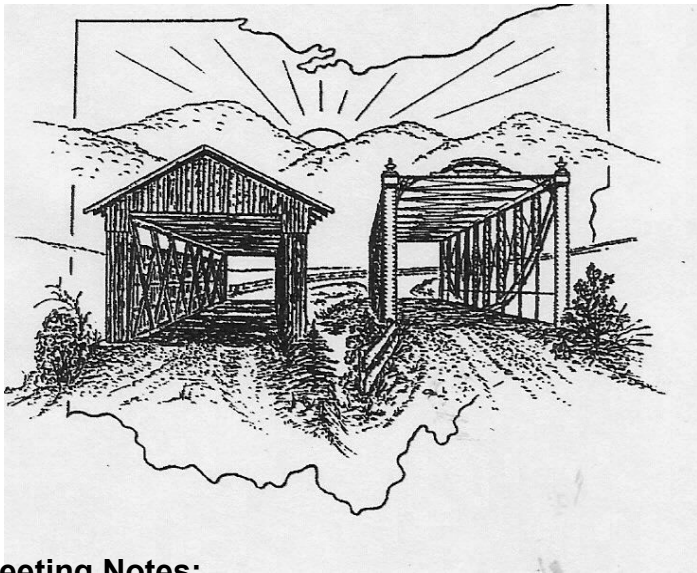


Latest Ohio Historic Bridge News



Meeting Notes:

March 17, 2024 at 1:30 pm.

Meeting

Speaker: David Simmons

Topic: Guardians of Traffic, the connection between the renaming of the Cleveland Indians and Hope Memorial Bridge

Place: Ohio History Connection in the Cardinal Room on the third floor. Ohio History Connection 800 E. 17th Avenue, Columbus, OH (Exit 111 off I-71)

May 18, 2024 at 10 am

Spring Bridge Tour: Fairfield County Continued

Place Millersport: Location to be arranged

July 21, 2024, Noon.

Summer Picnic

Salt Creek Covered Bridge

Located east of Zanesville off interstate 70 on Arch Hill Rd. (CR82). Bring a dish to share, your own silverware, plates, drinks, and lawn chair.

September 21, 2024

Fall Tour

TBA

November 19, 2024 at 1:30 p.m.

Business Meeting

Place: Ohio History Connection in the Cardinal Room on the third floor. Ohio History Connection 800 E. 17th Avenue, Columbus, OH (Exit 111 off I-71)

Bridges and Byways

Journal of the

Ohio Historic Bridge Association
Volume XXXIX
Winter 2024
Number 1

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Renewal subscriptions are due by January 15, 2024. See page 7 for details. Your mailing label has your subscription date above your name.

The OHBA Web site is now available at www.oldohiobridges.com/new/OHBA

OHBA is a not-for-profit organization incorporated in the State of Ohio and is recognized as a non-profit organization under 501 (c) 3 of the Internal Revenue Code.

The OHBA mailing address is

**Ohio Historic Bridge Association
PO Box 153
Galena, OH 43021-0153**

The President's Span.....Doug Miller



The OHBA coordinates with the Ohio Department of Transportation (ODOT) on historic structures all across the state on a regular basis. The latest interaction involves the Ohltown Viaduct over Meander Creek Reservoir, a major water supply for Mahoning and Trumbull counties near Austintown. Unlike the Roche de Boeuf Bridge over the Maumee River discussed in the last issue, this viaduct is in active use, carrying over 3,700 vehicles every day on Austintown-Warren Road (CR 67). Tom Barrett is ODOT's Historic Bridge Program Manager and our primary contact when federal funds are used for any bridge rehabilitation projects. OHBA funded Tom's attendance at one of Vern Mesler's previous rivet workshops. Like us, he has an affinity for historic bridges of all types, and Dave Simmons, Bill Vermes, and I have all worked closely with him for years. The Ohltown Viaduct—TRU-C067A-06.00 as ODOT identifies it—is a nine-span, filled spandrel concrete arch built in 1928 and a significant structure. (See photo on back cover.)

