

Nova Outdoors®



FREE
With
Membership
See Page 21

VOLUME 13, NO. 3
SUMMER 2004

A Walk In The Woods

How Old Is That
Fish Anyway?

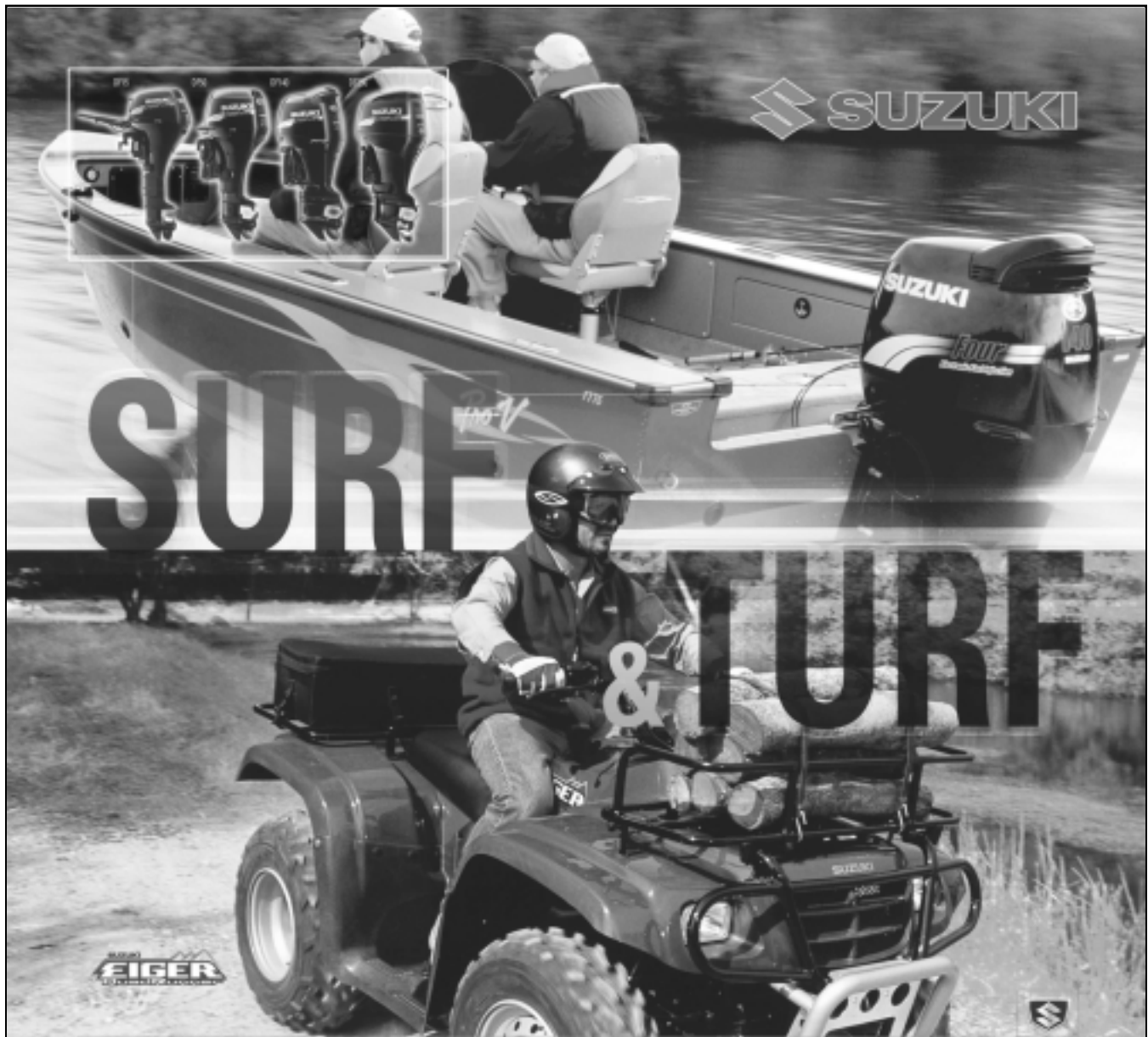
Random Casts

Mailed under Canada Post
Publication Agreement No. 40050030

**OFFICIAL PUBLICATION OF THE NOVA SCOTIA FEDERATION
OF ANGLERS AND HUNTERS**




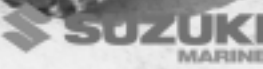

**Make Your Vote Count for
Conservation on June 28.**



SURF & TURF

In the woods or on the water. Suzuki's got you covered with a complete line-up of strong and dependable ATVs and 4-stroke outboard engines ready to bring the adventure to you. Find out why so many people are choosing Suzuki as their brand of choice. **Suzuki. Your complete package for outdoor enjoyment.**

www.suzuki.ca


Remember, boating and alcohol or other drugs don't mix. Suzuki encourages you to operate your outboard safely and responsibly. Always wear a life jacket when boating. Specifications, product features and colours are subject to change without notice. Read your owner's manual carefully. Always wear a helmet and protective clothing when riding and remember to observe all safety regulations and respect the environment. Please see your local Suzuki dealer for more information.

**Power Wheels
of Truro**

160 Robie Street
Truro, NS B2N 1L1
(902) 843-4000

**Toy Master
Motor Sport**

Box 6009
Cornwall, PEI C0A 1H0
(902) 894-5287

**Adventure Rec
& Marine**

7 Blackmore Ave., Suite 1
Clearenville, Nfld A5A 1B8
(709) 466-7800

NOVA OUTDOORS

SUMMER 2004

TABLE OF CONTENTS

CWD: The Race Is On <i>by Mark Hamilton</i> _____	4	A Walk In The Woods <i>by Don Cameron</i> _____	14
Executive Director's Voice <i>by Tony Rodgers</i> _____	5	How Old Is That Fish Anyway? <i>by Ralph Heighton</i> _____	16
Lead Fishing Sinkers in the Environment _____	6	The Old, The New and The Practical <i>by Blair Doyle</i> _____	18
Shad Make You An Instant Expert <i>by Ed Coleman</i> _____	9	Random Casts <i>by Don MacLean</i> _____	19
Providing More Acadian Forest Wildlife In Habitats In Today's Managed Forests <i>by Bob Bancroft</i> _____	10		

Cover photo credit: A Beaver, Courtesy of U.S. Fish & Wildlife Service, National Image Library.

To place your ad in the next issue (Fall, 2004) of Nova Outdoors,
please call (902) 468-6112, or call Tony Rodgers of the
Nova Scotia Federation of Anglers and Hunters at (902) 477-8898.

Nova Outdoors

Official Publication of the
Nova Scotia Federation
of Anglers and Hunters



Vol. 13, No. 3
Summer, 2004
**STATEMENT
OF PURPOSE**

The Nova Scotia Federation of Anglers and Hunters is interested in all aspects of the out-of-doors and is dedicated to the fostering of sound management and wise use of the renewable resources of the Province. We want to ensure that their economic, recreational and aesthetic values may continue for the benefit of this and all future generations.

Nova Outdoors is the registered trademark of Nationwide Promotions. The opinions expressed in the magazine do not necessarily represent the official views of the Nova Scotia Federation of Anglers and Hunters nor its publishers. Nova Outdoors is published quarterly and will be made available free of charge to the membership and selected retailers, government offices, libraries and other seasonal outlets.

Special thanks to our many contributors who have assisted in this project - your continued support will be appreciated.

We cannot be held responsible for unsolicited articles or advertisers claims.

Published quarterly by

NATIONWIDE
Promotions Limited

Design and production

Angela Urquhart
David Mullins
Meghan Stewart

Advertising

David Boutilier
Ross McQuarrie
Greg Cooke

**Letters and/or contributions
may be sent to the editor c/o:**

Nova Outdoors
P.O. Box 44028, 1658 Bedford Hwy.,
Bedford, NS B4A 3X5
Ph: (902) 468-6112
E-mail: novaout@accesscable.net

Mailed under Canada Post
Publication Agreement No. 40050030

RETURN UNDELIVERABLE CANADIAN ADDRESSES TO:
P.O. BOX 44028, 1658 BEDFORD HWY.
BEDFORD, NS B4A 3X5

CWD: The Race Is On

"Canned Hunts" in the United States are a lucrative business, with trophy animals netting \$40,000 - \$50,000. These animals must be free of signs of captivity, which makes the capture and sale of free-range deer a tempting prospect for the unscrupulous. Recently, a former deer-hauler turned states evidence, telling stories (under oath) of the live capture of deer in Ontario and their sale throughout the United States. The animals were moved at night to keep them cool and to reduce law-enforcement checks, and veterinarians were paid to falsify documents in case of border checks. Authorities in the U.S. believe about 25,000 deer are moved illegally every month. More recently in Nova Scotia, a herd of 150 bison was brought here illegally, clear across the country. In Canada there are about 2600 game farms; in the U.S. it's closer to 8500. All this points to the need for continuous, widespread testing for disease in game farming operations. As well, with concerns mounting about the spread of Chronic Wasting Disease, it is expected that 200,000 deer and elk taken by hunters during the past season will be tested for CWD.

