



Narrows Covered Bridge crosses Sugar Creek at Turkey Run State Park. The Cox Ford Bridge is outside the western edge of park property. Frank Oliver photo.



COVERED CLASSICS

Bridges celebrate state's rural culture

By Scott Roberts, OI Staff

As she stared at the photo in her hands, Maria Lee was dumbfounded. Must be an old photograph, she thought, to contain a red, two-span wooden covered bridge.

"I asked the person how long that picture has been in the family," she said. "They told me they had taken it a couple weeks ago. I'm like what? Where?"

The Bloomington resident drove an hour to Williams, in Lawrence County, and there it was.

Williams Covered Bridge is the state's longest two-span bridge.

"I was coming around the corner and remember seeing it out past the field," Lee said. "I also remember that feeling of excitement, walking up to it and getting to feel the air coming through the bridge, the water rushing underneath."

She was hooked.

Since then Lee has visited every covered bridge in Indiana, all 90 of them, over two years.

She knows who the major original builders were. J.A. Britton, J.J. Daniels, and the Kennedys are legends to her. She knows about the burr arch and the Howe truss, the most popular designs for Indiana covered bridges. She loves everything about covered bridges.

She's not alone, especially in Indiana.

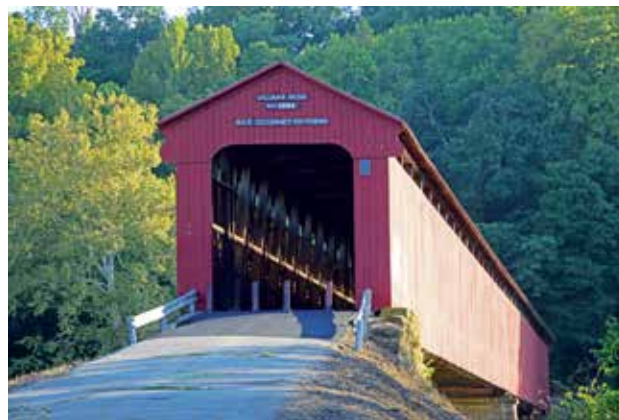
Many Hoosiers have embraced covered bridges as a state symbol. A competition among Bureau of Motor Vehicles (BMV) employees and design firm ITI to choose a license plate design that represented Indiana resulted in covered bridge art joining other designs as an option for Indiana license plates in January 2017. Multiple covered bridge designs were submitted, according to Christine Meyer, BMV communications director, and the final design was an amalgam of employee and ITI-submitted entries.

A covered bridge was added to the State Fairgrounds in 2008, cementing the structures' place in one of Indiana's largest events.

Indiana's state park properties protect three covered bridges. Turkey Run State Park has Narrows Covered Bridge over Sugar Creek. Cataract Falls Covered Bridge in Lieber State Recreation Area spans Mill Creek. And the entrance to Brown County State Park boasts double-barrel Ramp Creek Covered Bridge, which was relocated to the park in the 1930s and now spans Salt Creek.

Medora Covered Bridge in Jackson County, at around 434 feet, is billed as the longest historic covered bridge in the nation, though that has been challenged by Cornish Windsor Covered Bridge between New Hampshire and Vermont. The dispute lies in how the bridges should be measured, whether from abutment to abutment or by the length of their framework. Medora's is longer by the first method.

Because of their prominence in Indiana culture, covered bridges are big business for Parke County, which has more (31) than any other county in the United States. Parke County's Covered Bridge Festival during the second week of October bills itself as Indiana's largest festival. It annually draws 1 to 2 million people for the 10-day event, according to the county's chamber of commerce.



John Maxwell photo

Williams Bridge across the East Fork of the White River in Lawrence County is Indiana's longest two-span covered bridge.

Despite covered bridges' popularity, their number in Indiana is declining. More than 600 are known to have been built in Indiana. In 1977, a total of 104 remained. Now there are 14 fewer.

Understanding how covered bridges have integrated themselves into Hoosier culture is an important step toward keeping those the state has left. That story involves nostalgia, deep family ties, vendors, engineering, and a lot of wood.

