SMRA SPRING NEWS

SPRING, 2011 Volume 22, Issue 1



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On July 1, 2001, the St. Mary's River Association proudly cut the ribbon for the grand opening of it's new "Salmon Museum" officially called the St. Mary's River Association Education and Interpretive Centre. After many long years of planning and fundraising by dedicated volunteers, the dream came true. This summer marks the 10th anniversary. If you're in the area, why not drop in to see what's new. We open June 1st for the season and close October 15th. Museum hours are 9:30—4:30 everyday.

St. Mary's River Association

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Web address: www.stmarysriverassociation.com

ST. MARY'S RIVER **ASSOCIATION**

The St. Mary's River Association is a charitable, non profit organization providing leadership and engaging partners to enhance, protect and promote the St. Mary's River as a healthy ecosystem for Atlantic salmon and other native animals and plant species as well as a rich community resource.

Our vision:

"Health for the river, the Atlantic salmon and our community."

SMRA News is a publication of the St. Mary's River Association as a service to our members.

The opinions expressed are those of the authors and do not necessarily reflect the policy of the St. Mary's River Association, the editor or the publisher.

Memberships, suggestions and comments are welcome. Address all correspondence to:

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www.stmarysriverassociation.com

Registered Charity

2009-2010 Executive

President: Kris Hunter **Treasurer: Florence Duffy**

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(see ad on pg 27)

PRESIDENT'S REPORT

- Kris Hunter

As my first year as president of the St. Mary's River Association begins to draw to a close I have been looking back on the events of the past year and starting to plan for the upcoming year. Last year the association of course saw some positive and some not so positive events. The not so positive events included the loss of our executive director, Dr. Sean Mitchell, and some changes to projected funding that did not materialize.

Dr Mitchell, who was nearing the end of his contract with us, asked to be let out of his contract early to pursue an opportunity to work with DFO Maritimes on a Southern uplands salmon recovery plan. The board recognizing the importance of the work, its potential value to our organization, agreed to Sean's request. Despite this demanding job with DFO, a long commute, and a busy family life, Sean has continued to volunteer with the organization. Personally, and on behalf of the board, I would like to thank Sean for his time and dedication to the organization both as our executive director and as a volunteer.

The loss of this projected funding coupled with the financial uncertainty in the economy, a strong Looney, and several other factors meant that we will run a significant budgetary shortfall this fiscal year. This shortfall has meant that the board has had to have a hard look at our finances that when coupled with the loss of Sean who handled most of our fundraising. means that we have a need to either develop a new approach, or at least modify the way in which we organize our fundraising. In response to this need, and with the encouragement and counsel of several of our honorary directors, the board has formed a finance/fundraising committee that will look at how we fundraise and develop a long range plan. On this note I would like to personally thank Hardy Eshbaugh and George Newell for their counsel and advice they have provided me and the board during this situation. All members are, as always, welcome to contribute their ideas or to join the committee. If you are interested just let us know via the association email or phone. The full details of our budget will of course be made available at our AGM, but I encourage all members that if they have concerns to speak to either myself or one of the other board members.

The positive events of the past year included a successful collaboration with Eddie Halfyard, advancements on the West Branch Restoration project, our involvement with DFO in their assessment of the salmon populations assessment, our collaboration with NS Nature Trust, and the success of our bi annual salmon dinner in Antigonish,

Our collaborations with other organizations have once again yielded great results. Work was done with Eddie Halfyard, a Ph.D. student from Dalhousie, who has been using telemetry gear to remotely monitor young and adult salmon movements. Eddie's project, besides involving the use of really cool and expensive toys (always fun), will provide us with excellent information on where our fish go, where they die, and some of the possible reasons for their movements. More on Eddie's project has been included later in this newsletter. The work of several of our board members with DFO has resulted in our continued participation in their salmon assessment program. Although there are those that do not fully

PRESIDENT'S REPORT—cont'd from page 2

believe in DFO's numbers, our continued involvement gives us a voice with DFO and ensures that the St. Mary's River is part of this important process. Work with the Nova Scotia Nature Trust continues to be beneficial, with discussions currently occurring to look at a significant riparian zone restoration project. Other projects we are pressing are a partnership with NS Salmon Association and its partners to advocate for and advance the development a provincial salmon recovery strategy, and the advancement of the West Branch Restoration. This latter project will focus on continuing to build on the groundwork laid by Sean Mitchell and Mark Pulsifer at meetings with DFO last year.

Progress since that meeting includes having some people come down to survey a portion of the river and several meetings about West River Restoration with DFO and other people knowledgeable about restoration. Hopefully in the relatively near future we will bring in expertise to aid in the development of a restoration design strategy, one of the documents identified as necessary by DFO before we can proceed with the actual restoration work. Other future directions include an update of our museum, the continuation of our restoration of smaller tributaries, and some research aimed at filling in a few knowledge gaps.

I would like thank all of the people who make our organization the success that it is, I would like to especially recognize and thank our manger Joanne Mailman, the executive (Florence Duffy and Jocelyn Ellis), the entire board, and all of our volunteers who put in countless hours and effort for the association. I'll end by encouraging all of our members to continue to get involved to help push for a healthy sustainable salmon population within the St. Mary's that will keep the angling community engaged and promoting and maintaining our angling opportunities. In short if you have ideas we would love to hear them.

Cheers

Kris

NOTICE TO MEMBERS ANNUAL MEETING

The annual general meeting of the St. Mary's River Association will be held on Sunday May 29, 2011 at 2 pm at the Association's Education & Interpretive Centre, located at 8404 Highway #7, Sherbrooke, NS. All are welcome.

All paid up members are eligible to vote at the meeting. Memberships will be available for those wishing to join or renew their membership.



Above is our revised logo.
After numerous revisions,
the board decided on this
image as it was similar to
our original logo.

A bad day of fishing is better than a good day of work. ~Author Unknown

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Sean Mitchell

The year 2010, saw a scaled back field season relative to the previous two years since we adopted our new direction in 2008. We had only nine projects on the books this year. This reduction was due to a tightening of our focus over time as we continue to learn about the watershed and impacts about which to be concerned.

