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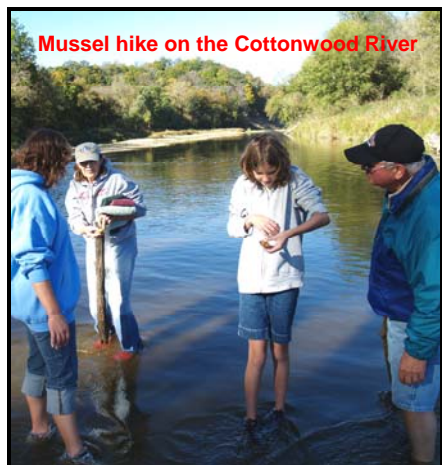
RIVER TALK

THE MINNESOTA RIVER CURRENT

EXPLORING THE WONDERFUL WORLD OF MUSSELS

Fun is how 9- and 10-year-old cousins George and Matthew Hartley described the Cottonwood River “mussel hike” on a pleasant September morning. The boys from Lafayette discovered a lot of cool things including numerous live mussels, minnows, crawfish, a bone shaped like a duck’s beak, dragonflies and dragonfly nymphs. For their adventure they got soaked to the knees and spent a morning in the great American outdoors.

Close to 50 people of all ages participated in the “mussel weekend” put on by the Minnesota River Watershed Alliance with assistance from Mike Davis and Bernard Sietman, Malacologists with the Minnesota Department of Natural Resources. Besides the morning hike, Davis gave a more formal presentation on Friday Evening.



Mussel hike on the Cottonwood River

Led by Davis and Sietman, the group spread out in the river next to Flandru State Park not only to look for live mussels, which usually meant digging into the mud of the stream bottom, but also pick up old shells to see what used to live in the Cottonwood River. After three hours of wading in the ankle to knee deep river a total of 24 live mussels from six species were found along

with empty shells of eight species.

According to Scott Kudelka, communication coordinator of the Minnesota River Watershed Alliance, this “mussel weekend” was held to give people a chance to connect with the river even for a few hours. “I feel we were successful, especially with the kids who had a great time getting wet and dirty,” stated Kudelka. “They jumped right into the water and loved observing anything up close and personal.”



Bernard Sietman & Mike Davis searching for mussels in the Cottonwood River



Mike Davis holds up a Plain pocketbook (*Lampsilis cardium*) mussel

The Minnesota River Watershed Alliance was fortunate to been able to work with two talented and dedicated “mussel experts” - Mike Davis and Bernard Sietman. Both patiently answered every question thrown at them and were on their hands and knees searching for the mussels by touch only. Mike and Bernard travel across the state conducting mussel surveys and have been working to restore the endangered Higgins eye (*Lampsilis higginsii*) on the Mississippi River.

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DID YOU KNOW?

Tim Rundquist of the Fergus Falls Daily Journal recently wrote an article on how "Aunt Ednas" are easing foreign fuel dependency. Rundquist said Jimmy Carter got one thing right during his presidential term, setting the national speed limit at 55. "Fuel consumption in fact modestly, but measurably decreased, and American consumers were a little less vulnerable to the foreign crude-oil cartels that had driven the crisis.

"Now we fast-forward a few years to the go-go 80s, where 'greed is good,' where OPEC fears have long since faded into the rear-view mirror." President Regan threw out the 55 mile-speed limit by linking it federal transportation funding and Detroit responded by cranking out monster trucks and SUV's.

"Finally, we fast-forward to modern times. Buck-a-gallon gas is but a distant memory, and even \$2 would seem like a steal. It can now cost \$100 or more in some locales to fill up that Hummer, and indeed, the guzzlers are increasingly gathering dust on the retail lots."

According to Rundquist not everyone jumped off the 55 bandwagon or bought a Detroit-produced gas guzzler. Our Aunt Edna "is the one in the right-hand lane, poking along at an even 55 mile-per-hour - as everyone else impatiently flies past. It takes her maybe 20 to 30 minutes longer to reach downtown Minneapolis from Fergus, but she has plenty of time anyway.

"We all have been 'stuck' behind Aunt Edna in local traffic; indeed, it is one of the signature characteristics of our region. But, what does she know that we don't, or that we seem to have forgotten? Is there a reason why she seems to get more out of a tank of gas than anyone else? Is Aunt Edna thinking about easing foreign fuel dependency, curbing the release of greenhouse gases and other pollutants, or old-fashioned values of thrift and economy?

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.