PROTECTED PASSAGES

Nationally, Indiana still has more covered bridges than all but two states. Pennsylvania has 213, and Ohio has 148. Pennsylvania also claims the first covered bridge in the U.S., built in Philadelphia in 1805.

That those three states have the most is not coincidence, according to architectural historian Paul Diebold of the DNR Division of Historic Preservation & Archaeology.

"Pennsylvania, Ohio, the route of Euro-American migration runs right through Indiana, and a lot of the Euro-American people coming had the tradition of covered bridges," Diebold said.

The landscape provided plenty of material—builders just needed to look around. Quarrying stone was a lot of work, but trees were plentiful.

The reason for covering wooden bridges is simple. Roofs and siding protect them from the elements. Uncovered bridges would last 10 years at most before rot and decay took over. Covered bridges, as we see today, can last more than 100 years.

Indiana's first was built in 1820, at Floyds Knobs in Floyd County in southern Indiana. That bridge no longer stands, but the seed had been planted, and Parke County nurtured it into a garden.

Parke County is nearly perfect for covered bridges. The landscape is full of tributaries and small streams that people needed to cross, some way, somehow. Daniels and Britton were up to the task, constructing covered bridges from the 1850s into the early 1910s.

"Most bridges built in 1890 and before were built of tulip, poplar, oak—local timber," said Dan Collom, a Parke County commissioner and bridge builder who has worked on 37 covered bridges. "Most of them built 1890 to 1900 look like a kit. There was a company in Cadillac, Michigan people ordered a bridge from and had it shipped down as timber. Most Britton bridges are kit bridges."

Economics has played a major role in the county still having



John Maxwell photo



John Maxwell photo

The majority of Indiana's covered bridges are either Howe truss designs, such as Williams Bridge (top), or burr arch truss designs, like the Bowsher Ford Bridge in Parke County (bottom). A covered bridge's roof and siding protects the wood from rot and decay. A covered bridge can last more than 100 years.

the number of covered bridges it has today. Collom said the county has not had the money to replace the bridges with more modern structures, so it needs to maintain those it has. Nineteen still carry traffic every day.

"I'm sure when Daniels built his bridges he had no idea the school buses and traffic they would have to hold," Collom said. "He probably thought horses, buggies, a log wagon once in a while, but here we are."

While Daniels and Britton were busy spanning the many creeks and tributaries of Parke County, the Kennedys were busy in Rush County. About an hour east of Indianapolis, Rush County has the third most covered bridges of any county in the state. All six were built by Archibald Kennedy and his two sons, Emmet and Charles.

The most well-known Rush County span is probably Moscow Covered Bridge. It was destroyed by a storm in 2008, but rebuilt in 2009.

The most notable difference between Kennedy bridges and those of Britton and Daniels is Kennedy bridges are more ornate. Their ends are arched and finished with a molding, and have decorative scroll work on both entrances.

"Parke County may have the most ... but we like to say we have the Cadillacs of covered bridges," said Eleanor Arnold, a retired Rush County historian and vice president of Rush County Heritage, Inc.

While the bridges have admirably served their original purpose of spanning bodies of water, they've taken on mythic status in the eyes of some of their admirers—who see them as part of the family.

MEMORIES AND MYTH

"Cross this bridge at a walk."

With this instruction, covered bridges demand slowing down before entering. There are practical reasons.

During the era of horse-drawn carriages, horses that ran across a bridge would stress it due to the way bridges are built. The bridges are designed to take weight from their center and disperse it throughout the structure. With the popular burr arch bridges, that job falls to the arch.

"If you had wagonloads that weighed as much as a couple tons and went too fast, you would set the truss in motion against itself and potentially damage the bridge," Diebold said. "When you move slowly you give time for the truss to flex and respond."

When driving a car across a covered bridge, the need to slow down increases. Many covered bridges have an incline preceding them. If a car comes up that incline and lands on the wooden floor of the bridge too hard, it can damage the bridge beyond repair.

