Dragonfly Gazette

WET's Facilitator, Teacher and School of the Year

Georgia Project WET relies on strong facilitators, teachers and schools statewide. On Saturday, March 23, at the Environmental Education Alliance of Georgia's annual conference at Unicoi State Park, Project WET recognized Melanie Melancon as the Facilitator, Tamera Neal as the Teacher and Henderson Middle School as the School of the Year for their outstanding contributions to water education.

Melanie Melancon, Facilitator of the Year

Greene County High School, Greene County

Ms. Melancon has a pretty "wet" history! She worked in the marine education setting at Sapelo Island National Estuarine Research Reserve and UGA Marine Education Center and Aquarium, both on the Georgia coast. She earned her M.A. in Science Education from UGA and worked as a teaching assistant in the Marine Science Labs and at the Oconee River GYSTC (Georgia Youth Science & Technology Center). Today she teaches science at Greene County High School where she uses Project WET in her classroom!

Tamera Neal, Teacher of the Year

Tritt Elementary School, Cobb County

Last year, Tamera Neal, and her fellow teacher Wendy Limerick, chaired the "Splash into Project WET" event their school received as the WET School of the Year. To take their students learning further, they worked with Georgia Project WET to create the Splash Superstars. As Splash Superstars, their 60 students have been introduced to four Project WET activities outside of the "Splash" event; led other students through two Project WET activities; monitored the quality of a local water body using the Adopt-A-Stream program; studied the way water flows and sources of nonpoint source pollution on the school campus; and identified their watershed to create poetry and artwork with the River of Words project. In addition, Ms. Neal has left no rock unturned to find support, funding, and resources for the River Kids Network project. Her students have adopted a section of Chimney Springs Creek and made monthly visits to the site to run tests, collect and compile data and pick up litter.

Henderson Middle School, School of the Year

Dekalb County

Henderson Middle's commitment to water education is outstanding. Over the last two and a half years, 700 of their 1,400 students have engaged in hands-on environmental activities ranging from morning announcements and poetry projects to storm-drain stenciling and wetland cleanups. The dedication of their teachers and students was showcased earlier this year when GPTV's Georgia Outdoors program highlighted their participation in Rivers Alive, an annual waterway cleanup.

Henderson Middle School Teacher Linda McCuen and Vice Principal Wayne Chelf

River of Words

New Partnership is "Write" On Time

This year, the Georgia Center for the Book will join Georgia Project WET as a sponsor of the River of Words Poetry and Art Project. Rhonda Mullen, GCB's Executive Director, along with the GCB Advisory Council will promote the project, judge the poetry for state awards, co-host the Awards Ceremony for national and state winners, and coordinate the exhibit to visit libraries across the state.

What is the Georgia Center for the Book?

Visit http://www.dekalb.public.lib.ga.us/gcb/#intro for more information.

The Georgia Center for the Book is a statewide program that celebrates books, reading, literacy, book arts, publishing and Georgia's literary tradition. Forty-two states are affiliated with the Center for the Book at the Library of Congress, a program created by an act of Congress in 1977. The DeKalb County Public Library is the host site for the Center for the Book in Georgia.

Georgia Center for the Book

Projects include:

The Georgia Top 25 Reading List

The list is made up of books set in Georgia or written by a resident or former resident of the state. The Advisory Council of the Georgia Center for the Book solicited nominations from citizens across the state and selected the titles it believes represent quality Georgia literature. The purpose of the Top 25 is to promote reading and discussion and to enhance appreciation of Georgia's rich literary traditions.

All Georgia Reading the Same Book

This is the first ever statewide reading campaign to unite all of Georgia. *Ecology of a Cracker Childhood* by Janisse Ray is the book chosen by the GCB to encourage reading and discussion in the state. With poetic layering of memoir and environmental study, themes of family and place, and concerns for our disappearing longleaf pine ecosystem, *Ecology* brings Georgians into a world shaped by the past but committed to the present.