Watershed Alliance Coordinating Team:

Charlie Guggisberg, Brown County

- cntyadm@co.brown.mn.us
507-354-5797

Patrick Moore, Clean Up the River Environment

- cure-ed@info-link.net
320-269-2984

Scott Sparlin, Coalition for a Clean MN River

- yasure@lycos.com
507-359-2346

Lori Nelson, Friends of the Minnesota Valley

- lnelson@friendsofminvalley.org
612-370-9123

Loren Engelby, Kandiyohi County

- loren_e@kandiyohi.mn.us
320-235-3266

Dee Czech, MN Earth Sabbath Team

- dczech@frontiernet.net
507-964-5171

Larry Gunderson, MN Pollution Control Agency

- larry.gunderson@pca.state.mn.us
651-296-8402

Shannon Fisher, Water Resources Center

- shannon.fisher@mnsu.edu
507-389-5492

Watershed Alliance Staff:

Scott Kudelka, Communications Coordinator

- scott.kudelka@mnsu.edu
507-389-2304

Check out the Watershed Alliance's web site:

<http://watershedalliance.blogspot.com>

Join the Watershed Alliance's bulletin board to receive regular updates on what is happening in the Minnesota River Watershed at:

<http://mail.mnsu.edu/mailman/listinfo/mrwa>





Chantill Kahler-Royer is a water resources engineer with Bolton & Menk, Inc. She and her husband and two daughters live in North Mankato.

What is the biggest issue affecting quality of life in the Minnesota River Watershed?

I think the biggest issue is a disconnection with the land and river and with the local community. We as a society have become much less connected to the land, whether it be nature or where our food comes from. We need to nurture the sense of place - by visiting state parks in the watershed, planting native plants, restoring wildlife habitat and buying from local food producers - so that the Minnesota River watershed doesn't end up becoming a generic suburb that could be Anytown, USA.

How do we connect the river to the public?

I think a key component of people caring about something is their familiarity with it. So, to allow more people to connect to the river, we need more

opportunities that allow them to spend time with the river. For instance, I live less than a mile from the Minnesota River in North Mankato, yet I hardly see it because of the floodwall. Mind you, I appreciate what the floodwall does in protecting my home. But I am very excited for the future plans to create parks that will focus on connecting the Greater Mankato Area

citizens with their river once again. I also think that community recreation activities would be a great opportunity to connect with the river - canoe trips, kids' fishing rallies, etc.

How do we get the youth involved in the issues affecting the Minnesota River?

I loved going fishing and walking in the woods with my family as a young girl. If we can connect youth with mentors that will take them fishing, camping, canoeing, hiking or swimming, and teach them an

appreciation for all that the natural surroundings have to offer, that will build a relationship with the environment. I think service projects like highway or river cleanup are essential to building a stewardship ethic, as well.

How do we get the different competing interests to listen to each other in a safe environment?

We need to get past the finger pointing at the other competing interests and what they're doing wrong and look at what we can do in our own family and work lives to make the environment better. Then we can seek out projects that we can all work on together toward a common goal. The competing interests will never completely become the same, but at least we can achieve some goals that all parties can appreciate.

What would you like to see as your legacy when it comes to your work with the Minnesota River?

I would like to empower people and show them that there are things they as individual citizens can do. So often we think that the problems are too big for us to handle, so we end up doing nothing. If each person can find something to do at work or at home - like including a rain garden in their yard, recycling, buying locally grown or made products or cutting back on fertilizers or pesticides - it will make a difference. Each small step counts in the journey towards a healthy environment.



What are the positive aspects of working with groups like Friends of High Island and Rush River?

I love meeting and brainstorming with new people who share my enthusiasm for protecting the environment. Together we can come up with, and carry through on, a lot more ideas.

What do you see as the role of the Minnesota River Watershed Alliance when it comes to improving, protecting, and restoring the MN River Watershed?

There are so many people who are passionate about the environment, but due to time/location constraints, can't be part of a larger group that may meet far away from their hometown. I like that fact that the Watershed Alliance is intended to represent many groups who all have a slightly different approach or focus, yet we can come together to work on a goal of our choosing. The people who attend Watershed Alliance meetings are often leaders in groups in their hometowns, and these goals are then shared with the other groups across the watershed, and that will multiply the good work!

EXPERIENCES OF THE SUMMER INTERNS

By Edwin Dumalag
Minnesota Pollution Control Agency

It is one thing to learn from a classroom, getting assigned reading from a professor or instructor and telling you what you need to know for a test. It is another to apply those things that professors and instructors have been grooming you for. Internships are the real world application. It is the experience that a single book or instructor can never give. Throughout my endeavors as an Intern at the Minnesota Pollution Control Agency (MPCA), the experience that I've gained is priceless. The job wasn't easy. In fact, the job is still going.

In April, when the internship opportunity was announced, I immediately expressed my interest. After a couple of Snafus, that I thought I'd never get out of, I finally was sitting next to my colleagues David and Clare who were also hired as interns to work on a project that, at that moment, was not known to us. All we knew is that it had to do with communications.

After our crash course in new employee training, it was time to meet the Minnesota River Groups. We headed to New Ulm to meet and make ourselves known to the Non-Profits, For-Profits, Governmental, and Non-Governmental groups that had a stake in the Minnesota River. The Minnesota River Summit II meeting was my first taste as to what stakeholders' attitudes were and what people wanted from each other. Ran by Robin Lawton from International Management Technologies, I could see where people were having agreements and disagreements. Talking to Individual stakeholders, I learned a vast of different things such as conservation practices, 3rd crop initiatives, and river based economies. There was rich knowledge within the stakeholders. Although the Summit II meeting was an important part of our understanding of what was going on in the Minnesota River, it was only a grain of sand in a vast beach of what was to come.

