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Artful Nature and the Legacy of Maria Sibylla Merian

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Artful Nature and the Legacy of Maria Sibylla Merian

Description

The exhibition *Artful Nature and the Legacy of Maria Sibylla Merian* celebrates the skills and influences of a remarkable woman from seventeenth-century Europe. Curated by Emily Roush '21 and Shannon Zeltmann '21 with the guidance of Professors Kay Etheridge (Biology) and Felicia Else (Art History), Emily and Shannon selected the prints, organized them into categories, and carried out research on them, much of which was relatively obscure and would have been challenging even for graduate students.

Maria Sibylla Merian lived and worked in a time of vibrant intersections of art and science in Europe. Her images of insects and plants are at the center of the exhibition, but it is important to understand how her work was shaped by this period. What may at first glance appear to be “pretty” pictures of flowers and bugs were actually revolutionary compositions that changed how nature was portrayed.

Keywords

Gettysburg College, Art, Science, Biology, Symbolic Nature, Butterflies, Ecological Illustrations

Disciplines

Art Practice | Biodiversity | Biology | Ecology and Evolutionary Biology | History of Art, Architecture, and Archaeology

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Comments

Artful Nature and the Legacy of Maria Sibylla Merian was on exhibition at the Schmucker Art Gallery at Gettysburg College September 4th - November 12th, 2019.

To learn more, visit the [exhibit website](#).



Artful Nature and the Legacy of
Maria Sibylla Merian

Acknowledgments

In the spring semester of 2019 at Gettysburg College, students Emily Roush '21 and Shannon Zeltmann '21 worked with focus and determination with Professor Felicia Else, Department of Art and Art History, and Professor Kay Etheridge, Department of Biology. Their excellent essays and intense engagement with the works of art included in this catalogue would not have been possible without Prof. Else's commitment to and insights into Renaissance art history and Etheridge's profound and particular expertise on the art and science of Maria Sybilla Merian, as well as their collaborative, innovative pedagogy and scholarship. We are especially grateful to Prof. Etheridge for graciously loaning original prints for the exhibition and guiding the acquisitions made possible by a generous gift from Betsy A. and Bruce R. Stefany '71. Eighteen prints by Maria Sibylla Merian, Antonius Sanderus, Albertus Seba, and Moses Harris have been added to Gettysburg College's Fine Arts Collection.

We are delighted that these prints have fostered Shannon's and Emily's research, are on view to visitors in Schmucker Art Gallery, and will be available for further examination for students and faculty in Special Collections and College Archives. Additional thanks are due to Sydney Gush '17, Schmucker Art Gallery Preparator and Digital Scholarship Assistant, for all of her work to make this material accessible to the students and visitors; from scanning to framing and hanging, Sydney's dedication to all aspects of the exhibition process is invaluable. We are thankful for Ayumi Yasuda's elegant graphic design, and to Leslie Casteel, Academic Administrative Assistant for Schmucker Art Gallery, for her tireless support.

Shannon Egan, Ph.D., Director, Schmucker Art Gallery

Carolyn Sautter, Director, Special Collections and College Archives,
Musselman Library

Introduction

The exhibition *Artful Nature and the Legacy of Maria Sibylla Merian* celebrates the skills and influences of a remarkable woman from seventeenth-century Europe. Curated by Emily Roush '21 and Shannon Zeltmann '21, it is also a testament to Gettysburg College's commitment to student learning, and this exhibition catalogue is a result of their outstanding work and dedication. With the guidance of Professors Kay Etheridge (Biology) and Felicia Else (Art History), Emily and Shannon selected the prints, organized them into categories, and carried out research on them, much of which was relatively obscure and would have been challenging even for graduate students. Following rigorous feedback and revision, they authored the essays for this catalogue and the didactic wall labels. With Gallery Director Shannon Egan and Gallery Preparator Sydney Gush, they also assisted with the installation of the exhibition and, with the help of Systems Librarian R.C. Miessler in Musselman Library, created an exciting Wordpress website so that the exhibition can live on past its closing date (see <http://wonder-cabinet.sites.gettysburg.edu/artful-nature/>).

Roush and Zeltmann's outstanding work builds on previous student research and curatorship, showcasing the dynamic interaction of art and science in the days of the Renaissance and beyond. Both students had been enrolled in Professor Etheridge's First-Year Seminar "Exploration of the Marvelous: Art and Science in the Renaissance," which culminated in a student-curated exhibition in the Schmucker Art Gallery, *Wonders of Nature and Artifice* in 2017. Here, the College's own wonders of nature and artifice were dramatically displayed like a Renaissance-era wonder room or curiosity cabinet, with works ranging from scientific specimens like fossils and skulls to a Ming plate and sixteenth-century musical manuscript; some objects were loaned by faculty, alums, trustees, and even the students themselves. Roush and Zeltmann's earlier research on botanical illustrations and minerals can be found on this Wordpress site, along with the work of the other student curators, including those enrolled in Professor Else's course "Wonders of Nature and Artifice: the Renaissance Quest for Knowledge": <http://wonder-cabinet.sites.gettysburg.edu/2017/>. Students learned the about the complexity and interrelatedness of art and science; through active learning and exploration, they challenged traditional disciplinary boundaries in rich and meaningful ways. When given the chance to return to a similar subject, the work of Maria Sibylla Merian, Roush and Zeltmann jumped at the chance, even on top of a full course load.

Maria Sibylla Merian lived and worked in a time of vibrant intersections of art and science in Europe. Her images of insects and plants are at the center of the exhibition, but it is important to understand how her work was shaped by this period. Roush and Zeltmann designed the exhibition to show examples of what came before Merian and inspired her work, as well as to demonstrate how she influenced the natural history studies that followed the publication of her books on the metamorphosis of moths and butterflies. What may at first glance appear to be “pretty” pictures of flowers and bugs were actually revolutionary compositions that changed how nature was portrayed.

We begin with plants and gardens as a point of departure for the exhibition, an appropriate gateway to Merian’s earliest books, meant for lovers of flowers and fruit trees as well as for those curious about insect metamorphosis. Exploration of the globe and the trade that followed are also a part of this story. In what could be seen as some of the earliest steps along the path of globalization, specimens of exotic animals and plants began first to trickle, and then to pour into countries like Germany and Holland from around the world. Tulips from Persia and sunflowers from North America became sought after cultivars for gardens; butterflies and other insects were collected and categorized. Moreover, illustrated books on gardening and flowers (florilegia) were acquired by collectors and gardeners to aid in choosing and identifying their treasures.

At the same time, scholars were keen to know and understand the natural world. Maria Sibylla Merian researched, wrote and illustrated books that created a pivot point – combining ecologically related plants and insects for the first time. Before her innovative publications, images of plants and the text about them occupied one subset of books, and images and information on animals were published separately. Even the different stages of metamorphosis of one species of insect were shown separately; the adult moths and butterflies were treated in one section of a book, and many pages apart, the caterpillars made their appearance (Figure 1).

After Merian’s books on insects and plants from Europe and from Surinam were published, it became commonplace for natural history images to combine insects with the plants on which they fed, illustrating one of the most fundamental and important relationships in an ecological community. Christiaan Sepp, Moses Harris, and Mark Catesby, whose works are included in this exhibition, represent just a small sample of the innumerable artist-naturalists who were influenced by the work of Merian. Art can play a role in shaping science, and through Merian’s work, images changed how we understand the world.

Professor Felicia Else, Department of Art and Art History
Professor Kay Etheridge, Department of Biology



(Figure 1) Plates IV and XXI from Jonston, Jan, 1653. *Historiae naturalis de insectis*, Libri III. Frankfurt-am-Main: Merian. Photo: Artis Bibliotheek, University of Amsterdam.



