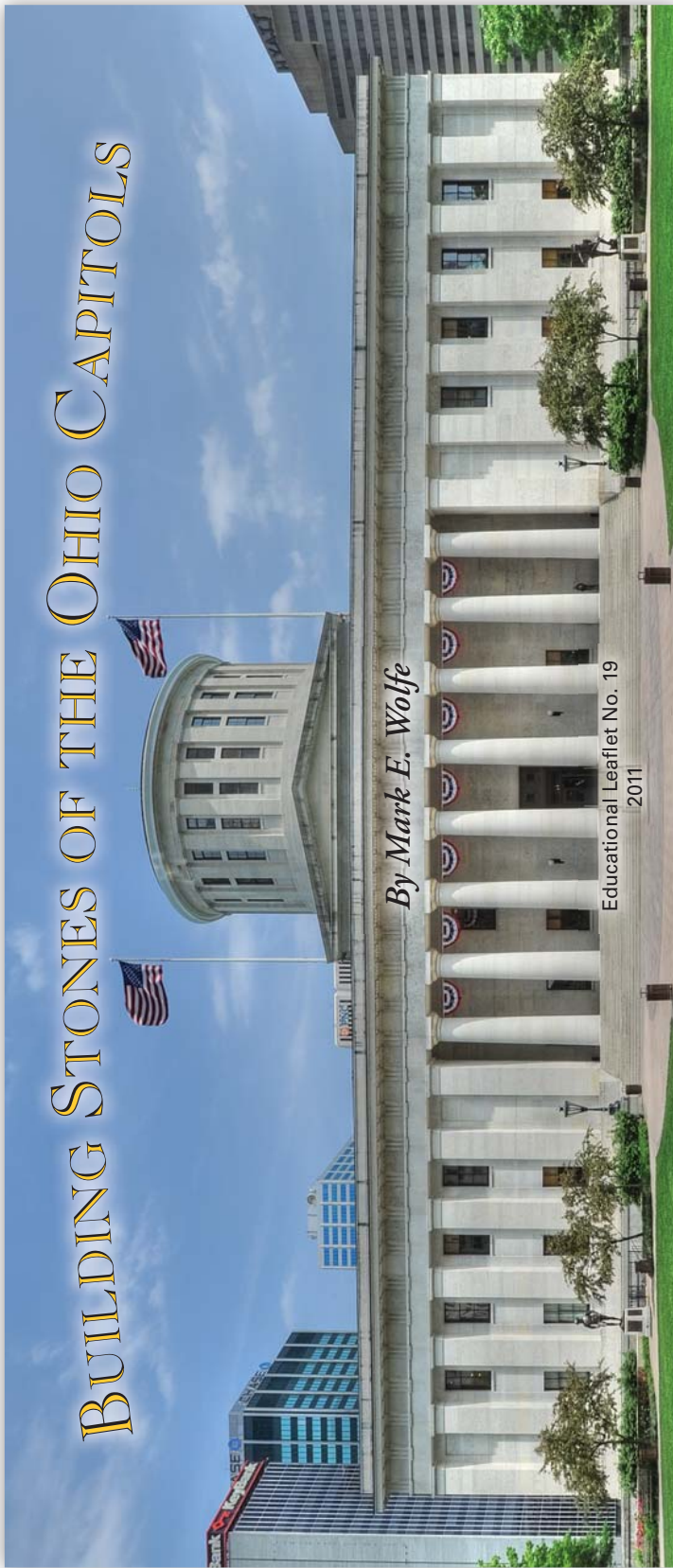


BUILDING STONES OF THE OHIO CAPITOLS

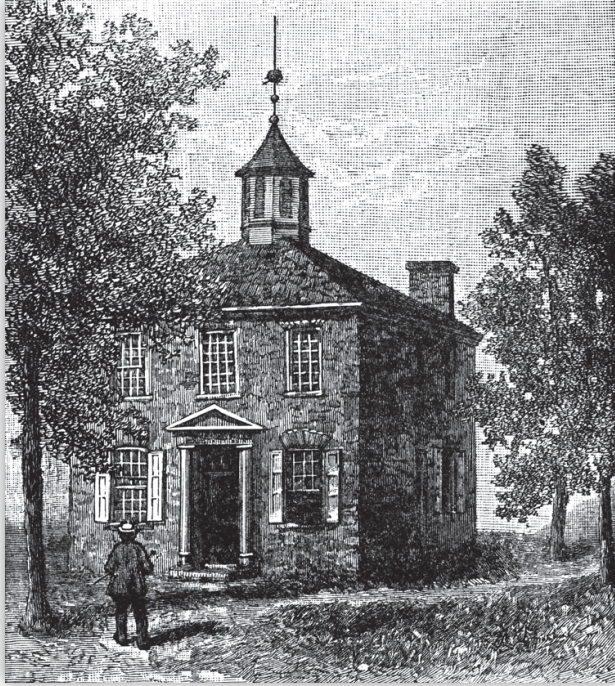


The aspirations and accomplishments of a state are often reflected in the public buildings it conceives and constructs. A state capitol is not only a place where important government functions are performed, but it is often a focal point of civic pride. Ohio has been fortunate to have beautiful and durable building stones, excellent clays and shales to make brick, and skilled masons to construct statehouses that embody the spirit of Ohio's citizens. In the more than 200-year history of Ohio, four statehouses have been erected that represented the vision of Ohio's future.

Ohio's First Statehouse in Chillicothe

A very early use of Ohio stone for building purposes occurred in 1800, when construction began on the first statehouse in Chillicothe, located approximately 45 miles south of Columbus in Ross County. Chillicothe was chosen as Ohio's first capital because of its central location on two important early transportation corridors, Zane's Trace and the Scioto River; because it was the largest city in the state at the time; and because it was home to influential Ohio politicians. The two-story stone building is believed to be the first public, stone structure erected in the North-west Territories. Major William Rutledge, a Revolutionary War veteran, supervised masonry work on the square, hipped roof and cupola-style building. Ohio's first constitution was written there in 1802, and the building served as state capitol from 1803 to 1810 and again from 1812 to 1816, when the capital was temporarily relocated from Zanesville. Unfortunately, the historic building was razed after the Great Chillicothe Fire in 1852 to make way for the Ross County Courthouse. In 1940, the *Chillicothe Gazette* built a replica of the first statehouse as the headquarters—still in use—for its newspaper operations.