One of the many projects that Dave, Clare, and I were working, and still are working on, is the Strategic Communications Plan that was expressed in many meetings that we attended. This required more conversations with stakeholders that had their hand in the Minnesota River.

Dave, Clare and I traveled to the ends of the Minnesota River Basin, sometimes staying at different towns overnight, just to talk to individuals. It would not be uncommon for us to be in the middle of a farmer's field talking about Best Management Practice or conservation initiatives which some farmers are implementing.

The 6 a.m. departure time from the MPCA just to get to Worthington or some other city in the other side of Minnesota was not uncommon. However, the information that was given was truly valuable. The Strategic Communications Plan was, and still is, a big task that required a lot of time from all three of us. There were many hard times where we felt we weren't getting anywhere, and there were other times where we could not have had a more productive day. However, the Strategic Communications Plan wasn't the only project that I was involved in.

The Minnesota River CD Project was an endeavor that was started by Scott Kudelka of the Minnesota River Watershed Alliance and local Anthropologist Ross Gersten. The CD project was to tie in culture with the importance of the river in the lives of the many different ethnic groups that used the Minnesota River as a resource. This, in turn, would tie in to how important it is to restore and preserve the Minnesota River. I got involved as a funding proposal writer and median to the MPCA to help get the project off the ground. Scott also got me involved with another project that promoted organizations who helped with the clean up efforts.

The Minnesota River Friendly Label Project was another endeavor which gave a whole new set of challenges. This project was to study the feasibility and perhaps implement a labeling program to recognize organizations of every spectrum that helps in the restoration and preservation of the MN River.

The opportunity to work with the MPCA and the other organizations to help with great cause is something that I will always take with me no matter where I may land. Knowing that I helped, and still helping, gives me a sense of gratification that I have never really felt in my previous lines of work.





SISTERS GROW ORGANIC AT EARTHRISE FARM

**By Tanner Kent
Mankato Free Press**

The Fernholz farm has been off drugs for three years now. All sunshine and sweat, the Fernholz farm uses no pesticides, herbicides or genetic engineering. And that's precisely how School Sisters of Notre Dame Kay and Annette Fernholz like it.

It's a wonderful feeling that there are no chemicals on our 240 acres," Kay Fernholz said.

While three Fernholz brothers take care of most of the all-organic farming on the family's 240 acres situated near Madison, MN, Kay and Annette have their own 11-acre plot called Earthrise Farm.

Through Earthrise, the Fernholz sisters and an ever-changing assemblage of volunteers plant, tend and harvest enough fresh produce to supply families across southwest Minnesota and with a weekly supply of food.

Every week, the sisters deliver 40 to 50 boxes – all containing in-season vegetables – to cities such as Madison, Appleton and Montevideo. Some families are low income and can use the help, others are just too busy to grow their own. But all of them can be assured there's more than dinner inside their food packages.

"We really want to re-establish the hospitality that was once part of rural America," Annette Fernholz said. "Because of large farm sizes and the movement of people, that hospitality has been taken away."

Located in sparsely populated Lac qui Parle County on the westernmost edge of heart of



Minnesota, the Fernholz farm is situated in the one of Minnesota's most agricultural districts.

According to the MN Department of Agriculture, the acreage of land certified for organic farming statewide doubled in five years from 1997 to 2001. Minnesota also continues to lead the nation in the production of organic corn and soybeans.

But, according to Bob Gronski, policy coordinator for the National Catholic Rural Life Conference, organic farming is about more than not using pesticides.

"Organic farming is about caring for the land and creating a sense of community," Gronski said. "It's a care for creation and the chance for the community to come together."

With farmers' markets and food co-ops becoming more prevalent, so are the opportunities to buy food that is made and produced locally. Mankato and St. Peter both have farmers' markets and St. Peter has its own food co-op.

Organic farmers also make up a significant portion of those who donate to food shelves.

The Mankato School Sisters of Notre Dame were among the pioneers in opening the ECHO Food Shelf in the early 1980s and they have donated heavily ever since. Ted Evans, marketing coordinator for the Emergency Food Shelf Network, said that organic farmers are responsible for 25 percent of all donated produce.

"Plus, with smaller organic farmers, you get the produce when it's ripe," Evans said. "It's quite a treat when organic produce makes it to the food shelf."

Earthrise is more, however, than the vegetables its soils sprout forth.



Earthrise is also something of a spiritual oasis, a place where stewardship and community grows right alongside squash, peppers, onions and tomatoes.

Kay & Annette adhere to a philosophy that

views the earth as a living thing, as a conduit

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A PASSION FOR THE MINNESOTA RIVER

Art and Barb Straub live in an apartment in downtown Le Sueur but their heart, soul and passion belongs to the Minnesota River and the 200 acres of natural landscape they own along the river. They could easily be living in a large house filled with fancy furniture but instead decided to save protect their land in a natural state.

