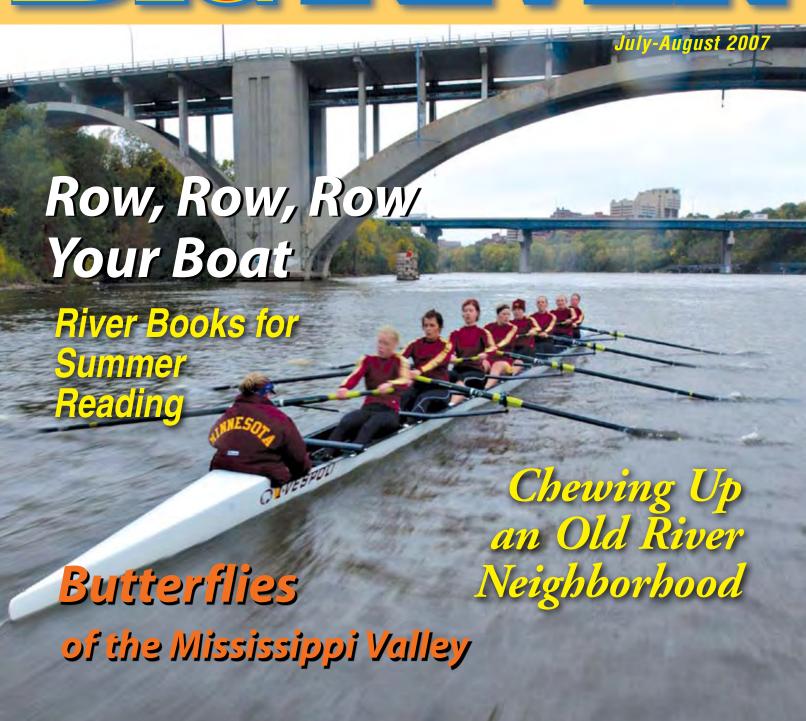
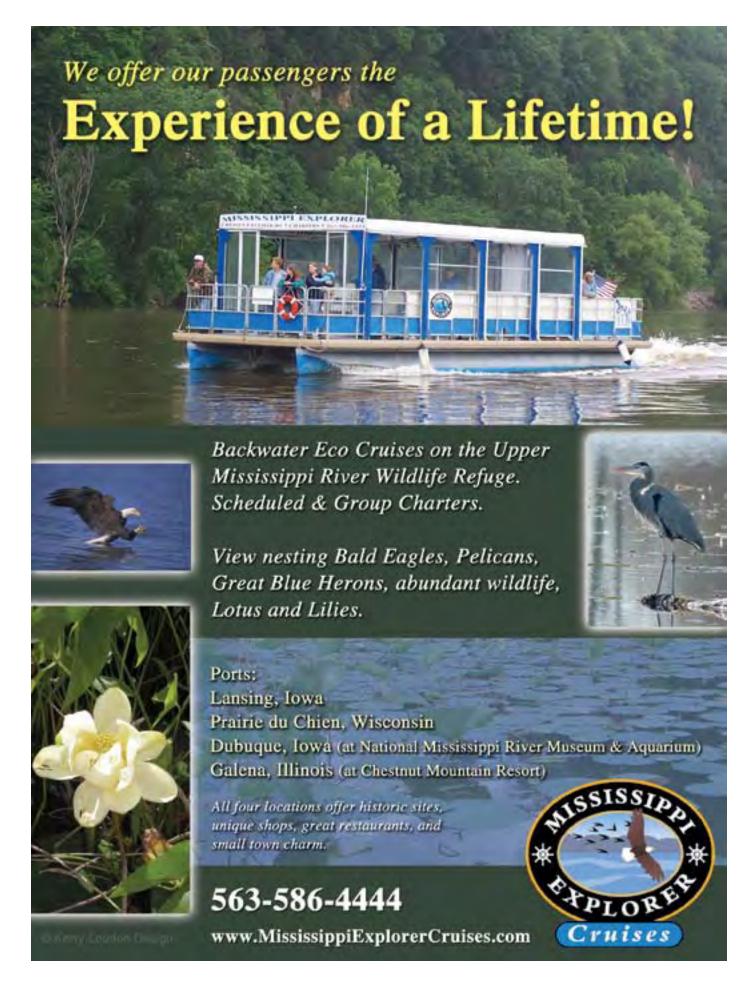
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July-August 2007

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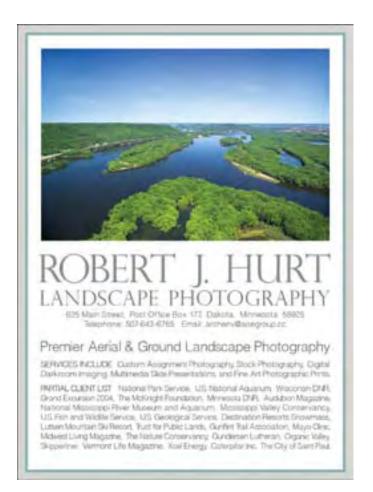
A hiking and mountain biking riverside sojourn through Midwest industrial history.

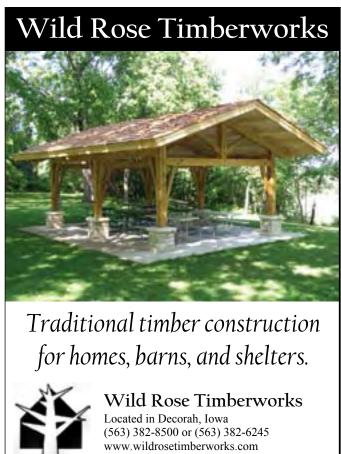
By Bill Jacobs

Right: Minnesota Boat Club scullers (Susanne Holderried); South Clinton resident Ed Broderick (Julie Johnson); monarch butterfly (Gary Rodock)

Cover: University of Minnesota rowing team practices on the river. (Eric Miller/University of Minnesota)











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From the Riverbank



CORN CRAZY — TRADING PROBLEMS OR SOLVING THEM?

Reggie McLeod Editor/Publisher

n a late spring drive through the rolling hills of southeast Minnesota and northeast Iowa, I was surprised to see how much land was planted in corn. Many hillsides that should have had contour strips of alfalfa to reduce the erosion were plowed and planted in corn. For the last couple of years, thanks to the ethanol boom, corn farmers are finally making some money. Current forecasts predict that corn acreage could increase as much as 15 percent this year over last year.

Problem is, growing more corn to make more ethanol creates more pollution — especially in the river — and will have little affect on our energy independence. If every bushel of corn grown in the United States were converted to ethanol, it would replace about 10 percent of the gasoline. Our taxes subsidize growing the corn and making the ethanol. Our taxes will pay to repair some of the damage, and the damage that is not repaired will deplete resources that we all depend on for our health and

Here's how it works: Planting the corn burns energy. Making the fertilizer and herbicides burns energy. Applying the fertilizer and herbicides burns energy. Harvesting the corn burns energy. Drying the corn burns energy. Shipping the corn burns energy. Cooking the corn and distilling the ethanol burns energy.

Most of the people who study this sort of thing agree that you get a bit more energy from burning the ethanol than you invest into growing the corn and making it. They also agree that making ethanol costs more than pumping oil and making gasoline, thus the subsidy. You are paying taxes to make the ethanol cheap enough for you to buy.

On the plus side, even with all the energy inputs that go into growing the corn and making the ethanol, less greenhouse gas is created by burning a gallon of ethanol than burning gasoline, according to most studies. And, the ethanol replaces harmful gasoline additives.

Most of the corn grown in the United States is grown on the Mississippi River watershed, especially in Illinois and Iowa. What happens to the nitrogen and phosphorus applied to fertilize the corn? What happens to the atrazine applied to keep the weeds out of the corn? What happens to the soil washed off the hillsides after hay strips are plowed under to grow more corn? Much of it washes into the river.

Algae fed by those fertilizers turns the river brown in the summer. That algae blocks the light that plants need to grow and to provide food for ducks and shelter for young fish.

(Riverbank continues on page 49)

Big RiverTM

Big River Magazine (ISSN 1070-8340) is published six times a year by Open River Press with assistance from Riverwise, Inc., 70 1/2 E. Fourth St., PO Box 204, Winona, MN 55987; (507) 454-5949; fax: (507) 454-2133; email: editors@big-river.com; website: www.big-river.com

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Subscriptions are \$27 for one year, \$49 for two years or \$4.95 per single issue. Send subscriptions, single-copy orders and change-of-address requests to Big River, PO Box 204, Winona, MN 55987

Second-class postage paid at Winona, MN.

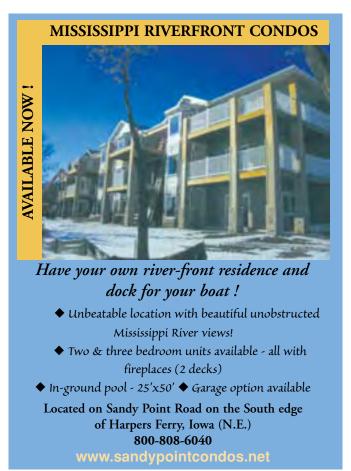
POSTMASTER: send change-of-address requests to Big River, PO Box 204, Winona, MN

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Printed by W&C Printing, Winona, Minn.

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Family Drowns

Dresbach, Minn. — On May 12, a boat sank suddenly just below Lock and Dam 7, drowning all four occupants. Nearby boaters were unable to help.

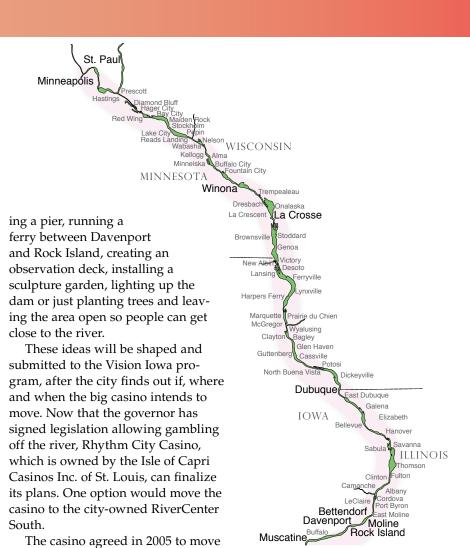
The family, Cha Yang, his fiance See Her and her two children Amanda Xiong and Joshua Xiong, were former residents who had returned to visit and borrowed a fishing boat for the day. After an afternoon of fishing they pulled up the anchor and tried to start the motor. When the motor didn't start, turbulent currents sucked the boat up against the dam wall. Two nearby boaters came to their aid, but the boat capsized and sank abruptly.

After a massive search involving many agencies and volunteers, three of the four were found. As of early June, the body of the fourth was still missing. The search will continue throughout the summer, if needed, said Winona County Sheriff Dave Brand.

The accident took place in an area called "the drowning machine" in a Minnesota Department of Natural Resources brochure. Water that flows over dams creates a churning "vertical whirlpool" that can pull people and boats under and hold them there indefinitely. Signs are posted at all Mississippi River dams, warning people to stay at least 150 feet away from this area, but the choppy waters attract fish and thus fishermen. (Winona Daily News, 5-15-07)

Visions for Riverfront Park

Davenport, Iowa — When the Rhythm City Casino boat checks out of this city's riverfront, what should move in to LeClaire Park? Business owners, city staff, kids, tourism promoters, river advocacy organizations, city council members and other citizens contributed ideas and input at dozens of community meetings this spring. Ideas include erecting a Ferris wheel near the water's edge, build-



The casino agreed in 2005 to move upstream and build a hotel and parking ramp at a cost of \$43.1 million.

The city submitted a \$13.8 million grant request for park improvements to the Vision Iowa board in late 2005. That grant request has been on hold, but will be continued when all the pieces fall into place. Vision Iowa is administered by the Iowa Department of Economic Development and funds "construction of recreational, cultural, educational or entertainment facilities that enhance the quality of life in Iowa," according to its website.

Gambling Profits Down

Quad Cities — Citing declining revenues, the Riverboat Development Authority (RDA), the nonprofit group that holds the license for the Rhythm City Casino in Davenport, will not give new grants this fall. Instead, it will make good on its commitments to past multi-year projects. The RDA gets 4.3 percent of Rhythm City's

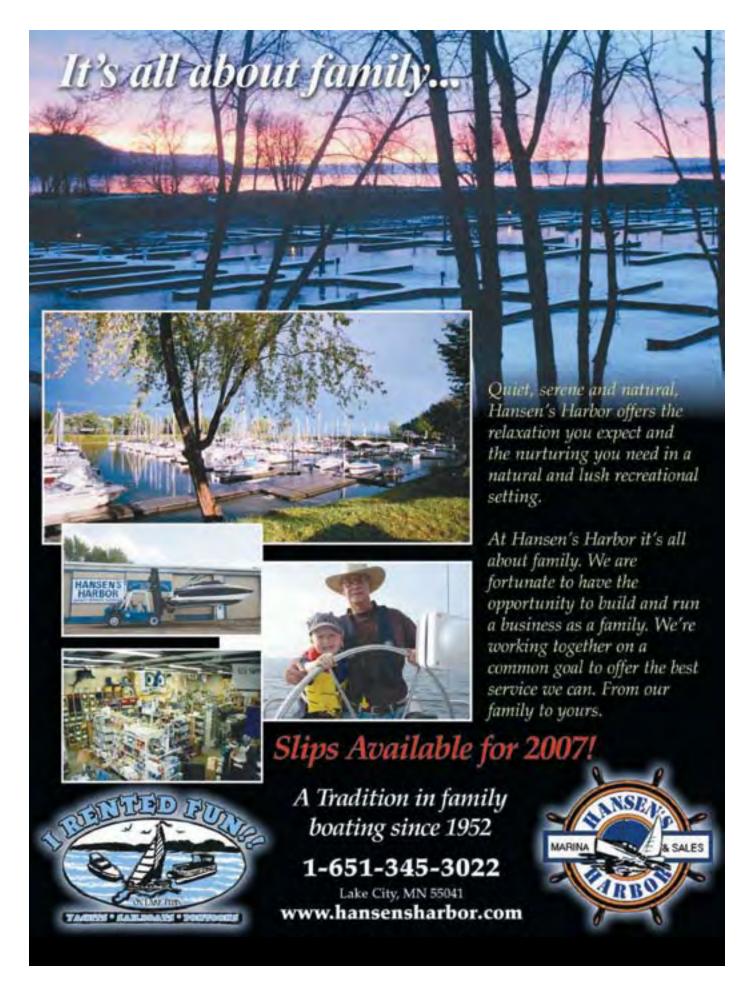
revenues. As of May, its share was \$799,000, down \$300,000 from last year. Rhythm City's adjusted gross revenue fell from \$6.5 million in April 2006 to \$5.08 million in April 2007.

It wasn't the only gambling operation in the area to report declining revenues. *Isle of Capri-Bettendorf* reported adjusted gross revenues of \$7.57 million in April, down from \$8 million in the same month last year.

The City of Rock Island received \$830,000 from Casino Rock Island in March this year, down from more than \$900,000 in March 2006, according to the Illinois Gaming Board. (Quad-Cities Online, 5-18-07)

Saving Sacred Sites

Milwaukee — An organization called Earth Keepers Voices of Native America (EKVNA) sent runners up the Mississippi River again this summer, in a



continuing effort to draw attention to the history of indigenous people and gain public support for protecting sacred sites.

The program, called Sacred Sites Run, recruits youth from dozens of tribes to run or walk between mounds, graves and historical sites.

"Our purpose is to acknowledge the place and honor the people who have passed through there," said founder Ben Yahola. "Honoring the place and honoring the people is a humble thing. We offer a pinch of tobacco and work to educate people and make people more sensitive. It's painful to see what looters have done in some places."

