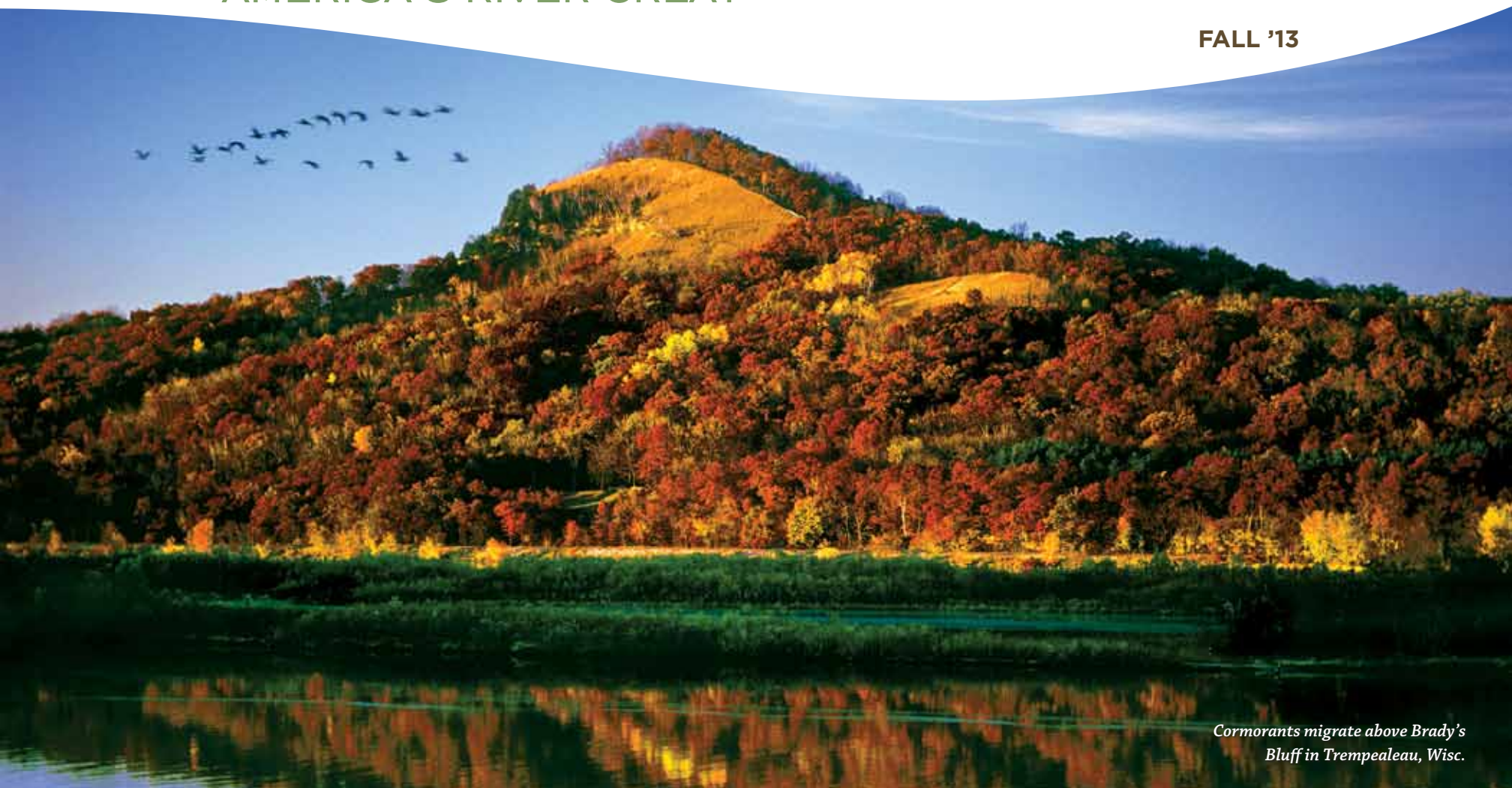


Our Mississippi

PARTNERING TO KEEP
AMERICA'S RIVER GREAT

FALL '13



Cormorants migrate above Brady's Bluff in Trempealeau, Wisc.

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and the Corps

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the new eagles?

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READY FOR THE WORST

Emergency responders travel wherever help is needed

MOTHER'S DAY, 2011, Sarah Jones did not awaken to breakfast in bed or even to the sweet smiles of her daughters, then 8 and 12. Instead, she was 550 miles away from home, working for the sake of strangers and their children, helping organize and manage a massive team responding to spring flooding on the Lower Mississippi River.

"It was very hard for me," says Jones, 39, who typically works as an emergency management specialist in the Rock Island District of the U.S. Army Corps of Engineer. "And it was hard for my daughters. They like me to be home.


"But I tell them that their big sacrifice, by allowing me to go, is helping people who've lost their homes and need emergency help. I tell my daughters we [the Corps] couldn't do it without them."

Jones is among the hundreds of Corps personnel who willingly set aside their day-to-day lives—and regular jobs—to join in efforts deemed emergencies, and not just in their own districts. They are regularly called upon by the Federal Emergency Management Agency (FEMA) to help in federally designated disaster areas like the recent flood-devastated areas of Colorado. Among the work Corps teams do is restoring power, covering roofs, distributing food and water, ensuring safety for other workers, getting rid of debris and setting up temporary facilities for schools or police and fire departments.

"All these folks have normal jobs," says Jones, "but their supervisors have signed statements supporting their emergency

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 **Our Mississippi** is a quarterly newsletter of the U.S. Army Corps of Engineers about its work in the Mississippi River Basin. It is published in cooperation with other state and federal agencies and other river interests with whom the Corps collaborates and partners toward long-term sustainability of the economic uses and ecological integrity of the river system.



ABOVE, FROM LEFT: Corps teams clear debris following a devastating tornado; Dive team leader Bill Ford prepares for an expedition; sandbags are dropped during flooding in Fargo.

work. Sometimes those supervisors can't really stand to lose them, but they make do."

The way people are chosen in various emergencies is complex, she says. "You can call them volunteers, but they have agreed to be part of a planning and response team. It's a well-organized team of mission-specific personnel who receive annual training and are required to maintain their readiness, including their medical screening. When a crisis arises, though, other Corps men and women often volunteer to help out."

These emergency deployments are expected to increase due to both aging infrastructure and an apparent increase in more ferocious storms.

Jimmy Coldiron, the 55-year-old chief of the River Operations Maintenance Section for the Corps' Vicksburg District, says he's never traveled so much in his 27 years with the Corps. He's on the road now 30 percent of the time.

"We're doing more and more, both routine and urgent work, for other districts," he said from a levee-raising job in New Orleans. "Infrastructure is declining, more and more maintenance is required, and there's not as much hired labor or government employees to take care of this stuff."

These emergency deployments are expected to increase due to both aging infrastructure and an apparent increase in more ferocious storms.

Ready to dive in

The Corps provides response to infamous disasters like Hurricane Katrina, but also to local emergencies that often don't make the news. In September, the busy locks in Sault Ste. Marie, Mich., on the Canadian border, needed repair. (The Detroit District, which covers the locks, has no dive team.)

Bill Ford, a Rock Island District lockmaster and District dive coordinator, drove 700 miles to arrive on a Monday night, worked all day Tuesday, Wednesday and Thursday, then left early Friday morning to make the 12-hour drive home.