Dragonfly Gazette

Editors: Deron Davis, Petey Giroux and Monica Kilpatrick

Writer: Mary Sidney Kelly

Production artist: Jacob Escobedo

The Dragonfly Gazette is printed on recycled paper. Pass it on to a friend, and recycle it when you're done.

The Dragonfly Gazette is published bi-annually. It is distributed to Georgia Project WET Facilitators and Educators in April and October.

River Of Words Timeline

February 15

Annual deadline for entries

April

National winners announced and State winners selected

May 19

Georgia's National and State Winners recognized at Awards Ceremony

June - December

ROW exhibit travels to libraries across the state

August

Georgia ROW brochure produced and distributed

September

Georgia ROW Teacher's Guide produced and distributed

November - January

Georgia ROW Poetry and Art Journal produced and distributed

WET WORKSHOPS

VISIT THE www.EEinGEORGIA.org CALENDAR FOR THE LATEST INFORMATION ON AVAILABLE WORKSHOPS

Tip:

Add a new twist to your workshops by including other Watercourse curricula such as

Conserve Water
Wonders of Wetlands

for more information visit:
http://www.montana.edu/wwwwater/publications/index.html

Georgia Project WET and the Environmental Education Alliance of Georgia present

BIODIVERSITY BASICS and WONDERS OF WETLANDS

July 25, 2002 at Zoo Atlanta/July 26, 2002 at Newman Wetlands Center

Registration fee: $65.00 for Environmental Education Alliance of Georgia members and $70.00 for nonmembers. Includes Biodiversity Basics and Wonders of Wetlands educator's guides, dynamic training and field experiences at Zoo Atlanta and Newman Wetlands Center and other educational resources.

Join us for this exciting 2-day workshop and become certified in the World Wildlife Fund's Biodiversity Basics curriculum for middle school students *(http://www.acornnaturalists.com/p9341.htm)*) and the Watercourse's Wonders of Wetlands curriculum for K-12th grade students *(http://www.montana.edu/wwwwater/publications/module.html)*! You will meet representatives from Georgia Project WET, the University of Georgia Project for Excellence in Environmental Education, Zoo Atlanta, Newman Wetlands Center and the Environmental Education Alliance of Georgia. The workshop runs Thursday, 9:00 a.m. – 4:00 p.m. and Friday, 9:00 a.m. – 4:00 p.m.

One (1) SDU credit is available.

Space is limited, and you must register for the entire workshop.
Registration deadline is July 1, 2002.

Confirmation information (including directions and workshop details)
will be sent to all registered participants.
Questions? Call Georgia Project WET (404) 675-1762
or the Georgia Project for Excellence in EE (706) 542-8905

Please return this portion with your $65 or $70 check made payable to:
the Environmental Education Alliance of Georgia, c/o Monica Kilpatrick, Georgia Project WET, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354

Name:		
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Phone:	W	H
Fax:		Email

Soaking Wet

This section of the Dragonfly Gazette recognizes Project WET Facilitators, Teachers and Schools and provides a place for them to share their ideas and accomplishments.

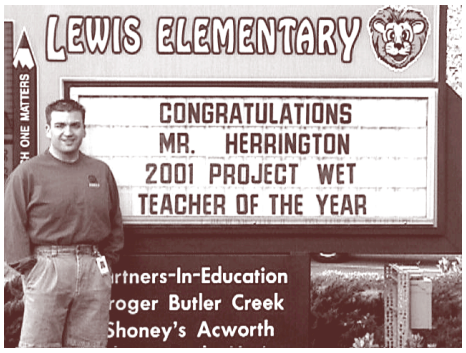
A former Project WET Teacher of the Year is creating a legacy of environmental action that will be difficult to top.

Over the past five and a half years, Dell Pamplin, Chattahoochee High School science teacher, has recruited his students, teachers, private industry and government officials to assist him in designing, funding and ultimately to construct a retention pond like no other. His efforts to filter out pollutants from storm water that drain into the pond earned him national recognition from the National Science Teacher Association as Outstanding Science Teacher for 2001. Earlier in the year Pamplin received one of eight awards worth $10,000 for this project from the Sea World/Busch Gardens Competition.

