Blue-crowned Motmot,
Brumidi Corridors
(detail, North Corridor).

The Unlikely Significance of Brumidi's Motmot

Amy Elizabeth Burton

A groundbreaking discovery reveals the source of imagery for nearly four dozen birds painted in the Brumidi Corridors—the first such source to be identified for the corridors. This breakthrough deepens our understanding of the artist Constantino Brumidi and the way he worked when creating the murals in the Senate's renowned corridors. Moreover, the charming birds that enliven the walls of the Brumidi Corridors tell a fascinating and unexpected tale—a story that steps beyond ornithology and aesthetic appeal and points to a unique and important phase in America's growth as a nation and Congress' role in the physical and intellectual exploration of this vast new land.

For years, ornithologists speculated that Brumidi and his team of artists used some type of scientific reference for the paintings of birds in the Brumidi Corridors. The 345 birds are from such diverse geographic ranges that Brumidi could not have observed or sketched them from life, even if he had been an ornithological specialist. Although the birds are not depicted with scientific form or detail, they are represented with admirable verisimilitude. Brumidi clearly took great pains to include a substantial variety of birds from across North America in his designs for the murals, and many of the birds were recent ornithological observations from the American West. The newly discovered source for the birds sheds light on Brumidi's noteworthy accomplishment in rendering an estimated 200 species of birds in his murals.

The Tale of a Motmot

The discovery that finally linked Brumidi's birds to a specific source was many years in the making. It began as I watched the conservator of the Brumidi Corridors direct her work lamp on a mural of the distinctive motmot, a bird whose hallmark is its extraordinary tail feathers. Before restoration, the motmot was hardly inspiring. It bore a coat of clumsy overpaint and seemed dull, thickly executed, and unremarkable. As the conservator labored on this bird, she rescued its refinement and finesse. After restoration, Brumidi's motmot appeared resplendent. The recreation of feathers as rich and iridescent as a mallard's head—painted on plaster, no less—showcases the expertise, or *sprezzatura*, of a real master. The bird's stately elegance, as well as its very presence in the Brumidi Corridors, intrigued me. How did the Italian-born artist come to include this particular bird—remote and exotic by 1850s standards—here in the United States Senate?

After many years musing the riddle of this exceptional bird and its unlikely presence in the Capitol's murals, I was rewarded. As I thumbed through a 19th-century book in the Senate Library, the mirror-image of the motmot from the Brumidi Corridors stared out at me. It appeared that the motmot—as well as nearly four dozen

Right: **Motmot, Brumidi Corridors (North Corridor).**

Far right: ***Mexican Boundary Report*, Plate VIII (*Momotus coeruleiceps*).**

The motmot in the Brumidi Corridors bears a striking resemblance to that found in the *Mexican Boundary Report*.

"West End of Madelin Pass," *Pacific Railroad Report*, Volume 11, engraving, ca. 1861.
In the 19th century, federally sponsored expeditions included artists to document the flora and fauna of the land.

of Brumidi's other birds—derived from two weighty congressional publications printed from 1855 to 1861: *Report on the United States and Mexican Boundary Survey* and *Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean*.

The *Mexican Boundary Report* and the *Pacific Railroad Report* provided comprehensive descriptions of the nation's newly surveyed geographical regions and included beautifully illustrated sections dedicated to ornithology. The birds identified on the expeditions and illustrated in the reports evidently provided a rich and inspiring source of subject matter for the decorative wall paintings in the Capitol. However, Brumidi's use of the reports as reference material was not a documented part of the Capitol's history, and the reports' influence on Brumidi's murals had long since faded from institutional memory.

Fortunately, copies of the *Mexican Boundary Report* and the *Pacific Railroad Report* never strayed far from the Capitol. As Brumidi and his assistants painted the corridors in the 1850s, the reports were delivered directly to the Capitol, specifically for Congress' use. The Senate's chief clerk collected reports to Congress prior to the 1871 founding of the Senate Library, and later, the Senate Library would count the volumes in its holdings. For nearly 150 years, these books and their ornithological lithographs have been waiting to be rediscovered and reassociated with Brumidi's work in the Capitol.