Ohio's first statehouse was constructed of Devonian-age Berea Sandstone, quarried by Major Rutledge to the immediate southwest of Chillicothe at



Ohio's first statehouse in Chillicothe, Ross County, circa 1803. Courtesy FCIT.

Cemetery Hill. Fortescue Cuming, a traveler passing through Chillicothe in 1807, remarks in his diary that "...freestone... got in the neighborhood, is of whitish brown colour, and excellent for building." The Berea Sandstone in this area is usually 25 to 35 feet thick, with individual beds generally 6 to 12 inches thick. The Berea is a fine-grained, light-gray sandstone that weathers to light brown. The Berea Sandstone was used to construct many homes and businesses in the Chillicothe area during the early 1800s, including the



Berea Sandstone of the Adena Mansion in Chillicothe, Ross County. The Berea Sandstone was used to construct Ohio's first statehouse, also in Chillicothe.

magnificent mansion constructed in 1807 by Thomas Worthington as part of his estate named Adena. Worthington was the sixth governor of Ohio and was considered a founding father of the state. The 300-acre estate and meticulously restored mansion are currently owned by the Ohio Historical Society and open to the public.

Competition to Build Ohio's Second Statehouse in Zanesville

The Stone Academy at Putnam (West Zanesville) was constructed in 1809 originally to be used as the new statehouse; but after intense political maneuvering, a competing brick building across the Muskingum River in Zanesville was chosen by the state legislature instead. The Stone Academy is currently owned by the Pioneer and Historical Society of Muskingum County and represents the sole remaining public structure in Ohio from the early 1800s. The building stone for the Stone Academy, a Pennsylvanian-age Pottsville Group sandstone informally known as the "Homewood," is light brown, fine to medium grained, thick bedded to massive, micaceous (contains mica), and is approximately 27 feet thick at the former quarry.