The scientific community worldwide is reacting to the need for better, faster, more reliable tests for animals suspected of having prion-related (prion is the abnormal protein which causes CWD) illnesses such as CWD, BSE ("mad cow" disease), scrapie, and for humans potentially carrying vCJD. New methods are being independently patented in labs from the U.S., England, Germany, and Ireland, using a wide variety of screening meth-

ods. Studies in testing error are increasingly indicating that our accepted data on infections might be as much as 30 percent incorrect, which leads researchers to speculate that the scale of this problem might be far more serious than they had thought.

In Wisconsin, several deer testing negative under the traditional method were found positive through a new test using lymph node tissue. This prompted officials to send letters to hunters whose deer were being retested that positive results might yet be forthcoming. This new test is the result of a recent discovery at Colorado State University that CWD can be detected in the lymph nodes of animals, and at a far-earlier stage of the disease cycle than previously possible. In New Mexico, wild deer have undergone 20-minute operations in which they are tranquilized, and a piece of tonsil tissue is removed for testing. The animals have been monitored in recovery and show no ill-effects. This method of testing is quite

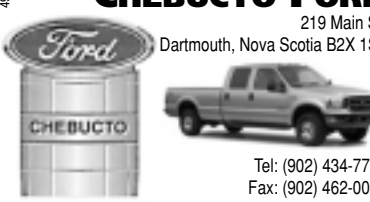
Continued on page 12.

**LAKEVIEW HOME HARDWARE
BUILDING CENTRE**
5228 Hwy. #7, Porter's Lake, N.S.
**"Hunting Licenses
& Hunting Supplies"**
Ph: (902) 827-3534 Fax: (902) 827-5183

**ATLANTIC
FUNERAL HOMES**
DARTMOUTH
(902) 462-1434
HALIFAX
(902) 453-1434
LOWER SACKVILLE
(902) 864-1434
Fax: (902) 435-9486
E-Mail: atlanticfb@accesswave.ca

**J. WILLY KRAUCH
& SONS LTD.** Tangier, N.S. B0J 3H0
Smoked Wholesale & Retail
Atlantic Salmon, Mackerel & Eels
Ph: (902) 772-2188
Toll Free: 1-800-758-4412
Fax Toll Free: 1-800-299-9414

CEF CEF Consultants Limited
Communications, Environmental and
Fisheries Consultants
5443 Rainnie Drive,
Halifax, NS B3J 1P8 (902) 425-4802 phone
ncollins@cefconsultants.ns.ca (902) 425-4807 fax

CHEBUCTO FORD 219 Main St.
Dartmouth, Nova Scotia B2X 1S7

Tel: (902) 434-7700
Fax: (902) 462-0036
"You can count on it" <http://www.chebuctoford.com>

**MERCURY
Outboards**
**Mercury
OptiMax**
Your Local Dealers
Terry's Rentals
101 Forest Street
Yarmouth, N.S. B5A 4B3
(902) 742-4051
Charles Repairs
75 Country Line Road
Cleveland, N.S. B0E 1J0
(902) 625-3964
Sunset Marine Ltd.
118 Post Office Rd.
Porters Lake, N.S. B3E 1H7
(902) 827-3353
Bayside Supplies
4566 Prospect Road
Bayside, N.S. B3Z 1L8
(902) 852-4199

Executive Director's Voice



By Tony Rodgers

Like little children anticipating the arrival of Santa Claus at Christmas, the firearms community of Canada waited to see the results of a three month long review of the firearms act started by Paul Martin, only to find out that it was the grinch making the delivery.

Just three days before the call of a federal election and without even telling the person who did the leg work on the review, the minister in charge of public safety Anne McLellan announced that firearms owners would not have to pay the fee to transfer a firearm and that's all we got.

Well that's sure going sway my vote.

What an additional waste of taxpayers money to do another review and then on top of that have Albina Guarnieri who was directed to do the work, admit she heard about the announcement of the changes on TV.

When Minister Guarnieri was appointed to review the firearms legislation, the outdoor community took her at her word and worked with her in good faith. She made specific statements and gave assurances to our sister organization the Ontario Federation of Anglers and Hunters that were not kept. However, despite the Minister's promises to firearms owners across the country that they would be pleased with the results of the review, the Prime Minister, Deputy Prime Minister, Anne McLellan, one of the chief architects of this failed system, Minister Guarnieri, and the entire Cabinet sold us a false bill of goods.

This expensive exercise has been nothing more than a pre-election public relations ploy designed to appease firearms owners and a majority of Canadian taxpayers who have repeatedly told the government to scrap the long gun registry. Provincial and territorial governments have refused to enforce the \$1 billion dollar firearms registry.

Taxpayers' federations, municipalities, police associations and front line officers across Canada have told the government that the registry is a fiscal and operational disaster and must be scrapped. Despite promises to the contrary, the government strung us along and produced nothing of substance to fix this hugely expensive, unnecessary and mistake prone system. Considering that this same government promised that the registry would cost taxpayers no more than \$2 million (a figure that has

been exceeded by 500%) their promise to cap the annual expenditure on the registry at \$25 million is laughable.

Over the last year, no less than ten regional and national public opinion polls have clearly indicated that a majority of Canadians favoured a scrapping of the firearms registry for long guns.

The Chief of Police of Canada's largest municipality has repeatedly stated that the registry has not helped his officers to solve one single gun-related crime. The money wasted on the system could have been better spent by putting 10,000 more police officers on the streets, improving border security and stemming the flow of illegal handguns into Canada that have been used to commit crimes in our communities, or improving health care, education, and municipal infrastructure, instead of harassing legal, law-abiding farmers, hunters and recreational shooters.

Early in the review, the government suggested that at the very least they would consider decriminalizing the failure to register, but did not. They refused to listen to firearms owners' requests for representation on the Firearms Advisory Committee. They ignored requests to restore funding for training programs, and failed to revamp a system that is so badly flawed, so riddled with mistakes, so prone to cost overruns and shady accounting practices that it calls into question why the system exists in the first place.

From day one, the firearms community across Canada offered to work with the government to make improvements that targeted the real problem, and promised to support the government in its attempts to toughen the laws and penalties against those who import, sell, and use illegal firearms to commit crimes. Instead of accepting this offer, the government has given millions of legitimate firearms owners the brush off and sold them out.

In contrast to the rosy promises made by the government, the proposed changes fall short in almost every respect, and this clearly indicates that they aren't listening to our concerns. With a federal election called for June 28, firearms owners and taxpayers will have an opportunity to send the government a message at the ballot box.

If the Liberal government truly believes that this package of 'amendments' will do anything to appease the outdoor community just before an election, or sway voters in western

Canada, they clearly don't understand, nor wish to understand, the depth of outrage against this flawed system.

The registry system is broken, does nothing to enhance public safety, and no amount of cosmetic surgery by the government will fix it. Firearms owners and the general public who have repeatedly said that this \$1 billion dollar albatross needs to be scrapped, will remember the government's abject failure and broken promises around this issue on Election Day."

I sometimes wonder if too much time is spend on the firearms control subject. I have written thousands of words and done countless media interviews over the past ten years and we do not seem to have moved ahead. The truth of the matter is that this legislation is the most significant attack on hunting that has ever been made and it must continue to be addressed.

If we are not successful in turning back the clock on the gun registry, a time will come in the future when clauses in Section 117 of the Criminal code will be used against us. These powers can single out and remove certain types of firearms and have them removed from society.

By crippling the hunter and his use of legitimate hunting tools, the government will in effect, rob wildlife conservation of the money generated by hunters, and a necessary tool for wildlife managers the hunter him or herself.

Our recruitment of young people into the hunting community has dropped dramatically over the past ten years, and it doesn't take a rocket scientist to see that a large part of the blame rests with restrictive firearms licensing and registration.

