THE HELM

News and Information from the Illinois-Indiana Sea Grant College Program **Summer 2003**

Growing Communities Plan to Protect Natural Resources

By Irene Miles

Urban populations and businesses are moving farther and farther out from city centers, into farmland, open spaces and small towns, transforming the countryside as they go. In Indiana, over 100,000 acres of agricultural land are being converted to development each year, which comes to about 10 acres every hour. The environmental price of growth can be polluted streams, erosion, flooding, excessive runoff, or a significant loss of open space.

Seeking ways to balance these forces, some communities have received critical assistance from *Planning with POWER* (POWER stands for Protecting Our Water and Environmental Resources). “This educational program, coordinated by Illinois-Indiana Sea Grant and the Purdue University Extension Service, is designed to help decision-makers and citizens protect water and other natural resources while allowing for compatible economic growth,” said Robert McCormick, *Planning with POWER* coordinator. “It links land-use planning with watershed planning.”

“Land use and water quality are inseparable,” said McCormick. “In fact, non-point source water pollution, caused by polluted runoff from the land, is the number one water quality problem in the United States. Increased development is a major threat to the health of our water and to other environmental resources.”

In Indiana as in many states, development sprawls out into rich farmland along lakes and rivers.

Hendricks County, located just outside of Indianapolis, is one of the fastest growing counties in

continued on page 10

Inside This Issue

New Fisheries Leadership School in Session

Chad Dolan, IISG's new fisheries extension specialist, is developing curriculum for the Great Lakes Sea Grant Fisheries Leadership Institute. Dolan is compiling material about fisheries habitats, which will include information on habitat types, as well as the impact of exotic species, pollution, and climate change. He is also promoting the institute with fishery-related organizations. In addition to Sea Grant, Dolan is employed by the Illinois Natural History Survey as a watershed ecologist, where he is building statistical models for an Illinois Department of Natural Resources project aimed at improving the efficiency of stream-fish sampling.

"Almost all Great Lakes fisheries issues involve stakeholders weighing in on management options," said Brian Miller, Illinois-Indiana Sea Grant associate director. "Through the Great Lakes Sea Grant Fisheries Leadership Institute we hope to provide emerging citizen fishery leaders the fundamental background in science and ecology necessary to make educated choices related to fisheries management."

The new institute will operate on a regional, lake, and state level to help foster the next generation of fisheries leaders. In addition to members of sport-fishing associations, commercial fishermen, and charter captains, participants in this program may include representatives from environmental non-profit governmental organizations, and tribes. They are nominated by their member organization and approved by a selection committee.

"We hope to create an atmosphere that provides effective communication between fisheries organizations and Great Lakes biologists," said Chad Dolan, IISG fisheries extension specialist.

The Great Lakes Fisheries Leadership Institute is a partnership of the Great Lakes Fishery Commission, U.S. Fish and Wildlife Service, U.S. Geological Survey, Great Lakes Environmental Research Laboratory, state departments of natural resources and environmental protection agencies, and others. These partners, along with Great Lakes Sea Grant programs, will help plan and teach the institute sessions.

"We are expecting to learn from these participants as they learn from us," said Dolan, who is developing part of the curriculum. In upcoming sessions, participants will acquire basic knowledge of fish biology, food webs, aquatic nuisance species, and the effects of contaminants on Great Lakes fish. They will receive a certificate after completing the program.

Funding for the institute is provided by the Great Lakes Sea Grant Network, the National Sea Grant College Program, the National Oceanic and Atmospheric Administration and the U.S. Department of Commerce.

If you would like more information about the Great Lakes Sea Grant Fisheries Leadership Institute, contact Chad Dolan at (217) 557-1406 or email CDOLAN@dnrmail.state.il.us.

Irene Miles, Managing Editor
Robin Goettel, Copy Editor
Valerie Eichman
Kristin TePas Contributors
Rod Roberts, Designer/Layout
Larry Ecker, Graphic Designer

Printed on Recycled Paper

Sea Grant ILLINOIS - INDIANA

Illinois-Indiana Sea Grant is one of 30 programs of the National Sea Grant College Program created by Congress in 1966. Sea Grant is a partnership of universities, government, business and industry that addresses marine and Great Lakes needs to enhance sustainable coastal economic development. Funding is provided by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA Grant #NA86RG0048), Office of Sea Grant, Purdue University, West Lafayette, Indiana, and the University of Illinois at Urbana-Champaign. Purdue University and the University of Illinois offer equal opportunities in programs and employment.

