

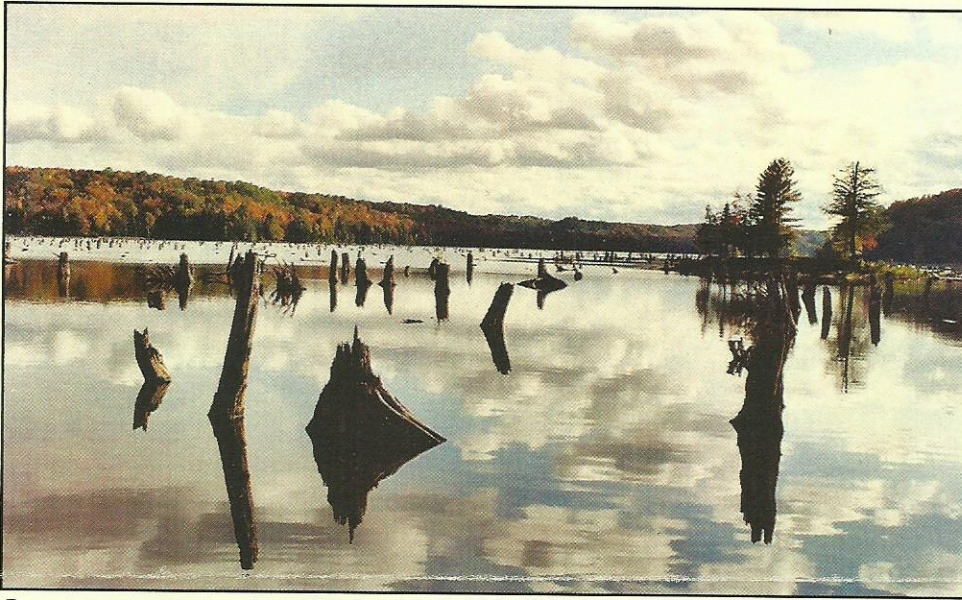
# UP Environment

Fall 2011

*The Upper Peninsula Environmental Coalition's quarterly newsletter.  
UPEC is the UP's oldest grassroots environmental organization.*



## Major challenges, yet elements of hope



*Remote reservoirs such as the Prickett Backwaters on the Sturgeon River in Baraga County offer recreation and solitude amid critical habitat. These areas have been threatened by shoreline development, but UPPCO recently withdrew proposals before a federal regulatory agency -- a hopeful sign during environmentally challenging times.*

*Photo by Nancy Warren*

### **UPPCO withdraws shoreline management plans for Bond Falls, Prickett & Boney Falls**

*By Robert Evans*

The Upper Peninsula Power Company (UPPCO, an Integrys Energy Group subsidiary) recently withdrew its proposed Shoreline Management Plans (SMPs) nearly four years after submitting them to the Federal Energy Regulatory Commission (FERC). The SMPs involved UPPCO's hydroelectric project lands surrounding reservoirs on the Ontonagon, Sturgeon, and Escanaba Rivers.

In its July 25 letter to the FERC secretary, UPPCO requested that the SMPs be withdrawn "because the plans are no longer pertinent to our current business model for excess lands." There was no press release from UPPCO about the SMP withdrawal, nor is there any information about it posted on UPPCO's website.

FERC's acceptance of the SMPs would have allowed infrastructure developments on environmentally sensitive project lands that could have enhanced and added financial value to potential residential developments on non-project lands that are outside of FERC regulation. If each reservoir is visualized as the innermost of three concentric circles, the project lands are the next circle starting at the shoreline, and the non-project lands are the outermost circle.

*Reservoirs. . . . . See Page 6*

### **UPEC invites greater support**

*By William Malmsten, UPEC President*

From sulfide mining to Asian carp, there seems to be no end to the threats facing our UP environment. It's difficult to anticipate what threats to our land and water will come to the forefront next. During these difficult economic times, it seems that our politicians have become bolder in rewarding their big campaign contributors with environmentally destructive legislation that harms the long-term interests of their constituents. To review voting records on environmental issues, visit [www.lcv.org](http://www.lcv.org)

Your UPEC Board of Directors tries hard to make efficient and effective use of your membership dues and contributions. Our efforts include not just combating destructive development plans, but also proactive efforts such as our "Celebrate the UP" programs, our environmental education grants, and this informative quarterly newsletter you are reading.