"The Straub land is the last undeveloped ridge line between here and Henderson and we



want to keep it that way," Art stated on a blustery fall day as he and Barb told the story of their land. "We have a son, a wonderful son who is 40 years old. He loves the land as well. We are hoping we can put it in some type of

park or land trust or whatever because we're not going to be around that much longer."

According to Art, his family has lived on this land for over 150 years and seen major changes including the building of Hwy 169 which cut through their property and the disappearance of small fields planted to crops like oats and pasture into large ones of corn or soybeans. Their land is literally becoming an island of trees and grasses in an ever expanding sea of development. The city of Le Sueur has been pushing to annex some of their property. This kind of talk cuts deep in the Straub's belief that we need the trees and grasses.

"Barb and I have 200 acres that are totally trees and prairie," said Art. "Our prairie is tall-grass prairie. We take kids from the churches and schools because we are retired teachers and want to take them through the tall-grass prairie way above their heads so they can pretend to be Laura Ingalls Wilder to get a taste of what it was like to be Laura and not be able to see through the grass."

Go for a walk with the Straubs on their land and you quickly learn how intimate they are with this natural landscape. Along the swiftly flowing Minnesota River, Art and Barb talk about the glorious return of Bald Eagle's nesting next to the river's edge. The first year – the year of the St. Peter Tornado – resulted in heartbreak when the last surviving egg got pounded by hail. Next year the eagles returned to the delight of the Straubs.

Now Bald Eagles are a common sight in the Minnesota River Valley and a positive story the Straubs enjoy telling. On our hike down to the river we stopped to check out 'Devil's Drop off,' formerly a bubbling small creek transformed in Art's lifetime into a deep scar on the landscape. Fortunately this gulch is becoming like the eagles and beginning to show signs of recovery.

"Devils Drop Off wasn't always here," Art told our small group. At one time the farm fields on all sides were cleared come fall and there was plenty of runoff. When we were growing up this was just a shallow little brook coming on from up top but as the land was cleared and the type of farming that goes on now occurred, the huge gorges began to develop, one coming from the north and one from the southeast."

Art went on to point out, " But in the last few years there is grassland on all but 120 acres and so the amount of runoff in a couple of weeks where we've had 10 to 12 inches of rain the runoff has just dropped off. Our dream is that this will eventually heal itself. This very same thing is going up and down the Minnesota River Valley where ever land is allowed to be completely fallow during the winter time."

Change is constant on the landscape and the Straubs are very much aware of this. As the Minnesota River continues to create a new channel as any healthy stream should, it eats away at the property of Art and Barb Straub. They have already lost a cabin and their comfortable homey-looking trailer will need to be moved soon. The Straubs have also seen this natural process sped up due to the influence of increased drainage and the simple act of running jet skis on the river. One day the Straubs know they will be gone but hope to preserve this natural landscape for future generations to enjoy like they and their family have for over 150 years.





The Minnesota River Watershed Alliance (Watershed Alliance) came together early in 2005 to engage citizens, landowners, recreational users, organizations, agencies and others who want to take action to bring about a vibrant prairie lakes and rivers environment for all of us living and working in the Minnesota River Watershed.

After two years of growing pains and literally getting our feet wet, the Watershed Alliance has started the process of looking inward at itself to see how the participants are feeling about its process, accomplishments and also help guide the future direction of this network of citizens, public agencies and private organizations communicating the benefits of an ecologically healthy Minnesota River.

One hundred surveys were mailed out to list of people who have participated in some form or fashion in the activities of the Watershed Alliance. Thirty-nine people took the time and effort to respond, giving us an almost 40 percent return rate. This is an amazing level of interest any organization could hope for and shows the interest people have in what happens next.



The first question asked how many issues the Watershed Alliance should focus on in 2008. Overwhelming (27) people want to concentrate on 2 or more issues. The top vote went for Clean Water and seven other issues had

at least ten votes or more. They included marketing & communicating; sustainable agriculture; farm bill policy and drainage reform.

Questions 3 and 4 dealt with what motivates and de-motivates people participating in the Watershed Alliance. The survey comments showed no major surprises. People are involved because they find out from others what's going on or keeping up and there is a greater power when we operate collectively.

