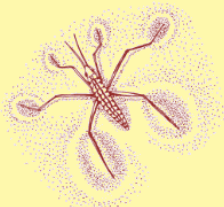




Cover photos: (left) Cornwallis, Annapolis Co, NS; (right) Moose River, Annapolis Co., NS, Katie McLean



Waterstrider

News from CARP's frontline

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Using outreach programs to develop ecological literacy

"Environmental education is ultimately about decision-making, critical thinking, and citizenship, including acting as an environmentally literate citizen which includes adopting actions that reduce environmental stressors affecting some conservation target (J Heimlich, 2010)".

Environmental education is a process of life-long learning, and bearing this in mind CARP has been seeking out new ways to actively engage community members in this process.

One exciting new program that we are leading, in partnership with the Town of Annapolis Royal, and with support from the Province of Nova Scotia's Thrive program, is the Annapolis Young Outdoorswomen program. This is an afterschool program for girls in grades 6-8, which provides an opportunity to...

(continued on page 2...)

develop their outdoor and leadership skills, and spend more active time enjoying the outdoors together.

In August we held "Young Naturalists Day" with the support of the County of Annapolis, at Raven Haven Beachside Family Park. With six stations featuring hands on learning opportunities open to youth of all ages, the CARP team was able to highlight the different program areas we are involved in, from fish habitat restoration to wood turtle conservation.

These types of programs can play an important role in engaging the public in stewardship efforts, because they support the development of ecological literacy.

Ecological literacy refers to the ability to understand natural systems that make life on Earth possible. Through ecological literacy, individuals become equipped to understand the relationships between natural and human systems, and the consequences of our interactions with these systems.

The ultimate goal of ecological literacy is to provide people with the knowledge required to understand complex environmental issues, and make decisions that move us in the direction of environmental sustainability, instead of undermining the natural ecosystem we depend on.

Lunch-n-learn sessions, public library talks, a Christmas Bird Count, and outdoor workshops are all on the schedule for this coming Fall and Winter, and community members of all ages are encouraged to keep an eye out for future events that might pique their interest.

Introducing Biolog

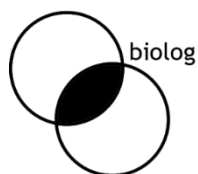
Contributed by Kate Goodale

There are some services that biodiversity provides that are indispensable for agriculture. Processes such as water filtration and pest control by beneficial insects will help production. There are also less tangible benefits, like the enjoyment that one gets from bird watching, or taking your children out fishing. Research was carried out by the School for Resource and Environmental Studies at Dalhousie over 2012-13 that investigated how farmers in Nova Scotia feel about biodiversity on their land, and what kind of management strategies they used, or would consider using, to encourage biodiversity.

An interest and willingness to engage in biodiversity conservation practices was found, but in some cases lack of information or tools to engage in those practices seemed to prevent activity adoption. The Biodiversity Landowners Guide (biolog) is a new resource for farmers about the practices that are beneficial for biodiversity and farming, including resources for how to cope with different nuisance species. Biolog can be viewed on any device with internet, from mobile phones to desktop computers.

This tool is the product of broad collaboration, created by the School for Resource and Environmental Studies with support and input from the Nova Scotia Federation of Agriculture, Nova Scotia Department of Natural Resources, Ducks Unlimited Canada, Agriculture and Agri-food Canada, Nova Scotia Environment, Nova Scotia Department of Agriculture, the Nature Conservancy of Canada and the Nova Scotia Woodlot Owners and Operators Association.

The official launch for the website is Thursday November 27th at the NSFA's AGM. The website is hosted by the NSFA at <http://www.nsfa-fane.ca/biolog>. Any questions or feedback about the site can be directed to Kate Goodale: goodale@dal.ca



Kate Goodale is a graduate of the MES program at Dalhousie University.



2014 Environmental Home Assessment Program, Jamie McCamon

Over the last year, 100 residents of western Nova Scotia have participated in the Environmental Home Assessment Program (EHAP), a Nova Scotia Environment initiative. Clean Annapolis River Project (CARP) delivers this program in Kings, Annapolis, Digby, and Yarmouth Counties.

Participation in EHAP has provided homeowners with information and resources that has enabled them to properly maintain their septic systems, wells, and oil tanks. Participating homeowners are able to take advantage of up to a \$100 rebate offered to pump out their septic systems, or the rebate may be used to test their water for bacteria and harmful chemicals. Residents of this region with malfunctioning septic systems are also given access to a 3,000 septic repair grant to help with the cost of repairing or replacing their septic system.