"That impact load does more damage than anything," Collom said. "You hit at 30, 40 miles per hour, it throws a shockwave into the timbers. You have all the compression and tension in the bridge, and you're going to rip apart those compression joints."

There's also a non-structural reason to decrease speed. Many covered bridges have only one lane. That means people must use caution to avoid head-on collisions.

Many covered bridge lovers say there are also sentimental reasons to slow down. In today's culture, when many people feel as though they don't have time to breathe, covered bridges allow drivers to fill their lungs with air.

And relax.

Diebold says this slower pace takes Indiana people back to their agricultural roots.



John Maxwell photo

Parke County Covered Bridge Festival visitors crowd through Mansfield Bridge last October.

"We like to think of ourselves as farmers," he said of his fellow Hoosiers. "We embrace the rural. (Out-of-state) people tease people from Indiana about that, but we kind of embrace it."

He says that because of their wood construction and need for crossers to slow down, covered bridges inspire nostalgia in a number of ways.

"There's an interesting word, a friend of mine told it to me; it's *hiraeth*," Diebold said. "It's a Welsh word meaning something very strange, like nostalgia for a time in which you never lived."

While some pine for a vaguely simpler time, others have concrete memories of life events on covered bridges. Greg McDuffee, vice president of the Indiana Covered Bridge Society (ICBS), proposed to his wife under Bridgeton Covered Bridge in Parke County, and the couple was married on the Cumberland Matthews Covered Bridge in Grant County.

McDuffee said he was just carrying on a long tradition of people doing the same.

But couples didn't and don't need to get married on covered bridges to enjoy them. Sometimes more casual events suffice.

"They called them the kissing bridges," McDuffee said. "Short bridges were good for a quick kiss; long bridges were good for a nice long kiss and possibly a quick squeeze."

Romance isn't the only reason people remember covered bridges. Irishman's Covered Bridge in Vigo County is the oldest in Indiana, completed in 1845. Legend that says while the bridge was under construction, a woman gave birth on it.

"As far as we know it's the only bridge with a baby born on it," McDuffee said.

Covered bridges may also have saved lives. Mike Roe, owner of Bridgeton Mill, said someone told him Bridgeton Covered Bridge had saved that person's grandparents. They were stranded in a snowstorm and took refuge inside.

"They said if it weren't for that bridge, they would have died of exposure," Roe said.

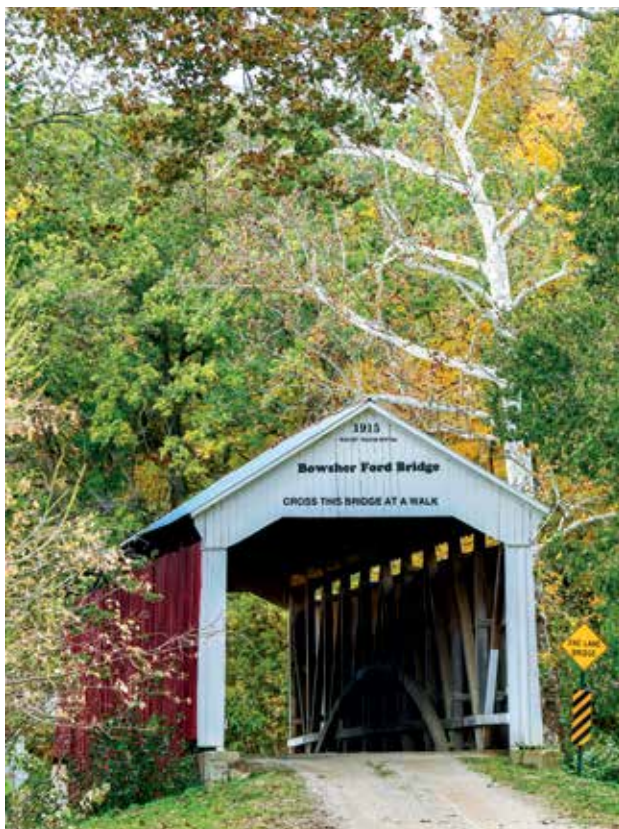
The Bridgeton structure has also been a gathering place for many families.

