

# IOWATER

Volunteer Water Quality Monitoring

## Volunteers *Mussel In On* Opportunities

by Karen Osterkamp, Iowa DNR Fisheries Bureau

Volunteers rolled up their sleeves and took a plunge recently to help search for the federally endangered Higgins' eye pearly mussel on the Iowa (photo right) and Wapsipinicon rivers. These dedicated volunteers, called "pollywoggers," submersed themselves underwater and scoured the river-bottom with their hands to locate mussels embedded in the rocky substrate. As the shivering pollywoggers emerged from the water, excited exclamations echoed across the river valley as several young Higgins' eye mussels were produced from their home beneath the water surface.



Scott Grifters

Through the efforts of Kelly Smith with the Landowner Incentive Program (L.I.P.), volunteers had an opportunity to learn about mussel biology and receive training on mussel identification by Dr. Kevin Roe of Iowa State University. Following the training, participants had an opportunity to search the riverbed for live mussels.



Tony Brady



Scott Grifters

At the end of the day, a total of nine Higgins' eye (photo upper left) were found. This is an amazing feat, considering these are among the first to be discovered on an inland river in over fifty years! In 2005, a single stocked Higgins' eye was recovered on the Wapsipinicon River. Volunteers also scoured the Iowa River and discovered yellow sandshells (center yellow mussel in lower left photo) and pistolgrips, both are troubled species in Iowa waters. One potential juvenile Higgins' eye mussel is awaiting positive identification by biologists. It is thought to be a hickory nut, a species that looks similar to a Higgins' eye, but to be sure it will be confirmed through DNA testing. If it does test out as a Higgins' eye, it will be the first documented in the Iowa River in 50 years.

## ...from IOWATER's Coordinator

Words are to reading as data is to monitoring...and both can reveal some incredible stories.

Understanding water quality data is like reading a book. If you only read the title of the book (infrequent and irregular monitoring), you have very limited information about the story – you may not even know what the story is about! If you read the chapter headings (quarterly monitoring), the overall story line might take shape, but the details are not clear until you actually read the words in the chapters themselves. With every passing word, the plot thickens and the story gets more captivating.

With each site you register and dataset you submit, you help Iowa write its water quality story. After 7 years, 2,522 volunteers, 3,317 registered monitoring sites, and 22,422 datasets, IOWATER's database is full of stories. In the coming months, we hope to be able to read them. We also hope you continue to write them by submitting data.

As the monitoring season winds down, please remember to submit your data to the IOWATER database. We can't wait to see what stories you and your data have to tell. As you know, streams and lakes are direct reflections of their watersheds. Similarly, IOWATER is a direct reflection of you. Your commitment to volunteer monitoring will help Iowa write a happy ending to its water quality story.

*Brian Soenen*

## Classify your Stream ...



If you know whether your stream is intermittent or perennial, let us know by completing the "Classify Your Stream" section in the data entry area for your site. Observations, narratives, or data that support your claim would also be helpful and much appreciated.

For more information about perennial and intermittent streams, review Chapter 9 (Defining Your Stream) of the IOWATER manual, located in the "Publications" menu under "Manuals" at [www.iowater.net](http://www.iowater.net).



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Higgins' eye mussels were first re-introduced to the Iowa, Wapsipinicon and Cedar rivers in 2001 via walleye and smallmouth bass inoculated with Higgins' eye glochidia. Glochidia are the larval stage of a mussel that attaches themselves to fish gills as a host. As the glochidia mature, they transform into young adult mussels, drop off the gills, and ideally fall into a quality rocky habitat on the riverbed.

