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The Wondrous World of Mark Catesby and John Carlyle

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In 1747, the English naturalist, Mark Catesby (b. 1682, d. 1749) completed a series of watercolors which became the single most important reference of the flora and fauna in North America. It was titled *The Natural History of Carolina, Florida, and the Bahama Islands.* His work intended to illustrate and effectively communicate, a meaningful understanding of natural life in the New World. Published, copied, and finally purchased for King George III's natural history collection, Catesby's work offered a picture of the natural world of North America.

American Woodpecker, by Mark Catesby

This article will first explore Mark Catesby and his life and findings. Then it will summarize from John Carlyle's letters and tie these references to Catesby's work. This approach will help to better understand the history of science and the natural world in relation to John Carlyle's life. Most of the material presented here is from three major sources. These sources are listed at the end of the article and may be of future interest to the reader.

Mark Catesby was raised in the town of Sudbury, in Suffolk, East Anglia. He was the fourth child and the youngest son of Elizabeth Jekyll and John Catesby. There is little, if any, evidence that he received a university education, but he had knowledge of Latin. Catesby was probably directed to the study of natural history through his maternal uncle, Nicholas Jekyll. Nicholas Jeckyll had been a colleague of the well-known naturalist John Ray (1627-1705). In order to label the many plants and animals never before seen by Europeans, Ray developed a basic framework for a system of plant classification. In working to publish writings of his colleague and friend, Francis Willoughby (1635-1675), Ray helped to lay down a framework for identifying animals. Catesby used this system to classify the many plants and animals he would find and illustrate. This system, however, would be replaced by the dichotomous system of the celebrated Swedish naturalist, Carolus Linnaeus. In 1758 Linnaeus published the 10th edition of the *Systema Naturae*. In this edition, a two part naming system was established. The purpose of this naming system was to label the confusing and increasing numbers of plants and animals coming from all parts of the world. Russell Peterson, in his forward to *Catesby's Birds of Colonial America*, would explain the ramifications of the different naming systems. For example, Catesby identified and painted "The Largest White-bill Wood-pecker, Picus maximus rostro albo." Linneaus would simplify the name to "Picus principalis." Linneaus received the credit for identifying the bird.

While Catesby would eventually be eclipsed by other naturalists, such as Alexander Wilson and John James Audubon, it should be understood that Catesby killed far less animals, especially birds, to obtain his sketches and watercolors. Some errors on markings of birds such as the American Redstart may have been because he painted the bird from memory upon returning to England.

Catesby's status as an aristocrat would prove to be useful for him. He knew how to handle himself as a

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gentleman, and more importantly, how to secure patrons to fund his expeditions. His sister, Elizabeth, figures prominently in his favorable experiences in Virginia. Elizabeth Catesby, against the will of her father, married Dr. Samuel Cocke, left England to live in Williamsburg, Virginia. Her father, in his family records, refers to Elizabeth as "my disobedient daughter." Elizabeth encouraged her brother to come to Virginia and introduced him to the close-knit and wealthy group of planters and merchants such as John Custis (1678-1749) and William Byrd II (1674-1744). These men became the center of his horticultural and scientific community in North America. With their support, for the next seven years Catesby explored the natural world of Virginia, the Carolinas, and later the Bahamas.

With a Native American guide who carried his supplies, boxes, bottles, and art materials into the wilderness, Catesby sketched and collected as best he could. He collected seeds, plants, and specimens for a number of patrons. These patrons and supporters in England were so excited about some of his specimens that he sketched and collected that they began to impede him in his work of collecting. He had to turn them down in order to continue to make the kinds of collections and drawings he personally sought to produce. Thomas Fairchild (1667-1729) had a nursery at Hoxton, Shoreditch, on the outskirts of London. This nursery became the most well known place to see much of Catesby's collection of plants from North America.

Catesby had strong interests in botany, especially natural resources. He wrote that he "had principally a Regard to Forest-Trees and Shrubs because of their use "in Building, Joynery, and Agriculture in Food and Medicine." (pg. 15, *Mark Catesby's Natural History of America)*. Catesby's curious mind turned to birds as well because he more likely saw them in the trees and plants he was studying and collecting. His keen eye for observation led him to make a major discovery about birds and migration. At this time in history, people believed that birds hibernated in mud or buried themselves at the bottoms of marshes or ponds. But Catesby observed Rice Birds (Bobolinks) eating rice in North Carolina at one time of the year and then later observed the birds eating rice in the south in the Bahamas at another time of the year. This observation led him to propose that birds move or migrate to find the food they need as the seasons change and food becomes scarce.

Upon his return to England, Catesby did not have the funds needed to produce his watercolors. He worked as a horticulturalist and over a period of 11 years painted and produced his watercolors in a subscription series. To economize on paper he attempted to match the birds with the plants where they were observed. He felt they were closely associated with those plants. But he also had an appreciation for birds because he felt "them to be the most numerous and beautiful of living creatures." (*Natural History,* Pg. 15). Catesby, to earn income, worked in Thomas Fairchild's nursery and later in other nurseries. His position as horticulturalist put him in contact with potential subscribers.

In order to finish his project, Catesby relied on drawings by Hans Sloane. Catesby also employed several printmakers and learned how to make the prints himself. Catesby followed an organized methodology for presenting his material, and he borrowed from the sources of naturalists and printmakers. The first 100 etchings would represent birds and often the plants they feed on. The following set of 100 etchings was divided into sections representing fishes, crustaceans, reptiles, amphibiae, mammals, and insects. Plants found in the natural habitats were included, as well.