Reversing this trend rests with you. Take a young person hunting and introduce them to the experience of the outdoors you have enjoyed, and VOTE on the 28th so that all political parties will see we still mean business on this issue.

The Federation will be holding "Meet Your Candidate Nights" across the province during the election. We will ask them to deal with questions of the outdoors, hunting and angling. Look for our announcements and show up. I'd love to see you come out. ☘

Tony Rodgers
tonyrogers@eastlink.ca

Lead Fishing Sinkers In The Environment

More than five million Canadians take part in recreational angling each year, spending over 50 million days fishing on open water. Recreational anglers contribute to environmental lead deposition through the loss of lead fishing sinkers and jigs. Each year, lost or discarded fishing sinkers and jigs amounting to an estimated 500 tonnes of lead, and representing up to 14 percent of all non-recoverable lead releases in Canada, are deposited in the Canadian environment.

Wildlife, primarily piscivorous birds and other waterbirds, ingest fishing sinkers and jigs during feeding, when they either mistake the sinkers and jigs for food items or grit or consume lost bait fish with the line and weight still attached. Lead fishing weights that weigh less than 50 grams and are smaller than two centimetres in any dimension, are generally the size found to be ingested by wildlife. Ingestion of a single lead sinker or lead-headed jig, representing up to several grams of lead, is sufficient to expose a loon or other bird to a lethal dose of lead. Lead sinker and jig ingestion has been documented in 10 different wildlife species in Canada. In the United States, ingestion of lead sinkers and jigs by 23 species of wildlife, including loons, swans, other waterfowl, cranes, pelicans, and cormorants, has been documented. Evidence gathered to date indicates that lead sinker and jig ingestion is the only significant source of elevated lead exposure and lead toxicity for Common Loons, *Gavia immer*, and the single most important cause of death reported for adult Common Loons in eastern Canada and the United States, frequently exceeding deaths associated with entangle-

ment in fishing gear, trauma, disease, and other causes of mortality.

Except for a few local or regional instances, available data indicates that Common Loon populations are stable or increasing through most of their Canadian range. There currently is insufficient information to answer the question of whether mortality through lead sinker poisoning is having population-level effects on loons anywhere in Canada. Or to estimate with confidence the minimum frequency of poisoning that, combined with the effects of other environmental stressors, would be required to significantly affect population dynamics. The most critical areas of new knowledge that are required to enable confident estimates of the population effects of lead sinker poisoning in loons are accurate life history data using individually marked birds to derive important population parameters for local or regional loon populations in Canada; DNA analyses to better define "populations"; a better understanding of the interactions of multiple environmental stressors that may influence population dynamics; and incorporation of these multiple stressors into a large-scale spatial analysis using geographic information systems. Such research would be expensive and time-consuming, requiring long-term monitoring of substantial numbers of banded individuals from several selected populations.

There are numerous viable alternative materials for producing fishing sinkers and jigs, including tin, steel, bismuth, tungsten, rubber, ceramic and clay. Tin, steel and bismuth sinkers and bismuth jigs are the most common commercially available alternatives in Canada. Many of the available

alternative products are currently more expensive than lead; however, switching to these products is anticipated to increase the average angler's total yearly expenses by less than 1 percent (\$2.00). Nevertheless, the continued availability of (cheaper) lead products has made it difficult for the manufacture and sale of non-toxic alternatives to achieve commercial viability.

Some limited regulatory actions have been taken to reduce the use of lead sinkers and jigs both in Canada and elsewhere. In 1987, Britain banned the use of lead fishing sinkers weighing less than 28.35 grams. The United States has banned the use of lead sinkers and jigs in three National Wildlife Refuges and in Yellowstone National Park and is currently considering further action. New Hampshire, Maine and New York have ratified statewide regulations prohibiting the use of lead sinkers beginning in 2000, 2002 and 2004 respectively. Environment Canada and Parks Canada prohibited the possession of lead fishing sinkers or lead jigs weighing less than 50 grams by anglers fishing in National Wildlife Areas and National Parks under the Canada Wildlife Act and the National Parks Act, respectively, in 1997. However, these latter two regulations are of limited geographic scope, covering <3 percent of Canada's land mass, and they affect only about 50 000 (<1 percent) of the estimated 5.5 million recreational anglers in Canada. Currently, the majority of recreational anglers continue to use lead sinkers and jigs. ◀

Courtesy of the Canadian Wildlife Service.



The hunt is over.



The KVF700 4x4 is the industry's biggest V-Twin engine ever

put in a production ATV. There's 697cc of smooth-running, SOHC, liquid-cooled 90-degree brute-force V-Twin power. The 1,514 pounds of towing and hauling capability from the KVF700's standard front and rear racks and trailer hitch deliver exactly what hunters want in a sport-utility ATV.



The KVF700 4x4 is also available in Atlas Red and Hunter Green.



KVF
Kawasaki



See your dealer for the latest sales promotion.

Kawasaki
Let the good times roll.™

kawasaki.ca

P.G. Sports Inc.

1093 Ave. Des Pionniers
Balmoral, NB E8E 1B5
(506) 826-1800

Phils Auto & Recreation Centre

2709 Route 102 Hwy
Lincoln, NB E3B 7E4
(506) 446-6135

Freedom Cycle Ltd.

160 Chain Lake Drive
Halifax, NS B3S 1E9
(902) 450-0020

Veinottes Chainsaw Sales & Service Ltd.

RR#2 Bridgewater
NS B4V 2W1
(902) 543-4502

Marsh Motorsport

P.O. Box 602, T.C. Hwy
Grand Falls, Windsor
Nfld A2A 1X2
(709) 489-2400

Sleds & Treads Ltd.

7 Turner Court
Sussex, NB E4E 2S1
(506) 433-5434

Adventure Motors

238 Archimedes Street
New Glasgow, NS B2H 2T9
(902) 928-1015

Yarmouth Forklift Ltd

Box 6350 RR #4,
Yarmouth, NS B5A 4A8
(902) 742-6699

Toy Master Motor Sport

Box 6009
Cornwall, PEI C0A 1H0
(902) 894-5287

Quality Auto Supplies Ltd.

P.O. Box 180, 190 Main Street
Glovertown, Nfld A0G 2M0
(709) 533-6074



Think About It – Is The Earth Flat?

The overwhelming majority of people love the idea of saving the world, or at least a small part of it. And of those, many relish being viewed by others as a world saviour. Wanting to “do good” is a trait that many of us share. Unfortunately, the desire to “do good” often results in unintended consequences that, in fact, can have the completely opposite effect.

Just as, at one time, everybody “knew” that the earth was flat, many today “know” that requirements in the Firearms Act, such as licencing and “safety courses”, are beneficial to society. Of course, most citizens have neither the time nor the inclination to ascertain the truth for themselves on every given subject. In general terms, the public is brainwashed by propaganda by those with sufficient resources – often our own governments and with our own money. In short order, those with little knowledge form almost intractable positions on subjects with which they are really quite unfamiliar.

“gun-laws mostly affect those that least require restrictions”

Although many supporters of the Firearms Act are sincere in their beliefs and desires, we suspect that the leadership of the anti-gun movements is quite aware of the truth – that gun-laws mostly affect those that least require restrictions. The motivations of those who are attempting to regulate civilian firearms ownership out of existence are unknown. Some have suggested “control” may be the motive, while others have suggested nothing more sinister than a desire for some attention, free world-travel and the limelight by a few egotistical individuals.

Whatever the motivations, the current law impacts unnecessarily and severely upon law-abiding Canadian gun-owners. It is totally unreasonable that mere possession of a firearm without a licence should be a Criminal Code offence. Likewise, the requirement of licenced gun-owners to report a change of address to the authorities within 30 days of changing residence treats otherwise law-abiding citizens worse than those who have been prohibited by the courts from possessing firearms.

It is our belief, that public policy on such important and potentially divisive issues, such as this, should be based on reputable research. In short, firearms law should be based on the best, unbiased evidence available. Our position is that, rather than being a benefit to society, the Firearms Act has a net detrimental effect towards the (dream-world) goal of a “safe society”.

It is worth noting that in 2003, the Centers for Disease Control and Prevention, based in Atlanta, Ga., (and often viewed by some as a bastion of anti-gun thought) published results of a study that effectively demonstrated that U.S. gun-laws have little effect on gun violence. The scientific report reviewed 51 published studies about the effectiveness of eight types of gun-control laws. In every case, a CDC task force found “insufficient evidence to determine effectiveness.” The CDC study does not necessarily conclude that gun-laws are ineffective but that the evidence is insufficient. We can only conclude that if the evidence of effectiveness actually did exist, these 51 studies would surely have uncovered it! We believe that it is worth asking why Canada is pursuing the current policies if evidence cannot seem to be found to support such policies. Even Peter Hamill, spokesman for the Brady Campaign to Prevent Gun Violence is quoted as saying “There have not been enough good surveys to know whether these laws work”. Incredible.

