The North American Experience:

Early America Illustrated

Rare Books Exhibit

at the

Lloyd Library and Museum

Exhibition Dates:

March 25, 2013

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June 21, 2013

Exhibit Catalog

Lloyd Library and Museum
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Cincinnati, Ohio 45202
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Exhibit curator:

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On the cover, Plate 57, volume 1, showing the Crested Titmouse, from Mark Catesby's *Natural History of Carolina, Florida, and the Bahama Islands*. (see item 1 of the catalog for a complete publication listing).

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Introduction

What we collectively know about the flora and fauna of the New World is largely the result of the words and illustrations provided by some of its earliest explorers. Some of the drawings were quite primitive, others converted into more detailed etchings that would capture the minutest aspects of (to these new North American inhabitants) previously unknown flowers and trees, animals and insects.

North America had been the home of Native American tribal peoples for centuries, having likely arrived here from somewhere in Asia anywhere from 40,000 to 17,000 years ago. They knew select regions of the continent quite well, but were mostly reluctant to interact with the new European explorers and were not a print-culture people. There are many debates about when Europeans first discovered the New World, but certainly successful colonization of North America began in the earliest years of the 1600s. As expected, the first settlements were along the coastal regions and it took many more decades before they made forays into the interior.

Mark Catesby was the first to publish a natural history of North America (first part issued in 1729). He was followed by many others, including François André Michaux, William P. C. Barton, Pehr Kalm, C. S. Rafinesque, and John James Audubon. And, while their writings about what they encountered here was infinitely important (Michaux's work, for example, would be used to start the National Forest Service), what sticks in the mind's eye are the numerous illustrations that, in an age without photography, are a colorful window into what was then a strange new world.



Books on Display
(in order of appearance—22 titles)

18th Century

1. Mark Catesby. *The Natural History of Carolina, Florida, and the Bahama Islands...* London: Printed at the expence [sic] of the author, and sold by W. Innys and R. Manby ... and by Mr. Hauksbee ... and by the author, 1731-1743.



While not the first to publish a natural history of the New World, English-born Mark Catesby (1683-1749) was the first to publish such a work on North America. It appeared in parts, beginning in 1731, with the last part issued in 1747. The Lloyd copy is from the first edition, of which there were only 160 copies.

At left, "The Little White Heron," plate 77, volume 1.

The Natural History of Carolina, Florida and the Bahama Islands contains 220 hand-colored, copper-plate engravings depicting the flora and fauna of North America. The original drawings for the plates were made on Catesby's second trip to Colonial America from England (1722-1726), a journey which he made on behalf of the Royal Society. Catesby was commissioned to collect plant and animal specimens, which were to be sent to Hans Sloane and William Sherard in London. Upon his return, he spent the next several years preparing his work for publication, including learning how to etch, as he could not afford to pay for an etcher.

Catesby introduced many unique, never-before-seen plants and animals to an interested European audience. In researching and producing these volumes, he accomplished many firsts:

- One of the first to draw animals while alive (rather than killing and posing them)
- One of the first to place animals alongside the plants found in their natural habitat.
- One of the first to suggest that birds migrate (rather than fly out of the atmosphere or hide in caves)
- One of the first to connect habitat destruction to species extinction

2. Charles Plumier. *Plantarum Americanum fasciculus primus [-decimus]...* Amstelaedami: Sumtibus Auctoris, Prostant in Horto Medico..., 1755-1760.

Plumier (1646-1704) was a French botanist and the man for whom the tropical *Plumeria*, famously used in lei making, is named. As a monk, he first studied mathematics and physics, but took up botany at the French monastery of Trinità dei Monti in Rome. Once back in France, Plumier became a student of the famed botanist Joseph Pitton de Tournefort and was able to travel on botanical expeditions with him. Plumier made many other expeditions, including three lengthy trips to the New World. The result of these excursions was several volumes on American botany.



At right, plate 29, *Plumeria.*

Plumier died prematurely from pleurisy and left behind thousands of drawings, mostly of plants, but also including animals, and thirty-one manuscript volumes of notes and descriptions. Some of these were published posthumously, as is the case with the volume on display here. Herman Boerhaave had 508 drawings by Plumier reproduced in Paris, and these were published in dedication to Plumier by Johannes Burman.

3. Antoine-Simon le Page du Pratz. *Histoire de la Louisiane...* A Paris: Chez de Bure: La veuve Delaguette: Lambert, 1758.

