




CROSS POLLINATION

HEADE, COLE, CHURCH, AND
OUR CONTEMPORARY MOMENT







This catalogue is published on the occasion of
CROSS POLLINATION:
Heade, Cole, Church, and Our Contemporary Moment,
an exhibition that was created by
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The Olana Partnership at Olana State Historic Site,
and Crystal Bridges Museum of American Art.
Its tour is organized by Crystal Bridges.

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FRONT COVER, PAGE 2: Martin Johnson Heade, *Hooded Visorbearer* (detail), ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.93. Photograph by Dwight Primiano.

FRONT COVER, PAGE 3: Jeffrey Gibson, *Camouflage*, 2004, oil and pigmented silicone on board, 30 x 31 in. Collection of David and Judy Goldis.

PAGE 4: Martin Johnson Heade, *Study of Varied Flowers with a Hummingbird* (detail), ca. 1870, oil and pencil on canvas, 17 x 21 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2007.205. Photograph by Dwight Primiano.

CONTENTS

Directors' Forewords

ELIZABETH JACKS, SEAN E. SAWYER, ROD BIGELOW

4

PLATES

The Gems of Brazil

MARTIN JOHNSON HEADE

7

"A Reflex of the Whole": Thinking about Cross Pollination through Art and Science

KATE MENCONERI + JULIA B. ROSENBAUM

25

Martin Johnson Heade's *The Gems of Brazil* and the Demands of Art and Science

MINDY N. BESAW

45

Artistic Exchange and Dissent: Heade, Cole, Church, and Their Descendants

WILLIAM L. COLEMAN

51

Acknowledgments

60

THOMAS COLE NATIONAL HISTORIC SITE
THE OLANA PARTNERSHIP AT OLANA STATE HISTORIC SITE
AND CRYSTAL BRIDGES MUSEUM OF AMERICAN ART



DIRECTOR'S FOREWORD

ELIZABETH JACKS

Executive Director

Thomas Cole National Historic Site



1815 Main House. Photograph by Escape Brooklyn.



Thomas Cole National Historic Site campus and the Hudson River. Photograph by Devin Pickering.

DURING A TIME when the issues that divide our society seem to drown out the goals and interests that we share, the ideas behind *Cross Pollination* serve as a counter argument: that by interacting with diverse factions and welcoming diverse viewpoints we are strengthened. At the Thomas Cole National Historic Site, we believe that an understanding of history is critical to understanding our own time and that nineteenth-century landscape paintings provide an opportunity for the public to engage with a story that sheds light on key issues—such as our stewardship of the land—that are debated both locally and nationally today.

In 1825, Thomas Cole boarded a steamship in New York City and traveled up the Hudson River to the town of Catskill, New York, seeking wild and sublime scenery in the newly famous Hudson Valley and Catskill Mountains. In the years that followed, Cole was dismayed and angered by the destruction of the area's astounding beauty, caused by what he called "a meager utilitarianism." In his influential "Essay on American Scenery," he wrote: "I cannot but express my sorrow that the beauty of such landscapes are quickly passing away—the ravages of the axe are daily increasing—the most noble scenes are made desolate, and oftentimes with a wantonness and barbarism scarcely credible in a civilized nation."

After drawing his inspiration from nature, Cole returned to his studio, where he composed large-scale landscapes infused with awe for the grandeur he had seen. The resulting paintings, in fully capturing the wonder of America's majestic wilderness, were at once artistically and culturally transformative. In these seminal works Cole redefined the style, themes, and methods of American painting, marking a new beginning in this country's illustrious cultural history. By the 1840s, Cole was joined by his student Frederic Edwin Church, who was a friend to Martin Johnson Heade, and hundreds of artists followed suit. Through his paintings, writings, and influence on generations of artists that followed, Cole had launched the first major American art movement, now known as the Hudson River School. Through this progression, American art traces its roots to this very place, Thomas Cole's home in Catskill, New York.

As the place where American art was born, the Thomas Cole National Historic Site has been organizing and presenting exhibitions of American landscape painting since 2004 and has been creating traveling exhibitions to share with other museums since 2013. Continuing the important work that Thomas Cole began as a mentor and leader, the Thomas Cole Historic Site serves as a catalyst for advancing the conversation in American art. *Cross Pollination* began as a conversation between many great minds and creative people, embodying the spirit of "cross-pollination" in its very genesis. It is our hope that this ambitious project will contribute to a renewed openness to a diversity of ideas and unexpected sources of inspiration.

DIRECTOR'S FOREWORD

SEAN E. SAWYER, PHD

Washburn & Susan Oberwager President
The Olana Partnership

We are having splendid Meteoric displays—Magnificent sunsets and Auroras—red, green, yellow, and blue . . . in profusion. I have actually been drawn away from my usual steady devotion to the new house to sketch some of the fine things hung in the sky.

—Frederic Edwin Church to Martin Johnson Heade, October 24, 1870¹



ABOVE: View of the Main House at Olana from the Summer House location. Photograph by Beth Schneck.

BELOW: Panoramic view of Olana from Blue Hill to the Rip Van Winkle Bridge. Photograph by Beth Schneck.

FREDERIC CHURCH'S LETTER to Martin Johnson Heade reveals the close artistic bond between the two painters. Church's rhapsody over the chromatic effusion of the autumn skies at Olana, his 250-acre estate in Hudson, New York, could equally have given voice to Heade's mania for the iridescence of South American hummingbirds. Both men were driven to express their wonder at the aesthetic splendor of the natural world while inspired by the expansion of scientific inquiry and participating in an art market fueled by industry's global exploitation of natural resources.²

Cross Pollination: Heade, Cole, Church, and Our Contemporary Moment has this fascinating web of interrelationships between Heade and Church and Church's seminal mentor, Thomas Cole, at its core. It draws upon the richness of Olana's collections, the most intact of any artist's home in the country, and on Church's lifelong

quest to forge a triad of art, nature, and science that has its greatest expression in his creation of Olana as a holistic work of art, architecture, and landscape. Olana's artist-designed environment is the superlative work of artistic cross-pollination.

In Church's lifetime, his home was also an epicenter of the contemporary art world, and The Olana Partnership is committed to connecting Church's work with that of artists today for whom the intersection of art, nature, and science is an ever-more urgent focus. This is the purpose of our Novak-Ferber Exhibitions Fund, established in 2017, which has supported the inclusion of contemporary work in the exhibition at what is now Olana State Historic Site.

This exhibition evolved out of our organization's enduring partnership with the Thomas Cole National Historic Site and our mutual commitment to build on the success of our first major joint exhibition, *River Crossings: Contemporary Art Comes Home*, of 2015, by mounting quinquennial joint exhibitions. This cultural and economic development project has been manifested by the opening, in 2019, of the Hudson River Skywalk, the pedestrian connection between the Cole site and Olana via the Rip Van Winkle Bridge. Visitors to our sites can now walk in the artists' footsteps, and it is our hope that this exhibition encourages them to move from aesthetic reverie to an appreciation for the fragile web of relationships that sustain our environment.

NOTES

- 1 Martin Johnson Heade papers, 1853–1904, Archives of American Art, Smithsonian Institution.
- 2 Church corresponded with Professor Ogden Rood, chair of the Physics Department at Columbia University and pioneer of optics and color theory, whose *Modern Chromatics, with Applications to Art and Industry* (1879) followed his lectures at the National Academy of Design in 1874. Rood's work is said to have influenced the rising generation of painters and Georges-Pierre Seurat, in particular.



DIRECTOR'S FOREWORD

ROD BIGELOW

Executive Director and Chief Diversity & Inclusion Officer
Crystal Bridges Museum of American Art



Panoramic view of Crystal Bridges Museum of American Art.



View of Town Branch Creek and south side of Crystal Bridges.

THE SIXTEEN PAINTINGS from *The Gems of Brazil* series by Martin Johnson Heade are a highlight of the Crystal Bridges Museum's collection. Our visitors marvel at the glimmering iridescence of the hummingbirds and butterflies and the way Heade conveys the physical characteristics and habitats of the delicate birds. Despite their intimate scale, *The Gems of Brazil* paintings are arresting, inspiring awe and wonder for our natural world. As the centerpiece of *Cross Pollination: Heade, Cole, Church, and Our Contemporary Moment*, Heade's series prompts consideration of cultural and artistic influence and exchange, interconnections between art and science, and the ways art has inspired advocacy for nature from the nineteenth century to today.

We are thrilled to collaborate with The Olana Partnership, the Thomas Cole National Historic Site, and Art Bridges to create this exhibition. It is exciting to see Heade's paintings together with artwork by fellow artists and kindred spirits Frederic Edwin Church and Thomas Cole, their daughters Isabel Charlotte Church and Emily Cole, and contemporary artists including Flora C. Mace, Patrick Jacobs, and Richard Estes—whose work also comes from the Crystal Bridges Museum's collection. This artistic dedication to nature deeply resonates with the Crystal Bridges Museum's mission and vision. At Crystal Bridges, nature, art, and architecture are inseparable. The unique museum building, designed by acclaimed architect Moshe Safdie, is nestled amidst miles of trails in 120 acres of Ozark woods. The lush natural setting of the landscape shapes our experience of viewing and appreciating the art, indoors and outside. In turn, the artwork inspires visitors to see nature and our surroundings in a new way.

We are dedicated to American art from the time of ancient Mississippian cultures to the present. We acknowledge and pay respect to Indigenous peoples past, present, and future, and to the ancestral lands and waters that support Crystal Bridges and all of us. We are honored to be good stewards of the land and nature, and to use art to inspire stewardship of nature broadly.

to poetic feeling they have
a singularly fascinating
THE GEMS OF BRAZIL

MARTIN JOHNSON HEADE

power, which the subtlest
Mind is unable to explain,
but which all who have
studied them must
acknowledge to have felt.

Of all Naturalists
Audubon has written



PLATE 1. Martin Johnson Heade, *Ruby-Topaz*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.81. Photograph by Dwight Primiano.



PLATE 2. Martin Johnson Heade, *Hooded Visorbearer*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.93. Photograph by Dwight Primiano.



PLATE 3. Martin Johnson Heade, *Tufted Coquette*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.86. Photograph by Dwight Primiano.



PLATE 4. Martin Johnson Heade, *Frilled Coquette*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.85. Photograph by Dwight Primiano.



PLATE 5. Martin Johnson Heade, *Black-breasted Plovercrest*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.87. Photograph by Dwight Primiano.



PLATE 6. Martin Johnson Heade, *Fork-tailed Woodnymph*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.88. Photograph by Dwight Primiano.

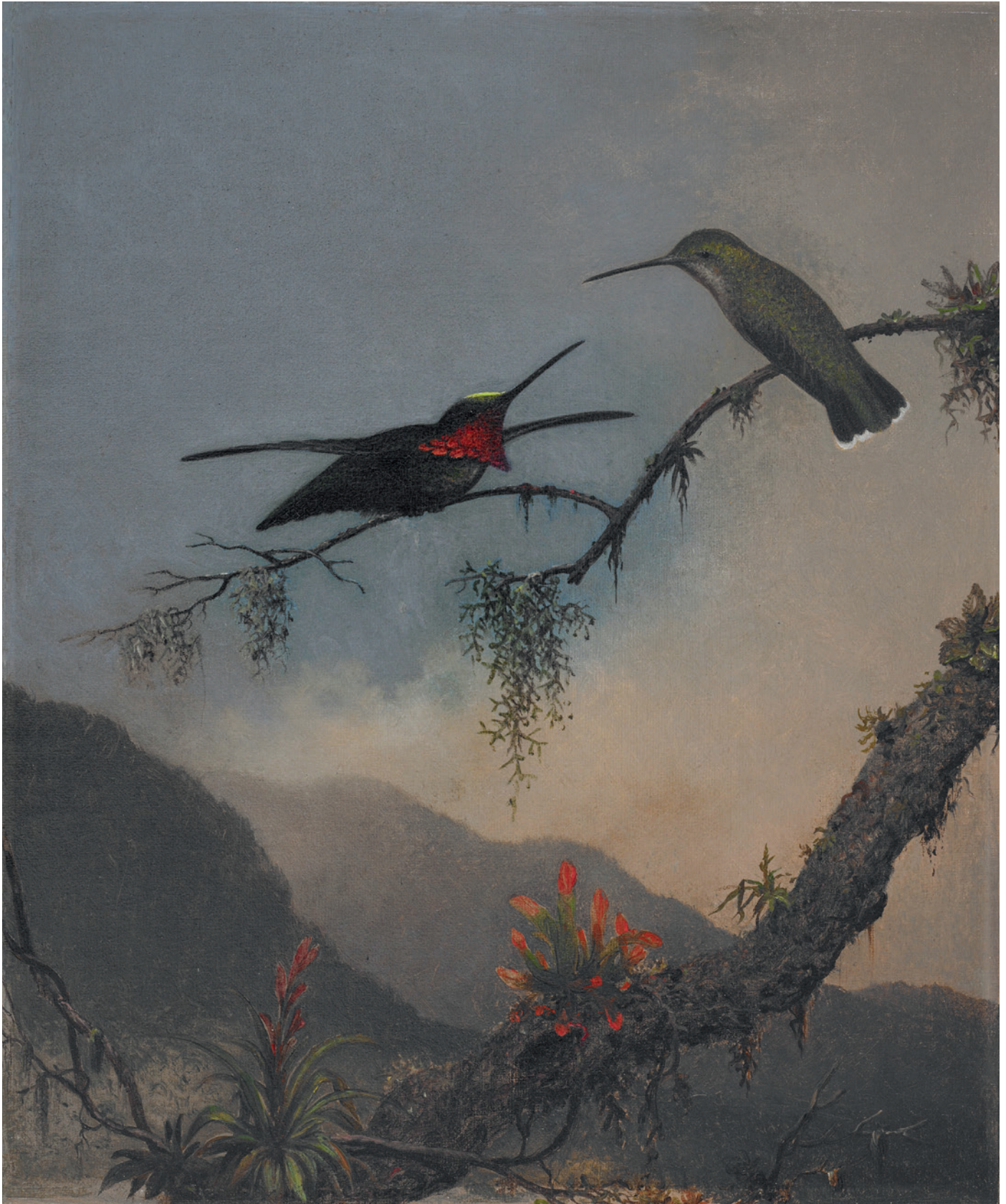


PLATE 7. Martin Johnson Heade, *Stripe-breasted Starthroat*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.95. Photograph by Dwight Primiano.