TOP

Matthaeus Merian the Elder (German, 1593-1650), "Member 200: The Crowned One," in *The Fruit-Bearing Society Names, Intentions, Paintings, and Words*

1646, hand-colored engraving, 7 5/8 x 6 in. On loan from Dr. Kay Etheridge, Professor of Biology, Gettysburg College

RIGHT

Matthaeus Merian the Elder (German, 1593-1650), "Member 201: The Nourisher," in *The Fruit-Bearing Society Names, Intentions, Paintings, and Words*

1646, hand-colored engraving, 7 5/8 x 6 in. On loan from Dr. Kay Etheridge, Professor of Biology, Gettysburg College

Symbolic Nature: Matthaeus Merian and the Fruit-Bearing Society

Shannon Zeltmann '21

Maria Sibylla Merian had many influences, including her father Matthaeus Merian, a famous engraver and publisher of the seventeenth century. Matthaeus engraved a multitude of subjects, such as topographical maps, biblical scenes, and Greco-Roman myths.¹ Matthaeus studied etching and engraving in Zurich and moved around Europe for a few years before eventually settling in Frankfurt to work alongside Johann Theodor de Bry, whose publishing house was known for maps and illustrations of the Americas and Native Americans.² Merian married de Bry's daughter, Maria Magdalena de Bry, and eventually took over the de Bry publishing house when his father-in-law died in 1624.³

The prints in the exhibit come from the 1646 book *Der Fruchtbrinden Gesellschaft Nahmen, Vorhaben Geraehide und Woerter* (*The Fruit-Bearing Society Names, Intentions, Paintings, and Words*).⁴ Merian published this four-volume book set for the Fruit-Bearing Society, a club for gentlemen of good morals and faith, established in 1617 by Prince Ludwig of Anhalt-Kothen to improve the German language.⁵ One activity of the society was to create a personal motto and symbol for each new member, accompanied by a poem expanding on the symbol's associated meanings.⁶



Two prints from *Der Fruchtbrighthen*, plates “Member 200: The Crowned One” and “Member 201: The Nourisher,” are featured in the exhibition. Each page is dedicated to a member of the society; above the depiction of a German landscape, a banner appears at the top of each plate with the name of the plant or fruit for which the person is known. In “Member 200,” the laurel tree is depicted to the right of an open-air building with a laurel wreath on a table inside. At the bottom of the illustration, the banner proclaims the virtue of the person. Member 200 was known as the “Crowned One,” alluding to the famous German poet of the seventeenth century, Martin Opitz. He became a member in 1629, having worked to create a standard set of rules for the German language.⁷ The society chose the plants and fruits for their symbolic properties. During the seventeenth and eighteenth centuries, plants were beginning to be studied and used for their scientific properties, as seen in Maria Sibylla

Merian’s prints of plants as the food of the insects she depicted. Yet, many artists like Matthaeus still incorporated plants into compositions for their symbolism. The crown of laurel was commonly used to denote a poet during the Middle Ages and Renaissance.⁸ This motif derives from the Greco-Roman god of poetry, Apollo, whose symbol was the laurel tree.

In “Member 201: The Nourisher,” the rye plant was chosen to symbolize Heinrich von Reus’ generosity to the poor. The mustard colored rye plant that von Reus produced for his community sits in the foreground. To the plant’s right, a flaming oven has various rye breads to feed the town. Golden rye fields and rolling mountains in the distance fill the background. The poem states that von Reus’ generosity is how he serves God. During this period, dark, grainy, rye bread was associated with the poor, and thus this symbol was chosen to illustrate Heinrich’s

allegiance to God through his assistance to the impoverished.⁹

Using flowers and plants as artistic symbols, as opposed to objects of scientific study, was commonplace in Europe for centuries.¹⁰ The examples of laurel and rye speak to ancient, literary, and religious associations. By the middle of the sixteenth century, the prevalence of symbolism began to change as flowers began to be studied for their own properties by Renaissance botanists. Matthaeus Merian died when his daughter, Maria Sibylla Merian, was only three. Her stepfather, Jacob Marrel, was the one who taught Merian how to paint, and possibly, how to etch plates. However, Matthaeus Merian set the stage for naturalists like Maria Sibylla Merian, whose prints carefully depict naturalistic plants and insects together in an ecological composition.

Thanks to Michael Ritterson, Emeritus Professor of German, Gettysburg College, for his help in translating the German.

1. Susan Donahue Kuretsky, “The Face in the Landscape: A Puzzling Print by Matthaues Merian the Elder,” in A. Golahny, Mia M. Mochizuki, and L. Vergara, *In His Milieu: Essays on Netherlandish Art in Memory of John Michael Montias* (Amsterdam: Amsterdam University Press, 2007), 221.

2. Karen Nipps, “The Cover Design,” *The Library Quarterly: Information, Community, Policy* 82, no. 4 (October 2012): 511.

3. Kuretsky, “The Face in the Landscape,” 221.

4. Matthäus Merian, *Der fruchtbringenden Gesellschaft Nahmen, Vorhaben, Gemähldte und Wörter* (Frankfurt: Merian, 1646).

5. David E. Wellbery, Judith Ryan, and Hans Ulrich Gumbrecht, *A New History of German Literature* (Cambridge, MA: Belknap Press of Harvard University Press, 2004), 277, 278.

6. Wellbery et al., *German Literature*, 278.

7. Sean Massa, “Martin Opitz,” *Salem Press Biographical Encyclopedia*, 2019. <http://ezpro.cc.gettysburg.edu:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ers&AN=89874990&site=eds-live>

8. Luba, Freedman, “*Apollo and Daphne* by Antonio Del Pollaiuolo and the Poetry of Lorenzo de’ Medici,” *Memoirs of the American Academy in Rome* vol. 56/57 (2011/2012): 226.

9. Lynne Olver, “Rye Bread,” *Breads, The Food Timeline*, accessed March 11, 2019. <http://www.foodtimeline.org/foodbreads.html#ryebread>

10. Lucia Tongiorgi Tomasi and Tony Willis, *An Oak Spring Herbaria* (Upperville, VA: Oak Spring Garden Library, 2009), xliii.

Merian's Artful Nature and Societal Expectations

Emily Roush '21



Prior to working on the *Raupen* book (prints from this volume are also shown in the exhibition), Maria Sibylla Merian published her *New Flower Books* in 1675, 1677, and 1680. All three sets of prints were reissued together in 1680.¹ For these plates, the German naturalist and artist focused less on scientific accuracy and more on composition and aesthetic to serve a different kind of market. Her book was made with the purpose of being copied and used as templates for embroidery and needlework.² This type of publication reflected a genre called a florilegium, a book of flower paintings or engravings.³ The prints in the exhibition, “Plate CLVIII” and “Plate CLIX,” are found in a later rendition of the 1680 version.⁴

“Plate CLVIII” presents a striking composition of bold flowers of different shapes and sizes: a dog’s tooth violet, a common garden hyacinth, a Persian iris, and grape hyacinth. Unlike later works, such as the *Raupen* books or *Metamorphosis*, these prints do not show insects within a natural habitat. Instead, if she includes insects, they are utilized as decorative details, like the curled caterpillar in “Plate CLIX.” The same curled caterpillar is featured in “Plate XIV” in the *Raupen* book, also featured in the exhibition. “Plate CLIX” shows the caterpillar feeding



PAGE 13

Maria Sibylla Merian

(German, 1675-1680),
“Plate CLVIII,” *New
Book of Flowers*

1675, etching, 9 ½ x 7 in.
On loan from Dr. Kay
Etheridge, Professor of
Biology, Gettysburg College

LEFT

Maria Sibylla Merian

(German, 1675-1680),
“Plate CLIX,” *New Book
of Flowers*

1675, etching, 9 ¾ x 6 ½ in.
On loan from Dr. Kay
Etheridge, Professor of
Biology, Gettysburg College

on the bright yellow daffodils; instead it should be feeding on red currant as pictured in “Plate XIV.”⁵ The visually appealing flowers in juxtaposition with the caterpillar create a striking image, combining flora alongside naturalia.

While the *New Flower Book* demonstrates Merian’s skill as an artist, its intended audience reflected the more limiting world based on gender in the seventeenth century. Merian created these etchings as models to be copied in fabric arts and watercolors. Thomas Burger points out that, “Sewing and embroidery were considered ‘fine science’ for the women’s room.”⁶ Upper-class women were expected to sit together, sew, stay out of trouble, and stick with the objects available from their limited domestic sphere. Lower- and middle-class women had no choice but to work any job, not limited to trade or artisan work.

The flower book prints with insects foreshadow the more scientific caterpillar books to come. Merian’s work exemplifies how the creative process can bring art and science together. In the preface to the *New Flower Book*,

Merian states, “Art and nature shall always be wrestling/ until they mutually conquer each other/ so that the victory is on the same stroke and line: that which is conquered, conquers at the same time!”⁷ Merian was dedicated to creating artful compositions in the *New Flower Book*, but later would produce scientifically accurate images in the *Raupen* book and *Metamorphosis*.

The significance of the flower emerges during the seventeenth and eighteenth centuries outside of the scientific realm too. The flower was viewed as a worthy object and a genuine delight, making way for a flower market and the rise of gardens.⁸ In holding a prominent role, flowers were an esteemed subject for still life paintings and florilegia. The work of Rachel Ruysch, a famous artist during the Dutch Baroque era, attests to the flower as an artistic subject. The flower in still life paintings shows how art is trying to conquer nature by stepping away from informative illustrations; such works were inherently motivated by aesthetic compositions. Furthermore, the flower rose as an art object in addition to being just a natural one.

1. Merian, Maria Sibylla Merian, “Preface,” *Neues Blumenbuch* (Nuremberg: Johann Andreas Graff, 1680).

2. Thomas Burger, “Art and nature shall always be wrestling,” in *Maria Sibylla Merian: New Book of Flowers* (Pretzel Pub: 1999), 32.

