to emerge before her sisters. Another advantage to this accelerated process is the reduced time the colony is queenless, and therefore broodless, and unable to produce the numerous worker bees needed for a successful colony.

Upon emergence, a virgin queen spends five to eight days in the colony prior to taking her mating flight(s). Nurse bees continue to feed her during this time, allowing her reproductive organs to mature and her flight muscles to grow strong in preparation for mating flights. The appearance of a virgin queen differs from a mated, laying queen. Before maturation, her ovaries have not fully developed, thus her abdomen is not yet distended, allowing her to move quickly across the comb and take mating flights- often making it difficult for the beekeeper to locate her. The image below shows the same queen before and after mating. Notice the changes to her abdomen as well as the difference in response from the surrounding workers.

SPEAKER NOTES cont.

Figure A shows the virgin, unmarked queen.
Figure B is the same queen after mating.
This queen is laying and marked. Photos: Kate Anton, Penn State

Honeybee colonies rely on chemical communication using pheromones. Pheromones are chemical secretions that alter the behavior and physiology of other bees in the colony. Queen honeybees produce a complex pheromone that contains chemicals produced by several glands in the body. The mandibular gland is a particularly important source of these pheromones, and a subset of five chemicals produced in this gland are called "queen mandibular pheromone" or QMP.

The types and quantities of the chemicals produced by virgin queens change with mating and mating quality. The virgin queen pheromone blend is very attractive to drones during mating flights, while the mated queen pheromone blend is important for social organization in the colony. QMP inhibits worker reproduction (laying workers) and prevents the rearing of new queens. The mated queen pheromone blend is more effective at inducing a retinue response. The retinue response is observed when the queen is surrounded by workers who are facing and touching her in order to spread her pheromone throughout the colony. Notice the difference in the workers surrounding the queen in the images above; retinue response is observed in the image with the mated, laying queen (B) and absent in the image with the virgin queen (A). Understanding these signals allows beekeepers greater control when working with queens and manipulating queenless colonies.

In summary, understanding queen honeybee development is critical to successful queen production. Integrating this information into management allows beekeepers to enhance the productivity of their colonies and achieve a higher level of self-sufficiency.

How to make Queens with a 5 frame Nuc

Kamon Reynolds – Tennessee's Bees

Queen Rearing for Beginners.
In this video series, we will show the entire process of how to make plentiful queens for the hobby and small sideline operation using a 5 frame Nuc.

Part 1
Part 2
Part 3

BEE CALENDAR

By the middle of June, the honey flow has usually tapered off quite a lot, and the danger of swarming should be about over if you have done your part so far. There will still be a few flowers around, but the large populations of bees will be working the last of them harder and harder – forever smaller rewards. Wax/comb production will decline to very little during June. And robbing will begin. Honey will be capped and cured during this month and harvesting may begin. Try to prevent robbing and be vigilant about queenlessness. When hives do become queenless you will need to be prepared to introduce a new queen.

Beginners – continue to feed 1-1 syrup as long as they will take it, give them a new box when all but 2 frames are drawn out and do your inspections! If your new hive completely fills two hive bodies with drawn comb, brood and bees – congratulations you can consider splitting them to make more hives!

BEE FUNNY

What music do bees like? Bee-bop, Bee-thoven, Bee-yoncé, The Bee-tles, Bee-stie Boys, Cros-bee, Stills, Nash & Young, or Justin Bee-ber? (answer on last page)

BEE INSIGHTS

Prehistoric Farmers Were First Beekeepers

by **Helen Briggs**
BBC News

Humans have been exploiting honeybees for almost 9,000 years, according to archaeological evidence. Traces of beeswax found on ancient pottery from Europe, the Near East and North Africa suggest the first farmers kept bees.
The research, published in **Nature**, shows our links with the honeybee date back to the dawn of agriculture.
Prehistoric people may have domesticated wild bees or gathered honey and wax for medicines and food.
Prof Richard Evershed of Bristol University, one of the lead scientists on the study, said: "We've got the earliest evidence for man's association with the honeybee. Man is collecting the beeswax and the honey and perhaps even domesticating them."

