



# Topical Tidbits

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Editor/Creator: Aimée Devine

## HONEY BEES

### Greetings!

The honey bees that we know and love are not native to the United States. Up until the 1600s, there were no bees here that produced honey. That changed, though, when European settlers arrived on the east coast bringing bee colonies with them. It would take over 200 years for bees to travel across the country and reach the west coast. Bees play such an important role in pollination that some farmers rent hives to help increase the yield of their crop. Because they are raised in order to make honey and pollinate crops, bees can be thought of as an agricultural animal, just like sheep and cows. Enjoy learning about these fascinating creatures in this issue.

This first day cover shows a western honey bee collecting pollen from a golden ragwort.

### Interesting Facts:

- Bees fly about 20 mph.
- Losing its stinger will cause a bee to die.
- An average beehive can hold around 50,000 bees.
- Forager bees must collect nectar from about two million flowers to make one pound of honey.
- The average forager makes about 1/12 of a teaspoon of honey in her lifetime.
- Average per capita honey consumption in the U.S. is 1.3 pounds.
- The principal form of communication among honey bees is through chemicals called pheromones.
- Bees are important because they pollinate approximately 130 agricultural crops in the U.S. including fruit, fiber, nut, and vegetable crops.

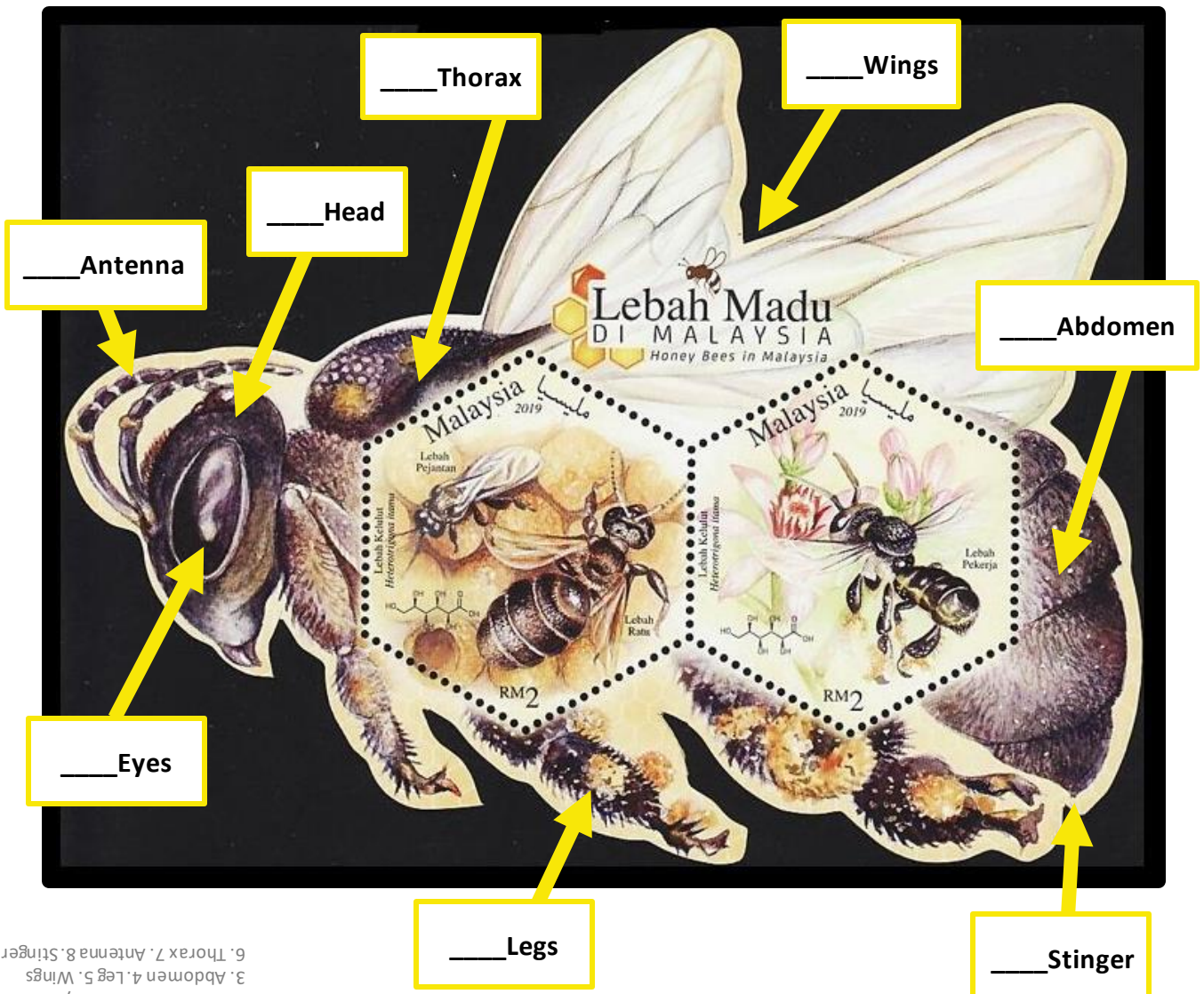
*From - Texas A&M University Honey Bee Information Site*