Eurasian Ruffe May Increase Pressure on Lake Michigan Perch

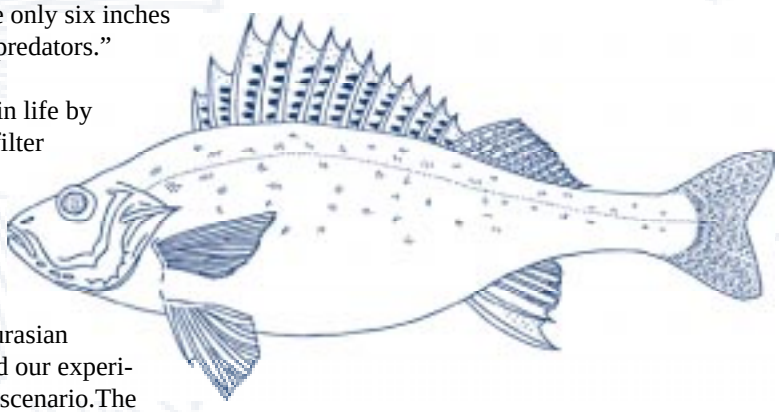
Eurasian ruffe, an invasive fish whose numbers have multiplied dramatically in Lake Superior, have now been spotted in northern parts of Lake Michigan. The good news is that another invasive fish, round gobies, which are already abundant in Lake Michigan, may keep ruffe numbers down in nearshore areas, according to Gary Lamberti, University of Notre Dame biologist. The bad news is that Eurasian ruffe will nonetheless reduce food resources for yellow perch, an important native sport fish.

With funding from Illinois-Indiana Sea Grant, Lamberti and Martin Berg of Loyola University have been studying the relationship among Eurasian ruffe, round gobies, and zebra mussels, and how this "exotic triad" can affect yellow perch.

"Exotic species now dominate the food webs of the Great Lakes, including Lake Michigan," said Lamberti. "As more invasive species are introduced to the Great Lakes, they not only compete with native species but also with other invaders."

The researchers found that the relationship between these invaders is complex, but one fact is simple. The successful species is often the one that gets there first. "In western Lake Superior, Eurasian ruffe have become the numerically dominant fish," said Lamberti. "In Lake Michigan, where round gobies arrived first and have become very abundant in rocky nearshore areas, invading ruffe may be relegated to deeper waters. We have also found in laboratory experiments that gobies are competitively superior to both ruffe and yellow perch in rocky environments."

"Eurasian ruffe are closely related to yellow perch and may compete directly with them for bottom-dwelling food and habitat in Lake Michigan," said Lamberti. "But unlike yellow perch they have no commercial or sport value; they average only six inches in length at maturity and are quite spiny, making them resistant to predators."