The Sacred Sites Run began this year at Poverty Point at Marksville, La., on the vernal equinox, March 21, and passed through Cahokia, Toolesboro Mound and Lizard Mound on its way to a scheduled sunrise gathering at Effigy Mounds National Monument on the summer solstice, June 21. Runners will be in the Twin Cities for several days of events, including a "Sacred Sites Tour Through Indigenous Eyes," on July 7. This tour of sacred sites in Hennepin and Ramsey counties begins at 9 a.m. at the Mdewakanton Community Center, 1324 Sibley Memorial Highway in Mendota. Leaving the Twin Cities, runners will move up the Mississippi to Hassman, Minn., near the headwaters, and then proceed to the Fond du Lac Reservation in Wisconsin on the first weekend in August. They plan to end their 2007 run at the Indian Summer Festival in Milwaukee on Sept. 21.

Ben Yahola of Milwaukee said this is the second year of a five-year project.

Testing Wetlands

Iowa City, Iowa — Iowa's Wetland Monitoring Project, undertaken by the Iowa Department of Natural Resources with a \$250,000 grant from the U.S. Environmental Protection Agency, may become an ongoing effort to monitor wetlands throughout

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the state. The project has sampled wetlands in the prairie pothole region in the center of the state since 2005. Many of the wetlands sit at the headwaters of Mississippi River tributar-

The final report will be released in November 2007, although early news about the findings caused a stir. According to the *Pileated Drummings* newsletter of the Dubuque Audubon Society, pesticides, herbicides and other chemical contaminants were found in 97 percent of the wetlands tested.

Researchers at the University Hygienic Lab, which contracted to do the monitoring, and at the DNR confirmed the 97 percent number, but were not surprised at the presence of the contaminants. "Measurable" amounts may or may not be damaging.

"We need to know at what point they become detrimental to aquatic life. For example, is a slurry of small amounts of different chemicals worse than a bigger amount of a single element? We want to tease this out of the data," said Vince Evelsizer, project leader for the DNR.

Evelsizer said the study represented a major step forward, and that plans are underway to create an ongoing wetland monitoring program.

Big Art Birds

Winona, Minn. — Fifteen sevenfoot-tall great blue herons took up residence in Winona this spring. They guard the city's farmers' market and YMCA, play doorman at a college theater and the city's visitor center, and watch over local businesses and intersections. They're everywhere, except near the river, where you'd find real, live great blue herons.

Winona's herons are fiberglass sculptures, cast from an original by Winona sculptor Lynette Power, and individually decorated by local artists. There's a fruit-and-vegetable heron, an Elvis Presley heron and a heron adorned with textured material from the river. There's even a protest heron, painted white with red eyes and surrounded by a cage, intended to communicate the artist's distress



There's always something new to discover in Winona.

Upcoming Events

July 7 University on the River July 13 Delta Queen Steamboat July 14 Jazz in the Park July 19-21 **Huck Finn Days**

Check our website for information on the Great River Shakespeare Festival, Gilmore Creek Summer Theatre, Beethoven Festival, Mississippi Explorations: University on the River, Farmers' Market, Cruise Nights, and Band Concerts at Lake Park.

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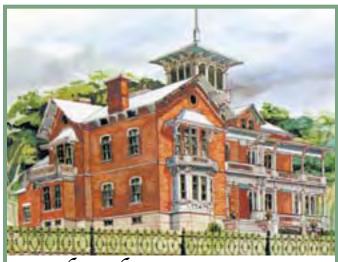
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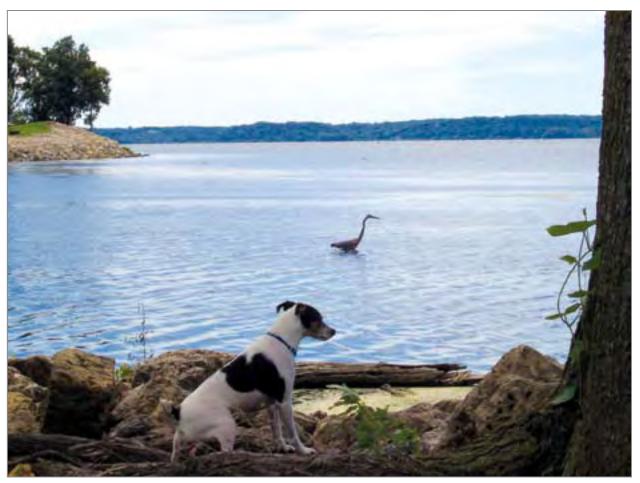
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Photo Contest Winner



This photograph by Ron and Deb Edfors of Clinton, Iowa, shows their dog Boots imitating a heron at the Thomson Causeway campground, Thomson, Ill.

Send entries for the September-October issue contest to Big River by July 19. If we select your photo to print in these pages, we'll send you three free copies of the magazine. The contest is open to amateurs, professionals, adults and kids. Email a digital JPEG (.jpg) photo file — high-resolution photos only, please — to photos@bigriver.com. Write "PHOTO CONTEST" in the subject line.

Or send a print to Photo Editor, Big River, PO Box 204, Winona, MN 55987. (We cannot return photographs, though.)

Include your name, address, phone number and a short description of the photograph — who or what it is, when and where it was taken, etc.

over some of the project's rules.

The project originated as a way to promote the town, promote the arts and entertain visitors and tourists. Along the way it involved dozens of business sponsors, two universities, one college and many individuals. That didn't stop some critics, who carped that herons are common sights along the river, so who needs more?

The birds have become part of the urban habitat. People have strong opinions about their favorites. Kids dressed up for prom had their photos taken with the big birds.

The herons will be auctioned off in

October, with proceeds going to support local arts.

Wapsi Water Trail

Princeton, Iowa — Soon, paddlers can follow a new, marked water trail down 55 miles of the Wapsipinicon River ("Wapsi" for short) and out into the Upper Mississippi River National Wildlife and Fish Refuge. The trail stretches from Massilon Park, in Cedar County, to the confluence with the Mississippi and then upstream to the Rock Creek marina and campground, just below Camanche. Clinton, Cedar and Scott counties are cooperating on the project.

"Along the way, canoeists and kayakers will find more than 100 public, sandy beaches and 12 public parks and recreation areas," said project leader Chuck Jacobsen of the Clinton County Conservation Board.

The U.S. Fish and Wildlife Service has already contributed money and support for an additional 10.5-mile loop from the marina out through the backwaters.

The project won approval and a \$9,512 grant this spring from the Iowa Department of Natural Resources. More funds will be raised from paddling groups, conservation groups, tribes or tribal governments, and





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other nonprofit or governmental agencies. Jacobsen said he was also looking for help from scouting and church groups to install the landings and do other work to get ready and maintain the trail.

On slate this year is the development of three step-down landings at the ends of dead-end roads that once led to bridges: one in the Buena Vista area, another at Muhl Bridge (no longer a bridge), and the third at Mason Creek.

"Next year we'll build three more landings," Jacobsen said.

The name Wapsipinicon comes from an Ojibwa word for "river abundant in swan-potatoes," because of the abundance of arrowhead plants on its banks.

Collecting River Stories

Twin Cities — University of Minnesota researchers will begin collecting the social history of the river in the Twin Cities, with a \$45,000 grant from the National Endowment for the Humanities. Researchers will fan out into several neighborhoods that border the river, to interview people, collect stories, investigate local archives, read diaries and explore the geography of local places. They hope to learn about people's longtime interaction with the river, as a place to play, earn a living or catch a meal, or as a place of risk and danger. They will also explore how diverse communities regarded the river differently.

The Telling River Stories collaborative is a group of community partners, 14 university scholars and 16 local historians, led by project director Patrick Nunnally. Eventually the group will share the stories through a variety of high-tech and low-tech media, including kiosks and pod-casts and tours relying on GPS (Global Positioning System) technology.

Floaters in Pool 8

Watch for "foreign objects" floating in Pool 8 (Genoa, Wis., to Dresbach, Minn.) this summer. That's the word from the folks at the U.S. Geological Service. They don't mean flying saucers or Russian samovars, but eight monitoring stations that will collect





Pool 8 monitoring equipment includes round yellow buoys near the Main Channel that measure dissolved oxygen (top), and dock platforms in backwater areas that measure oxygen, water clarity, wind, light and water depth. (courtesy of U.S. Geological Service)

data about water quality in the river throughout the summer and fall.

The monitoring stations will measure water clarity, river stage, weather conditions, and the concentration of nitrogen and phosphorus and how these affect dissolved oxygen levels in the river. They'll be positioned in backwater areas and adjacent to the Main Channel, and marked with reflective tape and flashing lights.

Pool 8 was chosen for the study primarily because a lot of information has already been amassed through the Long Term Resource Monitoring Program. It's also easy to get to from the project office.

New Fleeting Company

Muscatine, Iowa — A new fleeting facility is loading, unloading and parking river barges in the Linwood, Buffalo and Muscatine area this year. Upper Mississippi Fleeting will employ from 20 to 30 employees and run four towboats to provide a variety of services for river shippers.

The company started in cooperation with Newt Marine, which had more boats than it needed after Artco Fleeting Services moved into the Dubuque area last year. Artco is a division of Archer Daniels Midland.

That Sinking Feeling

Montreal — After many years of research and computer modeling, scientists at the University of Quebec-Montreal have concluded that earthquakes centered on the New Madrid fault, which underlies the central Mississippi River Valley, are caused by the steady downward drift of an ancient, giant slab of rock 360 miles beneath the surface of the earth.

The "Farallon slab" began its dive from 70 to 100 million years ago near the West Coast of North America. Forty million years ago, it caused giant earthquakes and volcanoes in what is now the New Mexico area. Now under the Mississippi River Valley, it tugs at the surface and pulls the crust down, causing "seismic ruptures" in it.

The last really big earthquakes, in the winter of 1811 and 1812, measured 8.0 on the Richter scale and caused the Mississippi to flow backward briefly. The New Madrid fault is still active, however, and about 200 small earthquakes are recorded in the region every year. Two earthquakes of 4.0 and 4.1 were noted in 2005. According to the U.S. Geological Survey, a quake of magnitude 6 or 7 is likely to occur within the next 50 vears.

On the Richter scale, quakes measuring 6.0 or less cause slight damage to well-designed buildings and major damage to poorly-constructed ones. A tremor of 7 is regarded as major, causing severe damage.

The research by Allessandro Forte and his colleagues was recently published in Geophysical Research Letters, a publication of the American Geophysical Union.

(LiveScience, 5-2-07, New Mexico Bureau of Geology and Mineral Resources website)

Fish-Killing Virus

Chicago — A mutated, invasive virus of undetermined origin is rapidly spreading west out of the eastern Great Lakes. The virus, called viral hemorrhagic septicemia (VHS), causes bleeding and organ failure in fish. It is not harmful to humans who eat infected fish.

VHS was first discovered in the Great Lakes two years ago in just two species of fish in a limited area. Its presence has recently been confirmed in lakes Huron, Ontario, Erie and St. Clair, and the St. Lawrence and Niagara rivers. Those who study the potential impact of the highly aggressive virus expect it to cause great damage for at least five years, until local species of fish have a chance to develop resistance. It has already been blamed for the deaths of tens of thousands of fish in the eastern Great Lakes.

Scientists aren't sure how the virus got to the Great Lakes, but suspect that it may have hitched a ride in the ballast water of a ship or pleasure

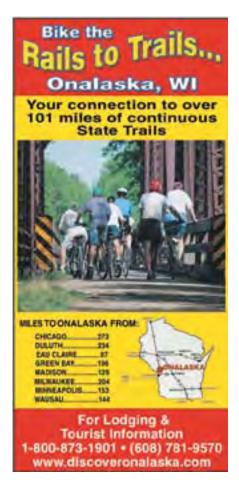
Sturgeon Look-alikes

Bettendorf, Iowa — The demand for caviar has not taken a big bite out of the Mississippi's population of pallid sturgeon, so far, but researchers worry about the species' future.

In fact, some members of the Mississippi Interstate Cooperative Resource Associates (MICRA), a consortium of state and federal agencies, hope that border states will ban commercial fishing of shovelnose sturgeon, along with the already-protected pallid sturgeon. The two species look so much alike that even biologists have a tough time telling them apart. In addition, the two species have hybridized, making distinctions almost impossible to detect, according to Jan Dean, assistant manager of the Natchitoches National Fish Hatchery in Natchitoches, La.

After the break-up of the Soviet Union, regulation of commercial fishing in the Caspian Sea slacked off, and the world's best source for premium beluga sturgeon caviar was over-fished. After the United States lowered the limits on the amount of beluga caviar that could be imported, customers turned to other sources for the tasty, black fish eggs. The shovelnose and pallid sturgeon are two of a few suitable alternatives.

Scientists estimate that fewer than 10,000 pallid sturgeon survive in the Mississippi, Missouri and Yellowstone rivers. The shovelnose is rea-





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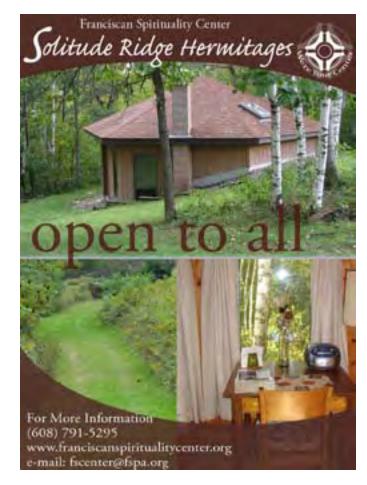
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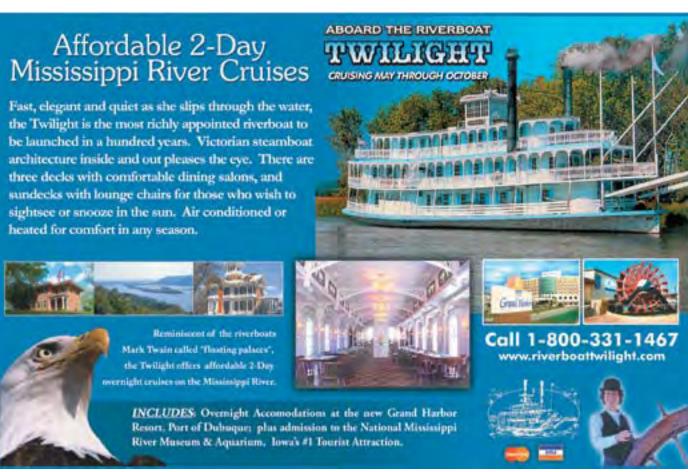




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sonably abundant, especially in the Lower Mississippi, but fishermen can mistakenly — or not-so-mistakenly — take pallid sturgeon instead. Scientists have noted that the populations of both species of sturgeon have apparently kept up with the harvest. "After 10 years of looking at our data, we believe the size distribution of the two species is very stable," Dean said. However, no one has tracked the actual number of fish, and no one is sure how the population will be affected over the long run.

At a MICRA meeting in late May, the Paddlefish/Sturgeon Subcommittee petitioned the U.S. Fish and Wildlife Service to list the shovelnose as a threatened species under its "similarity of appearance" guideline, but not all the states agreed, according to committee chairman George Scholten. Tennessee, Kentucky, Illinois, and Missouri still allow commercial fishermen to harvest the shovelnose, but Tennessee is poised to close its fishing. Now Scholten hopes the group can get the other states to accept regulations that will help protect the sturgeon.

In anticipation of increased pressure farther north, Minnesota banned fishing of the sturgeon. Iowa set a 27inch minimum, so that females have a chance to spawn at least once and probably twice.

Serial Paddlewheelers

Freeport, Ill. — Some guys just can't stop building boats. Take Ike Hastings, for instance. This summer Hastings, who is in his early 80s, expects to be tooling around the Mississippi River on his latest boat, a paddlewheeler called the *Pickett Hastings*. It's not quite done yet, he said, but he will put the finishing touches on the boat as he travels.