Four main issues came up for the response what de-motivates a person's participation:

- Time constraints, busyness
- Egos, hidden agendas and self promotion
- Lack of progress / lack of concrete actions
- Travel distance to meetings

Breaking down the other questions responses:

- A wide majority of people want to continue using Michael Groh as the facilitator. Two people did respond by saying don't use one of the participants as a facilitator.
- The Watershed Alliance meeting should continue as it does now – 4 times a year. No one wanted fewer meetings and 7 said it should be more.
- Most people are very satisfied or satisfied with Scott Kudelka's job performance.
- When it came to who you represent, 26 people said themselves.
- I participate in the Watershed Alliance:
 - By regularly attending quarterly meetings (12)
 - Occasionally attending quarterly meetings (12)
 - Haven't participated since the first few meetings (8)
 - Have never participated in the meetings (3)
 - Active participation outside the quarterly meetings (5)
- A majority of people want to see an occasional guest speaker at the quarterly meetings.
- Over 30 people are willing to participate in a 4 to 6 hour session this fall to help decide the future direction of the Watershed Alliance. This is great to see and we hope to hold a 4 ½ hour strategic session in December.
- Overall people are satisfied with the progress and function of the Watershed Alliance but there is also disappointment by some participants.
- When it comes to the leadership of the coordinating team most people fell into the satisfied or neutral category with others either very satisfied or disappointed.

There were many additional comments by the survey participants. Five of them were mentioned more than once including:

- Increase participation / broaden membership,
- Be more effective in the media,
- We're having normal growth pains,
- Glad we're in the business of doing good work,
- Use bigger envelopes (that would be my fault)



What the Water Resources Center Has Done For Us!

The Water Resources Center at Minnesota State University, Mankato wholeheartedly embraces the concept of using students in water quality studies of the Minnesota River Watershed. Not only do we assist with water quality sampling, agriculture transect surveys and other related tasks, we also get to plan and implement our own studies.

At the Water Resource Center our daily tasks range from going out in the field collecting water samples to assisting with activities in the office. Each time we get a significant rainfall we go to each of the sites and collect water samples to test for phosphorous, Fecal Coliform, and total suspended solids. We have also been extensively involved with a research project.

James Fett & Justin Valenty placing Hester-Dendy artificial substrate samplers on the Blue Earth River

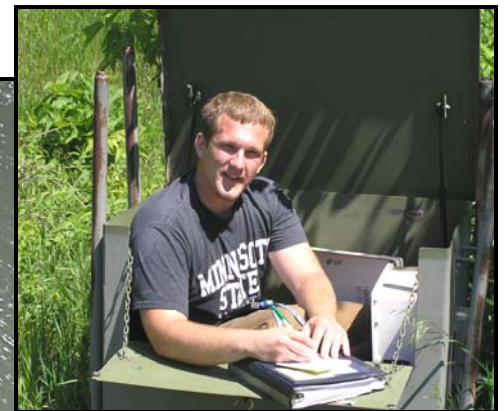


We are studying macroinvertebrate and fish populations within the Greater Blue Earth River Basin. Macroinvertebrates are aquatic organisms that live in rivers and lakes and inhabit many different types of substrate (rocks, vegetation, woody debris, leaf packs, cut banks, etc.). Our project began by using Hester-Dendy artificial substrate samplers. We placed these samplers at 21 different sites within the basin to collect macroinvertebrates. These sites give us a broad representation of different subwatersheds in the basin.

After letting them sit for six weeks, we collected them and preserved all specimens for later identification. We are also in the process of collecting macroinvertebrates using d-frame dip nets and are also collecting fish samples with an electrofishing unit at all of the same sites. We will be analyzing our data this winter and will be comparing the results between the three different sampling methods. With this data we will be able to make assessments regarding the health of the different streams within the Greater Blue Earth River Basin and be able to recommend which sampling method is most feasible, thus saving time along with financial resources.



Justin Valenty collecting macroinvertebrates



James Fett downloading flow data from the Buffalo Creek monitoring site in High Island Creek Watershed

The staff at the Water Resources Center has introduced us to several professionals through the activities of the Minnesota River Watershed Alliance across the Basin allowing us to make valuable connections for our own future job search and development. Hands on training have allowed us to learn about many of the different aspects involving water quality and biodiversity in flowing waters. All in all, the Water Resources Center has provided us with excellent experience and resources that will benefit our future in the biological field.

Exploring the Wonderful World of Mussels

(continued from page 1)

In an extended interview with Mark Fischenich of the Mankato Free Press, Mike Davis talked about the excitement of the participants. "It's very encouraging to me," said Davis. "People are really awakening to the value of rivers as educational tools and recreational opportunities." Throughout the two-day presentation, Mike and Bernard throw out a lot of interesting facts about mussels and their life cycle. Their excitement and knowledge proved to be an inspiration to some of the new "mussel finders," including 9-year-old Britta Hammerschmidt of New Ulm.

Did you know that mussels can live more than 100 years? Or that they can make a difference in a river's health. Mussels absorb bacteria and excess nutrients, along with stabilizing the bottom of rivers. How about this fact, North America has more mussel species than any other continent – over 300 of them. At one time there were 40 mussel types in the Minnesota River. Mike and Bernard were eager to share their knowledge and passion about this member of the Phylum Mollusca family.