The statehouse in Zanesville was completed in 1809. The Zanesville statehouse was an imposing two-story brick structure with a cut-stone foundation and trim that resembled Independence Hall in Philadelphia. James Hampson is generally considered the builder of the Zanesville statehouse. Jacob Houk supervised the stone and brickwork. And a man identified only as "Mr. Greene" was the mason responsible for cutting the sandstone into caps, windowsills, and the 1809 date stone. The second



Weathered "Homewood" sandstone of the Stone Academy in West Zanesville, Muskingum County. The "Homewood" is very similar to the "Clarion" sandstone originally used for the second Ohio Statehouse in Zanesville.

Ohio statehouse, affectionately called “Old 1809” by the locals, was torn down in the 1870s to make way for the new county courthouse. The skillful masonry of the original building is preserved in the oval-cut, one-piece “1809” date stone transferred from the original statehouse and now found above the main entrance to the current Muskingum County courthouse.

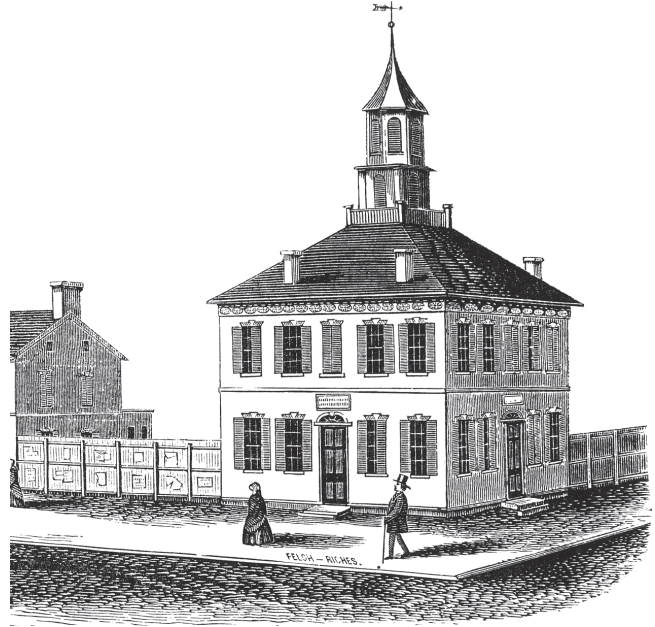
The brick used to construct the statehouse in Zanesville was handmade by John Lee at his brickyard, near Underwood Street. The brick was produced from the excellent Pennsylvanian-age clays and shales found near Zanesville. The Pennsylvanian-age sandstone used for the foundation and trim most likely came from the Townsend quarries north of Zanesville, which supplied a large portion of the building stone used in Zanesville during the early 1800s. The sandstone quarried at Townsend is from the lower portion of the Allegheny Group and informally named the “Clarion.” The “Clarion” is a medium- to coarse-grained, light-brown sandstone that is micaceous in part and often cross-bedded. The “Clarion” sandstone is 20 to 30 feet thick at the former Townsend quarries.



Ohio's second statehouse in Zanesville, Muskingum County, circa 1850–1870. Ohio History Connection photo.

The Original Statehouse in Columbus

After a brief return to Chillicothe (1812–1816), the Ohio state capitol was permanently moved to Columbus in 1817. Though still a small town in the early 1800s, Columbus was more centrally located than either Zanesville or Chillicothe, and most importantly, a large parcel of land had been donated to build a capitol. The new brick building had a foundation constructed of three tiers of hewn stone from Blacklick in eastern Franklin County. The finished building also had a belt of cut sandstone between the first and second stories. The nearby state office building was also built of brick and had a sandstone foundation and trim.



Ohio's third statehouse in Columbus, Franklin County, circa 1816. Ohio History Connection image.

The building stone used to construct the original statehouse in Columbus was sandstone from the Mississippian-age Cuyahoga Formation. The Cuyahoga Formation at Blacklick consists of thin-bedded, gray sandstones and shales. The building stone quality was variable primarily because of its poorly cemented character, but the quarry furnished stone for many early Columbus buildings. The brick was produced on site using alluvial clay taken from the Native American mound originally located at the southwest corner of Mound and High streets. The exterior of the original statehouse in Columbus deteriorated badly over the next 35 years, possibly due to poor building stone selection and brick manufacture as well as insufficient maintenance. Known as “Rat Rabble,” the dilapidated building was destroyed by fire on February 1, 1852, under mysterious circumstances, and apparently no one regretted its destruction. Unfortunately, it is possible that some of the first geologic specimens from the Ohio Geological Survey were on display at the statehouse and became lost prior to or during the fire. The original state office building was demolished in 1857, and the Governor and state legislative offices moved to the nearly finished Ohio Statehouse.