"People can relate back to fishing with Uncle Joe at the mill pond or talking under the waterfall," Roe said. "They all talk about their families."

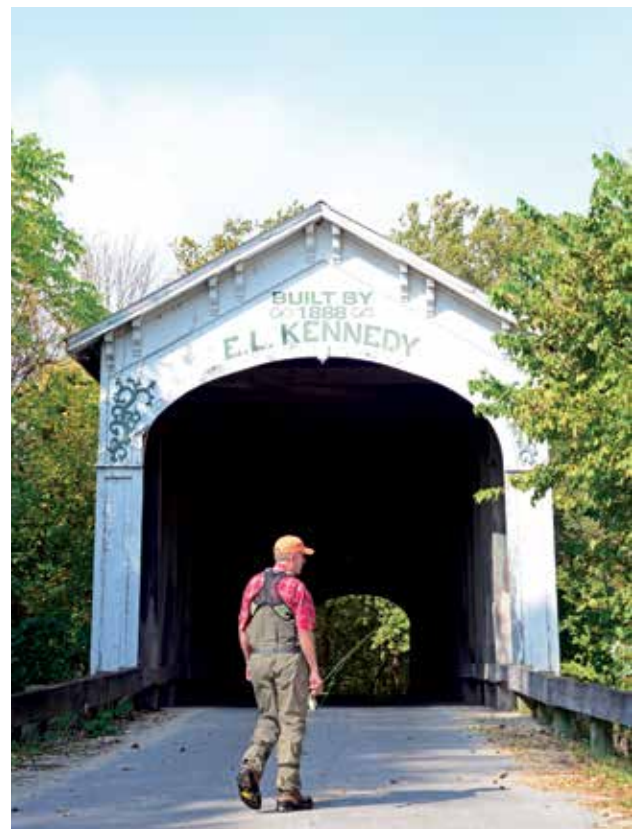
"I think this bridge is a lot more popular in the fact that it's next to town."



Frank Oliver photo



Frank Oliver photo



John Maxwell photo

J.J. Daniels, J.A. Britton and sons, or Archibald Kennedy, his sons and grandsons built the majority of Indiana's covered bridges between 1850 and the early 1900s. Examples include Daniels' Billie Creek Bridge (top) near Rockville, Eugene Britton's Bowsher Ford Bridge (bottom left) near Tangier and E.L. Kennedy's Forsythe Mill Bridge (bottom right) near Rushville.



Adams Mill Covered Bridge was built in 1872 over Wildcat Creek in Carroll County. During peak fall color, it draws tourists aplenty. Frank Oliver photo.



1872
ADAMS MILL BRIDGE

BRIDGES AND BUSINESS

With all of their nostalgia-inducing craftsmanship, Indiana's covered bridges have become destinations. That allure has provided opportunity for a number of vendors and hobbyists.

Vigo County resident Thomas McClosky taught himself to carve wood after checking out a book from the local library and reading it—five times. He would wake up early and practice its lessons before going to his job at Clabber Girl, then continue when he got home.

"I'd put a small piece of wood in my shoe and walk around on it all day and I'd be smiling, because I knew I would go home and be carving," McClosky said.

He now sells his carvings and designs in a building just outside Bridgeton Mill for most of the year. Usually he sells about one piece a day. McClosky says he's only able to pursue his passion because of his location.

"I'm in a tourist destination," he said. "That brings people in, and they want a souvenir of their visit. Even though it doesn't say anything about Bridgeton, they buy these for souvenirs."

McClosky gives up his table during the 10 days of the festival. He said Roe, who owns the building, can make a lot more money renting McClosky's spot to another seller who will pay more than McClosky can. The carver understands.

"I don't have that much on the table most of the time—I can't carve that much to keep up with the demand," McClosky said.

For vendors with a lot to sell, the festival is a financial windfall.

