

Cooks Current

"To protect, preserve and improve the quality of water, land and life in the Cooks Creek Watershed"

Volume 2, Issue 3

Newsletter of the Cooks Creek Watershed Association

Summer 2005

2005 CCWA Events

- **Regular Board Meetings:**
Springtown Fire House
7:30 PM
Sept 22, Oct 27,
Nov 17, Dec 22
All are welcome! We appreciate your involvement!
- **Oct 8: Fall Fellowship dinner @ Springtown Rod and Gun Club**
5-9 PM
- **Nov 12: Fall clean-up**
8AM



See Page 6 for Details !!

Cooks Current is a publication of the Cooks Creek Watershed Association.

Board Members:

President: W. Scott Douglas

Treasurer: Margaret McDonald

Membership Chair: Sherry Brodhead

Recording Secretary: Jim Orben

Lois Oleksa

Hans Reimann

Stephen Smith, MD

From Across the Board

It's hard to believe, but the summer is almost over. We've had a dry summer for the Creek, with water levels already at their annual low even before the dry spells. Please make sure to use water sparingly, and pray for a wet fall (but not too wet, one Ivan was enough, thank you). The Board is planning the Fall Fellowship Dinner for Saturday October 8, and I, for one, am excited to hear about native landscaping alternatives. I hope to see you there! I heard recently that our friends at the Heritage Conservancy have been busy quietly acquiring land rights in our backyards: the recent preservation of the Torpie tract in Durham is a real bonus. Thanks to everyone who worked on that,

you know who you are. Several Board members continue to work on the zoning ordinance in Springfield, and the sourcewater protection plan for Springtown. It is encouraging to see that the Springfield and Lower Saucon governments are willing to work together to protect our resources in the face of nearly constant

We're on the web!
www.cooks creekpa.org

development pressure. I will be looking for members to support the adoption of new ordinances before the end of this year. On another note, it came to my attention that the Springfield Historical Society just completed a survey of properties worthy

of protection. Protecting our rural character is yet another way to protect the watershed and its resources. Keep up the good work. One final thing, the Board will be cleaning up our section of Route 212 from Gallows Hill Rd to the 212/412 intersection early in November. If you are interested in helping for an hour or two, please drop me a line at info@cooks creekpa.org.

W. Scott Douglas
President

How's your MPG?

By: Jim Orben

How's Your MPG?

What about your tons per year? Or even more to the point, how much do you pay each year to fuel your vehicle as you drive around the watershed and back and forth to work?

Fuel prices have been on a steady increase this past year, but cost per gallon is only the starting point for our vehicles' effect on your budgets and our environment. A Toyota Prius averaging 55 mpg uses 273 gallons of gas to go

15,000 miles costing \$820 and emitting 3.5 tons per year of CO2. Compare this to the ride you're in. A generic 4WD averaging 20 mpg

See Your MPG
continued on page 2

Too Much of a Good Thing

By: W. Scott Douglas

We are fortunate to live in a watershed that is relatively free of pollution. Our low population, coupled with a lack of industry has ensured that we do not live with a legacy of chemical contamination. Our surveys of the creek and its tributaries several years ago revealed only those contaminants that typically come from atmospheric deposition, with one exception: nitrates. Nitrate levels are too high in the surface water in some places in our watershed including Silver Creek in Springtown and the tributaries that run down along Dogwood Lane in Durham. It is likely that these "hot spots" are caused by inadequate or failing septic systems. Nitrate in groundwater is a more serious problem. In Durham there are a number of home wells that have nitrate pollution so high that the water is not safe to drink. This pollution is likely a result of overuse of fertilizers in our more agrarian past.