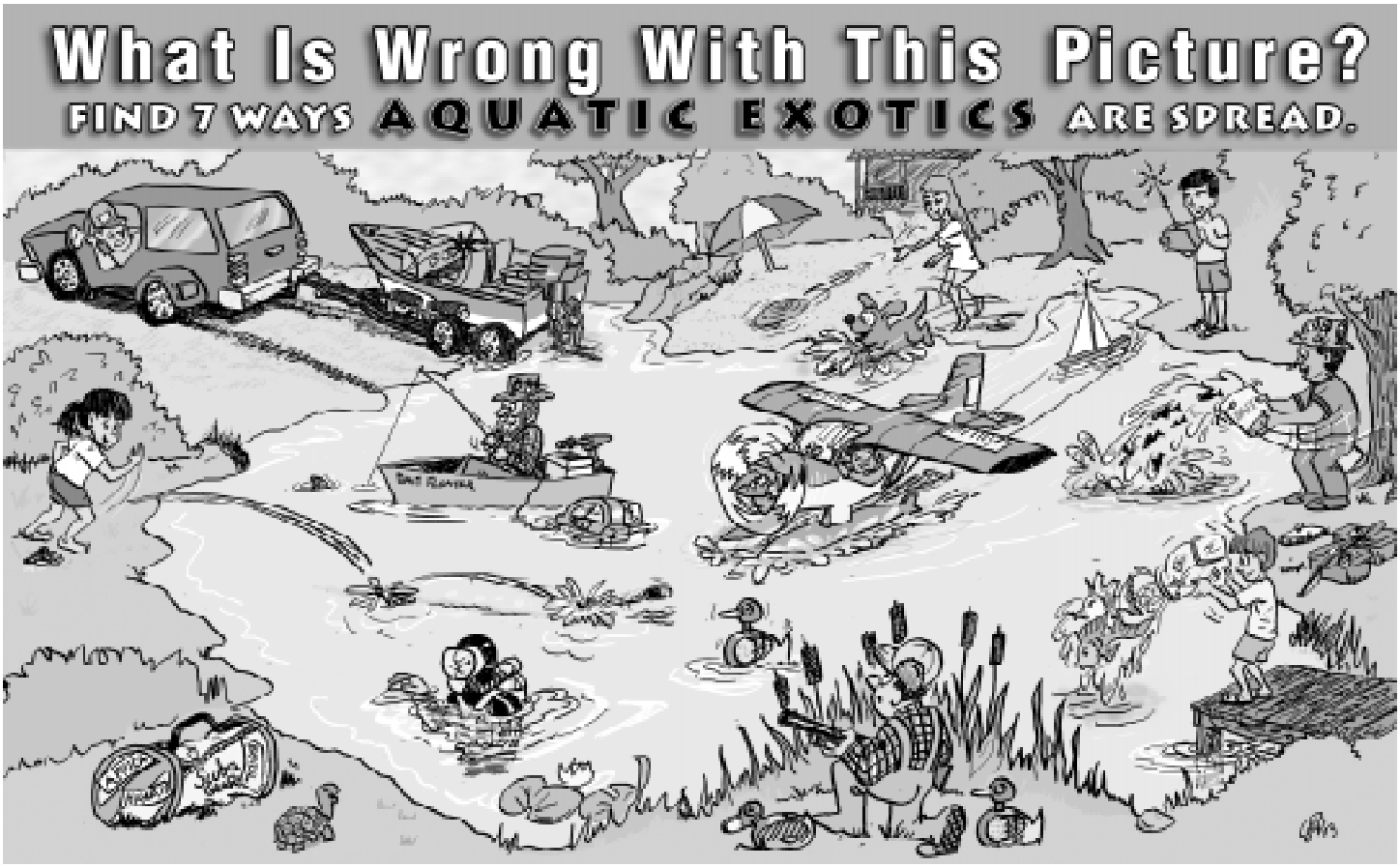


Yellow perch in Lake Michigan are believed to be pressured early in life by competition from zebra mussels and round gobies. Zebra mussels filter plankton that larval perch need to grow. Gobies eat the eggs of other fish, and they also compete with young perch for invertebrate food.

"Even a diminished ruffe presence in Lake Michigan waters will likely increase the bottleneck on yellow perch," said Lamberti. "Eurasian ruffe and yellow perch compete for some of the same resources and our experiments suggest that neither perch nor ruffe will do very well in that scenario.The native fish may experience increased competition during several stages of its life from the combined effects of the exotic triad."

Much of this six-year study was done in simulated lake environments and augmented with fish surveys from many parts of the Great Lakes. Two Notre Dame graduate students, Candice Bauer and Aimee Fullerton, were integral to the project.

If you would like more information, visit www.iisgcp.org or www.sgnis.org, which includes 3-D images of the exotic triad species.



Aquatic exotics can be introduced into new waterbodies through various human pathways, some of which are highlighted in this vignette. To play the game, see if you can discern which people-related activities pose potential problems, since not all contribute to the spread of invasive species. Can you identify seven activities that can spread exotics in this picture? The answers are on page 10. (Several answers are revealed in the text below.)

This exhibit, created by Illinois-Indiana Sea Grant, has been a hit at several venues, including the Chicagoland Outdoors Show and the Northwest Indiana Steelheaders' Spring Fever Outdoor Show.

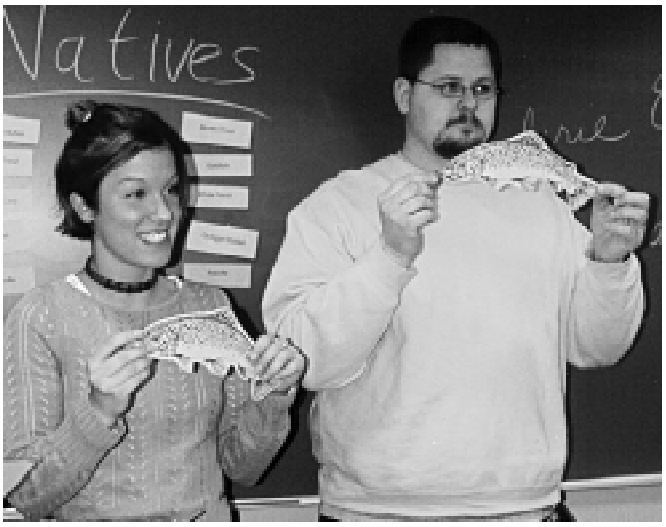
The game engaged both young and old alike with hundreds stopping by to participate. Many were challenged to think more broadly about the role humans play in the introduction and movement of exotics.