Those with an inclination for further information are invited to read the Canadian equivalent “Firearms, Accidental Deaths, Suicides and Violent Crime” by Yvon Dandurand and financed by our own Department of Justice. A perusal of this material will probably lead the reader to the conclusion that there is not enough evidence to suggest that the requirements found in the current Firearms Act were ever needed. As of February 2004, a copy of this report can still be found at: http://www.cfc-ccaf.gc.ca/en/research/publications/reports/1998/summaries/acc_sum.asp

“firearms law should be based on the best, unbiased evidence available”

Incrementalism, often described as “Boiling the Reasonable Frog” has become a favourite tactic of governments worldwide. As long as things are changed gradually, public reaction can be controlled until citizens become sufficiently used to the ideas being propagated. Combining this tactic with the desire to “do good” and “be reasonable”, it can be easily seen how even some gun-owners (and organizations) fall prey to supporting unnecessary, intrusive requirements.

As NRA President Kayne Robinson recently opined, “Red tape and government cost work with shocking efficiency to drive out gun-owners. The target is always law-abiding citizens, not criminals. And the primary intent isn’t to reduce crime or promote safety, but to cut the number of guns and gun owners.”

Our policies can be found at:
<http://www.rfocbc.com/rfoc-policies.pdf>

Responsible Firearms Owners Coalition of BC
Phone: (604) 532-8048 Fax: (604) 532-0380

P.O. Box 93052, Langley, BC V3A 8H2
Web Site: www.rfocbc.com e-mail: admin@rfocbc.com

Shad Make You An Instant Expert

“There’s nothing to catching shad,” a world famous angler once told me. “Put on the right spinning lure, cast out, retrieve and you’re an instant expert.”



Ed Coleman

We were at the mouth of the Nictaux River at the time and the angler had just taken half a dozen fish on

seven or eight casts. He used a closed face spinning reel, tiny yellow and white shad darts, and he made catching shad look easy.

In a way, the angler was right. Compared to, say, salmon and trout fishing, shad angling is relatively easy to learn. It’s almost simply a matter of tying on a lure, casting out and cranking in line. When my grandson Sam was eight, for example, he was catching shad with spinning tackle only minutes after making his first cast.

Once he caught on to letting his lure sink and to retrieving slowly, he was catching shad.

However, note that above I said catching shad is almost a matter of just tying on a lure and casting out. The angling writer I quoted was right, but he was simplifying things. True, you can become an instant expert; and true if you’ve never fished shad before, you can quickly learn how to catch them. Up to a point, it really is a matter of casting out and reeling in.

There’s the other side of the coin. There’s the instant expert, guys like

Continued on page 15.

POWER TO THE PEOPLE

TRX450F/E/EM

Honest, hardworking and tough, the **TRX450** is a workhorse of exceptional ability. Switchable 2x4/4x4 drive modes, a torque-sensing front differential and powerful Honda 4-stroke engine generate all the low-end torque heavy work requires. A 2WD/4WD switch-operated system and Honda’s race-proven ESP (Electric Shift Program) are both available. Or you can choose the standard foot-shifted 5-speed gearbox with automatic clutch.

Always wear a helmet, eye protection and protective clothing, and please respect the environment. Obey the law and read your owner’s manual thoroughly. Honda recommends taking an ATV rider training course.

<p>Adriann’s Cycle Service 204 Church Street Moncton, NB E1C 5A2 (506) 382-0262</p> <p>PG Sports Inc. 1093 Ave. Des Pioneers Balmoral, NB E8E 1B5 (506) 826-1800</p>	<p>Sutherland Equipment Ltd. 336 Lineon Rd. Fredericton, NB E3B 5C2 (506) 452-1155/1-800-668-4386</p> <p>Toys for Big Boys Ltd. 633 Salisbury Rd. Moncton, NB E1E 1B9 (506) 858-8088</p> <p>Graham Sport Ltd. 398 Connell Street Woodstock, NB E7M 5G9 (506) 328-9306</p>	<p>GW Sampson Construction 694 Main Street Kingston, NS B0P 1R0 (902) 765-3357</p> <p>Action Cycles Ltd. 20 Industrial Way Elmsdale, NS B0M 1M0 (902) 883-8080</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

GOW’S HARDWARE LTD.
“Ask about our Home Card.”
Eastside Plaza, 450 LaHave St.
Bridgewater, N.S.
pgow@gowshomehardware.ns.ca
P.H. (902) 543-7121

Eddie’s Small Engine Repair
“Repairs to All Makes & Models of 4 Wheelers
and Snow Machines”
P.O. Box 42, North East Margaree, NS B0E 2H0
OPEN YEAR ROUND
Ph: (902) 248-2283

ADVANCED
SCREEN PRINTING LIMITED
EMBROIDERY & PROMOTIONS
Kirk Arsenault 3667 Strawberry Hill
(902) 454-2580 Halifax, NS B3K 5A8
Mention this ad from Nova Outdoors and
Receive 5% Discount.

CUMBERLAND CANOES
25 Years of Quality Service
Manufacturers of Fibreglass
& Kevlar quality canoes.
RR#6 (Smith Road), Amherst, NS
(902) 667-5632 or (902) 667-7882
BUY FACTORY DIRECT AND SAVE

Mi'kmaw Kina' matnewey

Main Office:
47 Maillard Street, Sydney NS B1S 2P5
Phone: 1-902-567-0336 Fax: 1-902-567-0337
Email: mkeducation@kinu.ns.ca
Web: www.kina.ns.ca

Sub Office:
Micmac Post Office,
Shubenacadie NS B0N 1W0
Phone: 1-902-758-1185 Fax: 1-902-758-1184
Email: vera@kinu.ns.ca

Providing More Acadian Forest Wildlife Habitats In Today's Managed Forests

There is a need to incorporate more missing features of original Acadian forests into today's managed forest landscapes. Many of these features can best



be located in riparian zones, which are lands beside waterways that have a disproportionately high amount of use by wildlife.

The Importance Of Riparian Zones

Areas bordering water have been called greenbelts, buffer strips, special management zones and riparian zones. The term used here will be *riparian*.

About three-quarters of our wild animal species either depend upon, or prefer, habitats near water. In 1981 Brisson did a review paper on riparian (near water) ecosystems, states that the area of riparian vegetation most heavily used by wildlife is the zone within 200 metres (660 ft) of a stream or open water. These long, relatively narrow ribbons can contribute a relatively small amount to the total available habitat, but their wildlife value far outweighs their size.

DiBello found that 85 percent of the locations of radio-collared furbearers in Maine occurred within 100 m (330 ft) of a waterway. Coyotes and bobcats frequently move along frozen streams in winter, when traveling their home ranges, while red fox and fisher use the vegetation within 100 m of the waterway. Red fox use lake edges, while coyotes frequently avoid them. Small mammals and birds also travel through riparian zones in dispersing from their original or natal habitats.

Migration routes along rivers and streams are consistently used by birds, bats and deer. Migrating songbirds probably use riparian forests disproportionately because of the abundance of food and dense cover. Some areas are major resting places for many north-south migrating birds, and may contain up to ten times the number of spring migrants than are found in adjacent, non-riparian areas.

The microclimate of riparian zones is different from that of the surrounding forest. There is generally more shade, higher humidity, and increased air movement. The increased humidity is important to plant growth and tends to make the habitat more

favorable for many amphibians and some small mammals. Dense stands of conifers along waterways, with their milder microclimate, provide protective cover for tree swallows in cold, wet springs. Such stands in sheltered river valleys are commonly selected as deer wintering areas in Nova Scotia and New Brunswick. Riparian zones are also favorite moose habitat at various times of the year.

Research in the State of Maine has demonstrated that many forest songbirds require a riparian zone that is at least 100 metres (330 feet) wide, on each side of a river or stream, and with minimum cutting intrusions and no large scale forest cutting. In Maine, taking this approach has been calculated to encompass about 15 percent of the land base. A few bird species may require a 200 metre (660 ft) wide riparian strip on both sides of the waterway. Bird use of riparian habitat is often related to snag (dead tree) occurrences coupled with plant species diversity and the vertical stratification (varying height) of vegetation.