Nitrate is made up of Nitrogen and Oxygen and is one step in the natural breakdown and recycling of organic material. When something dies, or when a living animal excretes waste, nitrogen is released in various forms, including nitrate. Plants must have this organic nitrogen to build new tissues. Nitrogen is so critical to life that some plants go to great lengths to get an adequate supply. A Venus Fly Trap captures animals to get nitrogen and some plants actually house bacteria that can "fix" nitrogen directly from the atmosphere (legumes like clover, fescue and soy beans). Humans learned early how to manipulate the nitrogen cycle to assist with agriculture. Farmers have known for millennia that spreading animal waste on crops will help them to grow faster and produce more.

Despite its importance, it is possible to have too much nitrogen. When nitrogen builds up in our bodies, we excrete it. This is what gives urine its characteristic ammonia smell. Plants can only use so much nitrogen. If there is too much nitrogen, and specifically in the nitrate form for the plants to use, it can seep into the groundwater or runoff into streams and ponds. This can cause algae blooms that deplete oxygen in the water, killing

off the fish and other animals. Eventually even the algae dies, and the resulting rotting vegetable matter is ugly and smells bad. Nitrate can make us sick if it gets into our water supply. Symptoms of nitrate poisoning include frequent urination and migraine headaches. If you suspect that you might have a problem with nitrates in your well water, contact me at info@cookscreekpa.org. If there is enough interest perhaps we will supply water tests again as we have in the past.

There is very little we can do about nitrates once they are in groundwater, but we can easily prevent further nitrate pollution. If you own livestock, manage the manure responsibly and keep it away from creeks and drainage swales. If you farm, you should preferentially use natural nitrogen if possible, and only apply as much as the plants can use (talk to your local soil conservation service representative for help on determining how much nitrogen a crop can actually use). To reduce loss of nitrogen to the water supply, always plow fertilizer into the ground quickly no matter what the form. The most common form of nitrate pollution comes from each and every one of us. In order to minimize our impact on the nitrogen cycle, we need to keep our septic systems in good functioning order. This means not overloading the system, and pumping solids out every two years at a minimum. Avoid driving on the leachfield, and never dump chemicals into the system; it kills the bacteria that break the waste down. If you own a sand mound, make sure to inspect it regularly for leaks and have it professionally inspected every couple of years (when you pump the tank is convenient). As our township grows, it will fall to each of us to be ever more vigilant of our individual impacts on the watershed.

Your MPG

Continued from page 1

will use 750 gallons costing \$2250 and emit 9.4 tons of CO₂. How many years will it take to pay off the cost of a more efficient car with savings like that each year? These calculations were done pre-Katrina at a mere \$3 per gallon. As the cost of gas rises the pay-off comes even faster. And then we take into account the reduction in greenhouse gas emissions (tons per year CO₂) that the improved mpg affords and we have a double winner.

Not everyone can or will dash out and buy a new car/SUV to get higher mpg and lower tpy. But there are a number of things you can do with your old sled to relieve the pinch at the pump. Edmonds.com tested some gas saving tips and found that on a 2005 Land

Rover LR3 SE they could improve mpg 13.9% by using cruise control set at 70 mph. Another gas saver is feather foot over lead foot. If you accelerate more gently your mpg can be improved by as much as 35%. Proper tire inflation can help too by adding 4.4% and extending the life of the tires. Finally it is OK to use the AC. With the windows up and AC on the test SUV got 1.6 % better mpg than with AC off and windows open. You will just have to tell the dog you're sorry but the windows stay up

Two more ways to reduce your tpy are to take fewer trips by doing more errands each time you go out and walk or ride a bicycle rather than starting up the car. Remember to be good to your wallet and to be good to the earth. Raise your mpg and lower your tpy.

Highlighting this quarter's Invasive Plant

By: Hans O. Reimann Jr., The View from LaughingSprings

We have been very fortunate to live in a pristine watershed that has sustained a large degree of native bio-diversity, in spite of three hundred years of negative impact from our taming of the wilderness. But, in the last three decades or so, foreign plants innocently introduced into our watershed, have begun to accelerate their impact on our native ecosystems; out-competing native plants for habitat. As native plant communities are altered, food available for native insects such as butterflies and bees is lessened. This leads to fewer and fewer native varieties of flora and fauna in our watershed. All up and down the food chain, creatures are adversely affected; from birds who feed on the insects, mammals who eat the seeds and fruits, on down to the microbial creatures living in the soil that break down organic matter into usable nutrients.