Cave Paintings

The honeybee has been part of human culture for centuries, appearing in cave paintings depicting honeycombs, swarms of bees and honey collecting. However, there has been little direct evidence of when and where ancient people began harvesting honey and wax from the insects.
International scientists examined over 6,000 pottery vessels to piece together a map of the honeybee at a time when the world had just emerged from the last Ice Age about 10,000 years ago.
Lifestyles were shifting from hunter-gathering towards growing the first crops and keeping animals for meat, milk and skin.
The oldest evidence for human links with the honeybee, dating back almost 9,000 years, was found in what is now Turkey.
By a few thousand years later, beeswax was detected across the Balkan peninsula, including Greece, Romania, Serbia, and then at sites occupied by early farmers in Central Europe.
The first evidence for the use of bees in North Africa was also found around the same time.

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

Remember all apiaries must be registered with the State of TN. Forms are available at the meeting or they can be downloaded from the internet.
https://www.tn.gov/agriculture/businesses/bees/forms.html

BEE INSIGHTS cont.

In the British Isles, the chemical fingerprint of bee products was found on broken pottery at Neolithic sites in southern England.

The northerly limit appears to be Denmark, above which conditions may have been too harsh for bees to thrive.

Ireland and Scotland also appeared to be off-limits to honeybees at the time.

Prof Alan Outram of the University of Exeter, another lead researcher on the study, said until now there had been a poor understanding of the distribution of the species due to a patchy fossil record.

He added: "Our study of the use of honey and beeswax seems to show there was a northern limit to where they were living during the Neolithic, with no evidence being found in thousands of pottery shards found in Ireland, Scotland, Norway or Sweden."

Sweet Tooth

The beeswax may have been used by prehistoric people to glue together stone arrows and spears or to make pots waterproof.

Honey may have provided a rare source of sweetness in their diet.

Prof Outram explained: "The plentiful supply of sugary foods is a very recent phenomenon, but in the past sweet foods were very hard to find and it is clear from our study that the earliest farmers in Europe had a keen interest in exploiting the valuable products of the honeybee."

Recent DNA studies suggest that the honeybee originated in Asia around 300,000 years ago and rapidly spread across Europe and Africa.

The bee's range contracted in Europe during the last Ice Age but expanded in Africa.

Modern bees face multiple threats from climate change, pesticides and diseases.

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!

BEE STORE

T-shirts are available;
S, M, L, XL sizes - $10
XXL and larger sizes - $12
Hats - coming soon
Cookbooks –
$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.

BEE INSIGHTS cont.

History Of Beekeeping: Timeline from 1500s

1538 – Spanish import the first European honeybees to South America.
1682 – George Wheler – an English clergyman and travel writer, discovers and describes Greek hives (forerunner of modern hives with movable frames).

1700 – Again according to the book "Bee" above, written by Claire Preston, it wasn't until 1700 that it was understood bees gather nectar from flowers with which honey is made.
Prior to this time, it was thought the honey was collected by the bee's ready-made in the flowers!

1838 - Johann Dzierzon, a Polish apiculturist, devised the first practical movable-comb beehive, which allowed manipulation of individual honeycombs without destroying the structure of the hive.

Dzierzon discovered the phenomenon of parthenogenesis in bees (- in 1835 Dzierzon discovered that drones are produced from unfertilized eggs. Dzierzon's paper, published in 1845, proposed that while queen honeybees and female worker bees were products of fertilization, drones were not, and that the diets of immature bees contributed to their subsequent roles).
In 1962 a Museum of Apiculture was established at Kluczbork, Poland, in Jan Dzierżon's honour.

1851 – L.L. Langstroth of Philadelphia USA – the "father of American beekeeping had access to translations of Dzierzon's works., built upon the design of Dzierzon, and others (such as Francis Huber of Switzerland), and designed a completely movable frame hive. Langstroth has been credited with discovering the "bee space," although it had already been implemented by Jan Dzierżon.
However, Langstroth made many contributions to industrialized beekeeping – honey was the major sweetener in America at that time.

BEE INSIGHTS cont.