3. Lucia Tongiorgi Tomasi, Tony Willis, and Lisa C. Chien, *An Oak Spring Herbaria: Herbs and Herbals from the Fourteenth to the Nineteenth Centuries: A Selection of the Rare Books, Manuscripts and Works of Art in the Collection of Rachel Lambert Mellon* (Oak Spring Garden Library: 2009), xlvi.

4. Maria Sibylla and Jean Frederic Bernard, *Histoire des insectes de l’Europe, dessinee d’apres nature & expliquee par Marie Sibille Merian* (Amsterdam: Chez Jean Frederic Bernard, 1730). Posthumous editions of Merian’s collected works were issued in various forms through the eighteenth century.

5. Burger, “Art and nature shall always be wrestling,” 43.

6. Ibid.

7. Ibid.

8. Tomasi, et al., *An Oak Spring Herbaria*, xlvi.

Merian's Marvelous Ecological Illustrations

Emily Roush '21



Maria Sibylla Merian was a German naturalist and artist who made innovative leaps in accurately illustrating ecological frameworks; these reflect her extensive study of insects and plants as exemplified in her revolutionary 1679 *Raupen* or “caterpillar” book.¹ This book features the lifecycle of the caterpillar, showing proper representation of specimens with the food plants on which it feeds. As Kay Etheridge states, “Merian was one of the earliest naturalists to conduct long-term studies on a specific group of organisms, and her self-published volumes were the product of decades of meticulous observations of the life cycles of insects.”² Alongside the prints, Merian writes about the differing processes and habits of the insects, which she observed from life. For example, she documented the insects’ flying patterns and feeding behaviors.

“Plate XIV” shows two comma butterflies (*Polygonia c-album*) flying above a red currant plant (*Ribes rubrum*). Each butterfly, what Merian called summerbirds, has spotted marks; one flies and opens its wings fully to display its elaborate, accurately rendered patterns from above and the other is seen in profile highlighting one wing. This composition artfully illustrates differences in color between the upper and



LEFT

Maria Sibylla Merian
(German, 1647-1717),
"Plate XL," *Raupen* book

1679, etching, 8 1/2 x 6 1/4
in. Purchase made possible
by Betsy A. and Bruce
R. Stefany '71, Special
Collections and College
Archives, Musselman
Library, Gettysburg College

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RIGHT

**Maria Sibylla
Merian** (German,
1647-1717), "Plate XIV,"
Raupen book

1679, etching, 8 1/2 x 6 1/4
in. On loan from Dr. Kay
Etheridge, Professor of
Biology

lower sides of the wings. A favorite caterpillar of Merian's reappears in this print, first seen in "Plate CLIX" in the *New Flower Book*. On a leaf to the right, Merian depicts another stage of the species' metamorphosis, this time as a pupa.

"Plate XL" illustrates the blue garden larkspur (*Delphinium sp.*) vertically blossoming. The exhibition's version of this print was hand colored after purchase of the book, like many of the other prints in the exhibition. These bright pink flowers should more accurately be colored blue. On the top of the plant a long, orange and black caterpillar with dots and stripes is eating the leaves. As opposed to summer birds, Merian termed moths as "moth-birds." This moth has horizontal stripes on the middle right side resting on the plant. Another stage of the moth is shown in the form of the pupa situated near the bottom of the plant. Merian wrote, "One of these moth-birds is represented here in the middle of the copperplate resting on two green leaves—the more so to delight the eye of appreciative admirers and to shed light on one small masterpiece of tireless Nature."³ This demonstrates her process of observing

the specimen, while also revealing the pleasure to the eye, attesting to an appreciation for a display of more artful nature.

Merian's books belong to a period when science and religion were not so separated as they are today. In the preface of the *Raupen* book, hymns are included to acknowledge a higher power. In her address to the reader, she states, "Therefore, seek herein not mine, but God's glory alone, and glorify Him as Creator of even these smallest and least of worms, for they have their origin not in themselves, but from God, who endowed them with such wisdom that in some things (as if would seem) they almost put humankind to shame: by faithful adherence to the time and sequence of their lives and not emerging before they know how to find their own nourishment."⁴ Merian studied and observed nature to honor God, as many others did at this time too. Paying homage to God was a common theme for naturalists, as it justified the pursuit of science in the name of religion. Whether or not those naturalists actually acted based on true religious traditions or intentions is still somewhat ambiguous.

More profoundly, these prints draw upon firsthand observations from nature to reveal a greater level of accuracy than her early flower prints. She made an effort to depict the stages of metamorphosis with close attention to detail, as seen in the pupae in "Plate XL" and in "Plate XIV." Kay Etheridge explains her process as the following: "Merian collected lepidopteran larvae as they fed on their host plants and maintained them in captivity through metamorphosis to their adult form. At each stage she recorded her observations by taking extensive notes and making small paintings, and in most cases she also preserved specimens of the insects."⁵ The prints in this book are ecological because Merian makes an active effort to show the caterpillars with the host plant on which they feed, while also displaying various stages of life interacting with the natural objects. Merian's strategy of observing from life, recording the stages all in one illustration, and representing the proper environments, were her revolutionary creations that influenced the course of natural science.

1. Maria Sibylla Merian, *Der raupen wunderbareverwandlung und sonderbare blumen-nahrung* (*The Wondrous Transformation and Particular Food Plants of Caterpillars*) (Nuremberg: M.S. Merian, 1679). Merian published two more books on European caterpillars in 1683 and 1717.

2. Kay Etheridge, "The Biology of *Metamorphosis insectorum Surinamensium*," in *Maria Sibylla Merian: Metamorphosis insectorum Surinamensium, Verandering der Surinaamsche insecten, 1705* (*Transformation of the Surinamese Insects*), eds. M. van Delft and H. Mulder (Tiel, Belgium/The Hague, Netherlands: Lannoo, 2016), 29-39.

3. Maria Sibylla Merian, *The Wondrous Transformation and Particular Food Plants of Caterpillars*, translation by Michael Ritterson, published by Maria Sibylla Graff, 1679.

4. *Ibid.*

5. Kay Etheridge, "Maria Sibylla Merian and the metamorphosis of natural history," *Endeavour* 35, no. 1, (Elsevier: 2010), 15.

Maria Sibylla Merian's Lasting Influence—*Metamorphosis*

Shannon Zeltmann '21

After the publication of her other books, prints from which can be seen in the exhibition, Maria Sibylla Merian still had her most challenging book to publish—*Metamorphosis Insectorum Surinamensium* (*Metamorphosis of the Insects of Surinam*).¹ By 1691, Merian had moved to Amsterdam with her two daughters, where she saw several cabinets of curiosity, such as the wonder room of the Dutch botanist and anatomist Frederik Ruysch.² Merian's interest in studying live tropical specimens led her to study insects and plants in 1699 in Surinam in South America, then under Dutch control.³ She went without being sponsored by the state or a patron, unusual for naturalists at this time. While she was in Surinam for two years, she documented sixty plant species and over ninety animal species.⁴

Merian began work on *Metamorphosis* when she returned to Amsterdam with her notes, paintings, and preserved specimens.⁵ In the first edition of *Metamorphosis*, she commissioned the etching of sixty plates with the life cycle of insects and some animals from Surinam, along with the plants on which they feed. Merian had previously depicted species as life-sized in *Raupen*, and she did the same for *Metamorphosis*. However, tropical plants and insects





PAGE 19

Maria Sibylla Merian
 (German, 1647-1717),
 "Plate 5," *Metamorphosis*
Insectorum Surinamensium
 (*Metamorphosis of the*
Insects of Surinam)

1705, etching, 13 ³/₈ x
 18 ¹/₄ in. On loan from Dr.
 Kay Etheridge, Professor of
 Biology, Gettysburg College

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 LEFT

Maria Sibylla Merian
 (German, 1647-1717),
 "Plate 33," *Metamorphosis*
Insectorum Surinamensium
 (*Metamorphosis of the*
Insects of Surinam)

1771, etching, 12 ³/₄ x
 19 ¹/₂ in. Purchase made
 possible by Betsy A. and
 Bruce R. Stefany '71, Special
 Collections and College
 Archives, Musselman
 Library, Gettysburg College

can grow larger than European species, so the pages had to be almost four times as big as those in the European books, approximately 20.5 inches tall. By combining tropical species, Merian created dramatic and innovative compositions. Because of its popularity, *Metamorphosis*, first published in 1705, was subsequently reprinted in several editions. The prints in this exhibition, “Plate 5” and “Plate 33” are from the first edition and the 1771 edition respectively.