In 2010, our projects were:

- (1) water temperature monitoring,
- (2) hydrometric (river level) monitoring,
- (3) stream surveys for restoration needs (10 streams surveyed in 2010; 24 surveyed between 2008-2010).
- (4) fish-eating bird survey during the smolt run;
- (5) tributary restoration (24 cover devices placed in Moose River).
- (6) monitoring restoration (Black Brook and Moose River),
- (7) forestry education tours (in partnership with (NewPage Port Hawkesbury),
- (8) a children's after-school program Trailblazers in partnership with Municipal recreation and the Guysborough RDA, and
- (9) research on the effects of tree blowdown in riparian areas.

Unfortunately, the salmon smolt wheel was not deployed in 2010, for the first time in 8 years, due to administrative and permitting issues. These have been resolved and the wheel is planned for deployment in May of 2011.

Progress in 2011 will build upon the work done in the last three years. Planned projects at this point include: continued water temperature and hydrological monitoring, continued stream surveys to assess needs for restoration, operation of the salmon smolt wheel, and restoration of fish passage past culverts and continued tributary restoration as laid out in SMRA Technical Reports #8 and #9. Reports on previous years work, and recommendations for future, are available on the SMRA website (http://www.stmarysriverassociation. com/reports.html) and further information or documentation available through either Sean Mitchell (smitchel@stfx.ca) or the SMRA office for those interested.

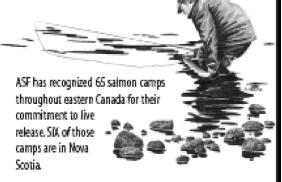
Thank you.

Release Grilse Too

The Atlantic Salmon Federation (ASF) urges anglers to voluntarily live release angled grilse.

~ Research has shown that grilse can:

- Spawn repeatedly, grow bigger, and provide more formidable challenges to anglers
- Maintain genetic diversity that salmon populations need to survive in the event of a major loss of large salmon
- Divert the attention of predators from large salmon
- Travel in shoals with large salmon, making them feel safer and behave more naturally. encouraging them to move further upstream to spawn



For more information or to apply for recognition, visit: http://www.asf.ca/docs/uploads/liverelease/recognition.html

Anglers – Enter the Nova Scotia Salmon Association's "TAG A PRIZE - NOT A SALMON" draw and you'll also be entered into ASF's Live Release Draw for anglers.



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St. Mary's District Lions Club

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EDUCATION & INTERPRETIVE CENTRE NEWS

Joanne Mailman, Manager

On July 1, 2001 the SMRA opened it's Education and Interpretive Centre. I had the privileged of being hired as manager of this new facility at that time and have enjoyed the past 10 years. It's hard to believe that I have been here that long, although in the grand scheme of things, it's but a short time! There have been almost 23000 visitors come through the doors to learn about our beautiful river and enjoy our many exhibits. Every summer brings new challenges as well as many new memories. It has been my pleasure to work and volunteer for the Association. Without the dedication of our volunteer members, this facility would still be a dream.

This year we saw another busy season. We partnered with Nature Nova Scotia for their conference and annual general meeting on May 28, 29 & 30 th. On Saturday May 29, we joined Nova Scotia Nature Trust for the fourth annual river day's festivities. This year, we celebrated the land dedication made by Dale Archibald. Nova Forest Alliance held their annual general meeting at the Centre followed by a forest tour.

On Canada day we held our annual yard sale, which saw the return of the baked goods table. Lots of great deals were found and I would like to say thank you to everyone who made that fundraiser a successful event.

We hosted several forest-based field tours so residents could learn about modern forest practices and issues associated with natural resource management as practised in the St. Mary's watershed.

Our Naturalist Club has been very active as you will be able to read the article by Jocelyn Ellis on page 17. She is busy planning many events for the up coming year.

In October we partnered with the Antigonish Town and County Anglers Association for our bi-annual fundraising dinner and auction. Proceeds assist NSSA, SMRA & AT&CAA with their work on various rivers and watersheds in our area. Thank you to everyone who assisted in any way as well as a big thank you to all our sponsors.

As always, we love to hear from you. So if you have any questions about our programs just give us a call. Stop in and visit us at the Centre across from the Provincial Picnic Park in Sherbrooke. We have many displays ranging from salmon and trout flies to conservation projects that the SMRA has taken part in. We also have a great gift shop, which offers items such as clothing, books, locally hand made jewellery and much more.

Open June 1—Oct 159:30—4:30



Canada Day bake and yard sale annual fundraiser



St. Mary's River Punt in front of Centre

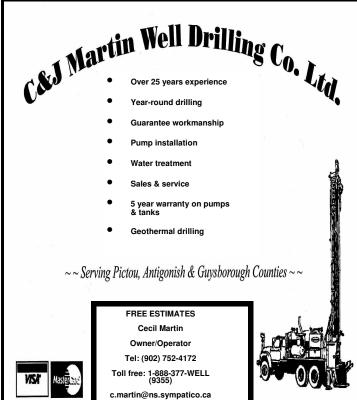
Nature does not hurry, yet everything is accomplished.
- Lao Tzu