PLATE 8. Martin Johnson Heade, *Ruby-throated Hummingbird*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.91. Photograph by Dwight Primiano.



PLATE 9. Martin Johnson Heade, *Brazilian Ruby*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.82. Photograph by Dwight Primiano.



PLATE 10. Martin Johnson Heade, *Crimson Topaz*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.94. Photograph by Dwight Primiano.

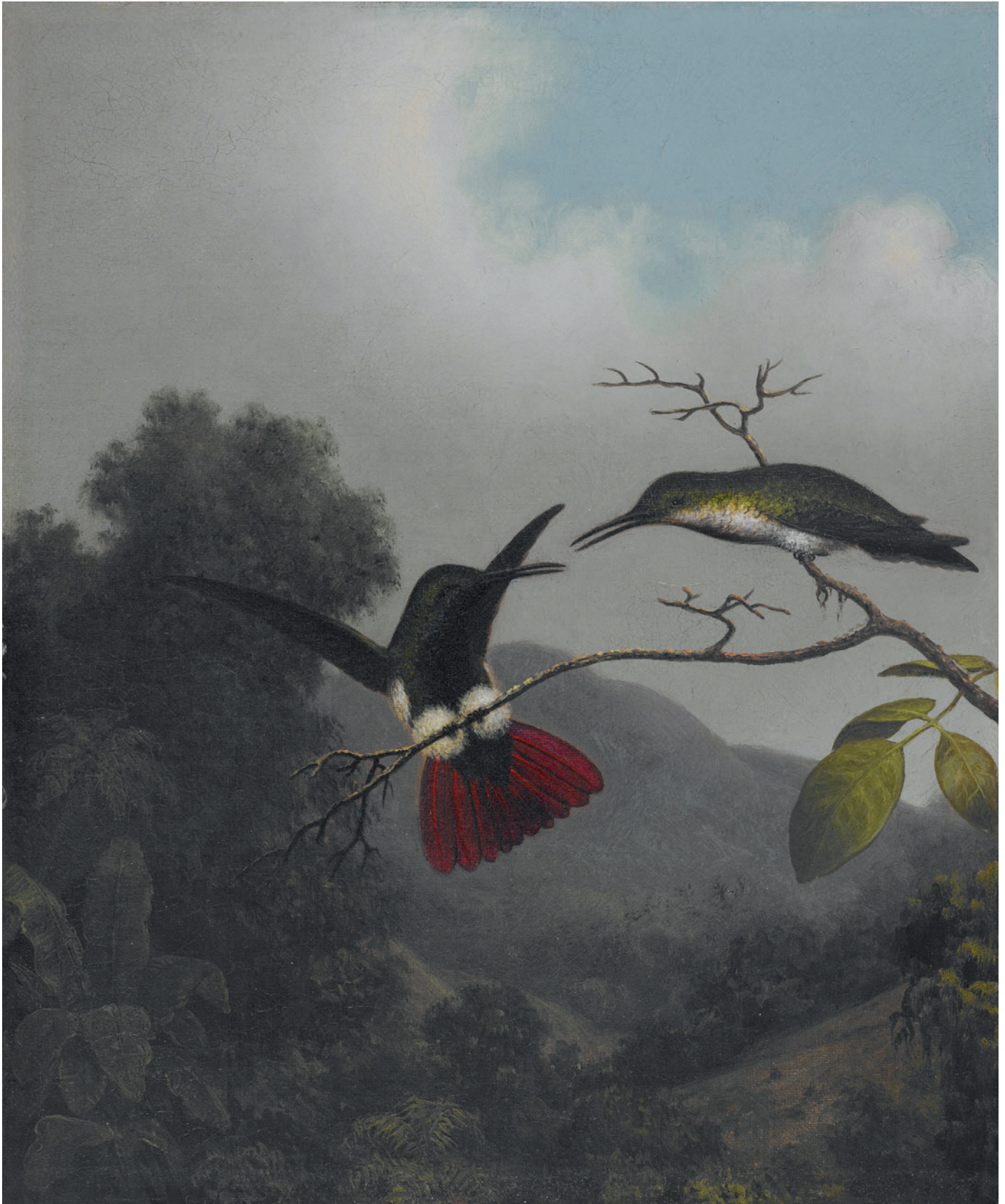


PLATE 11. Martin Johnson Heade, *Black-throated Mango*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.83. Photograph by Dwight Primiano.



PLATE 12. Martin Johnson Heade, *Snowcap*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.96. Photograph by Dwight Primiano.



PLATE 13. Martin Johnson Heade, *White-vented Violet-ear*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.90. Photograph by Dwight Primiano.



PLATE 14. Martin Johnson Heade, *Black-eared Fairy*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.89. Photograph by Dwight Primiano.



PLATE 15. Martin Johnson Heade, *Amethyst Woodstar*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.84. Photograph by Dwight Primiano.



PLATE 16. Martin Johnson Heade, *Blue Morpho Butterfly*, ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.92. Photograph by Dwight Primiano.



FIG. 1. Vik Muniz, *White Brazilian Orchid (Pictures of Paper)*, 2010, chromogenic color print from digital file, 106³/₈ x 63 in. Photograph courtesy of the artist and Sikkema, Jenkins, and Co. Gallery. © Vik Muniz / VAGA at Artists Rights Society (ARS).

"A REFLEX OF THE WHOLE": THINKING ABOUT CROSS POLLINATION THROUGH ART AND SCIENCE

KATE MENCONERI + JULIA B. ROSENBAUM

IN 1863, Martin Johnson Heade (1819–1904), a self-declared “monomaniac” for hummingbirds, traveled to Brazil. He wanted to see as many different species as possible and paint them in their natural habitats.¹ “There is probably no country,” he wrote, “where a person interested in ornithology, entomology, botany, mineralogy, or beautiful scenery could find so much to keep him entertained.”² The artist’s notebooks from the time include careful observations about the species’ coloration, their nesting habits, and their interactions with flowers and insects. He even dissected a bird to see what it ate. He was fascinated by these pollinators and in 1864 exhibited twelve paintings of them in Rio de Janeiro. While the book of prints he wanted to make was never realized, Heade kept painting new species, resulting in over forty canvases, today known as *The Gems of Brazil*. Each painting is titled with the common name of the bird, such as *Amethyst Woodstar* (plate 15) and *Ruby-Topaz* (plate 1). The series offers a portrait of the hummingbird family (Trochilidae), its diversity, and its life cycles from the unique perspective of an artist.

Cross Pollination: Heade, Cole, Church, and Our Contemporary Moment takes flight from this unprecedented series and expands outward to explore pollination in nature and ecology, as well as pollination as a metaphor for the interplay between art and science, the relationships among artists, and the connections across centuries, from the nineteenth to the twenty-first. The exhibition itself was developed collaboratively by the Thomas Cole National Historic Site, The Olana Partnership at Olana State Historic Site, and Crystal Bridges Museum of American Art, and draws from core work in each of their collections. Sixteen of Heade’s paintings from *The Gems of Brazil* currently in the collection of Crystal Bridges Museum are presented in conversation not only with works by fellow artists Thomas Cole and Frederic Church but also with artwork by their daughters, Emily Cole and Isabel Charlotte Church, as well as by artists working today (fig. 1). This resonant combination of material highlights the relevance, both past and present, of close observations of nature and the critical interconnections between pollinators and their habitats.

In Heade’s painting *Amethyst Woodstar*, an iridescent, magenta-throated hummingbird immediately draws attention (plate 15). Alighting on a vine, wings outstretched, and bill lifted upward, it hovers alongside another bird and a nearby nest. These tiny birds, male and female, respectively, are close to us, magnified and slowed, so the details of their colorful feathers can be clearly seen. In the background of this intimately scaled, twelve-by-ten-inch canvas, Heade painted an expansive mountainous, wooded landscape. This unusual combination of up-close bird portrait with a distanced landscape stands in contrast to the large, sweeping vistas that were being painted by many of Heade’s Tenth Street Studio artist friends, including the celebrated landscapist Frederic Edwin Church. Church’s blockbuster painting *Heart of the Andes*, for example, presents a grand panorama of an Andean mountain range (fig. 2). Instead, Heade paints birds, nests, flowers, and vines fantastically larger than the landscapes in which they appear. Heade’s works are also unlike the static scientific illustrations by naturalists.³ By integrating the birds with flowers and vines, and picturing them hovering above their nests and in courtship, Heade signaled cycles of life and the dynamic interconnections within nature. The wide-angle views that make up the backgrounds suggest a larger environment and provide Heade with a way to present the birds less as isolated specimens and more as part of a greater whole. With *The Gems*, Heade was making a different kind of landscape, one that pictures the intricate operations within nature itself. His stormy skies, parting



Martin Johnson Heade, *Amethyst Woodstar* (see plate 15).

clouds, and layered mists in which the birds operate also allude to transitions and the dynamic web of nature.

Heade's hybrid compositions resonate with ideas about the natural world circulating in mid-nineteenth century Euro-American scientific circles, specifically the influential work of Alexander von Humboldt and Charles Darwin. Throughout his writings, including *Aspects of Nature* (1808) and the five-volume *Cosmos* (1845–62), Humboldt had put forward the idea of the connectivity of nature and the interrelation of natural forces: "Nature, in every region of the earth, is indeed a reflex of the whole."⁴ Darwin had been greatly inspired by Humboldt and, coincidentally, published his groundbreaking *On the Origin of Species by Means of Natural Selection* in the same year Humboldt died, 1859. In *Origin of Species*, Darwin complicated, if not challenged, long-held beliefs of nature as a harmonious and unified divine creation, pushing further

the idea of nature as an evolving system. In 1862, Darwin came out with a text with the very specific title *On the Various Contrivances by which British and Foreign Orchids Are Fertilised by Insects*, in which he used orchid flowers to illustrate how plants and pollinators coevolved over time to ensure cross-fertilization.⁵ We know from Heade's notebooks that he was thinking about these kinds of relationships in nature, as evidenced by a passage in which he mused about how the hummingbird bill worked: "If Nature intended that the bird should live on insects, she must also have intended to confine its depredations to the flower in question . . . while on the other hand the flower might yield the bird exclusive sustenance in honey, as all other species are denied participation of its insects by the peculiar construction of its deep corolla."⁶ Around the same time, in 1866, the German



FIG. 2. Frederic Edwin Church, *Heart of the Andes*, 1859, oil on canvas, 66¹/₈ x 120³/₁₆ in. The Metropolitan Museum of Art; Bequest of Margaret E. Dows, 1909, 09.95.