“Plate 5” depicts a tree boa with the rustic sphinx moth and the various stages of the tetrico sphinx moth, all on a cassava plant, or manioc.⁶ Flying above the cassava, the adult sphinx moth is depicted naturalistically with its rich orange spots on its abdomen and brown, black, and white chevron patterned wings. To its left, the predominately black and yellow striped caterpillar eats away at the leaves. Below the boa, the light brown chrysalis lays on the roots of the cassava. While the book’s size was good for making life-sized depictions of insects, she often had to change the size of the

reptiles to make them fit the page, and here, Merian reduced the scale of the boa.⁷ The boa having eggs is another small detail that is less accurate; boas give birth to live young. However, Merian only had two years to study a tremendous number of species, and occasionally made mistakes. She stated in the preface of her book that while she does not know tropical vertebrates well, she considered making a full book of them if *Metamorphosis* did well.⁸ *Metamorphosis* was very successful in its first edition, but the project was never realized due to her age and health.

“Plate 33” also depicts a sphinx moth, this time on fig branches. The fig sphinx moth flies to the plant and the other adult lands on the branch. Two distinctive caterpillars appear at the bottom of the composition, one with an orange-yellow body, red stripes, and a black head, another with a green body with black and yellow stripes. While these two caterpillars look different, they are the same species. Merian wrote that she observed the green caterpillars turning to the orange-yellow coloration over the

course of a night. Merian depicted minute details of the species from her observations and sketches, such as the detailed pattern on the moths’ wings or the changing coloration of the fig sphinx moth caterpillar. Merian’s works surpassed previous illustrations of nature by combining plants and animals as well as demonstrating her exemplary skill as an artist in the rendering of accurate details.

Merian died in 1717; however, her contributions to the natural world could be felt in the naturalists and artists who came after her, including Carolus Linnaeus, Christiaan Sepp, and others whose works are featured in the exhibition. *Metamorphosis* left a mark on the world of how to study the interactions of food chains and interactions of various species.

1. Maria Sibylla Merian, *Metamorphosis insectorum Surinamensium* (Amsterdam: G. Valck, 1705).

2. Susan Owens, “‘Great Diligence, Grace and Spirit’: Maria Sibylla Merian,” in David Attenborough, Susan Owens, Martin Clayton, and Rae Alexandratos, *Amazing Rare Things: The Art of Natural History in the Age of Discovery* (New Haven: Yale University Press, 2007), 141.

3. Kay Etheridge, “Maria Sibylla Merian and the Metamorphosis of Natural History,” *Endeavour* (2011): 15.

4. Ibid.

5. Owens, “‘Great Diligence, Grace and Sprit,’” 148.

6. Ibid, 146.

7. Kay Etheridge, “The Biology in *Metamorphosis Insectorum Surinamensium*,” In ed. Marieke van Delft and Han Mulder. *Maria Sibylla Merian: Metamorphosis Insectorum Surinamensium* (The Hague: Lannoo, 2016), 36.

8. Ibid.

Grandiose Garden Culture: Elaborate Landscapes and Unusual Fruits

Emily Roush '21

Gardens by the eighteenth century were extensive and elaborate creations, intersecting art and nature acknowledging a higher divine order. In order to know God, it was important to know His creations in the world.¹ The prints of gardens and products of gardens feature the divine things of the world. Ian Thompson explains, “Gardens are instances of an uncommon collaboration between nature and culture, between living materials and the human imagination.”² Gardens were for viewing pleasure, but also a place where botanists studied, experimented, and researched to identify and breed plants. These prints show the crossover between nature altered and unaltered. The citrus fruits and the distant landscape were depicted in their natural forms, while other details show the garden cultivated by human hands for aesthetic purposes. These prints by Sanderus and Volkamer speak to important aspects of gardens from the eighteenth century, one illustrating an elaborate complex that served as part of a priory, and the other highlighting unusual and remarkable fruits, products of such monastic places.

Chorographia Sacra Brabantiae (Holy Chorography of Brabant) is an engraving made in 1726, published in *The Hague* and later hand colored.³ The scene features the rolling hills of lush vegetation around Brabant, which is in present day Belgium. Antonius Sanderus was a Flemish cartographer and cleric from the 1640s.⁴ Sanderus’ chorography, a view of a region of Brabant, shows his work as a Flemish cartographer. In the top center of the print a Latin inscription identifies this view as the Groenendael priory of St. Augustine in Brabant. In the top left corner, a Coat of Arms features the crest of the Abbots of Belgium. Underneath the crest, a key identifies places below, like the chapel on the hill, a barn in town, dormitories, and, of course, gardens. There are gardens within the monastery courtyard, as well as plots surrounding the building. On the paths and the land, figures walk, ride horses, and work. In the middle of the town, a monastery with a grand architectural structural and adjoining courtyard contains rectangular plots. The landscape consists of perfectly dispersed trees, precisely planted

rows of greenery, and a rectangular formation of the land. In Renaissance garden culture, there was emphasis on selecting the plants and creating an “architectural framework of greenery,” which often was seen in geometric subdivisions, intersecting linear paths, and enclosed walls, all of which can be seen in *Chorographia Sacra Brabantiae*.⁵

The exhibition presents two prints from *Nuremberg Hesperides*, published in 1708 by Johann Volkamer, a physician, botanist, and gardener, who hailed from a family that owned gardens in Nuremberg.⁶ Nuremberg was a center of trade, art, and innovation, where more than 400 gardens were established.⁷ Maria Sibylla Merian was an acquaintance of the Volkamer family and may have visited the gardens to observe and study the plants and insects.⁸ In the Volkamer prints, Sandra Raphael points out that Volkamer’s citrus fruits are “drifting like eccentric balloons above miniature landscapes—make pleasingly surreal compositions...”⁹ Each work includes a swirling light red banner bearing labels identifying the fruits, here a grapefruit and an orange, in Italian



Antonius Sanderus (Flemish, 1586-1664), *Chorographia Sacra Brabantiae* (*Holy Chorography of Brabant*), The Hague

1726, hand-colored engraving, 20 x 17 3/4 in.

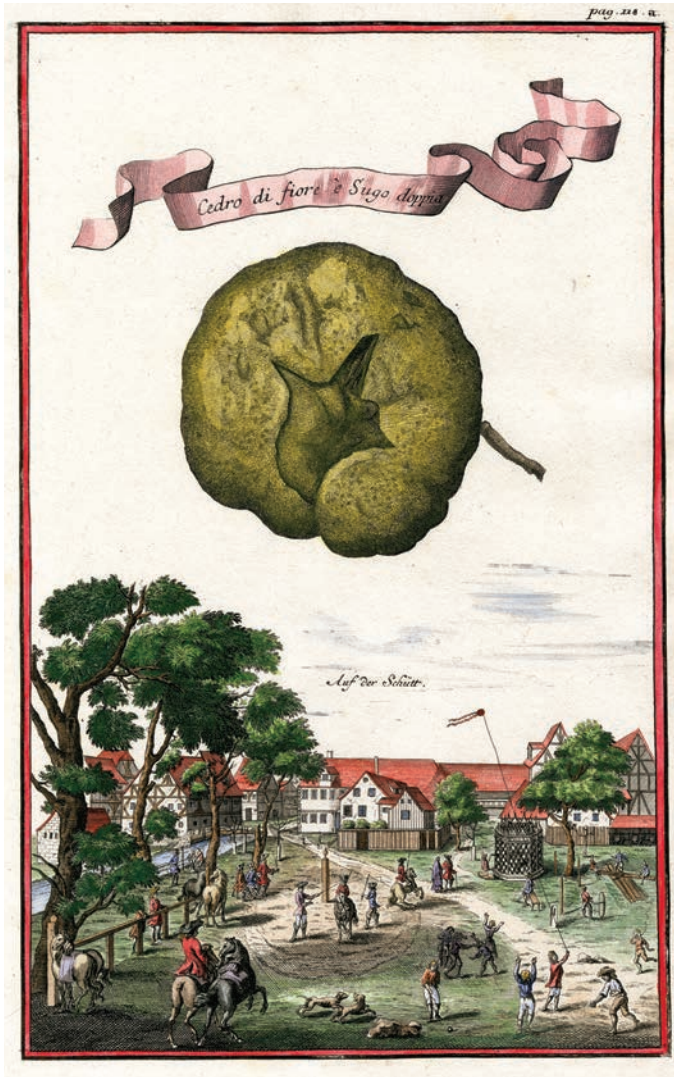
Purchase made possible by Betsy A. and Bruce R. Stefany '71, Special Collections and College Archives, Musselman Library, Gettysburg College

script. These fruits, which normally assume a spherical form, are shown with unusual texture, protrusions, and cavities, which speak to the rise in exotic plants and a fascination with deformities. *Cedro di fiore è sugo doppia* has an olive-colored spherical grapefruit that is concave in the center. Below the grapefruit, there is a town full of timber framed buildings in the background and figures at leisure in the foreground. One can see men on horses, children flying kites, and dogs running free. *Aranzo distorto ò monstroso* (*Distorted or monstrous orange*) has a red toned distorted orange on the stem with full green leaves. Below the orange, there is a garden with a fountain and four rectangular quadrants full of plants and flowers, similar to features in the gardens in *Chorographia Sacra Brabantiae*. A blue ribbon near the bottom of the print identifies this as “Mr. Leinckert’s garden.” Figures in elaborate clothing stroll leisurely and are seen in marked contrast with the lower social classes depicted in Volkamer’s other print.