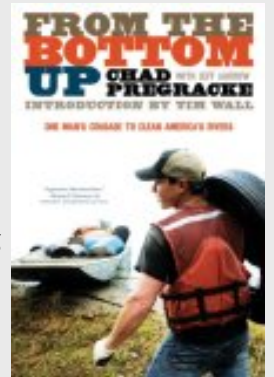
Today, mussels are one of the most imperiled groups of organisms in North America. In essence, they serve the unfortunate role of being the canary in the coal mine, telling us that something is wrong in our rivers. Lives of mussels have suffered from many threats including various contaminants in the water along with excessive sediment, dam construction, overharvesting and now by zebra mussels. This exotic species virtually suffocates and starves the native mussel.

On the Cottonwood River the DNR has surveyed 23 sites and found a total of 19 species out of 13 that were alive. During the surveys in the Cottonwood River Watershed over 646 live species were found in 58 hours. They included Plain pocketbook, Pink papershell, Cylindrical papershell, Creeper, Fat mucket and Fragile papershell. An empty shell of the lilliput mussel was found on Saturday, a first for the Cottonwood Basin.

Book Review: From the Bottom Up by Chad Pregracke and Jeff Barrow

As I motored upstream with a heavy load of clams, a huge pile of more than 50 steel barrels that stood exposed in the mud on shore caught my eye. This ragged mess had probably been rusting there for 30 years or more, and I had seen the site many times. But this time a 60-foot boat's white hull gleamed in the low-angled sunlight shining off the water. People were enjoying their cocktail hour on the back deck. As I looked at this picturesque setting, I thought to myself, "Is this how these people have to enjoy the river? Next to a pile of rusty barrels?" That was the moment I knew that I had to do something. If nobody else was going to do anything about the trashing of the Mississippi River, then I would do something.

In the summer of 1997, Chad Pregracke of the Quad Cities took it upon him self to clean up the mighty Mississippi River. Chad grew up on this truly American river learning to love this important natural resource but loathed all the garbage and trash.



For many decades, people treated the river as a sewer and garbage disposal. Illegal dumping was common – almost a way of life before cities and counties established landfills and good recycling programs. People dumped in the river because their parents did it and their neighbors did it. Or they dumped in nearby ravines, valleys, or ditches that would be cleaned by heavy rains. Eventually the trash would drain into the nearest river and get hung up on islands and shores.

Chad had no idea where to start and despite being dismissed by every government agency he approached this didn't stop him from pursuing his dream. He started out on his own with one corporate sponsorship and went on to found Living Lands & Waters, a not-for-profit environmental organization based in East Moline, IL. Under his leadership, millions of pounds of trash have been clean from our nation's waterways. Chad and his organization have tackled clean-ups on the Illinois, Missouri, Ohio, Hudson and Potomac rivers.

On a personal note, I met Chad early into his journey of cleaning up America's rivers when we both spoke at the Quad Cities Issak Walton League annual meeting. I came away impressed by his enthusiasm and dedication to this cause. This book is a testimony to someone who didn't let anything stop him from pursuing his dream.

RIVER RAMBLINGS

by Scott Kudelka



Recently the Minneapolis Star Tribune ran a series of articles titled "The Longest Clean Up," highlighting how the indiscriminate dumping of industrial chemicals has contaminated the groundwater and in essence our drinking water. In one article we learned how arsenic poisoning changed the life of Tom Hammers along with his father and uncle. Each of them unknowingly drank well water containing arsenic and thirty-five years later he still suffers its effects.

NBC News has focused on global climate change with stories on the drastic loss of glaciers on Greenland and an ongoing water crisis around the world, including the United States. As they report, saving the environment doesn't just mean driving a smaller car or supporting the right presidential candidate. The amount of water we are currently consuming is leading to environmental disaster and there could be a time we actually look fondly back at the current oil crisis.

Research on deformed frogs (first discovered in farm ponds near Henderson) has now been linked it to agricultural runoff, at least partly. From a MN Public Radio segment, *Nitrogen and phosphorous in the runoff fuel a cycle that results in a parasitic infection of tadpoles, resulting in loss of legs, extra legs or other deformities, according to researchers led by Pieter Johnson of the University of Colorado, Boulder.*

Where does this leave us? With a lot of questions but few easy solutions. Although we do know that even small changes can mean a big difference. All we have to do is look at Chad Pregracke to see how one person's dreams can reverberate and influence other positive actions across the United States. He has been able to take his one-man effort to clean up the Mississippi River and transform it around the country, including the Minnesota River.

Water is our most precious resource and the one we need to protect and conserve as if our life depends on it. Why not start by reducing your water consumption at home. It can be as easy as not running the water while brushing your teeth or getting all those leaky and damaged faucets repaired today instead of tomorrow. We are all in this together and can learn from each other on how to protect ourselves and the planet.

Sisters Grow Organic At Earthrise Farm

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through which all beings are connected. The sisters try to instill that appreciation for the natural world into the vegetables they grow and the community relationships they foster.

"We wanted to establish our own space," Annette Fernholz said, "a place to surround ourselves with the idea of the earth not as a collection of objects, but as a communion of subjects."

The Fernholz sisters are using part of their 11-acre plot to restore a turn-of-the-century schoolhouse. People who visit the farm - Earthrise also sells produce on a walk-in basis - already have offered to help paint and furnish. The sisters want to use the building as an environmental learning center where community members can come to learn about floral arrangements or how to make homemade soups and students can come and enjoy the outdoors.