In boreal mixed wood of Alberta, additional research found that 100 m wide buffers enhanced the movement of juvenile songbirds. The buffers had significantly more movement of birds than did clear cuts, showing the value of buffers as wildlife corridors. Focusing on ovenbirds, a forest-interior species, Lambert and Hannon (2000) found birds did significantly better with a 100 m wide buffer than they did with a 20 m wide lakeshore buffer.

In eastern Maine, species richness, evenness, diversity, and density (all species combined) varied little among buffer types but the bird community differed greatly. Riparian reference sites were dominated by forest-interior species, whereas buffer strips along rivers (averaging 76 m wide) were inhabited by equal numbers of forest-interior and edge species and tributary buffers (averaging 32 m wide) were largely inhabited by edge species.

Also in Maine, harvest intensity in lakeshore buffers had negative effects on forest-interior species (Johnson and Brown 1990). In Quebec, a riparian forest had higher abundance and richness than a non-riparian forest, because it contained forest-

interior species, shrub, and water edge species.

In boreal balsam fir mixed wood in NF, riparian buffers of black spruce and alder 20 and 50 m wide both proved to be poor habitat for birds; only 3 of 6 forest interior species were present and they were rare; a 50 m buffer was not significantly better than a 20 m buffer.

Several species of forest-interior passerines are sensitive to buffer width (Darveau et al. 1995) and harvesting of adjacent forest.



Canada Goose and Brood in Water, Courtesy of U.S. Fish & Wildlife Service, National Image Library.

Species that have declined where buffers were small (15-30 m) include the yellow-bellied flycatcher, golden-crowned kinglet, hermit thrush, Swainson's thrush, bay-breasted warbler, blackburnian warbler, black-throated green warbler, northern parula, and ovenbird.

Pearson and Manuwal found higher species turnover in narrower buffers. Residents were displaced by generalists that tolerate open, shrubby vegetation. This study also shows that avian species richness or diversity is not indicative of ecosystem health.

Another study reported a rapid increase in bird species occurrence and species richness with increasing corridor width. They found a 100 m buffer was sufficient to maintain functional assemblages of six common species and recommended a 100 m riparian buffer strip for conserving breeding populations of Neotropical migrant birds.

In Nova Scotia, Bill Freedman of Dalhousie University and others have studied changes in bird species associated with intense disturbances as a result of forestry operations. Cindy Staicer of Dalhousie University is currently studying bird use of forest habitats in western Nova Scotia. As vegetation on a site passes through successional sequences after a clearcut, so do trends in wildlife occurrence. The edge effect created be-

tween a residual stand (eg. - riparian zone) and a cutover area, for example, may attract more edge species of wildlife and reduce the number of forest interior birds such as ovenbirds. A 100 metre width on each side of the waterway is the kind of distance required to minimize some of these undesirable impacts. A typical forest songbird territory is about a hectare (100 m x 100 m) in size, so this width has potential benefits for wildlife.

Based on this kind of evidence, there should be a minimum 100 metre (330 ft) riparian zone from bank or shoreline inland on each side of a defined waterway. The closest 30 metres (99 ft) to the water would constitute a zone where live trees would protect banks and shorelines, dying and dead trees will offer cavities, and fallen trees could evolve naturally. The 70 metre (231 ft) band beyond that zone might be harvested on a gradual, small-scale basis. Possible harvest methods include selection, group selection, strip cuts at oblique angles, and patch cuts. They could also be left uncut for wildlife. Harvest openings would be designed so as to maintain the visual barrier (screen effect that hides wildlife) of the zone, foster new growth of shade tolerant species, and maintain riparian soil and air humidity. Disturbance in this zone should be minimized during the breeding season, which is generally May to August.

Many forested areas are imperfectly drained. These areas often contain small, spring-fed pools, seeps or ponds where frogs and salamanders can lay their eggs without having them eaten by fish. Humans build these, but call them woodland fire ponds. Seeps, small ponds and other perennially wet sites located in forests that are scheduled for any form of cutting should be flagged out of the harvest zone and categorized as a riparian zone. Occasionally these sites grow excellent trees (like spruce) on hummocks within the wet area. With the appropriate equipment, and during a dry or frozen time period, it may be possible to harvest a few of these trees without causing undue drying or destruction of wetland habitat. This might be planned and economically accomplished when a crew is scheduled to conduct a partial harvest in nearby riparian zones.

Small brooks, even ones that are less than 50 cm (20 in) wide, can be traditional rearing sites for young speckled (brook) trout. These places often have sources of cool water, and are too small to be occupied by larger fish that might eat the young trout. Even small brooks that dry up in the summer can host spawning adult trout after fall rains. Eggs overwinter in bottom gravels, and hatch in the spring. Some young-of-the-year trout will move downstream if drought sets in later in the summer.

A healthy forest environment can offset drought conditions. Forest environments tend to be moist, whereas large-scale forest

cutting generally leads to warmer air temperatures and drier soil conditions. Bogs and wet forest areas normally feed their water into small brooks. Two forest bird species that nest in such wet areas are the Canada warbler and Veery. Populations of both species are declining across North America. This downturn has been linked to reductions in their available habitat.

Small brooks supply water to larger rivers, in addition to the specific in-stream habitat needs of young-of-the-year speckled trout. Riparian zones on brooks that are too small to warrant a 100 metre wide "no clearcut" zone, should still have a substantial buffer from the drying effects of clearcut operations.

Wet areas and small brooks considered too small for the 100 metre buffer should have a 50 metre (115 ft) riparian zone applied around them. In the case of a defined channel, like a brook, this would be 50 metres on each side. The closest 20 metres (66 ft) to the water would constitute a zone where live trees would protect banks and shorelines, dying and dead trees will offer cavities, and fallen trees could evolve naturally. The outside 30 metres (98 ft) could be subject to the gradual harvest removals already discussed under the 100 metre riparian zones. They could also be left uncut for wildlife.

Any harvests in riparian zones should be light enough overall to maintain riparian dampness and shade conditions.

Wildlife Travel Corridors

Ecologists have long debated whether wildlife corridors are just someone's nice idea, or if they actually help species. An extensive study on the effects of wildlife corridors published in 2002, and based in the southern United States, offers positive proof that they encourage the movement of plants and animals across fragmented landscapes.

Wildlife Travel Corridors should be 100 metres (330 ft) wide. They will be considered gradual harvest zones where regular but minor harvests will maintain visual obscurity and encourage wind-firm, shade tolerant forest regeneration. Over time the entire area could be harvested, with rotations extended for longer-lived tree species, and leaving some (mis-shaped, inaccessible, etc.) standing trees to die and become deadwood on the ground. Snags could be removed from corridors on hill-tops if their position posed a potential fire hazard from lightning.

These corridors should connect watersheds and be linked to riparian zones, including wet ground that has the quiet pools and damp sites that some old wood and deadwood inhabitants, like frogs and salamanders, need for breeding.

Weaknesses Of Riparian Zones

And Wildlife Corridors

Leaving thin ribbons of trees across clearcut landscapes can prove very unstable when riparian and travel corridors are populated by even-aged, shallow-rooted and/or pioneer trees, on certain soil types and with topographic exposure to strong winds. Perhaps the most vulnerable period occurs when adjacent contiguous forests are clearcut harvested on a large scale, leaving riparian zones and wildlife corridors with bared edges for the first time, and open to blowdown. More gradual adjacent harvests might help, but some sites can windthrow with only a minor opening as a trigger. The challenge with inherently unstable riparian and wildlife corridors lies in gradually converting them to more stable, uneven-aged stands with a variety of site-suited tree species. Shallow soils may make this conversion impossible on some sites.

Riparian zones and wildlife travel corridors should be joined with the uneven-aged, shade-tolerant stands and other special areas set aside to provide connectivity at a landscape level for wild animals and plants.

To produce a reasonable facsimile of natural forest environments within shade-tolerant stands, inside riparian buffers and throughout wildlife travel corridors, the management regime within all these zones should involve extending the longer-lived tree species rotation times. This will enable long-lived, shade-tolerant species (like red spruce, hemlock, yellow birch and sugar maple) to pass through their natural age classes. Less valuable (e.g. misshapen) and more inaccessible individual trees would be selected for "no-cut", over-mature status as potential dead tree habitat material, and for eventual forest nutrient recycling. Poor candidates for the sawmill can be winners for wildlife. These older trees will eventually provide holes for cavity dwellers, and dead woody material as food for a wide variety of wild animals and plants, including the "decomposers" - microscopic bacteria, fungi, and soil animals that work over deadwood on the ground, producing essential nutrients for a new forest.