Johann Volkamer (German, 1644-1720), *Cedro di fiore è sugo doppia* (*Citrus fruit that is very juicy*), *Nuremberg Hesperides*

1708, engraving, 9 x 14 in. On loan from Dr. Kay Etheridge, Professor of Biology, Gettysburg College



Johann Volkamer, *Aranzo distorto ò monstroso (Distorted or monstrous orange)*, *Nuremberg Hesperides*

1708, engraving, 9 x 14 in. On loan from Dr. Kay Etheridge, Professor of Biology, Gettysburg College

Thanks to Professors Alan Perry and Felicia Else for their translation of the Italian titles for the Volkamer prints.

1. Claudia Lazzaro, *The Italian Renaissance Garden* (Yale University Press New Haven and London: 1990), 8.
2. Ian Thompson, "Garden, Parks, and Sense of Place," in *Making Sense of Place* (Boydell & Brewer: 2012), 159.
3. Antonius Sanderus, *Antonii Sanderi presbyteri Chorographia sacra Brabantiae, sive celeberrimum aliquot in ea provincia abbatiarum, coenobiorum, monasteriorum, ecclesiarum, piarumque fundationum descriptio* (The Hague: Christianum van Lom, 1726).
4. Ronald Tooley, *Tooley's Dictionary of Mapmakers* (Map Collector Publications: 1979), 101.
5. Claudia Lazzaro, *The Italian Renaissance Garden* (Yale University Press New Haven and London: 1990), 28-30.
6. Sandra Raphael, "Citrus Fruit," in *An Oak Spring Pomona* (Oak Spring Garden Library Upperville Virginia: 1990), 192.
- J. C., Volkamer, J.A. Endter, P. Decker, L.C. Glotsch, J.C. Steinberger, W. Pfann, J. Montalegre, ... F.C. Krieger, *Nürnbergische Hesperides, oder, Gründliche Beschreibung der edlen Citronat- Citronen- und Pomerantzen-Früchte* (Nuremberg: Johann Andreä Endters , 1708).
7. Thomas Burger, "Art and nature shall always be wrestling," in *Maria Sibylla Merian: New Book of Flowers* (Pretsel Pub: 1999), 68.
8. Kay Etheridge, "The Biology of *Metamorphosis insectorum Surinamensium*," in *Maria Sibylla Merian. Metamorphosis insectorum Surinamensium. Verandering der Surinaamsche insecten, 1705 (Transformation of the Surinamese Insects)*, eds. M. van Delft and H. Mulder (Tiel, Belgium/The Hague, Netherlands: Lannoo, 2016), 29-39, 2016. In Dutch and English, 31.
9. Sandra Raphael, "Citrus Fruit," in *An Oak Spring Pomona* (Oak Spring Garden Library Upperville Virginia: 1990), 199.

Seba's Cabinet: The Great Exchange of Nature

Emily Roush '21

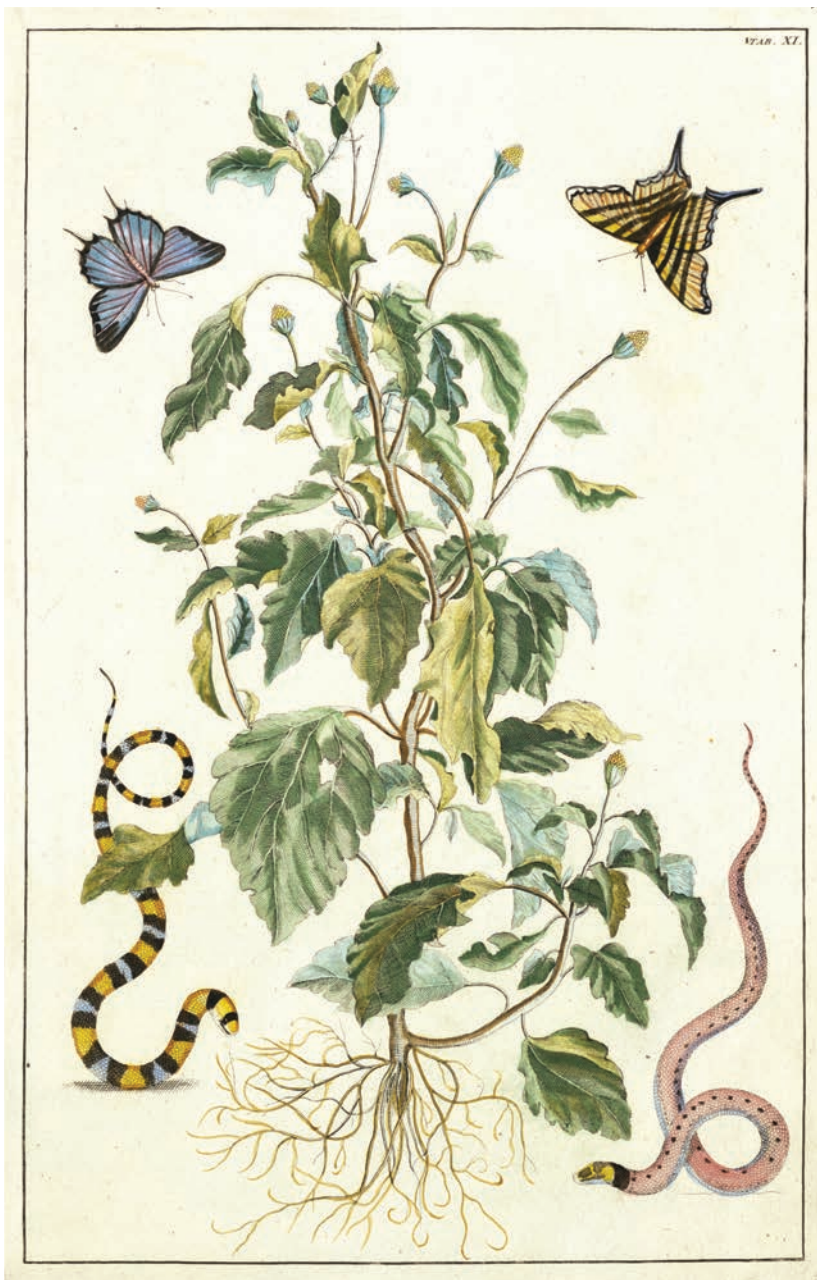
Albertus Seba was a prominent apothecary and collector during the eighteenth century who had forged relationships and exchanged goods with doctors, botanists, and naturalists. His lifetime overlapped with the rise of illustrated thesauruses and encyclopedias that included descriptive images and text. Seba published his own four-volume set titled *Locupletissimi rerum naturalium*, translated to “Only the Richest Nature.”¹ The book offers entries on a wide variety of subjects, such as plants, armadillos, snakes, sloths, and insects with descriptions of the species’ appearances and behaviors and elaborate illustrations.² His book speaks to the importance of presenting the identification of species alongside striking imagery, which appealed to wide audiences in the eighteenth century.

The exhibition features a print from the first edition printed in 1734 of Seba’s *Locupletissimi rerum naturalium*, titled “Tabula XI.” This print is in the first volume, depicting South American and Asian plants and animals.³ There is a large flourishing tropical plant with an abundant display of leaves along its branches. Seba exposes the roots of the plant below, showing them in detailed delicate lines. The upper portion of the plant has a few buds beginning

to bloom. There is an intentionally balanced placement of swallowtail butterflies and kukuri snakes (*Oligodon*) from Ceylon with one on each side of the plant to the left and right.⁴ The butterfly on the upper left side of the composition is colored blue with thin black diagonal stripes, and the right butterfly is golden yellow with black stripes, both in flight near the top of the plant. The snakes are placed closer to the roots, whose bodies take on meandering coiling shapes; one has a yellow and black striped patterning, and the other appears with a pink body and dark spots. Seba’s print is striking for its art and nature, but falls short of what Maria Sibylla Merian produced. Merian was extremely intentional and detail-oriented with the ecological makeup of the compositions; for example, the *Raupen* prints illustrate caterpillars with their specific and accurate host plants. In contrast, Seba’s print pairs the snakes, butterflies, and plant together with unrelated ecological significance.