Searches conducted on the Cedar River have not been as successful. Until recently, mussels were plentiful in the Cedar River, but the latest survey indicates densities now to be extremely low. The declining trend in mussel populations is troubling to biologists. To get a better understanding of why mussels are not surviving in the Cedar River, volunteers have pitched in to help the U.S. Fish and Wildlife Service's Genoa National Fish Hatchery and the Iowa DNR stock young pocketbook and black sandshell mussels. These more common mussels were produced at Genoa from parent stock taken from Pool 14 on the Mississippi River and then raised in cages in the Dubuque Ice Harbor at the National Mississippi River Museum and Aquarium. Volunteers helped "plant" these mussels into artificial mussel beds near Hartman Reserve in Cedar Falls and Palisades State Park close to Cedar Rapids. A control bed was also placed on the Wapsipinicon River near Central City. Iowa DNR biologist Scott Gritters hopes these young mussels can give us some answers as to why mussels are not thriving on the Cedar River. "In short, we will use these mussels to tell us if they can still live in the Cedar River or if something in the water is making it impossible. Is this a habitat issue or water quality affecting the mussels of the Cedar?" To find some answers as to why mussels are declining, Gritters has aspirations of determining mortality rates, predation issues, and determining potential toxin accumulation in mussel tissues. "Understanding what is going wrong is the first step to rectifying the situation."

*This enormous undertaking would not be possible without many partners and individual volunteers. The list of partners include Hartman's Preserve Staff, Black Hawk County Conservation Board, Linn County Conservation Board, Cedar Valley Walleye Club, IOWATER volunteers, National Mississippi River Museum and Aquarium, U.S. Fish and Wildlife Service-Genoa National Fish Hatchery and many other valuable individuals.*

## IOWATER action!

**Press releases, events, & news articles involving IOWATER monitors – Many thanks to all of you for your continued efforts.**

- **Clayton County** – Clayton County Conservation Board volunteers conducted a river clean-up project on the Turkey River.
- **Clinton and Scott Counties** – The Lower Wapsipinicon River Cleanup Project conducted a river clean-up project on the Wapsipinicon River.
- **Jones County** – Congratulations to Dean Zimmerman on receiving the Natural Heritage Stewardship Award from the Jones County Soil and Water Conservation District.
- **Mahaska County** – Students at the Oskaloosa Alternative School Incentive for Success worked on a monitoring project on Muchakinnock Creek.
- **Story County** – The Squaw Creek Watershed Coalition sponsored a Fishin' Friday which included an IOWATER monitoring demonstration.
- **Polk County** – Thanks to Teva Dawson for organizing the Des Moines Park and Recreation water monitoring program which identifies sites in city-owned park land in need of monitoring. IOWATER volunteers and others participating in the program include Judy Bequeaith, Deanna Clausen, Janice Cocran, Lowell DeVries, Anita Dutta, Brian Farlan, Eric Hall, Jim and Jodi Hueberger, Anne Hildebrand, David Huston, Mary Jack, Mikel Johnson, Grant Koch, Lynn Laws, Brett Lewis, Martha McCormick, Amy McCrary, Jeff Primmer, Don Propst, Colete Root, Sheila Rouse, Tricia Rummer, Mel Sadeghpour, Mike and Nancy Schrader, Tony Seeman, Carolyn Uhlenhake, Dean Williams, and Franchesca Zenitsky.

***If we missed your happenings, please call or email Jackie Gautsch with an update.***





# Volunteer viewpoints ... in their own words.



## My Foot Story by Dave Ratliff



*Dave Ratliff training Iowa City West High students to do snapshot sampling in Clear Creek.*

Several months ago, an IOWATER staff member and I sampled some sites on the Wapsipinicon River as part of a snapshot event. At the last site, I let out the noise of pain when trying to make it up the hill. The staff member never said a word or looked back, but I know she also felt the pain because she stopped walking for just a moment. I made a promise right then and there that no one would be in that situation again. So I have worked this foot right to the limit. Then I go and step in another hole two weeks ago and then another last Friday! So I am scared that something is broke.

They take three X-rays of my foot and set me in the little room. Soon the doctor steps in with an intern and they pull and twist my foot as I tell them of the pain and numbness. The doctor informs me that the pain is "soft tissue pain" and most people with my kind of injury experience it around 1 1/2 years. But ... he goes on ... "most people don't walk for a year so I am not surprised that you have it at 9 months." The numbness? "Dave, your foot is just waking

up, you are starting to get the full feeling back. If you were normal I would tell you to go home and put your foot up for a couple of days ... But I would just waste my time telling you to do that!" He informs me that my heel is 100% healed. There are no fractures or breaks showing on the X-rays.