Ohio's Current Statehouse

The cornerstone of the current Ohio Statehouse was laid in 1839, but it took 22 years of political intrigue, financial panics, industrial development, cholera epidemics, and engineering advancements

before the building was completed in 1861.

By late 1837, inmates from the Ohio Penitentiary were completing stonework at the Ohio Lunatic Asylum, located in downtown Columbus. Ohio Governor Joseph Vance suggested that using the well-trained prison laborers to build the much-needed new statehouse would be a cost-effective option. In 1838 the Ohio General Assembly authorized building a new statehouse on 10 acres located southeast of the intersection of Broad and High streets in Columbus.

Excavation proceeded briskly to 6- to 10-feet-below grade and preparations were made for inmates to cut stone, a vast quantity of which was obtained from the Sullivan's Limestone quarry in late 1838. Foundation walls up to 15 feet thick were made with rough-cut limestone faced with brick. Work progressed rapidly, and a grand celebration honoring the laying of the cornerstone was held on July 4, 1839.

Construction on the new statehouse was abruptly halted in 1839 because of the financial panic of 1837, though politics also played a role in the delay. Ohio's debt had increased dramatically in the 1830s owing to multiple major projects, including the National Road, canals, Muskingum River locks and dams, and state support of the fledgling railroads. Governor Thomas Bartley complained in the 1844 State of the State

address that state offices were in poor condition, state funds were being spent on rental of additional office space, and "an investment of some sixty or seventy thousand dollars in the foundation and materials for the contemplated new State House is lying wholly worthless and unproductive."

Then, an influential event occurred on April 11, 1845, when the State of Ohio purchased the 50-acre quarry belonging to William S. Sullivan. The quarry was located 3 miles west of Columbus on the west bank of the Scioto River and became known as the "State Quarry." The purchase price of \$15,000 dollars (approximately \$300,000 today) was a wise investment. Devonian-age Columbus Limestone from the quarry was used to construct important structures in Columbus, such as the Ohio Penitentiary, massive piers of the first Broad Street Bridge, and several government buildings, including the statehouse. Ohio still retains title to the land that contained the historic "State Quarry," though the quarry has been dormant for decades and a portion is now buried beneath interstate highways.

