



## 2nd Grade: JUNE

### *Cockroaches and Flowering Pineapple Moth, Larva, Pupa and Beetle on Citron*

by Maria Sibylla Merian

Debra J. Herman, M.F.A., Concordia University, River Forest, Illinois  
Funded by the John and Frances Beck Foundation, Chicago, Illinois  
Edited by Constance Kammrath, M.A., Concordia University, River Forest, Illinois

#### **About the Artist**

*The following information is provided to give classroom teachers a comprehensive understanding of the artist and artwork. Use your judgment on what to share with your students based on their level of curiosity, observation/inquiry skills, comprehension and age-appropriateness.*

#### **Maria Sibylla Merian**

Maria Sibylla Merian was born on April 2nd, 1647 in Frankfurt, Germany, to Matthaus and his second wife, Johanna Sibylla Heim. Maria was the only child of this union who survived infancy. Her father, Matthaus, was a prominent engraver and publisher whose health was failing at the time of Maria's birth. On his deathbed three years later, Matthaus predicted the future of his young daughter: she would be remembered forever. One year after her father's death, Merian's mother married Jacob Marell, a man who had been trained as a still life painter by several noted Dutch painters such as Jan Davidsz de Heem and Georg Flegel. Jacob brought children from a previous marriage into this new marriage.

Merian's mother trained her young daughter to be accomplished in traditional female skills, cooking, needlework, and the like. However, young Merian was more interested in insects and their outdoor habitats. She caught insects and observed their every move, recording what she saw by creating sketches. While this is a normal activity among children today, it was somewhat an odd interest as people in the 17th century thought insects came into existence from the depths of the soil and were therefore mysterious, destructive and dirty—even "beasts of the devil." Determined to pursue her interest in nature, young Merian went to great lengths. An undocumented account states that one night she climbed over a tall wall surrounding a wealthy count's garden. Once in the garden area, she found and picked a collection of very expensive tulip specimens. Some time later, when Merian was identified she quickly confessed and apologized for her actions. Apparently, the count was so impressed by her paintings that he accepted them as payment for his stolen goods.

Maria Merian often watched her step-father, Jacob Marrel, and his apprentices as they worked in the art business. Her stepfather recognized Merian's talent and eagerly did what he could to further her skills. She devoted time to precisely copying natural history prints. She quickly became quite good at illustrating all kinds of insects and plants. At age eleven, Merian engraved her first copperplate for print reproduction.

At age eighteen, Maria Merian married thirty-year old Johann Andreas Graff, an apprentice of her stepfather. The marriage al-

lowed the artist Merian and engraver/publisher Graff to join forces professionally. The couple were blessed with two daughters; Johanna Helena and Dorothea Maria. The young family moved to Nuremberg in 1670 where Maria continued painting plants and insects and designing embroidery patterns. Women in this time in Germany were not permitted to earn a living as a painter, but they could, however, publish examples for embroidery purposes. Her *New Flower Book* was published when she was in her twenties. The success of this book and similar ones brought her fame. Wealthy individuals sought painting and embroidery lessons from talented Merian. She, of course, was delighted to have access to some of her students' private gardens for further research, especially about caterpillars. At age twenty-eight, Merian published several books of her illustrations on the metamorphosis process of caterpillars and the plants that attracted them. These books were very successful and brought her financial independence with a business of her own: hand-painting and embroidering of silks made by female apprentices.

Over time, Maria Merian transitioned from her interest in insects and plants to a higher level. In subsequent books, Merian used her artistic talent to depict all the stages, egg, larva, and pupa in one image, including the insect's food plant. In addition, Merian set herself apart by providing the viewer with an aesthetically pleasing image. Other artists of the time presented the plant as the subject and the insect as the secondary embellishment. Merian did the reverse.

The death of her stepfather in 1681 brought thirty-four year old Merian and her two daughters back to Frankfurt to help her widowed and financially stressed mother while Graff remained in Nuremberg. Four years later the four women joined a widowed stepbrother in a strict religious commune in West Friesland in the Netherlands. Here Merian began a new life, ending her marriage to Graff and reverting to her maiden name. She poured herself into learning Latin and advancing her research. Neighbors in the commune shared stories of recent trips to South America where they had seen exotic plants and animals. After her mother's death, fifty-two year old Merian made a bold decision to travel with her younger daughter, Dorothea, to Surinam, South America.

Merian traveled to the new colony and studied plants and insects and the metamorphosis process. Certainly, the jungle brought new physical challenges from the private, well-manicured gardens she was used to back home. One challenge in particular was gathering of specimen assisted by slaves, which she opposed. She expressed her opinion to the Dutch planters. (Surinam was a territory of the Dutch West India Company.) Her work was difficult,

## Discipline-Based Art Education

The following components are integral to students having a complete, well rounded art experience.

### Art Aesthetics

Providing opportunities to develop perception and appreciation of visually expressed ideas and experiences.

### Art Production

Providing opportunities to develop skills and techniques for creative visual expressions of emotions and ideas.

### Art History

Providing opportunities to develop an understanding of the visual arts as a basic component of personal heritage.

### Art Criticism

Providing an opportunity to develop an intellectual basis for analyzing and making aesthetic judgments based on an understanding of visual ideas and experiences.