Response to the program has been very positive in the area, and participants seem very satisfied with the program overall. Whether they are experiencing problems with their septic systems and are looking for financial assistance with repairs, are recent homebuyers with no experience with septic systems and wells, or are simply looking for some advice on keeping things functioning well, the program has proven beneficial to those participating.

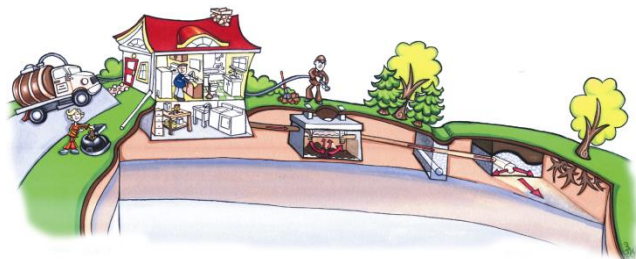
Follow-up phone surveys with program participants have yielded some very positive comments about the program such as:

"I was very impressed with the program. I was surprised that it was being done. It seems very progressive."

"The program helped us install a new septic system. It opened my eyes to a few new things. I'm really glad we got it done."

"It's a great program. I've recommended it to other people."

All homeowners having both a well and septic system are eligible to receive a free and confidential assessment.



Many homeowners do not give much thought to what happens when waste goes down their drain. But if you rely on a septic system to dispose of your wastewater, what you don't know can hurt you.

Proper maintenance of your septic system can have a significant impact on how your system works and how long it lasts. As a rural homeowner in Nova Scotia you are the one responsible for the maintenance of your septic system. When a septic system fails, domestic waste can reach the groundwater. Bacteria and viruses from human waste can cause dysentery, hepatitis and typhoid fever. Nitrates and phosphates also found in domestic wastewater can cause excessive algae growth in lakes and streams called algae blooms. These blooms are not pretty and can impair and destroy other aquatic life.

Three good reasons for properly maintaining your septic system are money, health, and pollution prevention:

Money - It costs a lot of money to replace a septic system and very little to maintain it. Paying a professional to pump your septic tank every three to five years and not putting hazardous waste down your drain is much less expensive than replacing your system.

Health - Any contact with untreated human waste can pose a risk to public health. Wastewater from failing septic systems can contaminate nearby wells, groundwater, and drinking water sources.

Pollution Prevention- Failing septic systems can contribute to the pollution of local rivers, lakes, and shorelines that your community may use for recreational and/or commercial activities. This can also affect the economic health of communities by reducing property values.

Community members committing to species at risk conservation in their backyards



CARP staff and volunteers wood turtle searchers at one of the 2014 group visual survey events

In 2012 CARP launched their wood turtle monitoring and stewardship project. The project team, which includes CARP staff and a highly dedicated group of community volunteers, has now completed the third field season of wood turtle monitoring at locations across the Annapolis watershed.

As CARP continues to build on the success of the monitoring component of this project, the next steps include utilizing the data collected to engage community members in stewardship actions aimed at reducing or mitigating human pressure on this species at risk.

Environmental stewardship refers to the responsible use of our natural resources through sustainable management practices, including conservation actions. In terms of wood turtle stewardship, there are a variety of options that community members who share habitat with wood turtles can choose to implement.

Landowners can protect known wood turtle habitat by restricting activities that create risk of injury to turtles or degradation of habitat quality. By allowing native plants to regenerate, or by actively planting native species, additional food sources and shelter will be provided.

Best management practices for agricultural land users include raising the blades on hay mowers by a minimum of 10 cm in order to prevent mutilation of turtles.

Activities can also be timed to avoid the nesting season, which is approximately June 10-30.

CARP is looking for community members who are interested in working collaboratively with CARP's wood turtle project leader to develop a Wood Turtle Stewardship Agreement tailored to their property. Stewardship Agreements are voluntary commitments that outline specific actions landowners can implement to mitigate negative impacts, based on the habitat provided in their backyard.

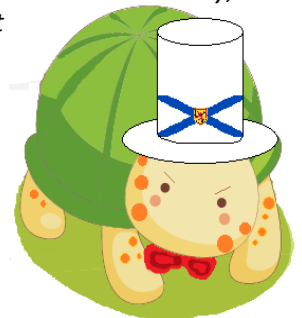
A landscape scale approach, involving private landowners and other stakeholders across the watershed, will help to improve the effectiveness of each individual's actions. Community members interested in learning more about stewardship agreements are encouraged to contact the CARP office.



The Aylesford and Kingston Girl Guides and Pathfinders teamed up to conduct an end of season visual survey, and learn about wood turtle habitat

Interested in becoming a wood turtle volunteer for the 2015 field season?