The Mahoning Valley Sanitary District was established following passage of a state law in 1919 allowing for the creation of government entities to administer water supply and sewage disposal. The law was similar to the state laws that permitted the creation of flood protection districts like the Miami Conservancy District and Muskingum Watershed Conservancy District. Both types of districts were given taxing authority to assess citizens or municipalities in order to finance construction projects.

The Mahoning Valley was an intensively developed industrial area—predominately of iron and steel production—stretching along the Mahoning River approximately 42 miles from Newton Falls to the Pennsylvania State Line. By the 1920s, all the municipal sewage and industrial outlets were being dumped directly into the river without any of the treatment required by both federal and state laws today. In addition, the river was used extensively for industrial cooling without any treatment.

Both Niles and Youngstown drew their water from the Mahoning—the same water polluted by the sewage and industry—as it flowed through the cities. The further downstream, the worse the water quality. It led directly to the formation of the Mahoning Valley Sanitary District. Its goal was to find a good, clean water source and distribute it to the surrounding area. After some studies, Meander Creek was identified as the best supply. A reservoir straddling both Trumbull and Mahoning counties would be created and water treatment facilities and supply lines built to the two cities. Eventually, both Youngstown and Niles constructed their own storage facilities to add capacity. To pay for the project, the district assessed each city, and they, in turn, taxed their residents, much as it is done today.



The open concrete railings on the bridge have deteriorated as salty snow was piled against them over the years. Photo: Ohio Department of Transportation.

The President's Span continued

With construction of a dam on Meander Creek, the Austintown-Warren Road (CR 67) was inundated, and a bridge was required to cross the reservoir. Lessons learned from the great 1913 Flood suggested a reinforced concrete arch bridge would be ideal because of its high durability. A narrow point in the reservoir was chosen for the location of the new bridge. The nine barrel arches of the bridge were founded on solid rock, and the spandrel walls and railings were given an aesthetic enhancement.

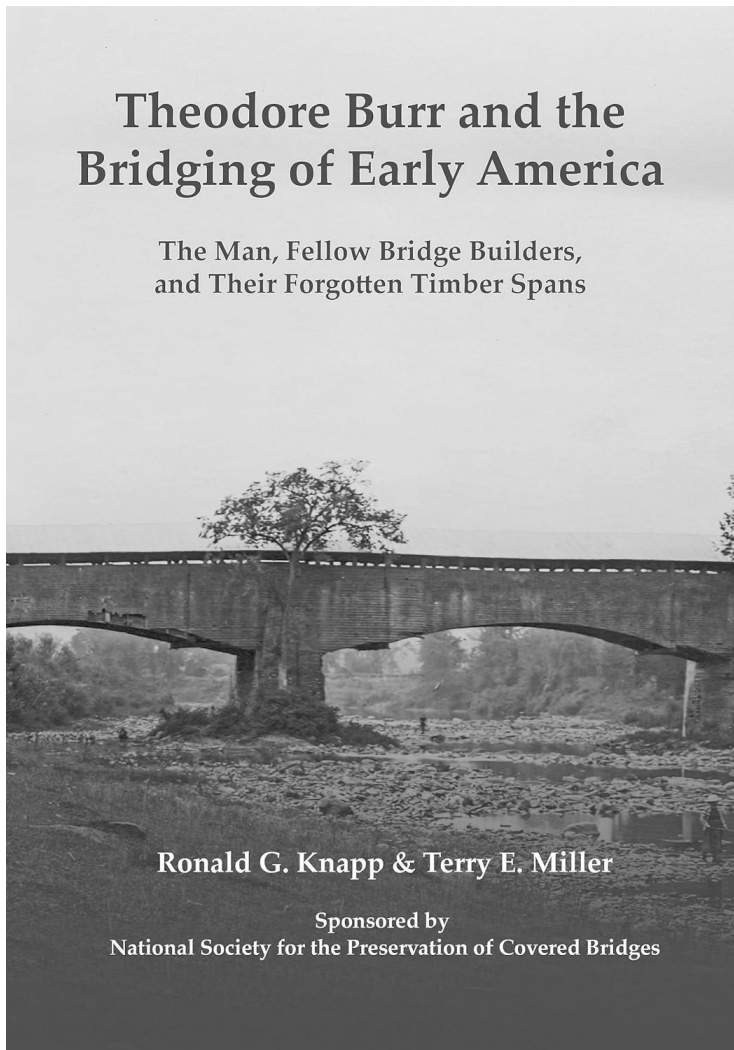
Trumbull County, the owner of the historic bridge, is developing plans to rehabilitate it. Many of the arches have exposed reinforcing steel and the concrete railing has also deteriorated. The county engineer is receiving federal funds for the project, so ODOT will be assisting them with completion of a Section 106 study. It is at this point that OHBA gets involved. We will be named as a consulting party, allowing us to make comments on the proposed rehabilitation plans. Currently the plans call for patching the arches and replacing the concrete railing with a new one meeting modern standards. Our goal will be to try to ensure that the bridge's historic qualities are maintained to the greatest extent possible.

