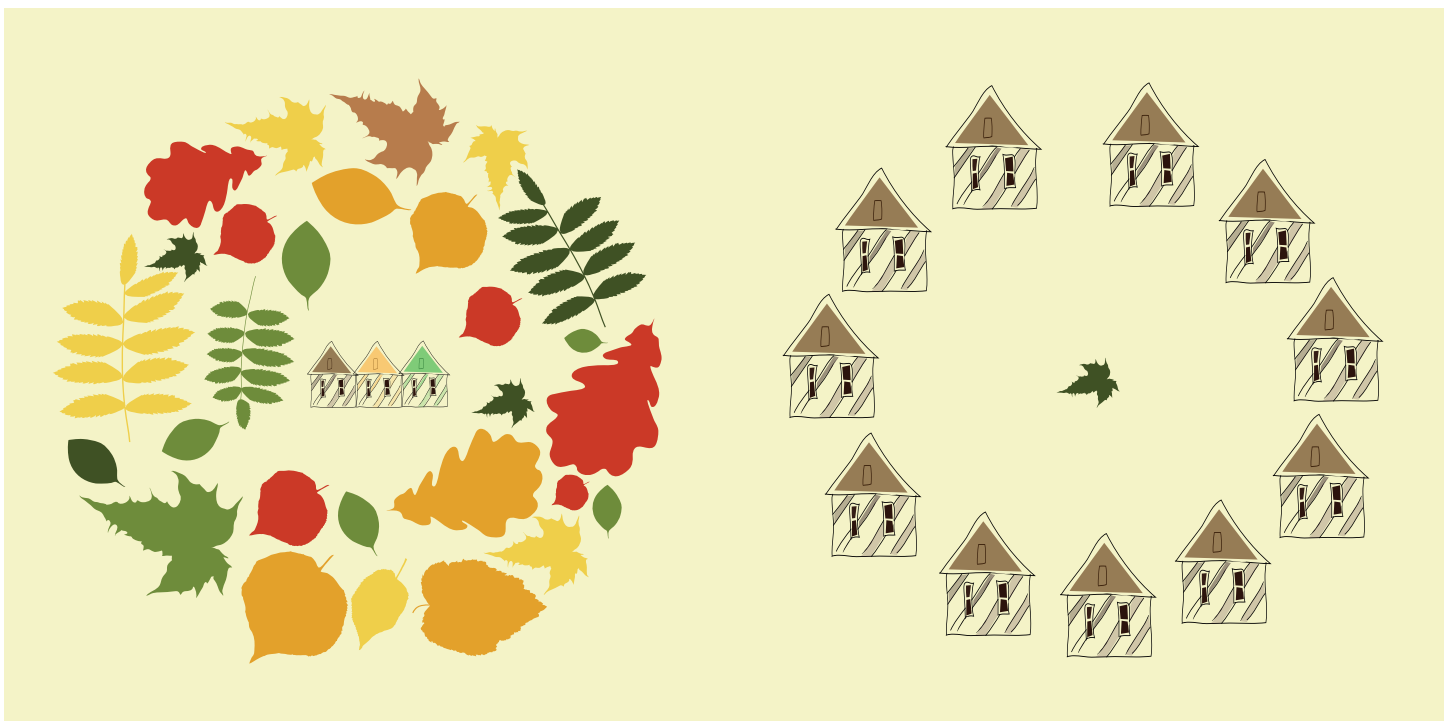


vol. 29:3 fall 2011

BETWEEN THE
issues

**BETWEEN THE COVERS:
Seven Billion and Counting
Sustainable City?**



Features

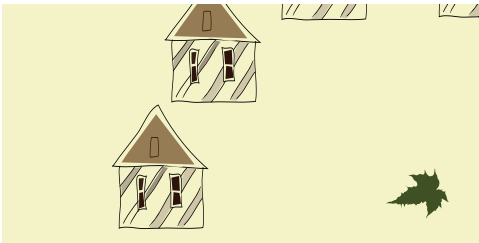
Seven Billion and Counting

/ 12



Our Sustainable City?

/ 14



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DESIGN AND PRODUCTION: Aaron Harpell, Hammerhead Design

DISTRIBUTION: EAC staff, members and volunteers

COVER: Aaron Harpell

To advertise in BTI, please contact advertising@ecologyaction.ca. We support businesses working towards social and environmental justice.

Printed at Halcraft Printers on Chorus Art Paper, 50 percent recycled fibre, 25 percent post-consumer with vegetable based inks.

Between the Issues is published three times a year by the Ecology Action Centre, a charitable organization (PM Registration # 40050204). The Ecology Action Centre's vision is of a society in NS which respects and protects nature and provides environmentally and economically sustainable solutions for its citizens. The EAC is a founding member of the Canadian and Nova Scotia Environmental Networks. Views expressed in BTI are those of the writers and do not necessarily represent EAC or its supporters.

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B E T W E E N T H E i s s u e s

an ecology action centre publication

VOL. 29 NO. 3

tableofcontents

3	Hot Off the Modem
4	Action is Our Middle Name <i>compiled by EAC Staff</i>
6	Ecobriefs <i>by Mike Ruxton</i>
8	The Dirt on Root Cellars <i>by Nikki Beauchamp</i>
9	The Secret Lives of Downtown Fireflies <i>by Scott MacIvor</i>
10	Natural Resource Strategy: Madly off in No Direction <i>by EAC Staff and volunteers</i>
12	Seven Billion and Counting <i>by Heather Hunter</i>
14	Our Sustainable City? <i>by Sam Fraser</i>
16	Fossil Free Power by 2030 <i>by Brennan Vogel</i>
18	The Deanery Transformation <i>by Kim Thompson and Richard Bell</i>
19	Being Green <i>by Jonathan Rotsztain with Scott Fotheringham</i>
20	La Vie en Vert
22	ecoHoroscopes
24	Seasonal Gourmet <i>by Katrina Ross</i>
26	Action in Verse <i>by Marilyn Nelson</i>
27	Action in Verse <i>by Sandy Hubbard</i>

letters to the centre

To the Editor:

This is a poem about pollution that I wrote on my free time. I am in grade 7 at Fairview Junior High, and am very interested and concerned about global warming. This poem is from the point of view of the fumes coming out of the smoke stacks and traveling around the world. My family has a membership to the EAC and my brother and I are involved with the HEAT group at the Adventure Earth Centre.

Sincerely,
Sandy Hubbard

See page 27 of this issue for Sandy's poem.

Letter from the centre

Turn and Face the Strange Changes



The “Occupy Nova Scotia” movement remains physically manifested in Halifax’s Parade Square as this issue makes its way to press. The tail end of the season’s cruise ship tourists appear both bewildered and curious about the chaotic settlement of tents set up on City Hall’s otherwise stately grounds.

Such tourists (and other passersby) are greeted by a sign stating “Keep Your Coins, We Want Change”. It’s a common sentiment, one that perhaps neglects to mention we’d strongly prefer such change to benefit the province and its citizens. (Change for the worse is best kept dormant, thanks.) Truth is, change is always around the corner. It’s our task to try to anticipate life’s twists and turns so that we can push the forces of change in a positive direction.

Case in point – HRM’s Irving Shipbuilding won a \$25 billion contract to build combat vessels for the Royal Canadian Navy just days after the first tents were pitched on Parade Square. Such an investment will bring about myriad changes. But how they manifest themselves raises more questions than answers at this point.

How will voters react to such a massive investment in Canada’s military when our national reputation is taking a beating for shifting emphasis away from the environment? Proving that our provincial government can be just as short-sighted as its federal counterpart, EAC staff combine to grade Nova Scotia’s uninspiring natural resources strategy (p. 10). On a happier note, Richard Bell serves up an example of positive change on a local level in Deanery Transformation (p. 18).

What effect will an influx of jobs in HRM have on urban and rural population settlement in Nova Scotia? We’re an increasingly urban culture in Canada, an unfortunate byproduct of which is transit chaos in cities and underfunded transportation options in less populated areas. Happily, the EAC’s Brennan Vogel outlines how Nova Scotia can wean itself off fossil

fuels by 2030 (p. 16). Keeping with a theme of energy efficiency, Nikki Beauchamp reviews the benefits of a root cellar, a long-term storage solution in city and country alike (p. 8).

Will the city have guidelines in place to allow a population increase without overreliance on suburban development? Sam Fraser takes a look at Our HRM Alliance (p. 14), a group trying to ensure important questions aren’t overlooked before final answers are reached. Speaking of overlooked items, Scott MacIvor offers insight on some of Nova Scotia’s smallest inhabitants (p. 9) as a reminder that changes made by and for humans have long-term ramifications for other species.

The changes already underway in Halifax and Nova Scotia will be significant. But Heather Hunter illustrates a more global perspective on growth (p. 12), comparing patterns in Canada to those elsewhere on our shared planet as human population reaches another milestone. It reminds us that we can receive both inspiration and valuable lessons by maintaining a wider point of view.

To show that not everything changes, many favourite features return in this issue, such as Being Green, Seasonal Gourmet, Eco-Horoscopes, La Vie en Vert and Action in Verse.

What will have happened to the “Occupy Nova Scotia” movement by the time you read this letter? No matter the duration of the visible protest, let’s hope that shouts for truly progressive, sustainable change fuel fires within us that stay stoked long after the tents are packed away.

– BTI Editors

hot off the modem

Shiny new EAC publications

The following publications are all available online at www.ecologyaction.ca/content/publications-resources

We also have paper copies of some of these reports. If you’re interested, please contact us at 429-2202 or drop by our office.

Communicating with Northumberland Strait Property Owners about Coastal Erosion

Recommendations for a Communication Strategy for Northumberland Strait Property Owners on Coastal Erosion

2030 vision (Energy Issues Committee) The Energy Issues Committee commends the provincial government on its recently legislated 40 percent renewable electricity target for the year 2020. This target makes Nova Scotia a leader in setting an ambitious transformation agenda for the electricity sector. Currently 13-14 percent of the province's electricity is sourced from biomass, hydro, tidal and wind power. In September, the province opened applications on the Community Feed-In Tariff (COMFIT) program that guarantees community groups a stable, long-term price for electricity produced from small-scale hydro, tidal, wind and biomass (combined heat and power). While the COMFIT program is limited (less than 3 percent of the total supply), it is a step in the right direction of a more diversified electricity supply market in Nova Scotia. Forthcoming federal regulations on coal-burning electricity coincide with our latest project: Fossil Free Power: 2030 – an interactive website describing how to achieve 100 percent green power in Nova Scotia by 2030. See page 16.