1890 – William Broughton Carr, English inventor and beekeeper, invented the WBC beehive. Learn more about the different types of **honeybee hives.**

1948 - Abbé Warré published **"Beekeeping For All"**. In the book he outlines plans for a a top bar beehive. Warré also advocates far less interference with hives and bees.
Read more about this and about **Natural Beekeeping.**

Emile Warré, who invented the Warré Hive

Today - Beekeeping continues to evolve. In the USA, UK, and Europe, we continue to see the rise of *'natural beekeeping'*, otherwise known as *'bee-friendly'* or *'api-centric beekeeping'*. This has, in turn, resulted in the developments of different kinds of hives, intended to allow the bees to build natural combs.

In tandem with these developments, we are also seeing all kinds of hive, such as the **flow hive**.

Located in the historic farmstead of Stripeikiai, the **Lithuanian Museum of Ancient Beekeeping** is sure to be a memorable for visit with its beautiful natural setting, unique harvesting displays and numerous wooden sculptures representing the beekeeping practices of societies from all over the world.

Founded in 1984, the museum has over 500 displays spread over six buildings and 25 sculptures with many of them containing live beehives. Visitors can also observe the intricate and complicated procedure of honey making in the glass-sided beehives on display here. At the end of the tour, you can taste some of the honey produced by the museum's very own bees and buy organic products from the on-site store.

BEE GARDEN

Poppy

(subfamily Papaveroideae of the family Papaveraceae)

May - June

Poppies rank as quintessential plants for pollen production.

A poppy is a flowering plant in the subfamily Papaveroideae of the family Papaveraceae. Despite the fact that they lack inflorescences (meaning they don't produce sugary sweet nectar), bees love poppies because they provide lots of pollen. Bumble bees, honeybees and a range of solitary bees will visit poppy flowers in shades of red, pink, yellow and orange. The delicate petals of the Common Poppy are harvested by the Poppy Mason Bee and used to line their nest burrows.

Why Bees Love Poppies

Bees love poppies quite simply because, as stated, poppies are a fantastic source of pollen which is easily accessible on the long filaments and exposed pollen-laden anthers of the flower.

Poppies are a lovely flower to include in the border, with their delicate, papery petals. The yellow Welsh poppy, *Papaver cambricum* grows in public gardens where I live, and is popular with bees.

Look inside a poppy flower, and you'll see there are many of these hairy filaments and anthers.

Currently I have the oriental poppy - *Papaver orientale* in our garden – a pale pink, blousy variety, also enjoyed by bees, but I have also grown:

- the California poppy - *Eschscholzia californica*, and
- the Common Garden poppy - *Papaver rhoeas*.

Honeybee on California poppy

Growing Poppies for Bees

I grow oriental poppies perfectly well in rich loam soil, as well as California poppies and Common Poppy in the same soil in full sun.

My method for sowing poppy seeds is very simple: seeds are sown quite thinly over the area (a sunny site) where they are intended to flower, then covered with soil, then watered. That is about it!

Poppies are easy to reseed themselves year after year.

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 **Paul Dallemagne**'s absolutely lovely meadow apiary outside of Sneedville in Hancock County. Article written by Paul.

The field in the pictures I attached is the second try, it didn't work out well the first time. Some of it was timing, some of it was the fact that the "pollinator wildflower mixes" that most companies sell either didn't take well, or, more importantly for me, aren't tailored to honey bees. They do attract a lot of other pollinators, but that wasn't the main point for me. For reference for the description below, my "Bee Garden" is a slightly more than 1 acre field on a slope steep enough to be uncomfortable mowing it.

Since the seeds came in a wide variety of sizes, and the amount per acre for each is actually quite small, once I mixed the different seeds together, I mixed all of that with fine grained sand (play sand, or masonry sand would work too). I used a bag-spreader, but I had to calibrate it first to see how much sand to use. First, I compared the largest seed size to the opening in the spreader and used a setting that would let that seed pass thru. Then I weighed out 10 pounds of sand and measured how many feet it took to empty the spreader. The roto-tiller I used is 6 feet wide and the spreader spread to 18 feet wide, so it is easy to follow straight paths and make sure you get good coverage. Comparing how far 10 pounds got me to how many feet I was going to have to use the spreader, I could calculate how much sand to use (75 pounds in my case). I spread a couple of days before we were supposed to get a light rain, then rolled the seeds in, crossed my fingers and held my breath.