Hastings made plans for the boat in 2003, after selling the Lilly Belle, a paddlewheeler he built decades ago. Among its features was a big deck that doubled as a front yard. He lived aboard the Lilly Belle for many years, traveling the Upper Mississippi and Ohio rivers with a gray parrot for company and plenty of curious visitors at every port. His new boat measures about 100 feet long,



Ike Hastings is taking his new paddlewheeler on the river this summer. (Brian Day)

has an aluminum hull, a 40-foot front deck, a working paddlewheel and a smokestack.

"It will have a big boom, so you can load things on and off," he said. Such as? "Cars, planes and hot- and cold-running blonds."

Hastings named the boat after his great grandfather, a Civil War soldier who, he said, was court-martialed for swearing at some officers. "I figured someone ought to build a boat for him." Pickett Hastings later was exonerated.

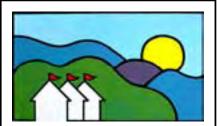
Universal Studios might borrow the boat for the filming of a movie, according to Hastings, but he will never sell it. He already has willed it to his children.

Meanwhile, Audubon Minnesota, a state office for the National Audubon Society, has put Hastings' previous boat, the Lilly Belle, up for sale. Executive director Mark Peterson said the organization needs more money for policy support and conservation measures. Used for educational programs and distinctive for the barn-red main deck, the paddlewheeler has a price tag of \$75,000.

Wireless Bluebills

Hunters and biologists both wonder what's happening to the little duck called the scaup, more poetically called the bluebill. It's been on the decline since the late 1970s, and last year its numbers sank to an all-time low.

All the usual culprits have been investigated: contamination, habitat changes and climate change. Suspicion has now focussed on another possibility: The birds are arriving on their nesting grounds in poor physi-



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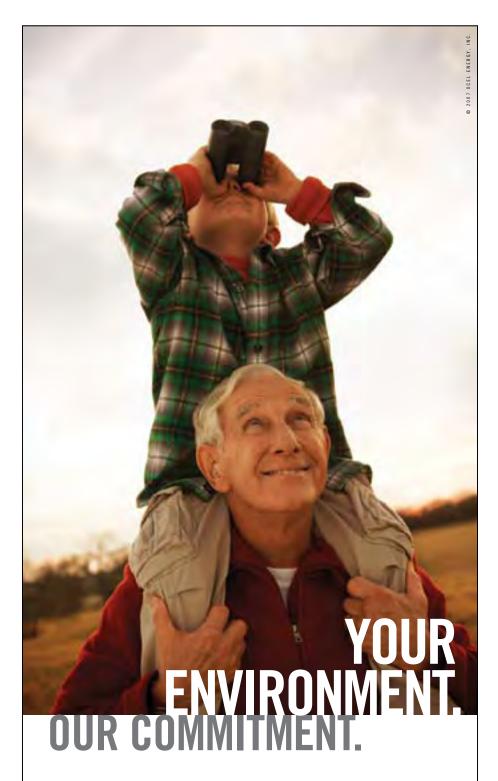
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cal condition because they don't get enough of the right food to eat on their long migration. Their success in mating, nesting and raising young in the far North depends on getting off to a good, fast start.

Researchers gathered in Keokuk, Iowa, this spring to start a new study on Pool 19 — the pool that hosts more diving ducks than any other place in the nation. They surgically implanted 17 female scaup with satellite transmitters that will broadcast information about the birds' location each day. They want to discover what route the birds follow across the prairies of Canada to the boreal forests of Manitoba, where they spend the summer. The transmitters should broadcast for two years.

"Understanding how the birds migrate in the spring and what habitats they are using are the key to understanding if poor food conditions may be contributing to their decline," said Jeff Lawrence of the Minnesota Department of Natural Resources.

To follow the ducks online, learn more about scaup and the study, and even listen to the birds' call, go to the Ducks Unlimited website and search for "scaup study."

New Snail Likes Rip Rap

Thomson, Ill. — An exotic species of snail, known as the faucet snail, appears to be expanding its range in the Upper Mississippi.

During the spring of 2002, biologists began finding a large number of dead coots, lesser scaup, and ringneck ducks on Lake Onalaska and along the Main Channel of the Mississippi in Pool 8 below Dresbach, Minn. They discovered that the birds were eating faucet snails, many of which host deadly parasites known as trematodes. Birds feeding on a population of badly infected snails can swallow a fatal dose in 24 hours, according to the U.S. Fish and Wildlife Service Division of Environmental Quality.

"We found faucet snails for the first time here at Pool 13 last year," said Ed Britton, manager of the Savanna District of the Upper Mississippi Wildlife Refuge. As of early June, he and his staff have not found any dead birds containing the parasite, but they are scheduled to begin an intensive survey June 15.

Britton said faucet snails make their homes in rip-rap rock along the river's banks. As people place more and more rock along the riverbanks to prevent erosion, they create more habitat for the exotic species. That will make controlling the snails a challenge, Britton said.

Fortunately, bald eagles and other scavengers do not seem to get sick from eating the carcasses of trematode-infected water birds.

Save Half a Bridge?

Inver Grove Heights, Minn. — An abandoned swing bridge across the Mississippi River could get new life. The 1,661-foot-long, two-level span closed to trains in 1980 and to autos in 1999.

Washington County, Minn., may remove the 471-foot eastern thrust as early as 2008.

On the other side of the river, Dakota County, Minn., is considering a project to preserve and restore the 112-year-old span as a fishing pier and historic site. The old bridge provides extraordinary access to the Mississippi and an impressive view, said John Mertens, Dakota County senior planner. "You're right in the middle of the river."

Inver Grove Heights plans a 60acre park at the bridge head. The Mississippi River Trail for pedestrians and bicycles passes nearby. Marinas with slips for hundreds of pleasure boats are nearby.

For now, however, the bridge is hard to reach. The riverfront includes an abandoned rail yard with contaminated soil. The city is also in the process of acquiring about 10 homes in the flood plain near the site.

Out-and-out demolition of the old bridge would be cheaper than restoration — \$5.2 million to remove vs. up to \$6.1 million to restore four sections extending a total of 750 feet into the Mississippi.

"It's only \$900,000," said Mertens.



Half of this abandoned swing bridge could be made into a fishing pier extending from Inver Grove Heights, Minn. (Dakota County)

Bridge Support Withdrawn

St. Paul — Faced with a prospect of building a new bridge across the Mississippi, a few dedicated trail backers have withdrawn their support.

The proposed new bridge would connect St. Paul with Minneapolis' \$25 million Midtown Greenway trail, which now links the Mississippi with several of the city's lakes. Hennepin County, in which Minneapolis is located, has raised about \$7.5 million for the \$12 million new bridge, reported the Star Tribune on May 22.

"A new bridge would have all sorts of negative environmental and scenic consequences," said Whitney Clark, executive director of Friends of the Mississippi River. "We're opposed to a new bridge — absolutely opposed to it."

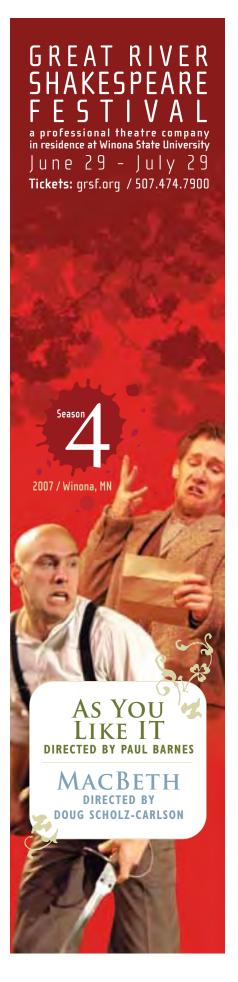
Clark said he can't think of another instance in which the St. Paul-based pro-river organization has opposed a river trail extension. A bridge, however, is "the largest scenic disruption you can have," Clark claimed.

He would support a trail connection across the river, if it crossed by way of an existing rail bridge that would be converted for bikes and pedestrians.

Trail planners are concerned about long-term use of the existing rail bridge, which is more than 125 years old. Trains still use it to reach grain elevators in Minneapolis, but other uses are prohibited.

Bikers, pedestrians and motor vehicles currently use existing spans within a mile of the rail bridge, one upstream and one downstream.

(Big River News continues on page 20)



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A Contentious Spur

New Rail Spur Might Remove Trees and Block River Access in Lansing, Iowa

By Pamela Eyden

Lansing, Iowa — The Iowa, Chicago & Eastern Railroad (IC&E) wants to build a new rail spur and coal unloader at Alliant Energy Corp.'s Lansing power plant. To do so, it must find a way to squeeze between the bluffs, the plant, the river and the existing rail line. Alliant and IC&E find the project an attractive business opportunity. Residents and the Allamakee County Board of Supervisors are concerned that the new construction might squeeze out eagles and peregrine falcons that nest in the area, and block some residents' access to

In early June, the county board tabled Alliant's request to vacate a county road and asked for a public hearing and an environmental impact study.

"This all started after Alliant asked the county board to vacate a small county road that crosses the tracks into the power plant. The railroad needs it to build the new line. People now use it for access to the dumpster site [where they take their trash]. After a public meeting in May, we asked for an environmental impact study of the proposal," said Kathy Campbell, county board supervisor. "We are worried that it will disturb nesting bald eagles and peregrine falcons."

The board asked three agencies to do an environmental study: the Army Corps of Engineers; the Iowa Department of Natural Resources; and the U.S. Fish and Wildlife Service. The study comes under the auspices of the Corps, because the plan calls for filling a quarter acre of wetlands, said Jon Klingman, Corps project manager.

Public notice will be posted soon. People will have 30 days to respond. "It's usually a 90- to 120-day process, but this one will be controversial," Klingman predicted.

Of particular concern are 28 oldgrowth maple and cottonwood trees that would be cut down under the railroad's current plan. The trees are favored by bald eagles that fish in the river. Sometimes hundreds of eagles can be seen foraging there, according to resident John Verdon, president of the Friends of Pool 9.

"If they cut down the 28 trees, the remaining trees are within a whisker of the tracks," Verdon said. "The

"We feel we're being asked to sacrifice the environment and our river way of life. We could live with two or three coal trains per week, but not with the loss of the eagles."

noise, motion and coal dust would jeopardize the site for eagles."

Verdon listed several other concerns — including increased noise, rail traffic and coal dust — for eagles and residents of about 100 homes along the river between Lansing and the power plant. Some residents are likely to lose their traditional access to the river. Verdon also suspected that access to the Allamakee County Conservation Park, "the most popular and widely used park in the county," would also be closed if double tracks are built.

There is also a rumor in town that this rail expansion would pave the way for a future barge transloading facility. Such a facility was part of a 2002 plan, Verdon said.

"We feel we're being asked to sacrifice the environment and our river way of life. We could live with two or three coal trains per week, but not with the loss of the eagles."

Alliant's 338.5-megawatt power plant burns one million tons of coal delivered by 700 barges annually. It wants to be able to accept coal by rail, as well, according to Alliant spokeswoman Carmen Wilhelm.

"There is no planned expansion in the generating capacity of the plant. We are exploring adding a spur so that we can reduce costs and be more flexible in our inventory. With the river frozen in the winter, we now have to stockpile large amounts of coal," said Wilhelm.

At a public meeting in early May that drew 250 people, concerned Lansing residents submitted a counterproposal that would allow the spur to be built without cutting down trees. As of June, they had not heard whether this plan is being considered.

Coal now comes to Alliant's Lansing plant from the Wyoming Powder River Basin by way of the Burlington Northern Santa Fe rail line to Keokuk, Iowa. In Keokuk, the coal is loaded onto barges and shipped upriver.

According to an article in the online business news site SNL, John Brooks, IC&E vice president of marketing, said that IC&E is currently pursuing similar projects at other power plants along the river, all of which depend on barge deliveries. Alliant would guarantee IC&E the business for long enough to pay for the new rail spur and unloader. After that, the railroad would have to compete with barge shipping companies.

IC&E Railroad is affiliated with DM&E Railroad, both of which operate under Cedar American Holdings. Cedar American and IC&E did not respond to requests for information for this story.

(Waukon Standard, 5-4-07; SNL, 5-11-07)

(Big River News continued from page 17)









Simmering Invasives

Chicago — A Chicago utility wants to keep discharging hot water into Chicago rivers to cool power plants — which, it says, will prevent invasive species from passing between the Great Lakes and the Mississippi River.

Midwest Generation Inc., facing \$800 million in equipment upgrades to clean up Chicago-area rivers, proposed a plan to keep waterways too hot for fish, reported the Chicago Tribune on May 8.

The utility's four aging, coal-fired plants use water from the Chicago and Lower Des Plaines rivers for cooling, then flush water at temperatures of 100 degrees or more back into the streams.

The Chicago Ship and Sanitary Canal connecting Lake Michigan with the Mississippi has been a prime route for invasive species moving is both directions. The upside of their plan, claimed the utility, is that invasives such as bighead carp wouldn't make it through the bathwater-hot stream.

Reception to the idea has been, well, cool. "I was appalled and frustrated that in 2007 a major corporation would propose such a ludicrous option," said Dale Bryson, chairman of Alliance for the Great Lakes. "It's laughable. I wouldn't even grace it by calling it innovative. I call it self-serving promotion."

So what's the alternative plan for preventing invasives passing between the Mississippi and the Great Lakes? Er, there's the rub. "That's an excellent question," Bryson conceded.

An electronic barrier upgrade on the canal connecting Lake Michigan with the Mississippi River has been delayed, though a smaller barrier is functional.

More Hydropower

St. Paul — When Ford Motor Company closes its truck factory at the end of 2008, its power turbines on the banks of the Mississippi River will keep right on spinning.

The hydropower plant, at Lock and Dam 1 in St. Paul, was purchased by a Canadian firm that will keep the

plant up and running. The dam has supplied the Ford factory with power for 82 years, and is capable of generating 18 megawatts. Some city officials and plant workers pitched to see the power plant sold along with the manufacturing facility. Instead, Brookfield agreed to sell 5 megawatts of power, about 28 percent of its capacity, back to new owners of the factory, which had not been sold as of June.

Just upstream from the Ford plant, SAF Hydroelectric LLC, which is majority-owned by Brookfield, is building a new hydropower plant on the Lower St. Anthony Falls dam. This 10-megawatt plant is scheduled to start operating by 2008.

Brookfield operates 140 hydro power plants on 50 rivers in North and South America. (Minneapolis Star Tribune, 5-31-07, *Mpls/St. Paul Business Journal*, 6-1-07)

Steamboats Online

La Crosse, Wis. — Murphy Library at the University of Wisconsin-La Crosse announced a partnership in June with U.W. Digital Collections to scan its collection of 51,000 historic photographs of steamboats and other river scenes. The project, which will make the collection available to internet searches, will take about four years.

The collection was put together from the 1970s to 2005 from private collectors all over the country, who agreed to loan the originals to the library long enough for copies to be made.

Many of the photos were collected by library volunteer Ralph DuPae, who traveled the country searching for them.

Endangered Iowa River

Washington, D.C. — The environmental watchdog organization American Rivers named the Iowa River to its 2007 list of "Most Endangered Rivers."

The river, which runs 300 miles from the north central part of the state to the Mississippi a few miles below Muscatine, Iowa, hosts a diverse fish population and is popular with both recreational and commercial fishermen. Due to lax regulation and permitting processes, the

river and its wildlife are damaged by hog farm manure spills, agricultural runoff and raw sewage from the city of Cedar Rapids.

According to American Rivers, "Iowa trails far behind the rest of the country in implementing and enforcing the federal Clean Water Act."

Save the Delta

New Orleans, La. — The Louisiana legislature is considering a new \$50billion project to reshape the Mississippi River delta, so floodwaters escape more quickly and less land is lost to erosion. Due to its soft and sinking soil, Louisiana loses about 24 square miles of land per year, most of it along coastal areas, because the leveed river no longer brings sediment to build them up.