Naturalists and collectors like Seba and Merian contributed to the acquisition of knowledge that led to describing, categorizing, ordering, and comparing nature in an effort to reflect upon the harmony of the cosmos and the divine order.⁵ As Joy Kenseth explains,

“Man strives for goodness and at the same time has an innate desire to acquire knowledge.”⁶ Collections and cabinets like those of Seba and his audience showed off his wealth and power through his elaborate range of nature. Seba collected a diverse array of objects buying and trading specimens that were brought back on ships from the West Indies.⁷ Seba also exchanged goods with friends and colleagues; for example, he received butterflies from Frederick Ruysch and seeds for Johann Volkamer, whose works of exotic citrus fruits also appear in this exhibition.⁸ Merian brought back and sold specimens to collectors like Seba in order to fund her trip to Surinam, which led to the making of *Metamorphosis*. There was an evident and necessary network among peers at this time in exchanging objects to one another. Tomomi Kinukawa describes physicians, pharmacists, artists, and collectors partaking in such exchanges as “entrepreneur naturalists.”⁹ These professions fostered connections and relationships with other people within the field, specifically to exchange and trade rare objects. Seba with his successful cabinet gained wealth, and in return supported other naturalists in need of funding.



Albertus Seba (Dutch, 1665-1736), "Tabula XI," in *Locupletissimi rerum naturalium*

1734, engraving, 13 ¼ x 19 ½ in. Purchase made possible by Betsy A. and Bruce R. Stefany '71, Special Collections and College Archives, Musselman Library, Gettysburg College

1. Irmgard Musch, William Rainer, and Jes Rust, "A Diverse & Marvelous Collection," *Natural History* 11, no. 3 (April 2002): 1.

Albert Seba, *Locupletissimi rerum naturalium thesauri accurata descriptio, et iconibus artificiosissimis expressio* (Amsterdam: Janssonio-Waesbergios, 1734).

2. *Ibid.*, 13.

3. *Ibid.*, 2.

4. Irmgard Musch, William Rainer, Albertus Seba, and Jes Rust, "Explanatory Notes on the Plates" in *Albertus Seba: Cabinet of Natural Curiosities* (Taschen, 2016), 551.

5. *Ibid.*, 13.

6. Joy Kenseth, "A World of Wonders in One Closet Shut," in *The Age of the Marvelous* (Hood Museum of Art, Dartmouth College, 1991), 86.

7. Tomomi Kinukawa, "Learned vs. Commercial?: The Commodification of Nature in Early Modern Natural History Specimen Exchanges in England, Germany, and the Netherlands," *Historical Studies in the Natural Sciences* 43, No. 5. (November 2013): 592.

8. *Ibid.*, 603.

9. *Ibid.*, 596.

Carolus Linnaeus' *Systema Naturae*: Merian's Influence on the Classification of Species

Shannon Zeltmann '21



Carolus Linnaeus (Swedish, 1707-1778), *Great American Spider which Prey on Birds*, *Systema Naturae* (*General System of Nature*)

c. 1794-1810, hand-colored engraving, 5 1/8 x 8 1/4 in. On loan from Dr. Kay Etheridge, Professor of Biology, Gettysburg College



Carolus Linnaeus, now known as the father of taxonomy, responded to the need for a better classification system for the many species of plants and insects discovered and illustrated in the seventeenth and eighteenth centuries by naturalists, such as Maria Sibylla Merian or Christiaan Sepp. Many naturalists, including Sepp and Merian, recorded the local name for a species. After many attempts at organization and classification since the sixteenth century, Linnaeus was the one who succeeded in establishing a successful

taxonomy.¹ Published in 1735, it was titled *Systema Naturae (General System of Nature)*.² The system, originally applied to plant species, uses Latin to name plants based on their reproductive organs.³ Linnaeus believed a classification system was important to have so naturalists could have a common term for a species. The system came to use other distinguishing features to classify animals. By the time of his death in 1778, Linnaeus and his followers had named 12,000 plant and animal species with his system.⁴

Carolus Linnaeus
(Swedish, 1707-1778),
Caiman Crocodile and
Amphisbaena Viper, Systema
Naturae (General System of
Nature)

c. 1794-1810, hand-colored
etching, 5 1/8 x 8 1/4 in. On
loan from Dr. Kay Etheridge,
Professor of Biology,
Gettysburg College

The prints in the exhibition, *The Great American Spider, which Prey on Birds and Caiman Crocodile and Amphysbaena Viper*, come from posthumous editions (c. 1794-1810) of the book. Linnaeus turned to the work of Maria Sibylla Merian and other naturalists to name various species. According to Pamela Smith, the reliance on images by predecessors like Merian was “an integral part in the making of natural knowledge in the early modern period.”⁵ Often, Linnaeus and his followers took parts or entire prints of other naturalists to use in illustrations alongside copies of *Systema Naturae*; this can be seen in the two prints in the exhibition.

The Great American Spider, which Prey on Birds depicts a dark brown Bird-Eating Spider on top of a dead hummingbird in the center of the print. Behind them, the nest of the bird sits on the branch with the bird’s eggs. The whole scene takes place on a tree branch, with the

leaves, flowers, and fruit filling the rest of the print. This print takes the spider and bird from Merian’s “Plate 18” from *Metamorphosis Insectorum Surinamensium* (1705). It depicts tropical species she found in Surinam between 1699-1701 in predator versus prey scenes: the bird-eating spider and the spiders against ants.⁶ “Plate 18” of *Metamorphosis* was a frequently copied image of Merian’s because of its dramatic nature, and other naturalists used it for their own works.⁷ In *Systema Naturae*, Linnaeus adds leaves and flowers, which Merian’s version does not have, and his print is a mirror image of Merian’s.

Another print in the exhibition from Linnaeus’ *Systema Naturae* is *Caiman Crocodile and Amphysbaena Viper*, which is a copy of Merian’s print of the same subject. Merian’s work was published in the posthumous edition of *Metamorphosis* (1719).⁸ In both versions, the Caiman protects its young—just

hatching from an egg—from the snake. While it is identified as a viper in *Systema Naturae*, it is a False Coral Snake (*Anilius Scytale*). The Caiman holds the snake in its mouth as the snake tries to reach one of the eggs. This one is a more direct copy of Merian’s print than the *Great American Spider*, as it is essentially the same image; in the *Systema Naturae* version, the eggs appear at the feet of the Caiman and offers less detail in the scales of the Caiman.

In naming tropical species, Linnaeus relied on more than a hundred species depicted in Merian’s works and countless more from other naturalists.⁹ Many scholars commonly used others’ images to create their illustrations or simply copied works, as seen with Moses Harris, who fully admitted to using Merian’s illustrations as a reference. In these tropical predator-versus-prey illustrations, Linnaeus relied heavily on Merian’s work.

1. Ernst Mayr, *The Growth of Biological Thought: Diversity, Evolution, and Inheritance* (Cambridge: The Belknap Press of Harvard University Press, 1982), 101.

2. Carl von Linné, *Systema naturae* (Leiden: B. de Graaf, 1735).

3. Bill Gilbert, “The Obscure Fame of Carl Linnaeus,” *Audubon* vol. 86 (September 1984): 112.

4. *Ibid.*, 113.

5. Pamela H. Smith, “Art, Science, and Visual Culture in Early Modern Europe,” *Isis* 97, no. 1 (March 2006): 87.

6. Kay Etheridge, “The Biology in *Metamorphosis Insectorum Surinamensium*.” In ed. Marieke van Delft and Han Mulder. *Maria Sibylla Merian: Metamorphosis Insectorum Surinamensium* (The Hague: Lannoo, 2016). 37.

7. Kay Etheridge, “Chapter 3: The History and Influence of Maria Sibylla Merian’s Bird-Eating Tarantula: Circulating Images and the Production of Natural Knowledge,” in ed. Patrick Manning and Daniel Rood, *Global Scientific Practice in an Age of Revolutions, 1750-1850* (Pittsburgh: University of Pittsburgh Press, 2016), 54.

8. Royal Collection Trust, “Maria Sibylla Merian, Common or Spectacled Caiman with South American False Coral Snake, c. 1705-10,” Explore the Collection, <https://www.rct.uk/collection/921218/common-or-spectacled-caiman-with-south-american-false-coral-snake>

9. Etheridge, “Biology of Metamorphosis,” 39.

Christiaan Sepp's Insects: Products of Art, Science, and Nature

Shannon Zeltmann '21



During the seventeenth and eighteenth centuries, insects were increasingly being collected and studied by naturalists and artists, such as Christiaan Sepp, an engraver and instrument maker in Amsterdam.¹ Sepp's son Jan joined the business, having acquired from his father an enthusiasm for insects as well as drawing and engraving skills. By 1762, the father and son made a series of monthly plates that appealed to a growing audience of entomologists and insect lovers.² Each plate illustrated a different species that the Sepps studied.