The crowning moment for Pamplin came when he was awarded a grant for $240,000 from the U.S. Department of Housing and Urban Development's Community Development Fund. U.S. Rep. Johnny Isakson personally visited the site and was so impressed with the plans that he pushed the project along the grant process. Already Pamplin and his students were able to raise $60,000 in grants and an estimated $100,000 in pro bono work from Parsons Engineering, who helped design the facility.

The entire project, called the Active Riparian Commensal Habitat (ARCH), will include an amphitheatre, trails, an elevated walkway, and interpretive walk. The facility, which will be handicapped accessible, can seat 200 and is being built of recycled materials.

Dell Pamplin from Chattahoochee High School in Fulton County was Georgia Project WET's Teacher of the Year in 2000.



James Herrington from Lewis Elementary School in Cobb County was Georgia Project WET's Teacher of the Year in 2001.

Not to be outdone by Dell Pamplin's achievements, fifth-grade science teacher James Herrington of Kennesaw's Lewis Elementary, who snagged the Project WET Teacher of the Year award for 2001, was recently recognized as the Elementary State Teacher of Promise for 2002 by the Georgia Science Teachers Association.

The award recognizes teachers with one to three years of experience who show exceptional promise, and takes into consideration their teaching philosophy and other accomplishments. Herrington received his award at the GSTA Science and Leadership Conference at Jekyll Island in February.

This year, he continues to use Project WET activities with the third-grade class.

"Project WET has helped me see that it takes just "little pieces" to incorporate everything together," says Herrington. "For instance, in 3rd grade we must cover map skills, heavily I might add. So I used the POISON PUMP Project WET activity to have fun with map skills. Not only do I cover map skills, we learn about diseases, bacteria and keeping healthy; all Georgia 3rd grade QCCs."

Herrington says the key to making science accessible to his students is to make sure the lessons are fun. "If I do an experiment or have a lesson that I do and then don't enjoy it, I probably don't do that lesson again. I find other ways to link together my QCCs with my likes, my abilities, and finally by asking the question how can we have fun with this?"

Frog Pond Lessons

Many teachers across the state are engaging students with water education. Often these classes include studying the pond in the campus' outdoor classroom. This section of the Dragonfly Gazette will focus on stories and lessons for making the most out of trips to the pond.

You can share your pond lessons and receive a $45 gift certificate for EE teaching materials from the Nature Watch Catalog. Qualify to win a library of over $500 of environmental education books and curricula! *Visit http://www.eeingeorgia.org/lesson_plans/ for more information.*

The following article is reprinted with permission from Green Teacher #48, June-September 1996. Subscriptions cost $26/year for 4 issues from: Green Teacher, P.O. Box 452, Niagara Falls, NY 14304, (416) 960-1244, www.greenteacher.com.

The Magnetism of Ponds

Getting the most out of a class excursion to a nearby pond

Getting comfortable

Appreciating the beauty of the outdoors is impossible unless you feel comfortable in it. Many students (and their teachers) may be apprehensive about going to a pond because it is new and the unknown can be scary. Going to a new habitat, however, is one of the most exciting experiences children can have. Help them feel comfortable by talking about the pond before they go (see pre-visit activity in side bar). This will develop a sense of familiarity and help link the pond to the classroom. Be sure to let them and their parents know what they are to wear and bring. Some suggestions are: rubber boots, hand nets, magnifying glass, buckets or basins, raincoat, long-sleeved shirts and pants if it is mosquito season, sun hats and sunscreen.

To make sure that you are comfortable, set boundaries along the pond edge to contain the students' activity. Be sure that everyone has a partner and that they understand that pushing and shoving will not be tolerated.