"Three other guys and I, plus two divers from the Buffalo District, we worked hard," he said. "On one of those days, everything that could go wrong did. We made nine dives, and we worked from 7 a.m. to 7 p.m. with no lunch break, no break at all. All of us were just beat and some of us went to dinner without cleaning up first, straight from the site. I told my guys, 'I want to go somewhere and just sit down and look at each other and not have to talk.'"

When Ford travels, he leaves behind his wife of 29 years who, he says, "totally understands."

"I'm on call 24 hours a day. I get late night calls for lock-and-dam stuff. We mobilize in a hurry, but getting in the water takes a few hours because in order to keep everybody out of harm's way, we live by the motto, 'Plan your dive then dive your plan.'"

"If you're diving, it's considered dangerous, so you get hazardous pay. But these guys, they don't do it for the money. They do it because they like the job and the work."

The first-timer

The first deployment for Andrew Goodall was less than thrilling—except in hindsight. He can now say of his flood-fighting deployment to Fargo, N.D., in March 2009: "I gained more than a couple years' experience in just a couple weeks."

He was 22 years old, just out of college and a new civil/project engineer with the Corps' Rock Island District. The Red River of the North, which runs through downtown Fargo, began rising, and when a Corps email sought volunteers, Goodall thought, "I've never been there, only seen the movie, but hey, I'll go." He joined another Corps employee on the brink of retirement for the 10-hour drive north, reading what's called "the red book," or Corps flood-fighting manual, on the way.

In a journal he kept, he wrote "I was very overwhelmed my first day, because this was my first time." He was assigned to protect a three-mile stretch near downtown Fargo, including a Catholic school that had just been renovated. Working with contractors, he helped raise levees when predicted crests kept rising, day after day. And when an old permanent floodwall, not built by the Corps, failed and sent a geyser of water into the school, he supervised from a Humvee the dropping by a National Guard Blackhawk helicopter of several one-ton sandbag "bombs" that stopped the water.

But the weather was nasty, below freezing, and the snow was deep. "It was probably some of the most miserable conditions I'll ever be in. You're outside the whole time, 16 to 18 hours at a time, even in the middle of the night, and it's blowing and snowing." He remembers being wet and cold, with bad boots that left his feet sore.

"The silver lining," he says, "was the people of Fargo, how grateful they were, how they'd offer you food and hot chocolate. You work a lot of hours, but you meet awesome people and help a lot of people out. I enjoyed it tremendously."

He returned twice more that spring to the Fargo area, and again the following year. Last year he was deployed to Baton Rouge during Hurricane Isaac to help FEMA distribute food and water. He keeps a duffel bag packed at home with a set of clothes, boots, sunscreen, bug spray and a flashlight.

Now that he is married with a two-year-old daughter and a baby boy, he says, he's not volunteering all the time for everything anymore. His wife, a hairdresser, faces more challenges when he's gone.

"But if something comes up, say another Fargo-type flood," he says with a grin. "We'll talk about it."—S.A.

Are climate swings the “new normal?”

U.S. Army Corps of Engineers projects increasingly prepare for the unexpected

PILOT PROJECTS within the Mississippi River watershed are helping to guide federal efforts to integrate climate change into flood risk management, navigation and other projects.

Studies were recently completed in the Iowa-Cedar river basin, at the Corps' Coralville Lake reservoir, along coastal New Orleans and in the snowiest northern stretches of the Mississippi and Missouri rivers. One thing they've shown, says Gregory Karlovits, a Rock Island District hydrologic engineer involved in several projects, is that it's difficult to predict the future. Projects, therefore, need to be resilient enough to adapt to wilder and wilder weather swings and the resulting high water or other effects.

Nationwide, Corps districts are now required to factor climate change into project analyses. Findings from pilots such as those conducted in the Mississippi Valley Division will help other districts figure out how that can be accomplished in practical ways.

“(Studying climate change) is important to the Corps because our primary role is water resource management, and climate change impacts temperature and precipitation, which are the basic foundation of water resource management,” he said.

Temperature affects precipitation—be it snow or rain—as well as the carrying capacity of the atmosphere, he said. “If you move from what we're accustomed to, to heavy precipitation events, as we're seeing happen, it would change the way you design local stormwater projects, how you handle watershed design. Changes in climate, especially at the extreme ends, really impacts all water resource management to varying degrees.”

Analyses conducted for the pilot projects showed that forecasted effects from climate change—more commonplace extremes of both flood and drought—are happening in the Mississippi River watershed, and in particular more regular flooding.

“There are more days when it rains, and heaviest events are heavier,” he said of the Iowa-Cedar analysis. “There are a lot of consequences for this, among them that it generally leads to bigger flooding.”

Official guidance issued

The Coralville Lake Reservoir pilot looked at how much impact reservoir operation alone could make in alleviating the impact of increased flooding. In both 1993 and 2008—two of the largest floods on record in northern Mississippi River tributaries, the emergency spillway overtopped, Karlovits said. “Our fear is that it'll happen more frequently, causing extensive damage downstream.”

What the study team learned is that you can control some, but not much flooding via operational changes and that the best way to avoid flood damage is by discouraging development in the floodplain and making clear that the perceived protection afforded by the reservoir may not last forever.

“We're seeing increased frequency of people being in harm's way—living in the floodplain or coastal flood zones. But also, places that used to be considered safe are no longer safe due to growing threats.

“Removing people from harm's way is a lot more cost-effective than to go in and rebuild; it's a lesson learned time and again with a number of disasters. But part of that is predicting where disasters will occur, and a lot of tools fail when things are changing as rapidly as they are.”

The Corps issued its first official guidance on response to climate change in the Mississippi Delta, says Kate White, senior lead for systems and global change at the Corps' Institute for Water Resources. She's heading the national initiative (and pilot projects) on how climate change will affect water resources planning and management of existing infrastructure.

Since 2009, all new navigation, coastal storm damage and flood risk reduction and ecosystem restoration projects are evaluated based on how they'd perform or what protection they'd afford in low, intermediate and high rates of sea level rise, she said.

The result of representative pilot projects scattered across the country will help in the development of further guidance. So far, no projects have concentrated on the main stem of the Mississippi River, she said, in part because it's been sufficiently resilient in the face of a recent record flood followed the next year by a record drought.

“We can't attribute those events to climate change, but we can say extremes of flood and drought are the kinds of things projected in the future, and the basin responded very well to the floods, was robust to them,” she said. “For the drought, some operational changes like dredging and removal of pinnacles had to be undertaken, leading us to reconsider drought contingency plans. But really, the forethought of designers of the system allows us to be fairly confident of our ability to meet future challenges without major adaptation. That picture may change as time goes by.” —K.S.

MY MISSISSIPPI

Dean Jacobs, 51, adventurer, Fremont, Nebraska



“I grew up in Fremont, Neb., far from the Mississippi River. I don't even know how to swim. But this past summer I spent August and September traveling the Mississippi from top to bottom, often by canoe, just as I've spent months on the Amazon and the Nile.

“When I was 40, I quit my job at Pfizer, where I made

over \$100,000 a year, and sold my house in San Diego, because my dream was to go and explore the world. I've been in 52 countries and on every continent except Antarctica.

“I saved my money. I've written two books, and I do presentations in schools, using my photos and stories to help remind kids that the world is far more beautiful and generous and kind than we give it credit for. The point of my work is to connect people to the cultures, history and wonders of the world.

“I can tell you one thing: It's far more expensive to explore the Mississippi than the Amazon. I try to live on just \$50 a day—a tiny budget that always puts me in contact with everyday ordinary people, which is part of the richness of the journey.