FIG. 3. Martin Johnson Heade, *Study of Varied Flowers with a Hummingbird*, ca. 1870, oil and pencil on canvas, 17 x 21 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2007.205. Photograph by Dwight Primiano.

zoologist Ernst Haeckel coined the term *ecology*, defining it as the “science of the relationships of an organism with its environment.”⁷

Heade’s lifelong passion for hummingbirds engaged both a scientific curiosity and a sense of wonder (fig. 3). As Theodore E. Stebbins Jr. has noted, Heade made work “with the eye of a naturalist” but was driven by “the richness of the painter’s imagination.”⁸ In Heade’s draft introduction to his unrealized publication, which would have featured chromolithographs of *The Gems of Brazil*, he approached the birds with a kind of spiritual reverence: “Scientific men have traveled hundreds of miles through the wild, malarious regions of the tropics in their anxiety to add to the knowledge of this seemingly insignificant but most brilliant and attractive little creature. For one who is in the least degree attuned to poetic feelings, they have a singularly fascinating power, which the subtlest mind is unable to explain, but which all who have studied them must acknowledge to have felt.”⁹ Rather than presenting art and science as distinct and separate, Heade’s efforts with *The Gems* suggest their interplay. Humboldt himself had argued for the importance of feeling and emotion and the power of the visual arts to cultivate an appreciation of nature.¹⁰

The framework of cross-pollination can also be used to examine the interconnections and relationships among artists across time. Church’s own earlier travels to Colombia and Ecuador had been inspired by Humboldt’s ideas and writings, and Church in turn prompted Heade’s visit to Brazil. Both artists worked in New York’s Tenth Street Studio Building and became lifelong friends. Church began his career in Catskill, New York, where he studied from 1844 to 1846 with Thomas Cole, the painter who had sparked a new American landscape movement. Cole taught his young pupil to sketch the details of plants, trees, and clouds (figs. 4, 5). He encouraged Church to be “truthful” to what he saw in nature, even while Cole often edited his own landscapes to express



FIG. 4. Thomas Cole, *Tree*, 1823, charcoal and white pencil on brown paper, 13¾ x 11¾ in. Albany Institute of History & Art; Gift of Florence Cole Vincent, 1958.28.4.



FIG. 5. Frederic Edwin Church, *Birch Tree Struck by Lightning*, Mount Desert Island, August 1850, graphite and gouache on paper, 11¹³/₁₆ x 14⁹/₁₆ in. Courtesy of Olana State Historic Site, New York State Office of Parks, Recreation, and Historic Preservation, OL.1980.1442.



FIG. 6. Thomas Cole's Box of Minerals and Artifacts, 1830–48, various minerals, fossils, artifacts, and natural specimens, 18 x 20 x 3 in. Thomas Cole National Historic Site; Gift of Edith Cole Silberstein and the Greene County Historical Society, TC.64.11.2.



FIG. 7. Thomas Cole, *Page of Herbarium: From Shakespeare's Garden / Stratford on Avon. / Sept 1841, September 1841*, plant material on paper, 9⁷/₁₆ x 7⁷/₈ in. Thomas Cole National Historic Site; Gift of Edith Cole Silberstein and the Greene County Historical Society, 1986.3.e.



FIG. 8. DOS Society, *Birds' Egg Collection*, 1885, birds' eggs, wood, paper, tray one of seven, 18 x 24 x 2 in. Olana State Historic Site, New York State Office of Parks, Recreation, and Historic Preservation; OL.1982.1820.



FIG. 9. Revert Henrique Klumb, *Vegetation, Province des Hines, Brazil*, ca. 1865–69, stereograph, 3¹/₄ x 6⁷/₈ in. Olana State Historic Site, New York State Office of Parks, Recreation, and Historic Preservation; OL.1981.350.

human drama and allegory.¹¹ Along with Heade, Cole and Church shared a deep commitment to careful observation, which informed their finished paintings. Traveling and collecting were also part of their art practice. Cole collected plants, as evidenced by his herbariums, as well as minerals and rocks, including those he found in his travels to England and Italy (fig. 6). For him, these items functioned both as specimen and souvenir, of value also for the places they represented, such as Shakespeare's Garden in Stratford-upon-Avon, England, or the Temple of Juno Lucina in Agrigento, Sicily (fig. 7). Church assembled collections not only of photographs depicting landscapes and cities around the world but also rocks and ferns as well as bird eggs, which were organized by size on multiple trays (figs. 8, 9).

Interest in the natural world extended to both Cole's and Church's daughters, Emily Cole and Isabel Charlotte Church, known as "Downie." Both sketched and painted botanical works (figs. 10, 11). Emily had a professional career as an artist and was known for her hand-painted Limoges china



FIG. 10. Emily Cole, *Untitled (Ladyslipper)*, n.d., watercolor and pencil on paper, 10⁵/₈ x 7⁷/₁₆ in. Thomas Cole National Historic Site; Gift of Edith Cole Silberstein, TC.2002.2.19.15.



Compositae -
Solidago Canadensis -
Goldenrod -
Sept. 25-'90
Olana - Hudson -

FIG. 11. Isabel Charlotte (Downie) Church, *Botanical Study of Goldenrod*, September 25, 1890, watercolor on paper, 11 x 7 in. Olana State Historic Site, New York State Office of Parks, Recreation, and Historic Preservation; OL.1985.302.

(see fig. 39) and works on paper. These feature carefully rendered flowers and plants, such as strawberries, lady's slippers, and violets, specimens she likely would have found in her own backyard in Catskill. Letters addressed to Emily from her mother suggest that Frederic Church was in conversation with Emily about her own artwork, continuing a legacy of mentoring that also connected Church to Cole's son Theodore, who managed the farm on the artist's 250-acre property and art project known as Olana, across the river from Catskill.

Thomas Cole and Martin Johnson Heade never knew each other personally. They both, however, wrote prose as well as painted and used their writing to advocate for the environment. In his 1841 "Lecture on American Scenery," for example, Cole expressed alarm at the rate of deforestation: "Where it is not necessary to destroy a tree or a grove, the hand of the woodman should be checked, and even the consideration, which alas, weighs too heavily with us, of a few paltry dollars, should be held as nought in comparison with the pure and lasting pleasure that we enjoy. . . . But its beauty is gone, and that which a century cannot restore is cut down; what remains? . . . Where once was beauty, there is now barrenness."¹² By the early 1880s, Heade similarly became concerned about the unrestrained use of natural resources, in his case overhunting and the destruction of species. He took the pen name Didymus and began to contribute regularly to a sportsmen's magazine, *Forest and Stream*, calling attention to environmental degradation, particularly of wetland habitats. A hunter himself, he argued for preservation and balance. About the water birds of Long Island, he observed: "They are so thinned out that even if not another one was killed there would scarcely be enough to raise another family. If sportsmen could only be induced to keep their guns in the cases this season, there might be some show of birds next fall."¹³ Heade was equally distressed about what he saw as an out-of-control trade in bird feathers: "No man who has the right to call himself a sportsman would engage in this plume hunting traffic even if he could 'clean up' five thousand. The plume birds of Florida have been thoroughly cleaned up and professional bird butchers are scattered all through South America."¹⁴ Heade had settled in Florida and, still enthusiastic for hummingbirds, had set up in his backyard feeders to watch them. But, he lamented, "between the frosts, taxidermists, and milliners, I fear they'll be almost exterminated in a few years."¹⁵

Didymus's call for ecological awareness and action reverberates among many contemporary artists, who through their work directly confront current struggles related to biodiversity, habitat protection, and environmental sustainability. Like their nineteenth-century counterparts, they engage multiple disciplines and media, drawing on the latest scientific studies, their own close observations of nature, and their imaginations. Artists such as Juan Fontanive and Rachel Berwick return us to the subject of hummingbirds. Fontanive's work reanimates the wonder and movement of the birds that earlier inspired Heade. His series *Ornithology* uses eighteenth- and nineteenth-century natural history illustrations to create a flip-book animation of a bird in continuous flickering flight, powered with Victorian clock or machine motors (fig. 12). Nineteenth-century practices and John Gould's 1851 zoological exhibition showcasing more than fifteen hundred stuffed hummingbird specimens inspire Rachel Berwick's sculptures of hummingbirds, which she casts in ruby glass to match the color found on the bird's wings. This work brings to light the story about Charles Dickens, who upon seeing the specimens in London, remarked that no one could ever duplicate such color in art—which scholars have suggested may have further fueled Heade's own artistic drive to paint them in *The Gems* series.¹⁶ In this work Berwick not only plays with formal Victorian methods of displaying nature but expands possible interpretations by integrating Aztec myth related to these birds, which flourish in Central and South America. An invocation of history is at the heart of Jeffrey Gibson's *Camouflage*, which transforms an equatorial jungle into a canvas of abstraction bursting with vivid color (see page 3). Making indirect reference to Heade's *The Gems of Brazil*, Gibson collages elements and practices, such as Native American beading, to complicate our notion of nature and suggest just how much it is a layered cultural and historical construction.

The fragility of life and the question of balance is a theme raised by many artists in the exhibition. How does one preserve something as fascinating and fleeting as a living flower? Like



FIG. 12. Juan Fontanive, *Ornithology L*, 2018, four-color screen print on Bristol paper, stainless steel, motor, and electronics, 4¼ x 5¾ in. Photograph courtesy of the artist.

Thomas Cole, artist Flora C. Mace collects plants, but she encases them in hot molten glass that once hardened forms a protective and clear barrier around the plant. In such examples as *Tazetta Narcissus*, Mace conflates the work of art with nature, creating not only a perfect display for close observation of these specimens but also a time capsule that preserves their color, shape, and details for generations to come (fig. 13). Rachel Sussman's series *The Oldest Living Things in the World* captures examples of resilience in the natural world. Working with biologists, she researched and then traveled to the far reaches of Earth to photograph the planet's oldest continuously living organisms, among them a 5,500-year-old moss in Antarctica and a 3,000-year-old flowering plant in the Atacama Desert in Chile (fig. 14). Part art and part science, Sussman's work is the first and only index of millennia-old organisms to have ever been made. Her series questions what allows things to survive. Addressing the lack of survival, on the other hand, *Eclipse*, by Saylor/Morris, focuses on the extinction by 1914 of the Passenger Pigeon, which had been one of the most abundant bird species in North America (fig. 15). Tracking the continuing loss of species is part of Maya Lin's project *What Is Missing?* Interactive and ongoing, the work, in the words of the artist, "invites us to bear collective witness to the sudden, massive—indeed extraordinary—loss of species now underway due, in large part, to human alteration of our air, water, land, and climate."¹⁷

Critical questions about where we belong within the natural world and within a specific place, as well as those about scale and balance, are sparked in Jeff Whetstone's *Drawing E. obsoleta*, a video piece in which the artist tries to draw a line by following the organic movements of a live snake on a light box (fig. 16). But the snake cannot be contained or controlled so neatly. As Whetstone observes: "[there is the] notion of drawing being a hand that lays down a line, but in this case the line itself is actually guiding the hand."¹⁸ Coming to art through the study of biology, Whetstone is interested in what happens when you remove an animal, in this case a snake, from its home environment and in this manner probes the relationship between humans and nature.



FIG. 13. Flora C. Mace, *Tazetta Narcissus*, ca. 2014, botanical, glass, composite, and steel stand, 30 x 21 x 7 in. Courtesy Crystal Bridges Museum of American Art, Bentonville, AR. Photograph by Edward C. Robison III.



la llareta #0308-2831 (3,000+ years old; Atacama Desert, Chile)

FIG. 14. Rachel Sussman, *La Llaleta #0308-2831 (3,000+ years old; Atacama Desert, Chile)*, 2008, from the series *The Oldest Living Things in the World*, archival pigment print, 19 x 23 in. Collection of James Tung.