Le Page du Pratz (1695?-1775) was a French ethnographer, historian, and naturalist best known for his history of Louisiana. This was first published serially in the *Journal Economique* from 1751-53. The full 3-volume set was published in 1758. An English translation appeared in 1763. The work is based on Le Page's own experiences, as he lived in both Louisiana and Mississippi from 1718 to 1734.

The book is invaluable as an accounting of the native populations in the Louisiana territory, their interactions with Europeans, as well as their way of life. As such, it was included in the guide books that Lewis and Clark took with them on their Expedition westward.

4. Pehr Kalm. *Travels into North America...* Warrington: Printed by W. Eyres, 1770-1771.

Kalm (1716-1779) was a Swedish-Finnish explorer, botanist, and naturalist. He was one of Linnaeus' most important students and is credited with the first real scientific description of Niagara Falls. Kalm became the superintendent of an experimental station in Sweden and did field research in Sweden, Russia, and the Ukraine. As a member of the Royal Swedish Academy of Sciences, he travelled to America to find seeds and plants that might be agriculturally useful in Sweden. While in Philadelphia, Kalm was befriended by Benjamin Franklin and John Bartram, the first American botanist to follow the Linnean system.



Kalm's work continues to be important for its description of colonial life, as well as for the depictions and descriptions of new species and places. Seen at right is plate 2 showing the raccoon and American pole cat.

5. Jonathan Carver. *Travels through the interior parts of North America, in the years 1766, 1767, and 1768.* Paris: Pissot, 1784.

Carver (1710-1780) was a Massachusetts-born explorer, writer, and shoemaker. He learned map-making and surveying while serving in the colonial militia and went on to lead an expedition westward in search of a water route to the Pacific, namely the Northwest Passage. He ultimately believed that he had found such a route, but when he petitioned the English government for payment, they refused payment saying that Carver's sponsor, a Robert Rogers (who was a Royal Governor of the colonies) was not authorized to contract with Carver for such an expedition. Carver spent the last decade of his life in England trying to get payment.

In the meantime, Carver did publish a book based on the expedition and it was an immediate success. It has been published in over 30 editions and in many languages. Carver was the first English-speaking explorer west of the upper-Mississippi and so it was invaluable to later English explorers.

6. Friedrich Adam Julius von Wangenheim. *Beytrag zur teutschen holzgerechten Forstwissenschaft...* Gottingen: J.C. Dieterich, 1787.

Wangenheim (1749-1800) was a German botanist specializing in forestry. As a Hessian soldier, he was doing service in the British North American colonies and spent his free time studying the forests around his post, becoming an expert on many species of trees and shrubs of the continent, which he ultimately recommended for importation into Germany. In the late 18th century, Wangenheim was made Director General of the Waters and Forests of East Prussia, and in that post conducted many experiments on American trees which had been planted there on his orders.

7. William Bartram. *Travels through North & South Carolina, Georgia, east & west Florida, the Cherokee country...* Dublin: For J. Moore, W. Jones, R. McAllister, and J. Rice, 1793.

Famed American naturalist, William Bartram (1739-1823), was the son of equally famous John Bartram, a botanist and naturalist. William accompanied his father on many of his expeditions and by the time he was a teenager had become a skilled illustrator of botanical and ornithological specimens. In 1773, he went on his own expedition to the southern colonies, making drawings, taking notes, and becoming acquainted with the native peoples of the area.

He returned to Philadelphia, the city where the Bartram family was based, in 1777, but did not complete his book on his travels until the late 1780s. It had a significant impact on the romantic writers of the early 19th century, as Bartram's narrative descriptions of the landscape were quite poignant. More direct influence in scientific fields can be seen in his tutoring of Alexander Wilson, who Bartram taught ornithological and natural history illustration. However, Bartram's primary responsibility was to tend and manage Bartram's Garden in Philadelphia, where he died in 1823.

8. Nikolaus Joseph Freiherr von Jacquin. *Icones selectarum stirpium Americanum.* Viennae: Apud A. Blumauer 1797.

Baron von Jacquin (1727-1817) was born in the Netherlands and studied medicine at Leiden University. He expanded his studies to include chemistry and botany. Between 1755 and 1759, at the command of the Austrian Emperor Francis I, Jacquin visited the West Indies and Central America to collect plants for the Schönbrunn Palace. The collection

eventually contained plants, animals and mineral samples.



Shown here is the beautifully illustrated title page.