“I sleep in my tent in parks along the river. I found a nice little hotel room in St. Louis for \$29 a night. A couple times I've slept in the back of my truck. But one of the developing aspects of this trip is the generosity of people: Put your tent in my front yard. I've got an extra room. Come in for dinner tonight. I'll buy your breakfast. We love what you're doing. They get it.

“All rivers are a great metaphor for life. They start young and innocent, like up in Minnesota, quite clean and pure, then they pick up a little baggage and don't move anymore as they once did, but the water is deeper, wiser, still wild at heart. Like me.”

Corps jobs on prime time?

Peter Reiss, the first journalist embedded with the New Orleans Task Force after Hurricane Katrina, is developing and preparing to pitch “Hard Corps,”

a cable TV reality show featuring tough jobs by Corps employees to networks like National Geographic, History Channel and A&E. While “Crisis and Response” is the featured pilot episode, other shows are planned around hurricane season, ice surveys, flood control and more.

“I saw firsthand the dedicated men and women who worked relentlessly to solve an engineering problem, and it made a lasting impression on me,” he said. Reiss' documentary won a CINE Golden Eagle award, and the long-time producer of documentaries and docu-reality series says he saw a future in a show about tough people doing dangerous work.

“I had the idea of building a show around the Corps and its management of the Mississippi River,” he said. “They take on huge projects, use massive equipment and battle the elements. The Corps' biggest enemy is Mother Nature herself and the floods, droughts and other weather events engineers have to deal with. The pressure is on every year with the river's vital importance to our economy. Throw in southern bayou culture, and it seems to me like a recipe for a successful show!” —K.S.



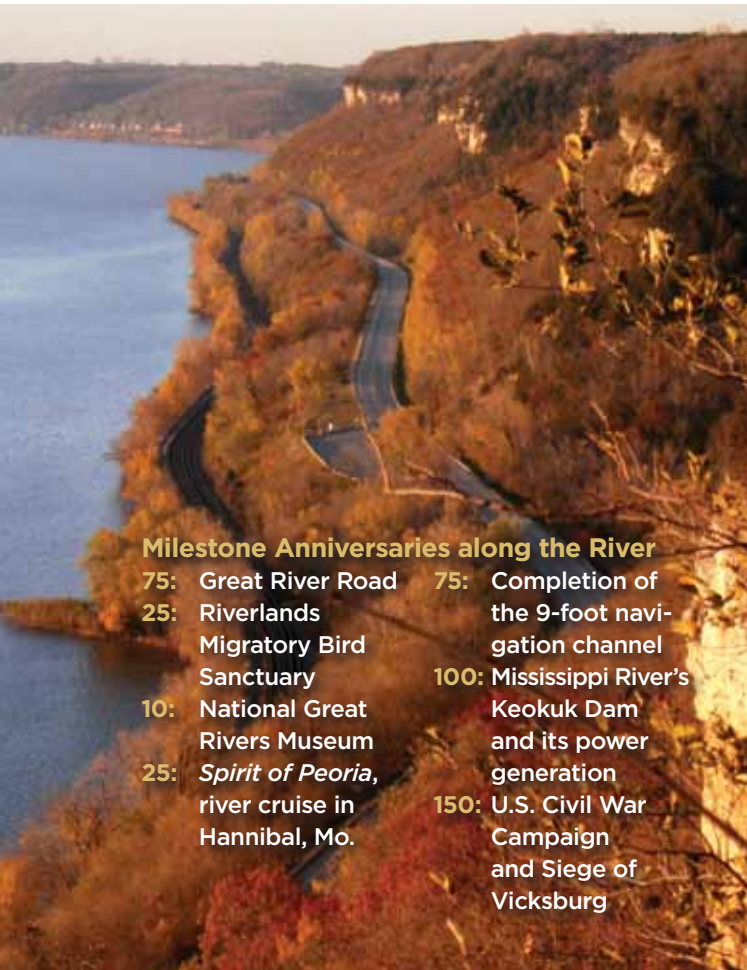
**Billion-dollar
Disasters in
the U.S.: 2011**





GREAT RIVER ROAD

75 years, and counting, of river bluff road trips



Milestone Anniversaries along the River

- | | |
|--|---|
| 75: Great River Road | 75: Completion of the 9-foot navigation channel |
| 25: Riverlands Migratory Bird Sanctuary | 100: Mississippi River's Keokuk Dam and its power generation |
| 10: National Great Rivers Museum | 150: U.S. Civil War Campaign and Siege of Vicksburg |
| 25: <i>Spirit of Peoria</i> , river cruise in Hannibal, Mo. | |

While he was in office, Franklin Roosevelt transferred Civil War battlefields and the Lincoln Memorial to the care of the National Park Service and created parks at the Great Smoky Mountains and the Grand Tetons. And in 1938, he took a collection of various state and county highways along the Mississippi River and parlayed them into the 2,000-mile-long Great River Road. His vision is now one of America's best road (and water) trips.

The U.S. Army Corps of Engineers operates six locks and dams along I-35 in just Wisconsin, a bluff-lined drive that's been named the prettiest in America. Call ahead to schedule a tour of the impressive structures that make modern river navigation possible, or watch anytime from the overlook in Alma, Wis. For a different vantage point, head to a fishing float situated behind river locks—a fruitful fishing location for both eagles and humans. At The Great Alma Fish Float, a day of fishing is \$18, and

you can rent all you need on the float. The owner will even fry your catch in the on-float café.

These 250 miles through 33 towns in Wisconsin offer a chance to be as active as you want—or to simply river gaze. Art fairs, apple fests and War of 1812 commemorations are just a few of the activities taking place during the 75th-anniversary celebration.

Small river towns are a draw year-round. Wisconsin's Great River Road towns are conveniently located only seven or so miles apart. That, you'll learn in interpretive centers like the Wings over Alma Nature and Art Center, is not at all coincidentally the distance a steamboat could travel in the river's transportation heyday before refueling with wood.

While all 10 states along the river road (designated by the symbol of a pilot's wheel) boast worthy attractions and cultural quirks, this stretch is one of the most wildlife-friendly, thanks in part to the Mississippi River National Wildlife Refuge. Even as you launch your trip at the interpretive center at Prescott, Wis., you'll likely get a greeting from a soaring eagle as you pick up brochures and plan your adventure.

From there, the road snakes south along or near the river at the base of colorful bluffs, sometimes stretching high for distant water views, at other times blazing a trail amid corn fields, acres of wine grapes and pumpkin patches. Shopping is a must in Stockholm, Wis. (pop. 66), home to a popular summer art festival and many year-round galleries, working artisans and worthy stops for fresh-baked bread and pie.

Book a kayak (Bay City Hardware and Marine rents them, as does Riverland Outfitters in Alma) to explore amid white pelicans and eagles the islands of the Mississippi River backwaters. The river is shallow and safe here, though a windy day can make for a workout. If you'd prefer that someone else do the steering, check out Mississippi Explorer's backwater cruises (mississippiexplorer.com). Narrators talk about engineering features that keep the main channel operational for barges, and special fall migration tours out of Lansing, Iowa, are a particular must for the chance to spot thousands of migrating ducks and tundra swans.

Sailing is a traditional way of experiencing Lake Pepin (SAILPEPIN.COM), after fried pickles at the Pepin Pickle Factory and a stop at the Laura Ingalls Wilder Museum, also in Pepin. Or celebrate the Year of Cycling along the Mississippi on the Great River State Trail (MISSISSIPPIRIVERTRAIL.ORG/YOC2013).