INTERPRETIVE CENTRE- OVER THE YEARS









ST. MARY'S RIVER ASSOCIATION LOTTERY WINNERS 2010

\$1200.00 winner was Sandy Barnhill

January 2010 Winners: May 2010 Winners: September 2010 Winners: \$150.00 ... Don MacLean \$150.00 ... Tom Corcoran \$150.00 ... Wendy Brown \$100.00 ... Peter Archibald \$100.00 ... John Hamilton \$100.00 ... Peter Archibald \$50.00 ... Kris Hunter \$50.00 ... John Silver \$50.00 ... Peter Udle \$25.00 ... Andrew Anderson \$25.00 ... Allie Jordan \$25.00 ... Richard Smith \$25.00 ... Jackie Silver \$25.00 ... James Surrette \$25.00 ... Gordon MacIntosh \$25.00 ... Krista Fraser \$25.00 ... Barb Crosby \$25.00 ... Jack Duffy \$25.00 ... Walter Smith \$25.00 ... Hazel McKeen \$25.00 ... Kurt Mueller February 2010 Winners: June 2010 Winners: October 2010 Winners: \$150.00 ... Richard Smith \$150.00 ... Jackie Silver \$150.00 ... MacGillivrary Fuels \$100.00 ... Ron Clark \$100.00 ... Flo Duffy \$100.00 ... Dan Smith \$50.00 ... Allie Jordan \$50.00 ... Sandy Barnhill \$50.00 ... Wendy Brown \$25.00 ... Wayne MacDonald \$25.00 ... Allie Jordan \$25.00 ... Tim Handforth \$25.00 ... Peter Archibald \$25.00 ... Ken Silver \$25.00 ... Peter Archibald \$25.00 ...Ted Fowler \$25.00 ... Terry Croft \$25.00 ... Tom Purves \$25.00 ... Walter Smith \$25.00 ... Tom Pyrves \$25.00 ... George Newell March 2010 Winners: November 2010 Winners: July 2010 Winners: \$150.00 ... David Surrette \$150.00 ...Robert Anderson \$150.00 ... Hazel McKeen \$100.00 ... Tom MacIntosh \$100.00 ... Gary Fleuren \$100.00 ...Jim Lerikos \$50.00 ... Gerry MacIntosh \$50.00 ... David Surrette \$50.00 ... Pat King \$25.00 ... Bob Bancroft \$25.00 ... Hilda Sherman \$25.00 ... Ron Clark \$25.00 ... Bill Fraser \$25.00 ... Colin Coady \$25.00 ... Elizabeth Pulsifer \$25.00 ... Jim Lerikos \$25.00 ... Marg Harpell \$25.00 ... Paul Sobev \$25.00 ... Richard Smith \$25.00 ... Dale Archibald \$25.00 .. Andrew Anderson April 2010 Winners: August 2010 Winners: December 2010 Winners: \$150.00 ... Colin Coady \$150.00 ... Allie Jordan \$150.00 ... Allister Jordan \$100.00 ... Krista Fraser \$100.00 ...lda Miller \$100.00 ...Richard Smith \$50.00 ... Peter Archibald \$50.00 ... Elizabeth Pulsifer \$50.00 ... Wendy Brown \$25.00 ... Gerry MacIntosh \$25.00 ... Walter Smith \$25.00 ... Krista Fraser \$25.00 ... John Hamilton \$25.00 ... Dale Archibald \$25.00 ... Gordon MacIntosh

\$25.00 ... Barb Eshbaugh

\$25.00 ... Marg Harpell



\$25.00 ... David Archibald

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The *Canadian Woodlands Forum* in collaboration with *NewPage Port Hawkesbury Corp.* are pleased to recognize the latest group of harvesting contractors to receive independent certification of their forest management knowledge and practice under the Atlantic Master Logger Certification Program. NewPage helps to fund this program and employs more Master Loggers than any other forestry company in Atlantic Canada. This certification can play a key role in implementing the new forestry regulations on private land.



Forest Stewards of Atlantic Canada - 2010

Front row left: Mike Masters – Masters Forestry, Oxford; Tommy Hayne – Thomas F. Hayne Contracting, Country Harbour; John Archibald – New Arch Forestry Contractors, New Glasgow; Peter Van Den Heuvel – Antigonish; Ralph Stewart – Scott & Stewart Forestry Consultants, St. Andrews.

Back row left: Bill Stewart – NewPage Director of Woodlands & Strategic Initiatives; David Gillis – Northumberland Logging, Merigomish; Paul Delaney – Delaney & Son Pulpwood, Cheticamp; Allan Connolly – H.B. Forestry, Havre Boucher; Mark Bannerman – Next Generation Forest Management, Dartmouth; John Sutherland – J. Sutherland Logging, Nuttby; and Robert Oxenham – Chair, Canadian Woodlands Forum.

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Highland Pulp, Central North River;
Hugh MacInnis Lumber, Frenchvale;
J & S Lumber Group, Rexton, NB;
JET Logging, Nine Mile River;
N.R. Kenney Logging, Westville.



The Atlantic Master Logger Certification Program, launched in 2006, is a unique recognition program for the Professional Logging Contractor. It provides a third-party verification process for acknowledging the sustainable practices of forest harvesting contractors in Atlantic Canada.

For information on the Atlantic Master Logger Program, log onto: http://cwfcof.org/aml.html

MEMBER OF THE YEAR-KRIS HUNTER

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It is with great pleasure that the St. Mary's River Association nominate Kris Hunter as our member of the year. Kris is currently our president and has been a very active member of the Association for a number of years.

Kris is also an active volunteer in his community and enjoys working outdoors on environmental issues, especially habitat restoration. He is also involved in Habitat Unlimited as well as NSSA.

He sits on various committees and is always willing to offer his expertise on restoration projects and operational issues.

Kris lives in Antigonish with his wife and two small children. He is employed with St. FX University. Despite a busy schedule, he manages to find time to devote to the Association.

Our recognition of his efforts are well deserved. Thank you Kris for all you do for the river and the environment.



Pictured here is Kris receiving his SMRA 2009 member of the year award.

YELLOW BUCKTAIL

Type: Wet

Origin: Late 1940's, St. Mary's River

Reference: Donald Barnes

Originally tied on limerick style hook, either turned up eye or turned down eye, with turned down eye preferred. This pattern was used extensively on the St. Mary's during the late 40's and 50's by most of the local anglers, especially on the large early run from 1st of April until the end of June. When silver tinsel was available, this pattern was also tied with a silver body. It also worked just as well using white (natural) bucktail or white calf tail.

"I can recall my father Henry Barnes tying this fly and having to resort to scraping the paint off toothpaste tubes and cutting them into strips to use for ribbing. When material became more available he tied thousands of hairwing flies which he sold at the local general store or while fishing on the river, at 50 cents each."