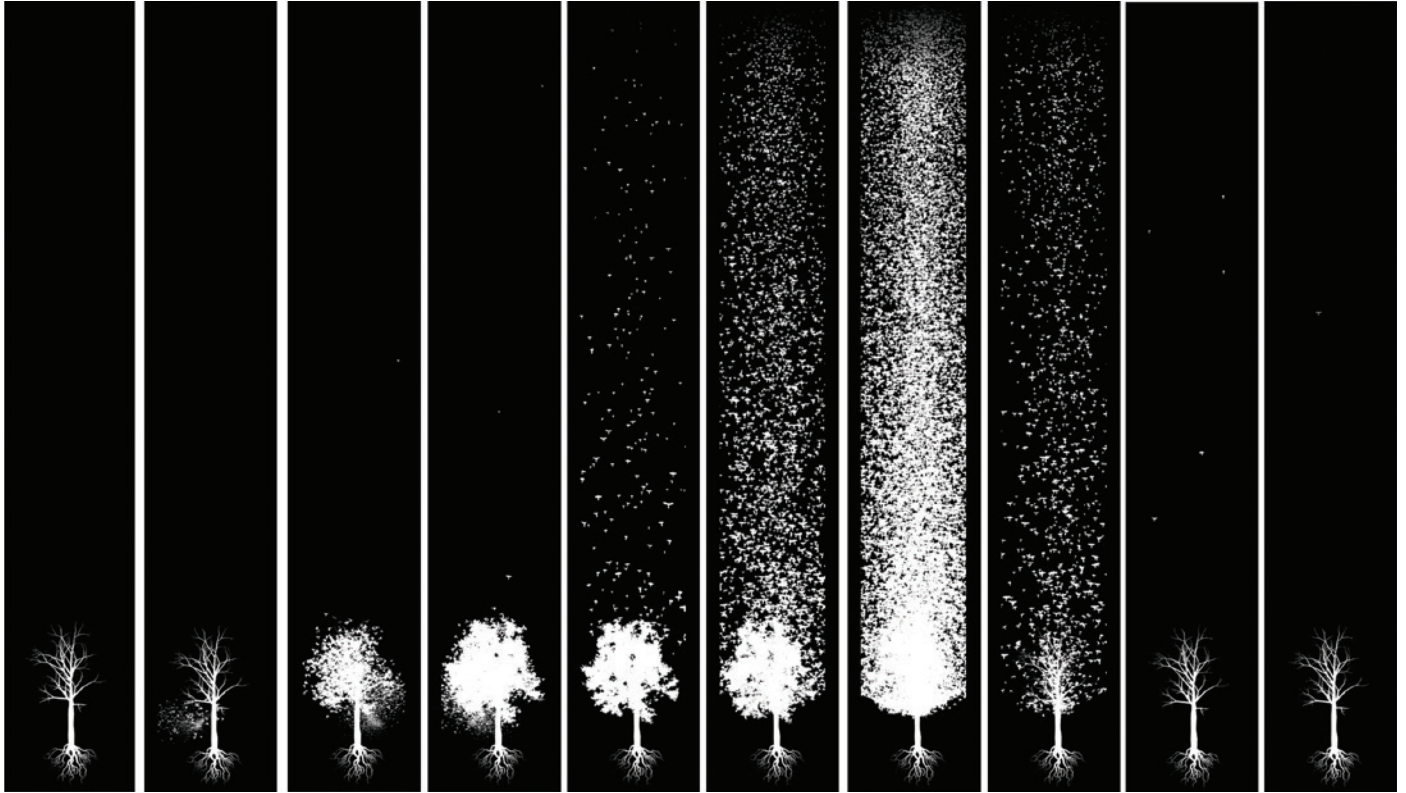


FIG. 15. Sayler/Morris, *Eclipse*, 2014, composited stills from video installation, 7-minute, 41-second loop. Photograph courtesy of the artist.

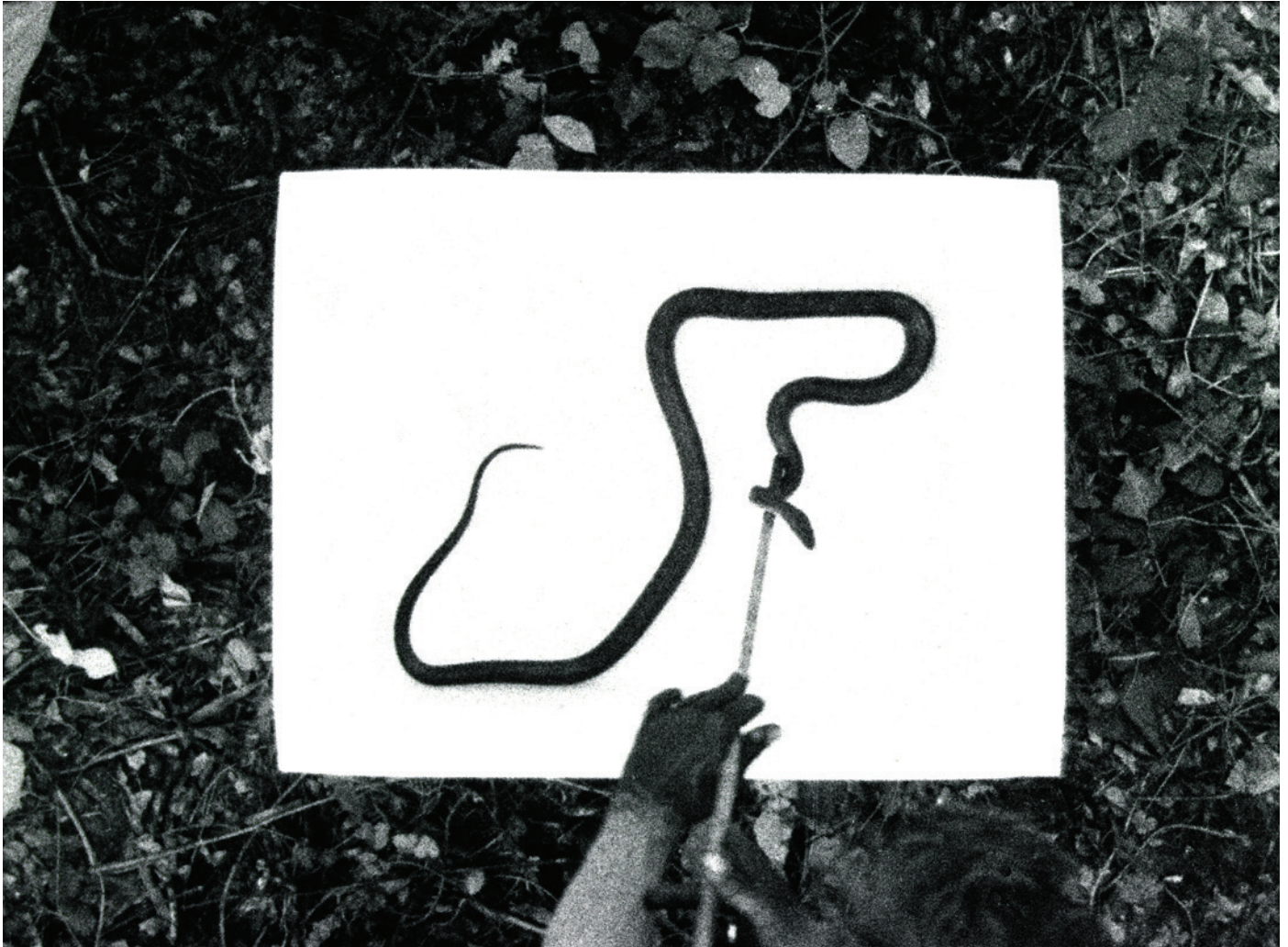


FIG. 16. Jeff Whetstone, *Drawing E. obsoleta*, 2011, 16 mm film transferred to digital video (duration: 8 minutes, 28 seconds). Courtesy Crystal Bridges Museum of American Art, Bentonville, AR.



FIG. 17. Lisa Sanditz, *Laptoplegzebramussels*, 2016, porcelain, sculpture clay, glaze, Apple laptop, broken statuette; laptop 14 x 12 x 3 in., base 15 x 8 x 7 in. Photograph courtesy of the artist.

Similarly, Lisa Sanditz points to what she terms a “new sublime” in her *Laptoplegzebramussels* (fig. 17). Referencing the ecosystem of the Hudson River, the piece features invasive Zebra Mussels that completely enclose and cover the edges of a laptop computer. With this work and others, the artist explores how the natural world is controlled, saved, or pressured. She writes: “There is chatter among geologists that we are living in a new epoch—the Anthropocene, which is the result of the effect of human impact on earth. Seeing the fossils of everyday items on tropical shores and reading about micro-plastic beads flowing through waterways and accumulating in flora and fauna, it’s easy to believe this is true, as a witness and participant.”¹⁹ How do we weigh our actions and responsibility for this changing of our collective habitat?

Seeing differently or imagining wildly are some possibilities, as the works of artists such as Patrick Jacobs, Vik Muniz, and Paula Hayes propose. Their art has an element of disorientation that unsettles assumptions and expectations. Both Jacobs and Muniz manipulate scale and color, but to opposite ends. In *Pink Forest with Stump*, Jacobs stages a vibrant, miniature landscape that can be seen only through a small window cut into a white wall (fig. 18). This micro work is especially compelling in relation to Frederic Church’s enormous painting, *Heart of the Andes*, which created the illusory effect of looking through a giant window onto an expansive landscape. Viewers were encouraged to bring opera glasses to see the meticulously detailed flora and fauna. The interplay between micro and macro similarly connects to Muniz’s *White Brazilian Orchid (Pictures of Paper)* (see fig. 1). The Brazilian-born artist directly riffs off Heade’s intimately scaled painting of an orchid and a hummingbird, but instead Muniz goes gargantuan in his work, and close inspection reveals



FIG. 18. Patrick Jacobs, *Pink Forest with Stump*, 2016, styrene, acrylic, cast neoprene, paper, hair, polyurethane foam, ash, talc, starch, Acrylite, vinyl film, copper, wood, steel, lighting, BK7 glass; diorama window: $7\frac{3}{8}$ in. Crystal Bridges Museum of American Art, Bentonville, AR; 2016.22. Photograph by Edward C. Robison III.



FIG. 19. Paula Hayes, *Dome Terrarium T94*, hand-blown glass, signed 2011, custom living planting, 14 x 22 x 18 in. Photograph by Ethan Herrington.



FIG. 20. Dana Sherwood, *Inside the Belly of a Horse*, 2019, oil, watercolor, and charcoal on panel, 36 x 48 in. Photograph courtesy of the artist and Denny Dimin Gallery.

the multiple layers of its fabrication. Paula Hayes's work moves in a different direction still, crossing genres and media. She sculpts and forms living artworks, including hand-blown glass terrariums (fig. 19). Small-scale ecosystems, these living sculptures require daily tending. They provoke thought and action not only about our stewardship of the natural world but also our everyday interactions.

Collaboration with living organisms is one possibility for moving toward balance. In Dana Sherwood's painting *Inside the Belly of a Horse* (fig. 20), the artist rethinks human exceptionalism. Rather than trying to dominate and drive the horse, the human figure is nestled within it, as if coming to life through it. *The Pollinator Pavilion* (fig. 21), a collaboration between Mark Dion and Dana Sherwood, invites both winged and legged visitors to come together in an open-air pavilion. This interactive architectural sculpture offers sustenance to pollinators and an opportunity to closely observe birds and flowers in an intimate setting. Like Heade, who in his later years set up hummingbird feeders in



FIG. 21. Mark Dion and Dana Sherwood, Sketch for "The Pollinator Pavilion," an interactive sculpture, 2020, watercolor and pencil on paper, 12 x 9 in.



his backyard, the artists set the stage for fleeting encounters. With *Soundsuit*, Nick Cave shapes densely intertwined flora into a wearable artwork made to fit the human form (fig. 22). When activated, figure and flora here coexist in a state of both protection and empowerment.

Integral to the exhibition is an exploration of how ideas in science and art cross-pollinate and the importance of both in our contemporary moment. With *The Gems of Brazil*, Heade was inspired by the symbiotic relationships he witnessed within nature. New ideas and issues in science continue to change the way we understand ecological systems today, and artists continue to wrestle with what is at stake. The artworks in this show feel especially urgent at a moment when the number of birds in the United States and Canada has declined by three billion, or 29 percent, over the past half century,²⁰ and widespread bee-colony collapse accompanies massive reductions of insects world-wide. Our species faces difficult questions: What will the impact of pollinator loss have on life as we know it? How can we see our world more acutely as one interconnected ecosystem? Rather than depleting earth's resources, how might we realize new strategies to live with balance and reciprocity?

FIG. 22. Nick Cave, *Soundsuit*, 2006–12, found sequined and beaded materials, hand-sewn, mannequin, and armature, 72 x 30 x 30 in. Collection of Carol McCranie and Javier Magri, © Nick Cave. Photograph courtesy of the artist and Jack Shainman Gallery. Photograph by James Prinz Photography.