A Triad: Congress, Exploring Expeditions, and the Smithsonian Institution

The connection between Brumidi's murals and the *Mexican Boundary* and *Pacific Railroad* reports now lends an historical relevance to the birds of the Brumidi Corridors. Placed in context, Brumidi's birds reflect the 19th-century surge in westward expansion and federal support for exploration and scientific discovery across the young and developing nation.

The 1830s through the 1880s witnessed America's great age of transcontinental exploration. Prompted by growing economic and strategic interests, federally sponsored expeditions mapped boundaries, ascertained rail routes, and explored the geological history and diverse resources of the trans-Mississippi West. Congress appropriated funds for these important expeditions and the resulting public reports. This investment promoted "nation-building," fitting for the Manifest Destiny generations of the mid-19th century. It also cultivated national scientific advancement and allowed a young America to plant its flag in the scientific world.

In 1846, Congress enacted legislation to establish the Smithsonian Institution "for the increase and diffusion of knowledge among men."[1] Regarded as the national museum, the Smithsonian Institution supplied federally funded expeditions with naturalists and collectors and became the repository for all federal science collections. As a result of the numerous and extensive expeditions, the fledgling museum experienced explosive growth as a collecting institution. The Smithsonian Institution also assumed responsibility for the wide-ranging scientific content published in the congressional reports from the government-sponsored expeditions. To appreciate the full story that the Capitol's birds tell, one must first study the ambitious *Mexican Boundary* and *Pacific Railroad* reports and the man instrumental to their creation, Spencer Fullerton Baird.

Spencer Baird (1823–1887) was the quiet but indefatigable force behind 26 government-sponsored exploring expeditions in the mid-19th century. As a well-educated and driven youth, he focused on ornithology. At age 17, Baird wrote to John James Audubon, the legendary ornithologist. Baird hoped that he had discovered a new type of bird but admitted that his descriptions might seem "very inexperienced" to this paragon of the field. Audubon confirmed the new species and added amiably, "although you speak of yourself as being a youth, your style and the descriptions you have sent me prove to me that an old head may from time to time be found on young shoulders."[2] Baird and Audubon continued their friendship until Audubon's death in 1851.

Baird's career would eventually take him far beyond the specialized field of ornithology. In 1850, at age 27, he became assistant secretary of the Smithsonian Institution. Baird's industriousness at the Smithsonian was legendary. During his career, he catalogued the findings from 1,000 of his carefully selected field collectors. As assistant secretary, and later as secretary of the Smithsonian, Baird played a critical role in the scientific exploration of the American West. He organized provisions and trained naturalists for the government's exploring expeditions. With his guidance

U.S. Senate Collection

"Balloon View of Washington, D.C." (detail), *Harper's Weekly*, engraving, July 27, 1861.

The Smithsonian Institution's first building was constructed in 1855, as seen in the background of this engraving.

National Museum of American History, Smithsonian Institution

Spencer Fullerton Baird, daguerreotype, 1842.

As a young man, Baird began a correspondence with prominent ornithologist John James Audubon.

and expertise, the resulting collections came to the Smithsonian Institution as part of a national collecting plan. Baird worked with exquisite timing, right as the government's systematic exploration of the trans-Mississippi West surged, in the era dubbed the "Great Reconnaissance." With his well-chosen connections in numerous branches of government, and with a father-in-law serving as inspector general of the United States Army and in charge of all terrestrial exploration, Baird earned a reputation as a "collector of collectors" and counted among his agents such luminaries as Commodore Matthew Perry, Captain David Farragut, and General George McClellan.[3]

