RIVER TALK

THE MINNESOTA RIVER CURRENT

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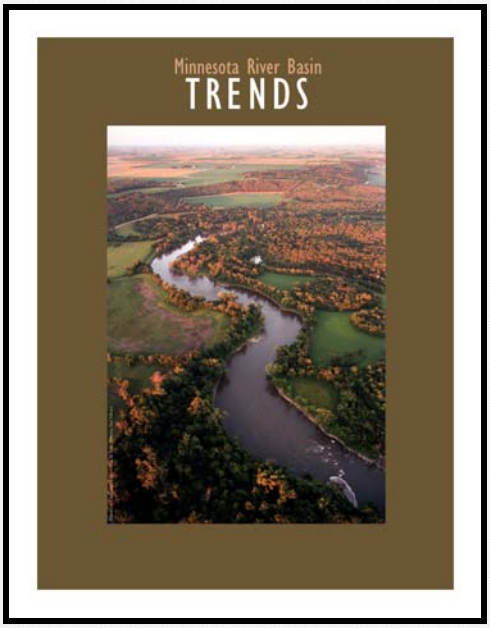
Minnesota River Basin Trends Report

Prior to Euro-American settlement, more than 18 million acres of prairie covered Minnesota. Our prairie lands were part of the largest ecosystem in North America, which stretched from Canada to Mexico and from the Rockies to Indiana. A wealth of diverse species, habitats and cultures thrived here. At the time of Euro-American settlement, upland prairie spread across most of the land south and west of Mankato. Historically, fires burned annually over large areas of Southern Minnesota limiting frequency and location of trees.

The Minnesota River Basin Trends Report takes the reader on a historical journey from the time of the early explorers discovering a immense tall-grass prairie inter-mixed with wetlands, shallow lakes and forested areas to today's dominance of agriculture on the landscape, specifically row crop farming. This easy-to-read and digest broad overview summarizes some of the major demographic, land use, water quality, biological, and recreational trends in the Minnesota River Basin.



Developed by the Water Resources Center at Minnesota State University Mankato, an inter-agency and citizen team helped shape the document, provide data, research and assistance. As a result, a diverse selection of trends have been examined including land use and demographics, water quantity and quality, living resources – aquatic and terrestrial life – along with river and lake focused recreation. A number of emerging trends are also mentioned.

The reader will discover how the "Big Woods" had dominated a large area of the eastern basin from Mankato north and east. Once filled with elm, sugar maple, basswood and oak, the deciduous forest successfully resisted the onslot of wild fires that helped maintain a vast tall-grass prairie that surrounded it on all sides. Today, less than two percent of the "Big Woods" remains after Euro-American settlers cut most of it down to construct buildings and use for firewood while converting it to cropland.

A change in demographics is covered as southwestern Minnesota continues to experience an ongoing population decline while urban areas like the Twin Cities expand in size and population numbers. Counties like Lac qui Parle, Lincoln and Yellow Medicine near the border with South Dakota have seen their population grow smaller and older since the 1940 census with fewer avenues for younger people to find higher education opportunities, jobs and social amenities.

Farm land dominates the Minnesota River Basin with the average farm size growing larger along with fewer farms, matching the population trends found in the state's rural areas. Crop types have also changed as a diverse array of crops including wheat, oats, and alfalfa have been mostly replaced with corn and soybeans.

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DID YOU KNOW?

Digging for clams or mussels in the Minnesota River became a major business opportunity in the late 1800s and early 1900s for making pearl buttons. New Ulm was a center for this industry in the basin as clammers moved up river into the Granite Falls area. According to the Yellow Medicine County History book, the clamming industry got its start here in 1916.

A crew of clammers from Muscatine or Comanche, Iowa arrived in Granite Falls with their paraphernalia. They brought the clams into the boats with rakes, removed the mat and piled the shells for shipment to a button factory. Occasional pearls were found, but of poor quality. Many carloads of clam shells worth $30,000 were shipped from Granite Falls in 1916, taken from the river between Montevideo and Mankato.

During the Great Depression of the 1930s a number of local residents took up clamming to make money in this economic difficult time. *Each afternoon Ole Twedt gathered six or seven bushels between the rapids and dam. He found this an ideal place for pearl clams because of the amount of refuse in the river. A pearl is formed when a piece of foreign matter is taken into the shell and irritates the flesh, causing a hard protective coating to form around the foreign object, Twedt was reported to have found seven excellent pearls, five the size of shoe buttons, three cream colored, the others bluish white.*

Digging for clams continued into the 1930s with 80 tons of shells harvested in 1933 by the Smith Brothers of Granite Falls and another 70 tons in 1935. All these shells were shipped to button factories in Iowa. Today, no live mussels may be collected in Minnesota without a special permit from the Department of Natural Resources.

River Talk is published quarterly in conjunction with the Minnesota River Watershed Alliance (Watershed Alliance) and partners. Thanks to the McKnight Foundation for funding this effort.