"I would hate to think what shape Parke County would be in without the festival," Collom said. "A lot of locals probably get irritated about that many people coming in, but it gives a lot of vendors a good shot in the arm."

Roe said the traffic from the festival allowed him to buy, restore, and open the mill. And operate it as a profitable business.

"People come in a few weeks before and then during the festival," Roe said. "Sometimes it's too busy for people to come in during the festival so they return after. It's pretty steady for a while."

BRIDGE PROPONENTS

Though covered bridges connect with some people for sentimental reasons and are good business for others, some people would like them gone. Detractors see them as antiquated pieces of wood not worth the cost to maintain. Because of this, the bridges need allies.

Arnold, the Rush County historian, and her friend, Larry Stout, became the supporters the six Rush County bridges needed in 1986, after county commissioners voted to let four fall below standards to be torn down and replaced. The two friends formed Rush County Heritage, Inc. to maintain and preserve the bridges.

Then they got to work.

That year Moscow Covered Bridge held a celebration for its 100th anniversary. Arnold and Stout leveraged the publicity.

"We went to commissioners meetings, and we got publicity from Indianapolis," Arnold said.

A petition was circulated for anyone age 18 and older to sign in support of the bridges. More than 90 percent of registered voters did so.

Meanwhile, the commissioner who spearheaded the drive



John Maxwell photo

Indiana's official roadway map labels Medora Bridge as "The Longest Historical Covered Bridge in the United States."

to replace the bridges lost his re-election bid. A second commissioner who also supported replacement decided not to run.

With all three commissioners in office supportive of the bridges, all six were saved.

When the Moscow bridge was destroyed by a storm in 2008, the three commissioners pledged support for a rebuild. In 2009, the bridge reopened.

"It's amazing how strong the support was," Arnold said. "There was just so much general feeling it had to be done."

SAVING THE STRUCTURES

Bridge allies come from a variety of backgrounds. When the Moscow bridge collapsed, an engineer was needed to design a way to save it.

Enter Jim Barker.

Barker, who works for VS Engineering, remembers crossing Ramp Creek Bridge at Brown County State Park when he was growing up. His older sister told him to put his hands on the ceiling of their car, lift his feet, close his eyes and make a wish, and it would be granted.

"The wishes never did come true," Barker said. "But there's something to saving the look and the experience of 5-year-olds going through the bridge. There's something to be said for preserving the technology."

That's why Barker, at age 73, still works on preserving covered bridges for future generations, as he has since 1974. He estimates he's designed 20 to 25 bridges. His most notable achievements include the plans for the rebuilds of the Bridgeton and Moscow bridges, as well the recently completed Cedar Ford Bridge in Monroe County.

"I can remember the first covered bridge I worked on," Barker said. "I thought 'wow, they're trusting me with this structure.'"

"I tried to fix what really needed it and leave the rest alone, and I was cognizant that economics always plays a factor."

Barker said he used 20th century materials and adhesives like epoxy when restoring his first bridges, but has gradually moved away from that. Now he replaces parts in kind when he can, keeping the original structure intact.

Replacing timbers can be tricky. Some are just too historic to be replaced. He mentioned a timber that said "furniture" on it and said that needed to be kept. During the remodel of



Frank Oliver photo



Frank Oliver photo

(Top) Roann Covered Bridge is in Paw Paw Township in Wabash County; it was built in 1877 and is 288 feet long. (Bottom) Jackson Covered Bridge was built by J.J. Daniels in 1861, and is the oldest remaining bridge from that builder; the bridge crosses Sugar Creek and was named for President Andrew Jackson.

the Moscow bridge, workers discovered a timber with a logo from a forest company in Cadillac, Michigan. That timber was moved to a visible location in the bridge so people could see it.

Other timbers that need to be saved can be less obvious.

"You see these dots," Barker said as he pointed at one timber from the Moscow bridge on his computer screen. "Those are historic. Those are nailheads, staples, tacks—each one of them held a sign at one time: 'Joe Blow for sheriff. Lost dog answers to name Fido. Father died, selling farm. Big show this Saturday.'"