# Parts of a Honey Bee

Match the description of each body part to the souvenir sheet below.

1. Where you'll find the bee's brain and primary sensory organs (sight, feel, taste, and smell)
2. Includes two large compound ones that are used for general-distance sight and three small simple ones which are used in the poor light conditions within the hive
3. Contains the digestive organs, reproductive organs, wax and scent glands (workers only)
4. There are six of these and they contain taste receptors on the tips
5. A bee has two pairs of these that are attached to the thorax
6. The middle part of the bee between the head and the abdomen where the two pairs of wings and six legs are anchored
7. A bee has two of these that help it detect smell and that can be used for touch
8. Only worker bees and queens have this on the end of their abdomen



Answers: 1. Head 2. Eye  
3. Abdomen 4. Leg 5. Wings  
6. Thorax 7. Antenna 8. Stinger

# Bee Jobs

Read the descriptions in the left column and put a check mark under the bee that matches.



	Queen	Worker	Drone
Male			
Female			
Tend to the queen			
Clean the hive			
Mate with the queen			
Lack a stinger			
Lays eggs			
Guard the nest			
Store honey			
Feed the drones			
Build cells			
Care for larvae			
Pollinate			



Answers: The queen and worker bees are female. Drones are males. The queen lays eggs, the drones mate with the queen and lack a stinger. The worker bees do everything else!

# Busy Bee Math

**Directions:** Solve the math problems at the bottom of the page to get the answers to the sentences below.

- A. Honey bees beat their wings \_\_\_\_\_ times per second, creating their trademark “buzz.”
- B. In order to make a pound of honey, a hive of bees must fly \_\_\_\_\_ miles.
- C. There are estimated to be nearly \_\_\_\_\_ beekeepers in the United States.
- D. A hive will collect approximately \_\_\_\_\_ pounds of pollen per year.
- E. Bees have existed for around \_\_\_\_\_ million years.