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The Minnesota River Watershed Alliance

Martin and Loretta Jaus run an organic dairy farm in western Sibley County on land his great-grandfather homesteaded in 1877. After working in Chicago at a wildlife research center in the 1970s, the Jaus moved back to the family farm in 1980 during the middle of the agriculture crisis. They are committed to conserving the natural resources of their farm and providing habitat to a diverse selection of wildlife.

Going Organic

"My dad, he was never organic, relates Martin, "but probably pretty close to it. He had some bad experiences [with chemical farming]. I would call him a sustainable farmer. We farmed like that the first 10 years we were here." After someone suggested they were already organic farmers, the Jaus applied and became certified their first year.

In order to become a certified organic farmer, the Jaus had already been farming without the use of chemicals and their land needed to be free of chemicals and genetically modified organisms for three years prior to certification. They joined a farmer-owned cooperative Organic Valley (over 1200 members) after meeting the organization's pasture standards – All cows need to graze for at least 120 days each growing season on open pasture along with 30% of their food intake.

Pasture System

"The cows do all the work," says Martin. "They do the harvesting, they deposit the fertilizer. And work it in. Basically no fossil fuels are used in the system." The Jaus use rotational grazing where their cows move between 25 paddocks. As a result, the cattle graze on fresh grass every day. This allows each paddock to rest from any cattle for almost a month letting the grass grow and allowing the root system to rebuild itself.

According to the Jaus, treating their farm as a natural environment and producing organic milk provides mutual benefits. By doing rotational grazing along with diverse crop rotations, they are able to build up the soil's organic matter. This helps produce healthier crops and water flowing off their landscape ends up being cleaner. Going chemical-free has been a major benefit for insects including pollinators along with providing food for all the birds their farm attracts.

Wildlife Benefits

"We've really worked hard to improve the wildlife, states Martin, "the biodiversity on the farm. I grew up on the farm and always loved wildlife. We've done a lot of little things. Somehow it's all come together." The little things include restoring a wetland and native prairie along with planting trees. One example of their commitment to wildlife of all types is the ponds they dug for amphibians and mourning doves.

One of the results of restoring an 11-acre wetland prairie and planting five miles of shelterbelts has been the 200 different species of birds that now visit the farm including grasshopper sparrows, bobolinks and meadowlarks. On the seven-acre CRP land the Jaus enjoy seeing 400 to 500 doves on summer evenings. All of this has double benefits including the trees which help shelter the cattle and reduce wind erosion.

"We've done a lot of things," Martin recalls. "They're all small things. But for some reason on this farm they've all come together. There's life in the soil."

Martin and Loretta Jaus stand by their 1928 barn

Neighborhood Outreach

The Jaus' 410-acre farm has been both a curiosity to the neighbors and hopefully an example to those farmers who might want to go the organic and conservation route. Loretta points out how "the organic movement has made it possible for small family farms to survive. If you had to look at maintaining hundreds of cows and thousands of acres . . . the capital outlay would be so much greater. You're not running back and forth with the tractors, and not using the fertilizers, which are petroleum based. With organics, it's the consumers that are driving it."

"Chippewa River considered 'hot spot' in MN River drainage for native mussels"

By Judy Swenson, Montevideo American-News

Where might one find a pocketbook, a mapleleaf, a pigtoe, deertoe or elktoe? In the Chippewa River of course. The above are examples of freshwater mussel species indigenous, or occurring naturally, in the upper midwest.

Unbeknownst to many people, mussels (also called clams) are a critical component in the ecosystem of our rivers and lakes. There is a growing body of research looking at the functional role of mussels within aquatic systems.

Lentz Landing, 10 miles north of Montevideo, below the Highway 40 bridge, is an area of the Chippewa River looked upon by malacologists (biologists that specialize in mussels) with the Minnesota DNR and related organizations as a "hot spot" for mussel diversity within the Minnesota river drainage system. The area was selected as part of a long-term, statewide monitoring project by the Minnesota DNR to understand and monitor the status and distribution of all mussel species in Minnesota.

"In the Chippewa River are some of the best remaining mussel assemblages in the entire Minnesota River Basin, which is a good indication that the river is healthier than other main stem river tributaries," says MnDNR malacologist Bernard Sietman of St. Paul.

Sietman and other environmental scientists recently checked out the mussel scene at Lentz Landing as part of their continuing study aiming to monitor mussel populations over time. Mussels assemblages are a critical factor in determining the river's state of health.