The biggest mistake I made the first time was planting in the spring. The vast majority of the purchased seeds were overwhelmed by native local weeds.

For the second go at it, I started with research using the book "Garden Plants for Honey Bees" by Peter Lindtner. Unlike other books that proclaim that certain flowers are good for honey bees without much proof, Mr. Lindtner did his PhD thesis on this subject by capturing bees returning from foraging missions, extracting nectar and pollen from them, then analyzing both to determine which plants they came from. The book is laid out by months, though his research was done in Pennsylvania. Each flower described is also ranked as to how much use they are to honey bees, from Forsythia (totally useless) to the Bee Bee tree (most beloved of all when in flower).

From there, I compared seeds that were commercially available at reasonable prices from a couple of websites to the book to figure out what I wanted to try. I looked at USDA zone, etc. for each as well. I tried to focus on perennials, though there are a few annuals and bi-ennials in the mix as well. The two main websites I used were American Meadows and Great Basin Seed.

APIARY in the NEIGHBORHOOD cont.

I figured out what I would order, then looked at the square foot coverage for each species. When you look at an acre as 43,560 square feet, you can figure out ratios of the different seeds to use. In my particular case, the bee garden is slightly more than an acre at 48,800 square feet.

I planned to sow the seed in the very early fall in order to give the plants a chance to germinate and grow enough roots to last the winter. That way, in the spring, they would have a head start, though some of the seeds would stay dormant until spring. In order to keep the soil fixed in place during the winter, I added a cool-weather flower called Phacelia that is good for bees but won't survive the summers here. It germinates in cool weather, grows very quickly. It even grows some in the dead of winter and flowers in the very early spring. Once everything else got started, it died off from the heat and hasn't come back. I think it's native to Colorado.

To prepare the ground, in mid July I mowed the field medium-short (4 inches), let the field recover for a few days, then sprayed the whole field with roundup. After everything was dead and crispy-brown (3 weeks ?) I rototilled the field with a tractor mounted roto-tiller. It took 3 to 4 passes to chop up all the grass/weeds, etc. and get the soil to nice and fluffy. I then let all the weed seeds in the soil germinate (about 2 weeks), then rototilled again. I did that 3 times. Around the end of September, I spread the seed, then rolled it into the soil with a culti-packer (you can also use a seed roller).

As a note, some of the seed I used was very fluffy, which didn't work well with the sand (blanket flower). I had to sow that by hand separately before I rolled the field.

I will give a list below of the seeds I sowed and what their application per acre is. The biggest mistake I made the second time is that I had a lot of extra daisy and coreopsis seeds left over, since their application rate is actually quite low. I didn't want to waste them, so I spread most of the extra in the spring. When you look at the attached pictures, all you can see are daisies and coreopsis. There are a lot of other flowers in there, they are just visually drowned out by those two.

Here are the flowers I used in my mix. I added the scientific name since the index for the book only uses the scientific name.

Flower Common Name	Scientific Name	Coverage per square foot of 1 pound
Chicory	Cichorium Intybus	7,260
Lance Leaf Coreopsis	Coreopsis Lanceolata	10,890
Purple Coneflower	Echinacea Purpurea	4,840
Black Eyed Susan	Rudbeckia Hirta	21,780
Gloriosa Daisy	Rudbeckia Hirta	21,780
Lemon Mint	Monarda Citriodora	14,520
Russel Lupine	Lupinus Polyphyllus	1,090
Perennial Lupine	Lupinus Perennis	1,090
Shasta Daisy	Chrysanthemum Maximum	7,260
Rocky Mountain Bee plant	Cleome Serrulata (Hassleriana)	5,178
Blanket flower	Gaillardia Aristita (Aristata)	4,335
Blue Flax	Linum Perenne	4,840
Phacelia	Phacelia Tanacetifolia	2,905 (this was what I used as a cover crop to hold the soil over the winter)

It was a lot of work, but in the end very pretty, enjoy!