Sign-up now-
We want to be ready as soon as turtles begin to emerge in the spring.



WE WANT YOU!

From management planning to action on the Nictaux sub-watershed

In order to address specific threats to freshwater aquatic ecosystems within the Annapolis Watershed, CARP has initiated a process of developing sub-watershed management plans for major tributaries of the Annapolis River; these plans outline proposed actions that can be implemented to enhance fish habitat conditions and improve fish populations.

The Nictaux River was identified as the first priority sub-watershed, and based on field work conducted through the 2011-2013 field seasons the "Nictaux River Sub-watershed Management Plan" was developed. The Nictaux River provides habitat for several species of conservation interest, including brook trout, Atlantic salmon, and American eel.

Implementation of the plan began during the 2014 field season, and included reconstruction of 2 rock weirs, partial repairs to 2 additional rock weirs, placement of boulders to create in-stream habitat complexity, and in-stream placement of fallen trees from the surrounding riparian zone to improve fish habitat structure.

High quality salmonid habitat, the family of fishes that includes brook trout and Atlantic salmon, includes a complex array of riffles, pools, and submerged boulders and woody debris. These fish also require cool water temperatures, and will experience thermal stress in water temperatures above 20 degrees Celsius. Vegetated river banks are another feature of high quality habitat, because of the role plants play in providing shade, which regulates water temperature.

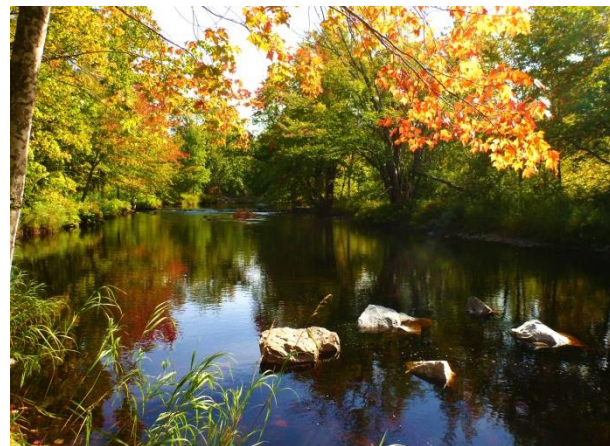
Now armed with a specific plan to guide future action, CARP will continue to implement in-stream restoration work on the Nictaux in upcoming field seasons.

CARP would like to recognize the financial support of Fisheries and Oceans Canada, NSLC Adopt-a-Stream, and the former Annapolis Fly Fishing Association, who provided funding for in-stream restoration work on the Nictaux.



Attention anglers

We are looking for past and present anglers who have fished the Nictaux, Moose, or South Annapolis sub-watersheds, and who would be interested in completing a survey to help us collect information about species and environmental conditions. Surveys available online or in hard copy. Contact the CARP office for more information.



A Stroke of Luck and Perfect Timing

Contributed by Tara Zaleski



8-year old Tamami Poirier, 7 year-old Chaya Diggins and 6 year-old Jacob Diggins of Middleton made a fascinating discovery beside the South Shore – Annapolis Trail over the weekend. The children, with their families, were picnicking by the reservoir near Wamboldt Lake (part of the Nictaux system) when they found two baby snapping turtles. They were careful not to step on them, but soon noticed that more hatchlings were trying to climb their way out of the sand. The kids discovered about 12 hatchlings in total. It was a pure joy to see the children experience nature, jump on the rocks, smell the beginning hints of fall in the air, and to feel and see the changing season taking place.

Membership and Donations

Membership

Please enclose a cheque for the annual membership selected

- ☐ Individual (\$7.00) ☐ Student (\$5.00)
☐ Life Time Member (\$100.00) ☐ Family (\$10.00)
☐ Organization/Institution (\$25.00)

Donations

Please find a cheque enclosed for \$ _____

☐ I would like a receipt

To donate online visit:

<http://www.annapolisriver.ca/givingoptions.php>

Name: _____

Mailing Address: _____

City: _____ Province: _____

Postal Code: _____ Phone: _____

E-mail: _____

- ☐ I would like to receive an electronic copy of the Waterstrider
☐ I am interested in learning about volunteer opportunities with CARP

2014 Annapolis Royal Christmas Bird Count



Sunday December 14

Contact: Katie McLean,

Communications & Outreach Coordinator

Stay in touch



www.annapolisriver.ca



@CARPAnnapolis



<http://www.facebook.com/CleanAnnapolisRiverProject>

Thank you to our project funders



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