Legacy Trees

To quote Parker, Doucette and Hache_ "Studies at Hayward Brook, New Brunswick, raise serious questions relative to the effects of certain forestry management practices on species of cavity nesting birds. For instance, leaving a few large, mature and often dying white pine or yellow birch trees in the middle of clearcuts to serve as nesting substrate for cavity nesters is of little value to most species." Leaving some older trees along the edge of the cutover might not satisfy existing regulations, but would prove more useful to

Continued on page 18.

CWD: The Race Is On...
Continued from page 4.

costly, but holds promise for areas with low deer numbers or for game farms not wanting to destroy animals.

Concern over cattle carrying BSE has also increased, as clinical symptoms of "mad cow" disease can take three years to develop, while livestock is generally slaughtered before two years of age. The USDA tested 12,500 animals for BSE this year, more than twice last year's figure. In England scientists have developed a high-resolution ECG machine which can be used on live animals to detect the disease in early stages, and it is hoped that the same technology can be extended to apply to humans.

A sporting goods store had this sign in the window: "FISHING TICKLE." Observing it, a passerby entered the store to tell the owner about the error. While there, he saw a new fishing rod and bought it.

As the owner was writing up the sale, the man said, "Oh, incidentally, did you realize there is a spelling error on the sign in the window?"

"I sure do," said the owner. "In fact, you're the 10th person who came in to tell me about it and all of you bought something while you were here."

HUBBARDS BEACH
Campgrounds & Cottages

Shore Club Rd., NS
(902) 857-9460

49503L www.hubbardsbeach.com



Office: 1-888-737-GEAR • (902) 457-4968

Fax (902) 457-4990

155 Chain Lake Drive, Suite #9,
Halifax, Nova Scotia B3S 1B3

Email: hiliner@ns.sympatico.ca • www.hiliner.com

Another new test, as yet unlicensed by the US Department of Agriculture, involves drawing blood from a test animal and using genetic analysis and DNA technology to identify the "footprint" of the prions. In the meantime, the USDA has been approved for appropriations to study a "rapid test", similar to a pregnancy strip test that can be used with slaughtered cattle for a result that is reported accurate within twenty minutes.

Perhaps the most compelling technology in the field is one that has yet to be applied to animal health studies: German scientists, led by Dieter Naumann at Berlin's Robert Koch Institute, have devised a process to screen human blood samples for vCJD which is entirely accurate and takes only fifteen minutes. It uses radiation to produce a chemical profile of the

sample, which is then compared to a normal sample. Designed to protect blood supplies from infection, it may yet become the simplest and fastest tool in North America's battle against CWD. ♣

by Mark Hamilton, with permission of Eastern Woods & Waters.

For a map showing where CWD has been found in wild and captive deer and elk in North America, visit the U.S. Geological Survey's National Wildlife Health Center map at http://www.nwhc.usgs.gov/research/chronic_wasting/chronic_wasting_map.html

Jonsered



2150 Turbo Jubilee Edition



Boudreau's Service Centre
P.O. Box 208
Cheticamp, NS B0E 1H0
(902) 224-2200

The Product Finder Ltd.
17 Clinton Street
Amherst, NS B4H 1K2
(902) 667-1844

Mahar Sales & Service
206 Main Street
Berwick, NS B0P 1E0
(902) 538-7449

Dayton Fruit and Vegetables
RR #1 Chebogue
Yarmouth, NS B5A 4A5
(902) 742-5148

Hughes Diesel Sales and Service
RR #2 New Ross
Lunenburg Co., NS B0J 2M0
(902) 689-2733

Veinottes Chainsaw Sales & Service
RR #2, Bridgewater, NS B4V 2W1
(902) 543-4502

Antigonish Rent-All
233 Old South River Road
Antigonish, NS B2G 2H6
(902) 863-6633

Lockes Marine
786 Hwy #2
Brookfield, NS B0N 1C0
(902) 675-2004

2137 Turbo



2159 Turbo



2165 Turbo



Jonsered.com

49400-407

A NEW KIND OF **POWER** ENTERS THE 21ST CENTURY

CLEAN, COMPACT AND EFFICIENT!



EU3000i



EU1000i



NEW EU2000i

Like the futuristic Honda Insight these generators don't look like something out of the last century. More importantly, they don't operate like it either. More than 30 patents differentiate the Honda 'EU' series from all other portable generators.

Advanced micro-electronics deliver current so stable and clean that it can power the most sensitive electronic equipment without fear of damage or downtime.

A special multi-pole alternator replaces the bulky engine flywheel to reduce overall weight and size by approximately 30%! Whisper quiet and ultra compact, the EU series also incorporates an Eco Throttle™ that automatically matches engine speed to load, to save fuel and reduce noise.

Some day, all portable generators may be this advanced, but right now, you can choose from the Honda EU1000i, 3000i or the exciting new EU2000i model. Welcome to a new era in portable power.

Honda portable generators range from 700-12,000 watts including the inverter series EU1000i, EU2000i and EU3000i.

www.honda.ca



Your Local Dealers

Nova Scotia

White Water Marine
169 Lucasville Rd.
Lwr. Sackville, NS B4E 3E8
(902) 865-3788

CAT Rental Store
3523 Commission St.
Halifax, NS B3K 5P6
(902) 454-6480

Hertz Equipment Rental
590 Windmill Rd.
Dartmouth, NS B3B 1B5
(902) 468-2277

GW Sampson Construction
694 Main St., Kingston, N.S. B0P 1R0
765-3357

Ramsey's Cycle & Sport
616 Keltic Dr., Sydney, NS B1L 1B6
(902) 539-7644

New Brunswick

PG Sports Inc.
1093 Ave. Des Pioneers
Balmoral, N.B. E8E 1B5
(506) 826-1800

Sutherland Equipment Ltd.
336 Lineon Rd.
Fredericton, N.B. E3B 5C2
(506) 452-1155 1-800-668-4386

A Walk In The Woods

Bears are up, deer and parks are down

"If you can dream it, you can do it."
—Walt Disney



Don Cameron

It has literally been an up and down year for wildlife and parks in Nova Scotia. Some of the downs in the central part of the province can be attributed to the

devastating force of Hurricane Juan. Some decreases cannot be totally understood or explained, other than it is a result of the forces of mother nature.

During the recent 2003 fall hunting season, with approximately 50,000 licensed hunters trying their best, there was a decrease of approximately 22% compared to the 2002 figures. The actual number taken dropped from 9319 to 7301 across the province over the year period. The most significant decrease occurred in Colchester County where 469 (40%) less deer were harvested.

The decrease was expected by DNR wildlife biologists due to the fact that the spring population surveys indicated that the past winter had resulted in lower deer numbers. Deep snow throughout the winter, and cold, wet spring weather hurt the health of both mature and newborn deer. And of course, in the central part of the province, Hurricane Juan created such a mess of blown down forests that it made it difficult for man and beast to see or travel through it.

Following, according to a recent DNR press release, is a summary of the deer harvest over the past two years by county (provided 2002 to 2003): Annapolis - 429 to 309; Antigonish - 392 to 210; Cape Breton - 135 to 62; Colchester - 1,173 to 704; Cumberland 707 to 609; Digby - 338 to 260; Guysborough - 363 to 223; Halifax - 763 to 448; Hants - 848 to 634; Kings - 384 to 332; Inverness - 66 to 55; Lunenburg - 1,536 to 1,600; Pictou - 741 to 530; Queens - 413 to 391; Richmond - 116 to 80; Shelburne - 467 to 335; Victoria - 16 to 12; Yarmouth - 432 to 465. TOTAL - 9,319 to 7,301.

Total License Sales - 45,763 to 42,260; Hunter Success - 20.4 percent to 17.3 percent; Bow Harvest - 214 to 242; Non-resident Harvest - 59 to 63; Antlerless Deer Harvest - 3,056 to 1,785; Antlerless Deer Per-

mits - 12,200 to 7,500; Antlerless Success Rate - 25.1 percent to 23.8 percent.

During the 2003 bear hunting season there were 384 bears taken compared to 284 in 2002. One reason for the increase could be attributed to a five week extension that was added during the fall deer hunting season. Another reason, which would be supported by many rural residents who have had encounters with bears over the last year or two, is that the bear population seems to be increasing.



Brown Bear with Fish, Courtesy of U.S. Fish & Wildlife Service, National Image Library.