- Don Barnes

Hook: Limerick 4/0 - #8

Thread: Black

Tail: Golden Pheasant Crest Ribbing: Silver tinsel, flat or oval

Body: Black wool

Hackle: Yellow saddle or neck, 2 turns

Wing: Yellow bucktail, sparse

Cheeks: Jungle cock

Head: Black





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SALMON ASSESSMENTS ON THE ST. MARY'S RIVER by Alex Levy, Heather Bowlby, Jamie Gibson and Eric Jefferson, Fisheries and Oceans

The St. Mary's River Association (SMRA) and Fisheries and Oceans Canada (DFO) completed another year of collaborative salmon assessment work on the St. Mary's River. This year's activities included summer electrofishing surveys, a fall adult assessment, and a fall release of mature adult salmon. Research is currently being conducted on what would be required to recover wild Atlantic salmon populations on the Atlantic coast of Nova Scotia. A collaborative acoustic tracking research project was also conducted with Eddie Halfyard (a Dalhousie PhD candidate) to monitor movement, habitat use and survival of smolts and adults (see Eddie's article page 15).

Luckily, weather and flows were cooperative to allow this year's electrofishing surveys to be completed in two consecutive weeks during the month of August. Thirteen sites were surveyed in total; six sites were located on the East Branch and seven sites were located on the West Branch. This year's average fry (age-0) and total parr (age-1 and age-2) densities (fish/100m²) were 8.7 and 3.3 respectively for the East Branch, and 6.9 and 8.4 respectively for the West Branch. For the entire St. Mary's River, the average densities were 7.7 fish/100m² for fry and 6.1 fish/100m² for total parr. The 2010 average fry density was lower than 2009 and lower than the average parr density was higher than 2009 and higher than the total parr density for the previous five years.

This year fall seining took place in Cumminger's, Indian Man, and Sutherland's pools on September 28 & 29 (Marking Trip) and October 12 & 13 (Recapture Trip) using the same approach as previous years. The estimate of abundance in the West Branch from this seining effort was 90 adults (statistical range: 57 to 164), of which 84 % were grilse. Adult salmon counts conducted at the Morgan's Falls fishway on the LaHave River, which is the other index river in the Southern Upland region of the province, showed an increase in grilse this year (i.e., 300 grilse counted in 2010 versus 168 grilse counted in 2009), whereas the multi-sea-winter count of 53 fish was the same in 2010 and 2009. By comparing the St. Mary's to the La-Have, the ratio of escapement estimates for the West Branch of the St. Mary's relative to the LaHave River above Morgan Falls for 2004-2008 ranges from 0.40 - 0.64 with a mean of 0.52.

Under the assumption that this ratio is the same in 2010, the 2010 adult escapement estimate for West Branch of the St. Mary's River is 183 adult salmon.

In 2006 and 2007, juvenile salmon (fry and parr) were collected from the St. Mary's River and reared at the Coldbrook

Biodiversity facility. These collections were undertaken as an "insurance policy," and the intention of the adult releases is to augment wild egg deposition and slow population decline. Adults from this program were released in 2008, 2009 and 2010 (final release year from the 2006 & 2007 collections). On October 20, 2010, with help from SMRA volunteers, 114 adult salmon were released at five sites along the West Branch and its tributaries.

It is important to note that this supportive-rearing program differs from traditional stocking for fisheries enhancement because the collection methods and release strategies were designed to minimize the impact on the wild population with the aim of preserving the population's ability to rebuild naturally. The adults were released close to the tributary that they were taken from as juveniles, which will hopefully increase their spawning success and help to maintain the natural structure of the population within the river. The released adults were marked with a V-notch in the adipose fin (the small fin on the back just ahead of the tail) in order to be able to distinguish the captive-reared adults from wild fish. This mark will be visible in 2011.

As many of you are already aware, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has finished their preliminary assessment of the status of all Atlantic salmon populations in Canada. COSEWIC has designated Atlantic salmon populations in the Southern Upland (SFA 20 and 21) as Endangered. As part of the process to determine whether or not these populations will be listed under the Species at Risk Act (SARA), DFO will undertake a Recovery Potential Assessment (RPA) in the spring of 2011. The documents produced by DFO Science for the RPA will: (1) summarize information about the status, trends, trajectories, threats, habitat requirements, and habitat availability for Southern Upland salmon, (2) explore scenarios that could lead to recovery, and (3) provide information for public consultations. The Minister of Environment and Federal Cabinet will consider this information from Science as well as information from public consultations and the social and economic costs/benefits of recovering Southern Upland salmon when they decide whether or not Southern Upland salmon will be legally protected under SARA.

We are preparing for another year of salmon assessment on the St. Mary's in 2011.

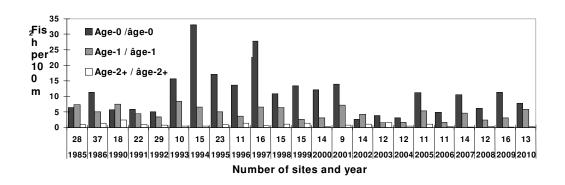
As always, we greatly appreciate your participation and thank you for volunteering to ensure the success of these programs.

Alex Levy, Heather Bowlby, Jamie Gibson and Eric Jefferson

SALMON ASSESSMENTS ON THE ST. MARY'S RIVER (continued)



Photo Caption: DFO staff and volunteers who helped with the recapture seining trip on the West Branch St. Mary's River.



Electrofishing Results: 1985 - 2010

ATLANTIC SALMON FEDERATION REPORT

Sue Scott, VP Communications, ASF and Lewis Hinks, Regional Director, N.S.

What a difference a year makes! Last season's Atlantic salmon runs to many rivers throughout Quebec and the Atlantic Provinces broke recent records. Some rivers, especially in Newfoundland, experienced the best returns in decades. Grilse returns increased substantially, and large salmon, despite predictions, actually increased in some rivers. The Margaree reported some of the best summer fishing in recent memory. This was especially pleasing, considering the poor grilse returns of 2009. The improved runs of grilse in 2010 bode well for even better large salmon returns in 2011.