The doctor goes on to say that I will receive a card in a year to come back in. "You can come in, because I would like to see you, or you can throw the card away – because you are all right!" I got up and offered to shake his hand and leave when he did something I did not expect. He sat down, and motioned for the intern and me to sit down. As he leaned back against the table, his eyes locked on mine and he said "tell me about your fascination with the water and the creeks."

So, over the next 30 minutes I took the doctor and the intern on a trip through the watersheds of Johnson and Iowa counties. I told them of the IOWATER program and the tests that so many volunteers have done. I told them of those that I have followed and learned from, and of those that have followed and learned from me. We talked of the benthic macroinvertebrates and how their absence or presence was a long-term indicator of water quality. I closed my eyes and talked of the caddisfly and mayfly hatch on a clear evening. I told them of my studies of Clear Creek and Muddy Creek.

When I finished talking I looked into his eyes and he said "wow ... now I know why you walk."

So in that short 30 minutes I took the doctor down the bank, into the water. Then with his mind he touched ... Yes, I think he will walk with me in a creek one day.

*Dave's heel was shattered while monitoring the waters of Clear Creek last October. His recovery is nothing short of remarkable. We're glad to see you back in the stream, Dave!*



## A Solo Canoe Trip on the North Raccoon River by Ray Harden

On a beautiful early June day, I set off down the North Raccoon River with my canoe, paddle, life jacket, camera, and can of Pepsi. After the first bend in the river it got quieter; the traffic sounds of Highway 141 began to fade as I passed through the tall walls of green trees that grew on both sides of the stream. The cottonwoods and silver maples provided heavy shade, while a slight breeze rattled the leaves, and cottonwood seeds made the river look like it was covered with lint.



The water had a greenish color and seemed cleaner than I recalled it from last summer. The sandbars were free of ATV tracks and litter. I was pleased to see that all of the hard work done by the Dallas County Conservation Board and the North Raccoon River Watershed Association seems to be having a positive effect.

In some places, vines of Virginia creeper and wild grape draped the steep banks like a curtain. In other spots, white blossoms of dogwood, multiflora rose, blackberries, and daisy fleabane stood out in brilliant contrast against the green vegetation.

Traveling by canoe is very quiet, which allows a person to get close to animals and birds. A fox squirrel had climbed out on a log and was drinking from the river when it saw me float by. It kept an eye on me but did not seem to be afraid as it continued lapping up water. A pair of great blue herons flew in front of me for a while; they went from one sandbar to the next as I moved downstream. At Frog Creek, where the river turns sharply to the southwest, heavy vegetation masked my approach, allowing me to get a photo of the magnificent bird (photo upper left). Kingbirds and swallows were constantly flying above the water catching insects. Many more birds, like the cardinal, catbird, robin, and yellowthroat were heard calling and singing from the trees along the riverbank.

Halfway down the river, I began to look for the eagle's nest that can be seen from the road, but I wanted to get a closer look to see if any young were present. I did not see the nest because the foliage was too dense, but I did see two bald eagles. They flew out of a large cottonwood tree and began to circle overhead for a quarter mile as I paddled downstream.

I paddled into Elm Creek to explore and to see how it had changed over the year, but could not go far because a large tree had fallen across the creek and blocked my way. A massive granite boulder rested along the bank here, a glacial erratic that was moved here from Canada during the last Ice Age (photo above).

The two-hour canoe float trip was relaxing. I enjoyed the serenity of the river and seeing the wildlife. I was very pleased to see that the river and sandbars looked clean, but I knew that the worst pollution sometimes cannot be seen.