A much loved resource that has decreased in number this year is Provincial Parks. Of course, the main reason for this is the huge amount of damage caused by Hurricane Juan. The summer parks season is now kicking into full swing as people take to the woods with their camping and picnicking supplies.

According to a recent DNR press release, the following parks are open as of May 21: Dollar Lake - HRM; Graves Island and Rissers Beach - Lunenburg Co.; Thomas Raddell - Queens Co.; The Islands - Shelburne Co.; Cape Chignecto and Wentworth - Cumberland Co.; Five Islands - Colchester Co.; Blomidon - Kings Co.; and Ellenwood - Yarmouth Co.

The following campgrounds will open June 18: Salsman and Boylston Guysborough Co.; Laurie - HRM, Mira River - Cape Breton Co.; Caribou - Munroes

Island Pictou Co.; Battery - Richmond Co.; Amherst Shore - Cumberland Co.; Smileys - Hants Co.; Valleyview - Annapolis Co.; and Whycocomagh-Inverness Co.

Several parks within HRM will have limited access and reduced facilities available during the early part of the season due to the continuing clean up and repairs that are ongoing after Juan. These parks include: Rainbow Haven Beach, Lawrencetown Beach, Martinique Beach, Cole Harbour Heritage Park, Crystal Crescent Beach, Oakfield, Dol-

lar Lake, McNabs and Lawlor Islands and McElmons Pond.

McCormack's Beach and Conrad Beach in HRM will remain closed until repairs are completed. Porters Lake Park, which was one of the hardest hit of the provincial parks, will not open for the 2004 season because of the degree of damage sustained.

A number of the province's managed trails were also damaged by the hurricane. There will be limited access to some trails until the necessary repairs are completed. More information and updates on the provincial park cleanup progress will be provided on the DNR website as it becomes available at www.gov.ns.ca/natr.

Don Cameron is the Information Officer for the Nova Scotia Section of the Canadian Institute of Forestry.

Raven Archery
Kentville, Nova Scotia
Ph: (902) 678-2601
Serving Archers Since 1980

Maritime Paper Products Limited
25 Borden Avenue
Dartmouth, N.S. B2Y 3Y9
Ph: 468-5353 Fax: 468-7314

Shad Make You An Instant Expert...

Continued from page 9.

you and me who use the simple cast out, reel in, spinning technique, have all kinds of fun catching shad, and never need to advance beyond this stage. Then there are the real experts, the anglers who've fine tuned shad fishing techniques and can catch fish on days when us cast out, reel in guys are drawing blanks.

There are days when the pools are literally boiling with moving shad and you have no trouble catching fish. Then there are times when shad are

sulky and us cast out, reel in guys can't get a strike. The real experts catch shad during these conditions, and all of us instant experts go home baffled and fishless.

Shad are typically obliging fish, so it really may not be necessary to learn the secrets of the experts. Like me, you can hang in there on the slow days and eventually you'll hook a shad, maybe even two or three.

However, you're probably asking yourself how you move beyond the cast out, reel in, hope for a strike stage. The answer is, experiment a lot and study

your quarry. Since you learn by experience, fish as much as you can when the runs are on. You can also hang out with an expert and watch what they do. You'll find that they like to use small darts, they experiment with various colours and they've learned to read the water.

P.S.: The shad run is at its peak. The hot spots, of course, are the Nictaux and Annapolis River. A small run of shad takes place in the Gaspereau, and while the fish there are difficult to locate it's worth a try. ♣

Ed Coleman is a well known outdoors writer who lives in Annapolis Valley.



Report Moose Sightings

Did you know that moose on mainland Nova Scotia were formally listed as "Endangered" in 2003?

You can assist the Moose Management Program by reporting your sightings of moose and moose sign (tracks, droppings, shed antlers) on MAINLAND Nova Scotia to the nearest DNR office. Or, report online at:

www.gov.ns.ca/natr/wildlife/web/msform.htm

And remember, poaching is a threat to the survival of moose populations on mainland Nova Scotia. Report poaching by calling **1-800-222-8477**.

Help Manage Your Wildlife.



TODAY'S RESOURCES, TOMORROW'S LEGACY

S.R. RYDER
Investigations
 Halifax, Nova Scotia
Phone: 902-477-6789
sbryder@ns.sympatico.ca

Home
Hardware
Chedabucto Home Hardware
 P.O. Box 186 Guysborough, N.S. B0H 1N0
Telephone (902) 533-2883
Robin (Bob) Cook
Dealer/Owner

Scottish Crofters
 Diane & Emily McHinnon
 HOUSEKEEPING CABINS • RV PARK • CAMPGROUND • GIFT SHOP
 P.O. Box 679, Margaree Forks, NS B0E 2A0
 (902) 248-2053
<http://www.scottishcrofters.com>

JJD's
 SHOOTING & FISHING SUPPLIES LTD.
 E-mail: jds@jds shooting.ns.ca
 Reloading Supplies • Rifles & Shotguns •
 Gun Repair • Scopes • Jennings & PSE Bows •
 Camo Clothing • Hunting Boots • Bow Repairs
John Dorey
 45 Prospect Bay Rd.
 Prospect Bay, N.S.
 B3T 1Z4
 Hrs. M-W-T-F9-9
 Tues.12-9
 Sat.9-4
 Visa • Master • Interac
 Tel: (902) 852-2551

Davis
Hunting & Fishing
Equipment
 622 Sackville Drive - Tel: 864-7158
 Supplier of fishing equipment, bows and bow supplies, firearms, gun supplies, clothing, blinds, treestands, boats, kayaks, inflatables, camping supplies.
Not all items in stock - some items must be ordered in about 2 weeks delivery.
Visa, Debit or Layaway

How Old Is That Fish Anyway?

By Ralph Heighton

Probably one of the most common questions we are asked while out in the field collecting information on fish in angler creel surveys is "How old would that fish be?" and "How do you know?".

As fisheries managers, there are some very good reasons to know the age of a fish. If anglers are going to be harvesting fish from a certain population we need to know for example, the age of the fish anglers are targeting, the age these fish first reach maturity and contribute to the population, the age at which they no longer contribute, and their average lifespan. This information can help us make better decisions on where a special regulation may be needed to protect a certain year class of fish. Inversely, an abundance of certain year classes or cohorts may allow a greater harvest. This is often the case in stunted populations where reducing the size can increase the number of larger individuals.

In fisheries science there are three basic approaches to aging fish. One method is the empirical approach whereby individual fish are held in confinement and growth is observed. In wild populations a mark and recapture method may be used. Another common approach to aging is a statistical approach generally based on length frequency distributions. The third and most common method of aging, and what I will discuss in this article, is an anatomical approach whereby individual fish are aged using common anatomical structures.

Just as a wildlife biologist can use a deer jaw bone to age deer from their teeth, or a dendrologist can age a tree by looking at a cross section of the trunk, fisheries biologists have several common anatomical features that can be used to estimate the age of fish. Most calcified struc-

tures that fish possess will contain some record of the growth. Certain features are more common than others but some of the most widely used include: dorsal spines and vertebrae in sharks, otoliths (ear bone) in codfishes, tunas and herrings, fin rays in sturgeons, pectoral spines in catfish, cleithra (from the operculum or gill area) in members of the pike family, and scales in trout salmon, temperate basses, minnows, tarpons, and sunfishes. These are the preferred methods used for aging each species mentioned. There is a great deal of overlap; a biologist can often use a combination of structures when trying to age a fish.

One of the most common structures used, and one I am most familiar with is the use of scales for aging. Just as a dendrochronologist can draw conclusions about historical weather patterns that contribute to the growth of a tree from its rings, scales can tell us similar things about the growth of a fish. Using scales as a method of aging has its advantages and its limitations. One of the more popular reasons for using scales is that it does not require killing the fish, where some of the other structures mentioned above could not be acquired or analyzed without lethal sampling.

Usually with trout and salmon by scraping a dull knife or similar instrument along the side of the fish, we can collect enough scales to give us a good sample to use for aging. With the temperate basses and sunfish we can usually pluck enough scales from the side of the fish with a good pair of tweezers. With some experience this can be done quickly and without a tremendous amount of stress to the fish. The scales are generally stored between two pieces of paper and read at later time.

Two significant disadvantages of using scales to age fish are that there tends

to be variability among different readers based on experience, and more importantly older fish tend to have somewhat harder scales to read, so as the fish ages the accuracy of this method decreases. This may be due to the thickness of the scale or that the number circuli present makes it very hard to distinguish seasonal variation in growth.