Eventually, these plates grew in popularity in Amsterdam and led the father and son duo to create their own publishing business, with Jan becoming a member of the Bookseller's Guild in 1764.³ Soon the plates were sold as bound books in Jan's bookstore, including the title *Beschouwing der Wonderen Gods, in de minstegeachte schepselen of Nederlandsche Insecten volgens eigen ondervinding beschreeven* (*Contemplation of the Wonders of God in the least respected creatures, or Dutch insects portrayed from personal experience*). Several volumes of the book were published, each with new butterfly and moth species that the Sepps observed and raised through metamorphosis.⁴ These books were distinctive in that they



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Christiaan Sepp

(German, 1710-1775),
 "Tab. III, P. II," *Contem-
 plation of the Wonders of
 God in the least respected
 creatures, or Dutch insects
 portrayed from personal
 experience*

1762, hand-colored
 engraving, 9 ³/₈ x 7 ¹/₈ in. On
 loan from Dr. Kay Etheridge,
 Professor of Biology,
 Gettysburg College

RIGHT

Christiaan Sepp

(German, 1710-1775),
 "Tab. XIV," *Contemplation
 of the Wonders of God in the
 least respected creatures, or
 Dutch insects portrayed from
 personal experience*

1762, hand-colored
 engraving, 9 ³/₈ x 7 ¹/₈ in. On
 loan from Kay Etheridge,
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were hand-painted by the company, so the colors used are uniform in all the volumes. In the first thirty texts, the Sepps colored the books themselves, but soon they hired assistants to complete the illuminations.⁵

The exhibition features “Tab. XIV” from the first volume and “Tab. III, P. II” from the second volume of *De Nederlandsche Insecten*. “Tab. XIV” depicts the various states of the Buff Tip Moth (*Phalera Bucephala*).⁶ Sepp calls this moth by its colloquial name, “Kliene Wapendrager” or “Little Weapon-Carrier.” Many naturalists like Sepp used the local names of insects they depicted because a classification system was still being developed.⁷ Over fifty small caterpillars line the bottom left leaf as they eat away at it, leaving the veins as they defoliate it (fig. 2). Sepp depicts the chrysalis separately from the plant in the bottom right corner because the caterpillar goes into its chrysalis state in the ground.⁸

Sepp depicts the Buff moth’s various stages interacting with the plant similarly to how Maria Sibylla Merian generally illustrates the life cycle of an insect on a plant. Sepp’s depictions are more explicitly scientific illustrations than Merian’s as he included labels identifying the various stages of the moth. Sepp also depicts small yellow eggs with black dots in the center of the Buff Tip Moth. The eggs cling to the bottom of the leaf on the right of the plant (fig. 1). Sepp had a microscope that he used to observe the eggs of the butterflies and moths he raised, allowing him to include both life-sized insects and magnified eggs in his print.⁹ Merian only showed life-sized insects in her prints. Microscopes became better and more available in the eighteenth century for naturalists. Sepp then more closely studied his specimens with a microscope, as the eggs could not be easily observed with the naked eye.

The other print by Sepp in the exhibition, “Tab. III, P. II,” depicts what Sepp called “the green and white banded moth,” most likely a type of emerald moth.¹⁰ The light green and white female adult moth is illustrated on the trunk of the tree in the bottom left corner (fig. 7), while the dark green male flies above the leaves at the top right of the plate (fig. 8). Sepp depicts the light pink ovular form of the eggs (fig. 1 and 2), as seen also in his illustration of the Buff Tip Moth.

Sepp, Merian, and many other naturalist-artists published their observations, allowing for advances in natural history and art. The Sepps exemplified the ever-evolving tradition of studying insects, as they used a microscope to gain a new understanding of the eggs. Christiaan Sepp and his son made their love and examination of insects into a successful business.

1. John Landwehr, “Dutch Coloured Plate Books in the 18th Century,” in *Die Buchillustration im 18. Jahrhundert: Colloquium der Arbeitsstelle 18. Jahrhundert Gesamthochschule Wuppertal, Universität Munster, Dusseldorf* (Wuppertal, Germany: University of Wuppertal, 1980), 193.

2. *Ibid.*, 194.

3. *Ibid.*

4. Stuart McNeill, *Butterflies and Moths* (London: Michael Joseph Ltd, 1978), 19.

5. Landwehr, “Dutch Coloured Plate Books,” 194.

6. McNeill, *Butterflies and Moths*, 110.

7. Jan Christiaan Sepp, *Beschouwing der Wonderen Gods: in de Mintsgeachte Schepzelen* (Amsterdam: J. C. Sepp, c. 1762-1860).

8. McNeill, *Butterflies and Moths*, 110.

9. *Ibid.*, 20.

10. Sepp, *Beschouwing der Wonderen Gods*, part V, 11.

Moses Harris's *The Aurelian* and the Mania for Insects and Tulips

Shannon Zeltmann '21

By the mid-to-late eighteenth century, many wealthy collectors across Europe were interested in gardens and the study of insects. The first society dedicated to the study and collecting of insects in England was the Aurelian, founded in 1743.¹ Most of the society was made up of well-known members of English society and the naturalist community, who chose the name Aurelian after the seventeenth-century term “aurelia” to describe the chrysalis stage of a butterfly.² Moses Harris was introduced to the Aurelian Society and was taught how to collect insects by his uncle.³ Harris was the secretary of the society when he made the most note-worthy publication for the society, *The Aurelian*. Published originally as a series of pamphlets and finally as a book in 1766, *The Aurelian* illustrates accounts of butterflies and moths and how to keep them.⁴ The moths and butterflies were shown with the plants that the caterpillar would feed on. These images were inspired by Merian's pioneering work portraying ecologically related species, which can be seen elsewhere in the exhibition.



“Plate XXI: Unicorn-Hawk Moth and Small Heath Butterfly” depicts a moth and a butterfly species in their various stages on the morning glory plant, on which it commonly feeds.⁵ The Hawk



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Moses Harris

(English, c. 1730-1785),
 "Plate XXI: Unicorn
 Hawk-Moth and Small
 Heath Butterfly," *The
 Aurelian: A Natural History
 of English Moths and
 Butterflies*

1766, hand-colored
 engraving, 11 x 15 in.
 Purchase made possible
 by Betsy A. and Bruce
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 Collections and College
 Archives, Musselman
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Moses Harris (English,
 c. 1730-1785), "Plate
 XXIII: Goat Moth," *The
 Aurelian: A Natural History
 of English Moths and
 Butterflies*

1766, hand colored
 engraving, 11 x 15 in.
 Purchase made possible
 by Betsy A. and Bruce
 R. Stefany '71, Special
 Collections and College
 Archives, Musselman
 Library, Gettysburg College

moth adult flies to light purple flowers, as the caterpillar sits on the stem or twig that peeks out from the morning glory. The Heath butterfly life cycle is depicted to the right of the Hawk moth caterpillar, with the adults flying in the sky. Harris's inspiration from Merian also can be seen here. Elsewhere in the book, Harris stated that when he did not know a species well enough to engrave it, he turned to "Mariana" or "Merian" for references, proving her influence on his work.⁶

In "Plate XXIII: Goat Moth," the Goat moth species is illustrated on willow wood, which the caterpillar eats. Harris depicts the caterpillar as it eats its way through the wood in the lower right of the composition (fig. b). Harris also depicts the Goat moth's chrysalis partially out of the tree, depicted by the black mass below the caterpillar (fig. d).⁷ To the left, the adult Goat moth flies to the yellow tulip with red and black streaks. The Goat moth does not

typically feed on the tulip, and Harris does not state why he chose to depict the tulip in this print.

Harris may have included the flower in his composition because tulips were still considered luxury items in the eighteenth century after the extreme "tulipmania" in the Netherlands between 1634-37.⁸ During "tulipmania," prices of tulips rose to exorbitant amounts; the most alluring tulip, the *Semper Augustus* (a white tulip with maroon streaks) cost 5,500 guilders at one point, an enormous sum given the annual salary of a craftsman at the time was 300 guilders. After this peak, tulips continued to be viewed as the queen of annual flowers. They were often exchanged by elite Europeans in the eighteenth century. Harris may have put this marbled tulip in "Plate XXIII" because of its allure, as other artists similarly have depicted tulips in still life paintings.

Below the illustrations, the prints include a dedication to a patron, usually a person of notable wealth or reputation, which was part of Harris's attempt to broaden his influence and appeal to those of wealth or reputation.⁹ It is likely "Plate XXI" refers to Nathaniel Curzon (1726-1804), Fifth Baronet of Kedleston. "Plate XXIII" is dedicated to the Earl of Suffolk. Possibly this dedication was an appeal to the nobles more generally to become patrons.