A Grand Compendium

As if these credentials were not enough, Baird also acted as supervisor of publications at the Smithsonian Institution and shaped the appearance, content, and quality of expedition reports. He prepared the ornithological descriptions and drew the 25 ornithological illustrations found in the *Mexican Boundary Report*. Issued in two volumes from 1857 to 1859, this impressive publication documented and mapped the nearly 2,000-mile boundary between the United States and Mexico following the Mexican-American War in 1846–48. Thanks to Baird's influence, the authoritative work served as a "grand compendium," rich with descriptions and illustrations of the flora, fauna, geography, and natural history of the region. At the time, renowned Harvard botanist Asa Grey proclaimed, "It must be ranked as the most important publication of the kind that has ever appeared."[4]

Right, top: ***Mexican Boundary Report*, Plate XVIII (*Cyanoloxia parellina* and *Spiza versicolor*).**

Right, center and bottom: **Indigo Bunting and Varied Bunting, Brumidi Corridors (North Corridor).**

Evidence suggests that ornithological prints served as inspiration for Brumidi's murals in the Senate's corridors. Here, the birds' poses were altered to create a sense of spontaneity and flight.

A Railroad to the Pacific Ocean

Baird also authored and reviewed several of the 12 encyclopedic volumes of the *Pacific Railroad Report*.[5] In 1853, Congress appropriated $340,000 for multiple expedition parties to survey potential routes across the West for the first transcontinental railroad. The Pacific railroad expeditions of 1853–54 collected a cornucopia of information about the natural history of the region. Topographical engineers, cartographers, physicians, naturalists, geologists, meteorologists, and botanists joined the parties of military engineers assigned to gather information. All of the ornithological descriptions and illustrations from the *Pacific Railroad Report* were ultimately reviewed by Baird and published to his exacting standards.

"Induce Them to Continue Such Explorations"

Baird worked tirelessly during his career at the Smithsonian Institution to publish high-quality reports for 26 federally sponsored expeditions. He felt a keen responsibility to curate a public collection and produce publications that would encourage the respect of the scientific world. Baird's insistence on quality elevated the artistic integrity of these congressional publications. Baird was savvy and recognized that high-caliber publications were instrumental in convincing Congress of the merit of appropriating funds for the expeditions and the subsequent reports.

When Baird assumed his role at the Smithsonian in 1850, he inherited a problem: Congress was still smarting from the poorly administered U.S. Exploring Expedition of 1838–42, which had cost a whopping $928,000. As late as 1861, Senator Simon Cameron of Pennsylvania declared, "I am tired of all this thing called science here. It was only the other day we made another appropriation in regard to the expedition which Captain Wilkes took out to the Pacific ocean. We have paid $1,000 a volume for the book which he published. Who has ever seen that book outside of this Senate, and how many copies are there of it in this country?"[6]

Baird's integrity, vision, and successful management of the exploring expeditions and publication program helped regain Congress' support. Writing to one of his lithographers, Baird urged, "I trust these plates of yours to make such an impression on Congress as will induce them to continue such explorations; and publish the results in creditable style."[7] Baird ensured that the lithographs for the *Mexican Boundary Report* were prepared by none other than J.T. Bowen and Company—the same establishment that had prepared Audubon's lavish octavo edition of *Birds of America*. For the *Pacific Railroad Report*, Baird invested in the services of the reputable John Cassin, curator of the Philadelphia Academy of Natural Sciences. Baird paid Cassin $5,324 to draw, print, and hand color 2,000 copies each of 38 plates of birds. These illustrations are a credit to Spencer Baird's vision and merit a place among distinguished American ornithological works.

The art of ornithological illustration reached its height in the 19th century with hand-colored lithography, the medium of choice for the 58 ornithological illustrations published in the *Mexican Boundary* and *Pacific Railroad* reports. These exceptional plates testify to Baird's commitment to the advancement of American science. Hand coloring was laborious and costly but produced prints seldom surpassed in beauty or color accuracy by other printing methods in pre-Civil War America. For the two reports' ornithology sections alone, more than 100,000 lithographs were meticulously colored by hand.

Renaissance of the Brumidi Birds

Without extensive restoration of the Brumidi Corridors, the connection between the Senate's birds and the *Mexican Boundary* and *Pacific Railroad* reports might never have been made. Once muddied by amateurish retouching, the birds of the Brumidi Corridors have enjoyed a renaissance following restoration that unveils their original plumage and splendor. Having molted dull, awkward layers of overpaint and varnish, the birds can be identified by species and studied in earnest.