Overlooks, reaching 500-plus feet above the Mighty Mississippi, could be the whole focus of a tour, particularly when fall colors set the hillsides ablaze. You can hike or drive to Alma's Buena Vista overlook, a local park. Brady's Bluff in La Crosse, Wis., is one you'll be talking about for some time after catching this eagle-eye view, as is the one at Wyalusing State Park near Prairie du Chien, where the bluff-top trail takes you along burial mounds and a monument to the now-extinct passenger pigeon.—K.S.



Museum complex shares river story



TEN YEARS AGO this October, the National Great Rivers Museum opened to tell the story of the Mississippi River—its history, its wildlife, and the complexity of balancing the river's many uses.

This river-side museum is adjacent to the river's largest lock and dam complex and across the river from a massive wildlife refuge that's also managed by the U.S. Army Corps of Engineers. The museum offers an unusual opportunity to learn about how humans relate to the river while actually doing that very thing.

Particularly popular is the chance to view wildlife—the hundreds to thousands of trumpeter swans, eagles and nesting white pelicans that frequent the Riverlands Migratory Bird Sanctuary. The complex of 3,700 acres of marshes, bays, interpretive opportunities and viewing celebrates its 25th anniversary this year, while the museum celebrates its 10th.

Over the years, people have flocked here, and so has wildlife, bringing even more people. Tens of thousands (of both) visit each year, with human visitation growing with new opportunities like the on-premises Audubon Center at Riverlands. More than 80,000 people visited the museum alone in 2012, and 4.1 million to the rivers project office grounds—48 percent of those say "sightseeing" was the reason for their visit.

The partnership allows the Audubon staff to focus on bird education and conservation, and the Corps staff to focus on connecting people to the river, says Charlie Deutsch, supervisory wildlife biologist at the Corps' River Project Office. The agency's multiple missions are also on display—never more clearly than from the tour that lets you walk atop the dam, 80 feet above the river, and see the distant miles of restored wetlands and prairies. The Corps has even created wildlife habitat for endangered terns atop repurposed barges.

Inside the museum, visitors get a close-up look at some of the river's more common and unusual fish, listen to bird calls and drive a towboat through a simulated river experience.

Also on display, and covered in regular tours, is information on how soil is made and erodes and how river models help scientists make important decisions affecting the river. At one station, visitors can estimate how much fresh water their household uses a day and at another visitors can learn of ways the Corps seeks to help protect the region from acts of nature like flooding.—K.S.

The complex ... celebrates its 25th anniversary this year, while the museum celebrates its 10th.

The museum, at #2 Locks and Dam Way, Alton, Ill., is open daily from 9 a.m. to 5 p.m. and offers free 45-minute tours of the dam. For more, call 877-462-6979 or visit mvs.usace.army.mil/Rivers/museum.html.



Pirates OF THE MISSISSIPPI

Robin Hoods of their day—
or cold-blooded killers?
The Mississippi and Ohio
rivers had 'em both.



Avast, me 'earties! Gather around for a tale of treachery, murder and wonder, and consider ye warned. For the sharp swift blade of the buccaneer's sword wasn't for those of the Caribbean alone. . .

When you hear the word pirate, you may envision Johnny Depp's character, Captain Jack Sparrow, aboard the *Black Pearl* or recall stories of Yellow and Black Beard. You may possibly think about modern times and the misery brought about by pirates off the coast of Somalia. But have you ever thought about the Mississippi River and pirates? If not, you are missing out on some of the most interesting—and dangerous—chapters of river life.

Perhaps one of the most notorious pirates of the southern Mississippi was Jean Lafitte. He considered himself a privateer, but Jean and his brother Pierre ran a successful smuggling operation targeting Spanish ships and other pirates. Jean was of French descent, but in true pirate fashion, he showed allegiance to none and sailed under no country's flag. He helped General Andrew Jackson fend off the British during the 1815 Battle of New Orleans, was offered British citizenship to betray the United States during the War of 1812, and spied for the Spanish during the Mexican War of Independence.

Not as violent as some of their counterparts on the high seas, the Lafitte brothers would treat captives well and would even return ships to the original crew. Sailing in a classic schooner to approach ships, they would set up auctions in the swamps to sell stolen goods and were romanticized as modern-day Robin Hoods in the Delta and New Orleans. But they weren't beloved by all. By selling stolen goods at a lower price, they took revenue away from New Orleans merchants and politicians, who sent a militia to disperse the events at Lake Barataria, south of New Orleans, in 1814. Pierre was arrested and jailed, while Jean continued the lucrative family business.

Early slave traders

Approached by the Spanish to act as spies during the Mexican War of Independence, the Lafittes traveled to Galveston, Texas, where they set up a pirate island called Campeche. They continued their pirating ways and worked several legal loopholes which allowed them to get involved in slave trading, even though the importation of slaves had been outlawed in the U.S. in 1818. This proved lucrative until several hardships fell upon the island. Some of Lafitte's men captured an indigenous Karankawa woman and were killed by tribal members. But the pirates fought back and killed most of the men in the tribe. A few months later, a hurricane hit the island, destroying all but a few houses and ships. Jean Lafitte would bounce back and continue his ways until 1823, when he was killed during a battle in Honduras and buried at sea.

River pirates usually located themselves along isolated frontier settlements, which lacked adequate law enforcement. They stole livestock, cargo and slaves and would usually sink or sell the stolen flatboat, keelboat or raft. Pirates would lure passing boats by posing as farmers with goods to sell, pretend as if they were in trouble. They might even hire a woman to stand by the bank, calling out in distress. Those foolish enough to stop usually met an untimely, violent death.

A main pirate hide-out was along the Ohio River at Cave-In-Rock in southern Illinois. Pirates came and went, but two would forever leave their mark. The Harpe Brothers, Michajah, aka "Big," and Wiley, aka "Little," were a particularly violent pair of river pirates—so violent that they've often been referred to as America's first serial killers.

James Hall, a Philadelphia native and judge in Shawneetown, Ill., during the 1820s, wrote the first histories about the "Bloody Harpes." His introduction from his 1828 "Letters from the West" serves best for the story:

"Many years ago, two men named Harpe appeared in Kentucky, spreading death and terror wherever they went. Little else was known of them but that they passed for brothers, and came from the borders of Virginia. They had three women with them, who were treated as wives, and several children, with whom they traversed the mountainous and thinly settled parts of Virginia into Kentucky marking their course with blood."

The Harpes were so nefarious, once tying a captive to a horse and forcing both over a cliff, that even the other pirates inhabiting the cave were disgusted. They were forced to strike out on their own, along with their many wives and children. More destruction was left in the brothers' path. One particularly horrifying story recounts "Big" Harpe's sadism when he killed an infant girl, whose crying he found annoying. Her vengeful father finally got justice when he and an angry hunting party found the brothers, fatally wounding "Big." Stories are told that the father placed the head of Michajah on a stake overlooking Cave-in-Rock to warn others.

Now alone, Wiley "Little" Harpe traveled back to Cave-in-Rock under the alias "John Setton." He was welcomed by Captain Samuel Mason, a Revolutionary Army veteran-turned-pirate who terrorized slow-moving flatboats traveling from Memphis, Tenn., to Natchez, Miss., in the late 1700s to early 1800s. Caught in New Madrid, Mo., in 1803, the pirates turned on one another, but both were sent downriver to New Orleans for sentencing. During the trip, they managed to break out of irons, kill several guards and escape. A reward of \$7,000 was offered for Mason, dead or alive. In true pirate fashion, Setton turned on Mason and brought his severed head to authorities to collect his reward. But he was recognized, caught, and sentenced to death by hanging in Greenville, Miss., in 1804.

