

Current News



Issue 7 • Fall/Winter 2004

President's Message



The Shediac Bay Watershed Association Inc (SBWA) has been active again this year. I invite anyone from the watershed's communities to visit your Association office (end of Pleasant Street, Shediac). While there, you

could learn about this year's projects, offer suggestions or have a look at the committee structure to see what might interest you.

I thank all members of the board for your support and for bringing your many talents to the table, some have found time to work with staff, both in the field and in the office, your time and efforts truly add to the success of the Association.

SBWA staff have always been top notch and their work is much appreciated, this year is no exception again they have successfully completed many projects, struggled with heavy workloads and tight budgets. Thanks go to coordinator Lise Auffrey-Arsenault and shellfish manager Dominique Audet. Lise will be leaving mid December for approximately 1- year (maternity leave) congratulations Lise. Dominique has worked with Lise for approximately 6 months and will act as interim coordinator in Lise's absence.

On behalf of the Board I thank Pierre Landry for his service last year as President, he could not re-offer this year as he and his family travel to many countries in the world, Bon voyage Pierre et la famille!

The success of the SBWA depends on many partnerships, grants, volunteer's etc. You also should know we now have charitable status and can offer receipts for charitable donations. To everyone that has contributed in any way thank you! Hopefully you will enjoy this newsletter!

Happy reading!

William (Bill) Murray

Busy summer at the SBWA!

by Lise Auffrey-Arsenault

The Shediac Bay Watershed Association was quite busy this past summer! With funds from the New Brunswick Environmental Trust Fund (ETF), Shell Environmental Fund (SEF) and Ducks Unlimited Canada, the staff was kept busy all summer!

For a fifth year, the SBWA received funds from ETF to improve septic systems and continue its water classification program. The SBWA has approved 11 septic system improvement projects for residents in the watershed boundaries. This is an increase from 6 last year. To continue its water classification program, the SBWA also initiated discussions to improve water quality with stakeholders within the watershed. Public outreach also continued as our sixth newsletter was distributed this past July. A community beach sweep was organized to celebrate World Oceans Day and the SBWA held its Annual General Meeting in June.

With financial assistance from the Shell Environmental Fund, the SBWA developed its Green Boating – Get on Board! project. The aim of this project was to promote green boating practices in Shediac Bay. A pamphlet and signs were developed for boaters (copies available at the SBWA office). An information session was also held to increase boater awareness towards green practices. This project falls well into place with the SBWA's mandate to improve water quality for future generations.

The Association partnered with Ducks Unlimited Canada to offer the Adopt-A-Class Wetland Education program. Three Grade 4 classes were taught the importance of wetlands and their protection. Students were brought to the wetland in Pointe-du-Chêne and showed the fauna and flora of a coastal wetland. Interactive activities addressing wetland issues were also offered. We intend on continuing our partnership with Ducks Unlimited Canada to offer this wonderful program to local schools.

Our partnership with Marie-Hélène Thériault and her graduate research continued. Staff and board members offered assistance to Marie-Hélène during her field work in Shediac. For more information on her project, please read her article in this Newsletter.

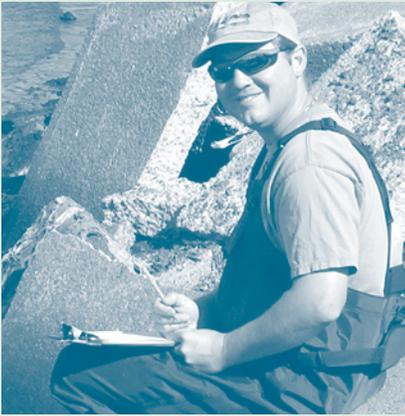
New Brunswick
Brunswick

Your Environmental Trust Fund at Work



Volunteer Profile

by Lise Auffrey-Arsenault



When it comes to protecting water, **LOUIS LEBLANC** is a man you want on your team!

During the day, and some nights, Louis is a teacher of welding at the Moncton Community College. He has been involved with the SBWA since 2001 as a Director. His reason for becoming involved with the SBWA: "I want to try and make sure that the local waters are good for drinking and good for playing and also good for fishing for the future generations."

Louis was born and raised in Shediac. As a youngster, Louis enjoyed the fruits of Shediac waters. Now, he has to contend with shellfish closures: "It is very scary to see that in less than 20 years that I can remember that we cannot eat the local shell fish! What did we do? And how can we fix it? I remember when I was younger that we would go clam digging up the Scoudouc River!". His concerns with water quality are what motivates Louis to continue working with the SBWA. Not only does he volunteer his time to the Association on several projects, notably water classification, shellfish restoration, and fish community monitoring, Louis is also involved with the Scoudouc River Canoe Club. He truly enjoys the outdoors, especially being out on the water.

We are very pleased to have Louis as a Director and are appreciative of his dedication to the SBWA!

Monitoring Study of the Health of the Scoudouc Estuary

by Marie-Hélène Thériault

HEALTH is a word that is important to us all! But, I am not talking about public health but rather about environmental health, more precisely that which concerns our bays and estuaries.