$$\begin{array}{r}
 25 \\
 52 \\
 37 \\
 41 \\
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 + 29 \\
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$$\begin{array}{r}
 32,143 \\
 17,598 \\
 + 5,259 \\
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 845,012 \\
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 142,358 \\
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 763,001 \\
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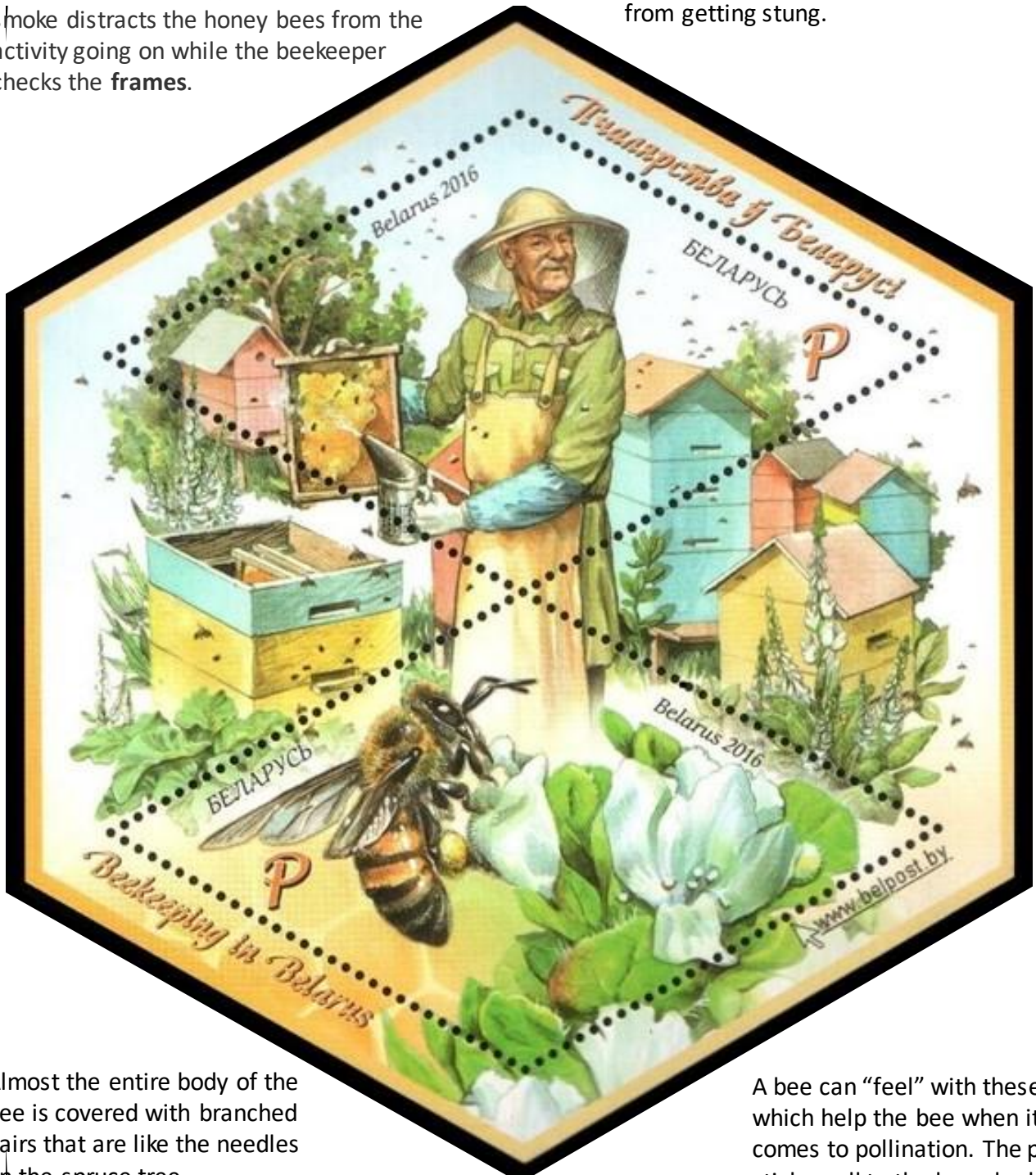
# Bee Keeping

Draw a line to match each bold faced word with the illustration on the stamp.

An **apiary** or bee yard is the location where the beekeeper keeps his colony or colonies.

Beekeepers use **smokers** to calm the honey bees by puffing cool smoke at the entrance of the beehive and at the top of the frames. The cool **smoke** distracts the honey bees from the activity going on while the beekeeper checks the **frames**.

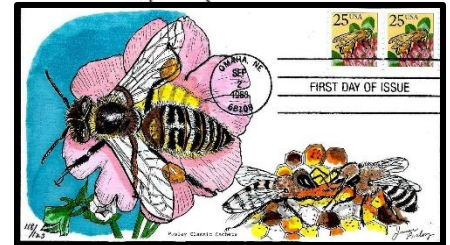
**Beekeepers** wear special clothing to protect themselves from the bees. A **veil** over their hat protects their face. Gloves and clothing that covers their whole body also helps keep them from getting stung.



Almost the entire body of the bee is covered with branched hairs that are like the needles on the spruce tree.

A bee can "feel" with these hairs which help the bee when it comes to pollination. The pollen sticks well to the branched hairs.

# Buzzing Across the U.S.A.



Trace the path of honey bees across the United States by reading the timeline below. Connect the yellow dots as you read. Start at the red star and end on the blue star.

