



# Coastal Chronicle

Bluenose Coastal Action Foundation Quarterly Newsletter



Issue 1 / December 2015


## Our inaugural newsletter

Greetings! It is my pleasure to introduce you to the *Coastal Chronicle*, Bluenose Coastal Action Foundation's new quarterly newsletter. Welcome and thank you for your interest!

With so much happening here at Coastal Action it's challenging work refining and condensing our featured stories into one concise, abridged newsletter. Luckily, Coastal Action staffer Emma Kinley worked hard to completely redesign our website this past spring - just in time for our annual general meeting in June. Visit [www.coastalaction.org](http://www.coastalaction.org) to explore in greater depth the news you read here in the *Coastal Chronicle* and learn more about the many other projects we have on the go.

In this issue you will dive right into the waters of South Shore

Nova Scotia. We highlight tales of an invasive fish species who can bite off more than any of us imagined they could chew; public concerns regarding fecal bacteria numbers presently found in the LaHave River; monitoring our local American eel populations as they begin their annual 'road trip' to the Sargasso Sea; and building a traditional boat inspiring action to protect our oceans. We'll also introduce you to a new salt marsh trail in Garden Lots, and show you what some of our hard-working summer students were up to this year.

Coastal Action is excited to share our research, activities, and projects towards a healthy environment and flourishing community with you. Enjoy! 

*Jennifer McKinnon, Editor*

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*Coastal Action staff and board members at the 2015 Annual General Meeting*

**Bluenose Coastal Action Foundation**, established in December 1993, is a charitable organization that addresses environmental concerns in the South Shore region of Nova Scotia.

Our goal at Coastal Action is to promote the restoration, enhancement, and conservation of our ecosystem through research, education, and action. Our vision is a healthy environment supporting thriving South Shore communities.



## What's wrong with chain pickerel?

Andy Breen, Coastal Action staff

Chain pickerel (*Esox niger*) were legally introduced to 3 lakes in Nova Scotia in 1945; this species is now found in over 100 lakes and 18 different watersheds in Nova Scotia. Why is this bad? Introducing a resilient, highly invasive species is detrimental to any ecosystem, especially one that includes the endangered Atlantic whitefish (*Coregonus huntsmani*). Since these early introductions, Nova Scotia pickerel populations have exploded.



Two live Snapping turtle hatchlings were found in the stomach of this 15.5 inch chain pickerel in June 2015. Other species found in pickerel bellies include: frogs, newts, snakes, multiple fish species, and muskrat.

Any fish of this size, armed with razor sharp teeth and a lightning fast attack, makes for an awesome predator. Our Atlantic whitefish work includes analyzing stomach contents of pickerel caught in Hebb Lake - and it can be very interesting work. In June, the team captured a 15.5" (39 cm) pickerel. The fish was also sampled for length, weight, mouth gape, and gender. To our amazement the pickerel's stomach contained two live juvenile snapping turtles (*Chelydra serpentina*)! We kept the turtles for a few days before releasing them back to the wild - away from known pickerel waters. What chance might young whitefish have in these same waters? 🐢

## LaHave River fecal bacteria contamination

Shanna Fredericks, Coastal Action staff

Coastal Action has monitored bacteria levels throughout the LaHave River Estuary for the past two years (along with our eight years of water quality monitoring across the entire LaHave River Watershed) and results consistently exceed Health Canada guidelines. This means people using the LaHave River Estuary for recreation such as swimming, boating, and fishing risk contracting illnesses like gastroenteritis, respiratory infections, or hepatitis. Bacterial pollution comes from livestock, wildlife, stormwater run-off, malfunctioning septic tanks, sewage treatment plants, and straight pipes. Twenty years ago there were over 800 straight pipes

discharging into the estuary. We know they haven't all been replaced and continue discharging raw human waste into the LaHave every day. The good news is people acknowledge this health hazard and word spreads quickly. Local youth, in particular, are disgusted to learn that straight pipes (which are illegal) pollute the river they love to play in. Stella Bowles (grade 6, Bridgewater Elementary) began collecting and analyzing water samples for her science project. We're happy to see increased awareness and action towards protecting the health of the river and our community - we look forward to Stella's results! 🐟



Grade 6 student Stella Bowles analyzing bacteria samples she collected.

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## The running of the eels

Danielle Pernette, Coastal Action staff



Danielle (and her field assistant Annie) capture a 98 cm female American eel.