As a Master's degree student in Biology at the Université de Moncton, I am conducting a study on the effect of effluents from marine products transformation plants on the aquatic environment. Every month since July 2003, I monitor the health of the environment around the lobster plant in Shediac with the support of members of the Department of Fisheries and Oceans and of the Shediac Bay Watershed Association.

In order to assess the effect of marine products transformation plants, I must compare the diversity and abundance of the community of small coastal fish located near the plants to the one located far from the plants. In order to do so, fishes and crustaceans are captured with a 30-foot beach seine. Then, all fishes and crustaceans are placed in an aerated tote, later to be identified, counted and released back into the water. It is surprising to see that only 15 meters from the coast, up to 10 different species of fish can be captured easily, some of which can be found by the thousands. The most common species are minnows such as the mummichog, the Atlantic silverside and different sticklebacks. The monitoring of marine vegetation and of various physical parameters such as temperature, salinity, dissolved oxygen and pH are equally measured.

I am also conducting this study in Cocagne and in Baie du Village. Results will be available through reports and scientific articles to be published in 2005.



Species identification



Beach seining by plant in Shediac



Species are placed in tote



Effluent from Shediac plant

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Current News

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Update on Shellfish habitat restoration in Shediac Bay and Cocagne Bay

by Dominique Audet

Here is an update on the SBWA Shellfish Restoration Project that took place in Shediac Bay and Cocagne Bay during the summer of 2004.

The project was put together to enhance oyster (*Crassostrea virginica*) habitat in the bays as well as to establish quahaug (*Mercenaria mercenaria*) reproductive sanctuaries in Shediac Bay. As a result of Malpeque disease, native oyster beds are merely 10% of their original biomass. Quahaug populations in the southern Gulf of St. Lawrence have also declined over the past five decades largely due to increasing harvesting pressures.

In Cocagne and Shediac Bays, shell material was added to the sea floor (shelling) to create recruitment substrate for oyster spat. Shelling activities occurred on a 3 710 m² surface area in Cocagne Bay and on a 3 520 m² surface area in Shediac Bay in mid-July. It is hoped that oysters will settle on this substrate and create reefs. By creating reef structures, oysters increase biodiversity, provide a viable food source and habitat for many species.

Recruitment in Cocagne Bay was high and a large number of juvenile oysters are now growing on our restored site. In Shediac Bay, oyster recruitment was not that successful. Therefore, adult oysters were added on the restored bed.

Quahaug reproductive sanctuaries were established in Shediac Bay by planting large quahaugs (>50 mm). By increasing the shellfish density up to 100 large quahaugs/m² in two 40 m² plots (total of 8,000 quahaugs), we are expecting to enhance the reproductive success, thus, allowing the natural population to grow.

Shellfish play an ecologically important role by filtering the water column. They contribute by reducing water turbidity and nutrient pollution effect (for example algal blooms). They also contribute to the recycling of nutrients and organic material.

By restoring shellfish in these bays, the SBWA is helping to improve water quality for residents and users of the bay.

Did you know? Fisheries Act protects fish habitat

by Lise Auffrey-Arsenault

The federal Fisheries Act, among many other things, protects fish habitat in Canada. The provisions of the Fisheries Act are administered exclusively by Fisheries and Oceans Canada (DFO), except for Section 36 which is administered by Environment Canada. Under the FA, fish habitat is defined as "spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes". As such, fish habitat may be found in freshwater, estuarine and marine environments. Under the Fisheries Act, fish are defined as: (a) parts of fish, (b) shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and (c) the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals.

One mission of the federal Fisheries Act is to prohibit the release of deleterious and harmful substances into the aquatic environment. Deleterious substances can be defined as any substances that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of the water so that it is rendered or is likely to be rendered harmful to fish or fish habitat. Examples of deleterious substances are: oil, bleach, gasoline and cleaning products. Any release of these substances into the environment is considered an infraction under Section 36(3) of this Act.

Section 35(1) of the Fisheries Act also prohibits the harmful alteration, disruption or destruction (HADD) of fish habitat. Some projects, for example harbour improvements, might entail activities which may result in negative impacts on fish habitat. If negative impacts to fish habitat have been determined by DFO, mitigation and compensation measures, such as restoration, may be required from the infracting party in order to prevent a net loss of fish habitat productivity.

kid's corner

within the framework of the green wings program of ducks unlimited canada, here is what fourth grade students observed and learned during their visit with the sbwa.

camille vautre school



drawing: Stéphane Richard

MÉLANIE HÉBERT: THANKS FOR EVERYTHING. IT WAS VERY INTERESTING TO SEE THE MARSH. I LIKED IT VERY MUCH.

JOSÉE DUPLESSIS: I DID NOT KNOW WHAT A HERON WAS. WHEN WE PLAYED THE GAMES, I LIKED EVERYTHING AND THANK YOU FOR EVERYTHING.

CHRISTOPHER LEGER: I LIKED THE EXPERIENCE VERY MUCH AND THE ACTIVITIES AND THE GAMES.