- 1622:** European settlers brought honeybee hives to **Virginia**.
- 1639:** Colonies of honey bees were found throughout the woods in **Massachusetts**.
- 1650s:** Migrating swarms brought honey bees to **Connecticut** and **Pennsylvania**.
- 1776:** Honey bees were found in **Michigan**.
- 1800:** By this time, bees were found in **Indiana**, **Illinois**, **Iowa**, and **Missouri**.
- 1820:** Bees were found in **Arkansas**, **Oklahoma**, and **Texas**.
- 1848:** Mormons took bees to **Utah** in covered wagons.
- 1852:** Swarms of honey bees reached **Nevada**.
- 1853:** Bees were brought by boat to **California** from the east coast after crossing through Panama.

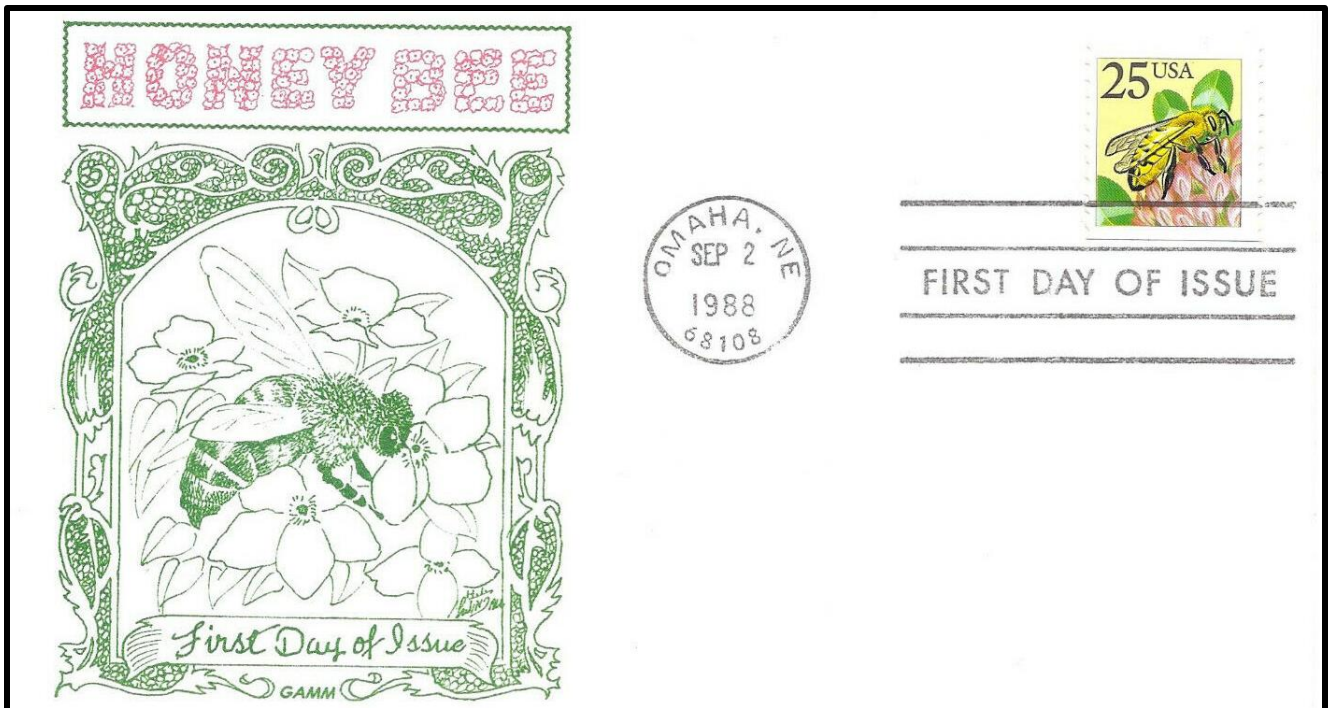
# What's All the Buzz?

There are lots of expressions pertaining to bees and honey.  
Put a check mark in the box if you've heard the phrases below.

The cover shows a quilting bee which is a social gathering where people make quilts. The stamp on the right is from Israel. The wording on the selvedge at the bottom is from the Bible and says "a land flowing with milk and honey."