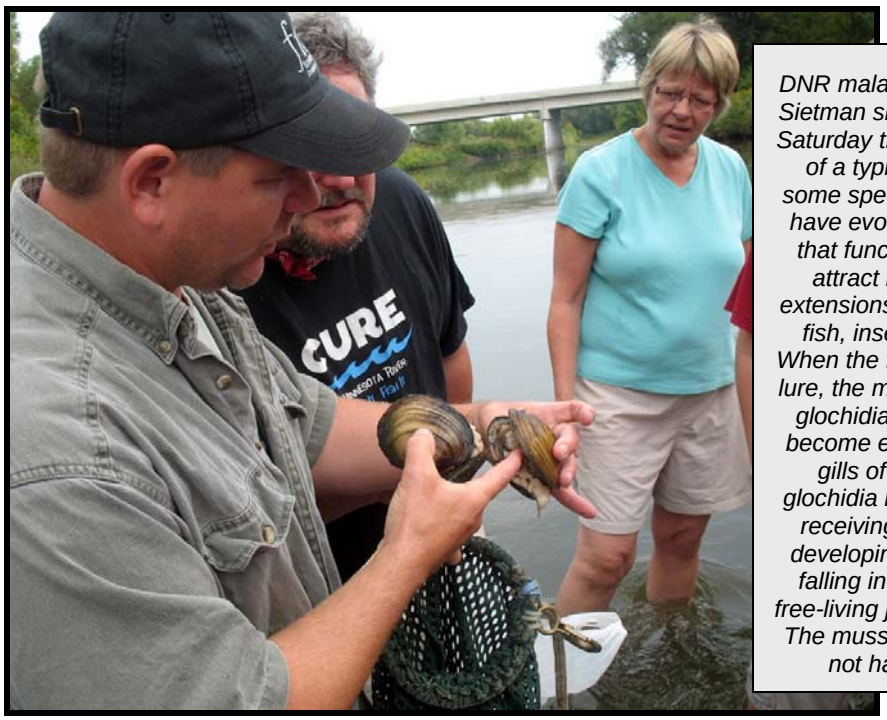
DNR river ecologist Mike Davis, DNR interns Kylie Bloodsworth and Ben Bosman, Scott Kudelka from the Water Resources Center in Mankato, Paul Wymar from the Chippewa River Watershed Project in Montevideo, and volunteer Angie Becker Kudelka spent Thursday, Sept. 12 and Friday, Sept. 13 wading the waters of the Chippewa River at Lentz Landing unearthing as many mussels and shells as possible in a pre-determined section of the river, recording numbers and species, then returning them to the water.

A Mussel Walk on the Chippewa River

Saturday morning Sietman and watershed scientist Paul Wymar with the Chippewa River Watershed Project led a mussel hike at Lentz Landing open to the public. The hike was made available to help raise awareness of these creatures and their importance to the environment.

The group of around 25, including a number of enthusiastic youngsters, meandered down the short path to the water and began wading. They were thrilled to find mussels, large and small, alive and expired.

Sietman, as everyone handed him their finds, identified the assorted species and talked about their life cycle, how they reproduce, and why they are so important to our environment.



DNR malacologist Bernard Sietman showed the group Saturday the different parts of a typical mussel. In some species the females have evolved extensions that function as lures to attract host fish. The extensions resemble small fish, insects or worms. When the fish strikes at the lure, the mussel expels the glochidia (larvae) which become embedded in the gills of the fish. The glochidia remain in the gill receiving nutrients and developing, then detach, falling into the water as free-living juvenile mussels. The mussel parasite does not harm the fish.

Working on the MN River – Cleaning our act to clean the earth

By John Fritz, MSU Reporter

MSU's Water Resource Center sets its aim on the Minnesota River.

To clean up the Minnesota River, the state needs to clean up its act. According to the Minnesota River Board, the river is one of the nation's most polluted. Dr. Shannon Fisher serves as director of the board and of the Water Resource Center at Minnesota State. Despite improvements in the river's health over recent years, "there's still a long way to go," Fisher said.

The Water Resource Center plays a large role helping state environmental and conservation agencies determine the condition of the Minnesota. It collects and analyzes data on the Greater Blue Earth Watershed. The watershed empties into the Minnesota River Basin, which encompasses 15,000 square miles of Minnesota, Iowa, North Dakota and South Dakota.

The center hires both graduate or under-graduate students from a wide range of departments, including biology, civil engineering, city planning, environmental science and geography, to assist in research. "We offer students a unique relationship of academic and practical applications," Fisher said. "They can get an amazing hands-on experience."

Among other duties, students do work in wetland assessment, global information systems and bacterial and sediment analysis. "The students and staff deserve the credit," Fisher said. "They're out in the field doing the research, and they're the reason state agencies consider it worthwhile to continue to fund our center."

Last year the center received $1.2 million to continue its applied research, which includes monitoring the water quality of the Minnesota River. The river board's website lists several factors in determining water quality:

- In high concentrations, nutrients such as phosphorus and nitrogen can cause harmful effects to plants and animals in the river.
- Dissolved oxygen is essential for aquatics animals.
- Bacterial contamination can pose health risks to individuals exposed to such waters.
- Toxics can affect the survival of riverbed-dwelling organisms. Pesticides are detected in Minnesota River Basin waterway.

Contributors to pollution include industrial and wastewater treatment plants, but also more indirect sources such as sedimentary run-off. While farmers, who make their living from the topsoil, do their part to stem run-off, tributaries also slough off large amounts of sediment. Fisher said humans have exacerbated this naturally occurring process by changing the soil composition over time and draining large areas, which artificially lowers and raises water levels.

He said climate change also affects the hydrology of the region. "Even if the amount of rainfall has remained constant, the way we receive it has changed. Instead of five days of half-inch rainfall we have one day where it rains three inches," he said.