Board members work without financial compensation. We travel to board meetings and myriad related meetings usually without reimbursement for travel expenses. We are almost always up against opponents with greatly superior financial resources, yet there are many rewards to our work that go far beyond monetary considerations.

Although there is some good news, such as the Upper Peninsula Power Support UPEC. . . . . See Page 6



# A Testing of Priorities and Moral Values: *Scott Rutherford vs. Governor Snyder*

By Jon Saari

Scott Rutherford, a 77-year-old Hancock resident, sits quietly on a bench at Van Riper State Park in early August, a calm Lake Michigamme in the background contrasting with his

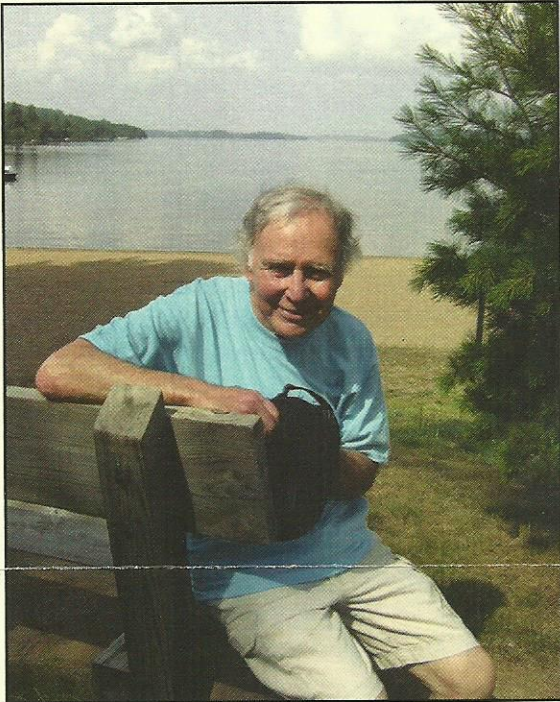
ence, but then the markers are all internal, invisible.

Rutherford has done this before. Twice. Each time for over 40 days. But then he was a much younger man. Each time the impulse to act was simple and

tion in the center of the city as they witnessed for freedom and democracy. One could not overlook their actions, and indeed their fasting aroused the Chinese citizenry in a land historically stalked by famine.

How different the situation in the remote Upper Peninsula. Our compelling interest as environmental activists is to do right by the land and the water; yet we face some ugly realities. State officials have permitted a nickel mine on the Yellow Dog plains 30 miles northwest of Marquette. One hundred and twenty acres of state land house the mining operation, a sanitized, fenced, and patrolled area sharply outlined against the green backdrop of one of the least developed parts of Michigan. Eagle Rock, sacred to Native Americans, stands out as a forlorn outcrop inside the high fence; it is scheduled to be blasted into this fall as the portal to the new mine.

Few decision-makers care much about the environmental dangers of a new wave of non-ferrous mining. The new Governor is virtually the last hope for getting a stop and a comprehensive review on this permitted but flawed mining project. It was to the Governor *Moral Values*. . . . . See Page 3



**Scott Rutherford**

*Photo by Christine Saari*

moving smile. He is eating again, on doctor's orders, after undertaking a fast for about two weeks in July. His body does not seem marked by the experi-

intuitive, triggered by a perception that some fundamental human principle was at stake. Each time fasting was his chosen mode of resistance and witness.

Rutherford sat in front of the Federal Post Office building in Marquette each afternoon during his fast. His sign said "Defend our Water and Stop this Mine." His thinking is rooted in the potentially devastating consequences of a mine failure, a fear shared by many activists and citizens, and in a heartfelt need to demonstrate that he will not be complicit in allowing this mine to happen.

Fasting has a long and honorable record in the annals of nonviolent action, from Gandhi in India's struggle for independence to the sitters on Tiananmen Square in Beijing in 1989. I remember the latter case vividly, as hundreds of students commanded world atten-

## About UPEC...

The Upper Peninsula Environmental Coalition has over a 35-year track record of protecting and seeking to enhance the unique environmental qualities of the UP through public education and monitoring of industry and government. UPEC seeks common ground with diverse individuals and organizations in order to promote sound planning and management decisions for all the region's natural resources.