Those holes are history, Barker said, a record of 150 years of community gatherings, events, news, and everyday life.

He says the rebuild from the 2008 collapse was probably his most challenging.

The storm that destroyed the bridge blew it sideways, so while the situation looked dire, Barker could see right away that a decent amount of the timbers were still usable.

"A lot of people said 'oh, it's a goner,' but we laid it out and tried to put it back together again," Barker said. "It took a lot of careful engineering. We ended up saving about 35 percent of the timbers."

Barker's most recent restoration is Cedar Ford Bridge, which re-opened June 9. That bridge was originally in Shelby County but was dismantled in 1975. The bridge now spans Beanblossom Creek and is Monroe County's only covered bridge.

Collom, its rebuild, said most of the bridge is new timber, but a few old pieces were salvaged.

"We resawed them and dressed them up—16 timbers out of 144 were used," he said. "Any time you can use old timber and salvage it, as long as it's still good (you do)."

"One of these days all of it will be old and they'll be talking about the real old timbers."

FINISHING THE DESIGN

When the Bridgeton bridge burned in 2005, the Parke County commissioners asked Collom if he could rebuild it from scratch.

"I said to be honest, I've never built one before and I don't know anyone that has, but there's not a piece in a bridge I haven't replaced at one time," Collom said.

He got to work. About a year later, the bridge opened to pedestrian traffic again. Collom said he found success by breaking the project into chunks.

"What it boils down to is, if you look at this thing as a whole, it's overwhelming," he said. "But if you break it down into individual pieces, take all the lower cords, get out and look at the upper cords and struts, go to the arches, all these pieces I've labeled like an erector set—then it's just a matter of putting it all together."

Since then, Collom has built three other bridges mostly from the ground up, including Cedar Ford. The bridges he's worked on have given him a healthy respect for the original workers.

"What they built back then with mules and gin poles and sheer back labor, I'm fascinated," Collom said. "We've got cranes, we've got equipment today they didn't have back then."

Even with modern machinery and tools, Collom and his crew haven't been able to build a covered bridge much more quickly than Daniels, Britton, or Kennedy did in the 1890s. While the original builders may have had as many as 50 or 60 people working on the bridges at a time, Collom only has five or six.

The labor is the real challenge in covered bridge building, Collom said.

"Now don't get me wrong, we work hard, but I can see why



John Maxwell photo

The 1838 Ramp Creek Bridge at Brown County State Park's north entrance is Indiana's only two-lane covered bridge.

those guys were as skinny as rails and ate 5,000 calories a day," Collom said. "They had to work with broad axes and an adz and hand-do the arches that way."

WORKING FOR THE FUTURE

Arson and severe weather are main reasons covered bridges get destroyed, but there are others.

Though many covered bridges have been saved, there are some that need serious maintenance or they may be lost.

Cades Mill Covered Bridge in Fountain County is one example. Built in 1854, it's one of the oldest in the state, but it has a pronounced lean. If it isn't shored up soon, it could collapse. Traffic is routed around the bridge, but McDuffee said it's still an important part of county history.

Oddly, GPS is another enemy. Many truck drivers use GPS to find the fastest route, but sometimes that can take them over a covered bridge that can't handle the load. Both height clearance and weight limit can be problems. If truck drivers ignore them, both the bridge and the truck can suffer.

The issue has gotten so serious, McDuffee said the ICBS is considering putting in headache bars, which are devices at the height of the bridge clearance to stop trucks that are too tall from entering.

"We don't want to do that because it spoils the view, not to mention it can hurt the truck," McDuffee said.

Headache bars are one way to stop the destruction of covered bridges, but there are other simpler ways to join in the preservation effort. According to McDuffee, the ICBS is always looking for members to promote and maintain covered bridges. Information is at indianacrossings.net.