Despite pollution, people can still safely come into contact with river water and eat fish out of the river, provided they obey state mercury guidelines. Mercury contamination is a problem in all Minnesota waters. Fossil fuels emit mercury into the atmosphere (in addition to vehicle emissions, most of the state's energy comes from coal-burning power plants), where it enters waterways through precipitation. Fisher recommends eating smaller fish, which haven't had time to absorb high levels of mercury.


The Minnesota River

Fisher still sees improvement to the overall health of the river. He is encouraged by the reemergence of some pollution-sensitive fish species not seen in the Minnesota River for decades. For the first time in 40 years fishermen report catching lake sturgeon on the river. This indicates how long the rehabilitative process can take. "When you abuse a river for 120 years, it's not fixed in 10. Be patient," Fisher cautioned.

"The river has a bright future, but it's a constant challenge to keep it bright. People want to do the right thing . . . but we want to live our lives and use our waterways." The key, he said, is controlling our impact and striking a balance between conservation and our own social and economic needs. "We can never get the impression our job is done," he said.

Paddlers Enticed by Sounds of New Orleans

By Aldo Santin, Winnipeg Free Press

Winnipeg musicians Murray Jowett and Nick Turnbull headed off on their adventure on September 15, 2009. These two young men set off on a once-in-a-lifetime adventure paddling by canoe to New Orleans. Jowett and Murray, both 21, set off just after daybreak from the bank of the Assiniboine River below the foot bridge at Assiniboine Park.

"We're doing it for the adventure and partially for the music and just for the challenge," Jowett said as their family and friends gathered to see them off. The young men decided to take a break from school to do the trip. They will travel up the Red River into North Dakota, portage to the Minnesota River and then to Minneapolis and the Mississippi River and all the way to New Orleans.

"We're going to New Orleans because . . . that's where the Mississippi ends," Jowett said. Only Turnbull is an experienced canoeist but he said he's never done anything like this before. They expect the trip will take three months but they've talked to others who've traveled the same route and it's taken them longer.

"We'll use the coming cold weather as motivation," Turnbull said. "We'll be going harder to stay ahead of winter." "We'll be back by Christmas," Jowett said, adding they both plan to resume classes in January. It's going to be an exhausting trip, more than 4,800 kilometers. And it can be dangerous. The Mississippi is a busy waterway, with several dams and dikes.

Local veteran adventurer Don Starkell, who canoed to the Amazon and followed the same Winnipeg-New Orleans route, said Jowett and Turnbull have taken on a tough challenge, especially leaving at this time of year. "They're making one hell of a mistake starting at this time of year," Starkell said, adding the 800 kilometers to Minneapolis will be difficult. "It's going to be cold, really cold. You're going upstream and the mosquitoes and camping will be bad."

Starkell said it took him three months to get to New Orleans but he was a veteran canoeist, adding he'll be surprised if Jowett and Turnbull can match that speed. "We took four days to get to the border, 10 days to Grand Forks, 17 days to Fargo and a month and seven days to reach Minneapolis," Starkell said.

The Mississippi is a busy waterway, Starkell said, but Turnbull and Jowett can avoid barges and big ships by sticking close to the shore but that will also keep them out of the current and slow them down. He said there are a series of 16 or 17 locks and dams along the route, which will slow them down further.

Turnbull and Jowett said they aren't bothered by the challenge. They have a cellphone and a GPS device. They've also packed a fiddle and a guitar. "We'll be playing along the way," Jowett said. "We'll make music, meet people and have a laugh."

They didn't expect to get too far on their first day. They were supposed to be just outside the city limits on their first night. Turnbull said his father will drive down to New Orleans to meet them and then drive them and their gear back to Winnipeg.

An Update

As of October 10th, the two paddlers were still on the Red River and had made it as far as Fargo. After pushing against the current, into the wind and rain Jowett and Turnbull rested for a few days and celebrated an early Thanksgiving with family and friends. For both of them it has been an interesting trip so far.

With dropping water levels on both the Red and Minnesota rivers, this pair of Winnipeg citizens decided to hitch a ride with a new friend to St. Cloud to paddle the Mississippi River the rest of the way to New Orleans. Both paddlers said they met many new friends along the way with people being generous and welcoming.

"Minnesota River Falls Open House"

By Scott Tedrick, Granite Falls Advocate Tribune

There were plenty of questions but very few definitive answers, during the October 1st Minnesota Falls Dam open house. Twenty-plus citizens showed up for the question and answer setting co-hosted by Xcel Energy and the Minnesota DNR at the Granite Falls City Hall.

Community members' queries were laced with caution as they sought to understand the affects on the Minnesota River should the 109 year old dam be lowered or removed. But whether those concerns hold merit will not be revealed until the completion of drawdown study currently being performed on the dam.

While most of the present indicated that they will withhold their opinion until all of the data had been gathered, Chris Domeier of the DNR's Fisheries department was comfortable saying that he would like to see the dam come down. Domeier indicated that by restoring the portion of the river back to its natural state that fish, such as sturgeon, will again be able to migrate back up stream, greatly improving the environment for fishing in the area.