*UP Environment*, is published four times a year and available online to share with family & friends. Send your comments or contributions to UPEC by standard mail at P.O. Box 673, Houghton, MI 49931, or e-mail us at [upec@upenvironment.org](mailto:upec@upenvironment.org). You can also visit us at [www.upenvironment.org](http://www.upenvironment.org)

## UPEC Officers, Board and Staff

President: William Malmsten

Secretary: Sherry Zoars

Treasurer: Jon Saari

### Board Members:

David Allen      Connie Julien (Webmaster)

Robert Evans      Connie Sherry

Nancy Warren      Doug Welker

Staff: David Clanaugh, Newsletter Editor &  
Business/Communications Manager



# Rutherford's fast witnesses need to renew democracy

*Moral Values. . . . .Continued from Page 2*

nor's conscience that Scott Rutherford was directing his action. But the Governor has delegated his conscience to his DNR/DEQ lieutenants: what's already permitted must be OK, he reasons. It will take more than a moral appeal to turn his head and heart.

A single person, acting out of moral compulsion, can accomplish much. Scott Rutherford came late to the cause, but has been a quick learner and become an acknowledged leader

in the consensus-based WAVE group that has reinvigorated the mine struggle this summer. Rutherford listens well and is a savvy veteran of many previous peace and justice fights.

Whatever the outcome, Rutherford has left his mark against what he considers a corrupted democratic process and a dangerous environmental precedent. Through his fast he has pushed us to think more deeply about what kind of politics and environmental oversight we should want in the State of Michigan.

## ***Invasive Seeds on the Move*** . . . . .*Continued from Page 7*

ing, too. Wear outer layers of clothing and footwear that are not "seed-friendly." Wear ankle gaiters over socks and laces. Avoid Velcro, pants with cuffs, and fabrics or clothing that readily carry seeds.

- » Pet your pets. Carry a grooming brush, shedding blade, small scissors, hoof knife, etc. to remove 'stickers' and seeds from animals.
- » Clean your stuff away from water, which can spread invasive species downstream. Choose cleaning spots where invasive species are already established or that be monitored for new infestations, such as along roads, at trail heads, or in parking lots.
- » Dispose of your 'hitchhikers' by placing them in the

trash. If burning, place the burn pile in an area that facilitates monitoring and control if an infestation occurs.

- » Report invasive species infestation to appropriate land managers or property owners. Give exact locations if possible; photos, GPS coordinates, or a map are best.
- » Volunteer to help control invasives. Contact agencies and nonprofits to learn about volunteer opportunities.
- » Educate others about invasive species and their effect on the environment, economy, and recreation.

Fall is a great time, some would say the best time, to spend time in the woods. Motorized travel is just one of many ways to enjoy the season. Here's hoping your memories of this autumn are fun and numerous...and weed-free.

## **Yes! I Want to Help UPEC Make a Difference!**

(Please complete and give this to a UPEC board member or mail to UPEC, Box 673, Houghton, MI 49931)

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_

City/State: \_\_\_\_\_

Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

I'd like to make an additional contribution to the following fund (s):

\$\_\_\_\_\_ UPEC Land Acquisition/Protection

\$\_\_\_\_\_ UPEC Environmental Education

\$\_\_\_\_\_ UPEC Outreach Fund

\$\_\_\_\_\_ UPEC Endowment Fund\*

**I'd like to support the goals of UPEC by enclosing a contribution for (please check one):**

\_\_\_\_\_ Regular Membership (\$20)

\_\_\_\_\_ Supporting Membership (\$50)

\_\_\_\_\_ Student/Low Income Membership (\$15)

\_\_\_\_\_ Other

\*If you make out your check to the Marquette Community Foundation and put **UPEC Fund** on the memo line, you can take a 50% tax credit on your Michigan tax return (up to \$200 for individuals, \$400 for couples). **OR** you can make your contribution directly to UPEC. We are a 501(c)3 nonprofit organization and your contributions are tax deductible. THANKS!



# In effort to push through mineral extraction, UP legislators circumvent local citizen action & control

*By Doug Welker*

Two recent developments, one governmental and the other corporate, may impact the future of mining in Houghton and Keweenaw Counties, as well as throughout the UP.