Doug Miller, PE
President



The use of deicing chemicals like salt has resulted in corrosion of some of the steel reinforcing within the concrete arches. Photo: Ohio Department of Transportation

Revealing Theodore Burr



Few names are more familiar to bridge historians than Theodore Burr. That's why it's so puzzling that much of what has been widely accepted about Burr and his work is grossly misunderstood or misinterpreted. The publication of *Theodore Burr and the Bridging of Early America: The Man, Fellow Bridge Builders, and Their Forgotten Spans* was sponsored by the National Society for the Preservation of Covered Bridges. Co-authors Ronald K. Knapp and Terry E. Miller have provided an invaluable resource aimed at correcting the 200-year-old myopia connected with this bridge builder's life and career.

Burr's bridge building career—stretching from 1804 until his untimely death in 1822 at age 41—was relatively short. And because of the era in which it occurred—emphasizing the “Early America” in the title—modern researchers have found relevant historical resources to be at a premium.

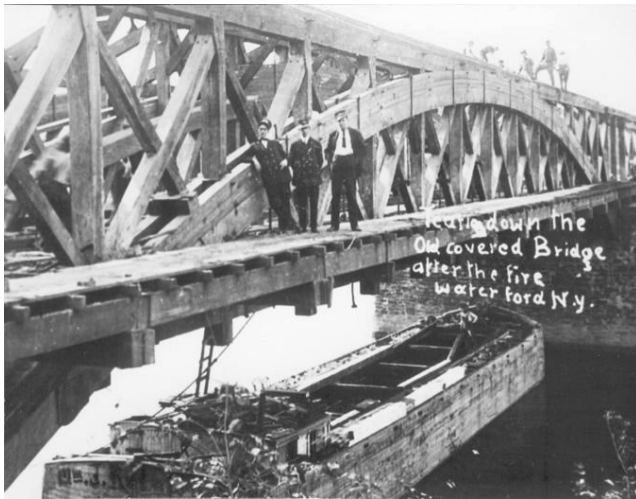
Knapp and Miller are uniquely qualified to produce this volume. In recent decades, government documents and microfilm of early American newspapers—part of the Library of Congress's *Chronicling America* project—have been extensively digitized and posted to the web. Thus keyword searches by name or topic are now

possible that previously could be done only after laboriously reading page-by-page or document-by-document. Knapp's skill in conducting the necessary web searches to access these resources is rivaled by few other scholars. And as a geographer with numerous publications to his credit, he knows how to take advantage of such widely diverse discoveries. Over the years, Miller has spent countless hours exploring public archives looking for data on bridges and their builders. But with the intellectual curiosity of an academic, he has not been satisfied with merely uncovering historical facts. He has taken the next vital step of asking probing questions in search of their larger meaning. Knapp and Miller have teamed up before, this time uncovering much pertinent information on Burr long buried in obscure places.