These plants that interrupt our native ecosystem's cycle of life, are called invasive plants. One of these plants that can be frequently seen in every watershed around us, but so far rarely in our own, is Japanese Knot Weed. Common names for this plant include: Elephant ear bamboo or Mexican bamboo. This plant can grow upright, hollow stems from three to ten feet high, with smooth-edged heart shaped leaves. Stems are often reddish or red speckled with young shoots looking similar to red asparagus. The small white flowers grow in dense clusters from the leaf joints in July and August. Although it dies back to the ground after hard frosts, the stems may persist through the winter as bare reddish brown stalks. Knot Weed is a creeping perennial, meaning it quickly grows back each year from an extensive rhizome (root) system, up to twenty-five feet

from the parent plant. This fact, and the ability of broken roots (from flooding or man made disturbances) to grow new plants independently along riparian or wetland areas, make this plant extremely dangerous to any watershed.

The best mechanical control method is by starving the root system by cutting the plant down to the ground periodically through the growing season over a three-year time frame.

More info on this plant and other invasive plants can be found at the Nature Conservancy website:

tncweeds.ucdavis.edu.

Book Review

By Lois Oleksa

Planting Green Roofs And Living Walls

By: Nigel Dunnett and Noel Kingsbury (Timber Press, 2004)

I've started reading a fascinating book on green roofs which I found in the Bethlehem Public Library. Remember the picture of the cow on the house roof eating tufts of grass? Green roofs are becoming upscale and mainstream. They consist of a layered sandwich of roof deck, waterproof membrane, and soil filter fabric, topped with several inches of lightweight soil mix. The cities Seattle, Washington and Portland, Oregon are encouraging the public to build green roofs. German cities such as Stuttgart and Mannheim require commercial buildings to have green roofs; they are years ahead of everyone else.

Remember the soddies? They

are green roofs. The Scandinavians also have a history of green roofs. They've been around for centuries.

What advantage do they have and why all the interest? The green roof acts like a storm window to reduce energy use, provides oxygen, absorbs and reflects noise, and collects pollution from the air as well as capturing, filtering and slowing water run off. What a great benefit for storm water problems. Maybe I'll plant one on my little chicken coop.

P.S. I understand the Pool Wildlife Sanctuary of the Wildlands Conservancy has a green roof. You are invited to view this marvel year-round.



Flowering Japanese Knot Weed
Photo by: Jim Orben

Thank you and good luck with invasive weeding!

Euell Gibbons writes in Stalking The Wild Asparagus; stew the young shoots of Japanese Knot Weed 3-4 minutes, add sugar, making a sweet sauce, like rhubarb. **Eat only if you know what you're picking.**