Piracy began to quiet down along the Mississippi in the early 1820s as steamboat travel increased. Faster and more secure than their slow-moving counterparts, these large vessels posed higher risks to the pirates. As river piracy waned, new methods of terrorism flourished to the west with outlaws, bank robbers and renegades acting as the new big bad.—S.K.

Writer Sarah Koepfel is an archaeologist with the Vicksburg District, where she works on prehistoric and historic sites, consults with Tribal Nations and ensures Corps compliance with cultural resources laws.

ABOVE, FROM LEFT: A rendering of the legendary Jean Lafitte; a flatboat like those often accosted by particularly bloodthirsty pirates at spots like the popular hideout Cave-in-Rock, also pictured here.

REPORT CARD
Mississippi River

- ___ Supply of abundant clean water
- ___ Reliable flood control
- ___ Support of local, state & national economies
- ___ Healthy and productive ecosystems
- ___ World-class recreation opportunities
- ___ Nation's marine water highway
- ___ National security enhancement

Does the river make the grade?

Is the Mississippi Watershed passing biology, aka “clean water”? What grade is it earning in economics or, say, physical education (i.e., the provision of recreational opportunities)?

Seeking to grade the 31 state watershed on a variety of areas, with sub-grades given to each of the six sub-basins, is one of the year's major goals of America's Watershed Initiative—a broad collection of agencies and individuals with a stake in the river's health and vibrancy (americaswatershed.org).

The intent, says Executive Director Jordy Jordahl, is to develop a clear

way of guiding priorities for policy, funding and management actions. Like the way it does in a traditional school, a report card will more clearly communicate the status of river health and trends and help with the setting of future goals. A bad grade, for example, might encourage further investigation into the cause, an upward trend an indicator that something is working. And while the letter grades provide just a quick “dashboard” glance, the process will be transparent enough that anyone interested in delving further can “look under the hood,” he said.

A working group led by Dr. Rainy Shorey of Caterpillar, Inc. and Dr. Heath Kelsey of the University of Maryland's Center for Environmental Science facilitated the first of seven workshops to discuss what indicators and data sources are available and should be used to develop the grades. The Upper Mississippi River workshop was held in Rock Island, Ill., on Sept. 11-12 with 40 people from federal, state and local agencies, non-profits and private businesses in attendance. Similar workshops will be held in the other sub-basins—the Missouri River, the Ohio, the Arkansas/White, Red and the Lower Mississippi—before Fall 2014 when the draft grades should be released.

Additionally, these groups will help develop ways to most accurately measure both impacts of human activities and uncontrollable factors like weather and global economic change. Attempts to measure a topic like the overall ecosystem, for example, would likely take into account factors like the Gulf Hypoxia zone; health of fish, wildlife and vegetation; and freshwater-dependent bird species.

“One of the things that's really exciting about the project,” Jordahl said, “is it's a report card that is looking at social and economic and natural indicators of the watershed. We're not just looking at ‘How is the business climate?’ or ‘How is the state of the water quality?’ We're trying to look at broader goals that people have expressed are critical for the watershed.”

Input will be sought from many other groups and individuals, beyond those present at the workshop. And much work remains to be done, he said. “This was a tremendous first step that we took; we had very strong diversity of people and experts. But it's a step. We're a long way from a product.” —K.S.



Jordy Jordahl

Handing off the baton

New general takes the Mississippi Valley Division helm

Brig. Gen. Peter “Duke” DeLuca says he's looking forward to yet another opportunity to give back to the U.S. homeland as a soldier and leader as he takes the helm of the Corps' Mississippi Valley Division. Learning a new watershed, meeting a new group of people and getting to explore the recreational activities of the watershed are other highlights.

DeLuca, who comes to the division from an assignment as head of the United States Army Engineer School in Fort Leonard Wood, Mo., and who previously served as commanding general in the Corps' North Atlantic Division, was officially introduced at a change of command ceremony in late September.

The custom of acknowledging a change in commanding officers of a military unit is a formal ceremony and dates back to at least Roman times. The ceremony also symbolizes the transfer of command responsibility, done in this case when outgoing division commander Brig. Gen. John Peabody passed the command flag to his successor, DeLuca. Peabody, who served as the Mississippi Valley Division commander and Mississippi River Commission president since November 2011, moves to a new post as deputy commanding general for civil and emergency operations for the U.S. Army Corps of Engineers in Washington D.C. During the ceremony, Chief of Engineers Lt. Gen. Thomas Bostick called both “true soldiers, scholars and statesmen.”

As the new division commander, DeLuca is now responsible for the Corps' water resources programs in a 370,000-square-mile area that includes portions of 12 states, its boundary extending from Canada to the Gulf of Mexico. He will also command six districts with offices located in St. Paul, Minn.; Rock Island, Ill.; St. Louis, Mo.; Memphis, Tenn.; Vicksburg, Miss.; and New Orleans, La.

Additionally, DeLuca will be the Mississippi River Commission president-designee. The presidentially appointed agency oversees the comprehensive Mississippi River and Tributaries flood control and navigation project, as well as the entire Mississippi River and its tributaries.

Trained as an engineer, and later earning a master of arts degree in International Affairs, DeLuca was commissioned into the Army in 1982, becoming an engineer officer straight out



of college. The often-decorated officer has served from platoon level through combat in both Army and multi-national environments, has run multi-billion dollar construction programs in Iraq and has supported foreign militaries in Europe and Africa.

DeLuca is married to Marianne Paciulli and has one son, now attending college in Virginia. He is a voracious reader and enthusiastic chef, and he says he's hoping the post along the Mississippi River affords chances to pursue other passions like bicycle riding and kayaking. His role models, he says, include Frank Lloyd Wright, for the way he relentlessly pursued goals and lived with great passion, and “ultimate professional military engineer” Leonardo Da Vinci.

“MVD is an assignment that I truly wanted,” he said at the ceremony. “I am committed to doing a good job as your new commander because the Mississippi River watershed is extremely important to our society and to our nation's economic well-being.” —K.S. & R.A.

ABOVE, FROM LEFT: **Brig. Gen. Peter DeLuca**, the new commander of the Mississippi Valley Division. **Outgoing commander Brig. Gen. John Peabody** leads a change of command ceremony procession, followed by **Lt. Gen. Thomas Bostick**, the Chief of Engineers; **Lt. Gen. Peter DeLuca**; and **Eddie Belk**, MVD's Director of Programs.

Recovery news worth trumpeting

A few decades ago, admirers of the planet's largest waterfowl species feared the trumpeter swan would soon sing its swan song. By the late 19th century, hunting had brought this native North American bird to the edge of extinction, and throughout most of the 20th century, the trumpeter swan was considered rare or extinct in the lower 48 states.

After a lengthy restoration effort, the distinct trumpeter call sounds again in wetlands, and enthusiasts have been flocking to catch a glimpse of the majestic birds in sanctuaries such as the Audubon Center at Riverlands, located north of St. Louis at the Army Corps' Riverlands Migratory Bird Sanctuary.

"Last year on Christmas Day, we had a little over 500 in the confluence area, which is one of the higher numbers we'd recorded in recent years," said Riverlands senior ecologist Lane Richter. "When people heard there were that many, we had a lot of visitors come in just to see the swans."

Watching the trumpeters can be as thrilling as sighting a bald eagle, due to the swan's large, graceful form and its trumpet-like call. Indeed, staffers at Riverlands have referred to the graceful creatures as the "new eagle" due to the number of visitors they now attract.