There were exceptions, including Labrador's rivers, rivers located near salmon aquaculture, and the Nova Scotia's acid rain stressed rivers along the Atlantic coast, but even here the Lahave, the index river for the Southern Upland, showed a slight improvement.

DFO continued to focus more on developing aquaculture than on protecting and restoring wild Atlantic salmon. ASF is urging governments to convert salmon aquaculture from open sea cages to closed containment to prevent the spread of disease and parasites and genetic interactions that weaken the wild gene pool. We are keeping the public informed when farmed salmon do escape, and are applying pressure on governments when these incidents occur. There were three escapes of a total of 184,000 farmed salmon reported by the industry in the last 3 months of 2010 in the Bay of Fundy. At NASCO, ASF works with other non government organizations to promote stricter measures and better adherence to aquaculture agreements.

ASF is working with independent economic experts to develop for use in 2011 an assessment of the socio economic value of wild Atlantic salmon that will, through advocacy and public awareness, increase our ability to affect Canada's policy and ability to conserve the species.

Our ocean tracking research continued this year, under Dr. Fred Whoriskey's direction. Salmon smolt were tracked from their natal rivers, through the Gulf of St. Lawrence to both the Strait of Belle Isle and Cabot Strait. Fred is now the Executive Director of Dalhousie University's Ocean Tracking Network (OTN). We expect to continue working with OTN to expand smolt and kelt tracking research, particularly in the Gulf of St. Lawrence.

Results of an ASF survey conducted in 2010 showed strong support for catch and release among the 802 anglers who responded. The data garnered will be valuable to Regional Councils and affiliates advocating for tag reductions and live release licenses.

ASF has now recognized 65 private and outfitting camps for their commitment and leadership in promoting live release through our Rewards and Recognition Program. They are Nova Scotia's Big Interval Fishing Lodge, Cape Breton Fly Fishing Adventures, Green Highlander Lodge, Normaway Inn, the Tight Lines Guide service and the Pomquet Lodge.

The Penobscot River Restoration Trust, of which ASF is a partner, purchased three hydro dams on the river from the power company in December and is now preparing to remove the first dam. When complete, nearly 1,000 miles of habitat will be re-opened for sea-run fish, without reducing net hydroelectric production.

The lime doser on West River, Sheet Harbour, a joint project of NSSA and ASF, is keeping pH values between 5.5 and 6.0. Approximately 8,600 smolt left the river in 2010, compared to 2,447 in 2009. Juvenile salmon were found in an area below the doser, where none had been previously reported. Currently, there is some interest in developing a similar program on other acid impacted rivers on the Southern Upland.

Our Greenland Conservation Agreement that has suspended the commercial salmon fishery at Greenland since 2002 is a significant factor in the good runs of large salmon this year. We are working with our partners to reduce Greenland's subsistence fishery that increased from 9 tonnes in 2002 to 26 tonnes in 2009. The higher recorded harvest may mean that fishermen are providing more accurate data so more of the catch is actually being accounted for.

Canada's mixed-stock fishery off the coast of Labrador harvested 36 tonnes in 2008 and 30 tonnes in 2009, without adequate knowledge of the number of stocks being exploited. their origin, size and health. ASF is very active in urging Canada to follow the agreement reached by the North Atlantic Salmon Conservation Organization (NASCO) in managing this mixed-stock fishery. Labrador rivers were among the few in Canada that actually had lower Atlantic salmon returns in 2010. We are urging government to apply precautionary management by lowering allocations in the food fisheries and expanding assessment to ensure that the fisheries kill only salmon originating from healthy river runs. ASF is proposing cooperative research with DFO, US scientists and First Nations for genetics studies to provide information on the origin and health of Atlantic salmon stocks harvested in these mixed-stock fisheries.

ASF has just completed a major Strategic Program Review, looking at all our programs, activities and projects to focus the limited resources that ASF has, both financial and personnel. One of the outcomes of this review, is that ASF will cease to deliver the Fish Friends program, after October 1, 2011 to allow Regional Program Directors to take leadership roles in advocacy and policy delivery. Fish Friends in Nova Scotia should continue relatively unchanged, as there are many dedicated volunteer groups and individuals involved in delivering the program. ASF is working with Regional Councils, affiliated organizations, and our volunteers in the transition to regional delivery of Fish Friends.

I wish to congratulate the St. Mary's River Association for all the great work you do for wild Atlantic salmon, and I look forward to working with you in the future.

SALMON RESEARCH ON THE ST. MARY'S RIVER:

An update by E.A.Halfyard

Sitting in my office on this cold, snowy and dreary January day, I drift off to thoughts of gliding across the lakes at Glenelg, hearing the loons call and seeing those 4 otters chase the suckers in shallow water. But I cannot daydream long as I have a pile of data to analyze, much of which has come from the St. Mary's River. The field season of 2010 was very productive and the entire salmon smolt project was completed while the adult salmon project was started and will finish this spring.

Smolt Project

The smolt project consisted of using acoustic telemetry ("pingers") to follow smolts from the St. Mary's Rivers as they leave their natal rivers and head to the rich waters of the Atlantic Ocean. Additionally, the Lahave R., Gold R. and West River, Sheet Harbour (WRSH) were also studied in 2010, while the WRSH was also studied in 2008 and 2009. The goals of the smolt project were to examine how seaward-bound smolts migrate through the system, describe which habitat they use, and perhaps most importantly, examine the magnitude, location and timing of smolt mortalities. Additionally, surveys of potential predators within the lower section of the river and estuary provided insight on the potential causes of mortality.