Mini-monsters take over Springtown....Again

By: Scott Douglas

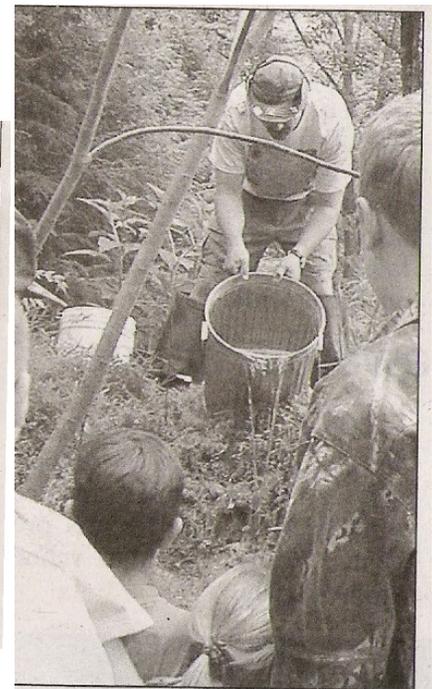
For the fifth straight year, the CCWA hosted a successful stream ecology class in Springtown at the Douglas'. Over 35 people attended this year, only about half of them kids under 12. With Scott's manic guidance, the kids of all ages learned about the importance of conserving water, the perils of stormwater runoff and how to tell a stonefly nymph from a mayfly nymph. As usual, the toilet-based watershed model brought squeals of delight and disgust from our newly dubbed Water Rangers. The class highlighted a walk to the Creek with kick nets and specimen bottles. In addition to lots of laughing and splashing, one team of monster hunters found an American Eel, another found a newly emerged Dobson fly – still soft and unable to fly. Special guests this year were representatives from the local chapter of *Trout Unlimited*, who set up a fly tying demonstration. Several children stayed into the afternoon tying up colorful bits of fluff hoping to fool our wily native trout. If you haven't yet attended our annual monster hunt, put it on your calendar for next year – the Saturday of Father's Day weekend.



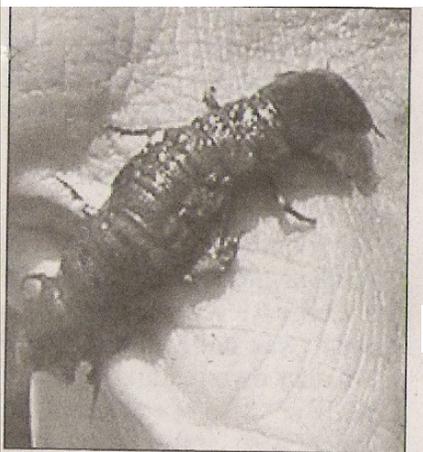
Kids in the Cooks Creek get their specimens.



Youngsters and parents look at specimens.



Scott Douglas gives an erosion demonstration.



Water beetle larva up close!

Photographs by Rose Strong

Going Native reprinted courtesy of *Estuary News*, Summer, 2005

Native plants are those species that were present before European settlement in North America. These species have evolved in the presence of local soils and climate conditions, and have developed natural defenses to insects and disease. As such, they require fewer, if any, chemicals to maintain their health, and can tolerate drought conditions better than exotic species. These characteristics make native species easy to grow, low maintenance plants with many environmental benefits.

When using native plants in your garden, you make a meaningful contribution to improving water quality. Why? Because native plants require you to use less fertilizer and pesticides in maintaining your garden, thus reducing the amount of toxic pollutants that eventually enter our rivers and streams. Excessive use of lawn fertilizer, for example, will run off or leach from the soil and end up in the local waterways. There, the nitrogen and phosphorus contained in the fertilizer will stimulate the growth of algae, which will deplete the levels of oxygen necessary for fish and other aquatic organisms to survive.

Finding native species at your local nursery can be difficult. More often than not, native species are not identified. In recent years, however, nurseries have begun to recognize the importance of adding locally native species to their plant inventories that are available for retail sale.

Exotic invasive plants can quickly overwhelm native species, reducing the availability of light, water, nutrients and space. Ecologists now rank invasion of exotic plants, animals, and pathogens second only to habitat loss as a major threat to local biodiversity. Invasive plants may be introduced intentionally or by accident. Because of their attractive appearance and popularity, many invasive species are sold at local nurseries. Below is a list of invasive species that should be avoided.

Come and hear more about the benefits of native plants at the Cooks Creek Watershed Association Annual Fall Covered Dish Dinner, Saturday, October 8, 2005 from 5 to 9PM at the Springtown Road and Gun Club.

Easy to find natives for the home garden...