NOTES

- 1 Didymus [Martin Johnson Heade], "Taming Hummingbirds," *Forest and Stream* 38, no. 15 (Apr. 14, 1892): 348. This essay draws on the writings of the artists as well as scholars, including: Theodore E. Stebbins Jr., *The Life and Works of Martin Johnson Heade* (New Haven, CT: Yale University Press, 1975), *Martin Johnson Heade* (Boston, MA: Museum of Fine Arts, 1999), and *The Life and Work of Martin Johnson Heade: A Critical Analysis and Catalogue Raisonné* (New Haven, CT: Yale University Press, 2000); Franklin Kelly, "Martin Johnson Heade, The Gems of Brazil," in *American Paintings from the Manooogian Collection* (Washington, DC: National Gallery of Art, 1989), 116–23; Maggie M. Cao, "Heade's Hummingbirds and the Ungrounding of Landscape," *American Art* 25, no. 3 (Fall 2011): 48–75; Ella M. Foshay, "Charles Darwin and the Development of American Flower Imagery," *Winterthur Portfolio* 15, no. 4 (Winter 1980): 299–314; Kimia Shahi, "Entanglements of Land and Water: Picturing Contingency in Martin Johnson Heade's *Newburyport Marshes: Approaching Storm*," in Karl Kusserow and Alan C. Braddock, *Nature's Nation: American Art and Environment* (New Haven, CT: Yale University Press, 2018), 304–11; Janet L. Comey, "The Gems of Brazil," in Stebbins, *Martin Johnson Heade* (1999), 71–77.
- 2 Martin Johnson Heade, *Brazilian Sketchbook and Journal*, Jan. 1, 1864, manuscript, Museum of Fine Arts, Boston, Gift of Richard and Susanna Nash, 1997.296.
- 3 For more on this distinction, see Foshay, "Charles Darwin and the Development of American Flower Imagery."
- 4 Alexander von Humboldt, *Cosmos: Sketch of a Physical Description of the Universe*, vol. 2, trans. Edward Sabine (London: Longman, Brown, Green, and Longmans, 1849), 86.
- 5 For more discussion on Heade's work in light of new ideas about nature, including the ideas of Darwin, see Foshay, "Charles Darwin and the Development of American Flower Imagery," and Shahi, "Entanglements of Land and Water," 308.
- 6 Martin Johnson Heade, *Notebook on Hummingbirds*, ca. 1864 and ca. 1881, n.p., MS-1, box 1, folder 9, Martin Johnson Heade Papers, 1853–1904, Archives of American Art, Smithsonian Institution.
- 7 Quoted in Andrea Wulf, *The Invention of Nature: Alexander von Humboldt's New World* (New York: Alfred A. Knopf, 2017), p. 307.
- 8 Stebbins, *Martin Johnson Heade* (1999), 9. On this theme also see Kelly, "Martin Johnson Heade, The Gems of Brazil," 118.
- 9 Heade, *Notebook on Hummingbirds*, n.p.
- 10 Alexander von Humboldt, *Cosmos: Sketch of a Physical Description of the Universe*, vol. 2, trans. E. C. Otté (New York: Harper and Brothers, 1870), 19–20, 95.
- 11 See Thomas Cole letter to Robert Gilmore, May 21, 1828, in Louis Legrand Noble, *The Life and Works of Thomas Cole* (Hensonville, NY: Black Dome Press, 1997), ed. Elliot S. Vessel, 64; and Thomas Cole, "Lecture on Art," Thomas Cole Papers, SC10635, box 5, folder 2, NYSL Manuscripts and Special Collections, Albany, NY: "... but in loftier Art Imitation is the means through which the essential truths of Nature are conveyed. Thus Art becomes the exponent of Nature's highest qualities; she seizes the transitory forms of beauty; (for truth + beauty, (in their highest sense identical,) are but the passing visitants of this world) + embodies them in permanent forms for our contemplation. She places the beautiful + the sublime, in Man + the World, before us free from the impediments + accidents which too frequently disturb; + oftentimes, in consequence of our sympathy with our fellow man, as the creator of the works before us, presents with more force than nature herself the beautiful + the true."
- 12 Thomas Cole, "Lecture on American Scenery: Delivered before the Catskill Lyceum, Apr. 1, 1841," *Northern Light* 1 (May 1841): 25–26.
- 13 Didymus [Martin Johnson Heade], "'Didymus' Could Not Find Them," *Forest and Stream* 19, no. 16 (Nov. 16, 1882): 310.
- 14 Didymus [Martin Johnson Heade], "The Plume and Bird Traffic," *Forest and Stream* 45, no. 4 (July 27, 1895): 71.
- 15 Didymus [Martin Johnson Heade], "Florida Hummingbirds," *Forest and Stream* 36, no. 23 (June 25, 1891): 455.
- 16 For more, see Kelly, "Martin Johnson Heade, The Gems of Brazil," 118. Writing about John Gould's display of over fifteen hundred hummingbird specimens at the London Zoological Garden in 1851, Kelly relays that: "Over 75,000 people attended, including Queen Victoria, Prince Albert, and Charles Dickens. ... Dickens was of the opinion that the most vivid colours of the painter's palette cannot duplicate their ever-varying tints." Years later Heade traveled to Brazil to see the hummingbirds in their native habitats and attempt to do exactly what Dickens suggested was impossible.
- 17 See "Maya Lin's Project, 'What Is Missing?,'" Honoring the Future, <https://www.honoringthefuture.org/climate-smarts/artist-to-know/maya-lins-project-whats-missing/>.
- 18 Jeff Whetstone, video interview by Nasher Museum of Art at Duke University, Durham, NC, for exhibition *People Get Ready: Building a Contemporary Collection*, Sept. 1, 2018–Jan. 6, 2019, "Artist Jeff Whetstone talks about 'Drawing E. obsoleta,'" YouTube video, posted by Nasher Museum, Oct. 15, 2018, <https://www.youtube.com/watch?v=2U91lCMMbY>.
- 19 Lisa Sanditz, artist's statement, e-mail correspondence with author, Mar. 1, 2016.
- 20 See Carl Zimmer, "Birds Are Vanishing from North America," *The New York Times*, Sept. 19, 2019.



FIG. 23. Martin Johnson Heade, *Brazilian Hummingbirds III*, n.d., chromolithograph touched with oil paints, 12¼ x 10½ in. Yale University Art Gallery; A. Conger Goodyear, B.A. 1899, Fund, 1973.6.

MARTIN JOHNSON HEADE'S THE GEMS OF BRAZIL AND THE DEMANDS OF ART AND SCIENCE

MINDY N. BESAW



Martin Johnson Heade, *Hooded Visorbearer*
(see plate 2).

IN 1863, the *Boston Transcript* reported that Martin Johnson Heade was preparing for a journey to Brazil, "to paint those winged jewels, the humming birds, in all their variety of life as found beneath the tropics."¹ Heade's ambition was to view hummingbirds in their natural habitats and produce paintings that would serve as the basis for a magnificent publication, to be titled *The Gems of Brazil*. Heade wrote, "No single member of the feathered race appears to have excited such a deep and general interest as the tiny subject of this work."² Heade was an entrepreneur, who intended *The Gems of Brazil* to reflect a unique view of the subject of hummingbirds and to appeal to an audience with a wide range of interests—amateur naturalists, art connoisseurs, and armchair travelers alike. Critic Henry Tuckerman praised Heade as "an accurate and graceful illustrator of natural history . . . [whose] delineation of birds and flowers is remarkable for

the most faithful drawing and exquisite color."³ Tuckerman's admiration for *natural history* and *drawing and color* speaks to Heade's success wrestling with the demands of both art and science in *The Gems of Brazil*.

From our current vantage point, it is hard to grasp how intertwined the arts and the natural sciences were in Heade's time. Today they have been separated in higher education and careers, and rarely do the disciplines overlap. Yet, historically, as art historian Ellery Foutch observed, "the lines between 'art' and 'nature' have often been permeable and indistinct, with frequent cross-pollinations."⁴ Heade, for one, was a self-proclaimed artist-naturalist with a wide range of interests and talents, including painting, poetry, and natural sciences. Artists utilized scientific knowledge and observation, while naturalists, on the other hand, often relied on art to convey valuable information about plants, animals, and birds when mere words were inadequate.

Today, viewed in the context of an art museum, the science of *The Gems of Brazil* takes a back seat to the art. In order to understand how Heade infused the paintings with both science and art, observation and romanticism, and realism and fiction, a closer look at the paintings, with a healthy dose of naturalist insight, is necessary. Viewing the sixteen *Gems of Brazil* in the Crystal Bridges Museum's collection through the eyes of avid birder and trained entomologist Dr. Robert Wiedenmann expanded my own artistic appreciation for the paintings.⁵ Drawing from his birding experience in Brazil in 2012 and 2014, and consulting well-worn guidebooks, Dr. Wiedenmann highlighted many biological details in the paintings that I had not noticed. The colors Heade used, for example, function as pleasing and interesting, but also perfectly capture the brilliant iridescence of the hummingbirds at the fleeting moment when the feathers catch the light in optimal conditions. Heade's background landscapes are each unique, ranging from cloud forests to the rocky regions of the *caatinga* (a dry, almost desert-like habitat). Other details show modifications and decisions Heade made when he translated scientific information into a painting. For example, in his *Hooded*



FIG. 24. Martin Johnson Heade, *The Harbor at Rio de Janeiro*, 1864, oil on canvas, 19¹/₈ x 34¹/₈ in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.76. Photograph by Dwight Primiano.

Visorbearer painting (plate 2), he intensified the color of the tail on the male, which actually appears more copper than red in life. In addition, the landscape surrounding the Hooded Visorbearer (one of four species in the Crystal Bridges collection endemic to Brazil) is mismatched, as the species lives in a dry habitat with cacti, as opposed to the lush landscape of Heade's painting.

For *The Gems of Brazil*, Heade followed a prescribed scientific format by illustrating both the male and the female of the species, with visual information about the shape and size of the body, length of the bill, and colors of feathers (fig. 23). Heade then enhanced the scientific detail with his artistic eye, as evidenced in the composition of each painting. In *Hooded Visorbearer*, for example, the tree branch in the top right frames the scene and parallels the soft curve of the female's body—a line that is again repeated in the descending ridge of the mountain on the left. Heade's color choices create unity between the hummingbirds and their habitat: the leaves on the bottom right match the tawny color of the female bird's breast, and the accentuated color in the male visorbearer's tail is the same hue as the warm glow of the sun in the lower right. Wisps of moss on the branches echo the texture of the mountains and trees in the landscape, further unifying foreground and background. Balancing scientific details with artistic elements, Heade imbued the birds with liveliness and created a painting that gives the impression of an encounter with the private life of hummingbirds in their natural habitat.

Heade traveled to Brazil because he felt that the only way to represent hummingbirds properly was to observe them from life on their native soil. This firsthand experience in South America lent authenticity to his paintings and helped Heade differentiate himself from his ornithological predecessors and contemporaries (and perhaps attract more investors). In his journals and his planned introduction to *The Gems of Brazil*, Heade often quoted Alexander Wilson, a Scottish American ornithologist; John James Audubon, who had completed his remarkable double elephant folio *Birds of America* in 1838; and John Gould, a British naturalist and the recognized authority on hummingbirds.⁶ Gould had identified more than three hundred species in his lavish multivolume monograph *The Trochilidae, or Family of Humming-birds* (1861). The vast majority of species were found in South America, but Heade carefully pointed out that "[Gould's] great work on the hummingbirds of South America was not made up from personal knowledge of their character and habits. . . . He never set his foot on South American soil."⁷ Gould loomed large in Heade's journals,

and his work served as a benchmark of accomplishment and a reference to corroborate Heade's own observations, but he was also a rival.⁸ Heade likely selected Brazil as his destination, instead of Ecuador or Colombia, where the greatest number of hummingbirds occur, after reading Gould's introduction to *The Trochilidae*. In his introduction, Gould wrote that the market for hummingbirds was especially rich in Rio de Janeiro (fig. 24), where thousands of birds from all over the continent were collected, skinned, and preserved for the European market.⁹

Heade spent nearly seven months, from late September 1863 to early April 1864, in Rio de Janeiro, where he encountered several species in the surrounding forests and had access to countless more at the city's markets. Heade collected specimens and studied the birds closely, even dissecting one to better understand hummingbirds' diets, which include minute insects and spiders in addition to flower nectar.¹⁰ Heade exhibited twelve canvases from *The Gems of Brazil* in an exhibition at the Academy of Fine Arts in Rio de Janeiro in February 1864, and planned to paint twenty total before departing for London to have the paintings made into chromolithographic prints. Eventually, Heade completed about forty *Gems of Brazil* paintings, although some are duplicates of the same species.¹¹ Despite great enthusiasm for the project, including patronage of Brazil's emperor, Dom Pedro II, Heade's grand publication was never realized. His timing proved difficult for gathering subscribers to the project in the United States, as the Civil War occupied the attention of American investors. Heade also struggled to gain support in London, where John Gould's influence was widely felt.