Restoration in progress, Woodhouse's Jay, Brumidi Corridors (North Entry).

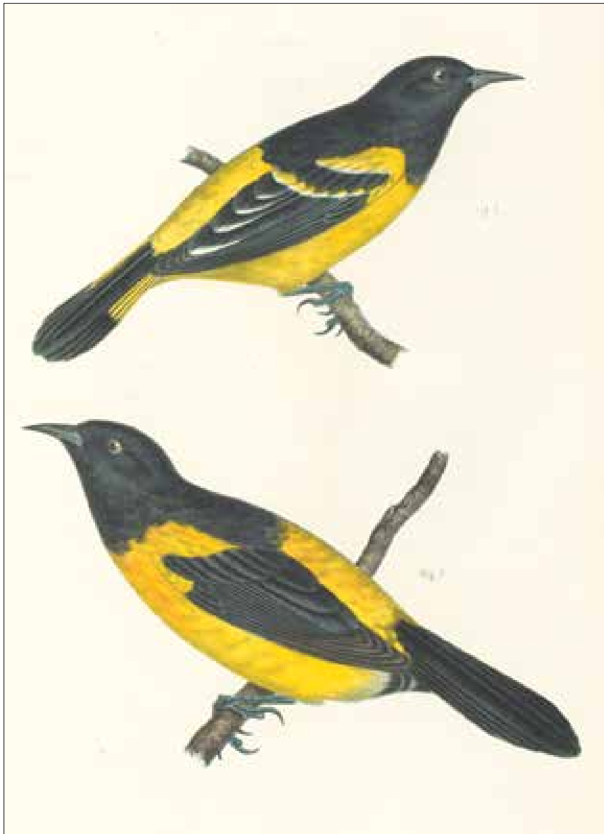
Inexpert overpaint made the bird indistinguishable as a species. Notice how the wing shape and plumage color changed as layers of overpaint accumulated. The restored bird regained its delicate grace.

Restoring the Senate's Birds

Constantino Brumidi and his assistant artists executed the majority of the Brumidi Corridors between 1857 and 1859.

As decades passed, the condition of the corridors deteriorated. Nineteenth-century methods of heating and lighting the Capitol created smoke and soot, which darkened the surface of Brumidi's murals. Aged varnish, which yellows and attracts a dulling film of dust, also marred the once-fresh look of the corridors. Subsequent generations repainted the murals using incorrect colors, replicating and perpetuating the aged and dingy appearance. Inexpert retouching compounded the problems by distorting the refinement of the original shapes and details in the paintings.

By the time conservators embarked on a major restoration campaign in 1996, the Brumidi Corridors suffered from multiple layers of overpaint applied in the intervening century. Conservators carefully removed these layers in a restoration effort directed by the Architect of the Capitol's curator. Today, the Brumidi Corridors appear with their original splendor, detail, and vibrancy.



Architect of the Capitol

Top: ***Mexican Boundary Report*****, Plate XIX (*****Icterus parisorum*** **and** ***Icterus wagleri*****).**

Bottom: **Black-vented Oriole, Brumidi Corridors (North Entry).**

Accurate eye and leg colors suggest that the artist relied on illustrations, not just specimen skins, when replicating birds in the Brumidi Corridors' murals.

Until the discovery of the *Mexican Boundary* and *Pacific Railroad* reports, little was known about Brumidi's sources or methods for selecting and replicating the flora and fauna of the Brumidi Corridors. A solitary clue originated in an 1874 guide book, *Keim's Illustrated Hand-Book*. It states that the birds in the Capitol "are studies from the collection in the Museum in the Smithsonian Institution, drawn by Brumidi."[8] For many years, it was assumed that "studies" referred to the Smithsonian's extensive collection of specimen skins. However, experts found this assumption problematic. Because soft tissues deteriorate and seldom reflect the true nature of the living bird, skins would not have provided reliable data for eye or leg colors. After restoration of the Brumidi Corridors, accurate details in

Until the discovery of the Mexican Boundary *and* Pacific Railroad *reports, little was known about Brumidi's sources or methods for selecting and replicating the flora and fauna of the Brumidi Corridors.*

Brumidi's birds became discernible and suggested that the artist looked to precise scientific illustrations, not just specimen skins. The hint provided in *Keim's* perhaps pointed all these years to Baird's lithographs.