American eels (*Anguilla rostrata*) live a complex life cycle migrating between fresh and salt water. During late August to mid-November, sexually mature eels (known as 'silver' eels, due to their colouring) journey from freshwater lakes and rivers to spawning grounds in the Sargasso Sea. Over 500 eels were captured in Oakland Stream (8 of them having been previously tagged in Oakland

Lake). From the mark-recapture study at East River in Chester more than 1,000 were captured - including this capacious female measuring 98 cm long! Female eels this size can contain millions of eggs, which they carry to the Sargasso Sea for spawning. After this pretty girl was measured and tagged, she was released and wished good luck on the 2,500 km journey! 🐟

## Garden Lots salt marsh interpretive trail

Emma Kinley, Coastal Action staff



View from the salt marsh trail platform.

An estimated 50% of Nova Scotia salt marshes - ecologically important habitats for many species, including: invertebrates, molluscs, birds, mammals, and fish - have disappeared since early 1700. Salt marshes provide erosion and flood control, protect our infrastructure from storm surges, and improve water quality. Coastal Action partnered with Bay to Bay Trails Association and High

Liner Foods during summer 2015 to develop a 200 m interpretive trail and viewing platform at the Garden Lots salt marsh. The trail, located on Battery Point Road, is now open for use by people of all ages and abilities! Join us in spring 2016 for Coastal Action's grand opening held on location at the interpretive trail. 🐟

## Restoring our streams

Shanna Fredericks, Coastal Action staff



Crew hard at work installing a digger log.

Coastal Action is committed to protecting and improving wildlife habitat and watershed health. Our hardworking 2015 summer students were busy with various habitat assessment and restoration projects in both the Petite Riviere and LaHave River Watersheds. We've restored over 3,400 m<sup>2</sup> of fish habitat this year, removing debris blockages,

enhancing in-stream habitats, and installing digger logs and deflectors. Removing significant amounts of garbage also helped restore over 20,000 m<sup>2</sup> of riparian habitat. After assessing over 150 stream crossings for fish passage, we remediated 5 culverts to open up over 13 km of previously inaccessible fish habitat! 🐟

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## Profile: The Blue Dream Project Ariel Smith, Coastal Action staff

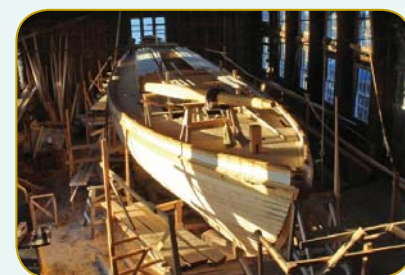
The Blue Dream Project is an Italian-Canadian environmental non-profit currently based out of Lunenburg, Nova Scotia. Francesco Nanni, president and founder, developed the idea of building a traditional wooden schooner in Lunenburg's historic waterfront shipyard. The project recently held a Shutter Plank Fundraiser to celebrate the laying of the last plank in the schooner's hull.

The goal of the Blue Dream Project is to provide research and educational-based expeditions, as well as acting as a flagship for oceanic protection and marine plastic pollution eradication. The organization has recently launched

a new initiative called The Blue Dream Fleet, where all boat members are encouraged to apply to become a member. By joining the fleet, boat owners and crews pledge to help protect the ocean from plastic waste pollution by bringing their waste back to shore and sharing the message with others.

Coastal Action and The Blue Dream Project are now developing a research project in Atlantic Canada to determine the level of micro-plastic pollution in Maritime fresh and saltwater bodies. The data collection phases of this project will take place over two field seasons (summer and fall of 2016) and we'll

also be organizing ongoing events and initiatives throughout the fall and winter months, including presentations at schools throughout the South Shore. More information can be found at [www.thebluedreamproject.org](http://www.thebluedreamproject.org). Happy sailing! 



*Blue Dream Project traditional schooner construction in Lunenburg. Photo: Blue Dream*

## Want to hear more about topics covered in this issue?

If you'd like to read further, in-depth information regarding the stories highlighted in this issue, please visit our website ([www.coastalaction.org](http://www.coastalaction.org)) where we post more detailed updates on all of our projects. We have lots on the go here at Coastal Action: research, education and outreach, public engagement activities, and volunteer opportunities. If you'd like to see a report on one of our projects or events in the *Coastal Chronicle*, send us an email at [editor@coastalaction.org](mailto:editor@coastalaction.org).



*Our home: Captain Angus Walters House in Lunenburg.*

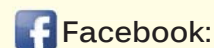
Coastal Action is a not for profit conservation organization. By donating financially to any of our projects we will provide charitable donation tax receipts. We also sell various articles of clothing, accessories, and maps; all proceeds go to Coastal Action!



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