Theodore Burr and the Bridging of Early America is filled with surprising revelations. Here are three that especially resonated with me.

For a time, I was working on a manuscript comparing the 1804 Hudson River bridge between Waterford and Lansingburgh, New York—believed to be Burr's first independent project—with Preble County's 1829 Roberts Covered Bridge. Both were impacted by suspicious fires, although the end result dramatically differed. Since I already had a lot of material on the Ohio fire, I devoted many hours to collecting newspaper accounts of the New York event. But other priorities interfered, and I never completed and published the comparison.

Through Ohio's Trusses continued..... David A. Simmons



Probably the most famous bridge associated with Burr crossed the Hudson River at Waterford, NY, and dated to 1803. It is typical of the confusion associated with Burr that this book addresses. Careful research by the authors demonstrated that the bridge so well known through turn-of-the-century photos was actually the result of a rebuilding in 1814-15.

Likely it's just as well, because after reading this book, I discovered that Burr was probably not the builder of the Waterford Bridge that was documented in early-20th-century photographs and that tragically burned in 1909. Instead, the New York bridge set alight was likely the result of an 1814-15 rebuilding by Reuben Fields, an associate of Burr's. He utilized Burr's design principles as documented in the famed 1817 patent. An entire chapter is devoted to exploring the elements of this long-standing and common, but critically important, factual misinterpretation.

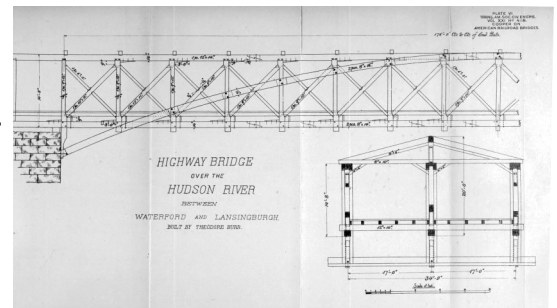
Equally intriguing is the authors' examination of Burr's legacy of six distinct designs. His bridges always incorporated arches, but they went far beyond his renowned 1817 Burr arch-truss. I don't want to give too much away here, because this is truly one of the benefits of studying the book. Suffice it to say that the illustration on the cover showing the 1812 Burr-built bridge over Schoharie Creek at Esperance, New York (NY-32-48-05x), represents a type characterized and described by the authors as "underdeck arches with a stiffening semi-truss."

Finally, the authors explain that a "Wernweg truss" is not really Wernweg's. German-born Lewis Wernweg was justifiably famous for two major early American bridges: the remarkable 320-foot Colossus across the Schuylkill River in Philadelphia completed in 1812 and the Delaware River Bridge, consisting of six, 175-foot spans, between New Hope, Pennsylvania, and Lambertville, New Jersey, finished two years later. As an experienced builder, Wernweg understood wood rot, and one of his most ingenious features was the insertion of iron pieces to separate major timbers in both bridges, allowing for air circulation and natural drying.

But the highway bridges that Wernweg built in places like West Virginia and Ohio essentially used Burr's 1817 patent. Many, including myself, have unconsciously repeated that Wernweg's use of radial verticals along with his arches was his own innovation. In fact, Burr's own 1817 patent illustrates the same principle, a feature that Wernweg probably never acknowledged to the patentee nor paid fees for.

After failing to find a satisfactory university press arrangement, the authors used an Amazon production. As a result, *Theodore Burr and the Bridging of Early America* is a hefty volume in more ways than one. It is available in both hardbound (\$60) and paperback (\$58) and weighs in at 500+ pages and (for the paperback version) more than 3 pounds—roughly the equivalent of a bag of apples at the grocery. So obtaining your own copy will require a serious commitment.

Theodore Burr was an extremely influential personality in American bridge history, and it's important that we gain a better historical understanding of his life and career. This book is an exhaustive effort, but Knapp and Miller are the first to acknowledge that they have not totally solved all the mysteries surrounding Burr, in part because of the period challenges mentioned earlier. Some future discoveries may bring us closer to a fuller understanding of Burr, but until that time, this book is your best bet and a worthwhile investment.