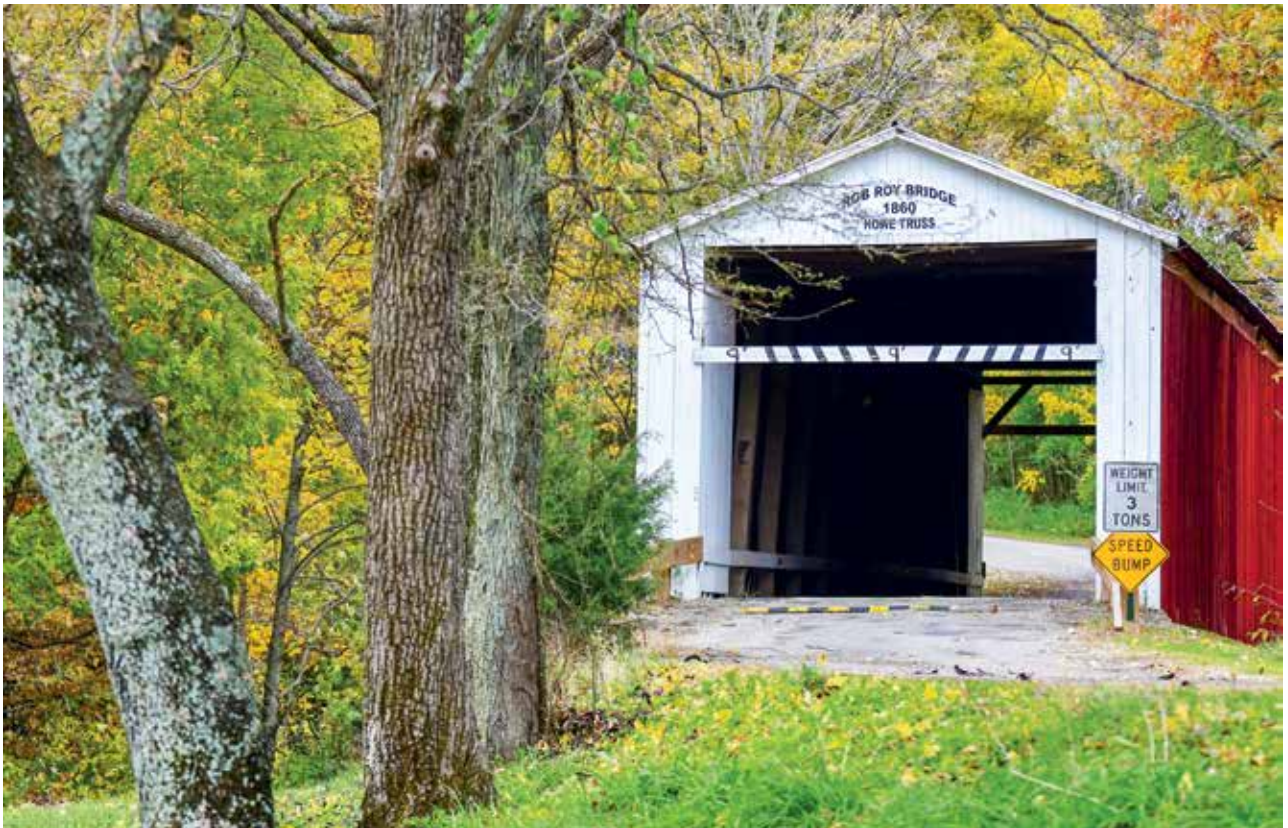
When you cross covered bridges, remember to observe their direction, go slow and enjoy the ride. Let the bridge work the way it was intended.

Whether it's their superior craftsmanship, their call back to a simpler time, or their appearance, they're worth a pause.

You don't have to visit every one in the state, like Maria Lee or Greg McDuffee did, to appreciate their place as one of Indiana's most enduring symbols.

Start with one and see where it leads you. □

Email sroberts2@dnr.IN.gov.



Frank Oliver photo



Frank Oliver photo

(Top) Rob Roy Bridge is one of three covered bridges in Fountain County; built before the Civil War, it still carries vehicles across Big Shawnee Creek. (Bottom) Essenhause Covered Bridge is a modern example of an old bridge style; built in 1993, it's at the Essenhause Inn & Conference Center.