"They're vocal birds, honking back and forth, and they're beautiful out on the water," Richter said.

In the 1930s, only 69 trumpeters could be counted in the lower 48 states, all living in a remote area of Montana. The Red Rock Lakes National Wildlife Refuge was established there to save the species from extinction. In the 1960s, swans from Montana were introduced at wildlife refuges in South Dakota and Minnesota. Breeding populations slowly established, then began to take off, and the survey completed in 2010 estimated 46,222 trumpeter swans in North America.

"It's one of the most remarkable recovery stories of wildlife in North America," said John Cornely, executive director of The Trumpeter Swan Society, a non-profit founded in 1968 to restore the swans.

Cornely, a retired biologist with the U.S. Fish and Wildlife Service, credited the restoration to effective coordination between agencies and conservation groups passionate about saving the swan.

Sensitive wetlands management helped mitigate the loss of habitat to development, and the U.S. Army Corps of Engineers, Richter said, "has done a great job with land management to help provide resting areas in the winter for swans and other waterfowl."

The largest concentrations of eastern trumpeters breed in Minnesota, Wisconsin, Nebraska and Ontario and migrate along the Mississippi flyway. The Society leads a monitoring effort to collect data on swan sightings, and Cornely said watch-



Trumpeter Swans at the Riverlands Migratory Bird Sanctuary.

TRUMPETERS:

- As adults, have white plumage with black bills and feet
- Have wingspans that can exceed seven feet
- Live up to 32 years
- Generally mate for life
- Breed around freshwater marshes, ponds and lakes
- Feed on aquatic plants

ers are excited to see the swans extending back into the historical wintering range all the way to the Gulf Coast and the southeastern Atlantic seaboard.

"Birds have gradually found their way farther and farther south again," he said. "We've even had birds show up in Virginia that found their way from a restoration in Iowa."

Migration isn't an instinct for trumpeter swans; it's taught by parents and older birds.

"If you raise trumpeters in captivity, they don't really know to migrate," Cornely said. "Young birds have a tendency to wander around, so in their moving around, they're starting to form new traditions that look somewhat like the old traditions."

While the population surge is thrilling, conservationists are not declaring victory. They will continue to battle threats to the swans by working with companies to mark or bury power lines, saving habitat where possible and educating hunters and fishermen on using lead-free ammunition and lures since lead poisoning contributed to the near-extinction of the population.

"Personally I believe what we do for swans help people," Cornely said. "These wetlands they need are good for flood control, they help clean up pollutants out of the water, and they are quite valuable to humans as well as swans." —S.F.

WHERE ARE THE MONARCHS?

Near the upper reaches of the Mississippi River on a warm September afternoon, thousands of admirers watched about 200 travelers depart for their distant winter paradise. With tiny tracking tags on their delicate black and orange wings, surrounded by youngsters decked in strapped-on wings, the lab-raised butterflies took to the air at the annual Monarch Festival in Minneapolis. They thus began a 2,300-mile flight to the mountains of central Mexico, where they will rest from November to March with millions of their kin—though with far fewer kin than in previous years.

Numbers of monarchs overwintering in Mexico have been dropping for more than a decade. The 2012–13 estimate was the lowest tally since a census began in 1993 and represented a 59 percent drop from the previous winter.

Plant Milkweed

Several factors have contributed to the decline, scientists say, including logging in Mexico's forests, but a major problem is loss of the milkweed on which the caterpillars feed. The adoption of herbicide-tolerant soybean and corn seed varieties has nearly eliminated milkweed in fields of row crops. In an effort to reverse the trend, the monarchs' allies are promoting milkweed plantings in both backyard gardens and in large public land restorations.

Spot the ever-rarer beauties

Though monarchs are difficult to track during their migration, wildlife refuges and nature centers along the river often have preferred habitats. For example, Bellevue State Park south of Bellevue, Iowa, has a butterfly sanctuary where they can generally be spotted. —S.F.

FOR MORE

Visit monarchlab.org and monarchjointventure.org



Monarch butterfly

People, projects and partnerships highlight the Mississippi River Commission's Low Water Inspection Trip

WITH THE CENTRAL THEME of adding "Value to the Nation," the Mississippi River Commission travelled more than 2,000 miles on its namesake river and flagship motor vessel. During the outing, commissioners met with thousands of people, listened to stakeholders testify about their projects and formed stronger partnerships with organizations focused on protecting and improving the world's third largest watershed.

While conducting public meetings in La Crosse, Wis.; Dubuque, Iowa; Alton, Ill.; New Madrid, Mo.; Memphis, Tenn.; Vicksburg, Miss.; and Morgan City, La., the MRC heard testimony from 88 partners, stakeholders and local residents. Staff members representing 30 state and federal congressional offices attended the meetings. In total, MRC members met 2,600 citizens during the inspection trip.

While on the trip, commissioners:

ENGAGED with 21 of the 59 mayors who have joined the Mississippi River Cities and Towns Initiative. The MRC also held ceremonial signings of a "Memorandum of Common Purpose" with the group at every public meeting.

CHRISTENED the Corps new Motor Vessel *George C. Gruggett* Aug. 20 in Memphis with George Grugett in attendance. (MORE IN SIDEBAR BELOW.)

TOURED the U.S. Geological Survey's Upper Midwest Environmental Science Center, a research and data management complex in La Crosse, Wis. The Center is currently working on ways to prevent Asian carp, an invasive species, from entering the Great Lakes and other key waterways.

LISTENED to the Iowa Economic Development Authority and Soy Transportation Coalition describe the economic value derived from Mississippi River navigation and the projected economic impacts from the Panama Canal expansion.

TOURED the Rock Island District's versatile Mississippi River Project Office near Pleasant Valley, Iowa. The project office has massive infrastructure repair capabilities and serves as a repository for major flood fighting supplies.

PARTICIPATED in a ceremonial signing of a Memorandum of Understanding with the National Great Rivers Research and Education Center, near Alton, Ill. Another partnership was forged with the U.S. Fish and Wildlife Service and the Engineering Research and Design Center for the Lower Mississippi River Strategic Conservation Plan. That agreement emphasizes collaboration on species data collection and river engineering science. The work will help protect three river species and serves as a model for other areas of the nation.

CONDUCTED in-depth discussions with Louisiana coastal protection leaders on joint Mississippi River diversion research collaboration. —R.A.



Brig. Gen. Peabody heads an MRC public meeting. OTHERS: Christening of the MV *George G. Gruggett*.

Motor Vessel christening honors river champion

"You know, it's hard to describe the attachment to the river, and how you feel about the river. But the river just kind of draws you to itself.... And you want to do whatever you can do, in your own small way, to make certain that everybody has the advantage of the river."

—GEORGE GRUGGETT, 2011

Not many have had the opportunity to serve beyond retirement through a newly christened motor vessel bearing their name. But not many have George Grugett's tradition of service both to the river and to the country.

The river champion served as a bomber in Italy during World War II. Over the next 70 years, he would go on to hold two successful and related 30-plus year river careers—first as a civil engineer within the Corps' Memphis District and later as executive vice president of the Mississippi Valley Flood Control Association.

While he was at the helm of the Mississippi Valley Flood Control Association, Grugett advocated for a comprehensive flood control system; he was a staunch opponent of any system that afforded landowners with more financial means and ability to build higher levees than his or her neighbor.