"With the School Sisters of Notre Dame, there was a real concern for the environment and creation," Kay Fernholz said. "This farm is an opportunity to do something hands-on."

ENVIRONMENTAL ECOLOGY PROGRAM

Students will observe nature as it is meant to be - wildlife embracing their habitat, flourishing plants, trees and wetlands. An interactive slide presentation focuses on wildlife of the Minnesota River Valley and their effective use of camouflage. Students will be able to touch some of the natural artifacts (deer antlers, beaver pelts, turtle shells, etc.) collected in the Minnesota River Watershed

Ron Bolduan is a well known photographer, naturalist and speaker from New Ulm. Ron developed this educational program to highlight the benefits of restoring critical, sensitive land for improving water quality and wildlife aspects.

- ⇒ Part one focuses on resident wildlife, including a 'camo critter hunt' study of nature's effective use of camouflage and track identification.
- ⇒ Part two is a hands-on presentation of natural artifacts ranging from shed antlers to beaver pelts to turtle shells.

Contact Information for Ron Bolduan:

- Phone: 507-354-8367
- E-mail: boldriv@newulmtel.net
- Web Site: www.experiencenature.com



River Reveals Old Bison Bones

Ben Leonard and his 4-year-old son Jack discovered around 80 bison bones on a Minnesota River paddle. The remnants including spine, pelvic and jaw bones, along with a few pieces of crockery that appear to be equally old were found in an area the size of two football fields. All of the pieces were exposed during low water levels this summer. According to the Mankato Free Press, Leonard said the sight was at once eerie and exhilarating. "I said, 'Jack, this is the coolest stuff I've ever found.' And he said, 'Yeah me too.'"



Lac qui Parle Valley School Wind Turbine

After ten years of operation, the Lac qui Parle Valley School District made its last payment on the 225-kilowatt wind turbine right on schedule. The turbine produces an average of 452,800 kilowatts of energy or 25 percent of the electricity consumed by the school. In the winter of 1997 the turbine went into operation for the cost of approximately \$249,000. Lac qui Parle School received an \$189,000 zero percent loan and a \$60,000 grant from the state.

Today large turbines produce around 1.5 megawatts of energy. Other facts on the Lac qui Parle turbine: it stands on a 152-foot tower, supporting an 18,000 pound generator and three rotor blades – each 46 feet long and weighing about 4,000 pounds.

NRCS Rapid Watershed Assessment

The Natural Resources Conservation Service has completed a Rapid Watershed Assessment for nearly every major watershed in the Minnesota River Basin. Rapid Watershed Assessments provide initial estimates of where conservation practices would be the most effective. It provides information on land use classes, hydric soils, HEL (Highly Erodible Land), etc. For more information check out the web site: www.nrcs.usda.gov/technical/rwa/Assessment_Downloads/index.html

Do-It-Yourself Home Energy Audits

With winter just around the corner its time to do a home energy audit. Go to the U.S. Department of Energy web site at: www.eere.energy.gov

Authorities search Corn Plus

On August 10th a search warrant was executed at the Corn Plus ethanol plant in Winnebago by the Faribault County Sheriff's Department, Winnebago Police Department and Minnesota Pollution Control Agency (MPCA). According to MPCA, "between October 17, 2006 and June 4, 2007 they received numerous citizen complaints of visible discharges of wastewater to a ditch leading to Rice Lake, as well as odors related to the discharges."

According to the Mankato Free Press, state officials believe Corn Plus has "periodically and intentionally" discharged its wastewater into the county ditch. Lee Ganske of the Mankato MPCA office stated the case has moved into an "investigative phase" and couldn't provide further details.

Rapidan Dam hole causes concern

At the end of July, the reservoir at Rapidan Dam was lowered, along with the closing of the campground and observation deck after federal inspectors suspected a hole at the base of the structure. According to Al Forsberg, Blue Earth County engineer, Rapidan has been labeled a "low hazard" dam. This means there's little risk to human life if it gives away.

For years there has been a lot of controversy among government officials and the public on whether the dam is safe and if it should be removed. Money has been secured by the state, county and U.S. Corps of Engineers to study the dam but nothing has been started. When officials quickly drained the reservoir, fish were left flopping around on silty ground to die. At this time little work has been done to fix the hole because of recent rains.



What is cuphea?

Cuphea, a flowering plant native to the U.S. is being grown to see if it can be processed into the military jet fuel known as JP-8. Scientists at the North Central Soil Conservation Research Laboratory near Morris have grown cuphea for close to seven years, initially for other reasons.

They believe cuphea has the potential to become a significant oilseed crop for Midwest farmers. It has to do with the oil being different from soybeans, sunflowers or canola. Cuphea produces oil that has medium-length chains of carbon molecules, like those of coconut and palm oil. This oil is also well-suited for a wide range of personal care and cosmetic products, soaps and detergents and engine lubricant.