The project is one of many that arose after hurricanes Katrina and Rita, but it addresses old problems.

"This will be one of the great engineering challenges of the *21st century — on the order* of the Channel Tunnel or the Three Gorges Dam."

It calls for letting the river loose at more than a dozen places, creating seven new, smaller channels to the sea. Three would carry sediment into the coastal areas, which have been eroding rapidly. Another part of the plan would pump sediment from some areas and send it through pipelines to rebuild marshes and islands along the coast. The plan also calls for hundreds of miles of new and reconstructed levees to protect local people from floods.

According to the Washington Post (5-1-07), the plan has evoked much support and no real opposition, although fishermen and the oceangoing shipping industry have not commented yet.

The location and number of the levees is likely to provoke debate. People whose property is stranded at the edge of disappearing wetlands want to be inside the levees. Meanwhile, environmental scientists point out that building more levees will defeat the purpose of the project.

"This will be one of the great engineering challenges of the 21st century — on the order of the Channel Tunnel or the Three Gorges Dam. What is obvious to everyone is that something has to be done," said Denise Reed of the University of New Orleans.

If the state approves the project, the state will turn to the federal government for funding. (River Crossings, May/June 2007)

Fall of a Faux Riverboat

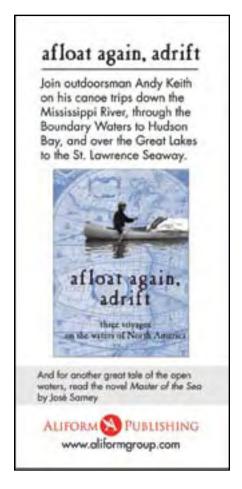
Winona, Minn. — Can you sink a boat that doesn't float? Yes, in early June the Winona City Council voted to tear down an imitation boat in a city park on the river.

The Julius C. Wilkie, a replica of an old-fashioned river steamboat, has stood on the levee since 1982, when it was built to replace a riverboat that burned down.

The *James R. Pearson*, built in 1898 with an 18-foot paddlewheel, was purchased and brought to town in the late 1950s to serve as a riverside museum. The boat, renamed the Julius C. Wilkie, was a homely, workaday boat, so gingerbread woodwork, a second deck, a calliope and a pair of crowned smoke stacks were added in 1959. Some years later the original James R. Pearson was discovered to be historically significant and placed on the National Register of Historic Places. A grant was found to refurbish the boat and take it back to its original working-towboat design. At that point the boat burned down. Arson was suspected, but never proved. The city was so fond of the decorative steamboat, people raised funds to build a new one with a cement hull set in a reflecting pool atop the flood-control levee downtown.

Over the years, the Wilkie served as a landmark and centerpiece of Levee Park, but it was never self-supporting. It suffered decay, water damage and neglect, and was condemned as unsafe last year.

Volunteers had raised just \$12,000 of the \$400,000 it would take to take to repair it. The city estimates it will take \$60,000 to tear the boat down.







The Walker home and attached tavern were demolished in 2005. (Courtesy of George and Kate Walker)

Chewing Up a Neighborhood

By Julie Johnson

outh Clinton may as well be an island. The working-class neighborhood is separated from the rest of Clinton, Iowa, by a railroad corridor, and the Mississippi River borders it on the east and south.

There are few ways to enter or leave South Clinton — by rail, by two streets that pass under viaducts or by boat, and these days, Archer Daniel Midland Company (ADM) transportation dominates all avenues of transit in South Clinton. The grainprocessing company's railcars fill the rail yards and its trucks rumble back and forth from its South Clinton operations.

One day South Clinton resident Ed Broderick tried to leave his neighborhood via the Fourth St. viaduct and waited in his vehicle 10 minutes for a train that didn't budge. He made a Uturn and found semi trucks blocking his entrance to the Second St. viaduct, then went up another avenue and found it blocked by a different train.

"We're caged in like animals," said Broderick.

Expansion of ADM facilities in South Clinton is changing the neigh-



A backhoe claw tears apart a South Clinton building. (Dixie Foster)

borhood to an industrial area. Broderick's South Clinton neighborhood has been reduced to a few city blocks — from Fourth to Second streets and 11th to 17th avenues — surrounded by ADM property. A new ADM cogeneration power plant's cooling tower and its golden, coal storage dome obstruct his view and cast a shadow on his security. Broderick is not alone, but he may soon be. ADM has bought and demolished more than 200 South Clinton homes since 2004, leaving only 93 remaining in the neighborhood.

A HISTORICAL NEIGHBORHOOD

Due to its location and isolation, South Clinton residents enjoyed generations of river community life in relative privacy.

Beaver Island, one of the largest islands on the river, lies just across Beaver Slough from South Clinton. The island was homesteaded from 1840 to 1995, complete with farms, a school and a grocery store, but now only seasonal cabins remain. In their youth, Broderick and his brother walked up the island and rowed a boat across the channel to catch the Clinton school bus. According to

Broderick, his family "turned out the lights on the island" as the last residents to leave.

South Clinton homes are modest. Their historic value is not measured in architectural importance, but in a richness of family roots and riverside memories. The neighborhood is full of people who love to banter about whose family has the longest, deep-

As a girl, Kathy Flippo lived on Beaver Island and in South Clinton. As an adult, she wrote several river books including one about South Clinton and two about Beaver Island. Flippo's books are full of photos of people in the floods, the ice crossings and the endless adventures of river homesteading.

After living in Missouri and working on the Mississippi for 14 years with her husband, a towboat captain who worked on the river 50 years, Flippo and her husband returned to South Clinton. They didn't know it would be a brief stop.

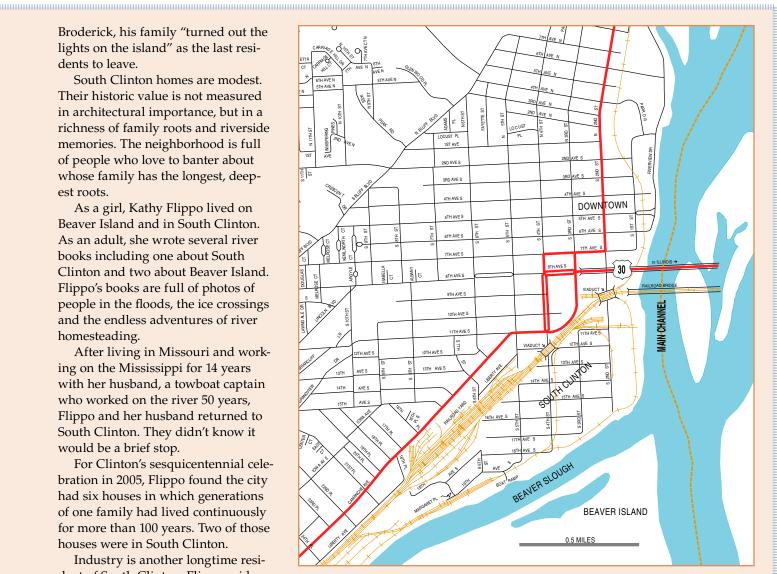
For Clinton's sesquicentennial celebration in 2005, Flippo found the city had six houses in which generations of one family had lived continuously for more than 100 years. Two of those houses were in South Clinton.

Industry is another longtime resident of South Clinton. Flippo said, "South Clinton has been industrial since day one, but people also lived there."

AN INDUSTRIAL NEIGHBORHOOD

In 1907, the Clinton Sugar Refining Company began operating a wet corn milling operation to produce corn syrup for the National Candy Company of St. Louis. It changed hands several times before ADM purchased it in 1982. The 100-year-old plant still produces a variety of corn products including crystalline and liquid sugars; corn starch, oil and syrup; byproduct animal feeds; and two types of alcohol: for beverages, such as vodka and gin; and fuel alcohol or ethanol.

Some days the heavy, sour smell of cooked grain permeates the town. It hangs in the air, especially during the humid days of summer. The tall steaming stacks of the corn plant are



A tangle of railroad tracks separates the South Clinton neighborhood from the rest of the city.

accompanied by mysterious sounds. The whish of released steam and huge fans seems syncopated with the dense clanking of railcars stopping and switching inside. A seeming maze of tanks and sky tunnels add to its mystery.

Jim Woll, ADM plant manager, came to ADM Clinton in 1982, working in maintenance. He became plant manager in 1994. Woll earned a biology degree from St. Mary's University in Winona, Minn. After college he worked for the Iowa Department of Natural Resources or what was then the state Environmental Protection Agency.

Decatur, Ill.,-based ADM is one of the largest shippers and processors of agricultural products in the world. It employs more than 26,000 people at its offices and facilities in 60 countries. In a 2003 settlement with the

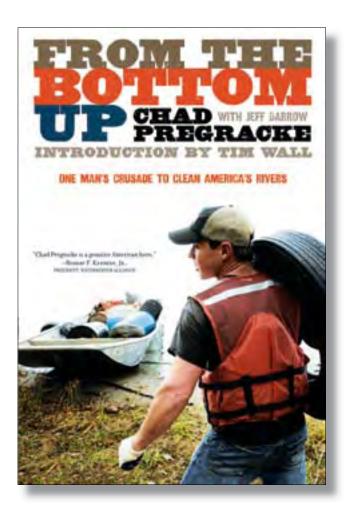
U.S. Department of Justice and the Environmental Protection Agency, ADM agreed to begin cleaning up air emissions at 52 plants, including its Clinton operation.

ADM Clinton is growing under Woll's management. A new co-generation plant will replace a smaller generator and supply all of ADM's electricity and steam needs. The plant will burn coal and is permitted to burn up to 20 percent alternative fuels, which are limited to petroleum coke, tire-derived fuel and biomass.

In a new venture, ADM has partnered with Metabolix, Inc., to produce biodegradable plastics. ADM chose South Clinton as the site to build the first plant of this type in the world. It is easy to see why the Clinton site was picked — it is situated next to the existing wet corn milling plant at the crossroads of national rail, river and



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highway transportation routes, in a city hungry for industrial revenue.

The new polyhydroxyalkanoate (PHA) plant, ADM Polymer, will use corn sugar from the corn milling operation and combine it with a bacteria to ferment in vessels. The bacteria will eat the corn product and centrifuges will separate the resulting PHA from the mass of cellular organisms. The marketable product will be "small, white, beads" said manager Woll. "It will be shipped by truck or rail." Metabolix stated that "PHAs are a broad and versatile family of natural plastics that range in properties

Residents watched and listened as a claw-like backhoe picked up each building and dropped it in a contraption that chewed up houses, creating clouds of debris dust.

from rigid to highly elastic, making them suitable for films, fibers, adhesives, coatings, molded goods and a variety of other applications."

ADM is unsure about how the by-product of cellular mass will be handled. "It's under evaluation," said Woll. "Today, it's believed that the material will be dried and used as a fuel." The PHA plant is scheduled to begin operations by the end of 2008.

SOUTH CLINTON ROYALTY

Helen Walker, 86, lived in South Clinton since she was a few weeks old. She and her husband Bob, who passed away in 2001, operated Walker Tavern for 57 years, from 1948 to 2005, and he also operated a salvage yard. The tavern catered to the neighborhood, including the factory workers. On payday, besides serving beverages, burgers and chili dogs, they cashed checks. Some days transactions totaled \$20,000.

The Walkers raised six children in the home attached to their tavern. When asked if her mother was the defacto mayor, daughter Therese Walker Honeywell replied, "No, she was the queen of South Clinton." Others simply call her grandma



Beaver Island is across Beaver Channel from Clinton's ADM corn-processing plant. (Julie Johnson)

9

Walker, because she cared for the neighborhood kids from birth on.

The Walker family's first run-in with ADM was in the mid-1990s. One day Bob came inside and said, "Look out the window." A row of orange cones came over their yard to within ten feet of their house. Helen recalled Bob saying, "ADM's gonna put a fence there. Says they own it." Three Clinton lawyers wouldn't take Walkers' case, confessing that they couldn't beat ADM.

Walker remembered a wet area behind the tavern where wood ducks loitered. She compared her situation to the ducks, "I'm a little duck in a puddle and I'm not afraid of ADM." Eventually, the Walkers won that case against ADM, with a lawyer from Des Moines and a steep bill.

Then a real estate agent knocked on their door to tell them that ADM had permission to buy 131 houses in South Clinton, in what is now called Phase I, making room for the new cogeneration plant.

In April 2005, Walker sold 13 properties — two commercial and 11 residential — to ADM for approximately Ŧ......

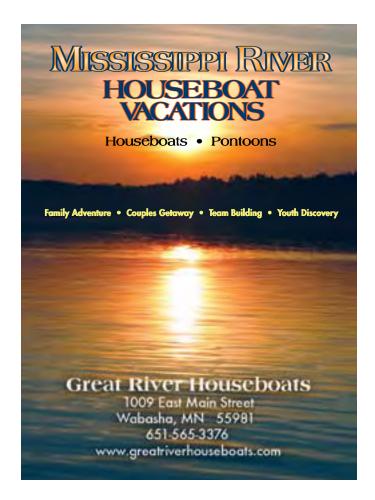


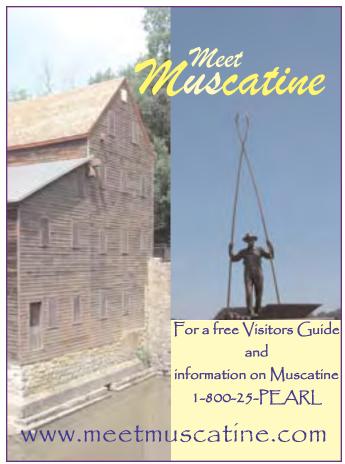
Helen Walker donned a hard hat at her tavern's closing party. (Courtesy of George and Kate Walker)

\$640,000. She said she had two weeks to get out of her home, where she had run a business for nearly six decades.

"But then they called one day," Walker said, "and I had to be out sooner." Walker's daughter, sons, granddaughter and great-grandchildren, also South Clinton residents, helped her move. Two squad cars parked across the street, and the officers watched the family move all her possessions. She was the last one in the Phase I buy-out to move.

Walker moved two blocks away. Crews moved into her old neighbor-





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ADM Clinton's coal storage dome glows behind South Clinton houses. (Julie Johnson)

hood immediately. Residents watched and listened as a claw-like backhoe picked up each building and dropped it in a contraption that chewed up houses, creating clouds of debris dust. Bulldozers leveled everything else.

Since then, anyone seen taking pictures of ADM activities or facilities is approached by ADM security or the Clinton police. Police chief Brian Guy said in a post-9/11 environment the Clinton police will talk to anyone taking pictures from public property. "We will ID them and make sure they are not gathering intelligence information."

ADM's Woll said, "Because we are a port, the events of 9/11 require facilities like ADM to prepare security plans for the Coast Guard and Department of Transportation."

South Clinton residents complain of harassment by security and police for taking pictures. Woll had no comment on ADM private security approaching photographers on public land.

Walker said she "bought a house on Fourth St. for \$80,000, stuck another \$20,000 into it, and here they come knockin' again." According to Walker, realtor Dan Jefferies said, "Helen, we're gonna argue again. We're buying all west of Fourth St."

In March 2006, Walker moved out of South Clinton.

Phase II allowed for the purchase of 100 homes to make room for the new ADM polymer plant. Along with the homes, in what felt like blow after blow to neighborhood residents, the 1, 0

school district sold Irving School, the city sold Courtland Young South Side Park, and Riverside Presbyterian Church went, too.

Remaining residents grieve deeply over the loss of the park. Everyone went to the park for the playground, the ball field, the trees and big birthday bashes.