BUZZ ART GALLERY

From rock carvings to rock music – the prevalence of bees in art throughout human history

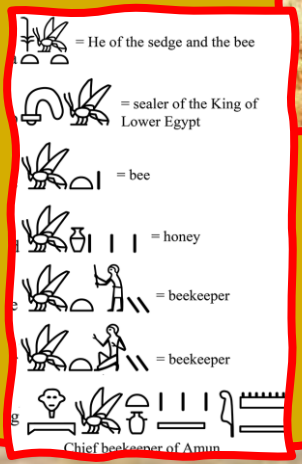
Published: January 26, 2022

With a looming biodiversity crisis and concerns over food security and sustainability, bees are frequently making news headlines.
The importance of bees in our society as pollinators and honey producers appears to have led to their increased popularity in many artistic endeavors, such as film, social media, gaming and contemporary art. Is this new fascination with bees a recent phenomenon? In our new study, we explored how bees are represented throughout different cultures, time periods and art mediums.
Their representation in art would tell us how people at different times perceived bees, which we also found has led to bees being a source of inspiration for different art forms.

Bee art throughout time and cultures

Bees have been depicted in carvings, jewelry, coins, songs, tools and sculptures for thousands of years. One of the first known depictions of bees is in the form of rock art from 8000 BCE in the Spider Caves (Cuevas de la araña) in Spain.
According to Wikipedia, the image is a Mesolithic rock painting of a honey hunter harvesting honey and wax from a bee's nest in a tree. Dating around 8000 to 6000 BC

Bees in the ancient world are represented in hieroglyphics of ancient Egyptian names and architecture. Egyptian words and phrases that incorporate the honeybee hieroglyph.



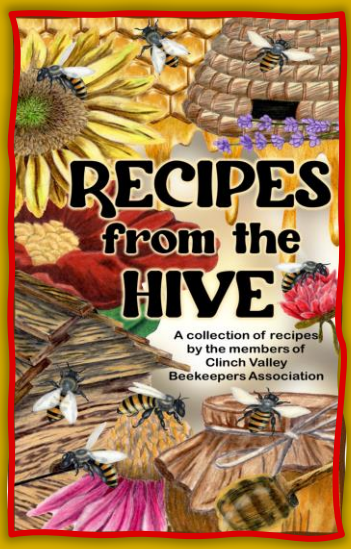
Advanced agricultural societies like the Mayans developed apicultural techniques (The raising and care of bees for commercial or agricultural purposes) and kept native bees in their homes. Some gods in their pantheon were consecrated as protectors of the hives, while others were often represented in postures resembling landing bees in sculptures adorning temples.

While Chinese art has a long history of representing plants, it was during the Tang Dynasty (618-907) that honeybees started to be represented in poetry and painting, when formal beekeeping and the use of bee products in traditional medicine increased.
Prior to the Tang Dynasty bees were regarded with suspicion due to the capacity of some bees to sting, revealing how a positive aesthetic representation of bees developed with an improved understanding of the value of bees to our environment and well-being.

RECIPES from the HIVE

SUPER SLAW with HONEY POPPY SEED DRESSING

from member
Bobbi Smith
page 38



Slaw

1/4 of a large head purple or green cabbage
3 medium sized carrots
1/2 large purple onion
1 - 8 oz. can crushed pineapple, reserving the juice
1 cup 'trail mix' with dried cabbage cranberries, raisins, slivered almonds and sunflower seeds

* Slice the cabbage into very thin strips.
* Grate the carrots.
* Slice the purple onion into very thin strips.
* Toss thoroughly in a salad bowl.
* Add the crushed pineapple and 'trail mix' and toss again.
* Add poppy seed dressing and toss once more.

Dressing

2/3 cup Canola oil
1/2 cup honey juice
3 tablespoons apple cider vinegar
1 1/2 tablespoons poppy seed
2 tablespoons reserved pineapple
salt and pepper to taste

* Combine all ingredients in a pourable (salad dressing) bottle.
* Shake vigorously.
* Add 1/3 to 1/2 of this recipe to slaw (to individual taste).
* Refrigerate the remainder.