## ELEMENTS OF ART

- Line: A continuous mark
- Shape: Area enclosed by a line
- Color: Hue, reflection of light.
- Texture: Surface quality, real or implied
- Form: 3D shape or illusion of 3D
- Value: Graduated areas of light/dark
- Space: Illusion of depth

## PRINCIPLES OF DESIGN

- Repetition: Imagery repeating pattern
- Variety: Contrast/variation
- Rhythm: Issues of eye movement
- Balance: Even visual weight
- Emphasis/Economy: Dominance/minimalism
- Proportion: Compare size relationships

## COMPOSITION

- Symmetrical: Mirrored imagery
- Asymmetrical: Random placement
- Radial: Mirror image from center point
- Repetition: Repeating pattern, motif

## ARTISTIC STYLES

- Realism: Realistic representation
- Abstraction: Personal interpretation
- Non-Objective: No recognizable depiction

## ELEMENTS OF DESIGN IN PICTURE BOOKS

Children's literature that relate to this lesson due to elements of art or story content are:

- *Animals That Change: Metamorphosis* by Luise Woelfli
- *Butterflies and Caterpillars* by Melvin Berger
- *Mealworms: Raise Them, Watch Them, See Them Change* by Adrienne Mason
- *Metamorphosis: Changing Bodies* by Bobbie Kalman
- *A New Butterfly: My First Look at Metamorphosis* by Pamela Hickman
- *Starting Life: Butterfly* by Claire Liewellyn

## REFERENCE/BIBLIOGRAPHY

- Janson, H.W. *History of Art*. New York. Harry N. Abrams, Inc. 1999
- Riddoticker, Elizabeth. *The Life and Personality of Maria Sibylla Merian*. Amsterdam, 1705; Pion, London, 1982, Vol. 2
- Stokstad, Marilyn. *Art History, Volume Two*. New York. Harry N. Abrams, Inc. 1995

especially when specimens were located in the upper canopy of one-hundred-fifty foot trees. Despite the challenges, Surinam was a perfect location for a naturalist. While she had hoped for a five year stay, a near fatal bout of malaria forced Merian to leave after two. She brought home a wealth of information including drawings with detailed notations and actual specimens. Fully recuperated at home, Merian prepared paintings and sixty engraving plates for the first edition of her Surinam research entitled *Metamorphosis Insectorum Surinamensium* published in 1705.

Maria Merian continued living a productive life, including additional publishing. A stroke when she was sixty-seven left her partially paralyzed yet, Merian persisted in her work until she succumbed to death on January 13, 1717, at the age of seventy. The Amsterdam death registry listed her as a pauper despite her one-time financial security.

Maria Sibylla Merian's work won the respect of natural scientists and artists world-wide. She carried a passion for research and documentation of the insect and plant world. She financed her own research and projects. Six plants, nine butterflies, and two beetles bear her name. At the time of her death much of her original work was purchased by and transferred to Peter the Great, Tsar of Russia. The collection of works was presented to the Academy of Science upon the death of the Tsar where they remain today. The Soviet Union released images of some of the work to the world in 1970. On March 3, 1997, the United States Postal Service dedicated two new stamps based on her work from Surinam. Images portray the anatomy of insects in the metamorphosis process in their natural habitat.

## About the Art

The work featured in the United States Postal stamps consists of two paintings by Maria Merian from her book of illustrations titled *Dissertation in Insect Generations and Metamorphosis in Surinam*. One stamp features a blossoming pineapple along with two different cockroaches. The other stamp features a citron adorned with moth larva, pupa and adult beetle. Notice the full metamorphosis process is illustrated, a characteristic which makes Merian's work identifiable.

## Directed Observation

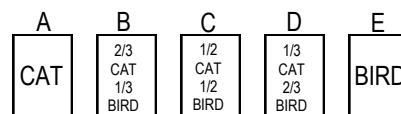
Show students an image of the two United States Postal stamps which are reproductions of two hand-painted engravings by Maria Merian. The United States Postal system wanted to honor Merian's contribution to art and science by using her images as postal

stamps. Invite students to quietly study the work. After some time for thinking, encourage students to share what they see. Welcome all comments.

Show students as many of Merian's works as possible. Ask students how Merian's work differs from traditional still lifes? Help students realize Merian had a specific scientific purpose in her illustrations and engravings. How did her work inform and advance the understanding of plants and animal life? Transition this conversation into the following activity options.

## Things to Do

1. Learn about a similar artist, Rachel Ruysch, who painted scientifically accurate botanicals in a fashion similar to Maria Merian. View Ruysch's work and compare/contrast it to Merian's work.
2. Merian created art work to teach others about plants and animals. Pick an animal and illustrate it in its natural habitat. Include the animal at varying stages of life. Consider doing the same for plant life. If space is available, consider planting seeds and recording the plant growth. Bring an incubator into the classroom and watch young chicks hatch from eggs. Record the daily changes.
3. Research plants native to your geographic location. Plan a trip to create "open air" drawings of these plants.
4. Study the metamorphosis process. If possible, bring caterpillars into the room and watch them create a cocoon and eventually emerge as butterflies. Record this transition.
5. Use your imagination and make up a story of something that transforms into something else.
6. Learn about "morphing" in art. Choose two different animals—a cat and a bird. Draw each object as you see it on two separate sheets of paper (A-Cat and E-Bird). Then create one drawing half cat and half bird (C). Next, create a drawing that is 2/3 cat and 1/3 bird (B). Make one last drawing that is 1/3 cat and 2/3 bird (D). Place these five drawings in order to see the morphing.



7. Try this project three-dimensionally using five lumps of modeling clay to form each step. Place completed works in order and see the transition.