During his tenure, the organization spearheaded key improvements to a massive flood protection system credited with preventing more than \$230 billion in

flood damages during the record 2011 flood that claimed not a single life. But his favorite years, he said in an interview with curators of the new Corps Museum in Vicksburg, Miss. (LMRM.ORG), were the Memphis years he spent working on flood control projects right on the river, because he enjoyed the sense of freedom that it afforded.

In his earliest days on the river, he worked on vessels like the "old steamer *Mississippi*," which the Mississippi River Commission used for its annual inspection trips. "It's a stern wheel," he said. "It was the last stern wheel steamboat on the river that had a Texas deck on it. It was very small, and it was ... well, people have asked me to describe the Steamer *Mississippi* and I can do it with one word—hot!"

Approximately 200 people attended the christening ceremony highlighted by World War II fighter planes flying in tribute over the Memphis riverfront. Grugett proudly watched the christening ceremony and departure of the vessel that bears his name. —R.A.



Diner's delight is river chef's goal



"Nothing is better for a chef than to watch a customer close their eyes in rapture as they relish the spicy delight of a well-seasoned dish," says Chef Anthony Areh—Chef Tony to his devoted staff.

And that is exactly the kind of reaction he gets from the presidentially appointed Mississippi River Commission, the generals and the many guests he cooks for aboard the Motor Vessel *Mississippi* during bi-annual Mississippi River Commission (MRC) Inspection Trips.

When he's not whipping up West African-influenced Jamaican dishes for friends and family (jerk-goat is his specialty), Chef Tony enjoys treating his MRC guests to New Orleans-inspired recipes of pasta and seafood, steaks, pork chops and a wide assortment of creatively designed vegetable dishes.

Originally from Nigeria where his mother's family hails from, his Jamaican-born father influenced his cooking style, and he now specializes in jerk meats. "Jamaican jerk style is my favorite dish, and I like to use lots of curry and cumin to make it just right," Areh said.

Aboard the MV *Mississippi*, he said the small kitchen makes time management and organization vital to a successful meal. "We've got to cook for and serve 60 to 70 people and we've got to make sure that everyone gets served a hot meal, so we can't waste movement or time," Areh said.

The MV *Mississippi* Captain, Pete Ciaramitaro, sums up what his staff and crew think: "In my 35-plus years on the river I'd have to say he is one of the finest chefs I've ever known, and I think we hit the jackpot when he came to work for us." —R.A.



Best of Show, Randy Meade

PHOTO CONTEST WINNERS

Wildlife, recreation and the scenic landscape have always been the powerful draws to the many recreation areas and public lands within the U.S. Army Corps of Engineers Mississippi River Project. So it made sense that those would be the categories judged in the 22ND annual photo contest. These striking images were the category winners. The photo of the fur trapper coming off the river, named "Trapper Dick," won best of show. Judges liked the way the shot captured a bygone era on the Mississippi, said Ben DeRoo, a Corps park ranger and contest coordinator. For information on next year's contest, call the Thomson Ranger office at 815-259-3628.



First Place, Debbie Cram



Second Place, Bluebird



First Place, Roger Dorneden



Honorable Mention, Debbie Cram

MAKE IT WITH MUD!

OUR MISSISSIPPI KIDS



Make a Mississippi Mud painting

Try making your own mud painting like Frank Ross's raccoon painting, shown at left. Here is his mud-painting method.

YOU WILL NEED:

Small plastic tubs	Popsicle sticks or a palette knife
Mud in different colors	Spray polyurethane
Water	Elmer's Glue (optional)
Watercolor paper	
Brushes	

INSTRUCTIONS:

1. Collect variously colored muds in small plastic tubs. If you explore along the river, or even dig deeply enough in the same spot, you'll find subtle changes in mud tone.
2. Mix a bit of each color with water, thinning it enough to apply on heavy watercolor paper with a brush, a popsicle stick or palette knife.
3. When the painting is dry, spray it with polyurethane to keep it from smearing.
4. Painting may also be done with sandy soil, but you must first mix it with Elmer's Glue, or it won't stick to the paper.

Make a Mississippi Mud shirt

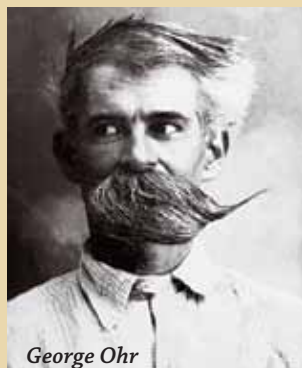
A favored activity at Corps recreation areas near the Mississippi River is the making of tie-dye style shirts out of river mud, a natural way to dye shirts. For your project, you may want to collect the mud on your visit and finish the project once home. Get permission if you're planning to do this project in your hotel room or rental cabin!

YOU WILL NEED:

White cotton T-shirt
Detergent
1 cup soda ash
1 gallon warm water
Light and dark soil
1 cup vinegar
clothesline

INSTRUCTIONS:

1. Wash the cotton shirt with detergent and dry it.
2. Pretreat the shirt with soda ash, which you can find at a pool supply store. Add 1 cup soda ash to 1 gallon warm water. Soak the shirt for one hour, then remove excess water by wringing out the shirt in the sink. Leave shirt as is for a more solid result, or tie into knots with rubber bands to create a tie-dye effect.
3. Gather your mud, using a mud hole outside or bringing dirt inside and placing it inside the sink. If making your own mud, add enough warm water to give the mud a thin consistency. You'll need one gallon of mud for each T-shirt.
4. Add 1 cup of vinegar to the mud, then submerge shirt in the mud/vinegar mixture. Let the shirt soak there for at least four hours.
5. Rinse the shirt with clear, cold water and hang on a clothesline to dry or dry in a hot dryer to help set the color. Repeat to darken the color, if desired.



George Ohr

Mad for Mud

River mud, in this case from the Tchoutacabouffa River near Biloxi, Miss., was the source of pottery clay for a young George Ohr, who'd later become known as the "Mad Potter of Biloxi." George was only 14 when he left for New Orleans to look for work. After trying 19 different jobs, a boyhood friend offered him a job as an apprentice potter in New Orleans. He relied on natural resources around Biloxi for supplies. He'd row up the river, dig the clay, and float it back down the river and then create his trademark thin-walled pots twisted into unusual positions. See his work at the Ohr-O'Keefe Museum of Art in Biloxi. GEORGEOHR.ORG

MY MISSISSIPPI

Frank Ross, 84, mud artist,
East Moline, Ill.



"I worked as an electrician for many years, on call 24 hours a day, trouble-shooting, and I was a nervous wreck until I could get home and do some sketching or painting, which would relax me so I could sleep. I've always loved art—I paint in every medium—and I even took my brushes and pencils with me when I was drafted to Korea.

"I retired in 1990 after I was in an accident that left brain damage. After the accident I had to study my art all over again, relearn my colors. Then I read in the *National Geographic* about Native Americans painting in a cave with mud. A friend asked me why I didn't try it, so I dug up some mud, and I was amazed!

"We live in an earth-sheltered underground house I built in the '70s when the energy situation was bad. We got mud on the roof. Across the creek, when digging in the hillside, I found different colors of clay, beige and tan and black. Then I remembered the coal mines in this area, and there I found more blacks and grays and some mud almost white. Within 50 miles of my home, I picked up all this mud! Not in the Mississippi itself—it's too sandy—but all around it, along tributaries.

"I dig everywhere. I'm always walking the rivers, seeing what I can find. I always ask first if I can take some mud, and I've never been refused.

"I've got buckets in my garage of 13 varieties and colors, including oranges and reds. My problem is, I never wrote down where I found my colors! And I have another problem: I do not have any blues or yellows. If I do a painting where I need a blue sky, I'll cheat with something else, but you know what they call that? Mixed media!