30 km/h, 1,137 signatures

(Transportation Issues Committee) The Active & Safe Routes to School campaign to reduce speeds in school zones from 50km/h to 30 km/h was successful. On May 24, 2011, the provincial government announced it will make this change to the Motor Vehicle Act. Students in over 100 schools participated in International Walk to School Month in October. School Travel Planning schools across the province are busy starting walking school buses, getting bike racks installed and creating safe routes with traffic engineers and planners. The Transportation Issues Committee submitted recommendations on changes to cycling rules in the Motor Vehicle Act. A petition against the widening of Bayers Road, containing 1,137 signatures, was presented to HRM Council. This helped lead Council to defer the acceptance of the Road Network Functional Plan until after the five-year review of the Regional Municipal Planning Strategy is completed.



things always cooking

(Food Action Committee) Our Food Connections staff held over a dozen preserving workshops, both public and with our community partners, and took our demos on the road, visiting farmers markets and festivals throughout the province. HelioTrust hosted Open Farm Fridays on the Hants Shore in August, September and October. Visitors to the farm picked produce and learned how to make yummy treats with it. Meanwhile the garden team has been busy launching the new Native Plant Pollinator Project and the Bloomfield Community Greenhouse. We'll work on the biodiversity of five community garden sites and expand the growing season this winter. Stop by the Bloomfield Centre to take a peek. For more details, visit: <http://adventuresinlocalfood.wordpress.com/> and <http://halifaxgardennetwork.wordpress.com/>

clearcutting language not clear

(Wilderness Committee) We've been meeting with community groups across the province to encourage broad public engagement in the recently released "12 percent by 2015" land protection process (see www.gov.ns.ca/nse/12percent). Public consultations will help choose a final slate of new protected wilderness areas to take our province from 8.3 percent to 12 percent protection by 2015. We were underwhelmed by the Natural Resources Strategy released in August. While the government deserves credit for maintaining their commitment to reduce clearcutting to 50 percent of all harvests, the significance of this reduction target depends on an ecologically-sound definition of clearcutting. Also of concern was a step backwards in the language concerning whole-tree harvesting – original commitments to "prohibit" this destructive practice have been replaced by plans to "develop rules" for its use. The Otter Ponds Demonstration

Forest – Nova Scotia's first-ever community-based forestry project – is now up and running. This project will act as an outdoor classroom to demonstrate that you can cut trees and still have an intact forest system – and all the social, cultural and ecological values it provides.

greenbelt mapping

(Built Environment Committee) We're contemplating what our focus ought to be in the months ahead. Possible focus areas include revamping the Nova Scotia Building Code or setting up a system to match demolition projects with new uses. The 32-member Our HRM Alliance reached consensus on seven "Asks" to present to HRM Council in the first review of the Regional Municipal Planning Strategy. The Alliance also held its first greenbelt mapping workshop. A greenbelt with four zones is now being discussed. Media strategies for the release of both the "Asks" and the greenbelt are in the works. We've nearly completed the first Nova Scotia gardening season under the provincial ban on cosmetic pesticides! Though a major step forward in Nova Scotia, the ban still requires work to ensure proper monitoring and enforcement is in place, and to ensure it remains resilient in the face of industry pressure.



EVENTS

Root Cellar Tour

Nov 26, 3 pm

Pre-registration required

contact Marla at foodaction@ecologyaction.ca**EAC Organic Christmas Tree and Wreath Sales**

Place your order at the Seaport Market

Nov 19, Nov 26 or Dec 3

Or online at: www.ecologyaction.ca/trees

Last day to order is Dec 5

EAC's Annual Open House – 40 years of action!

Dec 1, 4 pm-7 pm

Join us at our offices for refreshments and good cheer

2705 Fern Lane, Halifax

EAC Organic Christmas Tree and Wreath Pickup

Dec 10, 9 am-1 pm

Bloomfield Centre

Hydraulic Fracturing (Fracking) Conference

Dec 3, 8:30 am-4 pm

NS Agricultural College, Truro

contact groundwater@ecologyaction.ca**Eighth Annual Sable Island Update**

March 2012

Exact date and location TBA

visit www.ecologyaction.caor www.greenhorsesociety.com for details

a fish DOES need a bicycle (Marine Issues Committee) Our favourite spokesshark, Hector, has taken his quest for sustainable fishing practices to a new level. In September he decided to cycle from northern Spain to London, England to meet with the Marine Stewardship Council. Hector is formally objecting to the certification of the Atlantic Canadian Longline Swordfish Fishery. Keep up with his progress at www.friendsofhector.org. The EAC attended a United Nations workshop in September in which the efforts of countries to protect deep-sea fish and ecosystems from the impacts of bottom trawling were reviewed. While some progress has been made, there are still significant gaps in full protection – for a full review see www.savethehighseas.org and the report by the Deep Sea Conservation Coalition. Closer to home, Off the Hook launched its fourth season, delivering fresh, fair fish. We've also increased our efforts to bring sustainable and land-based aquaculture to Nova Scotia. The growing demand for sustainable wild and farmed fish means we need to promote fisheries that have a low impact on the marine ecosystem and ensure fin fish farming doesn't jeopardize our coastal communities and environment. Finally, along with First Nations, tourism groups and fishing associations, we are recommending that oil and gas exploration be excluded from the Gulf of St. Lawrence, which is bound by five provinces and is home to much wildlife, including the very endangered blue whale. Contact your elected representatives and ask them about their position.

long-awaited wetland conservation policy is here (Coastal and Water Issues Committee)

We welcome the new Nova Scotia Wetland Conservation Policy, originally to be completed by December 2009 but finally released in October 2011. The new policy promises no further loss of significant wetlands. Swamp lovers everywhere celebrate the new policy and will keep a close eye on its implementation to ensure it achieves its intended goals. Do you want to know how to reduce stormwater runoff and increase water infiltration? So do we, and we're starting a stormwater demonstration project to showcase best practices. Between October 2011 and March 2012, we will work with HRM, the Halifax Water Commission and the Insurance Bureau of Canada to locate and assess suitable demonstration sites. We'll document the process via blog and share what we learn. Our two-year climate change adaptation project in Chéticamp is well underway. Our team is armed to make change with environmental technicians from NSCC and tourism students from MSVU, among other partners. Send one of our gorgeous pre-addressed postcards to Premier Darrell Dexter. Our message: Please protect our coast through a Coastal Act now. Visit www.ecologyaction.ca/post-coast or drop by the EAC to pick up your postcards.

JOIN US ON THE RADIO

La Vie Verte! Every Thursday 12-1 pm on 98.5 FM (Radio Halifax Metro) or ckrhfm.ca Co-hosted by Jen Graham (EAC), Isabelle Levert Chiasson (Heartwood) and Heather Richie. Join us for great music, interviews, and upcoming green and community events. En français!

Le Temp se Gâte! Every Wednesday 8-9 pm on CKJM FM (Radio Cooperative de Cheticamp) or www.ckjm.ca Join climate change adaptation researcher Scott Aucoin for interviews, music, and discussions about climate change adaptation in Cheticamp, Nova Scotia. Toujours en français.

By Mike Ruxton

Bottled Water Has Its Place

Clean potable water is a convenience of our modern society, but it is a scarce resource in many parts of the world. An estimated billion people lack access to clean drinking water. The most common techniques used to purify water for drinking are relatively expensive for the poor: boiling, disinfection with chlorine and filtering. Solar disinfection, or SODIS, is an alternative disinfection methodology which is cheap, convenient and effective. SODIS is not new. It has been studied for over a decade by Dr. Ken McGuigan of the Royal College of Surgeons in Ireland. SODIS requires four things: water, transparent water bottles with cap (either plastic or glass bottles will do), sunshine and time.

SODIS works because ultraviolet radiation and the heat generated either kill or damage almost all pathogens. McGuigan says, "We've yet to find a waterborne disease that's not significantly affected by solar disinfection." The process has some drawbacks. Sunshine is not guaranteed. The procedure works best if the water is filtered first to reduce turbidity. And it takes time – six hours of direct sun exposure is recommended.

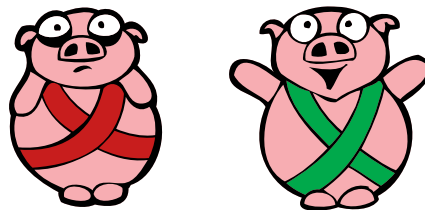
Physics.org October 2009, Chemical & Engineering News September 2011

The 5-Step Program to Livestock Welfare

If you buy your meat at a farmers' market, you can ask the farmers how they treat their animals. If you shop at a grocery store, you can ask your butcher where the product comes from. But the butcher isn't always available and the butcher isn't always the buyer. The Ecology Action Centre has been very active in helping consumers learn where their food comes from, with the Off the Hook Community Supported Fishery program and SeaChoice being excel-

lent examples. Are there comparable programs for meat and poultry? Whole Foods Market, a U.S.-based supermarket chain, has been working with its suppliers on just such a product-labeling protocol and it is now coming to Canada.

Whole Foods Market doesn't have any stores in the Maritimes, but it has four stores in Vancouver and three stores in the Toronto area. Whole Foods Market has, since its beginnings in Austin, Texas in 1980, sought the highest quality foods while supporting the natural foods industry. Over its history, it developed standards for product quality, ingredients and animal welfare for its suppliers and customers. Eventually it helped found Global Animal Partnership, a nonprofit charitable organization with the mission of promoting and facilitating improvement in the welfare of animals raised for food.



Janet Wilson

Global Animal Partnership's 5-step animal welfare rating system applies to chickens, turkeys, pigs and beef cattle. The steps are rated by colour code: one red step, two orange steps, one yellow step and two green steps. Red coded product does not meet Whole Food Market requirements. At a minimum, to meet step one, no antibiotics, no added growth hormones, and no animal by-products are allowed in feed. There are limits on transport time to market. Most body modifications are prohibited; e.g., no de-horning, de-tusking, or beak trimming. An example of the progressive nature of the steps are weaning ages. For pigs, different steps have weaning ages of 28, 35, 42 and 56 days. The steps have different labels depending on the animal, but for pigs, they are labeled

No Crates, Stalls or Cages; Enriched Environment; Enhanced Outdoor Access; Pasture Centered; and Animal Centered. Animal centered for pigs implies no castration and pigs remain with littermates their entire lives.

Here's hoping the 5-step animal welfare rating system comes to a supermarket near you in the near future.

Globe & Mail 7 August 2011, Global Animal Partnership website

US Polar Bear Scientist Told – Go Hibernate

The Public Employees for Environmental Responsibility (PEER) call it "a witch hunt." The proper word is inquisition.

Dr. Charles Monnett is a veteran wildlife biologist, employed by the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), within the US Department of the Interior (DOI). Dr. Monnett and co-workers monitored marine mammals as part of the Bowhead Whale Aerial Survey Project (BWASP). Although BWASP focused on bowhead whales, systematic observations were made of all marine mammals. The survey was an ongoing one, with data collection systematized starting in 1987. In September 2004, four polar bear carcasses were seen floating in open water, presumably drowned. This was the first documented observation of drowned polar bears. Dr. Monnett and Dr. Jeffrey Gleason published their observations in the January



Janet Wilson

2006 issue of *Polar Biology*, and speculated that receding pack ice might be a contributing factor.

