

Name: \_\_\_\_\_

What I know about entomologists:

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What I wonder about entomologists:

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Where can I look to learn more?

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Name: \_\_\_\_\_

## Did you know?

Can you find interesting facts to share about an entomologist?  
The entomologist I am learning about is...

Share what you learn:

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Name: \_\_\_\_\_

## Did you know?

Choose an entomologist to read about.

I am reading about:

Share what you learn:

|                    |            |
|--------------------|------------|
| Birth / Early Life | Vocabulary |
| Accomplishments    | Death      |

## Margaret S. Collins

Margaret James Strickland Collins was born on September 4<sup>th</sup>, 1922 in Institute, West Virginia. The town she grew up in has been described as an intellectual black community. Both of her parents were college educated which was rare at this time. She says that her family and community prevented her from ever feeling that she couldn't do something "as a child, as a woman, or a Black person."

When she was just 6 years old, she was already able to read at a college level. She skipped two grades of school and graduated from high school at the age of 14. She attended college and graduated from West Virginia State University in 1936. Next, she earned her PhD from the University of Chicago in 1949. She was the first African American woman to earn a PhD in zoology. She earned her degree by studying termites and became known as the termite lady.

After graduation, she became an assistant professor at Howard University. She left when she decided that the school did not treat men and women equally. She then worked as a professor at Florida A&M University.

Collins was not only a famous entomologist, she also spent time fighting for equality for African Americans and women. During a bus boycott at Florida A&M, she volunteered to drive people to work. From 1952 to 1957 she did not publish any papers because she was fighting for equal rights.

Following 1957, she held many positions. She studied North American termites at the Minnesota Agricultural Experimental Station. Afterwards she moved to Washington, D.C. where she became a full-time professor at Howard University. She earned the position of president of the Entomological Society of Washington and became a research associate at the Smithsonian Institution. Collins studied in Everglades National Park, Mexico, the Sonoran Desert in Arizona and the Caribbean.

Collins died on April 27, 1996 while she was researching in the Cayman Islands.

## Charles Henry Turner

Charles Henry Turner was born on February 3, 1867 in Cincinnati, Ohio. This is just two years after the Civil War ended. His parents were a church custodian and a nurse. He had one brother and one sister. In 1886 he graduated from Woodard High School as valedictorian. He then went on to earn a degree in biology from the University of Cincinnati in 1891 followed by earning a masters degree in 1892.

After earning his degrees, Turner was a teacher at different colleges and even a high school. Turner earned his PhD in zoology from the University of Chicago in 1907. He was one of the first African Americans to earn a doctorate in biology and one of the first African Americans to earn a PhD from the University of Chicago.

In the beginning, he often studied avian brain structure and aquatic invertebrates. After this, he studied behaviors of ants, cockroaches and honeybees. He worked to prove that bees could see colors and insects could learn. He often lacked a formal laboratory and equipment but still accomplished much as a scientist.

He often faced racism and became a part of the civil rights movement. Turner believed that education was one way to end racism. He fought for African Americans in St. Louis to receive social and educational services.

In 1922, he began to struggle with his health. He retired and moved to live with one of his sons. Turner died in Chicago on February 14, 1923.

## Evelyn Cheesman

Lucy Evelyn Cheesman was born in Westwood, Kent, England on October 8, 1881. She grew up with little money and little education. She had four brothers and sisters.

She grew up interacting with nature and her dream was to become a veterinarian. However, the Royal College of Veterinary Surgeons did not accept female students at the time. She became a governess for a couple of years and then trained as a canine nurse in 1912. After working at a canine hospital in London, she wanted to travel. She traveled to Germany and France where she taught herself to speak German and French.

During World War I she was able to help due to her ability to speak German. After the war she studied entomology and became the Assistant Curator of Insects at the London Zoo. She became the first woman to be hired as a curator at the London Zoo in 1920.

After her time at the London Zoo, she went on many expeditions where she continued to learn about animals. She learned that she preferred to explore and collect specimens on her own instead of in a group. She collected over 70,000 specimens of insects, plants and animals from the South Pacific during her expeditions.

After an injury during World Word II, she gave up exploring for a period of time. Feeling better after a hip replacement at the age of 73, she returned to the South Pacific and continued her work. She died in London in 1969. Since her death, many species have been named after her.



## Jan Swammerdam

Jan Swammerdam was born in Amsterdam on February 12, 1637. His father was an apothecary. He also collected insects from around the world along with other objects. Swammerdam helped his father take care of this collection. He began studying medicine in 1661 and earned his doctorate in medicine in 1667. While studying medicine, he started his own collection of insects.

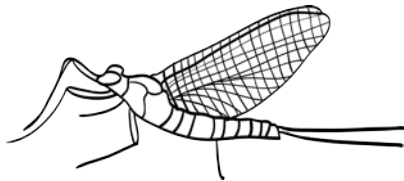
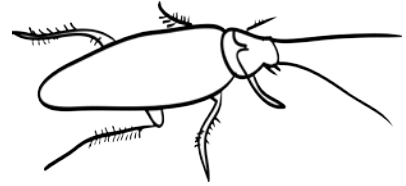
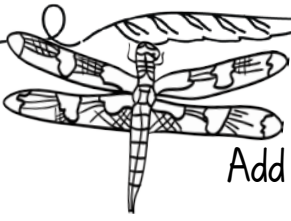
As he studied medicine and after, Swammerdam dissected many insects to learn about them. In 1669 he published a book sharing what he had learned about insects. He was the first to discover the king bee was actually a queen bee. Swammerdam also discovered the idea of metamorphosis. He found that a caterpillar actually had the limbs and wings of a butterfly inside of it and would transform into a butterfly during its life. Before his discovery, it was believed that they were separate insects.

Swammerdam died at the age of 43. Before he died, he had created a book on as many insects as he was able. It was not published until after his death in 1737.

Today he is often remembered for his use of a microscope. He developed many new techniques for examining specimens.

# Entomology

Add words and pictures to show what you learn about entomology.





insect

an animal that has three body parts, three pairs of legs and usually two pairs of wings

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abdomen

the back part of an insect's body that has the digestive system and other organs

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antennae

one or more pairs of feelers that an insect uses for sensing the environment

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compound eye

the type of eyes found in most insects, they can cover a wide angle

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entomologist

a person who studies insects

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exoskeleton

the outside of an insect that helps support and protect its body

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head

the front part of an insect's body that has the main sensory organs

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invertebrate

an animal without a backbone

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larva

the very young stage in an insect's life as it begins its metamorphosis into an adult

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metamorphosis

the major changes an insect goes through from egg to adult

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pupa

the stage of life an insect goes through after the larva stage, adult features start growing

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proboscis

the tube attached to the head of some insects that is used for feeding or sucking

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stinger

the sharp organ found in many insects that can inject venom into another animal

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swarm

a large group of insects grouped together in one area or moving together

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thorax

the middle section of an insect's body where there are legs and wings attached

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wings

objects that grow out of the thorax of an insect, they allow an animal to fly

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