Four test chromolithographs were, however, completed for the publication, including *Brazilian Hummingbirds III* (see fig. 23). Immediately it is evident that the very qualities that make Heade's paintings so rich, including the iridescent color and vibrant backgrounds, were not adequately conveyed in the chromolithographs, which is likely another reason the publication was never completed.¹² Further, a comparison of the print to a related painting, *Tufted Coquette* (plate 3), reveals the ways the print was altered to appeal to the publication's audience. Changes include more pronounced palm trees, the addition of Spanish moss on branches, a tiny egg visible in the now brightly lined nest, and the tree changed from an acacia to one with simplified leaves and no thorns. The lighter background accentuates the hummingbirds, especially the female. The mountains, palm trees, and mossy branches of the chromolithograph function less as an accurate depiction of habitat for the Tufted Coquette, which is actually found in the dry *caatinga* in northeastern Brazil, and more to signify "The Tropics" generally. Audiences in the United States, especially, would expect palm trees prevalent in the scene to match their preconceived notions of a (simplified) South American landscape.¹³ Here, despite Heade's attention to detail, scientific accuracy was sacrificed to popular taste and expectations.

Heade's paintings mark a departure from the ornithological illustration conventions evident in Gould's hummingbird prints, in which the species appears in the center of a page with only fragments of plants or trees. Compared with Gould's *Cephalapis lalandi* (fig. 25), Heade's *Black-breasted Plovercrest* (plate 5), featuring the same species (now named Green-crowned Plovercrest), conveys an immersive habitat. Heade's landscape is particularly atmospheric, which is appropriate for a species



FIG. 25. John Gould, *Cephalapis lalandi*, 1861, from *A Monograph of the Trochilidae, or Family of Humming-birds*, vol. 4, plate 208. Lower Saxony State and University Library, Göttingen, Germany.

typically found in shaded cloud forests. His hummingbird's vivid chartreuse-green crown and bright blue breast pop against the dark, dense clouds. While the two compositions vary greatly, Heade regularly referenced Gould's illustrations to compare details. For example, Heade wrote of this species: "See if Gould has tip of tail white in Dels. Plover crest."¹⁴ Despite the cross-referencing, Heade made original works and never copied Gould's hummingbird poses or compositions.

While the general format of male and female birds in a lush background stays constant in Heade's *The Gems of Brazil*, there is a great deal of variety within the series. *Fork-tailed Woodnymph*, for example, includes flowers and fruit as well as a nest with tiny hatchlings (plate 6). The hummingbirds appear as a fictionalized portrait of a husband and wife with their children. Despite Heade's belief in this family unit, in reality male and female hummingbirds are rarely together, and the female usually builds a nest and cares for her young on her own.¹⁵ The Fork-tailed Woodnymph is one of the species Heade viewed in both the forests near Rio de Janeiro and the city's markets. In his journal, Heade described a closely related species, the Brazilian Woodnymph, as a "very common bird in the shops at Rio. The blue cap is extensively used in the manufacture of the feather

flowers. Notwithstanding the great numbers killed for home consumption as also for exportation, it is still very numerous in the region of Rio, & the adjoining districts."¹⁶ The brilliant green and purplish-blue feathers of the male Fork-tailed Woodnymph are arresting, although Heade depicts the tail as more fanlike than the actual forked shape. In addition, Heade also added a butterfly into the small painting—almost imperceptible on a leaf near the male woodnymph's beak.

While hummingbirds were the primary focus of *The Gems of Brazil*, Heade also collected and studied flowers and butterflies—his journal even included a recipe for a formula used to poison butterflies in order to gather specimens while preserving the delicate wings.¹⁷ One painting from the series highlights a single blue morpho butterfly, with one iridescent wing glowing brilliantly in the otherwise dark forest (plate 16). The details of the illuminated wing are remarkable, yet, surprisingly, the butterfly represents an artistic composite of characteristics from several blue morpho species.

Not all the hummingbird species in the Crystal Bridges' *The Gems of Brazil* collection are from Brazil. The Ruby-throated Hummingbird (plate 8) is a North American breeder that winters in Central America, and the Snowcap is a Central American bird found from Honduras to Panama (plate 12). In Heade's *Snowcap* painting, the tiny birds perch on a U-shaped vine suspended in the air above a mountainous landscape with the fronds of an unspecified palm tree in the upper left. Sketches from Heade's

journal show a variety of poses and studies of the Snowcap (fig. 26), indicating that Heade acquired a specimen of the Central American bird while in Rio de Janeiro. In his planned introduction, Heade addressed the fact that the birds included in *The Gems of Brazil* were not exclusively Brazilian, stating that species were included because they represented "some of the most brilliant specimens yet discovered. The 'gems of the feather creation.'"¹⁸

Heade's artistic experience and training bring a level of vibrancy and life to *The Gems of Brazil* not often found in scientific illustrations of his day. But, importantly, the art is amplified through



FIG. 26. Martin Johnson Heade, "Snowcap," from *Brazilian Sketchbook and Journal*, 1865, pen and ink and graphite; page: 9 x 6⁵/₈ in. Museum of Fine Arts, Boston; Gift of Richard and Susanna Nash, 1997.296. Photograph © 2020 Museum of Fine Arts, Boston.

Heade's direct observation and inclusion of scientific detail. Heade celebrated this duality in his own description of hummingbirds in *The Gems of Brazil* introduction, nodding to science and poetry in the same paragraph: "While scientific men have traveled hundreds of miles through the mild, malicious regions of the tropics in their anxiety to add [to] the knowledge of this seemingly insignificant but most brilliant & attractive little creature. For one who is the least degree attended to poetic feeling they have a singularly fascinating power, which the subtlest mind is unable to explain, but which all who have studied them must acknowledge to have felt."¹⁹ In *The Gems of Brazil*, Heade balances scientific knowledge and artistic elements brilliantly.

NOTES

- 1 *Boston Transcript*, Aug. 12, 1863, as quoted in Theodore E. Stebbins Jr., *The Life and Work of Martin Johnson Heade: A Critical Analysis and Catalogue Raisonné* (New Haven, CT: Yale University Press, 2000), 61.
- 2 Martin Johnson Heade, Notebook on Hummingbirds, ca. 1864 and ca. 1881, n.p., MS-1, box 1, folder 9, Martin Johnson Heade Papers, 1853–1904, Archives of American Art, Smithsonian Institution.
- 3 Henry T. Tuckerman, *Book of the Artists: American Artist Life, Comprising Biographical and Critical Sketches of American Artists; Preceded by an Historical Account of the Rise and Progress of Art in America* (New York: G. P. Putnam & Son, 1870), 543.
- 4 Ellery E. Foutch, "Capturing Nature: American Artists' Pursuit of Natural History," in *Flora/Fauna: The Naturalist Impulse in American Art*, ed. Jennifer Stettler Parsons (Old Lyme, CT: Florence Griswold Museum, 2017), 75. In the essay, Foutch explores many examples of fruitful exchange between artists and naturalists from the late 1700s to the late 1800s.
- 5 I would like to extend my deepest gratitude to Dr. Robert Wiedenmann, professor emeritus, Entomology Department, University of Arkansas, for sharing his insight and helping this art historian see the paintings through a natural science lens, and for reviewing a draft of the essay. Additional thanks go to Dr. Ashley Dowling, associate professor, Entomology Department, University of Arkansas, for sharing butterfly knowledge.
- 6 Heade quotes Wilson, Audubon, and Gould in his handwritten Notebook on Hummingbirds, n.p., which constitutes the planned introduction for *The Gems of Brazil*.
- 7 Didymus [Martin Johnson Heade], "Taming Hummingbirds," *Forest and Stream* 38, no. 15 (Apr. 14, 1892): 348.
- 8 Martin Johnson Heade, *Brazilian Sketchbook and Journal*, 1865, manuscript, Museum of Fine Arts, Boston, Gift of Richard and Susanna Nash, 1997.296. Heade references Gould in the journals more than twenty times among sketches of hummingbirds and notes about colors, habits, and other characteristics of the birds.
- 9 John Gould, *An Introduction to The Trochilidae, or Family of Humming-birds* (London: Taylor and Francis, 1861), 3. Heade was also friends with Mr. James Cooley Fletcher, a US diplomat in Brazil and author of the guidebook *Brazil and the Brazilians* (1857), which may have further encouraged Heade to select a Brazilian destination. Mr. Fletcher introduced Heade to English and Brazilian aristocrats, including the emperor of Brazil, Dom Pedro II. See Heade, *Brazilian Sketchbook and Journal*, Oct. 23 and Oct. 25.
- 10 Didymus, "Taming Hummingbirds," 348. Tuckerman also notes Heade's "fine collection of tropical birds and butterflies, which have served him for authentic and elaborate studies." Tuckerman, *Book of the Artists*, 543.
- 11 See Stebbins, *Life and Work of Martin Johnson Heade*, 284–93.
- 12 Ellery E. Foutch discusses Martin Johnson Heade's attention to perfection in the chromolithographs for *The Gems of Brazil*, in Foutch, "Arresting Beauty: The Perfectionist Impulse of Peale's Butterflies, Heade's Hummingbirds, Blaschka's Flowers, and Sandow's Body" (PhD diss., University of Pennsylvania, 2011), 93–166.
- 13 Art historian Katherine Manthorne notes that in the nineteenth century, "The Tropics" referred to Central and South America, reflecting a "myopic view and a prevailing misconception. The tendency was to lump the entire continent under this heading, with little regard for the fact that much of it was not hot, steamy, jungle-covered terrain." Manthorne also addresses preconceptions about Latin America. Manthorne, *Tropical Renaissance: North American Artists Exploring Latin America, 1839–1879* (Washington, DC: Smithsonian Institution Press, 1989), 3, 9–30.
- 14 Heade, *Brazilian Sketchbook and Journal*, sketchbook, n.p.
- 15 Stebbins, *Life and Work of Martin Johnson Heade*, 76. Heade writes about the male hummingbird as a "husband," in Didymus [Martin Johnson Heade], "Hummingbird Pets," *Forest and Stream* 43, no. 7 (Aug. 18, 1894), 137.
- 16 Heade, *Brazilian Sketchbook and Journal*, sketchbook, n.p.
- 17 Ibid, sketchbook, n.p. Heade also wrote, "Collecting butterflies is an interesting occupation here, but the bug business, tho [sic] it may be scientifically interesting, is not so neat." Ibid, journal, Nov. 15, 1863, n.p.
- 18 Heade, Notebook on Hummingbirds, n.p.
- 19 Ibid, n.p.



FIG. 27. Martin Johnson Heade, *Gremlin in the Studio, I*, ca. 1871–75, oil on canvas, $9\frac{7}{8} \times 13\frac{3}{4}$ in. Collection of Dr. and Mrs. Harold Krug. Photograph by Kevin Todora.

ARTISTIC EXCHANGE AND DISSENT: HEADE, COLE, CHURCH, AND THEIR DESCENDANTS

WILLIAM L. COLEMAN



FIG. 28. Martin Johnson Heade, *Haystacks*, ca. 1871–75, oil on canvas, 10 x 22 in. Promised Gift to Crystal Bridges Museum of American Art, Bentonville, AR. Photograph by Dwight Primiano.

MARTIN JOHNSON HEADE'S *Gremlin in the Studio, I* presents a playful joke between two friends and studio-mates and a neat summation of the often ambivalent processes of cross-pollination between artists that inspire this exhibition (fig. 27). The top section of the canvas presents the typical Newburyport, Massachusetts, salt marsh—subject matter that Heade was a pioneer in finding beautiful for its color, texture, and scale, rather than insufficiently utilized and civilized; it is sketchier but not so different in execution from the two examples that are included in this exhibition (figs. 28, 29).¹ However, all is not right with this quiet scene. The persistent water that defines the marsh, and challenges all attempts to make it productive in human terms, drains onto the floor of an imagined studio space from that top portion, which is revealed to be a painting within a painting, resting on two hastily executed sawhorses. Just out of splash range from the leaking marsh, the titular gremlin engages the viewer directly, leering at the failure of the artist, at the viewer's deception, and, perhaps, at the feebleness of art's efforts to transfix and preserve a transitory landscape.

In this enigmatic little painting, which is on public view in this exhibition for the first time in many decades, we are offered a tantalizing glimpse of the playful relationship between Heade and Frederic Church and the processes of exchange and dissent that characterized the highest-stakes corners of the nineteenth-century American art world. It is significant that an apocryphal tale has grown up around the making of this painting in the studio the two artists shared at the famous Tenth Street Studio Building in New York.² So the story goes:

Heade, who occupied Church's room for a while, was painting a sunset—a meadow scene—and left a part of the canvas below the picture. When Heade went out Church at once finished the lower part. The water from the meadow was leaking down in every direction. The effect was immense.³



FIG. 29. Martin Johnson Heade, *Two Fishermen in the Marsh, at Sunset (New Jersey Marshes)*, ca. 1876–82, oil on canvas, 15¼ x 30⅞ in. Private Collection, Courtesy BROCK & CO., Concord, Massachusetts.