Criminal investigators with the DOI Office of Inspector General interviewed Dr. Monnett in February 2011 about potential scientific misconduct related to BWASP. The investigators asked for explanation and clarification of the *Polar Biology* paper and related matters. During the interview, Dr. Monnett was candid on why he thought he was being investigated – DOI didn't want its scientists publishing science that might impede the drilling of wells. Dr. Monnett's co-author, Dr. Gleason, was interrogated by DOI investigators in January 2011. Dr. Gleason had moved from BOEMRE to the Fish and Wildlife Service several years previous, is not being investigated for misconduct and is not under suspension.

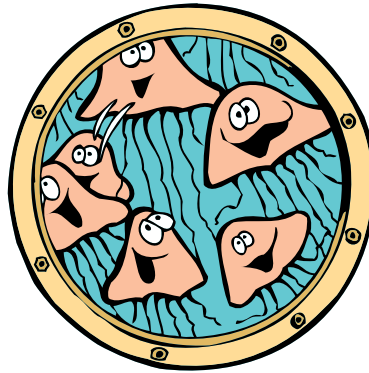
In July 2011, Dr. Monnett was placed on administrative leave, directed to refrain from entering any DOI offices, to refrain from attending any official DOI functions and further directed not to have any communication on the subject while on leave. He was interviewed a second time in August, after DOI changed their allegations to improper contract oversight. Dr. Monnett has since been reinstated, but assigned other duties.

DOI has yet to tell Dr. Monnett of specific charges or questions related to the scientific integrity of his work. Dr. Monnett has asked the Office of Scientific Integrity to look into the way DOI has handled his case. Scientists familiar with Dr. Monnett's work believe it to be solid and praise his integrity.

*Polar Biology January 2006,
The Guardian July/August 2011, Alaska
Dispatch July 2011, Public Employees for
Environmental Responsibility, transcripts of
DOI interviews with Drs. Monnett
and Gleason, Science 29 July 2011*

Jellyfish Invasions

One consequence of global warming is the acidification of the oceans. Many species will be negatively affected by acidification, such as clownfish, coral reefs, shellfish such as lobsters and crabs and molluscs. Acidification demonstrably impairs the sense of smell in clownfish and may affect their hearing.



Janet Wilson

Possible beneficiaries of acidification are sea grasses and jellyfish. Jellyfish seem to be largely immune to the effects of acidification and many of their competitors and predators are subject to heavy fishing pressures.

Certainly, there have been frequent jellyfish population explosions in recent years. This past summer, jellyfish invasions shut down power plants at Torness in Scotland, Hadera in Israel and Fukushima in Japan. The plants at Torness and Fukushima are nuclear-powered. Israel claims the Orot Rabin plant at Hadera is coal-fired.

*Science News July 2011,
European Project on Ocean Acidification,
The Guardian June 2011,
The Daily Mail July 2011,
UNEP 2010 report - Environmental
Consequences of Ocean Acidification*

Another Hole in the Sky

The Arctic and Antarctic are dissimilar in a number of ways; in particular, the north is an ocean surrounded by land; the south, land surrounded by ocean.

The north has an annual ice cover melt; the south has a permanent ice cover. The south is colder than the north.

An international team of scientists reported in early October that "chemical ozone destruction over the Arctic in early 2011 was - for the first time in the observation record - comparable to that in the Antarctic ozone hole." Environment Canada scientists provided observations from ground stations and balloons which helped track the hole, and David Tarasick, an Environment Canada scientist, co-authored the report. Journalists were advised that interviews with Tarasick "cannot be granted."

The hole formed because the stratosphere was cold for much longer than normal – more than 30 days longer than any previously studied winter. The colder stratosphere is believed to be due to global warming trends. The Arctic polar vortex is more mobile than its Antarctic counterpart and this spring moved across northern Canada, through northern Europe and central Russia and on to northern Asia. Environment Canada says ultraviolet radiation levels were as much as 60 per cent higher than normal under the hole this spring.

Marcus Rex, a report co-author working with the Alfred Wegener Institute for Polar and Marine Research in Germany, says "the Canadian stations were an absolutely key element of the network of stations we used to do the study." He disagrees with Environment Canada statements that there is redundancy in the existing Canadian networks that can be eliminated. "There is no redundancy. The scientists in Environment Canada are bright guys. They have never wasted money by doing redundant measurements."

*Nature October 2011, Postmedia News
October 2011, NASA Earth Observatory
October 2011*

The Dirt on Root Cellars

By Nikki Beauchamp



Alison Freese-Stoddard

Our Food Coordinator Marla MacLeod in the EAC root cellar

“As crisp and sweet as the day we put them in,” says Bob Ottenbrite of the nearly 500 carrots stored in his root cellar. No longer limited to “living off the grid”, root cellars and cold cellars are reappearing in rural, suburban and even city homes. While deep freezers and refrigerators provide undeniable convenience, they are energy inefficient and unsuitable when it comes to long-term storage of sizable quantities. Nova Scotians are quickly discovering the advantages of root cellar storage, especially with the popularization of farmers’ markets. Ottenbrite, owner of Grass Roots Farm in Mount Uniacke, remarks, “It’s a pretty simple concept, but it works.”

Root cellars come in many different shapes and sizes; building a root cellar can be as simple or complex as your space and budget allow. Consider the most common and accessible form of root cellar for homeowners: a cold cellar in the north-most basement room that retains humidity and is unheated throughout the year. A simple ventilation system prevents mold and mildew growth by ensuring fresh air flows freely around the room. Often, basement rooms have a small window through which the builder can run two or more pipes - one straight into the room at window level and another to the opposite corner of the room a few inches off the floor. This way, warm, rising air escapes through the higher pipe and cold air enters from the outside, keeping the room chilly and perfect for vegetable storage. If your space lacks a window, don’t fret - Ottenbrite uses a much simpler ap-

proach: “Opening the door draws out the humidity. You can just feel when it’s too damp.” Check out the Ecology Action Centre’s Adventures in Local Food blog for a step-by-step guide to turning your empty basement space into an energy efficient, no-running-cost vegetable storage room. Or visit the EAC’s Fern Lane building for a first-hand look at materials, conditions and storage ideas.

For the project oriented types, consider the traditional form of root cellar: an independent, underground structure dug into a hillside or mound of earth. Great for larger properties, this type of storage is more labour intensive and requires working knowledge of structural support systems. Once you have mined a suitable space, temperature and humidity generally take care of themselves; the earth floor will retain enough heat and moisture to prevent frost formation and keep your space damp. Wooden beams are needed to support the ceiling and concrete or rocks can be used to build walls, so be prepared for some heavy lifting if this is the style of cellar best suited to your property. Larger structures also allow for “pounds”, essentially stalls for different types of produce.

Robert Hudson, a large-animal veterinarian from Adam’s Cove, Newfoundland, says the biggest challenge is the upkeep of his 150-year-old dual entrance root cellar: “I have to renovate the pounds and bedding [floor] every five to ten years with new material due to the rot the damp causes.” Every August, Hudson clears out rotten vegetables and sprinkles his root cellar with quicklime, a high-pH bacteria-inhibiting compound, to disinfect it before stocking up on new goods. “Use non-pressure treated wood because you don’t want toxins in with your vegetables,” he says. “Other than that though, once you have one, you have one for life. It’s a gem.”

With each design, a few things remain constant: root cellars, no matter how they are built, require 90-95 percent humidity, stable temperature (ideally around three degrees Celsius) and good ventilation to discourage the growth of

wood and root eating microbes. Avoid roots with rot and store vegetables unwashed for best results. Ottenbrite covers his with dirt: “A layer of carrots, a layer of dirt, a layer of carrots, and so on.” Most root vegetables and hearty greens, like cabbage, do well in root cellars but you may not know that cheese, meat, salted fish and nuts keep well too. If you’re worried about uninvited dinner guests, don’t be. “You get a rat every two to three years,” says Hudson. “Most people build a cement rock wall to keep the pests out. Slugs coming in on my potatoes are my biggest problem.”

For more root cellar tips, keep up with the EAC’s running commentary on root cellar storage, use a search engine to see what other root cellar owners are doing, or talk to your neighbors - what works for them will likely work for you. Who knows? You might be surprised to learn who has caught on to this newly revived tradition.

Nikki Beauchamp graduated with a BSc. Though she is now a Public Relations student at NSCC she likes to keep in touch with her biological roots and her love of the environment by writing for the EAC.

Take Action

Read Root Cellaring by Mike & Nancy Bubel for tips on root cellaring.

Visit EAC’s Adventures in Local Food blog for a step-by-step guide and more. Just search for “root cellar” at adventuresinlocalfood.wordpress.com

Build a root cellar in your basement or seek out a cold nook and store some veggies of your own.

Come on our root cellar tour on Nov 26 and check out some local root cellars. See the EAC website for registration details.

The Secret Lives of Downtown Fireflies

By Scott MacIvor



Urs Rindlisbacher (inset photo)

Phosphaneus hemipterus, chilling on a rock

In 2009 I got to explore insect diversity on green roofs and nearby ground-level green spaces in Halifax. During that time, I came across a fair number of interesting and unique species – a few not previously recorded in Nova Scotia. This may seem strange – to find new insects in human-dominated landscapes – but the reality is that these “urban habitats” have been sorely understudied since they were first recognized a century or so ago. A significant interest in the ecology of urban habitats has developed in recent years and this is leading to new and exciting research and ideas on the planning and design of city spaces.

Another reason I might have been so fortunate to find such a diversity of insects downtown is that Halifax is a port city and gateway to the rest of Canada, serving as a hotspot for all sorts of newly introduced species. Some of these introduced species end up being harmful to other local organisms, while others are more or less harmless. At the end of that summer in 2009, I had recorded over 300 species in just four months of sampling at 10 downtown areas, raising the question: just how biologically diverse is the rest of Nova Scotia?

Dr. Chris Majka might have a good idea. He is a renowned insect taxonomist, with a fondness for beetles, and one of a few documenting the diversity and introductions of invertebrate species found in the Atlantic provinces. Most important to this story, he was key to my project’s most bizarre discovery – a

population of endangered, flightless, day-living fireflies thriving in the heart of downtown Halifax.

The species in question is the lesser glow worm, *Phosphaneus hemipterus*, which is the only firefly (fireflies are beetles) of over 2,000 catalogued species in the world to be introduced into North America from Europe. These glow worms were found in three nearby locations in Halifax: at the Fort Massey Cemetery, the Holy Cross Cemetery and the lawn garden on top of the elevated parking garage at the apartment building across the street. These locations are similar to the species’ native habitats in Germany, Belgium, England and other countries, having disturbed areas of lawn, shrub and hedgerow, dotted with bare soil, concrete, rock and paved areas.