Analyses are still underway, and will likely be presented at a SMRA meeting in the near future, however I can let a few preliminary tidbits out the of bag. Smolt survival on the St. Mary's (to the open ocean) was estimated at 68% which is only slightly less than the Lahave River (74%), similar to the WRSH in 2009 (68%), and better than the Gold R. (62%), the WRSH 2010 (41%) and the WRSH 2008 (47%). Approximately 2/3rds of the mortality occurred in the river, prior to the smolts even reaching the salt water, with the remainder dying in the salt water between Sherbrooke and Sonora. Smolts from the St. Mary's also spent the least amount of time in the estuary and bay compared to other rivers.

Adult Project

The adult program on the St. Mary's consisted of capturing wild adult salmon (returning to spawn), and surgically implanting acoustic telemetry tags to monitor their movements, habitat selection and survival. Additionally, the same procedure was performed on adult salmon from DFO's supportive-rearing hatchery program. These hatchery fish were collected from the river as wild parr, raised until they were mature, and returned to the river to spawn on their own. In total, we were able to tag 32 wild salmon and another 43 hatchery salmon, despite warm June and July temperatures threatening to end collections of wild fish and warm/low water changing our release plans of hatchery fish.

The project will run until the salmon exit the river in spring as kelts, at which point data analyses will begin. For now, there are some very interesting data coming from monitoring the fish and I'll tease you with these few morsels.

- Salmon move around the river much more than originally expected, and this movement is both upstream and downstream, between branches of the river and even in-and-out of brooks during the summer months.
- Some salmon actually returned to the salt water midsummer for a brief visit.
- The fish from the hatchery appeared to have spawned, some near where they were released, some in the nearby brooks.
- 4. There was mixing of hatchery and wild salmon but spawning between the two groups is unknown. As things progress, I'll be sure to keep all "in the loop".

Major supporters of these projects include; SMRA, DFO, ASF, NSSA the Atlantic Salmon Endowment Fund, the Ocean Tracking Network, Dalhousie University and others. During both of these projects, many SMRA members and executive provided a tremendous amount of help. Without you, these projects would not have been possible and I am forever indebted. Because of you, hopefully our work will prove beneficial to the wild salmon of the St. Mary's River and elsewhere.

Until the river thaws,

Eddie Halfyard



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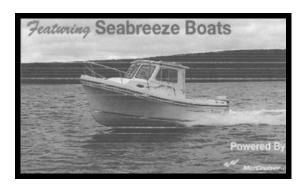
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ST. MARY'S NATURALIST CLUB by Jocelyn Ellis

Through its environmental education programs, the St. Mary's River Association offers informative and entertaining presentations for all ages.

As a new year of activities approaches we reflect upon the many activities of the past year.

In May members of the community were invited to participate in activities planned by Nature Nova Scotia, Nova Scotia Nature Trust and the St. Mary's River Association. Ken McKenna and Bob Bancroft led early risers on bird walks at Stonewall Park and the Estuary. We assisted Ken McKenna as he monitored several squares for the Maritime Breeding Bird Atlas. Mark Pulsifer led a Wood Turtle walk. Eddie Halfyard and Sean Mitchell offered participants a salmon/river walk and Bob Bancroft led a flood-plain walk.

June found us exploring the world of wildflowers with Jocelyn Ellis and enjoying a closer look at aquatic insects with Dr. Kurt Mueller.

We enjoyed an afternoon in August at the Cornect Family Farm as Margaret Cornect introduced participants to the wonderful world of bees. We sampled homemade items made with honey including a delicious wine.

In September, Mark Pulsifer presented a program entitled "Where have all the Moose gone".

Dr. Kurt Mueller returned in October to present a very informative program about Mushrooms. We were fortunate to pick 2010 to present this program. Our area of Nova Scotia was teeming with these beautiful and sometimes-tasty gifts of nature.

The St. Mary's River Association will continue to provide nature oriented programs and activities for residents of the community. Tentative programs for this year include the following: wildflower walk followed by tea and cookies, fly tying program and hopefully back by popular demand programs by Dr. Kurt Mueller, Mark Pulsifer and possibly Dr. Hardy Eshbaugh and/ or Dr. George Archibald.



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TAKE THE KIDS FISHING by Don MacLean

I often praise sportfishing as a lifelong sport which you can participate in from a very young age well into your senior years. How a young angler is introduced to fishing can impact their decision to take up the sport.

Sportfishing and kids are a good combination as children have a natural curiosity combined with a sense of adventure which is important for all anglers. These days with the increased concerns about getting children physically active sportfishing can play an important role in getting them outside. In addition spending time in the outdoors exposes them to the natural world and the importance of clean air and water for both us and the fish. When you introduce children to sport fishing it is important to remember some key points:

Start Simple-A short trip, close to home is a good way to introduce them to sport fishing. It is important to make sure the kids are comfortable. Cold weather, rain and flies can sour any new angler on the sport. Try to pick your days so you will have a good time on the water.

Use Simple Equipment-Equipment that is easy for a child to operate is essential if they are going to enjoy the trip. A spinning rod with a bobber and bait is hard to beat. Both are easy to use, as well as effective, and they will be able to cast with it in a very short period of time.

Safety-Safety is always a priority when on, or near the water. This is even more important when fishing with children. While everyone knows they need life jackets when fishing from a boat they should also be part of your child's fishing equipment when shore fishing near deep or fast-moving water. Sun screen, sunglasses and insect repellent should also be part of your equipment.

Make Sure They Have Fun-When you go fishing and don't catch anything it can be pretty discouraging, especially for a young angler. Try to stack the odds in your childs favour by fishing where you have a good chance of catching something. This may be a perch lake or a stocked trout pond.

Take Your Time-Slowing down to fish with your children will let you see many things that you might miss in your race to get to the next trout pool. Birds, frogs, salamanders, minnows and dragonflies are all part of the angling experience. Seeing nature through a child's eyes can help remind us why we want to be outside in the first place. With all the pressures on everyone these days it is often an effort to find the time. Make the effort, you will be rewarded many times over.