The first development involves passage of state legislation that liberalizes mining regulations throughout Michigan, and has specific impacts in Portage Township, Houghton County. This legislation (Public Act 113 of 2011) circumvents local control by weakening the ability of townships and counties to regulate mining through zoning ordinances. It also prevents counties from regulating and controlling activities associated with oil and gas wells: exploration, drilling, operation and abandonment. By implication the controversial practice of fracking would also be exempt from local control.

Faced with "rural-residential" township zoning that made mining illegal at the Valley View Quarry site near Dodgeville, Moyle Construction was forced earlier this year to cease operation of its quarry and rock crushing operations. Adjacent home owners had challenged this operation because of the noise, dust, and traffic they experienced. The Portage Township Board invoked its zoning ordinance to stop the operation, and court decisions also ruled that the operation was illegal. Citizen action and the democratic process played key roles in shutting down the quarry.

Two UP state legislators, though, found a way around local citizen action, township zoning ordinances, and judicial rulings by introducing bills that would prevent local zoning from stopping mining in most cases, except those where "very serious consequences would result from the extraction of those natural resources." The statute does not define what those "very serious consequences" would be and the use of "would" implies that citizens would have to prove those consequences beyond any doubt. This apparently makes irrelevant the probability modeling and risk management practices that have been central to environmental regulation.

Matt Huuki, 110th District representative (R-Atlantic Mine), introduced HB 4746, to "amend the Michigan Zoning Enabling Act to prohibit a zoning ordinance from preventing the extraction, by mining, of valuable natural resources from any property unless very serious consequences would result from the extraction." Tom Casperson, Republican senator from the 38th District, introduced a companion bill, SB 470. The legislation passed both houses and was signed into law by Governor Rick Snyder on July 20.

This law strikes a blow at local control of activities by communities, townships, and counties. The Michigan Townships Association strongly opposed this legislation.

Operations at Valley View Quarry are currently on hold; Moyle Construction must now submit an application to the Portage Township Board if it wishes to request quarry operations be restarted. Presumably, a judge would need to determine whether "very serious consequences would result" if the quarry reopened.

The second development that could impact the area is the potential for new mining, presumably of native copper, in Keweenaw and northern Houghton Counties in areas where past mining has occurred. Highland Resources, Inc., based in Vancouver, Canada, recently announced plans to spend several years exploring for copper there. It is unclear at this point if Highland Resources would be reactivating old mines or opening new mines, should its exploration prove to be promising.

Numerous Copper Country towns and cities developed in close proximity to former copper mines, so new mining potentially could occur in areas that are highly populated. Efforts to keep mines out of such areas could be complicated by the recent Michigan zoning-related legislation mentioned above. However, most areas of the two counties, especially rural townships, do not have zoning laws, a situation that poses problems for environmentally responsible development.

## ***Innovative partnership simultaneously supports UPEC & public media***

For several years UPEC has been running spots on the Marquette-based public radio and television stations, especially promoting our annual "Celebrate the UP" spring event. UPEC members have funded these announcements by designating their financial gifts to the radio/TV stations as available to UPEC for outreach messages. The stations set the money aside in a UPEC account, and the UPEC board decides when and how to use the money. The individual donors become anonymous in this process, which is their wish, while being able to recognize UPEC and support its mission.

This option to divert gifts to the stations into the UPEC account is available to every supporter of public radio and TV. It is a way to amplify UPEC's voice throughout the year. UPEC thanks its members who anonymously contribute to public radio and television in a way that enables us to become an honorary underwriter of these important services and in the process to publicize our programs and environmental advocacy. If, as a UPEC member, you support public radio or television, you can also become part of this innovative partnership.



# Do turtles have wisdom? 410 sure seems to!

*Saga of 410. . . . Continued from Page 8*  
ish, long-tailed nestlings hatch and head to the water. It may take as many as 12 to 18 years before these hatchlings begin to produce offspring.

We became "wood turtle volunteers" for the 2006 season. When we first found Turtle 410 on June 7, she was full of eggs searching for a suitable nesting area on a sandy beach along the Ontonagon River. She had chips on several scutes (edges of her shell), was missing the tip of her tail (possibly bitten off by a fish or other predator), and had a much worn plastron (belly). Each wood turtle has a unique plastron, similar to the human fingerprint. We recorded 410's age as 27 by counting the rings on her shell, weighed and measured her, permanently notched her shell "410", using a universal coding system, annotated all her scars, and added her photo to the "wood turtle catalog." Upon her release, she immediately returned to the river. At the time, we thought her capture was insignificant.