Although red-listed and considered endangered in some areas where the lesser glow worm naturally occurs, the reported scarcity of this species might come from entomologists looking for it in the wrong places. Most search in semi-natural and forested areas, but it is becoming clear that the lesser glow worm prefers disturbed – even human-dominated – habitat, which until only recently has been avoided in many biodiversity investigations.

Exactly how these glow worms made it to Halifax in the first place remains unknown. They’ve possibly been here for a very long time – between 1878 and 1937 over 10,000 seedling trees in soil were imported from Europe and planted

in Point Pleasant Park. Such activities introduced new earthworms to Canada (19 of 25 species in Canada are not native) and could have also served as a vector for associated earthworm predators, such as the larvae of the lesser glow worm. Unlike some other insect species, lesser glow worm adults don’t feed at all!

The lesser glow worm doesn’t fly and its mobility is greatly limited, so this population in Halifax was almost certainly established from a unique introductory event. The lesser glow worm has been collected in Canada from four other localities: in Wolfville, Nova Scotia (80 km from Halifax), Yarmouth, Nova Scotia (220 km), Montréal, Québec (800 km), and Fergus, Ontario (1350 km). So we suspect the glow worm has been introduced to the continent on at least four separate occasions.

Despite their limited dispersal abilities, the distribution of the lesser glow worm in Halifax may be wider than it appears. All three sites where the species was found are close to one another and interestingly, there are many neighbouring private and public gardens (Victoria Park, the Halifax Public Gardens) and cemeteries (Camp Hill Cemetery, the Old Burial Grounds) that could very likely support even greater populations of this distinctive and elusively rare insect. In the summer of 2010, Dr. Majka found it in a garden in peninsular Halifax, 1.6 km west of the previous sites where the species had originally been recorded.

More about this discovery can be found in a freely available research article at:

http://www.pensoft.net/J_FILES/1/articles/279/279-G-1-layout.pdf.

Scott is a former chair of the EAC Built Environment Committee and a SMU alumnus. He is currently studying wild bees in the urban landscape while completing a PhD at York University.

Natural Resource Strategy: Madly off in No Direction

By EAC staff and volunteers



Ray Plourde

A Nova Scotia clearcut

The status quo is not an option.

That was the overall message that came out of the year-long Phase 1 public consultations for the new natural resources strategy. So on August 16, 2011, when *The Path We Share: A Natural Resources Strategy for Nova Scotia* was finally released, the thousands of Nova Scotians who voiced that sentiment wanted to know if they'd been heard.

The answer, sadly, is “kinda, sorta, but not really.”

This strategy was the government's opportunity- some would say duty- to make the hard decisions that had to be made for industries like forestry and mining. Even with eight extra months of time (it was supposed to be delivered in December 2010), they largely didn't. Instead, they pushed most of that work and responsibility off to some vague point in the future following yet more multi-stakeholder consultation processes.

Two contentious areas of concern to us were forests and minerals.

Forests

The topic of forests was so controversial it split the Phase 2 panel of expertise into two camps: one, a majority report calling for a paradigm shift in the way Nova Scotia manages forests; the other, a more industry-friendly mi-

nority report, calling for education not regulation.

The final report claims to strike a balance between those two extremes. It speaks about the need to change the way we manage our resources now to ensure future prosperity, but when examined closely, shows a bias toward economics over the environment. Consider this:

The strategy says government will reduce clear-cutting to no more than 50 percent over the next five years. This is a major progressive step forward. But the devil truly is in the details. The strategy provides no technical definition of what a clear-cut is and therefore how this goal – one of the few specifics in the entire strategy document – will be measured. Instead of a proper technical definition it gives a simple layman's definition of the practice as: “The removal of all trees in an area at one time, except those required to be left uncut under the Wildlife Habitat and Watercourses Protection regulations.”

By that measure clear-cutting could potentially continue at near-current levels. This from the same NDP government that, while in opposition, entered bills on six separate occasions to have clear-cutting substantially reduced. A strong technical definition that will lead to meaningful and measurable changes in harvesting practices needs to be final-

ized as soon as possible if they hope to maintain their credibility on this most important of issues.

As recently as December 2010, the government said it would prohibit the practice of whole-tree harvesting, but upon the strategy's release that changed to “will develop rules for whole-tree harvesting.” This means whole-tree harvesting can continue as a harvesting method.

Over a decade ago, the Department of Natural Resources' own deputy minister warned that the province was seriously overcutting. One of the Phase 2 panels of expertise called for a cap on the annual allowable cut on both private and Crown lands. The new strategy dodges the issue, saying only it will evaluate the effects of implementing a cap.

The strategy's action document says the government is putting measures in place to help small woodlot owners participate in the forest sector. It's a move that encourages an increase in the harvest of sawlogs on smaller private lands, which will offset the shortages being experienced on industrial lands due to the overharvesting of the last two decades. It supports the industry recommendation and the Woodbridge Associates report that called for education, not regulation.

We did find some good news in the strategy, though. We applaud the government's decision to reduce clearcutting and eliminate public funding for herbicides and we're happy the government recognized the need for Nova Scotia to restore the Acadian forest. The goal of establishing working community forests on Crown land is also a good one as it will change the way the rights to use those lands are distributed.

The strategy also sets a goal of fully implementing an ecosystem approach to forest management. In the strategy's action plan, government commits to spending \$4.1 million per year “to enhance private land silviculture with a focus on non-clear-cut harvesting.”



Minerals (Geological Resources)

Public concern and opinions about mining ran almost as high as those of forests. But once again, the strategy leans in favour of exploration and development. This time, it comes right out and plays the job card, stating that mining jobs are permanent, year-round and typically pay almost 40 percent higher than other sectors in the province. That makes them hard to resist when you consider our current economic climate.

In an opinion piece in the *Chronicle Herald* on September 8, 2011, Jennifer West, Groundwater Coordinator at the Ecology Action Centre, pointed out several other deficiencies with the strategy.

During Phase 1, public consultation clearly said no mines or quarries should be allowed in sensitive areas and communities should have the power of veto over their placement. The public also raised the issues of greater pollution prevention and how mines and quarries affect the health and wellbeing of those living near them. The new strategy says citizens will “be engaged over the lifecycle of a mine” – language that suggests go-ahead is a foregone conclusion – and promises to assess and report on the potential for hazards to public health and safety, but stops short of saying what protection measures will actually be taken.

The Phase 1 report also said the province must raise the bar for environmental performance and consultation, yet the new strategy sets no rules for

responsible exploration and development. Same thing for reclamation—it recognizes there have been problems in the past, but offers no new substantial regulations, choosing, instead to study the matter further, and thus pass the problem to the future.

Worth the Wait?

A true strategy represents a path to a goal and sets measurable milestones along the way. This one is a high-level document that emphasizes soft concepts such as consultation and education, but makes few hard decisions - especially critical ones that were needed immediately.

Finally getting some hard results could take a long and slow consultation process. It is now more important than ever to keep up the public profile of this process and to continually remind government of the need to make meaningful changes - changes the public it serves demanded but have yet to see.

Ecology Action Centre staff and volunteers have been deeply engaged in the process to develop the Natural Resources Strategy. As far back as 2005 we began advocating for public consultations and since then we made numerous submissions and presentations to the strategy development process. In addition to Forestry and Mining, the Strategy also addressed Parks and Biodiversity. Stay tuned to future issues for our thoughts on how the Strategy handled these two areas.

Take Action

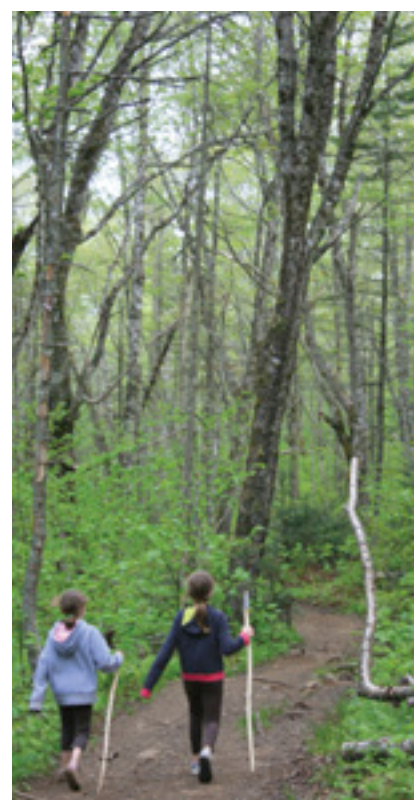
Want to help improve forestry practices in Nova Scotia?

Write your MLA to let them know you expect the government to live up to their commitments to reduce clearcutting and eliminate whole tree harvesting.

Learn more about the impacts of these practices on Nova Scotia's forests by visiting www.novascotiaforests.ca

Read the Natural Resources Strategy, its companion action plan, and all the background reports by visiting www.gov.ns.ca/natr

Watch the video on selection management in NS titled “Leaving a Legacy”, available upon request from the Association for Sustainable Forestry www.asforestry.com



Seven Billion and Counting

By Heather Hunter



It's official. The Population Division of the Department of Economic and Social Affairs of the United Nations named October 31, 2011 as the day the world's human population reached seven billion. It seems like just yesterday the UN announced we'd hit the six billion mark in 1999. With the Earth's human population increasing by nearly 80 million people each year, it's hard not to be concerned about the toll our population has on the planet.

The impacts of human activity on Earth are plain to see: soil is eroding, glaciers are melting and fish stocks are vanishing. Over large and densely populated cities, smog and particulate air pollution often block out blue skies and nearby rivers and waterways are polluted with human and industrial waste. While human overpopulation undoubtedly has negative impacts on the environment, it's not the whole story. The threat to our planet is not just due to our numbers, but how much we consume and pollute. Today, humans use the equivalent of 1.5 planets for the resources we use and to absorb our waste. That means the Earth needs one year and six months to regenerate what we use in a year. This year, the Global Footprint Network announced September 27 as "Earth Overshoot Day"

when we "exhausted the budget of what nature can provide this year."

The amounts that, and rates at which, humans consume, pollute and reproduce vary greatly around the globe. While the population in some areas of Sub-Saharan Africa is growing at a much quicker rate than in North America and Europe, more developed countries tend to consume far more resources per person. The biocapacity, or natural resources that a country has available to support its population, also varies greatly.

To highlight global diversity in population size, rate of population growth, biological capacity and use of resources, we compare statistical indicators from Niger, China and Canada. This provides a snapshot of the population and ecological challenges that these and similarly situated countries will face moving into the future.