19th Century

9. André Michaux. Histoire des Chênes de l'Amérique... A Paris: Smithsonian InsDe l'Impr. de Crapelet, an IX-1801.

André Michaux (1746-1802) was a French botanist and explorer, as well as the father of François André Michaux, also a botanist. He was sent on botanical expeditions a few times by the French government and came to the United States in 1785 with his son on one such mission—his task was to investigate plants that could be useful to the French for building and carpentry, as well as for medicine and pasturing. They travelled through the United States, Canada, and Nova Scotia. Michaux established a botanical garden in 1786 near Charleston, South Carolina, and a little later one in New Jersey.

Michaux sent some 90 cases of plants back to France and was also responsible for introducing some European species to the Americas, including crepe myrtle and ginkgo. While in the United States, Michaux lost his funding from France because of their Revolution, but his support was picked up by the American Philosophical Society, and Michaux was commissioned by President Jefferson to conduct a westward expedition. Unfortunately, he was suspected of spying for the French and was ultimately asked to leave the country.

On an 1800 expedition from France headed to Australia, Michaux asked to be let off in Mauritius and from there travelled to Madagascar. He contracted a tropical fever and died there. He has been memorialized through the naming of plants after him (Lilium michauxii and Saxifraga michauxii) and the naming of two natural reserves, the Michaux State Forest in Pennsylvania and the André-Michaux Ecological Reserve in Quebec, Canada.

10. François André Michaux. *Histoire des arbres forestiers de l'Amerique septentrionale...* Paris: De l'Imprimerie de L. Haussmann et d'Hautel, [1810-1813].

Michaux (1770-1855) was a French botanist and the only son of André Michaux, also a botanist. The younger Michaux moved to the United States in 1785 with his father, who was supposed to establish a botanical nursery to grow trees to ship back to France. Both were fond of exploration and the son took advantage of his situation and did extensive botanical exploration of the Tennessee Valley, Florida, and even the Bahamas.

Combining his discoveries with his father's, Michaux produced the *Histoire des arbres forestier...*, or what came to be known as *The North American Sylva*. This is arguably the most important 19th century work on American trees, information from which was used to help start the American Forest Service. It was first published in French, later in English. Michaux gives accounts of the distribution and scientific classification of the timber trees of America all the way from northern Mexico to just east of the Rocky Mountains. The artwork is notable because much of it was completed by Pierre-Joseph Redouté (one of the most accomplished 19th century French botanical illustrators), with other work done by Henri Redouté (Pierre's brother) and Pancrace Bessa.

Though Michaux continued for several years to travel back and forth between France and the United States, he eventually settled down in France where he administered an estate owned by the Société Centrale de l'Agriculture. He was eventually awarded the title of Chevalier of the Legion of Honor. Michaux died in October 1855.



Shown is the American Holly, volume 2, plate 2.

11. François André Michaux. *The North American Sylva...* Philadelphia: Sold by T. Dobson 1817.

This is the first English edition of Michaux's seminal work on American

timber trees. It was translated by Augustus L. Hillhouse, an American living in Paris. It has been republished on at least two occasions: once in 1852 with no changes, and again in 1853, this time with an additional 121 colored plates and including trees of the Rockies and Pacific Coast, which were added by Thomas Nuttall, a well-known English botanist, who lived for about three decades in North America.

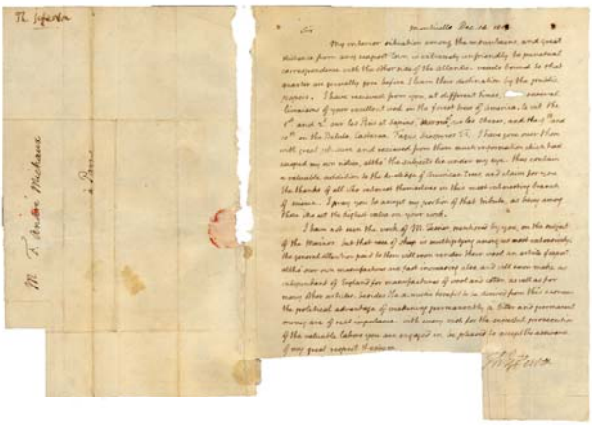


Shown is the Hemlock Spruce, volulme 3, palte 149.

12. Thomas Jefferson. Letter dated December 14, 1813 addressed to François André Michaux

Jefferson (1743-1826) was the third United States President, a Founding Father, and a leader of the Enlightenment, as well as founder of University of Virginia. He held many interests, including architecture, philosophy, and farming. As President, Jefferson purchased the Louisiana Territory, called for the Lewis & Clark Expedition, and was supportive of other such exploratory missions.