From Baird's Lithographs to Brumidi's Murals

The ornithological sections of the *Mexican Boundary* and *Pacific Railroad* reports were published by the government between 1857 and 1860 and would have rolled hot off the press in precisely the years that Brumidi and his team of artists decorated the Brumidi Corridors.

Although Brumidi was the chief artist responsible for the overall design of the murals, his was not the only hand to paint the corridors. The English painter James Leslie was believed to be Brumidi's best assistant at depicting birds and animals, but Brumidi oversaw several artists, many of Italian and German descent, who specialized in painting flowers, fruits, faux moldings, landscapes, and animals.

Brumidi and his team of artists created a unified overall effect in the elaborate Brumidi Corridors, but a close analysis of the murals reveals subtle stylistic differences in the execution of the birds. Some poses are full of motion and give a feeling of the living bird, indicating an artist confident enough to take license with the specimens in the pages of the source books. Other birds in the murals replicate the more static poses of the birds in the reports, perhaps done by a different painter in Brumidi's crew. At times, the artists even copied the specific leaves and branches found in the lithographs.

Right: ***Mexican Boundary Report*****, Plate III (*****Picus scalaris*** **and** ***Picus nuttallii*****).**

Below: **Ladder-backed Woodpecker, Brumidi Corridors (North Entry).**

Several birds in the Brumidi Corridors are literal translations from the expedition reports. Here, the mirror-image pose of the woodpecker, as well as the shape of the leaves, is taken directly from the lithograph.

Architect of the Capitol

Interestingly, the birds modeled after the illustrations in the *Mexican Boundary* and *Pacific Railroad* reports appear in three specific areas of the Brumidi Corridors. This placement suggests that Brumidi and his assistants used the reports as they systematically executed portions of the wall murals in the expansive network of corridors.

The Brumidi Corridors' largest hallway, the North Corridor, showcases specimens from the reports in seven out of eight of its most prominent panels. Brumidi often adapted the lithographed bird's pose, or reversed it, to avoid repetition in the murals. On occasion, the reports' specimens appear almost traced onto the murals. Artistic license was duly exercised in just as many instances, with some of the birds enlarged or

Left: ***Mexican Boundary Report,*** **Plate XXII *(Cyanocitta sordida).***

The reports' lithographs typically illustrate one specimen per species.

Below: **Mexican Jay, Brumidi Corridors (North Corridor).**

In the North Corridor, Brumidi adapted the lithographs to create formal-looking pairs of birds flanking vessels abundant with fruits and flowers.

Architect of the Capitol

***Pacific Railroad Report*, Plate XXXVI (*Centurus uropygialis*).**

The Gila Woodpecker was first identified in 1854 during expeditions that surveyed potential routes for the first transcontinental railroad.

Architect of the Capitol

Gila Woodpecker, Brumidi Corridors (North Entry).

Brumidi included the newly discovered woodpecker in his murals shortly after the species was illustrated in the *Pacific Railroad Report*.

reduced in size. Priority seems to have been placed on the aesthetics of the murals as a whole rather than on the accurate representation to scale of the various species.

Individual specimens from the *Mexican Boundary* and *Pacific Railroad* reports cluster in the North Corridor's perpendicular spurs. One of these two spurs is the North Entry, a handsome foyer where nearly all of the 17 birds match those in the *Mexican Boundary* and *Pacific Railroad* reports. Unfortunately, two of the birds in these murals were badly damaged and could not be restored to Brumidi's original, so we will never know their true appearance or source. The Zodiac Corridor, the second spur that runs parallel to the North Entry, contains 22 birds, half of which were drawn from the reports.