“Many participants expressed surprise upon learning that SCUBA diving equipment can contain invasive exotic species in any leftover standing water, or that boots worn by hunters can carry exotic animals or seeds in the mud encrusted on their soles,” said Kristin TePas, Illinois assistant coordinator of aquatic nuisance species programs.

“Not only does the game inform the participants about the problem of exotics, but it also empowers them with steps they can take to prevent their spread,” added TePas. This exhibit is scheduled to appear at future venues throughout Illinois and Indiana.

ESCAPE Provides Ideal Tool for Mentoring Teachers

"I've been sterilized six times," exclaimed a high school student playing the part of a sea lamprey in the "Beat the Barriers" game. Other students created "Most Wanted" posters depicting exotic species as criminals. This fun and learning continued at many other learning stations created by environmental sciences teachers Meg Buss and Diana Vermeulen at Elkhart Memorial High School in Indiana. Buss and Vermeulen are among 26 teachers collaborating with Illinois-Indiana Sea Grant, as novice and experienced teacher team up to plan lessons using Exotic Species Compendium of Activities to Protect the Ecosystem (*ESCAPE*).



Eastern Illinois University students in Marylin Lisowski's science education class learn that brown trout are not native to Lake Michigan. Fifty soon-to-be teachers got firsthand experience with exotics through ESCAPE *activities.*

Through the "Mentoring with *ESCAPE* Project," IISG is reaching out to underserved teacher groups such as preservice, urban, and novice teachers. Mentoring programs have gained momentum as a way to help new teachers grow professionally and remain in the field. Sea Grant's education staff is committed to providing this service.

Buss and Vermeulen shared the benefits of the "Mentoring with *ESCAPE* Project" at the Hoosier Science Teacher Association Conference in a half-day workshop. Buss explained, "Learning stations foster communications skills as students work together in teams; students have control over their class time because they have choices regarding when they do each station; and they loved playing the games." Students ultimately compiled all they learned from the *ESCAPE* activities into a final book. "We didn't really have a text book," said Vermeulen. "We wanted students to cover the 'big ideas' along four themes — species introduction, survival, impact, and solutions. *ESCAPE* offers prolific ways for students to get this information over and over again."

To order the curriculum, log onto www.iisgcp.org or contact Valerie Eichman at (217)244-8809 or eichman@uiuc.edu.

Control of Purple Loosestrife Now a National 4-H Project

In the near future, purple loosestrife, an attractive but invasive wetland plant, may have nowhere to run. A biological control program to introduce the natural enemy of purple loosestrife, the Galerucella beetle, into local wetlands, has been accepted into the National 4-H Collection of youth development curricula.

"This program provides 4-H field volunteers the opportunity to hatch thousands of these plant-eating beetles, to release them into nearby wetland areas where purple loosestrife is a problem, and to monitor the success of their efforts," said Natalie Carroll, Purdue University associate professor in 4-H and agricultural and biological engineering.

"Purple loosestrife forces out native vegetation, and does not provide a food or a nesting source for native wildlife," said Patrice Charlebois, Illinois-Indiana Sea Grant biological resources specialist. "Invasive aquatic species such as purple loosestrife reduce biodiversity and can also change water chemistry and flow."

The 4-H project to beat back purple loosestrife was developed by Carroll and Purdue University 4-H in partnership with the Illinois Natural History Survey, Illinois-Indiana Sea Grant, Michigan Sea Grant, and Minnesota Sea Grant. It has been implemented in several Great Lakes states, but now will be available to 4-H programs nationwide.

If you would like more information about the purple loosestrife 4-H program, contact Natalie Carroll at (765) 494-8344. To download or order the curriculum, see page 11.

Reel in the Latest Fish Consumption Advisories

Courtesy of Indiana Dunes National Lakeshore

It's about time to gather your bait and tackle and head down to your favorite fishing hole. Before you bring home your catch and fry it up, however, you ought to find out if there are fish consumption advisories for that body of water. This is especially true if the fish will be eaten by a pregnant or nursing woman or a child.