Tight Lines

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THE NOVA SCOTIA NATURE TRUST – Archibald Conservation Lands - By Mark Campbell

Dale Archibald was just a boy when he first visited his grandparents' farm near Glenelg, but his memories of the summers he spent there are well preserved. He particularly recalls days spent fishing and canoeing along the St. Mary's River with his father, brothers, sisters, cousins, aunts and uncles. So when he inherited the land from his father, Percy, Mr. Archibald had an idea: why not preserve this land, just like his childhood memories? Dale, who has been a member of the St. Mary's River Association since the 1980s and served as its president, approached the Nova Scotia Nature Trust about placing a portion of the land under permanent protection through a partial donation and partial sale. This past spring, this 15-acre parcel became the fifth site acquired through the Nature Trust's St. Mary's River Conservation Legacy Campaign, bringing the total conservation lands to over 400 acres. His generosity ensures that his family's legacy and connection to the land will be protected in perpetuity, and he also has plans to protect other parcels fronting along Glenelg Lake.

"My father and mother were great friends with Sandy and

Shirley Cameron", said Mr. Archibald. "The Cameron family made the first donation to the St. Mary's River Legacy campaign, so it was a natural fit, because some of that property adjoins ours. Also, I like the philosophy of the Nature Trust in protecting important lands to help sustain sensitive habitat. I hope it will help create an awareness of how special the St. Mary's River is, and all rivers are." According to Dale, the land has been in the family since his great, great, great grandfather, Alexander Miller Archibald, arrived in Glenelg in the early 1800s. "It was a mixed farm until my grandfather, Elwyn, passed away. My grandmother lived there until 1990. The farm provided pretty well for different generations over the years, and people either grew, built or harvested what they needed from the property." Situated on Harrison's Pool, the picturesque property features some of the province's last mature Acadian floodplain Forest, and its ponds and river frontage provide vital habitat for the Wood turtle, which is listed on Canada's endangered species list.



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ADOPT- A -STREAM ON THE ST. MARY'S RIVER by Amy Weston

The Nova Scotia Salmon Association achieved a major landmark in 2010 when it welcomed the Nova Scotia Liquor Corporation as title sponsor of the Adopt A Stream program.

The program has operated under the auspices of the NSSA since 1998, providing technical advice and project funding to community groups undertaking fish habitat restoration work in their local watersheds. In 2005, the program gained access to secure project funding from the Nova Scotia Sportfish Habitat Fund – angler-generated revenue from a levy on recreational fishing licenses – with the Nova Scotia Department of Fisheries and Aquaculture providing funding to the NSSA to manage the program and provide technical field support to participating groups.

The new partnership with NSLC will provide at least \$500,000 over five years. This additional funding will allow us to expand project implementation, reach more communities, and improve watershed-specific habitat planning.

In addition to its financial contribution, the NSLC is helping to increase the program's profile through the development of our new website (www.adoptastream). Greater visibility and public awareness have also resulted from in-store promotions — in particular the April ECO-Sale, whereby sponsoring suppliers donate a portion of the proceeds to the program.

This past year the St. Mary's River Association was one of 28 community groups involved in NSLC Adopt A Stream. Their collective efforts resulted in the restoration of more than 147,000 square meters of stream and riparian habitat, the reestablishment of fish passage to 30 km of stream habitat, and the streamside planting of 23,245 trees. In addition to in-stream and riparian work, stream habitat assessments were completed, and temperature monitoring and aquatic habitat connectivity assessments were initiated in a number of watersheds across the province. The groups raised matching funds and their volunteers gave more than 8500 hours to these efforts.

In the East Branch St Mary's, the Moose River was assessed and 22 half-log cover devices were constructed and installed to provide cover in the lower 1.5 km of the stream, an area that flows through agricultural land with little riparian forest or in-stream cover. The crew also conducted preand post-restoration fish community sampling (using fyke nets and minnow traps), with an aim of assessing whether the cover devices made any change in fish use of the area. The results of the study were ambiguous. SMRA Executive director, Sean Mitchell noted that proper assessment of the effectiveness of this restoration technique would require much more intensive pre- and post restoration sampling, as there are many variables at play in nature. As part of longer-term planning and prioritization, the SMRA also

completed habitat surveys on a further 10 streams throughout the watershed, bringing the total to 23 to date

There is no doubt that restoring fish habitat to productivity is a long-term undertaking. With the support of Nova Scotia anglers, government departments and our new corporate partner, NSLC Adopt A Stream is looking forward to providing more help to community groups like the St. Mary's River Association to achieve substantive gains for the aquatic ecosystems its members hold dear.

For more information about NSLC Adopt A Stream visit our website or contact:

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Photo Caption: Field worker Mike Reid at Moose River





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WHERE HAVE ALL THE MOOSE GONE? By Mark Pulsifer

A brief overview of the state of the mainland moose herd, and some of the reasons behind its decline.

You would be hard pressed to find anyone in this country who did not think of the moose as one of our most recognizable iconic symbols of the Canadian wild. Affectionately known as the "swamp donkey", this largest member of the North American deer tribe appears to be a strange assortment of long and gangly parts that give the appearance of being simultaneously slow- witted, and dangerous. Although moose are far from being the smartest animal in the woods, they can easily be one of the most aggressive, particularly bulls during the fall rut, and cows with calves in spring. For those who have been privileged to see one of these magnificent creatures in their natural habitat there can be no greater thrill. Sadly though, few of us on mainland Nova Scotia ever get this opportunity because despite no hunting, moose numbers have declined at least 20% over the past thirty years, and what moose remain are primarily confined to isolated sub-populations. In fact, the mainland moose herd has declined so much that in 2003 Nova Scotia became the first and only jurisdiction to legally recognize (mainland) moose as an endangered species under the province's Endangered Species Act.

Today, the mainland moose population is estimated to be between 1000 and 1200 animals, but because of difficulties completing good surveys no one really knows for sure just how many there are. Since 1960 most of the moose on the mainland have been restricted to areas within the Cobequid Hills, the Pictou-Antigonish Highlands, the Tobeatic Wilderness Area of western Nova Scotia, and scattered pockets in Halifax, Guysborough, Shelburne, Queens, and Yarmouth Counties. Over the past several years moose have been sighted occasionally throughout the St. Mary's River watershed and undoubtedly have a small but persistent breeding population.