POETS STAGE

Excerpt from a poem by Isaac Watts, parodied by Lewis Caroll in Alice in Wonderland.

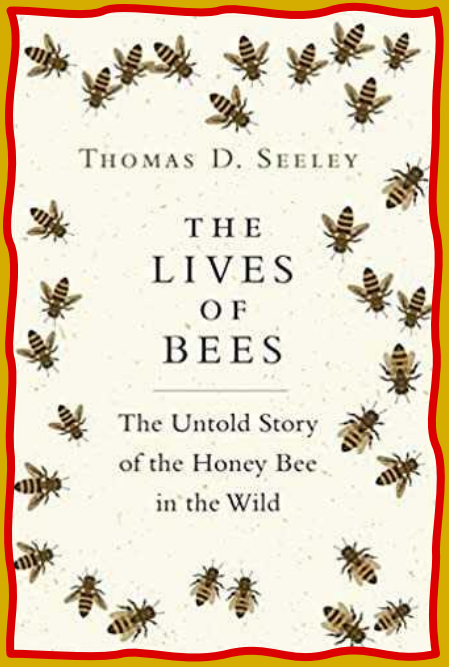
How doth the little busy bee
Improve each shining hour,
And gather honey all the day
From every shining flower!

How skillfully she builds her cell!
How neat she spreads the wax!
And labours hard to store it well
With the sweet food she makes.

BOOKSHELF

The Lives Of Bees – The Untold Story of the Honey Bee in the Wild

Thomas D. Seeley



This remarkable book eloquently explains how to be a better partner with honeybees, using nature as a guide. Seeley draws on insight and wisdom gleaned from a lifetime of research and hard work – and provides plenty of instructions and illustrations.

"The Lives Of Bees" is for everyone who has, or wants to have, honeybees in their lives.

Using beautifully crafted arguments, Seeley challenges us to let bees be bees. Drawing from his life study of colonies in the wild, Seeley provides a timely reminder of all the amazing strategies that honeybees have evolved to survive on their own."

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ANSWER to BEE FUNNY

They like Sting.

KIDS CORNER

Learn About Bees for Kids

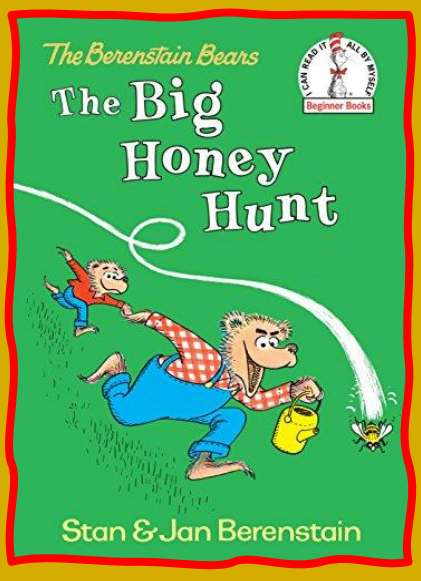
Oliver and Lucas Educational Videos

Oliver and Lucas take a beehive tour with Nathan who is a beekeeper from Maya Xala Honey. Nathan teaches them all about bees, honeybees, how honey is made, pollination and how important bees are to our food chain. The learn just how healthy eating honey is and amazing bees are!

The Big Honey Hunt

by Stan and Jan Berenstain

This classic Beginner Book written by Stan and Jan Berenstain—and edited by Dr. Seuss—is the debut of the beloved Berenstain Bears! The Bear family has run out of honey, and Father Bear and Small Bear are sent to get more. But rather than just get some at the store as Mother Bear suggested, Father Bear decides to follow a bee and get fresh honey from the source. Early readers and established Berenstain Bears fans will lap up this sweet, adventurous (and misadventurous) tale.



Originally created by Dr. Seuss, Beginner Books encourage children to read all by themselves, with simple words and illustrations that give clues to their meaning.