While most scholars have dismissed this charming tale of collaborative making and have found no evidence of multiple hands in the work, the persistent mythology of *Gremlin in the Studio* is itself evidence of the close relationship between these artists and urges closer attention to the precise means of exchange at work throughout the objects of nature study and environmental critique that make up this exhibition.⁴ We will see that the transmission of ideas between artists does not come without a certain degree of friction, as each of these figures seeks to carve out a distinct contribution in dialogue with the natural world.

This story begins with Thomas Cole, the artist so often cited as the American pioneer of the poetically ambitious mode of professional landscape painting that spawned the mid-nineteenth-century landscape boom colloquially known as the Hudson River School (fig. 30). By the time the prodigiously gifted eighteen-year-old Frederic Edwin Church (fig. 31) obtained a letter of introduction to study with Cole from the prominent arts patron Daniel Wadsworth, Cole was certainly the most important landscape artist in the United States. A painting Cole made just two years before Church joined him as his first student, living and working with the Bartow and Cole family at the home that is now the Thomas Cole National Historic Site, gives an idea of the artistic values that would have been transmitted from master to student. Cole's 1842 view of Mount Etna in Sicily shows a grand vista of a volcanic peak with its surrounding human and natural traces, which evoke associations and encourage a viewer's reflection on



FIG. 30. Asher B. Durand, *Portrait of Thomas Cole*, 1838, oil on canvas, 29½ x 24½ in. Berkshire Museum, Pittsfield, Massachusetts; Gift of Zenas Crane, 1917.13.

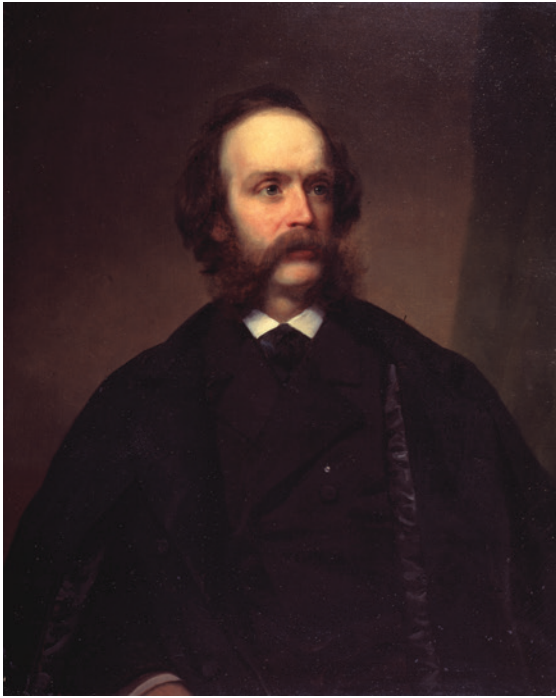


FIG. 31. Att. Charles Loring Elliott, *Frederic Edwin Church*, ca. 1866, oil on canvas, 34 $\frac{1}{8}$ x 27 $\frac{1}{8}$. Olana State Historic Site, Office of Parks, Recreation, and Historic Preservation; OL.1981.4.A.

the timescale of humans in contrast to that of nature (fig. 32). The work presents a synthesizing, harmonious whole, an ambitious American artist's entry in the long pictorial history of Europe, rather less labored and less overtly charged with the duty to manufacture new associations and aesthetic justifications than were his responses to the wilder landscape of the Catskills, which was newer to the European tradition of representation.

The mixture of productive exchange with dissent that was latent in the relationship between Cole and Church, as in all artistic cross-pollination, is nowhere more evident than in the stark contrasts in motivation and execution between *Mount Etna* and a rather different view of another volcanic peak Church would produce a decade after his studies with Cole, *Heart of the Andes* (see fig. 2). Thomas Cole's nature study was motivated by a desire to prove that landscape painting too could be a valid means of participation in the republic of letters, on an equal footing with the more prestigious

genre of history painting and kindred arts such as poetry, which also consumed a significant share of his attentions.⁵ His method is characterized by proceeding from rigorous scientific specificity in his drawing practice and broad readings in, and serious amateur practice of, natural science to the



FIG. 32. Thomas Cole, *View of Mt. Etna*, 1842, oil on canvas, 32 x 48 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2007.11. Photograph by Dwight Primiano.



FIG. 33. Frederic Edwin Church, *South American Landscape*, 1857, oil on canvas, 16 x 24 in. Private Collection, Courtesy BROCK & CO., Concord, Massachusetts.



FIG. 34. Frederic Edwin Church, *View on the Magdalena River*, 1857, oil on canvas, 35 x 47 in. (framed). Virginia Museum of Fine Arts, Richmond, J. Harwood and Louise B. Cochrane Fund for American Art; Adolph D. and Wilkins C. Williams Fund; Arthur and Margaret Glasgow Fund; and the Estate of Hildegard Graham von Roijen, by exchange; 2018.393.

general in paint, as in the case of *Mount Etna*, in which the studied detail is subsumed into a harmonious whole that is not limited by its claims to botanical accuracy. Despite Frederic Church's devotion to Cole and all that he learned from his teacher in their sketching expeditions around the mid-Hudson Valley and beyond, Church's work manifests a stark difference of opinion in regard to the uses of the scientific study of nature in making art. *Heart of the Andes* wears proudly the long study of Alexander von Humboldt's *Cosmos* that directly inspired it, proclaims the intrepidity of the journeys that gave it authenticity, and makes a monumental spectacle of the conspicuous labor that filled it to the brim with useful information of scientific accuracy that a rigorous viewer could obtain by close observation that models and mirrors the painter's own.

Church's *South American Landscape* (fig. 33) and *View on the Magdalena River* (fig. 34), both works of the banner year of 1857 and included in this exhibition, show the gradual emergence of his break with Cole and the development of the final achievement of *Heart of the Andes*. *South American Landscape* approaches not only a volcanic subject after Cole but also follows quite directly the color palette of *Mount Etna*, with their kindred veil of golden yellow. However, the rigorous botanical specificity of the foreground here and in *View on the Magdalena* shows a very different set of artistic values than the generalizing and poeticizing vision of Cole. That the latter painting was repurchased by Church and displayed at Olana into the twentieth century adds to its resonance as a sign of the pictorial characteristics the artist valued in his own work.⁶ The claim Church's mature paintings like these make on the public's attentions is distinctly not the poetical uplift or moral allegory of his teacher's work but rather the promise of spectacular transport with an admixture of information value from a scientifically precise explorer-artist who brought back from distant latitudes all the facts and detail his canvases could contain.

In this context, the next major figure of our exhibition represents a third path, undeniably manifesting the cross-pollination of ideas from both Cole and Church, and especially closely tied to the latter, but offering an iconoclastic brand of counter-landscape that begs to differ from the Hudson River School consensus. The work of Martin Johnson Heade (fig. 35) reflects neither the overtly poetical and allegorical landscape of Cole nor Church's imperial assemblage of spectacular detail but rather a microcosmic vision at the nexus of still life and landscape. By making his stock in trade the liminal subject matter his predecessors had left by the wayside, Heade's overtly modest but quietly revolutionary paintings undermined received value systems and called a viewer's attention to what we risk losing at the fringes of empire. In his imperfect but no less pioneering environmental consciousness, Heade shows lessons inherited from Cole, whose own outcries against "the ravages of the axe" are by now well known.⁷

While all evidence indicates that Heade never met Cole and knew him only through his paintings and writings, Heade enjoyed a particularly close friendship with Frederic Church, the warmth of which belies important differences of opinion that lay beneath the surface.⁸ As first a fellow renter at the Tenth Street Studio Building alongside Church (fig. 36), and later a de facto subtenant of Church's own grand studio in the building, making use of the space while the latter was at Olana, Heade was quite literally immersed in the contributions and worldview of the most successful artist of the period. From their first encounters, Heade had nothing but praise for Church and his work, not giving evidence of any sign of resentment at the far

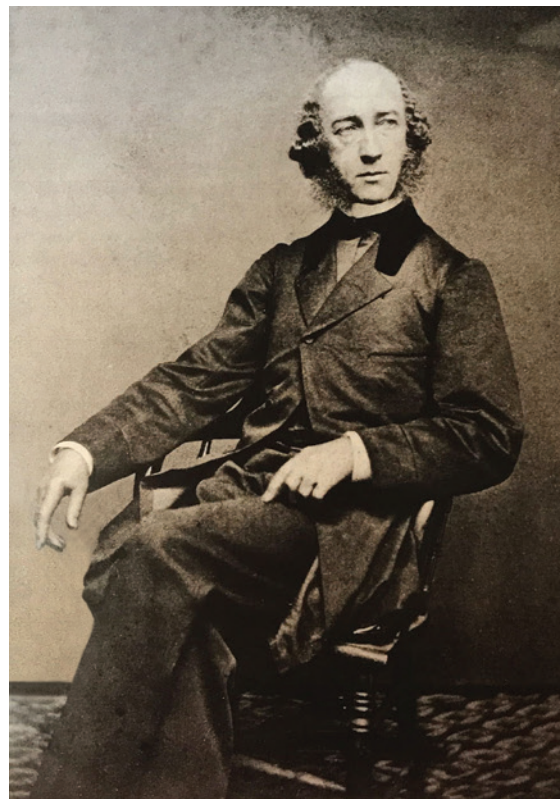


FIG. 35. Martin Johnson Heade, 1860, carte de visite, now lost, albumen print. Photographs of Artists, Collection I, Archives of American Art, Smithsonian Institution. From Theodore E. Stebbins Jr. et al., *The Life and Work of Martin Johnson Heade: A Critical Analysis and Catalogue Raisonné* (New Haven, CT: Yale University Press, 2000), plate 14.



FIG. 36. S. Beer, Frederic Edwin Church's Tenth Street Studio, New York, ca. 1866, stereograph, 3¼ x 6¾ in. Olana State Historic Site, New York State Office of Parks, Recreation, and Historic Preservation; OL.1985.815.

greater accomplishment of an artist seven years his junior. Like so many others, Heade was overwhelmed by the achievement of Niagara, which Church completed just months before Heade took up his first studio at Tenth Street. When the two painters finally met in that fertile creative environment, Heade was not disappointed, calling Church "one of the most affable & agreeable men I have ever met," and a lengthy and lively correspondence developed that would continue for decades.⁹ Notwithstanding occasional requests during the time they shared a single studio that Heade act on Church's

behalf in various city matters, which risked making Heade feel treated as an assistant, the predominant tone across the surviving letters is of genuine fondness. Their correspondence is peppered with doodles and inside jokes, suggestions that Heade buy land close to Olana and join Church in happy country life, commiseration about the art market, and tales of family dramas large and small.