The confusion over Burr's legacy began as early as 1889, when Theodore Cooper published a widely circulated article on "American Railroad Bridges" that attributed the well-known Waterford Bridge to Burr.

Bridge News.....Elma Lee Moore, Doug Miller, and David Simmons

Brubaker Covered Bridge OH35-68-06, Preble County

The bridge was damaged in 2022 when a semi tried to go through the opening. According to the Preble County Engineer's office, the bridge was reopened on January 31, 2024.

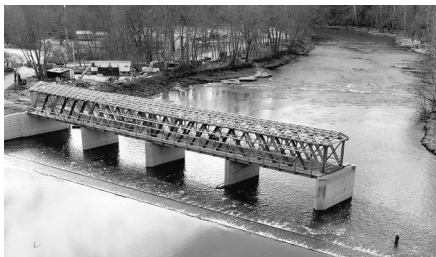


Photo by Preble County Engineer's Office



Photo by Greg McDuffee on Facebook

Harpersfield Covered Bridge OH35-04-19 Ashtabula County



After many months of seeing no sign of a bridge at this location, work has progressed at the Harpersfield Bridge. According to several recent Facebook posts, one span has been erected. This is one of the most beautiful Ohio locations of a covered bridge. Facebook photo by David Scafuro

Knowlton Covered Bridge OH35-56-18 Monroe County

According to County Commissioner Mick Schumacher, work has started on the rebuilding of sections of the Knowlton Bridge which collapsed in 2019. White Oak was harvested from a nearby location. The piers have been repaired, scaffolding erected, and Span 3 truss rehabilitation has been completed. Righter construction is currently working on Span 2 Truss rehabilitation. Photo by Mick Schumacher.



Newton Falls Covered Bridge OH35-78-01 Trumbull County



On February 17, 2024, a reopening ceremony was held for the bridge. In February 2022, a vehicle crashed inside the bridge. The two-year project to rebuild the bridge cost \$712,000 according to the Trumbull County Engineer's office. Photo from station WFMJ.

Hills Covered Bridge (OH35-84-24), and Bell Covered Bridge (OH35-84-12), Washington County and Adamsville Road Bridge, Gallia County

Repairs have been completed and these bridges have been reopened.

Blackwood OH35-05-06, Hizey OH35-23-07 and Germantown OH35-57-01 Covered Bridges

Designs are being prepared for work to be completed on these bridges.

Errata:

In the Fall 2023 issue of **Bridges and Byways**, an error was made in the Book Review. The number of covered bridges should be listed as 21 not 12. Apologies to the author for this error.

OHBA Officers & Membership Information

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bvermes@ymail.com

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DUES: Senior (age 55 and over) \$8; Student \$8; Single \$10; Family \$15; Contributing \$25; Supporting \$40; Life \$250. Annual dues include subscription to Bridges & Byways, quarterly journal of the OHBA. Dues period is the calendar year. Dues paid after October 1st cover the succeeding year. Renewal dues to be paid by 1/15.

Please fill out the membership application form below and send it with your check made out to the OHBA to **Mr. Joseph Charles at 726 Newark-Granville Rd., Granville, OH 43023-1451.**
Be sure to include your 9 digit zip code.

I wish to join/renew (circle) membership with the OHBA.

My name is _____

My mailing address is _____

City _____ State _____ Zip Code(9 digit) _____

My email address is _____

My phone number is _____

Enclosed is my check made out to the OHBA in the amount of _____ for a _____ year senior/single/family/contributing/supporting/life/student (circle) membership.

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The Ohltown Viaduct built in 1928 across the Meander Creek Reservoir between Trumbull and Mahoning counties consists of nine filled-spandrel concrete arches. Owned by Trumbull County, a major rehabilitation of this important historic structure is being planned.
Photo: Ohio Department of Transportation