Asking questions

Be prepared for lots of questions*

What is this? Ponds are full of creatures that are so bizarre your students are bound to ask you what they are. If you don't know what it is, try to focus on one of its adaptations instead of its name. You could say, "I don't know what it is, but look at these paddle-like legs that it has for swimming." From observing these special features, encourage the student to think of a descriptive name for the creature (such as "pale green pond paddler"). Use this name when other similar creatures are found. Because the purpose of the field trip is to see the diversity of life and how a creature lives in its habitat, real names are not essential. If you or a student really wants to know what it is called, refer to one of the books that you may have brought with you. Or, better yet, ask other students. When I was in grade five, my teacher took the class to the local conservation area to study ponds. Because I lived right beside the area, I had spent a lot of time there on my own with nets, buckets, books and binoculars, so my teacher used me as a resource. This worked out well for everyone: the teacher has a "pond biologist" on her field trip, the other students got answers to many of their questions, and I went on to a career as an interpretive naturalist! You probably have students who have visited ponds already and will love to share their knowledge.

Pre-visit Activity Amazing Adaptations:

Creating a pond creature

Discuss aquatic and terrestrial animals with the class:

- ***How are they the same?*** (Both need oxygen, both need to move around in their environment, both need food.)
- ***How might an aquatic organism breathe?*** (Go to the surface for air, use a "snorkel" at the surface, use gills.)
- ***How might an aquatic animal move?*** (Have paddle-like legs, crawl along the bottom, have a long tail.)

After the discussions, have students create a drawing of an imaginary pond creature. They can then report to their classmates on what it eats, how it breathes, how it moves and where in a pond it may live (surface edge, bottom, in weeds). Because you are trying to make the students comfortable before their visit to a pond, let them have fun with their creations. They will usually design creatures wonderfully adapted to the pond, even though some may move with underwater rockets and eat "pond pizza." This activity works will after a pond visit, too, because they can incorporate real adaptation that they have observed.

Frog Pond Lessons *continued*

Post-visit Activity

Pond Field Guide

Have students make a pond field guide. Each could be in charge of a particular organism. Grades K-1 could set up their books with drawings of each pond creature. For older students, make up a template page that has a box for a drawing and several headings with space for the answers. Headings could include size and shape, number of legs, means of locomotion (float, swim, crawl), food, predators, number of eggs, or descriptive name ("pale green pond paddler"). Some of these categories will require information they gather from water samples or an environmental impact study. Once they book is bound, be sure to use it on future trips and let other classes borrow it.

The following are common pond creatures and aquatic plants that you might expect top see on a field trip with your students. If they are unfamiliar to you, look them up in a book before the trip to see what they look like. Better yet, have your students study them in the library as a pre-visit activity.

• Water mite • Spider • Dragonfly nymph and adult • newt • Damselfly nymph and adult • crayfish • Mosquito larvae and pupa • waterboatman • Backswimmer • giant water bug • Diving beetle • leech • Duck weed • cattail • algae

Using Nets and Buckets

Encourage the students first to look into the water and try to scoop out what they can see. When they catch something, have them gently turn their nets inside out and dip the contents into buckets that are half filled with water. After a few of these scoops, have them do some "blind scoops" that is, just scooping through the water among pond plants without necessarily seeing anything. When they look closely into their nets they will likely see damselfly and dragonfly nymphs or water mites. Even if they can't see anything in their nets, they should still empty the algae and debris into buckets because many creatures that are not visible in the net will be easily found once they are swimming in the bucket.

Basins work even better than buckets because more students can look into them, making observations or explanations of one creature much easier. Because they jump and may get stepped on before they escape, frogs should not be caught, only pointed out and watched. When the creatures are to be released, have two students, one on each side, gently dump the whole bucket into the pond and then rinse it. Some creatures such as snails may stick to the bucket and should be carefully removed and released.

Does it bite? Although the majority of pond creatures that will be caught are harmless, some of them can inflict a painful bite. Tell your students not to touch the animals with their bare hands and to leave them alone once ther are in a bucket or basin. Creatures that bite include backswimmers, diving beetles, spiders, giant water bugs, turtles and leeches. Snails, on the other hand, are great to touch and good for learning patience. If you put a bit of water and a small snail in your palm, eventually the snail will come out and crawl across your hand. Of course, you have to be sure you have a live snail and not just a snail shell, or it could be a very long wait!

Can I keep it? This question may come up as soon as a frog or turtle is caught. Getting across the point that an animal should be left in its own environment can be difficult. Point out that everything in the pond depends on everything else in a web of life, and that removing this creature is not fair to it or to the environment.