We'd like to hear  
from you, so  
**send us a note...**  
about your  
IOWATER activities,  
thoughts, and  
ideas **...in your**  
**own words.**

## Team Up to Clean Up...

### River Cleanup Grants Still Available

The Iowa Department of Natural Resources is seeking proposals for a mini-grant river cleanup program, which is funded by REAP CEP (**R**esource **E**nhancement **A**nd **P**rotection – **C**onservation **E**ducation **P**rogram) and known as CLEAR (**C**ommunity **L**eaders **E**nhancing **A**rea **R**ivers). Through the CLEAR initiative, fifteen \$1,000 mini-grants were made available to support local cleanup efforts throughout Iowa.

Since 2003, over 600 volunteers have contributed thousands of hours towards beautifying Iowa's rivers. By participating in Project AWARE (A Watershed Awareness River Expedition), these volunteers are proving they can make a difference - one river, one week a year, one piece of trash at a time. Over the last four years, a flood of requests have come from citizens who are excited about developing their own cleanup events. While many of these groups have tremendous local support (from both a participation and sponsorship standpoint), they often lack adequate funding to dispose of river trash in an environmentally ethical manner (recycling instead of landfilling).

**Wanna' clean up your river?** Six mini-grants still remain. All applications must be received by December 31, 2006 and will be reviewed and awarded on a first-come, first-served basis. For more information visit [www.iowater.net](http://www.iowater.net) or contact Brandon Harland at (515) 281-3150 or at [brandon.harland@dnr.state.ia.us](mailto:brandon.harland@dnr.state.ia.us).

## Congratulations to 2006 spring and summer CLEAR recipients!

### First Round Recipients

- Mahaska County Ikes, Oskaloosa: South Skunk River Cleanup, May 27, 2006.
- Clayton County Conservation Board, Elkader: Tidying the Turkey, Aug. 19, 2006.
- Friends of the Wapsi Center, Inc., Dixon: Grove to Grove Lower Wapsipinicon River Cleanup Project, Aug. 25-27, 2006.
- Iowa Whitewater Coalition, Inc., Des Moines: Clean Rivers Team, Sept. 16, 2006.
- Carter Lake Preservation Society, Omaha: Carter Lake Cleanup, April 14, 2007.
  - Contact Jeann Eibes at [carterlake@hotmail.com](mailto:carterlake@hotmail.com) to volunteer.

### Second Round Recipients

- Siouxland Human Investment Partnership, Aug. 4, 2006.
- Missouri River Relief, Council Bluffs: Back to the River, Inc, Sept. 22-23, 2006.
- Keep Boone County Beautiful, Boone County: Dagoon River Romp, Sept. 23, 2006.
- Iowa River Greenbelt Resource Trust, Steamboat Rock to Pine Lake State Park: Iowa River Cleanup, April – July, 2007.
  - Contact Lisa Hein at [lhein@inhf.org](mailto:lhein@inhf.org) to volunteer.



## Don't Hesitate – NOMINATE!

Gotta' story to share? We're listening...Nominations for the 2006 IOWATER Awards are now being accepted. Nominate your projects, groups, peers, and yourselves. Award recipients will be invited to attend the 7th Annual Water Monitoring Conference in Ames on February 1-2, 2007.

This is your opportunity to recognize those working to improve Iowa's water quality. Award Categories: Volunteer of the Year • Professional of the Year • Classroom of the Year • Watershed Group of the Year • Event of the Year

Deadline: December 1, 2006 Visit [www.iowater.net](http://www.iowater.net) for a nomination form.



## Upcoming events . . . snapshot sampling & water monitoring conference.

**Oct. 21** (Sat); Wapsipinicon Watershed Snapshot  
Contact: Katie Foreman (319) 335-1571  
[kforeman@igsb.uiowa.edu](mailto:kforeman@igsb.uiowa.edu)

**Nov. 4** (Sat); Cedar River Watershed Snapshot  
Contact: Roy Hesemann (319)286-5976  
[royh@cedar-rapids.org](mailto:royh@cedar-rapids.org)

**Feb. 1-2, 2007** (Thur-Fri); Water Monitoring Conference  
Scheman Building, ISU, Ames, IA  
Contact: Mary Pat Heitman (319)335-1576  
[mheitman@igsb.uiowa.edu](mailto:mheitman@igsb.uiowa.edu)



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