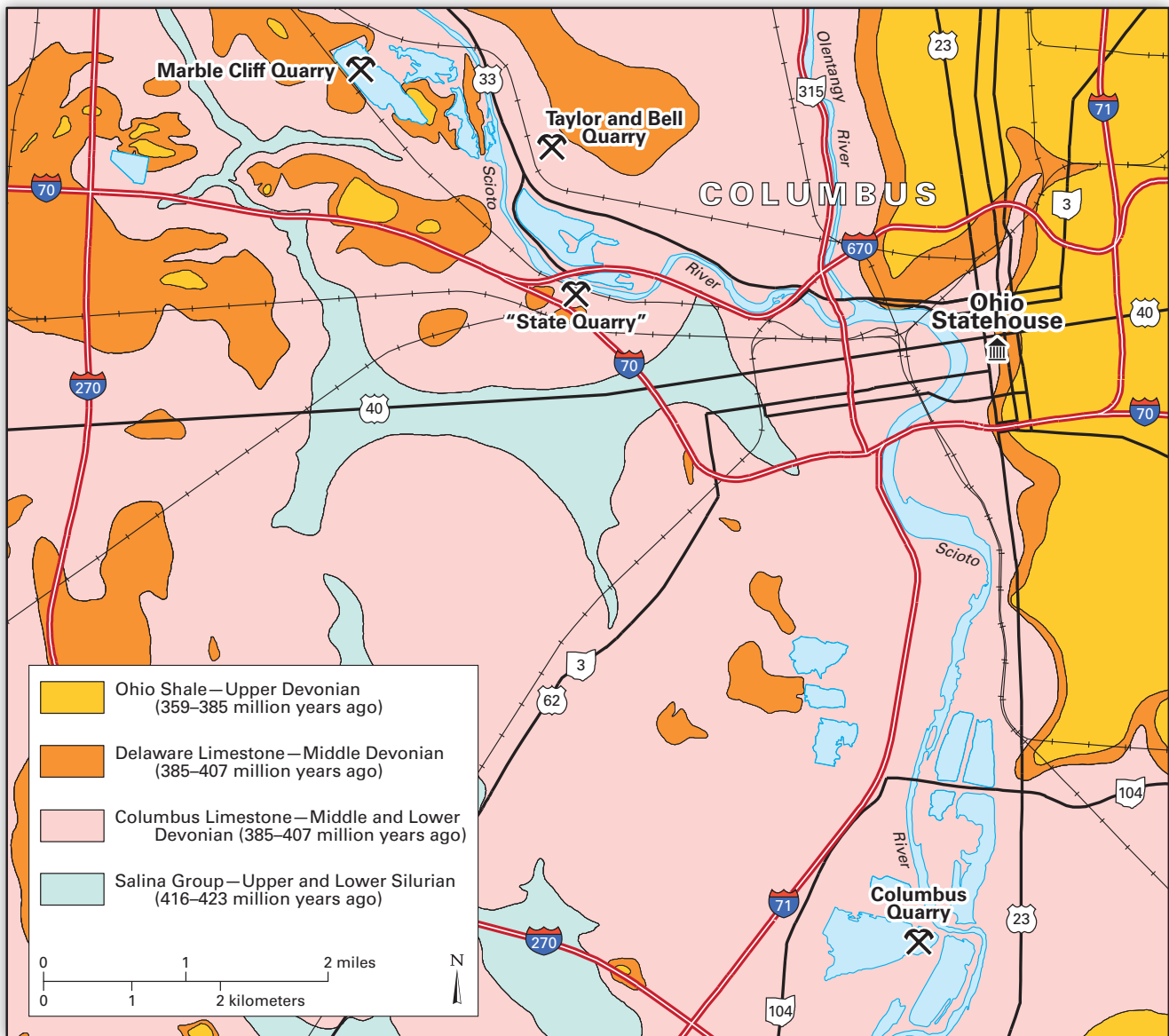
Initially the state penitentiary took charge of the quarry, providing inmates as stone cutters as well as inexpensive stone. These cost-saving conditions encouraged the legislature to provide funds to continue



West highwall of Marble Cliff Quarry exposing Delaware Limestone (dark-colored, thin-bedded unit) overlying the Columbus Limestone (light-colored, massive-bedded unit). 2004 photo.



Workers in a quarry near Dublin Pike and Grandview Avenue, circa 1900. Photo courtesy of Grandview Heights/Marble Cliff Historical Society Archives.



Bedrock geology map of the west-southwest Columbus area, showing approximate locations of historic and present-day quarries.

the massive statehouse building project. By 1849, Governor Seabury Ford noted in the State of the State address that work on the new statehouse continued “with commendable energy and success, though considerably retarded by loss of convict labor for nearly half the season.” More than 115 inmates had perished that year from the great cholera epidemic.

In 1849, a railroad was constructed to the bottom of the “State Quarry,” which was later extended 2,000 feet to obtain additional limestone. Cranes and derricks were erected in the quarry to handle the 12-ton blocks of limestone. The railroad was extended south along Third Street to the statehouse construction site. Work progressed quickly, and according to the 1849 report of the superintendent of the statehouse, the basement walls had been completed and the building stood at a height of 14-feet-above ground.

The period from 1850 to 1853 was a time of tremendous construction activity on the new statehouse. Nearly 220 men (including 80 inmates) were employed on site, and an additional 100 men were hard at work at the “State Quarry.” By 1854, the entire statehouse was under roof and all the stonework had been completed except the cupola, outside steps, curbing, and twin 100-foot-tall ventilation stacks, which were finally completed in 1861. Governor William Medill remarked in the 1854 State of the State address that the new statehouse “will be a large and beautiful edifice—comporting well with the magnitude and increasing wealth of the State.” The original building commission had decided to use locally derived stone, and the 150-year-old structure demonstrates

that the Columbus Limestone is appropriate for the monumental scope of the building. The immense building project used an estimated 55,000 tons of Columbus Limestone during construction—enough stone to fill thousands of rail cars.