	Niger	China	Canada
Population	14.14 million	1,336.55 million	32.95 million
Average births per woman	7	1.5	1.5
Ecological Footprint	2.35 gha/pers	2.21 gha/pers	7.01 gha/pers
Biocapacity	2.09 gha/pers	0.98 gha/pers	14.92 gha/pers
Remainder	-0.26 gha/pers	-1.23 gha/pers	7.91 gha/pers

gha/pers = global hectares per person

Population Trends

Looking at the demographic information for China and Canada, we see that women are having an average of 1.5 children during their lifetimes, placing these nations below the replacement rate of 2.1 children per couple. This was not always the case. As recently as 1965, the average number of children born to a Chinese woman was six and in Canada around three. In China, the decrease can largely be attributed to the famous "one child" policy. In Canada and other developed countries, the shift toward having fewer children is part of what demographers call the "demographic transition".

The theory is that demographic transition occurs when a country has gained enough money and infrastructure for the population to reliably access food, water and basic medical care. In doing so, greater stability is achieved and people gain more control over birth and death. As a result, parents can be more certain that their children will survive into adulthood and the number of children born in each family tends to decrease. Birth rates also tend to decrease when women can access educational opportunities and when contraceptives are widely available. In countries that have undergone demographic transition, population size remains relatively constant over time and older adults make up a larger segment of the population.

In comparison, we can see that Niger, with an average of seven children born per woman, will experience a major

population boom in the coming years. In fact, David Bloom (from the Department of Global Health and Population in the Harvard School of Public Health) has predicted that by 2050 the earth's population will reach 9.3 billion and adds that "Nearly all (97%) of the 2.3 billion projected increase will be in the less developed regions, with nearly half (49%) in Africa."

Population and Biocapacity

As the world's population swells and human activities diminish natural resources, global biocapacity decreases. In 2005, there were 13.4 billion hectares of biologically productive land and water on this planet. Dividing by the number of people alive in that year, 6.5 billion, gives 2.1 global hectares per person. In 2010, biological capacity available per person has been reduced to 1.8 global hectares. Canada and Niger both exceed this number.

In terms of individual country biocapacities, Niger and China both have ecological footprints beyond their country's biocapacity, a situation the Global Footprint Network calls overshoot. However, Niger and China are not alone. The Global Footprint Network estimates that 80 percent of countries overshoot their biocapacity. Overshoot tends to have a disproportionate impact on the poor, who cannot afford to buy resources from elsewhere. When it becomes severe, overshoot also contributes to resource conflicts and wars, mass migrations, famine, disease and other human tragedies.

In Canada, we are lucky to be one of the 20 percent of countries that have more biocapacity than we are using. However, according to the *Canadian Living Planet Report 2007*, if everyone lived like Canadians, we would need 4.3 Earths to support us! While nations around the world strive to attain the comforts of life that we enjoy here

in Canada, it is clearly not ecologically possible for all people to consume and waste as much as we do.

With a growing population and with millions of people wanting and deserving to raise themselves out of poverty, how can we balance human rights and desires with the Earth's ecological limitations? In developing nations, hope for the future likely lies with sustainable development initiatives, resource protection measures and education, especially for girls and women. Perhaps more importantly, developed nations, even those with abundant resources or the ability to buy resources elsewhere, must reduce waste and consumption to sustainable levels.

To save ourselves and save this planet, it seems that a global shift in perspective is required. We must learn to be conscious of ourselves, each other, the planet and all its biodiversity. After all, this is all we have – seven billion people, one planet and a universe of mostly empty space.

Heather Hunter is a recent graduate of Wilfrid Laurier's MA Community Psychology program and a research associate at the Participatory Action Research and Training Centre on Food Security at MSVU. This is her first article for Between the Issues.

Take Action

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Our Sustainable City?

By Sam Fraser



Courtesy Kelsay

In the late summer of 2006, council members of Halifax Regional Municipality approved a document detailing everything about how the city and county would be developed over the next 25 years. Land use; waste management; transit; urban, rural & island development; environmental sustainability; wetlands protection; property taxation; business parks: all this and more was considered by the 164-page Regional Municipal Planning Strategy. Though the document is called a strategy or simply “the Plan”, it is a policy document, laying down dozens of broad policies on all aspects of HRM living. These policies would be honed and then implemented by Functional Plans, such as the Road Network Functional Plan.

An impressive achievement, the Plan has nonetheless been subject to many complaints since its adoption. For example, the proposed widening of Bayers Road and Highway 102 seems to run contrary to its transit-focused strategy. However, because of council’s recent agreement to postpone the discussion of the widening project, the Bayers Road issue won’t come up during the review process. A document so large in scope can’t help but satisfy some citizens’ demands while shirking others, even as the changing needs of citizens over time make some aspects of the Plan less relevant.

The Plan has a built-in review process to combat inconsistencies. Parts of the document will be updated every five years to reflect people’s experiences with existing policies. But how can one council with a membership that will change many times over the lifetime of the Plan retain the important details and cooperative momentum from one review session to the next? Enter Our HRM Alliance, a group formed in the fall of 2010 to help bring the needs of HRM’s populace and environment into the review process.

The Alliance is made up of over 30 business, social and environmental organizations from across the region, representing the whole gamut of people in the county. A package of “Asks” is being created by the Alliance membership through a steering committee of the Downtown Halifax Business Commission, the Ecology Action Centre, the Five Bridges Wilderness Heritage Trust, the Heart and Stroke Foundation of Nova Scotia, the Sackville Rivers Association and the St. Margaret’s Bay Stewardship Association. This package contains seven demands to be brought before the review process and, if accepted, they will improve environmental sustainability and the health and happiness of the populace. It will reinforce aspects of the Plan that have been poorly

implemented, redefine key terms such as community growth centres, and incorporate new research into social trends.

“The Plan is a good document, but the Alliance wants HRM to regain its title as the most sustainable medium-sized city in Canada,” says Jen Powley, Our HRM Coordinator at the Ecology Action Centre. “It will take a great document to do this, but I am confident HRM can steal back the title from Vancouver. The five-year review is our best opportunity to do this.”

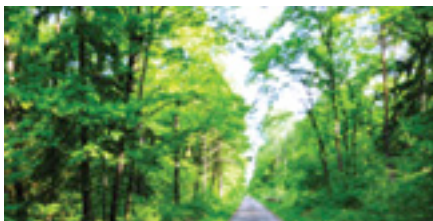
The review process will take at least 12 months to complete, ideally wrapping up in the fall of 2012. Parts of the Plan will need to be rewritten according to what was accepted during the review. The Plan could still be undergoing big changes in October 2012, simultaneous with the next municipal election. Election candidates could be campaigning on their vision for the 25-year Plan. For example, one candidate might be willing to accept the changes proposed by the Alliance, while another might not.

Because this document has such a broad and long-term scope, let’s hope the candidates and Councillors are familiar with how the Plan will shape the next 20 years in HRM!

Sam Fraser sits on the EAC’s Board of Directors. This is his first article for Between the Issues.



The Seven Asks



1. The creation of a greenbelt around Halifax. Although the Plan has created an Open Space and Natural Resources Designation, which includes parks and trails and conservation areas such as wetlands, it is composed of isolated pockets of green space and furthermore is still affected by development. An accessible natural corridor or greenbelt is vital to the health of our ecosystem.

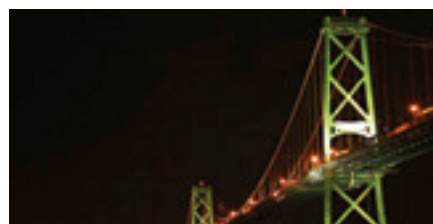


2. Provide funding to revitalize the downtown cores of Halifax and Dartmouth, as well as community centres. The downtown core is suffering, as anyone witness to the boarded windows and empty facades on Barrington Street can testify. Likewise, communities around the region are struggling to keep shops and cultural centres open while consum-

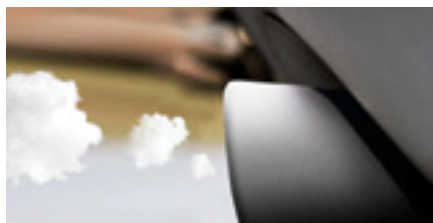
ers drive to commercial parks for their needs. A significant investment from all levels of government will help keep communities vibrant and well-populated.



3. Shift the balance of funding to active transportation and public transit instead of single-occupancy vehicles. Halifax's public transportation lags behind other Canadian cities such as Montreal, Toronto and Vancouver. Accessible transit is worse. Prioritizing transit and active transportation such as bicycles and walking will improve the health of citizens, as well as reduce harmful emissions.

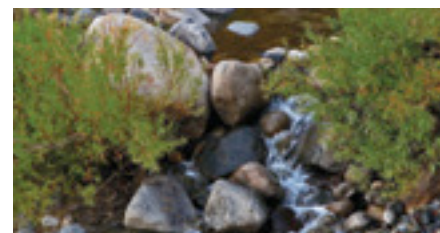


4. Ask HRM to prioritize growth in already built-up areas. Currently, the suburbs and rural commutershed are surpassing their growth targets while the core has yet to meet its target. Our HRM Alliance proposes that residential development eventually reach a goal of 40 per cent urban, 40 per cent suburban, and 20 per cent rural.



5. Ensure existing taxpayers do not shoulder the cost of sewers, water mains, roads, and soft services for new developments. HRM has begun to col-

lect Capital Cost Contributions to help alleviate the burden, but these contributions must go further. Most already built-up areas have this infrastructure in place. New developments require these services to be put in place. With the exception of six specific areas, general taxes pay for this. Putting the cost burden on the developers will create an incentive to stick to already developed areas that don't need new infrastructure.



6. Protect water resources by extending buffers between new developments and lakes, rivers, and coasts, requiring third-party environmental assessments, and ensuring new developments are capable of handling storm water runoff. Poorly planned developments are threatening the coasts and are polluting fresh water systems. Lakes are becoming increasingly choked by organisms feeding on minerals from runoff.



7. Improve the methods of measuring the success and failure of the Regional Municipal Planning Strategy. The Plan includes a number of benchmarks that reflect the issues the document is trying to address - drinking water quality or number of people walking to work are examples. The Plan does not set targets for these measurables nor does it offer current statistics. Rewriting this section of the Plan to include goals that can be measured will show where it has been successful and where it has fallen short.

Take Action

Browse the Regional Municipal Planning Strategy at <http://www.halifax.ca/districts/dist17/documents/RegionalPlan.pdf>

Join Our HRM Alliance by visiting <http://www.ourhrmalliance.ca/members>

Hold your councillor responsible in the 2012 municipal election!

Fossil-Free Power by 2030

By Brennan Vogel



Maggie Burns

Solar panels at the Joggins Fossil Centre.

Fossil-free power in Nova Scotia by 2030 seems like an immense challenge. However, it is both realistic and achievable and it would bring with it immense benefits. It would leave a long-lasting legacy for generations of Nova Scotians while setting us apart as a national and world leader in reducing greenhouse gases, creating sustainable jobs and achieving energy security.

Over the past year, the EAC's Energy Issues Committee has developed a visionary project called Fossil Free Power: 2030. This web-based educational tool provides a brief overview of how Nova Scotia's electricity system could become fossil fuel-free by 2030 and why it is crucially important that we do so.