But then, we captured her twice in 2007, once in 2008 and several times in 2009. Each time we examined her, we found more chipped scutes. Research suggests that female wood turtles do return to nest sites year after year and so, when we found her again in 2010, we weren't surprised. But, I felt different about this turtle. Female 410 has a distinct personality; she is more laid back than most. She doesn't clam up and go into her shell as others sometimes do. She didn't hiss or spit or even attempt to bite. Some turtles attempt to climb out of the bucket holding them, but 410 waits patiently for her turn to be processed. Seemingly nothing bothers her.

When we released her in 2010, we watched as she bounced off rocks riding the rapids. If a turtle could express



*Nancy Warren and 410 share a quiet moment along the South Branch of the Ontonagon River this summer. Each summer for the last six years their paths have crossed during the Ottawa National Forest Turtle Study.*  
*Photo by Al Warren*

joy, she certainly looked as though she was having fun. It also became abundantly clear why her shell was so beat up.

On June 15, 2011, I picked up a wood turtle basking in the sun checked her markings and quickly recognized her as 410. I felt like I just found an old friend. Over the past six years we have processed more than 100 wood turtles, many have been handled multiple times but none is more special than 410. She is the only turtle we have captured each year.

This time, she used my finger to support her toes and stuck out her neck in a curious sort of way as if to make eye contact with me. Maybe she sensed I wouldn't harm her; maybe she remembered the routine and figured it was just easier to let her legs hang loose to let me probe for eggs. Most likely, she is just a carefree turtle and doesn't realize the many threats facing her species. In any case, 410 has become more than "just another number" to me!

---

## Consider EarthShare payroll deduction to support UPEC

UPEC is a proud member of EarthShare of Michigan, an organization that allows working people to donate to environmental organizations through workplace giving campaigns. Each year EarthShare provides UPEC with critically needed funding for environmental education and program operation.



If you would like to help us earn more funding for UPEC, consider letting your employer know you want to participate in the EarthShare of Michigan giving option at your workplace through the annual payroll deduction plan. For more information, please call 1-800-386-3326 or visit [www.earthsharemichigan.org](http://www.earthsharemichigan.org)



# ***Clear FERC ruling would have been helpful for preventing future shoreline threats***

*Reservoirs. . . . .Continued from Page 1*

UPPCO's withdrawal of its SMPs hopefully concludes an ordeal that began in 2002 when it announced an "asset management strategy" for its Upper Peninsula lands. In that strategy, lands "not needed for hydroelectric boundaries that lay outside project boundaries" would be targeted for sale. For most of its hydroelectric projects, including these three, UPPCO-owned lands near the reservoirs included a mix of both project and non-project lands. FERC requires that project lands be managed to provide both public benefits (such as recreation) as well as habitat for wildlife, in exchange for allowing the utility to utilize a public water resource to produce hydroelectric power.

UPPCO sold its "non-project lands" around these reservoirs in December, 2005 to Naterra Land, a Minnesota-based Realty firm. Naterra then quickly announced plans to subdivide the non-project lands into lots for hundreds of residential homes. The SMP proposal outlined UPPCO's plans to develop the FERC project lands closest to the reservoirs by building lighted docks, paths from the homes to the water, marina facilities, and other amenities primarily designed to benefit the adjacent homeowners. In 2009 UPPCO bought back substantial acreage from Naterra to settle a breach of contract lawsuit in which the latter company alleged UPPCO had not provided accurate information about

easements, pier placements, and future dam repairs.

UPPCO's proposal to FERC to develop the project lands met with immediate and strong opposition from a coalition of natural resource agencies (U.S. Forest Service, U.S. Fish and Wildlife Agency, Michigan DNR) as well as environmental organizations such as the Michigan Hydro Relicensing Coalition, Upper Peninsula Public Access Coalition, the Northwoods Alliance, the Friends of the Land of Keweenaw, and UPEC. These agencies and organizations urged FERC to reject the SMPs on the grounds that UPPCO's proposed land development was inconsistent with FERC license requirements that project lands be managed to benefit the public and natural resources such as wildlife, including threatened and endangered species.