"Fish are a great source for protein and minerals; they are also low in saturated fat and can be a source of omega-3 fatty acids--essential for good health, but in a number of water bodies in Illinois and Indiana, fish can be contaminated with pollutants. Exposure to low levels of these contaminants may have long lasting health effects," said Leslie Dorworth, Illinois-Indiana Sea Grant aquatic ecology specialist.

Mercury can damage the nervous system, particularly in developing children. Low amounts of mercury may lead to learning deficits. PCBs have also been linked to learning deficits and behavioral problems in children.

A fish consumption advisory will tell you which contaminants are of concern for a particular water body, along with whether available fish species pose a risk depending on their sizes. These recommendations are based primarily on protecting women of childbearing age, pregnant women, fetuses, nursing mothers,0 and children younger than 15 years of age.

"You can still get the benefits of eating fish by choosing safer types of fish and safer ways to prepare fish; and by carefully choosing how often you eat fish," said Dorworth.

Always remember to eat a variety of fish, keeping the following in mind: fatty fish tend to accumulate PCBs; fish that eat other fish, such as largemouth bass, also build up contaminants; larger and older fish tend to build up contaminants in their bodies; and fish that feed along the water's bottom ingest more contaminants than those swimming in the water column.

"PCBs are stored in the fat of fish, whereas mercury is stored in the muscle," said Dorworth. "This means you can reduce the level of PCBs, but not mercury, by properly cleaning, skinning and trimming your catch, as well as baking or broiling the fish on an elevated rack that allows fats to drain to the pan below. After cooking, discard all liquids."

"You can still get the benefits of eating fish by choosing safer types of fish and safer ways to prepare fish."

To find out how often it is safe to eat a particular species, fish consumption advisories are the key. "For many rivers and lakes throughout Illinois and Indiana, you can find out whether your catch is safe to eat," explained Dorworth.

For easy online access to fish advisories, go to the Sea Grant Web page at www.iisgcp.org. If you would like a copy of Illinois-Indiana Sea Grant's latest pamphlet on fish advisories, contact Susan White at (217) 333-9441 or email white2@uiuc.edu.

Tracking Toxic Mercury in Polluted Waters

Not all mercury is equally toxic to human health. Pollution sources mostly emit inorganic forms of mercury, but the mercury that accumulates in fish, and when ingested affects our central nervous system the most, is an organic form known as methylmercury. The transformation of inorganic to organic mercury takes place through a natural process carried out by bacteria. This process, called methylation, mostly occurs in oxygen-depleted zones of wetlands, flooded soils, and below the surface of sediments in rivers and lakes. But the rate of methylation varies from one sediment or wetland to another. “If we can figure out where high rates of methylation are taking place, clean up efforts can be directed to where they will have the most impact,” said Robert Hudson, University of Illinois environmental chemist.

With funding from Illinois-Indiana Sea Grant, Hudson and co-workers are developing a model that can be used to predict methylation rates in wetlands and sediments throughout a watershed. Believing models are best when they can be calibrated with large amounts of data, they hope to exploit the new breakthrough in methods of measuring methylmercury in water and sediments made by Chris Shade, one of Hudson's doctoral students. The researchers hope to get a clearer understanding of the specific environmental factors that contribute to the production of methylmercury.

The focus of this project is the highly-polluted Grand Calumet watershed at the southern tip of Lake Michigan. For years, this region was a center of steel production, as well as home to a number of other industries. “Very little research has been done on methylation rates in waters this contaminated,” said Shade. “There are a number of contaminants in these waters that may affect rates of methylation.”

The researchers are measuring rates of methylation and demethylation (which degrades methylmercury to inorganic forms) at several sites in the watershed, including marshes, wetlands, and river confluences. The results of this study may play an important role in the restoration of wetlands and rivers in the watershed.

Knauss Fellowship Opens Career Doors

By Lori Nadolski

Each year, a select group of individuals are offered the opportunity to represent a Sea Grant program, learn on-the-job skills and acquire invaluable experience that can open career doors. The Knauss Fellowship program allows outstanding graduate students and scientific scholars, interested in marine, oceanic or Great Lakes resources and in the national policy decisions affecting those resources, to spend one year in Washington, D.C. This year is spent learning and developing active leadership skills and conducting research.

Previous Knauss Fellowship winners representing Illinois-Indiana Sea Grant now have successful careers and have built up many accomplishments in their respective areas of study.