Shareholders, Ratepayers First

The fate of the dam came into question recently when the DNR informed Xcel Energy of the concerns of its structural integrity. Initially, the dam was used for hydro power and then later on as a reservoir for cooling the Minnesota Valley Generating Plant. However, since 2004 it has served no purpose for Xcel, and representatives of the company in attendance said that there are no present plans to utilize the dam in the future. Still, regardless of the company's want or need, the dam remains the responsibility of the utility.

Minnesota Falls Dam

In deciding its course of action Xcel has hired Barr Engineering to analyze the dam and the affects of its alteration to areas up river while also seeking public input. "Obviously we have to look out for ratepayers and shareholders interest first," said Xcel Energy Senior Environmentalist Analyst/Scientist Jim Bodensteiner, before adding that the company will also try to take into account the desires of the local community.

There are three options with the dam: it can be removed completely, rebuilt or augmented to a lower height. One of these three options will be Xcel's responsibility unless another entity, or collective, takes ownership of the dam.

According to McDonald it would cost an estimated $4,000,000 to rebuild the dam, and cost somewhere in the vicinity of $1 million to take it down. Based on just dollars, and without taking into account forthcoming information from the engineering study, this suggests that if Xcel is looking out for its profit then the rational step would be to take the structure down.

Public Input

For the vast majority of the community who showed up for the meeting, the dam's removal would run in opposition to the expressed desires to see the structure remain. "I really would hate to see it taken out, I think it's the worst thing could happen to the city," said Granite Falls resident and county commissioner, Dick Wambeke.

The commissioner and others in attendance expressed concern that the removal of the dam would create a perceived unsightly environment, particularly near town and Memorial Park, as a greater surface area of exposed banks became habitat for wetland plants such as cattails.

City and Business

The city and a few local businesses shared their concerns as well. Granite Falls Energy LLC., owns a water intake structure that draws water from the river as opposed to an aquifer. The company wants to make sure that there continues to be an adequate pool of water to draw from, and may face the expense of having to alter their current intake structure.

Dave Reimer of the Granite Run Golf Course made it clear that, "If I don't have the water, I don't have the golf course." Reimer says that river water is captured inside a holding pond from which he irrigates the golf course with millions of gallons of water a year. He worries that if the river drops he will not be able to hold the water in the pond. In the case of the City, the effluent line of the water treatment plant may become exposed if the water level drops enough and as a result pose a hazard.

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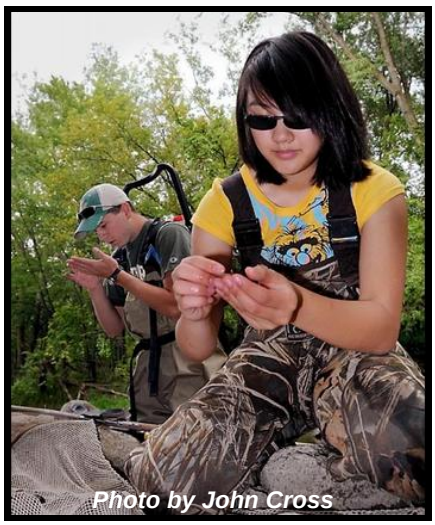
Loyola Senior Earns Grant for River, Fish Study

By Tanner Kent, Mankato Free Press

Standing knee-deep in the Big Cobb River, Lina Wang fits right in. Wearing camouflage waders and rubber gloves, she strings a net across gently rippling water. The suckers and darters and mudpuppies that catch in the mesh couldn't care less that Wang is still weeks away from starting her senior year at Mankato Loyola High School.



Lina Wang (right) is hoping her study on darter fish will shed light on the effects of river pollutants on fish populations. Just a senior in high school, this is Wang's second research study funded through an American Fisheries Society grant.

And the two Minnesota State University graduate students who accompanied her into the field could hardly care that their colleague is several years their junior. To the water and fish that have captivated her attention since she was a young girl, and to the fellow scientists who have helped coordinate the study, Wang's work has real value. But to the state and federal water control agencies that are watching her study closely, and especially to the American Fisheries Society that has now given her a second research grant, Wang's work is not just real valuable. It's also real remarkable.

"We very rarely see high school students," said Shannon Fisher, an MSU biology instructor who is also the head of MSU's Water Resource Center and Wang's research mentor. "She's a very sharp young woman and a pleasure to work with." Wang is among 35 high school students across the country selected to receive a Hutton Junior Fisheries Biology grant. The $3,000 awards are intended to stimulate interest in fish science and water management careers, especially among minorities and women. Wang was one of only three students in the country to receive the award for a second consecutive year.

Her study seems simple enough: By analyzing darter populations in the streams and rivers in the Minnesota River basin, Wang is hoping to shed light on the effects of pollution on ecological systems. Darters are small, finger-size fish that feed on algae and small crustaceans, and, depending on the species, can be used as an indicator of water quality because of their intolerance to some pollutants. Last year, Wang studied parasites in snail populations, also hoping to shed light on the effects of water pollution on ecological systems.

Fisher said such studies are important on a large scale and represent a divergence from previous research on the Minnesota River basin. "We've water quality for — literally — decades," Fisher said. "But we've not done such a good job of determining how water quality impacts ecology." Wang said she was barely school age when she began dreaming of a career as a marine biologist. Her parents installed a large pond in their backyard and stocked it with koi and shubunkins while middle school science teacher Chris Biehn encouraged her to pursue her marine interests for the yearly science fair.