- Inkberry Holly
Ilex glabra
- Eastern Redbud
Cercis canadensis
- Winterberry Holly
Ilex verticillata
- Foam Flower
Tiarella cordifolia
- River Oats
Chasmanthium latifolia
- New England Aster
Aster novae-angliae
- Beebalm
Monarda fistulosa
- Cardinal Flower
Lobelia cardinalis
- Orange Coneflower
Rudbeckia fulgida
- Cinnamon Fern
Osmunda cinnamomea
- Floeglove Beardtongue
Penstemon digitalis
- Bamboo
Phyllostachys aubea
- Butterfly Bush
Buddlei davidii
- Burning Bush
Euonymous alatus
- Norway Maple
Acer plantinoides
- Periwinkle
Vinca Major or Minor
- Princess Tree
Pawlowinia tomentosa

Wisteria
Wisteria sinensis

Japanese Spirea
Spiraea japonica

English Ivy
Hedera helix

Multiflora Rose
Rosa Multiflora

Local Government Meetings

Springfield Township:

610-346-6700

(www.springfieldbucks.org)

2320 Township Road

Supervisors: 2nd Tuesday @ 7:30 PM

Planning Commission:

1st Wed. @ 7 PM

Supervisors/Planning Commission Work

Session: 3rd Thurs. @ 7 PM

Environmental Advisory Council.: 2nd Thurs. @ 7:30 PM

Durham Township:

610-346-8911

215 Old Furnace Road

Supervisors: 2nd Tuesday @ 7:30 PM

Planning Commission: 1st Tues @ 7:30 PM

EAC: 3rd Tuesday @ 7:30 PM

Lower Saucon:

610-865-3291

3700 Old Philadelphia Pike

Council: 1st and 3rd Wed. @ 7 PM PM

Planning Commission: 2nd Mon @ 7 PM

EAC: 1st Tues @ 7 PM

Williams Township:

610-258-6060

(www.williamstwp.org)

655 Cider Press Road

Supervisors: 2nd Tues @ 7 PM

Planning Commission: 3rd Wed @ 7 PM

Land Preservation Board: 3rd Mon @ 7 PM

Richland Township:

215-536-4066

1328 California Road

Supervisors: 2nd and 4th Mon @ 7 PM

Planning Commission: 3rd Tues @ 7 PM

Preservation Board: 2nd Tues @ 7 PM

Rivers Conservation: 3rd Tues @ 3PM

Please Join Us...

All of us who reside in the area enjoy the beauty of Cooks Creek.

Those of us who are fortunate enough to live here are dependent upon this watershed not only for the beauty of the creek but our wells, the wetlands, the wildflowers and all of the beautiful landscapes in our townships.

It's up to all of us to protect this treasure. The Cooks Creek Watershed Association asks that you become a member and help in the task of protecting this special resource.

Cooks Creek Watershed Association - Membership Form

Name: _____

Address: _____

Phone: _____ E-mail: _____

Interests:

Newsletter: ___ Website: ___ Roadside Cleanup: ___ Event Planning ___

Christmas Tree Sale: ___ Providing Speakers: ___ Fund Raising: ___

Stream Studies: ___ Weekend Seminars: ___ Maintaining Open Space: ___

Individual Membership Fee: @ \$ 15.00 per year _____

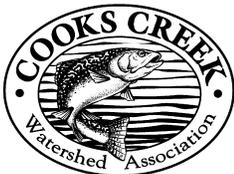
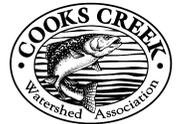
Family Membership Fee: @ \$ 25.00 per year _____

Donation: _____

Total _____

Please detach and mail to Cooks Creek Watershed Association , (CCWA)
P.O. Box 45 Springtown, PA 18081. *THANK YOU !*

*Checks can be made payable to Cooks Creek Watershed Association.
CCWA is a 501 (c) (3) non-profit organization.*



Cooks Creek Watershed Association
P.O. Box 45
Springtown, PA 18081
www.cooks creek pa.org

Place Stamp
Here

Mailing Address Line 1
Mailing Address Line 2
Mailing Address Line 3
Mailing Address Line 4
Mailing Address Line 5