In total, Brumidi adapted over 30 species of birds from the *Mexican Boundary Report* and *Pacific Railroad Report* for use in the Senate's murals. He used several species more than once, so that 46 birds in the Brumidi Corridors appear as if issued from the pages of the congressional reports.

Brumidi's murals are a time capsule of sorts. Mixed within the medley of birds common to the eastern states are leading-edge ornithological discoveries from territories in the West still being explored and settled. The Gila Woodpecker, for instance, makes an appearance in Brumidi's murals. This species was first identified in 1854 on the Pacific railroad expeditions and was illustrated in 1859 in volume 10 of the *Pacific Railroad Report.* Most Americans would not have seen this bird firsthand or in prior publications. Its presence in Brumidi's murals speaks volumes about the impact of 19th-century science and exploration on the psyche of the nation. Even the gentle birds of Brumidi's murals captured and celebrated the expanding bounty and variety that America had to offer.

Architect of the Capitol

Panel with birds, Brumidi Corridors (West Corridor).

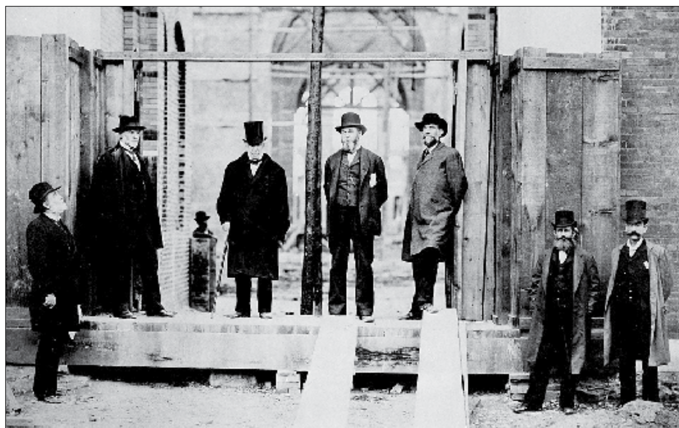
Brumidi placed North American birds within the classical scrolling vines.

Meigs, Sources, and Brumidi

The many birds ornamenting the Brumidi Corridors' murals are part of a long artistic tradition. Birds depicted with charming naturalism enliven ancient Roman mosaics and wall paintings. More directly, the mural designs of the loggia in the Vatican Palace influenced the delicate birds in the Senate's corridors. The murals in Raphael's early 16th-century loggia include a variety of birds nestled within a sophisticated framework of classical ornamentation. Today, the condition of the murals in the loggia is compromised, and a great many of the details are lost, but in the 1840s, Brumidi had worked at the Vatican and was familiar with its legendary designs.

Trained in Italy, Brumidi was well versed in the classical tradition and brought its distinct look to the Capitol. Montgomery C. Meigs, supervising engineer of the Capitol extension, desired that the Capitol's interiors rival those of Europe's great edifices and specified in his journal that Raphael's work at the Vatican would "give us ideas in decorating our lobbies."[9] Within Brumidi's first few years at the Capitol, he skillfully adapted many classical decorative arrangements for the Brumidi Corridors and added a bounty of motifs that reflected American interests. Perched in the ancient Roman arabesques and vines are sensitively rendered North American birds. Although one section of the Brumidi Corridors contains a handful of birds from foreign lands, such as parrots from Latin America and a Eurasian Hoopoe, the majority of birds are native species.

To render the impressive variety of specimens in his murals that perch, peck, and take wing throughout the stately corridors, Brumidi evidently utilized reference materials, such as the *Mexican Boundary* and *Pacific Railroad* reports. Using reference materials was not an uncommon practice for him. In 1858, a newspaper correspondent reported that Brumidi's work at the Capitol was done "with the aid of native pictures and engravings."[10] Meigs



Smithsonian Institution Archives, History Division

occasionally provided Brumidi with books and prints to help the Italian-born artist develop accurate historical scenes and to depict authentic details. An album filled with clippings of architectural engravings that belonged to Brumidi indicates that he, too, kept material for artistic inspiration. The margins are inked with Brumidi's sketches and doodles. As an academy-trained artist, Brumidi would have been accustomed to using many types of reference materials to create detailed and complex paintings.