Wanting to continue her scientific studies after junior high, Wang approached Fisher and MSU's Water Resource Center. Fisher said she should apply for a Hutton grant. "I've always been interested in aquatic life," Wang said. "So this has been a lot of fun."

Wang used this year's grant to purchase a fish identification key — which has been helpful for distinguishing the subtle differences between darter species — and a digital underwater camera to document her field research. The grant also allows Wang to team up with a research mentor (Fisher) and implement a summer-long study.

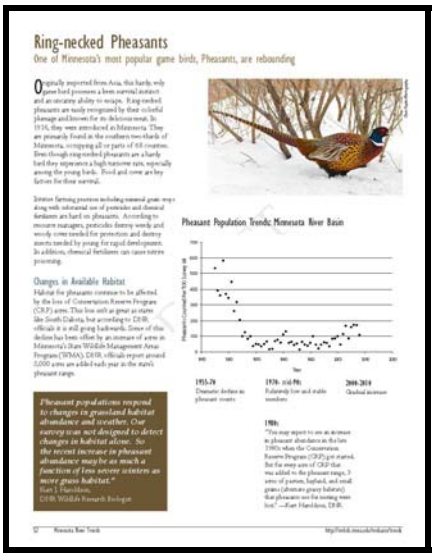
Wang said she hopes the study will help biologists in their effort to manage pollution and fish populations in the Minnesota River basin. And while she's not sure where she'll go to college next year, or when she'll begin her next research endeavor, Wang said she's pleased her hard work just might pay off. "We plan on sending all of our data to the DNR," Wang said. "Hopefully, it can make a difference."

Minnesota State University graduate students Matt Ribikawskis (middle) and Jon Lore help Wang collect darter samples from the Big Cobb River.

MN River Trends Report continued from page 1

Both aquatic and terrestrial life are looked at with trends on mussels, pheasants and river otters highlighted. Historically there were 41 species of mussels in the Minnesota River Basin with only 23 of those found today. Many of these species are listed as endangered, threatened or of special concern.

Chippewa and Pomme de Terre watersheds hold some of the best remaining mussel assemblages in the entire basin according to Malacologist specialists with the Minnesota Department of the Natural Resources. On the other hand, the Greater Blue Earth River Watershed is one of the most degraded for mussel species.


Ring-necked Pheasants

One of Minnesota's most popular game birds, Pheasants, are rebounding

Pheasant Population Trends: Minnesota River Basin

Changes in Available Habitat

Pheasant populations respond to changes in grassland habitat abundance and weather. Our survey can not designed to detect changes in habitat alone. So the recent increase in pheasant abundance may be as much a function of less severe winters as more grass habitat."

Ring-necked pheasants are one of most popular upland game birds with millions of dollars spent on protecting and increasing habitat for this imported Asian bird. From 1955 to 1970 a dramatic decline in pheasant numbers took place as more land was converted to row-crop agriculture and the Federal Government encouraged larger farming operations. Even the launching of the Conservation Reserve Program (CRP) - setting aside marginal farmland - didn't increase pheasant numbers. Minnesota DNR researchers point out that for every acre enrolled into CRP, 3 acres of pasture, hayland and small grains (alternate grassy habitats) that pheasants use for nesting was lost.

River Otter population in the Minnesota River Basin has been increasing since the early 1980s when 21 otters were released in the upper Minnesota River Basin. During surveys in 2000 and 2001, the Minnesota DNR discovered otter activity was most abundant on the upper and lower portions of the river, with few and scattered observations on the middle portion of the river. Today, there are an estimated 11,000 otters in the state with most in the northern half of Minnesota while numbers and distribution are increasing in the south.

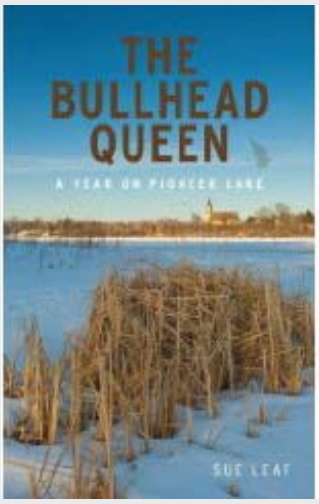
The Minnesota River Basin Trends Report can be found on the Minnesota River Basin Data Center web site at: http://mrbdc.mnsu.edu/

Book Review: The Bullhead Queen – A Year on Pioneer Lake by Sue Leaf

One of my aims in my essays is to model the habitat of seasonality, of tromps in the woods in autumn, cross-country skiing and skating in the winter, tapping maple trees in earliest spring, and so on. We consciously led our young children through these seasonal experiences, so that they learned to appreciate each season in turn, learned how to stay active, and learned how to pick up the clues to the turning of the great wheel of the year. Our family took Sunday afternoon and made it a time for hiking, skiing, canoeing – and hockey games.

Inspired by Aldo Leopold's "A Sand County Almanac," Sue Leaf touches on her own impacts on nature along with writing about her family's place in the human world. In this book Leaf writes about both natural and man-made changes on the lake.