Ed Buckner, 1999 Knauss Fellow, is currently an assistant professor at the University of Arkansas-Pine Bluff. In addition to teaching, he is currently researching water quality management, vegetative filter strips and wetland micro topography, which are wetland ridge and swale complexes containing a diversity of wetland habitats.

"This fellowship opportunity is immeasurably valuable because it bridges the gap between policy makers and scientists," Buckner said. "During my year on Capitol Hill, I took the lead as part of a team effort on drafting the Upper Mississippi River Conservation Act and drafted joint Congressional membership letters of support for several agencies, such as the U.S. Fish and Wildlife Service."

Also a 1999 Knauss Fellow, Holly Koehler is with the State Department in the Office of Marine Conservation in Washington, D.C., focusing on issues associated with Pacific highly migratory species, sea turtle conservation, marine debris, implementation of global fisheries treaties and the United Nations fisheries. During her fellowship in this same office, Koehler attended international meetings and negotiations as part of the U.S. delegation; prepared background papers, U.S. statements, letters and memoranda; and participated in the development of U.S. foreign policy on a variety of marine conservation and fisheries issues.

Adrienne Froelich, Knauss Fellow of 2000, was recently hired as an aquatic public policy analyst by the American Society of Limnology and Oceanography and the American Institute of Biological Sciences, and is also based in Washington, D.C. During her fellowship, she worked in the office of Senator Ron Wyden on oceans and fisheries issues, with topics ranging from FDA regulations on mercury levels in fish, to the prohibition of spotter planes in the Atlantic tuna fishery.

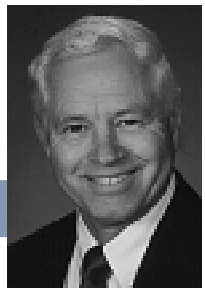
"It is very hard to get an "in" to congressional staff positions, and the Sea Grant Knauss fellowship has proved to be one of the best ways to get your foot in that door," Froelich said. "Working in Congress as a legislative aide is an experience that cannot be replicated and is very hard to come by."

Illinois-Indiana Sea Grant has sponsored two previous Knauss Fellows, John Epifanio in 1990, and Jeff Stein in 1998, who are both at the Illinois Natural History Survey.

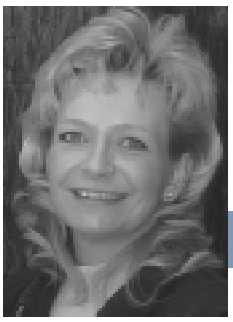
STAFF UPDATE

Now Sea Grant's research coordinator, Phil Mankin has a history rich in ecology. As a researcher for many years with the University of Illinois, Mankin has studied the interaction of human activity and wildlife from many perspectives. In urban and agricultural settings, on the ground, in the water, and in the air, Mankin explores ecosystem and land use management, as well as the public's attitudes about wildlife management. In his new role, Mankin is aiming to develop more research partners and collaborative funding opportunities, as well as optimize impacts from research projects.

Kate Beardsley has joined the Illinois-Indiana Sea Grant College Program as the Great Lakes ecosystem extension specialist. She is based at U.S. EPA's Great Lakes National Program Office in Chicago and will help develop programs and strategies that deliver research-based information to coastal community decision-makers, natural resource managers and agency professionals. She comes to Sea Grant with several years of experience with the Coastal Resource and Ecosystem Management Group at Battelle Memorial Institute and a Master's degree from Duke University.



IISG's new aquaculture extension educator is Charlie Felkner, who has over 30 years of experience with Purdue University Cooperative Extension. Through IISG he received concentrated training in aquaculture. Felkner will work with producers in Illinois and Indiana, train Extension field staff, consult with aquaculture associations, and update publications.



Director Dick Warner's administrative secretary is Stephanie Lage. Lage keeps track of Warner's full calendar, arranges a variety of meetings, and manages the University of Illinois Sea Grant office. Lage also works with the Environmental Council at the U of I. She has been employed with the university for 13 years.

Rosa Townsend serves as Illinois-Indiana Sea Grant's business manager. In this role she analyzes Sea Grant budgets and accounts and helps with the omnibus. She also manages the books for the Environmental Council and the Water Resource Center. In 1994, Townsend retired from the U of I after 35 years of service. Not content to sit in her easy chair, she earned her bachelor's degree at Greenville College, and then returned to part-time employment at the university.

We have a new doctor in the house!