Although UPPCO withdrew its SMPs, FERC never rejected them. Without a FERC ruling, we don't know at this point whether arguments put forth by the resource agencies and environmental organizations would have persuaded FERC to kill UPPCO's ill-advised plans to profit from developing land intended for public benefit and natural resource protection.

For the time being, however, UPPCO's decision represents good news for the environment and good news for anyone who believes that a utility that profits from public resources (water, in this case) must abide by the terms of its regulatory license.

## **Invite family & friends to involvement with UPEC's work; Consider greater hands-on role in environmental advocacy**

*Support UPEC. . . . .Continued from Page 1*

Company's withdrawal of basin development plans around regional flowages, overall this has been a hard year for our environment. It's times like these that UPEC needs greater support. Our legitimacy as environmental advocates flows from you, our members. We represent you. The more members we have, the more influence we have. Right now we could really use some more influence. We would appreciate if you would reach out to anyone you know who cares about the long-term quality of life here in Upper Michigan and invite them to join us.

An annual UPEC membership is only \$20. A student/low income membership is available for only \$15. We keep UPEC's membership fee low to encourage participation, yet we welcome any additional support members can provide. See Page 3 for a membership application form and the options available for supporting UPEC.

We equally need your talents to work directly on issues. There are opportunities to serve with UPEC board members on issue-specific committees, in letter writing campaigns, assisting at UPEC events, and more. If you would be interested in working with us on an issue or are just interested in finding out more about UPEC, come to one of our board meetings and talk with us. Our board meetings are open to any member, and members are encouraged to attend and participate in discussions.

Our next board meeting will occur Friday, Oct. 21 from 3-7 p.m. at the Ford Forestry Center in Alberta about eight miles south of L'Anse on U.S. 41. We meet in the cafeteria building on the left side of the complex. Please come and join in our discussions. We appreciate your past support and any additional support that you give us.

*-- William Malmsten, UPEC President*



## Fall a prime time for non-native plant seed dispersal

*By Melanie B. Fullman, US Forest Service*

For many locals, fall=hunting. For plants, fall=seed dispersal. And for non-native plants, that means another chance to try to rule the world.

If you drive any vehicle on an unpaved road surface, chances are you are helping disperse the seeds of plants. This may not seem like a problem unless those seeds are from non-native invasives. Even if your vehicle moves only a few seeds a short distance, natural events such as wind gusts, rain, or wild animals can spread the seeds farther.

In 2007, a plant research team at Montana State University began a series of experiments to determine the number of seeds transported on various types of vehicles and to evaluate the effectiveness of vehicle washing. Their study found that vehicles collect significant amounts of seeds even when driven on dry roads. For example, a four wheel drive SUV/truck picked up, on average, 176 seeds per 50 mile trip on an unpaved road in June. ATVs picked up as many as 200,000 seeds in 48 miles or nearly 4200 seeds per mile! (Of those, 750 were from noxious weeds.) Not surprisingly, ATVs acquired more seeds off-trail than on-trail.

To determine how far the seeds could be carried, the researchers mowed 12' x 40' plots. A late model pickup truck was driven into each plot and backed out. It was then driven 25 mph for 10 miles, after which, the undercarriage was carefully vacuumed. The results: there was 1633 seeds at mile 0; 510 at 0.1 miles, 226 at 1 mile, and 138 at 10 miles.

And while commercial vehicle washers did a decent job of removing mud and debris, the researchers found that, at many locations, wash waste water is filtered to remove sediment, then reused for future washes. Although hot water and filtration killed most seeds, many went through the process unharmed. So many, in fact, that the scientists were able to grow them in a greenhouse to determine the species.

### Why Does It Matter?

Invasive species negatively affect the quality and accessibility of recreational lands. Invasive species often out-compete and, in some cases, eliminate native plants; they change wildlife habitat; and they can modify the appearance and utility of the landscape. Some invasive plants produce painful skin reactions or may have sharp spines and thorns. Toxic berries sometimes poison people and pets. Private landowners are increasingly inclined to limit or prohibit access, par-

ticularly motorized access, due to concerns about the spread of invasive plants onto their lands.



*Japanese barberry is an invasive species that spreads through animal waste and when property owners plant it as an ornamental. It has been linked to the spread of Lyme Disease because it provides a nursery for juvenile ticks.*

Left unmanaged, these threats contribute to diminished quality and quantity of outdoor recreation. The annual economic damage associated with invasive species' is estimated to cost \$137 billion in just the US. This includes losses in agriculture, fisheries, timber, utilities, land productivity, tourism, and recreation.