Like the late Paul Gruchow's "Journal of a Prairie Year," Sue Leaf's "The Bullhead Queen" records a sensitive observer's impressions of local animals, plants, and partly developed lake across Minnesota's seasons. This is a gentle plainspoken book that finds its truths in what is most local and personal – a breviary for humble, semiwild/semideveloped places. – Jan Zita Grover



I think it is fitting to be sad. It means that something great and glorious is on the line, and one is not insensitive to the stakes involved. When I feel awash in sadness, though. I think of these things: first, the earth is very good at renewal. I am astonished each summer at the vast amount of biomass that the earth has put forth. And I also think of how quickly the Berlin Wall came down. For years and years, that wall seemed so permanent. And then, one morning we woke up, and there had been a sea change and a new world was dawning.

There's not a lot of us and we know each other well, on several different levels. But in an area of the state that is under constant assault from development, there is a continual stream of 'brushfires' that need to be stomped out. I just got home from a meeting of environmentalists, concerned about an – in our opinion – ill-conceived power plant that has been proposed for Chisago County. There's groundwater issues and air quality and noise pollution at stake – it's a big, big brushfire.

In September I got the chance to get out on the Chippewa River to help with a mussel survey conducted by the Minnesota Department of Natural Resources. You would think standing in cool rushing water in the rain wouldn't be an ideal of fun but it was a great time.

Mike Davis and Bernard Sietman, DNR malacologists know everything you would want to know about the mussels and can make even the most challenging conditions a blast. No one complained about the weather as we found a diverse selection of mussels and enjoyed the comrade of kindred spirits.

All of us came out because we care for the resource and enjoy spending time on the river with people who share the same ideas. What a better way to learn than getting wet and dirty as you dig to into the stream's strata to find a diverse selection of mussels. We went from shallow areas in the river to places where it took scuba diving equipment to get the river's bottom.

Mike and Bernard have enthusiastically embraced reaching out to the public to conduct mussel presentations and walks in the Minnesota River Basin. They have come out to the basin four times since 2007 to do these public events in the Cottonwood, Chippewa and Le Sueur river watersheds. This has been a great way to help connect people of all ages to a natural resource few of us know much of or think about.

I have seen kids as young as four and adults in their 70s get excited about playing in the water to find mussels of different shapes and sizes. We hope this time in the rivers will have a lasting effect on the public and encourage them to explore other elements of the natural environment. By reaching out to the public we have taken a major step in protecting and improving the Minnesota River Basin.

Let's all get out there to show our own commitment to protecting and restoring a favorite waterbody. You can volunteer to help with a city clean-up, see a public presentation to learn more about what is happening in the basin or attend a fundraiser for one of the many nonprofit organizations working for the benefit of the Minnesota River Basin. All of us have something to give back and be a positive influence to others.

Minnesota Falls Dam Open House continued

Still Preliminary

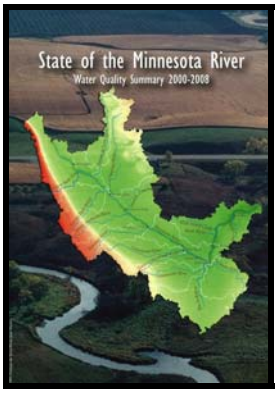
An idea of the affects, if any, the dam's removal will have on the public and businesses in Granite Falls will be apparent upon the planned release of a Barr Engineering analysis in the spring of 2010. The firm began the drawdown study in September, but has been unable to draw the water down significantly as a result of recent sustained rains.

Barr intends to draw down the river three to five feet, and then return it to normal before 'freeze-up,' expected in early November. When the river is dropped to its lowest level an archaeological group will have a chance to scour the banks for artifacts. MacDonald said that he did not foresee any work on the dam site beginning before the summer of 2011.


Downstream of the MN Falls Dam

State of the Minnesota River

The bi-annual water quality summary report for 2000-2008 is out. Put together by the Water Resources Center, Minnesota Pollution Control Agency and Minnesota Department of Agriculture, this overview summarizes water quality monitoring at four Minnesota River mainstem locations and fourteen outlets of major tributary streams. The information represents results from more than 4,000 water-quality samples collected from 2000 to 2008. Team partners include state and county agencies and many watershed projects throughout the Basin. For more information go to the MN River Basin Data Center web site: http://mrbdc.mnsu.edu/



Otter Tail withdraws from Big Stone II

Otter Tail Power Company withdrew as a participating utility and as the project's lead developer from the proposed coal-fired power plant Big Stone II on the South Dakota side of Big Stone Lake. The reason for this action had to do with the economic downturn and a high level of uncertainty with proposed federal climate legislation and existing federal environmental regulation. This now leaves four utilities to decide if they want to proceed with the construction of the 500 to 600 megawatt plant.

MPCA to take over old Eden Prairie landfill

By the end of this year, the Minnesota Pollution Control Agency should be taking ownership of the Eden Prairie Flying Cloud landfill. The 106-acres landfill located on a bluff overlooking the Minnesota River - once a deep gravel pit - closed in 1986. Overall, the landfill is in good shape, with monitoring wells showing volatile organic compound levels dropping. According to MPCA staff, this means the water inside the landfill is gradually getting cleaner.