Congratulations to **Brian Miller**, associate director on his successful defense of his dissertation in the school of Forestry.

Growing Communities continued from page 1

Indiana. “Historically, the county has been very agricultural, but at this point, about half of it is residential,” said Todd Barker, Hendricks County planner.

Inspired by the *Planning with POWER* program, land use decision-makers in the county established a committee to advise the planning commission about natural resources. “This group is developing regulations to allow for conservation design in future subdivisions,” said Barker. “We are aiming for at least 50-percent open space in these developments.

“*Planning with POWER* has been an excellent resource for us, providing expertise and materials throughout the process. For example, through Bob McCormick, we were able to bring in a top notch speaker for an open space planning workshop,” added Barker.

Four other Indiana counties are working closely with the *Planning with POWER* Program, including Dearborn County, which is experiencing growth from nearby Cincinnati, Ohio. “In several counties we have provided technical support so that comprehensive land use plans can be updated to include natural resource protection,” said McCormick.

Planning with POWER can offer a rich supply of expertise and information to local planners through its many project partners. In addition to the Purdue Extension Land Use Team, the program offers technical support from Indiana Department of Natural Resources, Indiana Department of Environmental Management, and Indiana Land Resources Council, along with the Natural Resource Conservation Service, and Soil and Water Conservation Districts.

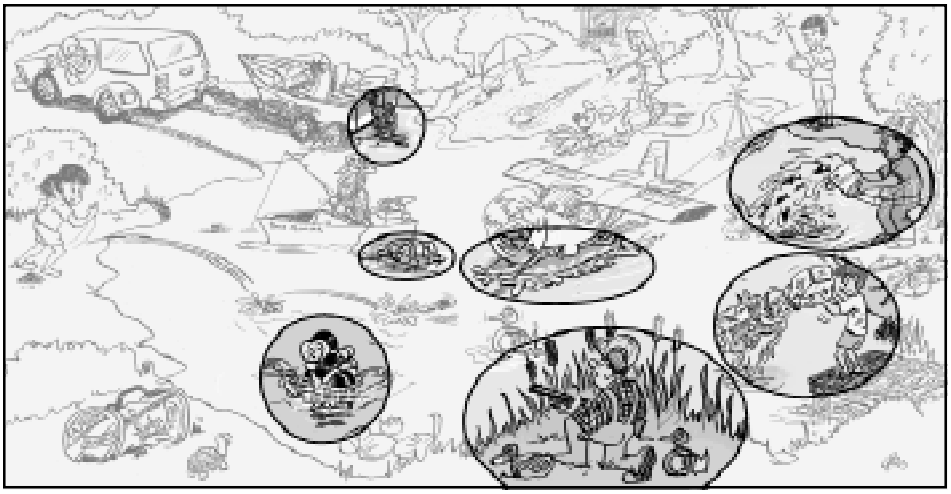
“Since the program started two years ago, we have given talks in over 30 counties in Indiana,” said McCormick. “*Planning with POWER* can help communities identify natural resources at risk and to evaluate management options to protect these resources. We also encourage networking between communities.”

The program is presently funded through Purdue Cooperative Extension Service and Illinois-Indiana Sea Grant.

If you would like more information, contact Bob McCormick at (765) 494-3627 or rmccormick@fnr.purdue.edu. Visit the *Planning with POWER’s* Web page: at www.planningwithpower.org.

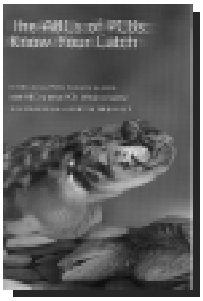
Seven Ways Exotic Aquatic Species Can Be Spread

(from page 4)



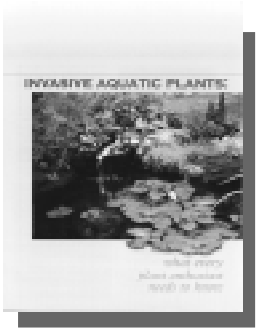
Boaters, anglers, waterfowl hunters, seaplane operators and scuba divers can unintentionally transport aquatic exotics hitchhiking on their equipment from one water body to another. Anglers, aquarium enthusiasts and pet owners can also spread nuisance species by releasing unwanted aquatic pets and plants, and by dumping aquarium or bait bucket water (which could contain microscopic organisms) into our lakes and streams.