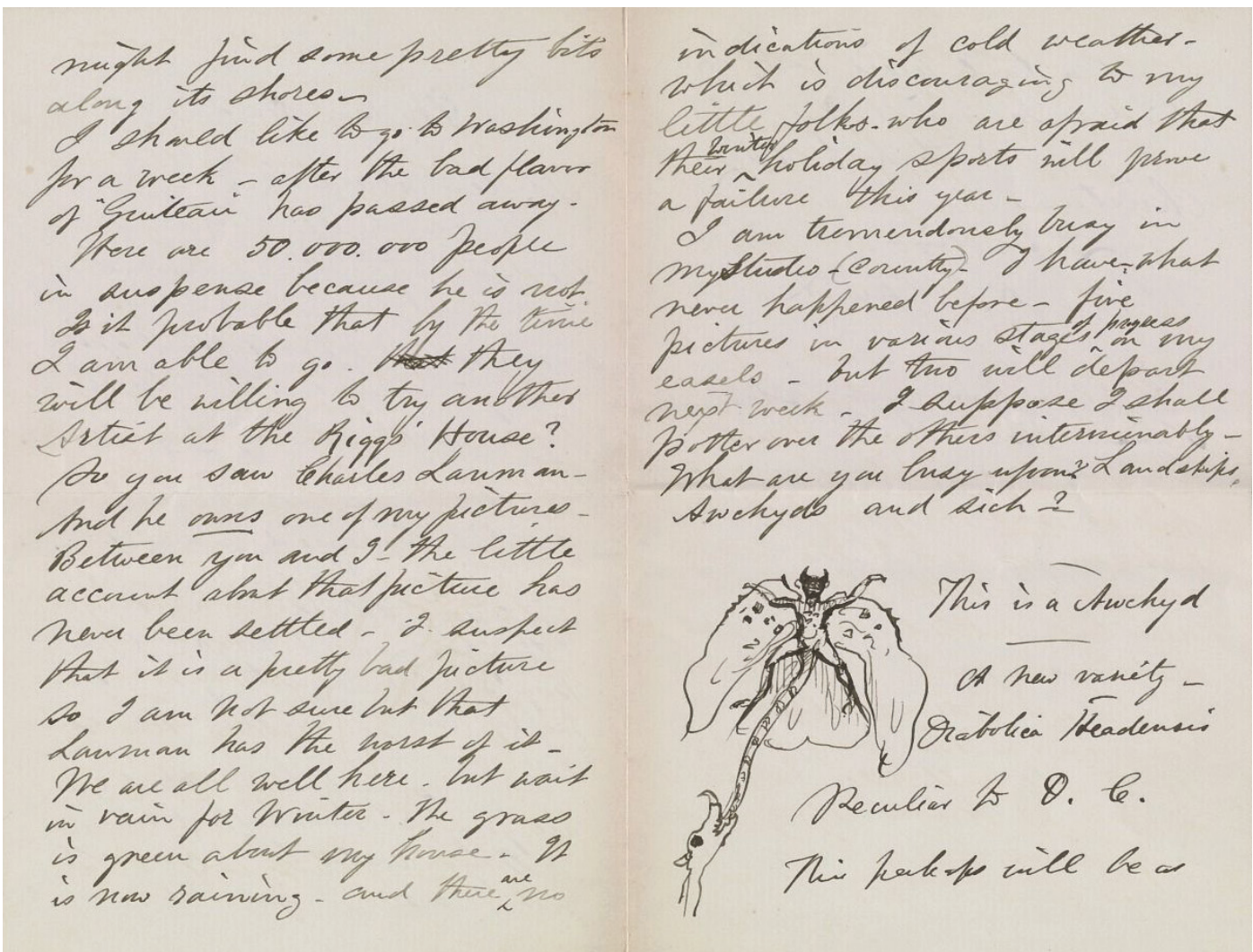


FIG. 38. Frederic Edwin Church, letter to Martin Johnson Heade, December 22, 1881. Martin Johnson Heade papers, 1853–1904, Archives of American Art, Smithsonian Institution.



FIG. 37. Martin Johnson Heade, *Tropical Orchids*, 1870–74, oil on canvas, 21⁷/₈ x 17¹/₈ in. Olana State Historic Site, New York State Office of Parks, Recreation, and Historic Preservation; OL.1981.39.

A particularly important trace of the cross-pollination of ideas between the two men is the painting *Tropical Orchids*, which Heade most likely gifted to Church and that remains in the Olana collection (fig. 37).¹⁰ While the act of exchanging work with a peer artist and displaying the work received prominently and with pride for generations in the family home is an important sign of respect, this canvas attests just how much Heade's work came to differ from that of Church. Despite the fact that Church was the key source of the inspiration for Heade to go to South America for the purpose of his art, Heade returned to make not another *Heart of the Andes* but rather works like *The Gems of Brazil* and this one, one of the earliest of his orchids without animal accompaniment. Church's friendly jibes in relation to the South American journey, chiding Heade for failing to find and sketch the Sierra Nevada de Santa Marta range in Colombia and his teasing reference to Heade's obsession with flowers in a doodle of a new orchid specimen, "Diabolica Headensis," show Church's consciousness that his colleague was going a rather different route in his own art (fig. 38). The works that resulted from this difference of priorities, as shown throughout this exhibition, manifest a heightened sensitivity to the fragility of the natural world and the delicate rhythms on which it depends.

The many layered connections between these artists did not end with their own ambivalent exchanges but extended to subsequent generations as well. Two of Thomas Cole's children, Theodore, known as Theddy, and Emily, came to have their own relationships with the Church family. In one letter of 1845, Cole wrote home to Catskill, "I hope Theddy draws. . . . Ask Mr. Church if he will not give Theddy a little lesson. Tell Mr. C that I expect to see something quite fine on my return."¹¹ There is also evidence that Church had a direct relationship with Emily Cole, who did inherit her father's artistic gifts and his devotion to the natural world.¹² Her work shows a sensitive hand practicing botanical art with distinction, both in flat media as well as in paint on porcelain (fig. 39), and she was a charter member of the New York Society for Ceramic Arts, in 1892. Emily had a lasting friendship and correspondence with Isabel Charlotte "Downie" Church (fig. 40), who, like Emily, found in the study of the natural world not only worthy material left aside by their famous fathers but also a rare corner of the art world where women were able and expected to operate. Their surviving work in a variety of media attests to the spread of a sense of the importance of close study of the natural world within their families.

While Theodore Cole never did become another artist, as his father had hoped in that 1845 letter, he was central to one more instance of cross-pollination between the approaches to the



FIG. 39. Emily Cole, *Tea Pot, Cups and Saucers, Cream Pitcher, and Sugar Bowl*, ca. 1900, painted porcelain, various sizes. Thomas Cole National Historic Site, Gift of Edith Cole Silberstein; TC.2002.2.1.1, TC.2002.2.1.7, TC.2002.2.1.4, TC.2002.2.1.5.

natural world that this exhibition examines. After his father's death, Teddy Cole came to serve as the farm manager for Olana, Church's right-hand man in the execution of the massive earth-moving projects there. In this immersive, artist-created environment, as much a designed landscape as any work in oil on canvas, a Church and a Cole again allied to bring the outdoors in, shaping the physical world as well as the fictive one. Amidst the teams of workers digging a lake by hand and carving out new carriage roads on a monumental scale, there was always the pesky figure of Martin Johnson Heade, asking if they should not just stop and smell the flowers.



FIG. 40. Robert and Emily de Forest, *Isabel Charlotte (Downie) Church & Emma Carnes*, October 11, 1884, photograph, 11 x 9^{3/8} in. Olana State Historic Site, Office of Parks, Recreation, and Historic Preservation; OL.1982.1520.

NOTES

- 1 Maggie M. Cao, *The End of Landscape in Nineteenth-Century America* (Oakland: University of California Press, 2018), 98–99.
- 2 For more on this important artistic milieu, see Annette Blaugrund, *The Tenth Street Studio Building: Artist-Entrepreneurs from the Hudson River School to the American Impressionists* (Seattle: University of Washington Press, 1997).
- 3 A. Cary Smith, "Reminiscences of Some Famous Artists," *New York Herald*, April 4, 1909, quoted in Cao, *End of Landscape*, 68.
- 4 A second, smaller version of this subject was acquired by the Wadsworth Atheneum, Hartford, CT, in 1997. It is intriguing to note that while the Wadsworth picture was certainly passed down in the Heade family, the spottier provenance of the first version leaves it open to speculation that the original could have been a gift to Church that was dispersed from Olana in the early twentieth century, as so many objects were, until its reappearance with the dealer Victor Sparks at mid-century. More study is needed.
- 5 See Marshall B. Tymn, ed., *Thomas Cole's Poetry: The Collected Poems of America's Foremost Painter of the Hudson River School* (York, PA: George Shumway Publisher, 1972).
- 6 Gerald Carr, *Frederic Edwin Church: Catalogue Raisonné of Works of Art at Olana State Historic Site*, vol. 1 (Cambridge and New York: Cambridge University Press, 1994), 285.
- 7 Thomas Cole, "Essay on American Scenery," *American Monthly Magazine* 1 (Jan. 1836): 12.
- 8 Church served as a connector for Heade to Cole not only through shared experience but also from the works of his teacher that remained in Church's own collection and could have been viewed by Heade, of which only *A Solitary Lake in New Hampshire* (OL.1981.19) and *The Protestant Cemetery in Rome* (OL.1981.17) remain in the Olana collection today.
- 9 Martin Johnson Heade to John Russell Bartlett, Nov. 28, 1858. John Russell Bartlett Papers, John Carter Brown Library, Brown University, Providence, RI. Quoted in Theodore E. Stebbins Jr., *The Life and Work of Martin Johnson Heade: A Critical Analysis and Catalogue Raisonné* (New Haven, CT, and London: Yale University Press, 2000), 21.
- 10 The frame for this painting matches those of numerous Church sketches in the Olana collection, and for that reason, it can be assumed it was most likely made in the woodshop at Olana specifically for this object.
- 11 Louis Legrand Noble, *The Life and Works of Thomas Cole*, 3rd ed. (New York: Sheldon, Blakeman and Company, 1856), 363.
- 12 See, for example, a letter from Frederic Church to Emily Cole, Feb., 16, 1899, CV 553, series 3: Cole Children, box 1, folder 16, Emily Cole, 1858–1900, Thomas Cole Papers, Albany Institute of History and Art Archives.

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THOMAS COLE NATIONAL HISTORIC SITE, CATSKILL, NEW YORK

The mission of the Thomas Cole National Historic Site is to inspire cultural and environmental awareness of the American landscape and the continuing impact of Thomas Cole's art and ideas through innovative educational programs that are relevant today. The Thomas Cole National Historic Site marks the birthplace of American art, as it was the home of the founder of the nation's first major art movement, now known as the Hudson River School. Located in the Hudson Valley, the site includes the artist's home, his 1839 Old Studio building, and the recently reconstructed 1846 New Studio building, with gardens and grounds overlooking a sweeping view of the Catskill Mountains. The site is an affiliate of the National Park Service and operates as a forward-thinking independent nonprofit organization. The Thomas Cole Site offers guided and self-guided tours, special exhibitions of both nineteenth-century and contemporary art, printed publications, lectures, extensive online programs, free school programs both at the historic site and in local classrooms, the Cole Fellowship program, free community events, and innovative public programs such as the Hudson River School Art Trail—a map and website that enable people to visit the places in nature that Cole painted; and the Hudson River Skywalk—a new walkway connecting the Thomas Cole Site with Frederic Church's Olana over the Hudson River. For more information, visit ThomasCole.org. The Thomas Cole National Historic Site is located at 218 Spring Street, Catskill, New York, 12414.

OLANA AND THE OLANA PARTNERSHIP, HUDSON, NEW YORK

Olana is the greatest masterpiece of Frederic Edwin Church (1826–1900), a preeminent American artist of the mid-nineteenth century, and the most intact artist's home, studio, and designed landscape in the United States. Church designed Olana as a holistic environment, integrating his advanced ideas about art, architecture, landscape design, and environmental conservation. Olana's 250-acre artist-designed landscape, with five miles of carriage roads and a Persian-inspired house at its summit, embraces unrivaled panoramic views of the Hudson Valley and Catskill Mountains and welcomes more than 170,000 visitors annually.

Olana State Historic Site, administered by the New York State Office of Parks, Recreation and Historic Preservation, is a designated National Historic Landmark and one of the most visited sites in the state. The Olana Partnership, a private not-for-profit education corporation, works cooperatively with New York State to support the restoration, conservation, and interpretation of Olana. The Olana Partnership operates Olana State Historic Site in a cooperative agreement with New York State Parks. Olana is located at 5720 State Route 9G in Hudson, New York. The house and landscape are open for guided touring, and reservations are highly recommended. The landscape is free and open daily, 8:00 AM–sunset. For details visit: www.OLANA.org.

CRYSTAL BRIDGES MUSEUM OF AMERICAN ART, BENTONVILLE, ARKANSAS

The mission of Crystal Bridges Museum of American Art is to welcome all to celebrate the American spirit in a setting that unites the power of art with the beauty of nature. Since opening in 2011, the museum has welcomed nearly 5 million visitors, with no cost for admission. The collection spans five centuries of American masterworks and is enhanced by temporary exhibitions. The museum is nestled on 120 acres of Ozark landscape and was designed by world-renowned architect Moshe Safdie. A rare Frank Lloyd Wright–designed house was preserved and relocated to the museum grounds in 2015. Crystal Bridges offers public programs including lectures, performances, classes, and teacher development opportunities. Some 280,000 schoolchildren have participated in the Willard and Pat Walker School Visit program, which provides educational experiences for school groups at no cost to the schools. Additional museum amenities include a restaurant, gift store, library, and five miles of art and walking trails. The Momentary, which opened in February 2020, is a dynamic, innovative, multidisciplinary arts space, a satellite to Crystal Bridges, which champions contemporary art's role in everyday life. For more information, visit CrystalBridges.org and TheMomentary.org.

CROSS POLLINATION: HEADE, COLE, CHURCH, AND OUR CONTEMPORARY MOMENT

Published by Thomas Cole National Historic Site +
The Olana Partnership 2020

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BACK COVER: Martin Johnson Heade, *Hooded Visorbearer* (detail), ca. 1863–64, oil on canvas, 12¼ x 10 in. Crystal Bridges Museum of American Art, Bentonville, AR; 2006.93. Photograph by Dwight Primiano.