In 1859 William Mather, who had previously served as the first State Geologist of Ohio, reported on the drilling of a water well on the statehouse grounds. Mather named the limestone encountered the Columbus Limestone. There are two members of the Columbus Limestone, the Delhi and the Bellepoint Members. The Delhi is the upper member and is generally a light gray to white, fossil-rich limestone approximately 60 feet thick. It was the source of building stone for the current statehouse. The Bellepoint is the lower member and is a light-brown, medium-to-coarse-crystalline, dolomitic limestone that is approximately 40 feet thick in the Columbus area. The Bellepoint Member is less desirable as a building stone but is used as aggregate in central Ohio.

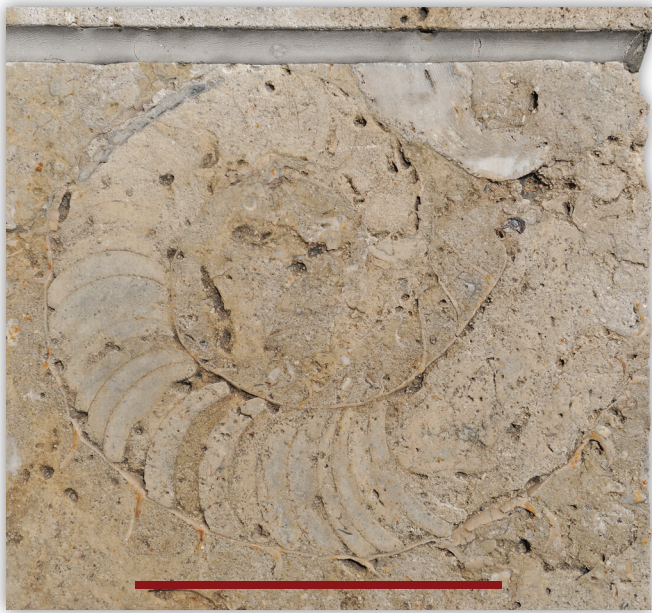
Abundant fossils, including corals, gastropods, and mollusks, are evident in the 6-foot-thick, 36-foot-high Doric columns that support the roof. The 24 columns weigh a total of nearly 2,000 tons and were produced from the lower portion of the Delhi Member in the “State Quarry.” The lower portion of the “State Quarry” also contained cranial plates of a large fish, *Macropetalichthys sullivanti*. Coiled cephalopods, gastropods, corals, and stromatoporoids, produced from the upper portion of the Delhi Member, can be found in the steps. Tiny fossil organisms, such as graptolites and bryozoans, also are abundant; and interesting fossils, such as trilobites, can be found along the face of the building. The diverse fossils and differential weathering of the Columbus Limestone



Columbus Limestone of the Ohio Statehouse in Columbus, Franklin County. Numerous fossils can be found in the exterior walls, stairs, and columns of the statehouse.



Cross section of the steinkern (internal filling) of a high-spired gastropod (genus *Loxonema*) in the exterior stairs on the east side of the Ohio Statehouse. Shown actual size.



A coiled nautiloid cephalopod (genus *Goldringia*) in the exterior stairs on the east side of the Ohio Statehouse. Red bar is 5 inches in length.

tend to enhance the aesthetic appeal of the grand building. The beautiful interior floors are made from green and black marble from Vermont, white marble from Italy, and red marble from Portugal. The columns in the legislative chambers are white marble from Pennsylvania and the detailed balustrades on the staircases are alternating dark marble from Tennessee and white marble from Italy.

The Senate Building was completed in 1901 and was constructed from Columbus Limestone obtained from the Taylor and Bell quarries located east of the present Marble Cliff quarry. The Columbus Limestone has a light-colored, crystalline texture somewhat resembling marble, thus “Marble Cliff” was a suitable name for the quarry. The Marble Cliff quarry has been an important source of aggregate for the Columbus metropolitan-area highway construction and building industries.

Major renovations of the Ohio Statehouse and Senate Building from 1992 to 1996 required that special stone cutting equipment be used to remove Columbus Limestone from an existing aggregate quarry south of Columbus. More than 350 tons of Columbus Limestone, including 100 tons for the massive columns, was used to construct the Atrium connecting the two historic buildings. The extensive and highly successful renovation has returned the Ohio Capitol to its original grandeur. Arnold Berke remarks on the statehouse renovation in his 1996 review for *Preservation* magazine: “Was it really built piece by piece or simply carved on site out of a huge block of Columbus [L]imestone?”