According to James Hansen, NASA's top climate scientist, the harsh reality is that by 2030 we must phase out coal-burning power plants. If not, we'll have failed to do our part in keeping the global temperature from rising by more than two degrees Celsius, which scientists claim would irrevocably change life on Earth as we know it.

Fossil Free Power: 2030 shows that by pursuing an ambitious agenda of reducing energy waste, transitioning to renewable electricity, implementing good power policies for green growth and better managing the electrical grid through regional collaboration, we can create

good jobs based on renewable electricity here in Nova Scotia. This would mean sustainable prosperity that does not damage the global climate, our local environment and human health.

If we look back 30 years, following the OPEC oil crisis of the 1970s, Nova Scotia realized that depending on imported oil for electricity production was economically unsustainable. With this realization, and an opportunity for cheaper, domestic fuel substitution in Cape Breton coal, Nova Scotia's public electrical utility invested heavily in developing coal-burning power plants to keep power rates affordable and to create mining jobs.

But 30 years later, the domestic coal and mining jobs are all but gone and Nova Scotians again face steadily increasing costs of imported fossil fuels for electricity generation. This time around, the problem is largely due to the rising costs of imported coal. To make matters worse, we also face the challenge of dramatically reducing the province's greenhouse gas emissions. About half of all of Nova Scotia's greenhouse gas emissions originate from the province's four coal-burning electricity plants in Trenton, Point Tupper, Point Aconi and Lingan.

We need to phase out coal to address serious global environment challenges like runaway climate change from rising

greenhouse gases. Moving away from coal-burning electricity will also have clear health benefits. It would improve our local air quality while reducing the health care costs associated with illnesses such as cancer and asthma. Air pollution is estimated to cost the Nova Scotian health system \$6.2 billion between 2008-2030.

Breaking our coal habit would also provide new opportunities for more stable energy prices and sustainable, local job creation in the renewable energy sector and energy efficiency/conservation sectors. Volatile international coal prices are the driving factor behind the increasing electricity costs in Nova Scotia and it is widely recognized that we must overcome this dependency to keep power rates sustainable for Nova Scotians. We can do that by getting away from unsustainable fossil fuels, like coal, and instead using the renewable power sources provided by Nova Scotia's wind, waves and sunshine. Our forests and farms can also offer sustainable opportunities for biomass and biogas to help with this transition.

According to the Department of Energy's 2009 Renewable Electricity Plan, 25 percent of Nova Scotia's electricity must come from renewable sources by 2015 with an aim to grow to 40 percent renewables by 2020. These are ambitious goals, but we can achieve and exceed them through progressive and aggressive measures to transform the electricity sector.

How Do We Get There?

We are challenged to transform the electricity sector by our aggressive greenhouse gas reduction targets, by our responsibility to our communities' health and well-being and by our obligation to future generations. How do we make this transformation a reality?

The essential ingredients to getting the fossil-free job done will be ambitious leadership, political will and a shared,

sustainable vision for the future of Nova Scotia's electricity among citizens. We're making progress on some of the specifics but much work remains to be done. Just as in the 1970s, Nova Scotia is investing in the domestic potential of our own resources, only this time its renewable resources, most notably wind, tidal and biomass. Making local renewable electricity to reduce greenhouse gases is a big part of the solution. In addition, we need to aggressively pursue all cost-effective opportunities for low-carbon, imported hydro-electric power. We also need to stabilize overall demand for electricity through energy efficiency and conservation. Thanks to the 2009 creation of Efficiency NS to provide useful programs and services to rate-payers,

this is happening too.

We have some more work to do around the implementation of progressive energy policies such as Feed-In-Tariffs, which democratize the renewable electricity supply opportunities for all Nova Scotians. Transforming the grid to allow better access to developing renewable resource potential and diversifying the supply of renewable production will greatly assist the transformation.

Take a moment to envision a prosperous Nova Scotia reaping the benefits of clean, local power and stable electricity prices. This fossil fuel-free transformation in Nova Scotia will require commitment, risk-taking, and hard work from all of us – in our roles as home-owners, citizens, voters, business owners, educa-

tors and change agents. But the rewards are well worth it!

Brennan Vogel is the Climate Change and Energy Coordinator with the Ecology Action Centre and holds a Masters of Arts degree in International Development Studies from SMU. Since joining the EAC in 2010, Brennan has advocated for progressive Feed-in Tariffs for renewable electricity, ambitious energy efficiency and conservation programs and transformative energy policies targeted at rapidly achieving greenhouse gas reductions from the electricity sector in Nova Scotia.

www.fossilfree2030.ca

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The Deanery Transformation

By Kim Thompson and Richard Bell



The Deanery project

Making the sand form for the outdoor wood-fired cob oven

The Eastern Shore of Nova Scotia is fast becoming known for more than its rugged beauty. Organizations like the Eastern Shore Forest Watch and the newly formed Deanery Project attest to the shore community's powerful commitment to environmental stewardship and education.

The story of the Deanery Project began in June 2011. It evolved out of an opportunity, a long history, a need for change and the vision of a community inspired by each other and by the land.

The opportunity arose when a much loved Anglican summer camp in Ship Harbour, an hour east of Halifax, came up for sale after 75 years of service to thousands of Nova Scotians.

A dramatic drop in camp use over the past decade led the Diocese to put the beautiful 25-acre coastal woodland on the market. But in a truly good news twist, community members from Ship Harbour and a number of youth-serving organizations in Halifax came together at the eleventh hour to purchase the property and keep it as a community resource.

The Deanery Project is now a community-owned cooperative offering activities focused on environmental education, natural building, and the arts. Long-term goals include creating an

inspiring, self-sustaining space which supports youth in particular, as well as community members of all ages. Learning through community service, outdoor leadership programs, healthy living projects and traditional rural skills will take place within a framework of environmental sustainability.

Organizations like HeartWood Centre for Community Youth Development, HRM Recreation, The Old School, Dalhousie University and Straw Bale Projects are among the many groups actively supporting the Deanery Project. Ship Harbour Youth Action Team alumni and a wide range of community members have been there from the beginning to envision future projects while renovating, repairing, and painting.

"We're deeply committed to making The Deanery Project a model for learning how to live sustainably with the land," says Kim Thompson, one of the founding directors.

"Every aspect of the Project will be reviewed with that intention in mind. It was a real joy to bring life back to buildings that many thought were destined for the landfill. Working with Dalhousie Free Lab students this summer we built a composting centre, a traditional outdoor bread oven, earth plastered interior walls, and made our own sunny yellow

milk paint that transformed the exterior walls. With youth from the Atlantic Youth Leadership Conference we began our first permaculture garden beds."

In reviewing the whirlwind process thus far, Thompson emphasizes the rich vein of goodwill for the Project. "What's been especially moving for us all is that so many people keep coming out to help. We have a stellar board of directors. We are looking forward to working with organizations like the EAC and a wide range of youth and community groups to explore opportunities for living and learning at this very special place."

Local projects like The Old School, Memory Lane Heritage Village, Rails to Trails and other committed local organizations remind one of what a remarkable place the Eastern Shore is. The Deanery Project, with its beautiful sheltered ocean cove, gracious trees, rocks and history, is another facet of this amazing spirit.

Kim Thompson wears a wonderful array of hats. She is a founding member of the Deanery, a straw bale building pioneer in NS, and a teacher at Dalhousie's School of Architecture and Planning – just to name a few. She is also a former – and hopefully future – EAC staffer!

To learn more about the Deanery Project search for it on Facebook or read the blog at hedeaneeryproject.wordpress.com.

Being Green

Mike Targett: Personal and Political Passions

By Jonathan Rotsztain with Scott Fotheringham



Mike Targett fell in love with Cape Breton in contrast to his upbringing in Markham, Ontario, a sprawling suburb outside of Toronto. He would visit his grandparents in Whitney Pier, where his father was born and raised, for two weeks every summer.

“I imagine that, cumulatively, those visits had a formative effect on me,” Targett says, “not just the beauty and scenery and whatnot but the ‘prosperity’ difference struck me then.” Targett decided to move back to Cape Breton and to make positive change in the place he calls home.

Targett uses his web design skills to empower non-profits, small businesses and community organizations to organize and engage online. In March 2010 he co-founded Green Cape Breton, an online destination for islanders to connect around environmental, economic, social and cultural development that seeks to build and maintain sustainability in the area. The site uses a local, consensus-based approach to tackle the global problem of climate change. The group focuses on energy, transportation and agricultural issues to creatively protect and enhance the health, safety, resilience and adaptability of Cape Breton.

The journey towards Green Cape Breton and sustainability began with

Targett’s disillusionment over Toronto’s suburbs and the promise this way of living failed to deliver.

“When we moved into the house I grew up in, when I was six or seven, our backyard was a dirt patch, and there were cornfields on the horizon. Every year, more of the farmland was stripped and turned to dirt and the dirt patches turned to housing subdivisions almost overnight. Over and over again,” Targett says. “I started looking, with skepticism, at what I eventually perceived to be the illusion of suburbia - of safety and stability - and realized the prosperity and security was propped up by inequality, exploitation and misery throughout the rest of the world... The human and environmental costs of the prosperity that surrounded me left me stunned.” Targett could no longer tolerate the injustice around him, so he decided to escape - to industrial Cape Breton and living with his 80-year-old grandfather, a retired steelworker.

Acclimatizing to Cape Breton came slowly. “I spent my first year basically hiding out. Looking back, I think I was in shock. I spent a lot of time standing on a beach, staring at the sea,” he says. Eventually, he began getting out, meeting interesting people and finding ways to make a difference. “I realized that trying to ‘save the world’ was not only impossible but narcissistic, not to mention a recipe for despair. So I started getting involved in things on the local level, where change is possible.”

Following his participation on a stimulating panel about the challenges of global warming, Targett and the other speakers gathered to build a movement. The principals quickly agreed that while education and awareness-raising were important, true engagement would be crucial. And so Green Cape Breton was born. As at the Ecology Action Centre, issues are organized into specific working groups with the aim of producing practical results. Targett is involved with food security issues (through CBLocalDiet.

ca) and the Sydney Open Streets revitalization project, which hopes to make downtown Sydney a pedestrian-friendly centre of activity.

“Both projects take a holistic approach to environmental problems: food, energy and transportation are intricately connected,” Targett says, “and the way we produce, transport and consume food and energy, and the way we get ourselves around, has a huge impact on our social, cultural, and economic well-being, not to mention our health.”

“If we take care of ourselves and each other we can’t help but take care of ‘the environment’,” Targett continues. “If we create sustainable communities because they contribute to this well-being, or for their own sake because they are beautiful, we dissolve - as opposed to solve - environmental concerns.”

Green Cape Breton’s website is a testament to the growing success of this new movement. The space for events, education and “Action Alerts” inspires and informs participants to learn, teach and make a positive impact on island sustainability issues. The main goal of the organization is to let participants know that they are not alone in seeking a more equitable, environmentally conscious Cape Breton.