Harris's career flourished between 1766-1785, when he collected all sorts of English insects and published his two most famous books, *The Aurelian* and *an Exposition of English Insects* in 1776.¹⁰ With *The Aurelian* Moses Harris combines the new tradition of depicting nature, following the steps of Merian, and the tastes of the aristocrats.

1. Moses Harris, *The Aurelian: A Natural History of English Moths and Butterflies, Together with the Plants on which they Feed*, (London: 1840), 34, Smithsonian Libraries, Biodiversity Heritage Library. T. R. E. Southwood, "Entomology and Mankind: Insects over the Ages Have Greatly Affected Man's Health and Food Supply and Have Played an Important Role as Religious and Cultural Symbols," *American Scientist* 65, no. 1 (January-February 1977): 31.

2. Southwood, "Entomology and Mankind," 31.

3. Harry B. Weiss, "Two Entomologists of the Eighteenth-Century—Eleazar Albin and Moses Harris," *The Scientific Monthly* 23, no. 6 (December 1926): 561.

4. Southwood, "Entomology and Mankind," 31.

5. Alan Watson Featherstone, "The Life of "Goat Moth" Trees," Ecology, Trees for Life <https://treesforlife.org.uk/forest/forest-ecology/the-life-of-goat-moth-trees/>

6. Sharon Valiant, "Maria Sibylla Merian: Recovering an Eighteenth-Century Legend," *Eighteenth-Century Studies* 26, no. 3 (Spring 1993): 473.

7. Harris, *The Aurelian*, 34.

8. Anne Goldgar, "Nature as Art: The Case of the Tulip," in Pamela Smith and Paula Findlen, *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe*, (New York: Routledge, 2002), 324, 330.

9. Janice Neri, "Conclusion: Discipline and Specimenize," in *The Insect and the Image: Visualizing Nature in Early Modern Europe, 1500-1700* (Minneapolis: University of Minnesota Press, 2011), 185.

10. Weiss, "Two Entomologists," 563.

Catesby's *Natural History*: The Expansion of the Exotic

Emily Roush '21

Mark Catesby was a naturalist, self-taught artist and horticulturist, who was influenced by the work Maria Sibylla Merian. Catesby is best known for *The Natural History of Carolina, Florida, and the Bahama Islands*, a book written after he left England and based on the observations and illustrations of exotic plants and animals from the Americas.¹ Catesby wanted to experience creatures then unknown to him. In 1722, he journeyed to South Carolina, where he documented information about plants, animals, the various climates, soils, habitats, and geology.² His writings were accompanied by illustrations, which because he was a self-taught artist were not as artistically rendered as those of a highly trained artist like Merian.³ Rather, his style can be characterized as whimsical, quirky, and witty, and his works possess remarkable detail and coloring for someone not artistically trained.⁴ In his uniquely charming style, Catesby was inspired by Merian's ecological compositions.

Mark Catesby (English, 1683-1749),
"Corolodendron Anguis," in *The
Natural History of Carolina, Florida, and the
Bahama Islands*

1729-1747, etching, 14 x 20 ¼ in. On loan
from Dr. Kay Etheridge, Professor of Biology,
Gettysburg College



The exhibition features Mark Catesby's "Corolodendron Anguis" from the second volume of *The Natural History of Carolina, Florida, and the Bahama Islands*, published in 1771. Catesby labeled his prints using polynomial names, or a few words to describe the species, which was the common practice before Linnaeus's taxonomy classification system fully was established.⁵ This print's title translates to Corolodendron Snake, the current scientific species being Dekay's brownsnake (*Storeria dekayi*).⁶ What Catesby termed the little bead snake is coiled around the brown root of the coral shrub. Catesby wrote about the snake: "These are always small, seldom appear above ground, but are dug up and found twisting about the roots of shrubs and other plants. All the back and upper part of the body, have transverse spots of brown and white, so disposed as to make some resemblance of a string of beads, which seems to have given its *English* name. It is a

harmless snake."⁷ The coral shrub, also called cardinal-spear or coral bean, is displayed as a single branch broken off at the top.⁸ There are thin red-orange colored buds down both sides of the branch and three green leaves stemming from the branch.

Catesby's book features plants and animals from the New World that were unknown to European audiences and thus attractive to collectors. Sachiko Kusukawa explains, "The development of passion for collecting and the rise of commerce in nature's commodities led to the circulation of a large number of exotic flora and fauna."⁹ Catesby himself stated, "My curiosity was such that not being content with contemplating the products of our own country, I soon imbibed a passionate desire of viewing as well the animal as vegetable productions in their native countries; which were strangers to England."¹⁰

Naturalist and artist Maria Sibylla Merian inspired the compositional style of Mark Catesby. Kay Etheridge explains that, "Prior to Merian, flora and fauna appeared separately for the most part, and few connections were drawn to other organisms in either text or image."¹¹ Catesby combined plants with animals, a composition seen earlier in Merian's *Metamorphosis*; but in Merian's plates, the plants formed the insect's natural habitat.¹² Catesby drew influence from Merian's work, particularly mirroring her ecological layout and life-size creatures.¹³ Yet, his work was more focused on vertebrates, whereas Merian focused mainly on insects with plants.¹⁴ Nonetheless, Merian and Catesby were both highly regarded for their detailed studies of nature and their innovative scientific illustrations.

1. Mark Catesby, *The natural history of Carolina, Florida and the Bahama Islands* (London: Published by the author, 1729-1747). "Mark Catesby," *Virginia Museum of History & Culture*, <https://www.virginiahistory.org/collections-and-resources/virginia-history-explorer/mark-catesby>.

2. David Lih, "Mark Catesby: Pioneering Naturalist, Artist, and Horticulturist," *Arnoldia* 70/3 (February 2013): 30.

3. Ibid.

4. Cynthia P. Neal, "Behind the Scenes: Catesby the Man, Viewed through the Lens of a Camera," in *The Curious Mister Catesby* (Georgia: University of Georgia Press, 2015), 24-25.

5. Ibid., 26.

6. James L. Reveal, "Identification of the Plants and Animals Illustrated by Mark Catesby for *The Natural History of Carolina, Florida, and the Bahama Islands*," in *The Curious Mister Catesby* (Athens, Georgia: University of Georgia Press, 2015), 338.

7. Mark Catesby, *The Natural History of Carolina, Florida, and the Bahama Islands* (1729-1747), 49.

8. Ibid.

9. Sachiko Kusukawa, "The Role of Images in the Development of Renaissance Natural History," *Archives of Natural History* (Edinburgh University Press, 2011), 189.

10. Lih, "Mark Catesby: Pioneering Naturalist, Artist, and Horticulturist," 25.

11. Kay Etheridge, "Maria Sibylla Merian and the Metamorphosis of Natural History," *Endeavour* 35, no. 1, (Elsevier: 2010), 19.

12. Kay Etheridge, "The History and Influence of Maria Sibylla Merian's Bird-Eating Tarantula: Circulating Images and the Production of Natural Knowledge," *Global Scientific Practice in the Age of Revolutions, 1750 - 1850*, Manning and D. Rood, eds. (Pittsburgh: University of Pittsburgh Press, 2016), 65.

13. Kay Etheridge and Florence F.J. M. Pieters, "Maria Sibylla Merian (1647-1717): Pioneering Naturalist, Artist, and Inspiration for Catesby," in *The Curious Mister Catesby* (Athens, Georgia: University of Georgia Press, 2015), 53.

14. Ibid., 55.

Artful Nature and the Legacy of Maria Sibylla Merian

September 4 - November 12, 2019

OPENING RECEPTION:

September 4, 5-7 pm (light refreshments provided)

**GALLERY TALK WITH CURATORS EMILY ROUSH '21
AND SHANNON ZELTMANN '21:**

September 27, noon (light lunch provided)

GALLERY TALK WITH PROF. KAY ETHERIDGE:

October 4, noon (light lunch provided)

Curated by Gettysburg College students Emily Roush '21
and Shannon Zeltmann '21 under the direction of
Prof. Felicia Else and Prof. Kay Etheridge.

This exhibition is made possible by a generous gift by
Betsy and Bruce Stefany '71 and loans from Prof. Kay Etheridge.

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300 North Washington Street, Gettysburg, PA 17325

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Design by Ayumi Yasuda

COVER IMAGE: Maria Sibylla Merian (1647-1717), Plate 33, *Metamorphosis
Insectorum Surinamensium (Metamorphosis of the Insects of Surinam)*, 1705, etching,
13 x 19.5 in., Special Collections and College Archives, Musselman Library.
Purchase made possible by Betsy A. and Bruce R. Stefany '71.

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