So what has happened to the moose herd? Why have numbers declined? The decrease is not well understood, and is most likely the result of a complex series of causes rather than any single one. The suspects in this long list of potential causes are: spread of white-tail deer and parasitic brain worm, illegal hunting, increased road access into moose habitat, forest management and habitat changes, climate change, chemical imbalances such as too much cadmium and too little cobalt, and possibly an unknown viral disease.

We suspect that some of the most significant causes in moose declines have come about as the result of how we physically manage our working landscapes, particularly the building of roads. Over the past forty years there has been a profusion of roads built across the mainland in Nova Scotia as part of our ongoing forest management activities. Roads cut the landscape up into smaller pieces with lots

of edge habitats that deer prefer more than moose. Deer have responded accordingly and their numbers have increased. Few would argue that the increase in deer numbers is necessarily a bad thing; however, deer carry a parasitic worm that is deadly to moose. This parasite is shed in the deer's feces where it is picked up by snails, which in turn crawl onto vegetation that moose eat. Once this parasite is ingested by moose it eventually causes neurological problems and death. Therefore, the larger the deer herd, the greater the chances that moose will pick up this parasite. Moose are not only subjected to this internal parasite, but to external parasites as well. The winter tick (or moose tick), is found throughout Nova Scotia and is most serious during the late winter when the adults and nymphs engorge themselves with blood causing significant nutritional and energetic stress.

Roads also allow access into moose habitat by hunters who illegally take an unknown number of moose each year. In some areas where small isolated groups of moose exist, poaching is suspected to be a significant cause of mortality, and can very quickly negate any small increases from reproduction. Legal moose hunting has not been permitted on the mainland since 1981, and the Mi'kmaq who are legally allowed to harvest mainland moose have agreed to restrict their hunt to Cape Breton's much healthier moose herd for conservation reasons.

Here in Nova Scotia, moose are commonly associated with mixed- and softwood habitats that provide a variety of feeding, calving, escape and cover opportunities. Changes to habitat stemming from forest harvesting can lead to other potential causes of mortality. Generally speaking, moose respond favourably to forest harvesting because there is often an abundance of hardwood browse and other nutritious plants regenerating on harvested sites. Although forest cutting often results in the production of food for moose, the loss of mature softwood stands can be problematic. Moose are a large animal with a heavy coat that does a good job of keeping the heat in, and the cold out during the winter.

However, during the summer months when temperatures frequently range in the mid to high 20's moose become highly stressed in the heat, and must find softwood stands near water to keep cool. As mature softwood stands are lost at a rate that far exceeds natural stand disturbance and replacement, moose have fewer places to escape this physiological stress. Unfortunately, the anticipated effects of climate change may only make this situation worse in the short term. Regenerating softwood forests should provide suitable habitat in the future if moose can survive this habitat bottleneck period.

WHERE HAVE ALL THE MOOSE GONE?

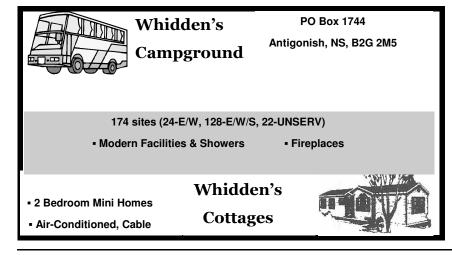
Continued from page 22

We also recognize that moose may be adversely affected by varying levels of environmental contaminants and micronutrients such as cadmium, cobalt and possibly copper. Cadmium is found naturally in our soils, but is also transported here as air-born industrial pollution. Regardless of origin, this heavy metal is absorbed by vegetation and then consumed by moose where it remains in the kidneys and liver, and may among other things cause brittle bones and reproductive failure. Studies have shown that cadmium levels in adult moose are some of the highest ever reported in the northeast. Similarly, cobalt and copper have been implicated with a variety of disease conditions but there is no direct evidence to point to a confirmed effect. Finally, there is a possibility of an unidentified virus which may be impacting moose. Some moose exhibit symptoms that are similar to moose disease caused by the brain worm nematode, but upon close examination of the brain following death do not exhibit the typical tell-tale signs of the parasite, and is therefore thought to be caused by a viral infection. This relationship and the effects of metals and nutrients on moose are being closely monitored as specimens become available by wildlife pathology scientists at the Atlantic Veterinary College in Prince Edward Island. In response to declining moose numbers on the mainland, recognition of moose as an endangered species, and the variety of threats facing moose, the provincial Department of Natural Resources brought together in 2004 a diverse group of moose scientists, experts, and individuals interested in the management and welfare of moose to form a Mainland Moose Recovery Team. This group meets regularly to discuss, and where possible, advise the department on approaches needed to mitigate the effects of these various threats and hopefully start a recovery process. The eastern moose is a unique animal that has historical significance

to many groups in this province. It is the only true Nova Scotian deer that has persisted continuously throughout our woodlands for the past several thousand years, and is worthy of whatever efforts we can afford it to ensure that it remains an integral part of our ecological landscape.

Mark Pulsifer is the Regional Wildlife Biologist for the Nova Scotia Department of Natural Resources in Antigonish.







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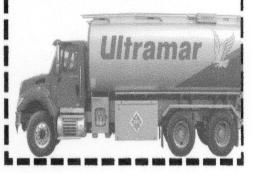
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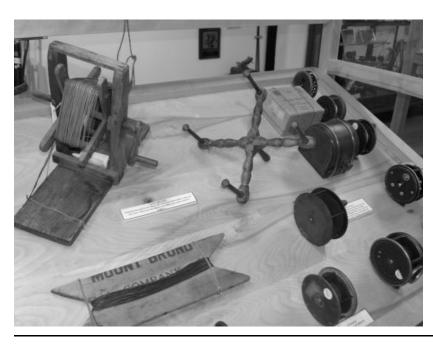
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