- as sweet as honey:** Exceptionally sweet, friendly, or kindly.
- catch more flies with honey than vinegar:** One can accomplish more by being nice than by being mean.
- land of milk and honey:** A place of abundance that is free from want. The phrase comes from the Biblical description of the land promised to the Israelites.
- as busy as a bee:** To be very busy.
- a bee in (one's) bonnet:** An obsession, often with something that is strange or a source of agitation.
- the bee's knees:** Something or someone highly enjoyable, desirable, or impressive, especially in a fancy or elaborate way.
- busy as a bee:** One who is very active, industrious, or busy.



Have fun coloring this cachet of a honey bee.

# How The Bees Saved America

Scholars aren't sure if this story actually happened or not. Even if it didn't, it's certainly entertaining. It first appeared in *The Sunday School Advocate* and was reprinted in the September 1917 issue of the *American Bee Journal*.

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.



George Washington

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's 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."



Anton Janša (1734–1773), a Slovenian beekeeper, was the pioneer of modern beekeeping and one of the greatest authorities on the subject of bees. He died seven years before this story takes place.

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 wild flower 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." 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.

Continued on next page.



# How The Bees Saved America, Cont.

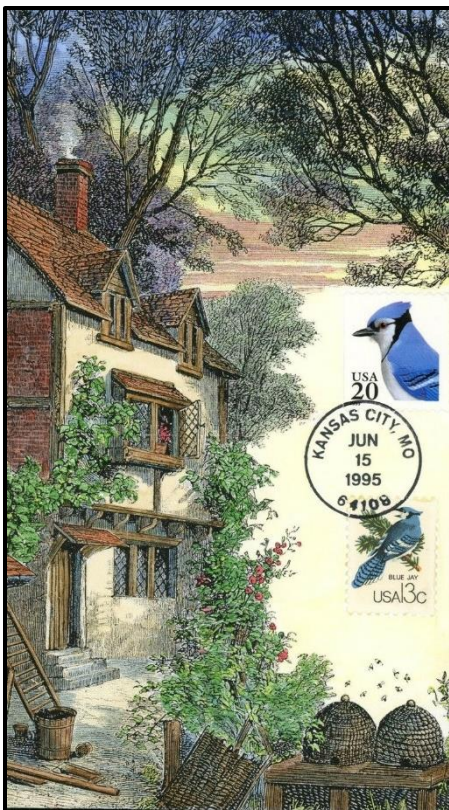
It was a man in citizen's dress who galloped down the road. His hat was blown off and he pressed his left hand to his side. When he saw Charity he just was able to rein in his horse and, falling from his saddle, draw her close so she might catch the feeble words he muttered between groans. "You are Patriot 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 we'll 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.

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.



The hives down at the bottom right of this cover are called *skeps* and are essentially upturned straw baskets under which bees form their honey comb. These are like the ones mentioned in the story.

# How The Bees Saved America, Cont.

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 dragged 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!"



This maxi card shows Capitoline Hill in Rome. This was the hill the Romans were defending from the Gauls in the story to the right.

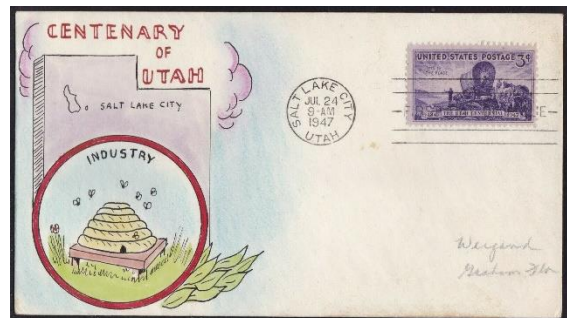
## \*Geese Who Saved Rome:

About 2,400 years ago the Gauls attacked Rome. All of the city had been conquered except for Capitoline Hill which the Romans were defending with all their might. That night, the Gauls tried to sneak up the hill. As they passed the temple of Juno, they disturbed a flock of sacred geese. The honking from the geese was so loud that it alerted the Roman guards who were able to throw their attackers off the hill.