Conclusion

Just twelve years after the original settlement in the Northwest Territories at Marietta in 1788, Ohio built its first statehouse of durable, local sandstone to signify a long-term commitment to the soon-to-be formed state. Less than four decades later, workers began building the present Ohio Statehouse, again using a long-lasting, locally derived building stone. The skills of hundreds of stonemasons and prison laborers produced a building of unique splendor that would become a symbol of a nationally influential state. Twenty-first century visitors to Ohio’s Capitol Square can observe geologic history in the building stones of the grand Ohio Statehouse; as one gazes upward in its soaring rotunda, it seems as if glimpses of the future are possible.

Further Reading

- Berke, Arnold, 1996, “This is Their Jewel”: *Preservation*, v. 48, no. 5, p. 77–84.
- Bownocker, J.A., 1915, *Building Stones of Ohio: Geological Survey of Ohio, Fourth Series, Bulletin 18*, 160 p.
- Cuming, Fortescue, 1810 (clarified and copyrighted by Arthur W. McGraw, 1993), *Sketches of a Tour to the Western Country: Pittsburgh, Cramer, Spear, and Bichbaum*, p. 200–235.
- Hannibal, J.T., 2006, *Guide to the Building Stones and Cultural Geology of Akron: Ohio Department of Natural Resources, Division of Geological Survey Guidebook No. 19*, 75 p.
- Hannibal, J.T., and Davis, R.A., 1992, *Guide to the Building Stones of Downtown Cincinnati: Ohio Department of Natural Resources, Division of Geological Survey Guidebook No. 7*, 44 p.
- Hannibal, J.T., and Schmidt, M.T., 1992, *Guide to the Building Stones of Downtown Cleveland: Ohio Department of Natural Resources, Division of Geological Survey Guidebook No. 5*, 33 p.
- Hyde, J.E., 1921, *Geology of the Camp Sherman Quadrangle: Geological Survey of Ohio, Fourth Series, Bulletin 23*, 190 p.
- Mayer, Mona, 1962, “Fossils in the Ohio State House”: *Cleveland Museum of Natural History, The Explorer*, v. 4, no. 4, p. 20–23.
- Melvin, R.W., and McKenzie, G.D., 1992, *Guide to the Building Stones of Downtown Columbus: Ohio Department of Natural Resources, Division of Geological Survey Guidebook 6*, 33 p.
- Orton, Edward, 1878, *Geology of Franklin County*, chap. 84 of *Re-port of the Geological Survey of Ohio*, v. 3, pt. 1, sec. 2—*Local Geology: [State of Ohio Legislature]*, p. 596–646.
- Prosser, Daniel, 1993, “The Hellenic Ideal—The Ohio Statehouse”: *Timeline*, v. 10, no. 4 (July-August), p. 46–54.

Stauffer, C.R., Hubbard, G.D., and Bownocker, J.A.,
1911, Bulletin 14—Geology of the Columbus
Quadrangle, in Report of the Geological Survey of
Ohio, v. 11—Comprising Bulletins 12, 13, 14 and 15 of
the Fourth Series: [State of Ohio Legislature], 133 p.
Stout, Wilber, 1918, Geology of Muskingum County: Geological
Survey of Ohio, Fourth Series, Bulletin 21, 351 p.
Wolfe, M.E., 2003, Hunting an Elusive Quarry—
Geology and Early Stone Architecture in Ohio:
Ohio Department of Natural Resources, Division of
Geological Survey, 1 sheet.

Websites

Ohio History Connection: ohiohistory.org

Ohio Statehouse: ohiostatehouse.org

Pioneer and Historical Society of Muskingum County:
muskingumcountyhistory.org

Ross County Historical Society:
rosscountyhistorical.org

Ohio Statehouse Tours and Information

The Ohio Statehouse is open to the general public and offers a variety of guided and self-guided tours for individuals and groups of fewer than ten. The statehouse is handicapped accessible and senior friendly. Tours depart from the Map Room, which is accessible from the Third Street entrance. Groups of 10 or more may schedule a tour in advance by calling (614) 728-2695 to ensure a guide is available. Tours last approximately 45–60 minutes.

For more information, to view photos, or to take a virtual tour, visit the Ohio Statehouse Website: www.ohiostatehouse.org.

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