Walker's great-granddaughter, Courtney Naftzger, submitted a letter

> When the assessor returns to ADM after construction is complete at the end of 2008, ADM could hold 25 percent or more of Clinton's property values.

to the Clinton Herald (3-30-06) about turning 14 in a new neighborhood. She wrote, "This year will be different without the neighborhood, family, friends and closeness of South Clinton, and I wish nobody would have to go through what my family has gone through in the past year — losing everything that mattered."

When the realtor came knocking on Flippo's door for Phase II of the ADM buyout, she resisted. Flippo said, "If ADM was going to buy my house, they were also going to buy me a new house of my choice." Flippo researched her rights with help from the Castle Coalition, an Institute for Justice project that helps citizens in grassroots activism. Flippo now lives in a new house across the river on

the Main Channel, in Albany, Ill., where she can watch the river traffic — birds and boats — all day long.

WORKING WITH THE CITY

Many past and present South Clinton residents feel abandoned by their city and dominated by ADM. City and ADM officials say that the city has concerns and responsibilities for all citizens in Clinton.

City Administrator Gary Boden said the ADM developments in Clinton, which will increase purchases of Midwestern corn and U.S. coal, have regional if not national ramifications for the country's addiction to foreign oil. "This is a facility that addresses that problem," he said. "I challenge anyone that says this only benefits Clinton."

But city finances are an obvious concern. Boden said, "Reserves are now just under 15 percent. Typically there is 25 percent in the general fund. Clinton has had as high as 30 to 31 percent." Early in the decade Iowa's elimination of the mechanical and equipment tax in factories hit Clinton hard and, coupled with a property tax limitation, the city found itself in a financial crunch. Clinton laid off employees in 2003 and deferred many street maintenance and construction projects.

"ADM's expansion will significantly increase the property tax base three to five years from now, expanding to incredibly significant in the next decade," Boden said.

According to Clinton's assessor, John Moreland, as of July 1, 2006, Clinton's total assessed value was \$1.1 billion. ADM's Clinton properties were about 5 percent of that, or \$61 million. Since then ADM has completed new grain silos for \$1 million and begun work on the power and plastic plants, two new facilities estimated to cost \$600 million. If all projects go as planned, when the assessor returns to ADM after construction is complete at the end of 2008, ADM could hold 25 percent or more of Clinton's property values. The city won't see huge tax revenue increases immediately, due to 10-year graduated tax abatements the city granted on the

(South Clinton continues on page 45)

Suttertlies of the Upper Mississippi Valley

Text by Gary and Deb Rodock Photography by Gary Rodock of RIVERDOC

The butterfly is one of the most magnificent and admired insects. The largest and most brilliantly-colored ones grab our attention as they flutter by, but there are many small ones we rarely notice.

About 115 true butterfly species live in our area. These are divided into two families: Papilionoidea (butterflies) and Hesperiodea (skippers — but they are a story for another day). Butterflies go through one of the most amazing metamorphoses of nature — in four distinct stages. The eggs hatch into larvae (caterpillars), transform into pupae (chrysalises), and then emerge as winged adults that fly off and almost immediately begin courting.

Along the Upper Mississippi River Valley, most butterflies are from one to one-and-a-half inches and have one to three broods per year. They winter either as eggs, caterpillars or chrysalises, and a few adults hibernate.

A female adult butterfly lays eggs, sometimes just a single egg or clusters of a few to several hundred, on host plants. She uses tiny sensors on her feet to help identify the right plant species. These same plants will

also provide food for the caterpillars. They feed continuously and grow quickly, molting as they grow. The final molt produces the chrysalis, which hangs from a structure called a cremaster.

Host plants are critical for the survival of butterfly species. In our area the federally endangered Karner blue (lycaeides Melissa Samuelis) depends completely on wild lupine as its host plant. But wild lupine is disappearing and so is the Karner blue. (See sidebar.)



Clouded Sulphur (Colias philodice)

You might see groups of newly emerged clouded **I** sulphur males gathered in wet spots, where they take in moisture and minerals from the soil and rock.

These yellow butterflies produce three broods a year and fly from early May through late October, making them quite abundant. The female lays eggs on red clover, and the caterpillar, which is green with white stripes and feeds on the same clover, winters as a chrysalis. Adults feed on clovers, asters and blazing stars.

Common Ringlet (Coenonympha tullia)



arsh edges and undisturbed grassy Prairies are great places to find this special little butterfly. In June and July I watch the tops of grasses, where the ringlets display their jerky, bouncing flight. This is the only ringlet that lives along the upper reaches of the Mississippi River Valley. They have one brood each summer, laying their eggs on these same grasses. The overwintering caterpillars are dark green with pale-green lines and a white ventral band. Adults have a wingspan of one to about two inches and feed on hawkweed, fleabane and clover.

American Copper (Lycaena phlaeas)

ne day I came across this copper perching on a tall leaf overlooking a wildflower patch. I know they have a reputation for being territorial and aggressive, but they are only one inch across, so how scrappy could this one possibly be? Sitting a few feet from it, I watched it chase off numerous larger butterflies from its private flower patch.

Then along came an eastern pondhawk, the most ferocious dragonfly of all — and they love to eat butterflies! Well, that tiny American copper darted off its perch, chased that pondhawk with a vengeance then returned to the same plant it had been perching on. This is truly a butterfly with an attitude.

Coppers have two or three broods each year. They prefer curly dock and sheep sorrel as host plants and places to lay their eggs. The green to rose-red caterpillars take about three weeks to form chrysalises. They overwinter under leaves or rocks near these plants.



Meadow Fritillary (Boloria bellona)

Thile hiking a stretch of railroad tracks next to the Nelson Bottoms, I spotted a patch of wild sunflowers and stopped to admire them. Out of nowhere this stunning little meadow fritillary lit on one of the blooms, opened its wings and let me take this picture before flying off. I was truly in the right place at the right time.

Females have two broods each year, laying their eggs on violets, the host plant. The caterpillar, which is yellow-brown with a V-shaped mark on its back, depends on violets for its food. Adults prefer nectar from yellow flowers, such as wild sunflowers, black-eyed susans and goldenrod.

ttract butterflies to your yard by Aplanting native host plants and nectar flowers. Once planted, these flowers need very little attention. Take *care* — *pesticides or insecticides will* kill butterflies. Look on the internet or in a good gardening guide to find out which plants butterflies like.

To learn more about the endangered Karner blue, contact the U.S. Fish and Wildlife Service or your local Department of Natural Resources. To give this butterfly some help, you can find out if your soil would support wild lupine.

To read more, see Butterflies of the North Woods by Larry Weber.





Common Buckeye (Junonia coenia)

ne day while exploring a power-line right of way, I noticed a small butterfly gliding above some tall grass. Suddenly it flew toward me, landing on my hat. I slid my finger underneath it and gently set it down on a plant stem. When it opened its wings, the butterfly's stunning beauty and large colorful eyespots mesmerized me. Buckeyes fly from summer to fall, migrate south and overwinter as adults. They have two to three broods each year, and the females lay their eggs on gerardia and plantain. The caterpillars are dark green mottled with red and green, and feed on these same plants. Adults frequently visit flower gardens, feeding on a variety of blooms such as false foxglove, rattlesnake plantain and dragonhead.



Coral Hairstreak (Satyrium titus)

These delicate beauties look like they are wear-have one brood each summer. The female lays her eggs on wild cherry and wild plum. The light green caterpillars are covered in downy hair and hide under leaf litter at the base of the host plants, where they are watched over by ants who gather the honeydew the caterpillars excrete. Adults feed on milkweeds, sweet clover, wild strawberries and blackberries.

I was lucky enough to have this coral hairstreak land on my pant leg while I was walking along the edge of a dirt road.

Gray Comma

(Polygonia progne)

Mhile exploring Snake Creek I came across an apple tree with the ground beneath it peppered with apples. A gray comma darted off a rotten apple and lit on a leaf next to me, where I snapped this picture. These anglewing butterflies inhabit rich deciduous woods and often perch along the edge of clearings. Because they don't feed on flowers, two of their important food sources are tree sap and rotting fruit.

Females lay eggs on gooseberry bushes. The caterpillars, which are a blotchy yellow-brown, will also feed on paper birch and elm. Grey commas overwinter as adults, so you may see them as early as March.





Monarch (Danaus plexippus)

Tonarchs are the most recognized butterfly Lin North America and are the only butterfly that truly migrates. This migration takes several generations to complete. Adults overwinter in the Sierra Madre Mountains of Central Mexico. In early spring they begin to move north, stopping in Texas to lay their pale green eggs singly under milkweed leaves, their host plant. After these adults emerge, they continue north, finally reaching the Upper Mississippi River valley in mid-May. This next generation has two broods in our area. By June, the banded black, yellow and white caterpillar appears and starts feeding on common milkweed. After two weeks, it becomes a pale-green, gold-flecked chrysalis. In another week it emerges as an adult. In late August the second brood appears, and by late September they are mature enough to begin the trip to Central Mexico. None is likely to make the complete round trip.

Another remarkable thing about monarchs is the fact that their steady diet of bitter milkweed makes them distasteful to birds and other predators. They are common and abundant, but whenever I get to see and photograph these amazing butterflies, my heart races.

Gary and Deb Rodock live in Nelson, Wis., where they operate Riverdoc Photography. Their last photo essay for Big River was "The Colorful World of Dragonflies," July-August 2006.



Heidi Kassenborg of the Minnesota Boat Club frequently rows a single sculler on the Mississippi River. (Susanne Holderried)

By Meggan Massie and Pamela Eyden

raceful, athletic, relaxing and collaborative — these are some of the adjectives used to describe rowing. The boat glides gracefully across the water, as the oars dip and rise like the wings of a heron. Rowing works all the major muscle groups together. The sound and sight of water rushing by calms and relaxes, while the rhythmic team effort provides a simple satisfaction.

Rowing, one of the oldest sports in the country, is gaining popularity on the Mississippi River as universities, city recreation programs, private clubs and individuals take up the oar. For a very long time nearly all river travel involved oars or paddles, but the new rowing enthusiasts use efficient high-tech boats with no room to spare.

There are two basic types of row-

Rowing the

Grab an Oar (or Tv Best Exercise on t

ing: sweep rowing, in which rowers hold one oar with both hands; and sculling, in which each rower has two oars, one in each hand. Oars pivot from the point that they attach to the boat, allowing them to act as a lever, unlike the paddles

used for kayaking or canoeing.

The boats come in six basic configurations. Sweep rowers accommodate two, four or eight rowers. Scullers come in singles, doubles and quads. Eights require a coxswain, who steers the boat and coaches the rowers.

Good for Body and Mind

"There is simply nothing like it," claimed 71-year-old Fred Skemp, of La Crosse, Wis. The retired physician divides his recreational time between rowing and canoeing. Skemp built his first small, fixed-seat rowing skiff in the early 90s. As his passion for the sport grew, he took classes, worked on his technique and hit the river every chance he could.

"From the second the boat begins to skim the water, I feel better," Skemp said. "The serenity of the river just melts away the stress of the day."

Rowing builds muscle and aerobic fitness, as rowers pull with legs, backs, arms and shoulders. This lowimpact sport is one of the few athletic activities that work all of the body's major muscle groups simultaneously.

While young at heart, Skemp admits the older you get, the smaller the range of physical activities you're able to do. He claims that rowing keeps him young, fit and smiling. "[Rowing] is a low-impact exercise and takes a great deal of concentration. Good for the body and the mind, a real double-whammy."

Club Traditions

Recruited in high school for her height, Susan Tietjan didn't know the



Fred Skemp of La Crosse, an experienced canoeist and kayaker, said it took about eight hours of practice to feel comfortable handling the boat and the oars when he first took up rowing. (Pamela

first thing about rowing. Since then she has spent more than half her life with an oar in hand. At the University of Wisconsin, the 6-foot-1-inch coed

e River

vo) for the he Water

competed on the varsity team and in national and international regattas. Tietjan, now 45, retired from competition in 1992, but she is now vice president of the Minnesota Boat Club and remains an avid rower.

The club, based on Raspberry Island in downtown St. Paul, is Minnesota's oldest athletic institution.

"Like with anything you do, you get better the more you do it," Tietjan said. "Learning to row is more difficult than riding a bike but less difficult than hitting a fast ball."

She enjoys rowing for both the aerobic benefits and the ties to nature. "The Mississippi is not a wide river, so when I row I scan the shores and really see nature. In an average day I can see herons, cranes, eagles and beavers — it doesn't get much better than that."

At the end of the season the Minnesota Boat Club has a tradition of rowing the Mississippi from St. Paul to Hastings, a 25-mile trip.

"It's easier at the end of the year, because we are much more fit," she said.

Tietjan marvels each year at the sights along the way. Between the bluffs from heavily wooded areas to the sandy dunes above Hastings, it is one great ride, she said.

The Quad Cities Rowing Club has a long tradition. Originally called the Sylvan Boat Club, it started in 1874. Its early competitive success attracted



It takes a team of eight to safely launch a four-person racing scull. (Jeff Cornelius)



A Quad Cities Rowing Association team scoots past traffic on the Main Channel while competing in the Bridge Festival 2006. (Jeff Cornelius)



The Minnesota Boat Club sponsored a Great Rivers Marathon in 2003 and 2004 that ran on the Minnesota and Mississippi Rivers from Shakopee to St. Paul. Here, a team of eight rowers glide near shore. (Susanne Holderried)



A sweep-rowing crew from the Back Water Rowing Club of Wabasha watches a towboat pass. The eightoared shell above is about 60 feet long. (Richard Spiller)

investors, including John Deere and C.H. Deere. The John Deere Foundation was one of the primary donors when the club built its new boathouse on Sylvan Slough, near the one used in the 1800s.

Today's Quad City Rowing Association (QCRA) is one of the most active clubs on the Mississippi River and still does well in competition. Some of the youths who learned to row in its junior program have won scholarships to Harvard, Cornell, the Naval Academy and other colleges with competitive rowing programs.

The club recruits new members and enthusiasts every summer at its "Learn to Row on the Mississippi" class, where about 120 people of all ages learn introductory skills and techniques. Some join the club, paying the \$325 annual dues to use the boats and equipment.

"We ask that people be reasonably fit and able to help lift the boats," said Rick Shaffer. "But it's really surprising sometimes, to see who stays with

Learning to row involves learning to launch the boat, lift and feather the oars, and stroke (row) with the others. In an eight-person sweep-rowing boat, one person — called the coxswain — rides at the back, facing the rowers and calling out the stroke. Each rower coordinates with the one ahead of him/her. It's the coordination that makes the boat speed lightly over the water.

Rowers speak in terms of strokes per minute, rather than miles per hour. Generally, a longer boat will be faster than a shorter boat. The majority of rowers average between four and five knots, roughly four to five miles per hour. Olympic rowers have been clocked at more than 40 strokes per minute, approximately 32 feet a second, or about 22 miles per hour.

> Most rowers, outside of competitive venues, don't worry about speed. It's all about the exercise and the ride.

But there's no real reason to hurry, when you're out on the river in the morning, with the sun coming up through the mist.

Most rowers, outside of competitive venues, don't worry about speed. It's all about the exercise and the ride.

Skim the River

Some of the 18-member Back Water Rowing Club of Wabasha, Minn., train on rowing machines in the winter so they're ready to go when the ice goes out. Some are keen on racing, but most come out just for the fun of it and to enjoy the river.

When the water is high or the current is fast, the club stays inside the sizeable city harbor. Longer river loops are sketched on a map painted

on a pillar of the boat storage shed. Depending on river conditions, rowers may row upstream but stay close so they can head to a nearby beach if they need to, or they row seven river miles up to Pepin, Wis., for lunch, take a break and return in the afternoon.

One of the advantages of rowing on the river, rather than on a lake, are the nice, long, straight stretches of water.

Rick Shaffer, a member of the Quad Cities Rowing Association, tries to take full advantage of these spans. "During the sprint season we train on a 2.5 mile-stretch of water here. Later, during the season, we do five or six miles of rowing a day for the twomile or three-mile races," he said.