Catesby carefully sought to gain mastery of his artistic skills to provide real-life renderings of his plants and animals. His best example is the painting of the American Bison, *Bison Americanus, and* the *Pseudo Acacia*. But this painting was based on another work of art by the Dutch artists, Everhard Kick (1636-after 1705), in the collection of Hans Sloane (p. 25, v. 2, *Natural History*). Catesby, as man living in the time of the Enlightenment, combined a curiosity about nature with an open mind about the natural world, and then produced a thorough representation of his explorations.

Bison Americanus and Psuedo Acacia

Although there is no direct connection between Mark Catesby's works and John Carlyle, there are numerous references to natural history in Carlyle's letters. These references coincide in their subject matter with many of Catesby's prints. For example, on February 3, 1745 Carlyle wrote his brother about the following: a type of Mangfold from a deer (a stone with medicinal properties), Indian boots (moccasins), Christell Stones (crystals or gypsum), flowers of Sassafras (Sassafras), and a Buffeloow Cow (Bison). Both Sassafras and Bison are depicted in Mark Catesby's works.

Fieldfare and Snakeroot of Virginia, Mark Catesby

In his August, 1750 letter, John writes about procuring Seneca Rattlesnake Root and Ginseng. Catesby includes in his prints a Whippoorwill under a Ginseng plant. Catesby writes about the "Snake-root of Virginia" "This plant rises out of the ground in one, two, and sometimes three pliant stalks…The usual price of this excellent root, both in Virginia and Carolina, is about six pence a pound when dried, which money hardly earned. Yet the Negro slaves (who only dig it) employ much little time allowed them by their masters in search of it." (p. 102, *Birds of Colonial America*).

Catesby writes much more on the Ginseng plant:

> "Ginseng is the root of a medicinal plant of the highest esteem with the Chinese. The ginseng … is a sovereign remedy for all weaknesses, occasioned by excessive fatigues, either of body or mind; that it attenuates and carries off pituitous humors, cures weakness of the lungs and the pleurisy, stops vomiting, strengthens the stomach, and helps the appetite, disperses fumes or vapors, fortifies the breast, and is a remedy for short and weak breathing, strengthens vital spirits, and is a good against dizziness of the head and dimness of sight, and that it prolongs life to extreme old age." (pp.72 and 73, *Catesby's Birds of Colonial America).*

The plant appears to be a wonder drug of the century. One can understand why John would be intent on sending some to his brother George, a physician.

In his August 4, 1752 letter John Carlyle adds an addendum mentioning that "A Young Doctor in his place has Promised Me his Assistance and you May Expect this Fall to have Sum Specimens So from hence tho' do Ashure you I have not time to make any great Collection Myself". John is trying to collect specimens for his brother who is a doctor but apologizes for not having the time.

On November 12-15, 1752, John wrote to George about sending Myrtle Wax candles "The Bearor Capt. Wilson has a Small box on board Directed to the Care of Mr. Hicks for you it Contains A Small Quantity of Mirtle Wax Candles, which my Wife Desires her Sisters Acceptance of- I have Sent my mother A few Also- They Are A Neat pleasant Candle & what We Make & Use in our familys, They are but a A Small matter Dearer than Tallow Candles." These candles must have been highly prized because they did not drip as much as tallow candles and they had a sweet scent.

Catesby writes in detail about the "Narrow-leaved Candleberry Myrtle" or "Waxmyrtle or candleberry" and gives the following description of how it is harvested:

> "In November and December, at which time the berries are mature, a man and his family will remove from his home to some island or sandbanks near the sea, where these trees most abound, taking with him kettles to boil the berries in. He builds a hut with palmetto leaves, for the shelter of himself and family while they stay, which is commonly three or four weeks.
>
> The man cuts down the trees, while the children strip off the berries into a porridge pot; and having put water to them, they boil them until the oil floats, which is skimmed off into another vessel. This is repeated until there remains no more oil. This, when cold, hardens to the consistence of wax, and is of a dirty green color. Then they boil it again, and clarify it in grass kettles; which gives it a transparent greenness.
> These candles burn a long time, and yield a

> grateful smell. They usually add a fourth part of tallow; which makes them burn clearer." (pg. 80, *Catesby's Birds of Colonial America)*

The detail in which Catesby notes the making of candles reveals how much candles were valued at the time. John Carlyle's gift was a precious one.

Red-Winged Starling on a Broad Leaved Candle-Berry Myrtle

On August 21, 1769, George Carlyle wrote to his brother John in America that his ten year old son, Joseph Dacre Carlyle, was "assiduous now collecting Birds & preserving them goes on with his studies assisted by Tom…" And so, John Carlyle is aware of the activities of his nephew, his cousins, his relatives and those of his acquaintances. Although he is a busy man, consumed with the financial activities of his projects, Carlyle shows an interest in the natural world.

Through John Carlyle's letters we have an opportunity to explore some of the thinking around natural history and the flora and fauna of the time. We see in Catesby's writings and John Carlyle's letters that a whole world of trade, exploration, and new information from many different parts of the world was opening up. And that many people were actively interested in finding out new information for many reasons. Some of these reasons could simply be to help a brother improve his practice as a doctor or it may be out of appreciation for the beauty of birds and plants. Whatever the reason, in this time of the Enlightenment, one observes an open curiosity toward the natural world.

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