Nature Tidbits

Be prepared with some nature tidbits in case a certain creature is caught. Some examples are:

- A whirligig beetle's eyes are divided into two parts: the upper part sees above the water and the bottom part sees below the surface.
- Some water spiders can catch minnows for their dinner.
- Diving beetles and backswimmers take air with them when they dive.
- Caddisfly larvae build their own "shells" out of pebbles, sticks or leaves and carry it along wit them. If they are disturbed, they will hide inside their moveable home.
- Frogs and dragonflies have a three-stage life cycle: egg >tadpole > frog or egg > nymph > adult dragonfly. Mosquitoes have a four-stage life cycle: egg > larvae > pupa > adult.

Protecting the pond environment

Certain rules should be followed to ensure the safety of the students as well as the protection of the pond habitat. Don't allow students to step in to the pond. Explain that the rubber boots are for the mud around the pond. Let them know that if they step into the pond they will be stepping on living creatures on the bottom and if they walk in the pond they will stir up mud and make it difficult to see what is to be caught. The fact that staying out of the water lessens the chance of someone falling into it is a bonus safety feature. The main objective of the trip is not only to catch small aquatic animals, but also to release them. This way, the students can lean about the pond and feel good about the fact that they are not taking something out of its environment for too long.

Encourage your students to think about how they can help the pond. For instance, everyone could bring back garbage when they leave. They could keep a record of all the creatures they have found and publish it in a school newsletter. They could encourage other students to visit them and learn about the pond.

If you still feel uncomfortable about taking your class to a pond by yourself, local nature centers usually offer pond programs. Try attending one of these with your class and pick up ideas for your own future field trip. Once you are comfortable with ponds, try other habitats such as forests, meadows and rivers. There is no limit to what the outdoor classroom has to offer.

Chris Earley is an interpretive naturalist at The Arboretum at the University of Guelph in Guelph, Ontario.

References:

George Reid, Pond Life: A guide to common plants and animals of North American Ponds and Lakes (Golden Nature Guide). New York: Golden Press, 1967

Karen Dawe and Neil Dawe. The Pond Book. Toronto: Somerville House Publishing, 1990, ISBN 0-921051-35-2.

Donald Stoke. Observing Insect Lives. Toronto: Little, Brown and Company, 1983, ISBN 0-316-81727-9.

News, Notes and Upcoming Events

FREE!

Photo-Murals for K-12 Teachers in the U.S.

Native Freshwater Plants and Invasive Non-Native Plants

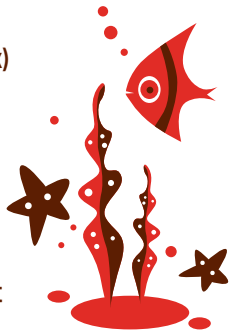
These full-color photo-murals are 62 inches x 23 inches and are fully laminated. Plants shown are from around the country. To read the list of plants for each mural, go to http://aquat1.ifas.ufl.edu. To obtain your free copies, send a hard copy letter on school letterhead to APIRS Photo-Mural, Center for Aquatic and Invasive Plants, 7922 NW 71 Street, Gainesville, FL 32653. For non-teachers, the cost per mural is $20 each plus shipping and handling.

FREE from Project WET (while supplies last)

Make your selections below and fax to Deron Davis at (404) 675-6245

REQUESTED

- ☐ Aquatic Plant Identification Card Deck (2 max)
- ☐ Grasses, Sedges and Rushes of Wetlands Identification Card Deck (2 max)
- ☐ Understanding Invasive Aquatic Weeds 5th Grade Student Activity Book (30 max)
- ☐ Wetland and Invasive Plants of the Southeast Coloring Book (30 max)



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Environmental Education Certification

Register Now for Environmental Literacy and Foundations of EE Zoo Atlanta: *July 8-10 and July 10-12 - Southwest GYSTC, Bainbridge: July 15-17 and July 17-19 Cost: $65 for one, $125 for two (Discount for EEA members)* Join the first class of educators to become certified Environmental Educators. EE Certification is a voluntary program. Participants will be required to complete six core classes plus (40) hours of community service within a three-year time frame. After completion of the core, participants will complete one hundred (100) hours of continuing education every five (5) years in approved courses/workshops/conferences to maintain their certification. You can register for courses offered this summer by visiting www.eeingeorgia.org and downloading the registration form. Two (2) – five (5) staff development unit credits are available for classroom teachers.