This letter to Michaux praises him for his latest publication and discusses the exportation of wool and cotton, among other topics. It was found inside a volume of Michaux's *North American Sylva*, which was purchased in Paris for the Library.



13. W. J. Titford. *Sketches toward a Hortus Botanicus Americanus...* London: Printed for the author by C. Stower, 1811.

William Jowett Titford (1784-1823/7?) was an English accountant born in Jamaica and raised in England by his uncle. Despite his training in

business, he had a strong interest in botany and travelled extensively, with the *Sketches...* being the result of his collecting and observation. Titford had other scientific interests, especially questions involving determining latitude while at sea, but the *Sketches...* was his only scientific publication, which was sold by subscription. There were 175 original subscribers, but as of the late 20th century, there were only 42 known complete copies of it.

14. William P. C. Barton. *A Flora of North America...* Washington: Smithsonian Institution, 1852-1858.

William Paul Crillon Barton (1786-1856) was born in Philadelphia and had a varied career as a medical botanist, physician, professor, naval surgeon, and botanical illustrator. His dissertation concerned the use of laughing gas, which at the time was considered useless but which subsequently became a standard. As a member of the naval medical team, Barton is known for introducing the use of lemons and limes aboard ships to prevent scurvy long before it was official policy. He was also asked to write a set of standards for the operation of naval hospitals in 1811 when they were first established by the U.S. Congress. Barton was also the first to promote the hiring of female nurses in the Navy.

As a botanist, Barton's career began largely in 1815 when he began teaching medical botany at the University of Pennsylvania and the Thomas Jefferson Medical College, a post he took over upon the death of his uncle, Benjamin Smith Barton.



At left, volume 1, plate 29, *Aeschynomene hispidai*

Barton's active life was rounded out by his other professional affiliations. He was a fellow of the College of Physicians in Philadelphia, president of the Linnaean Society, a member of the American Philosophical Society, and many other scientific groups.

15. Thomas Say. *American Entomology...* Philadelphia: Philadelphia Museum, by Samuel Augustus Mitchell, 1824-1828.

Say (1787-1834) was an American naturalist and entomologist, with experience in several other related fields. He is considered by some the father of descriptive entomology in the United States and was a founding member of the Entomological Society of America. Philadelphia-born Say was the great-grandson of John Bartram and great-nephew of William Bartram, the man who is most responsible for teaching him about natural history.

Say began work on his *American Entomology* while at the Academy of Natural Sciences of Philadelphia, an institution which he helped start. He collected specimens on expeditions to the frontier areas, a dangerous task at times because of the terrain as well as unsettled relations between the Native Americans and European settlers.

Say and his wife, Lucy Way Sistare (an artist and natural history illustrator) settled in New Harmony, Indiana, where Say completed his work on entomology. Coincidentally, Say made the acquaintance of C.S. Rafinesque there. Say died at New Harmony in 1834 from typhoid fever. By his death, he had described over 1000 new beetle species and 400 other insects. Several taxa bear his name.

16. John James Audubon. *The Birds of America.* [reproduction—original publication date, 1827-1838] New York: American Heritage Publishing Co., 1966.

Audubon (1785-1851) is one of the most famous American naturalists. Born in what is now Haiti, the illegitimate son of Lt. Jean Audubon, a French naval officer, and his mistress, Jeanne Rabine, a chambermaid, Jean (as he was named) was eventually raised in France by his father's wife, Anne. In 1803, at the age of 18, Jean Audubon boarded a ship bound for America, changed his name to John James Audubon, and eventually settled in at Mill Grove, Pennsylvania, where the Audubon family held a farm.

Audubon ultimately moved to Kentucky, where he set up a trading business with points further west, along with a general store. At about this same time, Audubon, who had a lifelong fascination with birds and the natural world, began a study of American birds. He was particularly interested in depicting them more realistically than was common, and

started drawing and painting a variety of birds, as well as recording their behavior. As part of that project, he began the first bird-banding project in North America when he tied some yarn to the legs of Eastern Phoebes to determine if they came back to the same nesting spots each year. He even began his own nature museum, which was filled with birds' eggs, stuffed smaller animals, such as raccoons and possums, fish, snakes, and a variety of other creatures.

Audubon made many trips up and down the Ohio River, became familiar with several Native American groups, writing about his encounters, the natural world around him, and continuing his pursuit of birds, both in life and on the page. By about 1820 he had committed himself to finding and painting all the birds of North America. By 1824 he was ready to publish, but rebuffed by Philadelphia publishers. Audubon eventually went to England with his work (in 1826) and the roughly 700 plates of North American birds was printed there over an 11 year period. It cost the equivalent of about $2 million to print.