The *Mexican Boundary* and *Pacific Railroad* reports documented species abundant during the 1850s exploration of the trans-Mississippi West. Brumidi featured these ornithological specimens in his murals when he was in his early 50s. When Brumidi passed away at age 75 in 1880, Senator Daniel Vorhees of Indiana noted the vast changes to the American landscape during his eulogy to the late artist:

> To one who recalls the great forests of the West before they were swept away, the birds and the specimens of American animals with which [Brumidi] has adorned a portion of this Capitol must be a source of unceasing enjoyment. The birds especially are all there, from the humming-bird at an open flower to the bald eagle with his fiery eye and angry feathers. I have been told that the aged artist loved these birds as a father loves his children and that he often lingered in their midst as if a strong tie bound him to them.[11]

Exotic parrots, Brumidi Corridors (North Corridor).

Only a small number of specimens in the Brumidi Corridors are non-native species, such as the parrots seen above.

Above left: ***National Museum Building Committee*, 1880.**

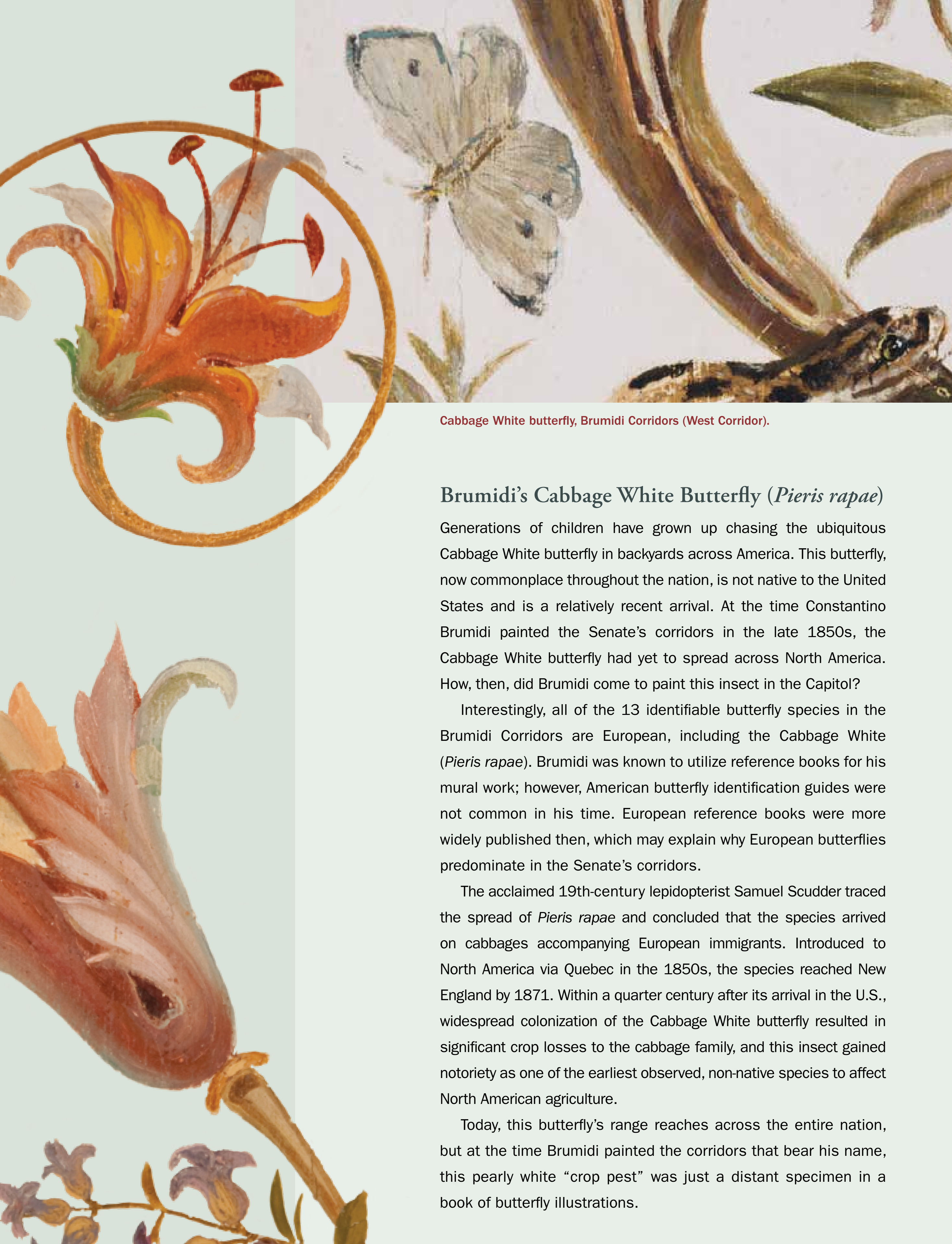
Shown here during their collaboration on construction of the Smithsonian Institution Arts and Industries Building, Meigs, *far left*, and Baird, *fourth from right*, were colleagues throughout their careers in Washington, D.C.