## Bee-u-tiful States

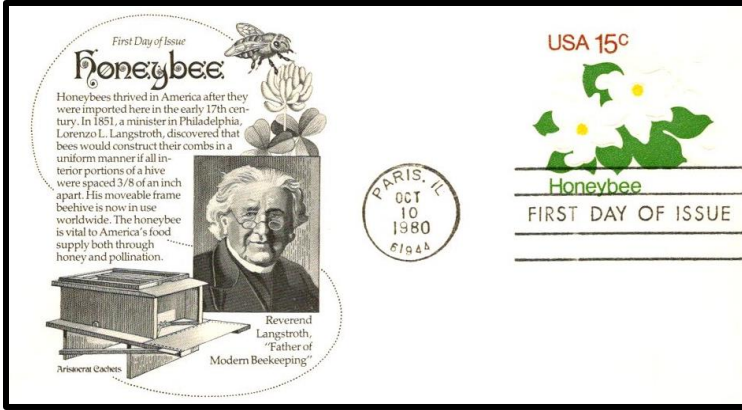
Bees are such an important part of agriculture that sixteen states have them as their state insect.

Utah is even nicknamed the "Beehive State." Look at the list on the right to see if your state is one of them.



Arkansas	Maine	New Jersey	Tennessee
Georgia	Mississippi	North Carolina	Utah
Kansas	Missouri	Oklahoma	Vermont
Louisiana	Nebraska	South Dakota	Wisconsin

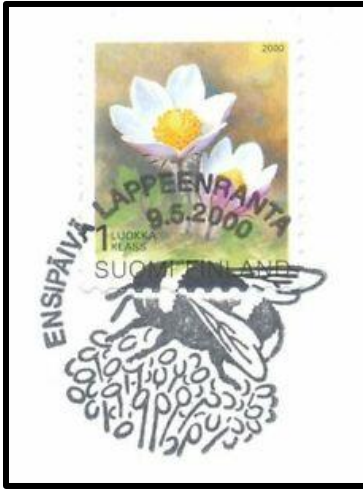
# Philatelic Buzz



Above: Embossed envelope with honey bee and magnolias



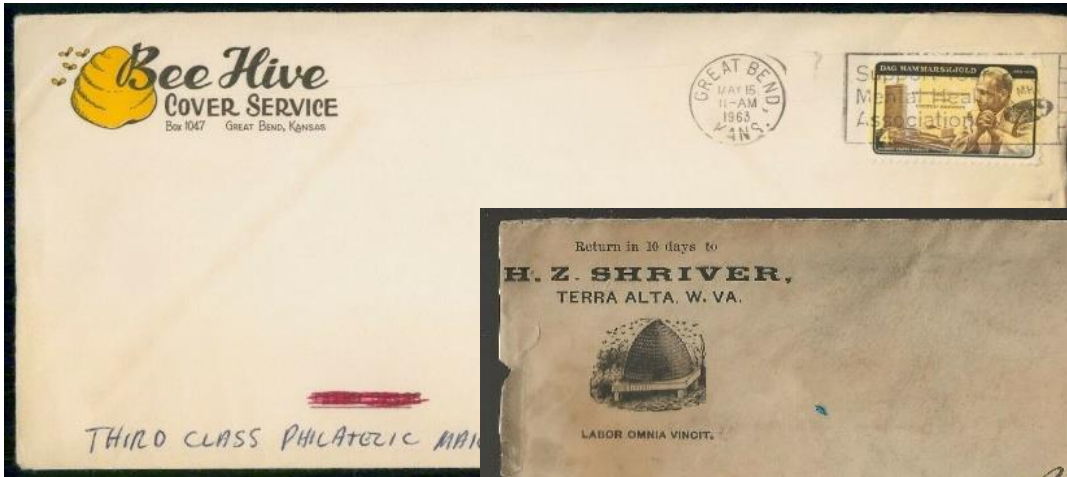
Above: Meter cancels with bee hives



Left: Finland bee cancel  
Above: Bee fancy cancel



Above: Se-tenant beekeeping stamps from France



Two advertising covers. The one at the top is for Bee Hive Cover Service and is from 1963. The one at the left is from 1892. Under the hive is written **LABOR OMNIA VINCIT** which means **WORK CONQUERS ALL**. That's a pretty good motto for bees and us!



# Bees



# Beekeeping





# Honey

# Honeycombs