### What Can You Do?

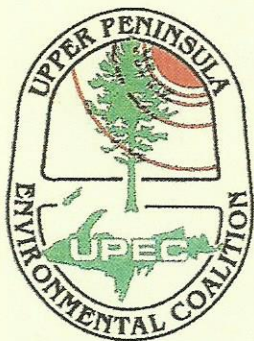
- » Learn to recognize invasive species common to the areas where you enjoy outdoor recreational activities. Read guides, brochures, and pamphlets produced by government agencies or weed management groups on invasive plants and invertebrates. Pay attention to signs at infested areas and trailheads.
- » Stay on established trails and routes. Tread lightly, leaving as little impact on the land as possible. When wet areas are encountered on established trails, go through them rather than around (this prevents the trail from becoming super wide, too.) When in doubt, stay out!
- » Spray, scrape, or brush dirt from your vehicle(s), then thoroughly wash with soap and hot water as soon as possible. Pay particular attention to the undercarriage.
- » Soil, seeds, and plant parts can cling to gear and clothing.

*Invasive Seeds on the Move . . . . . See Page 3*



UPEC is pleased to print this newsletter on process chlorine-free, Forest Stewardship Council-certified, 100% postconsumer recycled paper produced by Mohawk Papers. This company purchases verified emissions reduction credits and supports emissions-free wind power in its effort to be carbon-neutral.





*Protecting and maintaining the unique environmental qualities of Michigan's Upper Peninsula by educating the public and acting as a watchdog to industry and government.*

## ***410 shares her 32-year saga of carefree survival***

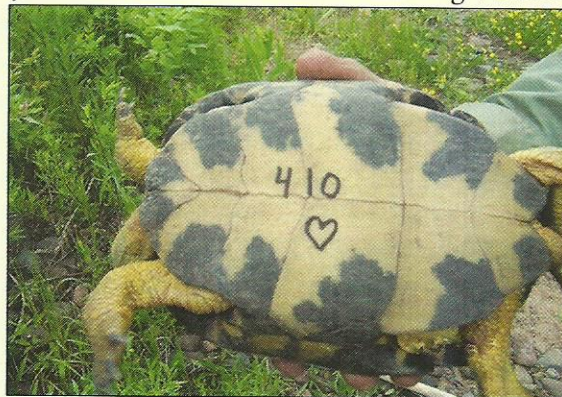
*By Nancy Warren*

Thirty-two years ago a female wood turtle hatchling, later known as "410", survived to make her way to the South Branch of the Ontonagon River. In some years, skunks, raccoons and other predators can destroy most of the clutches at a nesting site, but 410 beat the odds and lived through the juvenile phase when wood turtles experience high mortality.

Wood turtles (*Glyptemys insculpta*) face many threats including habitat destruction, water pollution and sedimentation, and deliberate and accidental destruction of eggs by humans. Its ornate shell is the armor that protects the turtle's vital organs, but it is no protection against the automobile. Females, searching for a nesting site are often killed.

My fascination with turtles began when I noticed a piece of ground, no bigger than a quarter in size, move in my driveway. I stopped to watch as five baby turtles emerged. I took pictures and later learned they were wood turtles, a species of

special concern in Michigan and a Regional Forester Sensitive Species in the Ottawa National Forest. When I called to report the discovery, I learned that the Ottawa National Forest was about to launch a study of wood turtles and they were seeking volunteers. My husband and I jumped at the chance to become involved.



***410: A Special Turtle*** Photo by Nancy Warren

Michigan is one of 17 states where wood turtles are found. They live in clear, hard-bottomed streams and rivers, spending most of their time in the water from September to May. They also are found foraging in woods, swamps, and meadows in the upland areas edging the stream or river in summer. They often use logs, rocks or banks near water to bask.

Egg-laying occurs only once per year in the sunny areas of exposed river sand banks. Though we have no solid data, for the Western UP, elsewhere the mean clutch size is nine. Females lay their soft-shelled eggs in a cavity they dig in late-May or June. After about six weeks of incubation in the warm sand, brown-

*Saga of 410. . . . . See Page 5*