The landfill does need a new cover, projected to cost $15 million. As the decomposing trash settled, the existing clay-and-earth cover is cracking and leaving places for water to pool instead of running off.

Celebrating hummingbirds in Henderson

At the end of August, the community of Henderson participated in a hummingbird survey. Don Mitchell of the University of Minnesota Extension Service led the effort to capture each of the hummingbirds and attach a tiny metal band on a bird's leg. Sponsored by Henderson civic leaders, they wanted the event to draw attention to the importance of the Minnesota River Valley to song birds, especially during migration time. This river valley has been identified as one of the state's 35 Important Bird Area.

Cougar reported: DNR official skeptical

A possible cougar sighting was reported near St. Clair at the end of September by two students from Minnesota State University Mankato. Melissa Enter and Nathan Bartell spotted it along the Le Sueur River while shooting photos for an urban studies class. Enter managed to take a blurry photo of the animal before it disappeared. After viewing the photo, DNR Wildlife Manager Ken Varland expressed skepticism of it being a cougar. Varland said the body seemed too short and it appeared to have a white strip on its rear left leg.

Drought replenishes Long Meadow Lake

The summer drought of 2009 did wonders to the Minnesota Valley National Wildlife Refuge's Long Meadow Lake. A 2-foot drop in water level exposed mud flats as the lake became a collection of shallow pools. According to Refuge biologists, the benefits to plants and waterfowl were almost immediate. New growth of native plants like smartweed, arrowhead and beggar's tick help stabilize the lake bottom. A new water-control structure and work by the Youth Conservation Corps removing a beaver dam assisted with the dry conditions.


Long Meadow Lake

Storm Drain Stenciling in Lafayette

Citizens and the City of Lafayette worked together to initiate a storm drain stenciling project to raise awareness about the link between city storm drain systems and water quality. John Paulson, a water conscious Lafayette resident led the effort with assistance from Al Fox, the city Utility and Maintenance Superintendent and Brooke Patterson, former Rush River Watershed Coordinator. They stenciled approximately 20 storm drains.

Joseph N. Nicollet – "On the Plains and Prairies

"Sunday, August 5, 1838 – Ascended the riviere Chippewais [Chippewa River] for nearly 2 miles this morning, having left the camp at its mouth. It is 70 feet wide, 3 to 4 feet deep, a strong current, water quite transparent on a sandy bottom. Its volume is almost equal to that of the Minnesota at their junction. The water of the Minnesota is distinguished from that of the Chippewa by a very tenuous suspension which gives it the appearance of muddled water. As the French of the country say, water slightly troubled, a little whitish, without transparency in the water. It is the condition which the Sioux express by Mini Sotta.

"At 7:15 we camp below the tenth rapid, or three rapids below the falls [Granite Falls], which is about 3 to 4 feet in an inclined plane and very similar to that of the Mississippi near Elk River.


The Minnesota River

"The three cliffs rise from the base of the oak hill immediately on the edge of the river; they present indisputable forms of stratifications inclined from 30 to 40 degrees NNE, I believe. They are from 12 to 20 feet high. The boulders are still on top of these layers. All this valley is filled with masses of rock formed from scattered hills, where the masses accumulate mixed with primitive boulders. It is the rocky bed of the river which forms the rapids, the barriers, and the flumes, etc.

"Tuesday, August 7, 1838 – Left camp at 6:00 in the morning. Hawk Creek and Yellow Medicine River are very wooded their whole length; the first is still shaded by red cedars. The second is important; it is nearly 60 feet wide at its mouth with a 3-foot depth. The water is clear and runs over a bed of sand and pebbles.

"Wednesday, August 8, 1838 – Redwood River [right bank of Minnesota] – 30 feet wide, strong current, water lively and clear. Large river, much water, but without current, mouth hidden by beautiful trees. It is well wooded on its banks, ascends a beautiful coulee also well wooded. It does not extend far on the high prairie. I had taken it at first for la riviere aux Castors [Beaver Creek], but we have discovered later that one is 2 ½ miles farther down.

"Friday, August 10, 1838 – At the mouth of the Cottonwood [River], there is a red rock [quartzite] of the same kind as that which covers the pipestone and which exists in hard fragments scattered on the floor of the pipestone quarry.

"Traverse of the Cottonwood. Camped. Width of the Minnesota at the traverse of the Cottonwood = 180 feet. Width of the Minnesota at the mouth of the Cottonwood – 100 feet. Width of the Cottonwood at its mouth = 74 feet.

The mission of the MINNESOTA RIVER WATERSHED ALLIANCE (Watershed Alliance):

The Watershed Alliance is a network of citizens, public agencies and private organizations that communicate the benefits of an ecologically healthy Minnesota River Watershed to others and who actively work towards its improvement and protection.

Questions and comments on the River Talk newsletter can be directed to: Scott Kudelka; Water Resources Center; 184 Trafton Science Center S; Mankato, MN 56001; 507-389-2304 or scott.kudelka@mnsu.edu