Rowers usually get out early in the morning on weekends to catch the calmest waters and have the river to themselves.

"We like to row up the slough behind Arsenal Island, because the water's quiet," said Shaffer. "But big boats like to anchor there, too, so you have to keep an eye on them."

One might think it would be difficult to navigate a boat while facing backwards, but it isn't as difficult as it looks, Shaffer said.

"You just line yourself up with a single point, and then turn around every once in a while to adjust. Of course, you also want to avoid floating logs and other debris.

(Rowing continues on page 49)

FOR SALE LILLY BELLE

A CLASSIC STERNWHEEL PACKET BOAT



BUILT BY CAPTAIN IKE HASTINGS in 1958, Lilly Belle was the 23rd boat that Ike designed and built. Audubon began working with Ike and Lilly Belle in 2000 for the second Audubon Ark Adventure and Education tour on the upper Mississippi River. Audubon continued its relationship with the boat, its builder, and the River the following two seasons. In 2003, Ike sold Lilly Belle to Audubon. Lilly Belle was in the 2004 Grand Excursion and is now in the boatyard of the Mississippi River Museum and Aquarium in Dubuque, Iowa.



For more information, contact Dan McGuiness 651-739-9332 · email dmcguiness@audubon.org 2357 Ventura Drive, Suite 106 Saint Paul, MN 55125 www.audubon.org/campaign/umr

INFORMATION

- Boat length: 62 feet Boat width: 18 feet
- Barge length: 42 feet Barge width: 22 feet
- Draft: 18 inches Height above water: 30 feet with aerials (23 without)
- Built: in 1958 Hull built: Dubuque Boat & Boiler Works, Ice Harbor, Dubuque, Iowa
- Superstructure: Built by Ike Hastings in Sabula, Iowa
- Average speed upstream: 5 miles per hour, downstream: 8-9 miles per hour
- Engine type: Diesel 6 cylinders, 95 HP Engine make: Cummins (new in 2004)
- Paddlewheels: 2, with ability to operate forward and reverse independently
- Paddlewheel drives: 2, Poclain hydrostatic motors (France). One drive on the outside hub of each paddle wheel. The diesel engine drives a hydraulic pump, which sends hydraulic oil to each drive at 4000 psi.
- Wheel diameter: 12 feet Spokes: 12 sets of spokes ("Buckets") on each wheel
- Total (Bucket) boards on paddlewheels: 48



Sand on the Move

By Reggie McLeod

ou might think that water flows down the Mississippi River, but it's really full of stew — a rich mix of trees, fish, bugs, algae and various kinds of soil. The equivalent of entire farms migrates downriver constantly. Some of that soil gets all the way to the mouth of the river to tumble into the depths of the Gulf of Mexico, but much of it just shifts downriver, like a hidden, slowmotion version of the river we see.

Dirt is a mixture of ingredients: organic and inorganic. Its particles are classified by size, from the smallest, clay, to silt and sand, to gravel and rocks.

The river tends to sort these heavier-than-water substances out, because faster current can move bigger particles. A rushing river rolls boulders around. The Mississippi moves sand and sorts out silt and clay. Silt is much finer than sand and only settles out of slow or still water. Clay is finer than silt, so it stays sus-



These two islands in Pool 5 were constructed with sand dredged from the Main Channel. They are designed to collect more sand in their "shadows" downstream. (courtesy Army Corps of Engineers)

pended in still water for a long time. Some of the clear backwater lakes

> in the Upper Mississippi have very little or no current, allowing the silt and clay to have time to settle out. If you go wading in these lakes, you may get a sinking feeling that the muck has no solid bottom. However, if you go wading along the Main Channel or on the back channels, you'll usually find a solid sand bottom.

A number of sand and gravel mines operate in the Mississippi River Valley, because the torrents that flooded down the valley as the last glaciers melted about 12,000 years ago, filled much of the valley with hundreds of feet of sand and gravel. In some spots the river is flowing on top of all that sand and gravel.

Most of the sand particles in the river valley are tiny quartz rocks. Some of the layers of rock in the bluffs that overlook the river valley are made of sandstone, created millions of years ago in the bottom of ancient seas as sand was cemented and pressed together. Sand is very recycleable, because those rocks erode into sand, which may some day be pressed into service as sandstone again.



Sandbars in the Upper Iowa River work their way toward the Mississippi. (courtesy Army Corps of Engineers)

Sand is sometimes quick, as in quicksand, which occurs where water flows through sand. Quicksand may even be dry on top, which makes stepping on it like stepping into a trap. It is rarely more than a couple of feet deep, and because both sand and water are denser than the human body, you can float in it, but you cannot move quickly in it. In fact, the "quick" part of its name means "living," rather than "fast." It seems that even before screenwriters in the 1950s began casting quicksand as a hungry monster lying in wait for its prey, storytellers saw it as a living thing.

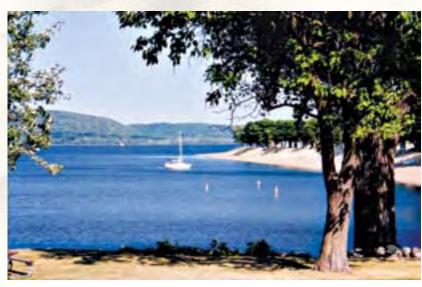
Jon Hendrickson, a hydrolic engineer at the Army Corps of Engineers,

Practically no sand leaves the downstream end of Lake Pepin, but that's where the Chippewa brings a huge load of sand into the river from northern Wisconsin.

St. Paul District, works with a lot of sand. His district, which reaches down to Guttenberg, Iowa, dredges about 900,000 cubic yards of sand out of the Main Channel in an average year. That's enough sand to fill 75,000 12 cu./yd. dumptrucks. The Rock Island District, downstream, averages about 500,000 yards.

"The sand we dredge is pretty good clean sand" he said.

Hydrologic processes clean it. The Main Channel current is not strong enough to move gravel, but it bounces sand along the bottom, in shifting dunes. However, the current is too fast to allow silt or clay to settle out. As a result, most dredge spoils from the Main Channel are 95 percent or more sand.



This sandy beach in Lake City, Minn., could be mistaken for a remote bay on a Caribbean island.

The clean sand is useful for construction projects on and off the river. Dredge spoils are often stored in large piles on island sites and later moved out of the flood plain, sometimes to sites where they are available to contractors. Environmental Management Program projects often use dredged sand to build islands, he said.

Tributaries carry varying amounts of sand into the Mississippi, and the shape of the river and placement of dams determine where the sand builds up. Around the Twin Cities, the Minnesota River brings a lot of sand and silt into the Mississippi. Lake Pepin acts like a big trap where the slow current allows it to settle out. Practically no sand leaves the downstream end of Lake Pepin, but that's where the Chippewa brings a huge load of sand into the river from northern Wisconsin. Below Wabasha, Minn., the Zumbro brings more sand into the river, and so on down the river, Hendrickson explained.

The sand tends to build up in the middle of a pool, the segment of river between two dams. "We have to dredge more in the middle reach of pools."

Hendrickson explained that environmental projects that the Corps and other agencies build in the river, often deliberately use islands to create "shadows," areas with little or no current where sand accumulates. In this way they utilize the power of the

9	Soil Particle Sizes	
clay	to less than 0.002 mm (0.00008 in.)	
silt	0.002 to 0.05 mm (0.00008 to 0.002 in.)	
sand	0.05 mm to 2 mm (0.002 to 0.08 in.)	
gravel	2 to 64 mm (0.08 to 2.52 in.)	

river to grow the islands for years after the construction equipment has left.

"The quantities of sand movement are immense, but it's very hard to get a handle on it" confesses Bob Gaugash, an ecologist with the U.S. Geological Service, Upper Midwest Environmental Sciences Center, in La Crosse, Wis.

With a depth finder, you can see underwater sand dunes moving down the river, but it's hard to calculate how much sand is moving along the bottom.

Many of the beaches in the river, especially the big ones, were created by the Corps with dredge spoils. Natural beaches occur on the river, too, often in the upper ends of pools and the lower ends of islands, in their shadows. Wing dams also create shadows where sandy beaches sometimes grow.

Sand does seem to like to move, whether in a river, a boat or your tennis shoes.

Tales of Travel, Music, Memoir and the **Nature Around Us**

By the Big River Staff

My River Home A Journey from the Gulf War to the **Gulf of Mexico**

Marcus Eriksen, Beacon Press, Boston, 2007, 255 pages, \$24.95

Memoirs of trips down the Mississippi River can blend together until it's hard to separate the adventures in one from the adventures in another.

Marcus Eriksen has written a different kind of memoir. Although he grew up near the river in New Orleans, it wasn't until he was a Marine, stranded with his unit in Kuwait long after the Gulf War was supposedly over, that he and a friend conceived their journey down the Mississippi. He didn't launch his boat for another 10 years. When he did, it wasn't a

canoe or a log raft, but a makeshift pontoon floating on hundreds of empty soda bottles. He named it Bottle Rocket.

Eriksen's tone of voice makes his book stand out. He is not floating down Mark Twain's river. He is a tough, disillusioned ex-Marine who uses action-filled language that moves the book along at a good clip. Episodes from Kuwait alternate loosely with episodes on the river. Eriksen is a good storyteller and a truth-teller. He does not try to make himself, the river, or the people he meets and travels with look good or look any other particular way. He is astute about his relationship with his companion Jenna.

> In the midst of an argument near Cape Girardeau, Miss., two-inch-diameter cables

the river attempts to twist them apart, and sometimes, to the fear of deckhands, they snap, hurling themselves like a horizontal guillotine against unsuspecting bodies.

"Traveling upstream in the middle of the river, bearing down on our raft, is a massive aggregation of thirty barges in a single tow. Whitecaps form beneath the bow, which is four barges across. It's the largest tow I've seen vet...

"There is another barge behind the behemoth and another one at our stern. I make a dash for the riverbank beneath the Cape Girardeau bridge. Above the roar of the river, and the roar of Jenna, I gulp a healthy dose of terror."

His point of view is complex. All this makes for a very interesting read.

Eriksen is now director of research and education for a nonprofit marine





Down to the River Portraits of Iowa Musicians

Sandra Louise Dyas, University of Iowa Press, Iowa City, 2007, 84 pages, \$29.95

This hard-cover book of blackand-white photographs comes with an 18-song CD tucked into a plastic flap inside the back cover. It's a great idea. You can look at the pictures while listening to the tunes. There's Greg Brown, Joe Price, David Zollo, Radoslav Lorkovic, Pieta Brown, Bo Ramsey and more, standing, sitting and playing full out at bars, clubs and festivals in eastern Iowa.

The photographs were taken over a number of years with different cameras under different situations. Some are motionless documentaries, others are taken in the heat and glare of a bar where everybody's moving. The book itself is about the size of an old 78-rpm record. It would make a great gift.

The River Queen, A Memoir

Mary Morris, Henry Holt and Company, New York, 2007, \$24.00

When the author's father died suddenly in Hannibal, Missouri — the town he grew up in — he left a note describing an island in the river that he once visited as a boy. Morris' urge to explore the river and find this island launches her journey.

She travels in September on a houseboat out of La Crosse, Wis., with a father and son named Tom and Jerry. She envisions window boxes, Weber grills and deck chairs, not rusted railings, a broken head and dysfunctional stove. So it begins. By the end of the journey she's learned a lot about the river and the tiny towns that dot its banks. For one thing, it seems almost impossible to find a good cup of coffee along this stretch of the river. She's also reflected enough on her father and herself to be ready to begin the next leg of her own life's journey.

Mary Morris teaches creative writing at Sarah Lawrence College and has written six novels, three collections of short stories and three other travel memoirs, including Nothing to Declare: Memoirs of a Woman Travelling Alone. She is a very good writer, with an eye for descriptions that set the scene, and an alert interest in people and the dynamics between them.

The Butterflies of Iowa

Dennis Schlicht, John C. Downey, Jeffrey C. Nekola, University of Iowa Press, Iowa City, 2007, \$29.95

This beautiful, comprehensive guide to butterflies includes not just color photographs and species accounts, but a very interesting section that outlines major ecosystems and natural communities in the state, and lists places where these remain intact. Where are the fens of northeast Iowa? Where can one find the butterflies that hang out in glade prairies? The book gives the novice a basic

Minnesota Beethoven Festival

July 7 - 22, 2007 • Winona, MN

Schedule of Events

Saturday, July 7th • 7:30 P.M.

Minnesota Orchestra

Led by Sarah Hatsuko Hicks
Winona Lake Park Band Shell
Free concert

Tuesday, July 10th • 7:30 P.M.

Canadian Brass
Somsen Auditorium, Winona State University

Saturday, July 14th • 7:30 P.M.

Kevin Kenner with Ned Kirk

Figliulo Recital Hall, Saint Mary's University

Sunday, July 15th • 3:00 P.M.

Kevin Kenner with Ned Kirk

Figliulo Recital Hall, Saint Mary's University

Tuesday, July 17th • 7:30 P.M.

Benefit Concert with

Artaria String Quartet

Minnesota Marine Art Museum

Thursday, July 19th • 7:30 P.M.

Filipovich/Vance/Kirk Piano Trio
Winona State University Recital Hall

Sunday, July 22nd • 3:00 P.M.

Minnesota Orchestra

Led by Osmo Vänskä

Winona Middle School Auditorium



Minnesola Orchestra



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WINONA, MINNESOTA



understanding of butterfly habitat and points him or her out the door.

There are also range maps, a check list, a glossary of terms and a section on how to attract butterflies, encourage puddling, give them shelter and study them. All this fits nicely in a compact book with an elegant cover.

Nature in the Neighborhood

Gordon Morrison, Houghton Mifflin Company, Boston, 2004, \$16.00

Some science books for children are informative, attractive, easy to read and written for a range of interest levels. Children like them and adults like them. This is such a book.

It invites young readers to pay attention to the nature around them. The book describes a year in a typical Midwestern neighborhood with a variety of habitats — rooftop, empty lot, school lawn, railroad corridor, etc. We meet kestrels, robins, monarch butterflies, nighthawks, frogs, rabbits, coyotes and other common wildlife. Large type at the top of the page above the illustrations leads us through the "story line," while small bits at the bottom of the page add detail for curious readers.

From the Bottom Up One Man's Crusade to Clean **America's Rivers**

Chad Pregracke with Jeff Barrow, National Geographic, Washington, D.C., 2007, \$26.00

Chad Pregracke's account of the beginning and development of his Living Lands and Waters organization, could serve as a case study for how to get things done. He grew up on and in the Mississippi and knew the Quad Cities stretch of the river intimately by the time he was a teenager. He worked as a clammer, diving for mussels, and was acutely aware that clammers were regarded as lowly river rats.

Then, with a bunch of river knowhow behind him, he asked big questions: Why was nobody picking up junk from the river, and why were eyesores allowed to remain? Rather than casting blame or making excuses or giving in to obstacles, he became an instrument of change. In a short time, cleaning the river became his goal. There was never a question that this is what he would do.

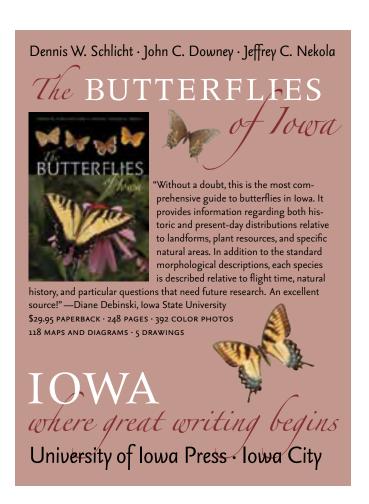
His character comes through in his stories: always problem-solving, persistent, charming, self-effacing (sometimes feeling like "a moron," other times hoping something wouldn't turn out "too cheesy") and amazed at the attention. Always tireless and willing, he puts up with loads of discomfort and challenges.