When asked what brings him to activism, Targett is wry and honest. “I met my future wife while attending a meeting of a group she founded, MobGlob (Mobilization for Global Justice). She’s now the manager of the Cape Breton Farmers’ Market. We have two kids, Shepard (2) and Zadie (4).” He says his children “are my answer to the question ‘What do you see as in need of protection?’”

Thanks to the work of Targett and others at Green Cape Breton, much is being done to leave future generations a healthier, more sustainable world.

Jonathan Rotsztain is a freelance writer and graphic designer in North End Halifax.

La Vie en Vert

Welcome to our “green society page” where we provide you with an inspiring (and pleasantly green-tinged) view of recent happenings in the EAC community.

Extreme Membership Canvass

Our canvass team this year is extremely spectacular! The rumour is that they even have a song-of-the-night. Seems like that would be a requirement for the crucial, but sometimes chilly, job of going door-to-door recruiting new EAC-ers.



Any Hawke

Julia Kemp

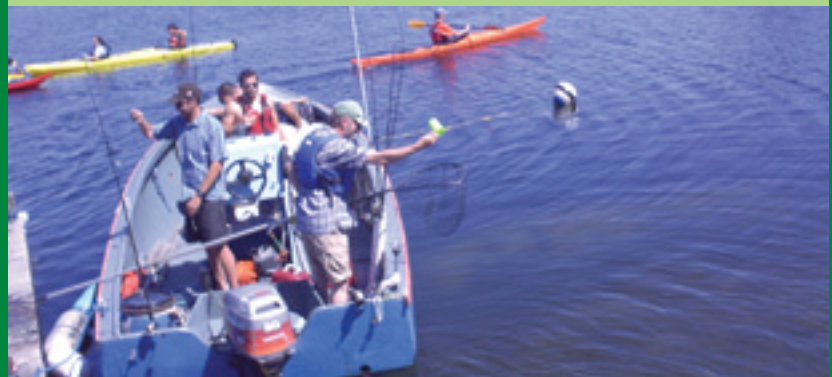
A Beautiful World

Katrina Ross and Steffy Guo were part of the cracker-jack team of organizers that helped make our second annual On Canvas: Art for the Planet fundraiser such a big triumph! Thanks also to some wonderfully talented artists, super special guests, fabulous patrons of the arts, and the stylish venue at FRED. We were able to make the world a more beautiful place in a few ways at once. Bravo!



Best Day Ever at the Office!

The reputation of our mandatory “Get Outside and Have Fun” day has been seriously enhanced thanks to East Coast Outfitters. Staff and volunteers spent a gorgeous August day messing around with boats, BBQs and sunscreen at their fabulous boathouse in Lower Prospect. If possible, our team now loves the environment even more than ever!



Brad Macinnis

Retreat: It Rhymes with Eat!

Not to overshadow the many awesome elements of our Annual EAC-wide Retreat – like the nature walk, yoga, on-site childcare and a beautiful outdoor smudging ceremony – but the food sure was delicious. We did lots of serious work too, so stay tuned for some super-duper strategic thinking courtesy of the collective mind of the EAC.



Emma Boardman

Staff Snippets

It's been a while since we updated readers on the doings of staff at EAC so there's lots to tell!

Our "no net loss of Jocelyns" policy means that Jocelyne Rankin (Water Coordinator) has returned from her New Zealand sabbatical energized and full of weird Kiwi vocabulary to share, while Jocelyn Knoester (Communications Coordinator) has embarked on the adventure of motherhood with her beautiful new daughter Mavis!

Perhaps indicative of the international popularity of "green", our colleague Jennifer Scott (HelioTrust Coordinator) married and became Jennifer Greenberg. Congrats!

Enthusiastic, EAC-style welcomes go out to: David Adler (Off the Hook Coordinator), Scott Aucoin (Coastal Adaptation Researcher), Veronica Brzeski (Coastal Adaptation Coordinator), Libby Dean (Our Food Researcher), Stephanie Hughes (Healthy Lawns Coordinator), Lindsay Hunt (Volunteer Coordinator), Julia Kemp (Office Coordinator), Matt Miller (Forestry Coordinator), Ryan O'Quinn (Canvass Coordinator) and Rebecca Singer (Native Plant Project Coordinator)!!!

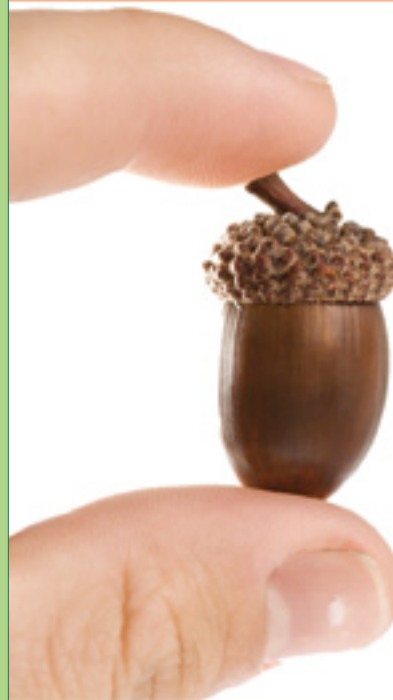
Continuing the theme of equilibrium we've seen some counterbalancing fond farewells: Cat Abreu (ACSEC Regional Facilitator), Chris Benjamin (Healthy Lawns Coordinator), Alex Curtis (Sustainable Fisheries Scientist), Amy Hawke (Office Coordinator, now on sabbatical), Carey Jernigan (Urban Garden Outreach Coordinator), Margot Metcalfe (Pace Car Coordinator), Sadra Monfared (Heavy Metal Researcher), Thom Oommen (Green Mobility Grants Coordinator and new dad to Felix!), Jamie Simpson (Forestry Coordinator) and Fred Wendt (Acting Water Coordinator).

Interns and students are a huge part of what makes the EAC such a great place to get stuff done! Thanks to our current and recent assemblage: Keltie Butler, Alison Froese-Stoddard, Sonia Grant, Keren Lifshitz, Munawir Mukhtar Lutfi, Brittany MacGillivray, Chitha Manoranjan and Fiona Tunmer.

Exuberant (and Caffeinated) Thanks to Laughing Whale Coffee!

You truly know you've arrived when you have a coffee named after you, right? Well that's the case for EAC and the "Grounds for Action" coffee produced by our very eco-friendly friends at Laughing Whale! Since 2007, Laughing Whale Coffee has donated 25 cents from every pound of retail coffee sold to help our environmental work. So between their coffee and their generosity you can see why we're so exuberant!

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By Suki Starfish

Aries – As your energy turns towards improving your health this winter, give yourself a natural high with some fun outdoor activities. Walk, skate, ski, gather some friends together for some winter sports or a hike. Get your favourite kids involved by encouraging their school to register for Winter Walk Day (www.saferoutesns.ca), any day in February.

Taurus – You of all people know that the arts speak directly to people's souls. Art, music, and poetry can inspire people to positive environmental action in a way that hard facts just can't. So, always remember that your creative pursuits are valuable forms of activism. Create, create, create and take some time to appreciate other environmentally-themed art, such as music by Planet Atlantic (www.planetatlantic.com) or the Gaia Singers, or check out EAC's art fundraiser, On Canvas, at FRED this winter.

Gemini – Words are like breath to you air signs. Pick yourself up as the sun's light wanes with an inspiring book. One of our favourite Geminis, and former EAC staff member, Chris Benjamin, has recently published *Eco-Innovators*, a book about Atlantic Canadians who have done groundbreaking work for the environment. Pick it up to read some great true stories about local leaders – including EAC Internal Director Maggy Burns. It'll inspire you to keep doing your own great work!

Cancer – Root cellars are becoming more popular these days and with good reason. You get to store your veggies and preserves in your own home, it's a low energy way to store food and it has a nice, old-fashioned, preserving-the-tradition feel. What could be more perfect for a nurturing, homebody Cancer? If you want to build one, check out the article on root cellars in this issue of *Between the Issues*. If you don't own a home but want to live the root cellar experience vicariously through someone else, sign up for the EAC's root cellar tour on November 26th – contact Marla at 442-1077 for details.

Leo – Hey there, beautiful kitty. Ok, so you're not really a cat, but chances are, you love one. They're cute, aren't they? But they can also be deadly killers. Yes, even your sweet, gentle, most precious and kind Mr. Fluffybloomers! Just ask a bird or a mouse. Cats are the number one killer of songbirds – according to the American Bird Conservancy, they kill hundreds of millions of birds each year. So, help birds and cats by making your home comfortable and fun for an indoor kitty with lots of window ledges, climbing spaces and scratching posts. Your vet will tell you that Puss will live longer if she stays indoors, too.

Virgo – Just because you're named after a virgin doesn't mean you have to act like one. Take Madonna, for example (who, coincidentally, has her natal Venus in Virgo). You'll be feeling extra charming and sexy in the first half of December, so work it. And feel even more amazing with some humorous EAC underwear, available from www.ecologyaction.ca/fundies with slogans like "Take Action, Get Action", "Wetland Protected Area" or "Local Wind Power."

Libra – You have the ability to see beauty in the most unlikely of places. That's why people like you are able to create beautiful art out of something that other people would see as just junk. The mural on the side of the EAC's office building is a good example. It's made completely from re-purposed materials, including an old piano that you can actually come down and play! It's worth checking out.

Scorpio – You have a deep, scientific mind. So why not use it to learn all you can about a complex issue? Hydraulic fracturing is a timely one. It's a process of drilling for natural gas which involves large quantities of water and chemicals. A lot of people are pretty concerned that it might be coming to Nova Scotia, potentially threatening our health, drinking water and wildlife. Once you've read up on it, and watched the award-winning movie *Gasland*, take action. The NOFRAC (Nova Scotia Fracking Resource and Action Coalition) needs all the support it can get. Find out more about them and their member groups on Twitter @NOFRAC – or contact your fellow water sign, Pisces Jennifer West, at groundwater@ecologyaction.ca.

Sagittarius – It's time to learn something new this winter! (Well, let's be honest, it's always time for a Sagittarius to learn something new and exciting!) So in the colder months, why not warm up with some food and friends at one of our seasonal cooking classes? The classes are taught by volunteers, feature seasonal, local ingredients, and after each class, participants sit down to share the meal they created together.

Capricorn – Feeling caught up in an epic struggle between good and evil these days? Read or re-read Capricorn Tolkien's *Lord of the Rings* this winter – it has strong environmental themes and it'll help you focus on the bigger picture (something you're naturally good at) as you do your work. Want to do more? Get out and put your skills to good use for a non-profit organization: join a board, or volunteer for a job that gets you doing what you do best in the ongoing battle against environmental ills.