Illinois-Indiana Sea Grant Publications



The ABCs of PCBs: Know Your Catch

This is a multi-lingual (English, Spanish, Polish, and Korean) brochure on the basic facts of PCBs and the occurrence of this toxin in Great Lakes fish. IISG-02-06. The cost is $9.00 for bundles of 50. Single copies are free. To order, contact Cyndi Moore at 1-800-345-6087 or go to www.PublicationsPlus.uiuc.edu on the Web.



Invasive Aquatic Plants: What every plant enthusiast needs to know

Due to popular demand, over 49,000 copies of this publication have been reprinted for 20 agencies and organizations. This full-color brochure provides information on the characteristics, impacts, and vectors of spread of invasive aquatic plants, as well as steps water gardeners can take to prevent the spread. 4pp., $9.00 for bundles of 50. A single copy is free. IISG-01-22. To order, contact Cyndi Moore at 1-800-345-6087 or go to www.PublicationsPlus.uiuc.edu on the Web.

Directory of Resources

Five brochures summarize the products, publications and services of Illinois-Indiana Sea Grant. Topic areas include the Sea Grant program, biological resources, water quality, coastal business and environment, aquaculture, and education. For a set of brochures or an individual one, contact Susan White at 217-333-9441 or white2@uiuc.edu.

Biological Control of Purple Loosestrife

This 4-H program joins students, educators, citizens, and scientists in the biological control of purple loosestrife using its natural enemy. These materials show an ecologically-sound approach that allows the return of an infested wetland habitat to a more natural state. (See page 5.) Leaders Guide, 92 pp., $8, IISG-01-11; 4-H Manual, 46 pp., $2, IISG-01-10. To order, call (888)398-4636 or download the curriculum at www.sgnis.org on the Web. Click on Outreach.

Exotic Species Watch Cards

Color photos, drawings, and general characteristics of many exotics, including three brand new ones: European frogbit (a water garden plant)(IISG-03-03), spiny water flea (IISG-03-04) and rusty crayfish (IISG-03-02). Others include round goby (IISG-01-15), purple loosestrife (IISG-01-14), Eurasian ruffe (IISG-01-13), and zebra mussel (IISG-01-16). To order, contact Cyndi Moore at 1-800-345-6087 or go to www.PublicationsPlus.uiuc.edu on the Web.

Read about and order other IISG publications at www.iisgcp.org/pubs.

Happenings & Education around Lake Michigan (*The HELM*), reports on Illinois-Indiana Sea Grant research, extension, education and other Lake Michigan issues and activities.

For a free subscription, program information or to send suggestions for articles or editorial correspondence write to us at the address above or contact

Irene Miles
University of Illinois
376 NSRC
1101 W. Peabody
Urbana, Il 61801
(217) 333-8055
miles@uiuc.edu

Visit our Web site at:
www.iisgcp.org

Illinois-Indiana Sea Grant College Program fosters the creation and stewardship of an enhanced and sustainable environment and economy along southern Lake Michigan and in the Great Lakes region through research, education and outreach.

Richard E. Warner, Director
dickw@uiuc.edu
Univeristy of Illinois
350 NRSC, 1101 W. Peabody
Urbana, IL 61801
217-333-5199

Brian K. Miller, Associate Director
bmiller@fnr.purdue.edu
Purdue University
175 Marsteller Street
West Lafayette, IN 47907
765-494-3573

Aquaculture
Charlie Felkner
765-412-2134
cfelkner@purdue.edu

Biological Resources
Patrice Charlebois
847-872-0140
charlebo@uiuc.edu

Coastal Business and Development (Interim)
Martin Jaffe
312-996-8933
mjaffe@uic.edu

Communications/K-12 Education
Robin Goettel
217-333-9448
goettel@uiuc.edu

Fisheries
Chad Dolan
217-557-1406
CDOLAN@dnrmail.state.il.us

Great Lakes Ecosystem
Kate Beardsley
312-353-2151
beardsley.kate@epa.gov

Planning with Power
Robert A. McCormick
765-494-3627
rmccormick@fnr.purdue.edu

Research Coordinator
Phil Mankin
217-244-6916
pmankin@uiuc.edu

Water Quality
Leslie Dorworth
219-989-2726
dorworth@calumet.purdue.edu

University of Illinois at Urbana-Champaign
Illinois-Indiana Sea Grant College Program
376 NSRC, MC-635
1101 W. Peabody Drive
Urbana, IL 61801

Non-Profit Organization
U.S. Postage Paid
Permit No. 75
Champaign, IL 61820