The Final Mystery

How exactly the *Mexican Boundary* and *Pacific Railroad* publications came into Brumidi's hands may never be known. Meigs and Baird were colleagues and communicated throughout their careers in Washington, D.C. However, there is no specific record mentioning the Brumidi Corridors' birds in Meigs' own journal. Furthermore, a fire in 1865 destroyed the Smithsonian Institution's early records and would have destroyed any mention of this topic that Baird may have recorded.

Did Meigs, or perhaps Brumidi, discover the handsome *Mexican Boundary* and *Pacific Railroad* reports when they were delivered to Congress? Could Baird, wishing to foster the Smithsonian's relationship with Congress, have suggested the illustrations to Meigs for the Capitol's decorative scheme? No matter the "how," these publications' influence on the Brumidi Corridors is evident and undeniable, and most importantly, has contributed to a fuller understanding of the history of the Capitol and the men who shaped it.

Restoration has changed what we know about the artist Constantino Brumidi, his methods, and the Senate's historic and meaning-filled decorative program. No detail is too small to be denied a significance or purpose. To date, only four dozen of the 345 birds in the Brumidi Corridors have an identified source—which means additional discovery lies ahead for those who are willing to let curiosity lead them forward.



Cabbage White butterfly, Brumidi Corridors (West Corridor).

Brumidi's Cabbage White Butterfly (*Pieris rapae*)

Generations of children have grown up chasing the ubiquitous Cabbage White butterfly in backyards across America. This butterfly, now commonplace throughout the nation, is not native to the United States and is a relatively recent arrival. At the time Constantino Brumidi painted the Senate's corridors in the late 1850s, the Cabbage White butterfly had yet to spread across North America. How, then, did Brumidi come to paint this insect in the Capitol?

Interestingly, all of the 13 identifiable butterfly species in the Brumidi Corridors are European, including the Cabbage White (*Pieris rapae*). Brumidi was known to utilize reference books for his mural work; however, American butterfly identification guides were not common in his time. European reference books were more widely published then, which may explain why European butterflies predominate in the Senate's corridors.

The acclaimed 19th-century lepidopterist Samuel Scudder traced the spread of *Pieris rapae* and concluded that the species arrived on cabbages accompanying European immigrants. Introduced to North America via Quebec in the 1850s, the species reached New England by 1871. Within a quarter century after its arrival in the U.S., widespread colonization of the Cabbage White butterfly resulted in significant crop losses to the cabbage family, and this insect gained notoriety as one of the earliest observed, non-native species to affect North American agriculture.

Today, this butterfly's range reaches across the entire nation, but at the time Brumidi painted the corridors that bear his name, this pearly white "crop pest" was just a distant specimen in a book of butterfly illustrations.