If you like technical stuff about boats and such, this is full of details about how Chad and his crew jerryrigged the equipment that they found or bought cheap, or constructed out of

Rather than casting blame, he became an instrument of change.

old materials, or got donated. Chad's stories are entertaining and sometimes astonishing. I chuckled as I visualized some of his efforts, like the time he scrounged up a John Deere tractor cab to use as an elevated pilothouse to see the barge of trash.

Chad went from picking up trash alone, to leading a crew. He learned how to raise money and find sponsors. He became adept at it. Now in his early 30s, he has become quite a national personality. Not bad for a clammer.





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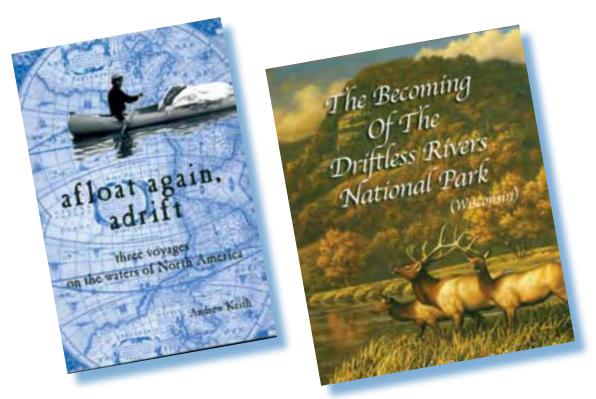
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Afloat Again Adrift — Three Voyages on the **Waters of North America**

Andrew Keith, Aliform Publishing, Minneapolis, 2006, \$15.95

My feet are gritty with sand and dirt from the shoreline. The adrenaline is still pumping through my veins, because I've been looking over my shoulder for polar bears... All this without leaving the comforts of my home.

I've been reading Afloat Again *Adrift,* which tells the story of the author's three canoe trips on North America's greatest watersheds. The first began when he noticed on a map "something very peculiar about northern Minnesota: not one but three major watersheds begin there... From just about the same location we could paddle three different directions and arrive at three different seas: south to the subtropical Gulf of Mexico, north to the subarctic Hudson Bay or east to the Gulf of St. Lawrence. New Orleans, York Factory and the city of Quebec were all downstream from my back yard."

His three voyages took him north along the Nelson River to Hudson Bay; down the Mississippi River to the Gulf; and from the Great Lakes

through the chain of lakes to the Gulf of St. Lawrence.

Keith made the trips just a year or two apart, so all are within recent memory. The tales he tells are vivid. The trips are real. The dangers are not minimized. Lessons are learned.

This book makes for great travel reading if you have the urge to get out on the waters vicariously. You can share a fresh roasted raccoon dinner and a cup of chicory joe.

The Becoming of the **Driftless Rivers National** Park (Wisconsin)

Bryan J. Stanley, 277 pages, \$75.00

In this self-published book, the author argues for turning Crawford County, Wisconsin, into a new national park. The book makes a broad and interesting survey of the county's ecology, geology, history and resources to point out its importance and the merits of opening it up for the enjoyment of the public.

The Mississippi River forms the western border of the county and the Wisconsin River marks the southern boundary. Prairie du Chien is the county seat and its largest city. The

county, with its many steep rocky bluffs, is near the center of the Driftless Area.

The idea is controversial, but Stanley's plea is sincere, and he has collected a welter of interesting information to convince the reader of the importance of the project. The writing is a little rough at times, and I did note a few inaccuracies, but I also learned some things that I hadn't come across in many years of writing and reading about this area. The paintings of Mark Mittelstadt and many photos of the area certainly do a fine job of illustrating Stanley's points, but the dozens of two-page spreads of aerial photos by Robert Hurt are breath-taking and show the big picture of this beautiful county.

This large (8.75 by 11.75 inches), hardcover book is printed on very thick paper, which helps justify its hefty price. All profits from the book will be used to help establish the park and to purchase and preserve other natural areas within the Driftless Area, according the book's dust jacket.

Stanley is a resident of the Mendota Mental Health Institute in Madison, Wis., where he was sent by the courts after the fatal shooting of three men in Onalaska, Wis., in 1985. 🎬 🗂

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(South Clinton continued from page 27)

first two projects, with a mention for the same on the new polymer plant.

While South Clinton residents struggle, others speak in awe of the huge economic impact ADM might have on Clinton. The Clinton Herald editorial board named manager Woll "Person of the Year" for 2006.

In the meantime, environmental stresses worry residents. Broderick chairs the South Clinton Citizens Coalition for Safety and Health, a new group with 67 members. People were concerned when the housechewing machine created a greenish dust cloud that probably contained lead paint and asbestos. The only buffer between the machine and residents' homes was a chain link fence. No health effects were proven, but residents claim a child has tested high for lead levels, dogs are scratching their fur off and some people are developing unexplainable headaches, nausea, nosebleeds and blood clots.

Marion and Traci Beecher live on 13th Ave. S., where one day last January Traci yelled to Marion, "Should those trees be so close to the house?" An ADM corn syrup railcar had derailed a few feet from their house and took out some house trim, gutters, fence and trees, along with cracking the foundation of the basement. Traci Beecher said, "Honestly, we feel like we're in a war zone down here."

"The thing that angers me the most is that I had called and called the ADM manager to say that the tracks were in bad condition and the trains were going too fast." Beecher knows manager Jim Woll's number by heart. Since the derailment, Woll has taken the tracks out of use.

On Dec. 20, 2006, South Clinton residents got notice of a public hearing about a proposed rezoning from residential to industrial for ADM Polymer. Broderick thought he should attend the meeting, even though the area was already bulldozed and everyone knew the plastics plant was

"Good thing I went," said Broderick. What the city notice didn't tell residents is that the planning commission wanted to vacate, to ADM, Fourth St. and all the residential

alleys that met it and install a fence to block public access. Broderick said he asked the city council, "How can you say these streets are abandoned when we use them everyday?" Fourth St. is also the direct route to the only boat landing on the south side of the city.

Broderick returned to his neighborhood, went to every one of the remaining 93 homes and gathered 145 signatures against the proposed Fourth St. abandonment. Broderick found a Sept. 7, 2006, letter from Woll to Clinton Mayor LaMetta Wynn, referring to an Aug. 3 meeting between the mayor, city administrator and city planning director that details the street abandonment,

Broderick expects that in five years his neighborhood will be a factory site.

among several other projects. All the other projects went public, such as the sale of the park, but the residents and city council were not notified of any street abandonment plans. When Broderick asked the mayor and planning director's administrative assistants for notes on the Aug. 3 meeting, they told him that none existed. Woll later revised the plan to leave Fourth St. and the residential alleys open to the public.

Relieved to keep their streets open, the coalition members are now focused on dedicating a new park on the corner of 14th Ave. and Fifth St. South. The city wanted to put the funds from the sale of Courtland Young Park in the depleted general fund, but the Coalition found out that it has to be dedicated to a replacement park.

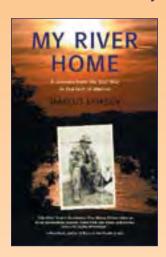
ADM Clinton now has ADM corporate permission to buy any of the remaining 93 homes in South Clinton. It hasn't released a plan for the area and it isn't sending a realtor door-todoor to solicit sales, yet.

Broderick expects that in five years his neighborhood will be a factory site. "We are the last piece in the puzzle."

Iulie Johnson is a writer who lives in the Winona area. Her last article was "River Rescue and Recovery" January-February 2006.

"Eriksen takes us on an extraordinary journey; home from war, chaos, and sorrow, down the mighty Mississippi."

-Ron Kovic, author of Born on the Fourth of July



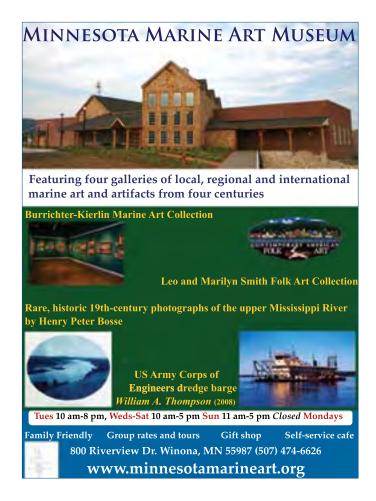
MY RIVER HOME

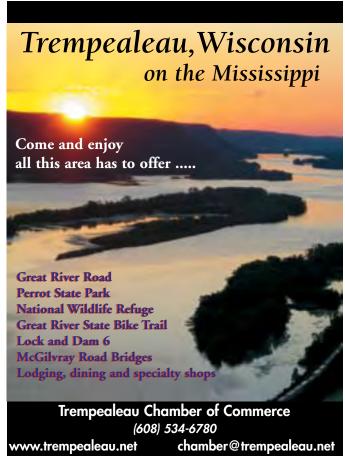
A Journey from the Gulf War to the Gulf of Mexico MARCUS ERIKSEN

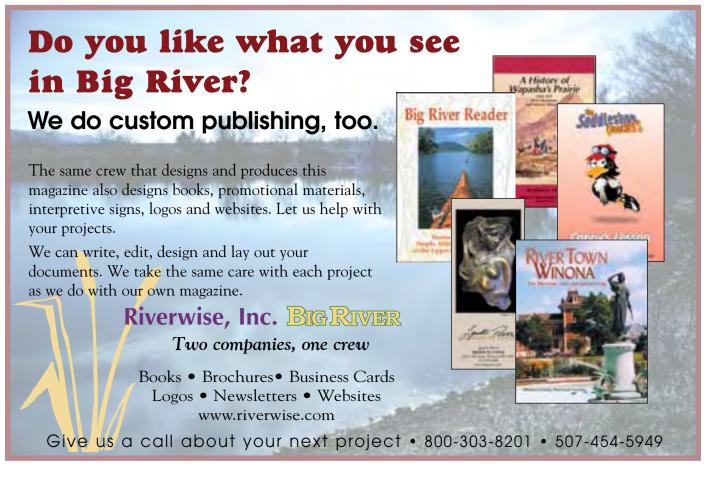
One August day, Gulf War veteran Marcus Eriksen set off on a journey down the entire length of the Mississippi River. His vessel was not Huckleberry Finn's log raft, but instead a pontoon boat kept afloat by 232 empty soda bottles, recycled junk, and a dose of ingenuity.

Alternating between his emotional journey from enthusiastic soldier to antiwar protestor and his physical journey down a river with an everchanging personality all its own, drawing on stories both painful and funny from both these times in his life, Eriksen thoughtfully explains the allure of the military, the tragedy of modern war, and the very real courage it takes to fulfill a dream.









Local Adventures

Up a Tributary with a Paddle

By Pamela Eyden

"t's unsettling to find three maps that disagree about the location of something. I mean, isn't this the age of Geographic Information Systems, Global Positioning Systems, satellite tracking and in-car navigation? Everything's been pinned down,

Apparently not. While looking at maps of the five cold water trout streams that flow into Winona, Minn., I saw that three maps disagreed about the exact location of the outlet of Garvin Brook. Garvin is the largest of the five streams and the only one that empties directly into the Mississippi. The others have been diverted to lakes and ditches that diminish their power before they get to the big river. One map showed Garvin as a fat wiggly line angling out from Minnesota City across a mile-long bulge of floodplain. Another showed an outlet near the Minnesota City Boat Harbor. A third showed a wispy line trailing off before it even reached the

So, which was it? To find out, a friend and I launched kayaks from Prairie Island to go find the mouth of Garvin Brook.

Our first stop was just upstream, the Minnesota City Boat Harbor, where we poked around among the docks and boathouses. Finding no brook, we cut out into the river and went on upstream.

We had Crooked Slough to ourselves that day. We enjoyed pulling our paddles across the surface of the water, with warmth in our muscles and the sun on our shoulders. In a kayak you sit so low that you're part of the water — it's more stable and more agile than a canoe, and you can go faster. We zipped back and forth across the slough, checking out the wildflowers and other interesting things on shore. A bald eagle flew

ahead of us and perched on a high branch beneath an opening in the trees. We paddled quietly into a little cove and found it a shallow and mysterious place, but it was a dead end. No brook.

By the time we got to Burleigh Slough, the sun was low in the sky and the shadows were growing long. I was about to take off my sunglasses and pull on a long-sleeved shirt when we rounded a bend into the opening of a valley. It was huge. Sunlight roared down it, unstopped by any hills or bluffs.

You get a very different perspective on your surroundings when you explore a watershed by water. I had never noticed how grand and wide Garvin Valley is while driving my car along Highway 61.

Garvin Brook today drains a huge area of Winona County — 30,720 acres, stretching all the way from Lewiston. Back when the glaciers melted, it drained an even larger area and dumped tons of silt and sand at the mouth of the creek. If it had not, Winona would have no sandbar to sit on today.

We paddled nearly to the far side of the valley before finding the mouth of Garvin Brook behind a screen of trees that were hopping with birds. Now I knew which map was accurate.

With the glee of explorers we turned our bows up into the current. The water was different — colder and milky. Like Winona's other five streams, Garvin is cold because it's fed by springs that bring the water up from deep underground. We didn't know for sure what the milkiness meant — pollution? Several sizeable streams empty into it — Rollingstone, Rupprecht, Middle Valley, Speltz and

Rush Creek. Stuff could come from anywhere.

The channel turned and twisted beneath tall trees, and we paddled single file, with never a long view of where we were going or what might be ahead. In some places the banks were low, made of gluey black mud, like on the Mississippi. In other places the banks were vertical and clay-like, mounting eight to 10 feet over our heads. Kayaking here was a little eerie — like going up a chute.

My friend noticed something peculiar — the long grasses lining this chute were pressed flat, as though they'd been combed or swept by rushing water, a lot of water.

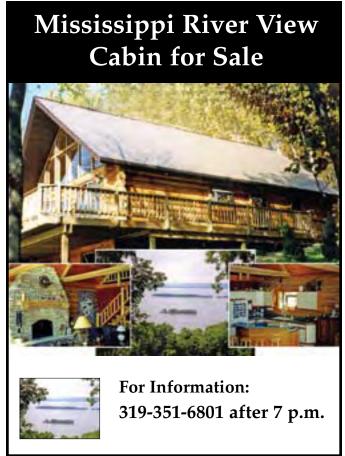
Not too many years ago, Garvin was notorious for floods. People spent millions of dollars on upland conservation projects to keep rain from running off so fast. The week before our daytrip, a huge rainstorm had dumped 10 inches of water on places not far away. I wouldn't want to go kayaking up Garvin Brook during a rainstorm.

We never made it all the way up to Minnesota City, our destination, but we were getting close to the railroad bridge and the park when a downed tree and a darkening sky made us turn around and head home for dinner.

After a few hours of paddling up the Mississippi and up Garvin Brook, it took less than an hour to get back to the landing. That's the pleasure of kayaking up a watershed — the water does the work on the way home.

Pamela Eyden is Big River's photo and news editor.







(Riverbank continued from page 5)

The eroded soil fills in back channels and backwaters.

Pretty convincing research claims that atrazine, even in very low concentrations, interferes with the sexual development of frogs and may also affect many other animals, including humans.

The hypoxia zone, or "Dead Zone," in the Gulf of Mexico is mainly fueled by the fertilizers running off Midwest farmland.

So, rather than solving a problem with ethanol, we are simply trading some problems for other problems. Ethicists could argue the net costs and benefits, but the ethanol boom will harm the river, the Gulf of Mexico and probably people's health.

AN IDEAL SOLUTION

Besides fueling the ethanol boom, higher gas prices are hurting the economies of many of our rivertowns. Higher gas prices kept many boats in the marina last summer, while restaurants and shops in our picturesque rivertowns have had a real struggle during the last year or so. Smaller towns are often especially dependent on tourism.