DANIELLE LIRETTE: I HAD FUN, VERY MUCH FUN. NEXT YEAR I WILL TAKE PART AGAIN.

notre dame school



drawing: Julie Vautour

ANGÈLE LEBLANC: : I LIKED TO LOOK THROUGH THE BINOCULARS.

MONICA CORMIER: I LIKED IT WHEN WE LOOKED AT THE DUCKS WITH THE BINOCULARS.

ISABELLE BASTARACHE: I LIKED TO LOOK AT ALL THE THINGS, I HAD FUN.

grande-digue school



drawing: Nicholas Roy

JANIQUE ALLAIN: I ADORED THE VISIT! I LEARNED A LOT OF THINGS REGARDING FALT MARSHES AND FRESH WATER MARSHES. YOU WERE VERY NICE! IT WAS FANTASTIC. THANK YOU.

Laura: : I ADORED IT, IT WAS WELL EXPLAINED. I LOVED ALL THE ACTIVITIES, RUNNING WHEN THE LADY WENT "HONK-HONK" WHEN WE PUT OUR HANDS IN THE BOX. I LEARNED THAT HERONS SWALLOW THEIR PREY WHOLE.

SOPHIE R.L.: THANK YOU VERY MUCH FOR THE GAMES AND FOR TAKING US TO THE MARSHES. THANK YOU, THANK YOU.

American Eel

Latin name: *Anguilla rostrata*



Where found? This species spawns in the Atlantic Ocean and ascends streams and rivers in North and South America. It is found in the Atlantic ocean, the Gulf of St. Lawrence, Great Lakes, Mississippi River, Gulf Basin, and also in various parts of South America. It is commonly seen near or at sea, but can also be spotted in inland streams or lakes.

Preferring streams, rivers, and muddy or silt-bottomed lakes, the American eel usually swims near the ocean floor in search of food. Throughout the day, American eels shelter themselves from the light by burying themselves in the mud, the sand or in gravel.

Appearance: Slender, long, snake-like body, with small pointed head and dorsal and pectoral fins. Their scales are so small that they are often mistaken as absent. The American eel can reach a maximum size of 152 cm (average of 91 cm) and a maximum weight of 7330 g (usually between 0.9-4.5 kg). Its coloration consists of a pale yellow or white ventral side, and a yellow to olive dorsal side. Their fins are usually the same color as the skin surrounding them. American eels can be distinguished from their close relatives, European eels by the difference in the number of their vertebrae.

Eel food: Eels feed on aquatic insects, small crustaceans, and dead fish.

Reproduction: This species spawns in saltwater. Sexually mature adults migrate to the Sargasso Sea to spawn. They live in freshwater for up to 20 years, and then they go out to sea to spawn. The female eel can lay up to 4 million eggs, which are fertilized by the male.

Importance: American Eels have an economic importance in some parts of the world, such as Canada, where it is fished for exportation purposes.

Come and visit us!

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Common Tern

Latin name: *Sterna hirundo*



Where found? The Common Tern is a migrating species that spends the summer in North America to breed in colonies. During the winter, they migrate to Mexico and South America. In Canada they are mainly found from British Columbia to Newfoundland, and from the southern Northwest Territories to southern Ontario. On the eastern American coast, their distribution ranges from Maine to North Carolina as well as in other states along the Canadian border. Although, they are also found throughout Europe, Northern Asia, North Africa, and the Middle East, in Shediac Bay they nest primarily on the southernmost part of Shediac Island. A colony can also be observed on the barge at the Shediac Bay marina. Terns usually chose colony sites that are on or close to islands or beaches with sparse vegetation.

Appearance: Both sexes of this species are very similar in appearance. The average Common Tern is 33-40 cm in length, has a wingspan of about 71 cm and weighs approximately 120 g. Their plumage consists of a light gray back with a white abdomen. They are identifiable by their black cap and their long white deeply forked tail. Three years are needed to obtain their full adult plumage. They have red feet and bills which are black at the tip.

Tern food: The Common Tern's diet consists largely of small fish. Aquatic invertebrates and insects also occupy a small portion of their diet.

Reproduction: The monogamous Common Tern chooses to nest in colonies. When returning to their breeding ground in the spring, they proceed in finding a mate. A wide variety of calls, from the slow seductive "keeeerrr" call to the sharp "kek-kek" call are used during courtship and mating. Dance is also an important part of courtship. They reproduce from early to mid-summer and this usually takes place in wetlands or open

water. The task of incubating the 3 to 4 eggs becomes mostly the responsibility of the female tern, while the male provides her with food. The incubating period duration is a minimum of three weeks and young birds will fledge after about 30 days.

Occasionally, a pair of terns may choose to raise a second brood in the same season. The Common Tern reaches sexual maturity at the age of three.

Importance: This species was nearly driven into extinction by the turn of the century. Fortunately, legal protection in both Canada and the U.S. in 1916, allowed the Common Tern populations to recover.

Oui, je veux aider à protéger la baie de Shediac et ses rivières!

Envoyer à :

Association du bassin versant de la baie de Shediac

164 rue Pleasant, Suite A, Shediac, NB E4P 2L8

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