CONSERVATION THOUGHTS



RACHEL CARSON

"If you travel much in the wilder sections of our country, sooner or later you are likely to meet the sign of the flying goose – the emblem of the national wildlife refuges.

"You may meet it by the side of a road crossing miles of flat prairie in the Middle West, or in the hot deserts of the Southwest. You may meet it by some mountain lake, or as you push your boat through the winding salty creeks of a coastal marsh. Wherever you meet this sign, respect it. It means that the land behind the sign has been dedicated by the American people to preserving, for themselves and their children, as much of our native wildlife as can be retained along with our modern civilization. Wild creatures, like men, must have a place to live. As civilization creates cities, builds highways, and drains marshes, it takes away, little by little, the land that is suitable for wildlife. And as their space for living dwindles, the wildlife populations themselves decline. Refuges resist this trend by saving some areas from encroachment, and by preserving in them, or restoring where necessary, the conditions that wild things need in order to live."

If a child is to keep alive his inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in."



Most people know Rachael Carson from her groundbreaking book Silent Spring first published in 1962 and considered to kick start the modern environmental movement. As a trained biologist, Carson advocated against the indiscriminate use of pesticides and today we see how wildlife species like the Bald Eagle have responded. Rachael Carson worked for the U.S. Fish & Wildlife Service from 1936 to 1952, including as a biologist and editor in chief.

"One summer night, out on a flat headland all but surrounded by the waters of the bay, the horizons were remote and distant on the edge of space. Millions of stars blazed in darkness, and on the far shore a few lights burned in cottages; otherwise, there was no reminder of human life.

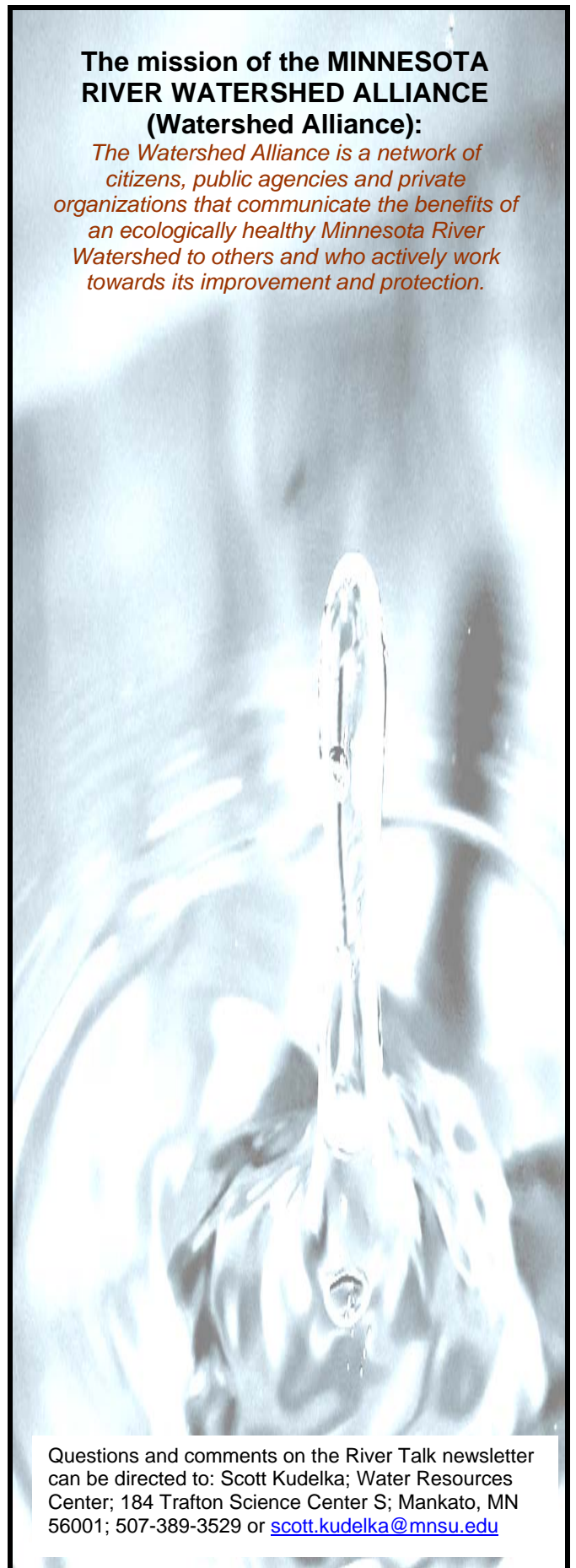
"It occurred to me that if this were a sight that could be seen only once in a century, this little headland would be thronged with spectators. But it can be seen many scores of nights in any year, and so the inhabitants probably gave not a thought to the beauty overhead.

"And because they could see it almost any night, perhaps they never will.

Rachel Carson died in 1964 after a long battle against breast cancer at the age of 56 years old.

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; 507-389-3529 or scott.kudelka@mnso.edu