We at *Big River* believe that our stretch of the river offers beauty, recreation, history and wildlife that rival any other place in the world. So maybe your part of the solution to high gas prices is to cancel that exotic vacation and spend your vacation on the river this summer. Take the bikes, canoe, binoculars, fishing gear and a couple of good books, and let the river work its magic.

If you are lucky enough to live in a rivertown, as most of our readers are, just kick back and ignore the yard work for a week or two, and enjoy the opportunities around you. Maybe bike or canoe to a nearby bed and breakfast. Go out to dinner at that great restaurant you've been talking about. See how many days in a row you can watch the sunset on the river. Spend a little time each day thinking how lucky you are to live in such a great place. And, if you can find the time to write a short letter, share your enthusiasm for the river with an elected official.

(Rowing continued from page 34)



Two single scullers approach the High Bridge in St. Paul. Single scullers are the smallest rowing boat. They weigh only about 30 pounds. Most shells are made of lightweight carbon fiber. (Glen Fiebich)

"Two years ago we rowed up by a dead cow floating in the water, just rotting there. The club president called Chad Pregracke [from Living Lands and Waters], and he pulled it out of the river for us." Shaffer said.

Rowers avoid the Main Channel in high wind or waves.

"Although wing dams help cut down on the waves, big waves cause havoc," said Shaffer. "After all, the boat sits only six inches out of the water."

Most boats are self-bailing. "If you get going fast enough, the water leaves. But the boat will float even if it's full of water. If something happens, you just stay with the boat," Shaffer said.

While most clubs require rowers to have some swimming skills, few rowers ever need to use them.

"The only time you get wet is from your own sweat," said Paul Haddal, coach of the rowing team at Winona State University, in Winona, Minn.

The Winona State team started as a recreational activity in 2005 and began competing in 2006. They have practiced on an inland lake, but will take their shells to the river as soon as they get a trailer, dock and, most importantly, a motor boat.

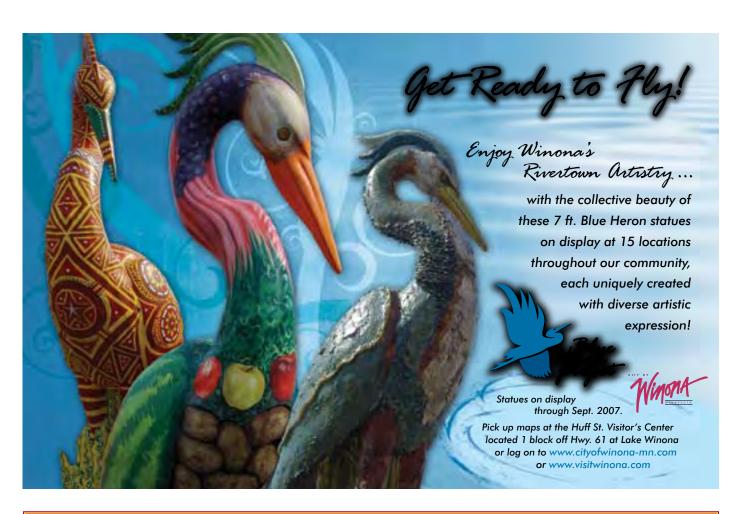
"If something were to happen, which it rarely does, we would need a boat that could quickly haul people to shore. Shell crews can be a bit blind," Haddal said.

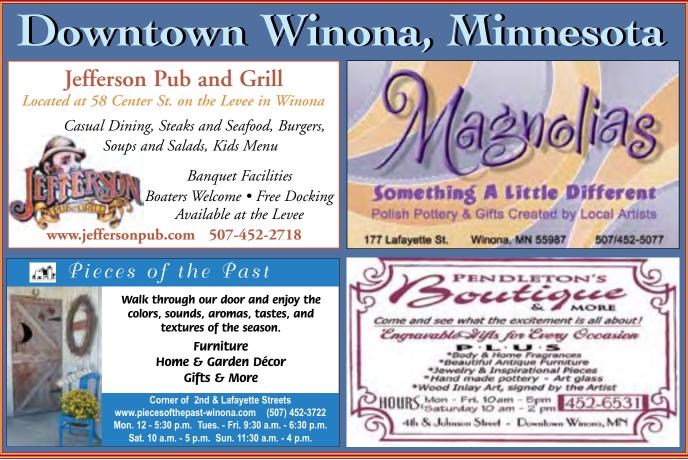
"The main reason we want to row the river is because we could simply row for longer that way," Haddal explained. "The ice breaks up on the river a good three weeks before the lakes. And after a long winter, the sooner I can get out on the water, the better."

The rowing program at the University of Minnesota is enjoying a banner year. In April, the U. of M. rowing team won its first Big 10 Championship in Madison, Wis. A few days later the university's new \$4.6 million boathouse was dedicated on the east bank of the Mississippi, in Minneapolis. An agreement between the school and the Minneapolis Parks and Recreation Board will provide programs for the public there, including youth rowing clinics and camps.

Meggan Massie recently graduated from Winona State University. Her last story for Big River was "Backwater Classroom," January-February 2007.

Pamela Eyden is news and photo editor for Big River.

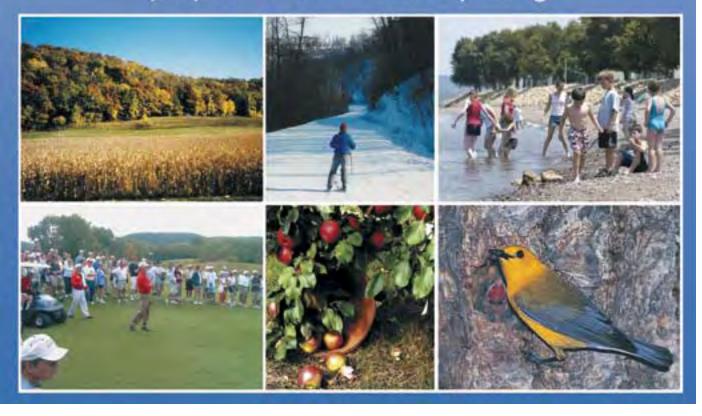






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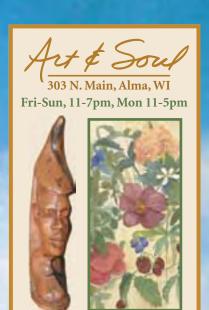
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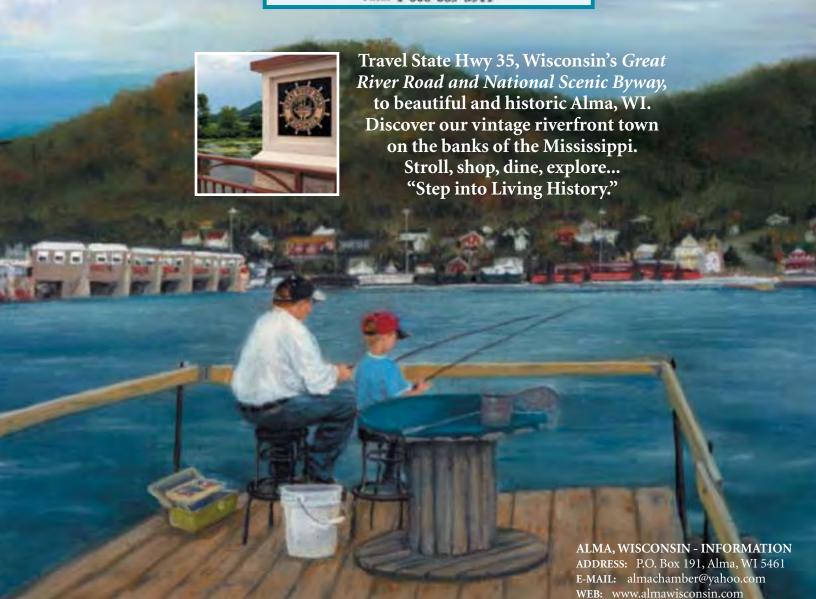
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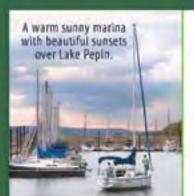
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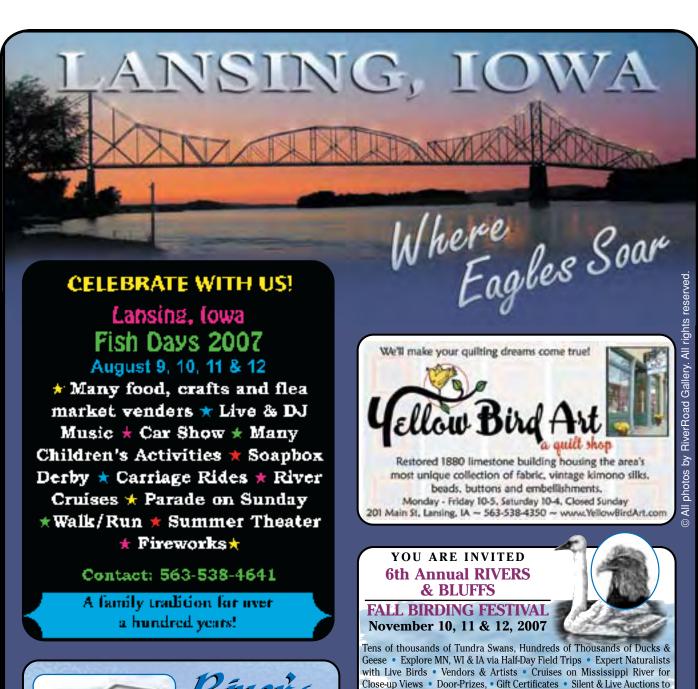
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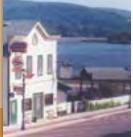


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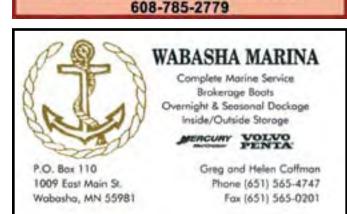
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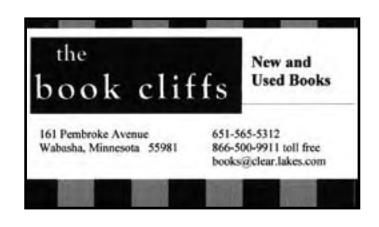
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With electricity came the realization that a single dam at the upriver end of the tailrace channel could provide far more power than the lateral dam could, so a dam was built across the channel. By 1871, the area behind the lateral dam was filled in and the "Great Wall of Moline" disappeared.

The dam between Sylvan Island and Moline still provides power, generating 3.2 megawatts for MidAmerican Energy. Rock Island Arsenal operates the dam between Sylvan and Arsenal Islands. The eight units can produce 2.8 megawatts of electricity.

With power to be had and empty land nearby — the new island some businessmen saw Sylvan Island as a perfect place to site a steel mill, that quintessential symbol of industry. Sylvan Steel Works began operations in 1894. With the steel mill came the need for rail access, and a stronger wagon bridge to carry the mill's finished goods off the island and workers onto it.

For the railroad spur, the steel company bought a bridge from Dubuque, Iowa — an 1868 Whipple truss bridge with Phoenix rolled posts and double rods for diagonals. It was shortened to fit across the tailrace channel, but otherwise left intact. It's still there, studied by bridge buffs and a popular place for anglers. An early wagon bridge built in 1871 was strengthened for bigger loads, and today it serves visitors who walk or bike onto the island to explore some of the 60 miles of trails that meander through the Quad Cities.

Other businesses found the island useful, too. From 1894 to 1914, ice cut from the relatively calm slough in winter was stored in a huge ice house for use in the summer. The island's underlying Devonian limestone was quarried for buildings and roads. But for 60 years the island was dominated by the steel mill that melted down old railroad rails to make other products. Steel continued to define the island, as the ice house crumbled and the quarry was filled with dredge spoils from river channel maintenance. Struggling families planted public garden plots in the spoil-filled quarry



Bicyclists, walkers and anglers now enjoy the island's many trails. (Dan McNeil)

during the Great Depression and victory gardens during World War II.

In 1954, the steel mill, by then part of Republic Steel, closed. As the mill's buildings were torn down and the unusable debris was left to clutter

Struggling families planted public garden plots in the spoil-filled quarry during the Great Depression and victory gardens during World War II.

the land, the island began to fill up with brush and second-growth trees — black willow, hackberry, poplar, slippery elm, honey locust, box elder — and opportunistic plants, such as great poison ivy vines, soapwort and wooly mullein. It was resettled by eagles, beavers and other river valley denizens. The overgrown island was frequented only by knowledgeable anglers and teenagers intent on secret parties among the ruins of the mill.

Sylvan Island was dedicated as a park in 1993, but only after 30 years of efforts by civic groups and volunteers

who cleared brush and named, rather than built, trails — Loading Dock Trail, Levee Trail, Forest Trail, Factory Trail. They left the ruins; the concrete walls; piles of brick and footings jutting out of moss-covered ground, decorated by spray-paint Picassos, beneath the giant piers of the tramway that had been built to offload railroad rails and carry them into the mill. They built a memorial to the mostly immigrant laborers who toiled in the mills. They documented the island's history in a visitor's center, a memorial to a community activist.

Today, all that history and nature's efforts to reclaim the industrial land make Sylvan Island Park less a park than an experience — in history, botany, birding, mountain-biking or simply walking along the river. This is a park you'll want to visit more than once.

To get there, take Highway 92 along the river in Moline to First Street and follow the signs.

Bill Jacobs lives in Davenport, Iowa. His last story for Big River was "A Hard Act to Follow — Citizens Force Polluters to Clean Up," December 1998.

Sylvan Island

Recreation Among the Ruins

By Bill Jacobs

💙 ylvan Island Park in Moline, Ill., has no playgrounds, no landscaped greenswards. It is instead a hiking and mountain-biking riverside sojourn through Midwest industrial history.

The search for energy, the rise and fall of industry, nature's reclamation of land — it's all here in a 38-acre island crisscrossed with named and unnamed trails, rife with singularly American ruins and covered with the trees and plants that demonstrate nature's haste to reclaim land that people have abandoned.

Sylvan Island is an island only because of an earlier age's search for alternative energy. The land once was a peninsula jutting into the Mississippi as it roiled around Rock Island

(now called Arsenal Island). It created rapids in the river channel to the north of the big island and

a slough to the south that became known as Sylvan Slough.

The river's frantic flow around Rock Island was dangerous territory for riverboats and huge rafts of timber. Nonetheless, it attracted industrious pioneers who saw in the slough a place where the power of the Mississippi could be put to work. In 1841 David Sears built a rustic dam across



Island trails pass through remnants of past industries, such as these graffitied foundations. (Bill Jacobs)

the slough to power mills he built on the big island.

Over the next 30 years, the dam was rebuilt and expanded, but it was too far away to serve the growing industrial base of Moline or the U.S. Army, which built Fort Armstrong on Rock Island in 1816 and was enforcing its claims by pushing settlers to the mainland. After agreements that gave the Army power from the dam across the slough, it helped build a lateral dam parallel to the Moline shore. This lateral dam was a great, mile-long wall in the river upstream from the peninsula. It had a series of gates that drew power from the river pushing against the shore, and it delivered power via cables to shops along the riverfront. The dam worked, but the water behind the wall never drained completely, and soon there was a fetid, stagnant pool of trash and dead animals hard up against the small peninsula. To drain that pool the Army and Moline Water Power blasted a 2,000-foot-long, 200foot-wide tailrace channel through the peninsula, creating Sylvan Island.

(Sylvan Island continues on page 63)



An artificial channel cut Sylvan Island away from the Moline shore, at bottom in the photo above. Arsenal Island is north of Sylvan Island. The river flows from east to west (right to left) through the Quad Cities. (Kuchera International, Rock Island GIS, Spring 2005)