"I demonstrate my mud painting in schools and libraries, for the Army Corps of Engineers and for senior groups. I tell the seniors, 'Don't just sit around. Do something!' With the kids I use popsicle sticks, and mix a little water with the mud, and show them how to smear gobs of it on a picture, real thick. I'm amazed what the kids do, with nothing but earth from the ground."



Ski the Mississippi bluffs

WATCH OUT ASPEN. America's longest river boasts a perhaps surprising claim to fame—ski destination. For heartland downhillers, the river bluffs provide some of the region's best—and most scenic—skiing.

Four ski areas perch along craggy bluffs overlooking the wide Mississippi River Valley between Illinois and Minnesota. Chestnut Mountain, near Galena, Ill., and Sundown Mountain, west of Dubuque, Iowa, are the southernmost. Mt. La Crosse is in Wisconsin, and Coffee Mill in Minnesota.

The river bluffs provide vertical drops ranging from 420 to over 500 feet, decent for the Midwest. Because the bluffs are bent and folded, these ski areas are blessed with some of the most interesting and diverse ski terrain mid-continent.

Chestnut (PICTURED) offers the best river views, a 450-foot vertical drop, 19 runs, terrain park, nine lifts, and a hotel on top of the ridge. Sundown, located just down the road from Field of Dreams in Dyersville, Iowa, also has a 450-foot drop, 21 runs, terrain park and six lifts. Mt. La Crosse, a sprawl of knolls, chutes and headwalls, has a 512-foot drop, 19 trails and four lifts. Coffee Mill, located south of Red Wing, offers 420-foot vertical, 14 trails and three lifts.—M.T.

Take a trip on the River of Grapes



Since long before human settlement, wild grapes grew in abundance along the Mississippi River. The grape species known as *Vitis riparia*—translated to “river grape”—remains one of the most common grapes of the Upper Mississippi region.

Today, there are no fewer than 29 wineries along the Mississippi River from the Twin Cities down to Quincy, Ill. However, the river region's wine grapes have evolved a bit from the wild grapes that even Lewis and Clark might have snatched for a snack.

Plant scientists at the University of Minnesota and elsewhere have created new hybrid wine grapes by breeding native grapes with some of Europe's better-known wine grapes. These new cold-hardy wine grapes combine the cold tolerance and disease resistance of native grapes with the flavor and aroma characteristics of traditional varieties. The result is wines gaining increasing popularity in tasting rooms along and near the Great River Road and awards in regional and national competitions.

While site selection is key at this northern extreme of commercial grape growing, the Upper Mississippi River valley is a great spot for wine grapes, says Peter Hemstad, a University of Minnesota grape researcher, because of the south-facing slopes, good air movement and tempering effect of the large body of water.

John Marshall, a grape grower and winery owner in Lake City, Minn., agrees. His Great River Vineyard is less than a mile from Lake Pepin, the largest natural lake in the Mississippi River. The relatively warm water of Lake Pepin extends the growing season in Marshall's eight-acre vineyard by about 20 percent as compared to areas farther away from the river, he said.

For Dorothy O'Brien of Wide River Winery, the Mississippi—a full 2 ½ miles wide alongside her eight-acre Iowa vineyard—is key to extending the growing season.

The river carved out a scenic bluff on which the vineyard is perched 250 feet above the water. Since cold air is heavier than warm air, it sinks low and away from the vineyard. The resulting wines have been so well received that O'Brien

opened a new tasting room in LeClaire, Iowa, this summer, 18 miles downstream. Many of her customers enjoy the drive down the Great River Road and visit both tasting rooms in one day.

“Grapes are very susceptible to spring frosts after they bud,” notes Brad Nilles, owner of Seven Hawks Winery in Fountain City, Wis. “But the river never freezes, and the air moving across the water warms us by a few degrees in the spring.”

Various soil compositions also result in differences in wine character, making for an interesting and varied tasting experience. The soil in Wide River's Iowa vineyard is mainly loam—an easily draining mix of sand, gravel and topsoil deposited by the river thousands of years ago and tailor-made for growing wine grapes.

In contrast, the soil at Seven Hawks contains more limestone with shallow organic topsoil. This produces a “minerality” that can be tasted in white wines and lead to wines similar in taste, Nilles said, to French Chablis.

Take a tasting tour

Seven Hawks, the largest winery in Wisconsin, makes a good base for a Great River Road wine getaway, specifically from the five rental cottages on a steep, wooded hillside overlooking the Mississippi. Cottage guests are treated to free wine from Seven Hawks. Midweek guests also receive free tastings at three other top local wineries—Danzinger Vineyards in Alma, Wis., Elmaro Vineyards in Trempealeau, Wis., and Garvin Heights Winery in Winona, Minn.

To help tourists navigate the wineries along the River, the Great River Road Wine Trail was founded in 2009 by nine member wineries stretching over 200 miles from south of St. Paul to Marquette, Iowa. Marquette, home of Eagle's Landing Winery, is one of the most popular tourist towns on the Great River Road Wine Trail. Eagle's Landing is on bustling North Street with many shops, bars and restaurants, and a band usually plays on the patio come weekends.—M.G.

Guest writer Mark Ganchiff is editor of Midwest Wine Press.

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greatriverroadwinetrail.org

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Call to Action

Lt. Gen. Thomas Bostick, Chief of Engineers for the U.S. Army Corps of Engineers, used the change of command ceremony as a chance to emphasize a new "Call to Action" drafted by the Mississippi River Commission during its recent low water tour of the Mississippi River. He read a section he's also shared with the White House:

"Our nation's infrastructure—its ports and navigation locks, levees and dams, highways and bridges, railroads and tunnels—all suffer from prolonged under-investment, deferred maintenance and a failure to upgrade and modernize capacity to keep pace with global trends. Having built out the greatest transportation infrastructure in the world, and then benefiting from its consequences for decades, we became accustomed to its enormous benefits and allowed ourselves to be lulled into assuming this advantage would always endure. So while the rest of the world has forged ahead in building modern marvels of infrastructure capable of efficiently moving vast quantities of waterborne cargo in recent years, the United States has fallen increasingly behind due to its failure to continue its pattern of investment."

In the call for action, commissioners stressed the need for new means of funding water resource missions. —R.A.



When it comes to firewood, buy local—and save the ash forest

Leave your firewood at home, and buy what you need for a crackling bonfire at your final destination; by doing so, you can help prevent the spread of the emerald ash borer, an invasive pest that kills ash trees and has been found in several states bordering the Mississippi.

Firewood cannot legally be moved in many areas of Illinois, Iowa and Minnesota and other states due to an Emerald Ash Borer quarantine, and the U.S. Army Corps of Engineers recommends against the movement of firewood. It's also recommended that you leave behind any unused firewood rather than transporting it back home.

The emerald ash borer is native to eastern Asia and was detected in the United States near Detroit, Mich., in 2002. It kills all ash species by larval burrowing under the bark and eating the actively growing layers. Pest infestations have been found throughout many public lands, threatening the forest mix, even though many agencies are working on tree rescue strategies. —K.S.

FOR MORE
 emeraldash
 borer.info

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Please help us improve by taking our online survey. We particularly welcome your ideas on topics we might cover in the future. Please visit this link to share your thoughts:

<https://www.surveymonkey.com/s/OurMiss2013>

Scan here with your smartphone to go to the *Our Mississippi* website. Here, you can subscribe to our e-edition, read past editions and find river-related education materials.



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