For more information, contact Richard Osorio at (706) 542-8905 or rosorio@uga.edu.

Did You Know?

In the last 40 years, one-third of North America's topsoil has washed off the land. And it's ended up in waterways where it can cloud freshwater streams and smother incredibly diverse coral reefs. Supporting soil health may sound dull as dirt, but it's key to sustaining productive farmland and a diversity of life for the future. Healthy soil supports a great part of life on Earth. That's why scientists are concerned about soil erosion and the loss of nutrients caused by certain farming practices, cutting down forests, and building homes and roads.
– from www.biodiversity911.org

Look What's New!

This fall a wonderful new environmental play premiered in Atlanta's elementary schools thanks to a marvelous collaboration between John Schmedes, Artistic Director of the TellTale Theatre, and Fred Brown, a well-known Georgia outdoor author. "Rio, The River Adventure" is jam-packed with river ecology and conveys a powerful conservation message in an action-filled, live performance. The play introduces Rio, a river-loving superhero, who guides two young people, Sandy and Gator, as they explore a river and encounter pollution first-hand. You can bring this production to your metropolitan Atlanta school or environmental learning center. Just contact the TellTale Theater at (770) 427-8206.

We're Not Allowing Field Trips Anymore

by Diane Davies, State 4-H Specialist, Environmental Education

For more than 20 years, I have watched the ebb and flow of decision making in schools concerning field trips. I have come to realize that this dance of back and forth can have enormous consequences on children's lives.

Our program, the Georgia 4-H Environmental Education Program offered at Rock Eagle, Jekyll, Tybee and Wahsega 4-H Centers, exists in large part because there have always been teachers and principals out there who understand that education just doesn't happen within the four walls of the traditional classroom. They understand the importance and absolute necessity of providing learning opportunities to their students in the one outside their doors, the real world. When a field trip is denied, whether that trip is to one of our centers, a zoo, museum, aquarium, farm or nature center, the losses, although not yet tangible or observable, will play out over time. But the hard reality of these decisions, make no mistake, will fall most heavily on the students who have been denied these learning opportunities.

I have heard so many stories from teachers over my career of what a trip to our centers meant to their students and how it changed their lives. But the one that has stayed with me the longest is the one about two students that came with their metro Atlanta area school to our Environmental Education program on Jekyll Island. The teacher had spoken to our coordinator about her reluctance to bring these two students on the trip. They were disruptive, had poor grades and were generally out of control. They were well on their way to becoming juvenile delinquents.

Encouraged by our staff to bring them on the trip, the teacher reluctantly agreed to do so. These children had never traveled out of their county, let alone to the coast. But when these two boys were given the chance to come, experience and learn, their lives were transformed. For the first time, they realized that there was a whole new world out there that was interesting and intriguing and that captured their imagination. They chased fiddler crabs across the marsh, they walked on the beach and identified creatures that had washed up. They had fun learning new things and seeing a different world than the one they had known in the city. This experience opened their eyes and made them realize that they might like to pursue a career in this area. On the bus trip back to Atlanta, they both told their teacher that they wanted to become marine biologists. They subsequently raised their grades and became A and B students and both went on to college to pursue degrees in marine biology.

Georgia, just like all of the other states in America, has such magnificent treasures in the beauty and grandeur and intrigue of the land. It is a natural teacher, the best teacher. In our collective decisions to try to make education more effective or raise student test scores even higher, we must be open to use the obvious. The natural environment of the land holds so much mystery and wonder for children and the child that still lives in us.

Diane Davies, State 4-H Specialist, Environmental Education 350 Rock Eagle Rd Eatonton GA 31024
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What's Inside this Issue?