17. C. S. Rafinesque. *Medical Flora: or, Manual of the Medical Botany of the United States...* Philadelphia: Atkinson & Alexander, 1828-1830.

Constantine Samuel Rafinesque (1783-1840) was a 19th century scientist who contributed widely to the areas of botany, zoology, linguistics, and archaeology of North America. Born in Constantinople of French and German descent, Rafinesque first came to the United States in 1802, traveling through Pennsylvania and Delaware. After a brief return to Europe, he came back in 1815, first settling in New York, where he was a founding member of the Lyceum of Natural History. Later, he became a professor of botany at Transylvania University in Lexington, Kentucky. While there, he began recording information about all the plants and animals he encountered, an endeavor he continued even after he left Transylvania. By his death, Rafinesque had published nearly 7000 binomial plant names.

18. Maximillian von Wied. *Reise in das innere Nord-America in den Jahren 1832 bis 1834.* Coblenz: J. Hoelscher, 1839-1841.

Prince Alexander Philipp Maximilian zu Wied-Neuwied (1782-1867) was a German explorer, ethnologist and naturalist. He made a major expedition to Brazil in 1815, for which he became well-known. The volume on display was based on an 1832 trip to the American Great Plains. The Swiss painter Karl Bodmer travelled with him on the jour-

ney up the Missouri River. Wied was very sympathetic to the Native American tribes he encountered, and he quite accurately described their lives, artifacts, and customs. Some of Bodmer's paintings were adapted to engravings for Wied's book.

19. Asa Gray. *Chloris Boreali-Americana: illustrations of new, rare, or other-wise interesting North American plants.* Cambridge: Metcalf and Co., 1846.

Asa Gray (1810-1888) is considered by many the most important American botanist of the 19th century. He was a moving force in unifying the taxonomic knowledge of the plants of North America and his *Manual of Botany* remains a standard in the field. The donation of his plants and books to Harvard essentially created the botany department there. Gray travelled extensively, especially in western America, and collected plant specimens wherever he went.

Gray's importance continues to be recognized by professional botanists. The Asa Gray Award is the highest award of the American Society of Plant Taxonomists. And, there are several gardens, buildings, and other entities named for him.

20. Asa B. Strong. *The American Flora...* New York: Strong and Burdick, 1847.

Asa B. Strong (exact dates unknown) was an American physician and one of the most popular illustrators of the nineteenth century.



Shown is *Citrus aurantium*, volume 1, plate 131.

21. William H. Harvey. *Nereis Boreali-Americana...* Washington:

Smithsonian Institution, 1852-1858.

William Henry Harvey (1811-1866) was an Irish-born botanist who specialized in algae, becoming an authority on both algae and mosses. He was curator of the Trinity College Herbarium and Professor of Botany of the Royal Dublin Society. Harvey described more than 750 species and 75+ genera of algae.

His two volume *Nereis Boreali-Americana* is a survey of the marine algae of North America and constitutes one of the earliest attempts to catalog the algae of the oceans associated with this continent.

22. Louis Agassiz. *Contributions to the Natural History of the United States of America.* Boston: Little, Brown and Company, 1857-1862.

Agassiz (1807-1873) was born in Fribourg, Switzerland. His career was spent on paleontology, geology, and glaciology. The bulk of Agassiz' work centered on questions relating to the age of the earth, and he was the first person to propose that the earth had undergone an "ice age." Agassiz eventually moved to Paris, where he worked with Alexander von Humboldt and Georges Cuvier.

He eventually moved to the United States, where he took a position at Harvard University and founded the Museum of Comparative Zoology. His work was well-known, even amongst the general public, making him one of the best-known scientists of the time. He is also well-known among scientific circles as being in opposition to Charles Darwin and his ideas of evolution and adaptation.

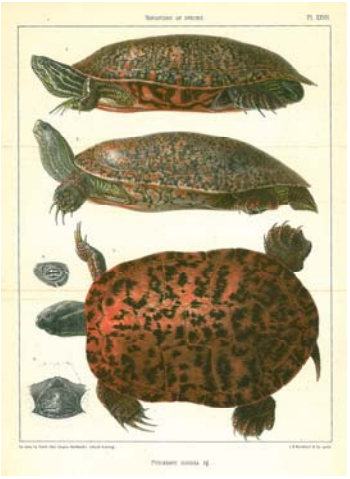


Plate 27 is displayed, depicting variations of the species *Ptychemys rugosa*.

— finis —