Aquarius – You'll be feeling especially warm and nurturing this Winter Solstice. Celebrate the season by cooking and baking local, organic food for those you love. The memories of a cheery evening with friends, family, warm apple cider and cookies will last far longer and mean far more than a disposable store-bought gift. For close friends, consider donating to a cause rather than giving gifts. Or set up a giving page at www.canadahelps.org which will allow your friends and family to donate to your favourite charity instead of giving a gift. It's easy and fun to set up a page for any holiday, birthday, or life milestone.

Pisces – Hector the Blue Shark and his best Pisces friend, Shannon Arnold of the EAC, spent some time this past fall cycling across Europe to raise awareness about the bycatch waste of the longline swordfish industry. As a fish learning how to ride a bi-

cycle, Hector says he felt scared and awkward at first, but pushed himself to keep going by remembering how far he had come and the importance of his job to "make the Atlantic ocean a safer place for sharks, turtles and other sea life." You, sweet shy Pisces, should learn from Hector. Jump out of your comfort zone to fight for something you believe in strongly. It can only result in good things. For inspiration, learn more about Hector and his epic journey at <http://hectoronwheels.org/>

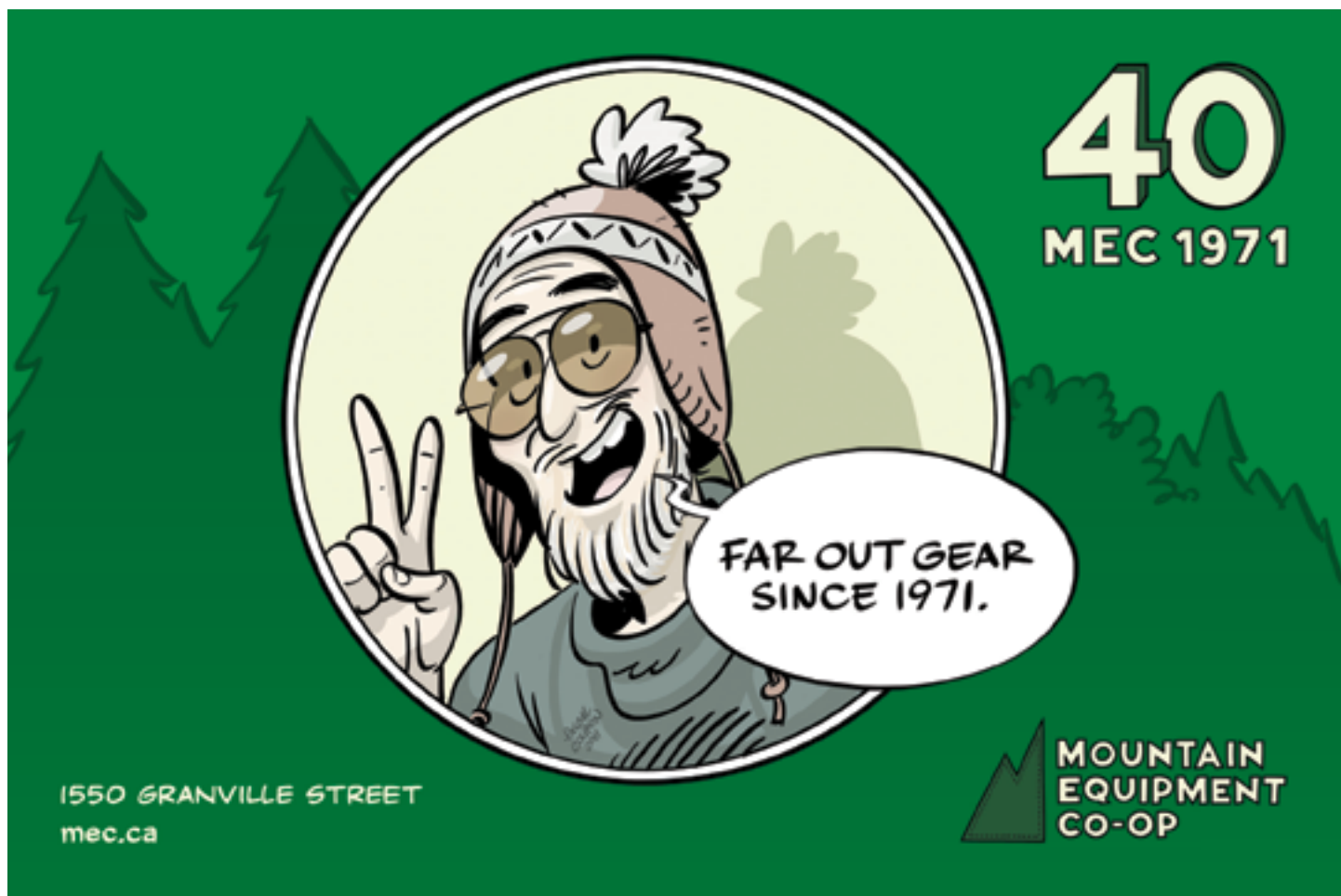
Suki Starfish is a Northern Sea Star (Asterias vulgaris). She lives in the shallow waters near Halifax and enjoys dining on molluscs, star-gazing, Bollywood musicals, and re-growing her own limbs.



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By Katrina Ross

Pastaless “spaghetti” and meatless “meatballs”

The fact that the days are getting shorter and cooler is a bit of a bummer but it means the arrival of warm hearty meals that stick to your ribs. One of my favourite vegetables available this time of year is spaghetti squash, aptly named as it can be used as a nutritious substitute for pasta. It has substantially fewer calories and carbohydrates than traditional pastas and is suitable for those following a gluten-free diet.



Ingredients

Spaghetti

3-4 pound spaghetti squash,
halved and seeded
1 T olive oil

Meatballs

2 cups cooked dark lentils
1 ½ cups button mushrooms,
quartered
1 onion, diced
1 clove garlic
½ cup nutritional yeast
½ cup brown rice flour
1 T flax meal
1 T fresh basil, chopped
¼ cup green onions, chopped
2 T fresh parsley,
finely chopped
¼ t salt (optional)

Method

1. Preheat oven to 350F.
2. Line cavity of squash with ½ T olive oil, wrap the cut side with tin foil and bake foil side up for 40 – 60 min, until fork can easily be inserted.
3. Gently sauté onions and garlic with remaining oil until translucent.
4. While onions are cooking add 1 cup of lentils and remaining ingredients to a food processor and blend. Be careful not to over mix. It should be crumbly not pureed.
5. Add remaining lentils and onion mixture and stir.
6. Form into golf ball sized balls and place on a cookie sheet. You should get about 24 “meatballs”. Bake for 30 min at 350F.
7. Scoop out fleshy strands of squash. If there is a lot of liquid in the squash, press through a colander to get rid of some.
8. Mix “meatballs” with your favourite pasta sauce and spoon over squash pasta.



What’s in Season?

Vegetables: Brussels sprouts, cabbage, carrots, celeriac, garlic, Jerusalem artichokes, kale, kohlrabi, leeks, onions, parsnips, potatoes, pumpkin, rutabaga, shallots, spinach, squash, sweet potatoes, tomatoes, turnips, winter squash

Fruits: apples, cranberries, pears

Sustainable Seafood: Chedabucto Bay Trap-Caught Shrimp, Bottom Longline Haddock, Atlantic Lobster, Farmed Mussels, Oysters and Clams, Atlantic Mackerel, Farmed Arctic Char

Check out the Food Action Committee’s blog for additional ideas of what to do with autumn produce: <http://adventuresinlocalfood.wordpress.com>

Katrina Ross is a nutrition student at Mount Saint Vincent University and blogger at Happy Body Foods (www.happybodyfoods.wordpress.com), an allergy friendly local food blog. She is also a volunteer on the Food Action Committee, coordinator of “Eating by the Seasons” cookbook and avid seasonal cook.





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action in verse

Dusting

By Marilyn Nelson

Thank you for these tiny
particles of ocean salt,
pearl-necklace viruses,
winged protozoans:
for the infinite,
intricate shapes
of submicroscopic
living things.

For algae spores
and fungus spores,
bonded by vital
mutual genetic cooperation,
spreading their
inseparable lives
from equator to pole.

My hand, my arm,
make sweeping circles.
Dust climbs the ladder of light.
For this infernal, endless chore,
for these eternal seeds of rain:
Thank you. For dust.

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Leonard at the Ecology Action
Centre Incredible Picnic Tent
on the Waterfront

Photo: Communications Nova Scotia, Michael Creagen

action in verse

Shot From the Chimney

By Sandy Hubbard

Grade 7 Student & EAC member

I feel the heat of the fire
 I am rising up, up
 The black walls shoot by me as I race past
 I see a light up ahead
 Suddenly, I am puffed out into the light
 I see land, covered in houses, rising up from the water
 I see my friends all around me
 We float through the sky
 We spread out into little groups
 I see clouds float by
 We are rising, up, up
 I look down and see the ocean below me
 We keep floating, up, up
 I see more houses in the distance
 As I get closer, I realise that they are different than the other houses
 So are the people; they dress differently
 No matter, I am free
 I am floating, up, up
 The clouds around me seem to be getting greyer
 Just like me
 I start to feel hot
 I feel as though I am in a ball of heat
 I notice that the ground isn't as green
 More a dull yellow
 And then it hits me like a wrecking ball
 I am extinction
 I am the future
 I am pollution

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100 000 – number of unwanted sharks thrown back in Nova Scotia by the surface longline fleet; that's 5 for every 1 swordfish kept!

1313 – number of km cycled by our spokes-shark, Hector on his journey from Spain to the Marine Stewardship Council headquarters in the heart of London's financial district.

3804 – number of fans Hector has on Facebook.

35 – number of pages in the objection submitted to the Marine Stewardship Council regarding eco-certification of the longline fishery.

4 – number of organizations who were part of this objection, including EAC.

2,000+ – number of letters sent to remind the Marine Stewardship Council that they have responsibility to citizens and species everywhere.

1.5 million – number of farmed salmon Cooke Aquaculture plans to put in two large feedlots in St. Mary's Bay off Digby Neck.

11 – number of criminal charges laid against Cooke Aquaculture for use of illegal pesticides.

Recent EAC Successes:

- The provincial government finally announced both a Coastal Strategy and a Wetland Conservation Policy. After years and years of hard work on these important subjects we were proud to see our input had been heard.
- On Sept 12th and 13th, 75 folks attended EAC's Opportunities for Agricultural Biomass Combustion in Atlantic Canada workshop in Truro.
- We constructed two new membership-based community food locations: our Fern Lane root cellar which has 5 members and our community greenhouse at Bloomfield Centre which has 7 members.
- On October 13th, 25 folks attended EAC's day-long workshop on the Community Feed-in Tariff program.
- The designation of Five Bridge Lakes Wilderness Area which is now permanently protected from industrial development.

The Ecology Action Centre Needs Your Help

Please fill out this membership form and return to the EAC.

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