Scale reading is somewhat like reading the rings on a tree. Trees in northern climates usually lay down one growth ring for each year of active life. In fish however, several rings (called circuli) may be laid down in a single growing season. Therefore it is not the number of circuli we look for but the proximity of these circuli to one another. These circuli radiate out from the center or the focus of the scale towards the edge of the scale. This is not to say that the number of circuli are not important, there is usually consistency among fish of the same age from the same environment, but age is usually determined by where those circuli lay in relation to each other.

Fish living in northern and temperate climates are subjected to seasonal variations in temperature, light and availability of food sources, all factors which contribute to how well a fish grows. Acceleration of growth or lack of growth transposes itself onto the scale.

In late spring and into early summer the circuli are farther apart and more of them are usually laid down on the scale. During this time food is abundant, water temperatures are rising and the fish's metabolism begins to increase, promoting growth. As late summer arrives, tempera-

Captian Ed's Charters
Harbour Taxi & Nature Tours
Tel: (902) 477 - 9630

490261

Veinotte's Chainsaw Sales & Service (1996) Ltd.

RR #2 Bridgewater
Nova Scotia
B4V 2W1



Ph. (902) 543-4502

490264

Tuckamore Wilderness Lodge
Atlantic Salmon
NFLD
Tel: (709) 865 - 6361
<http://www.tuckamorelodge.com>

490291

CONRAD
BROS. LTD.
SAND GRAVEL
CRUSHED STONE
DARTMOUTH, N.S.
OFFICE - 434-3660
ORDERS - 435-3233

490264

**Great Prices on
Brandname Tires.**
MILLER TIRE

Dartmouth 468-7733 Halifax 454-7664 Windsor 798-9551 Moncton 384-7733



All Seasons Argo

Daytime: (902) 452-7746
Evenings: (902) 757-3350

49047L

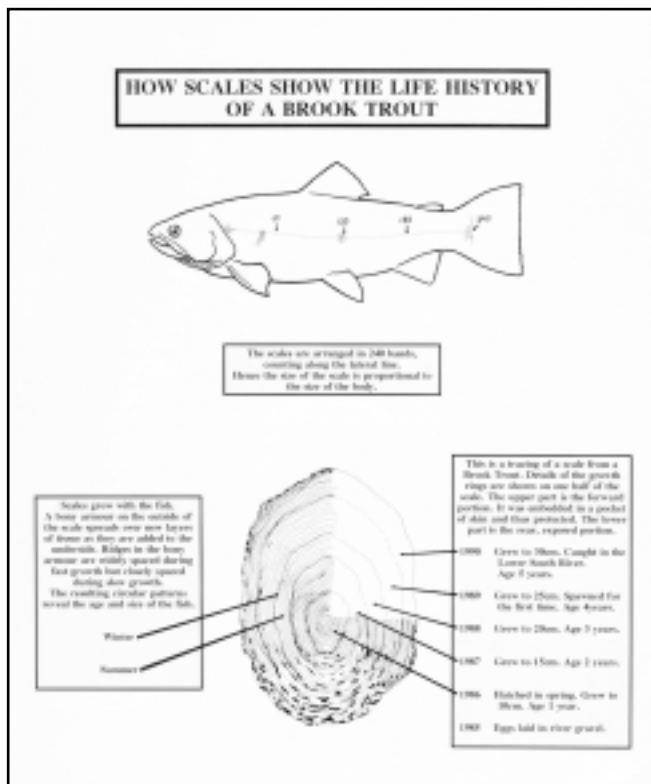


Figure #1

tures may rise above tolerable limits and fish stop feeding. As fall approaches energy in sexual mature fish feeding activities are postponed and energy is directed to spawning activity, this may lead to slower growth rates. Finally as winter approaches and water temperatures continue to decline growth essentially stops.

This reduction in growth is evident on the scale. The rate at which the cir-

culi are laid down decreases and the relative distance between adjacent circuli is significantly reduced on the scale. This spacing created by the compression of these circuli, creates a dark band on the scale referred to as an annulus or year mark. We can determine with relative certainty the age of the fish by counting the number of annuli present.

Sounds simple enough, however more often than not scales do not give up there secrets quite that easily, and many times text book scales (see Figure #1) are not that easily found. This is where the experience of the reader makes

big differences in the interpretation of the scale. It is very common for fish to experience variable growth rates throughout their lives, resulting in many readers under or overestimating the age of the fish.

Anadromy presents another problem because growth is usually accelerated for salmonids when they enter a saltwater environment. Estuaries can be very productive feeding areas for young fish, and depending on how long they stay in this ma-

rine environment, there may be a complete absence of a visible annulus.

There are several types of scales, however the two most common types on fish in Nova Scotia are referred too as cycloid and ctenoid. Cycloid scales are found on cod, haddock, trout, salmon, whitefish, minnows and most soft-finned fishes. Ctenoid scales are found on bass, sunfish, perch and most spiny-rayed fish. Figure #1 shows an example of a cycloid scale from a brook trout.

So this angling season, if a technician approaches you and asks to sample your catch, or asks you a few questions about your angling success, please do your part for sportfish management and offer the information. This allows us at Inland Fisheries Division to collect data in a very cost-effective manner because you the angler are doing the sampling for us. We have often worked closely with organized angler groups to collect information on certain species like Smallmouth Bass. As another way in which anglers can assist; a group of anglers is collecting scale samples from one of the few documented populations of Lake Trout in the province. An individual angler can contribute by taking part in our Angler Diary program, or becoming active by joining one of the many sportfishing organizations around the province. The fisheries resource belongs to you, so take an active role in its management and conservation. 🐟

Ralph Heighton is a Fisheries Technician with the Nova Scotia Department of Agriculture and Fisheries, which is part of the Inland Fisheries Division.

SKYDIVE UNLIMITED
GROUP RATES AVAILABLE
CALL NOW! 429-JUMP (5867)
 VISA "ASK ABOUT OUR SAFETY RECORD"

Schooner Cove Marine
 7208 St. Margaret's Bay Rd
 Boutiliers Point, Halifax
 Nova Scotia, B3Z 1W1
(902) 826-2278
 www.schoonercovemarine.com
 E-mail: schoonercove@ns.sympatico.ca

FOUR WINDS CHARTERS
 • Private Parties • Whale Watching
 • Harbour Tours • Deep Sea Fishing
 • Charters For 40 People
 • St. Margarets Bay Tours
492-0022 1751 Lower Water Street
 (Cable Wharf)
 www.fourwindscharters.com IF BUSY CALL 826-2562

WORLD'S BEST-SELLER
JUST GOT BETTER!
MacLeod's Farm Machinery Ltd.
 R.R.#5, Truro, N.S. B2H 5B3
 Phone: (902) 662-2516
 #4 Hwy, Exit 21, Alma
 Phone: (902) 396-4125
POLARIS
 The Way Out.
 ATVs can be hazardous to operate. Polaris adult models are for riders ages 16 and older. Polaris youth models are for riders age 6 to 15. Always wear a helmet and be sure to take a training course. For safety and training information, see your Polaris dealer or call 1-800-342-3764. ©2000 Polaris Sales Inc.

BILL'S CUSTOM GUN SHOP
 1697 Melbourne Rd.
 Lr. Melbourne, Yarmouth Co.
 N.S. B0W 1B0
(902) 742-5926

Home Hardware
 Shane Toms
 Manager
Baddeck Home Hardware
 P.O. Box 419
 Baddeck, Nova Scotia B0E 1B0
 Telephone (902) 295-2170
 Fax (902) 295-2969

I.M.P. GROUP LIMITED
Bill Goodwin
 Branch Manager
 Yarmouth Marine Division
 Bus: (902) 742-3042
 (902) 742-9283
 Fax: (902) 742-0982
 Res: (902) 769-3697
 44 Hawthorn Street
 Yarmouth, NS B5A 1M7

BRAS D'OR RECREATION & MARINE
 201 VILLA DR., LITTLE BRAS D'OR, NS
 Sale of firearms, ammunition, archery equipment
 Tikka, Beretta, Remington, Benelli, Browning, Stoeger,
 Hoyt, Champion, PSE bows
 Kent and Remington ammunition
 Mercury Outboards and Lund Boats
(902) 736-0849 (902) 567-7190
FAX: (902) 736-2792

Random Casts

Flies That Sting

By Don MacLean

When I was a kid I remember buying packages of cheap trout flies. The flies were smelled; they had a small amount of leader attached to them, something you hardly ever see today. As I recall, most of them were poorly tied but they did manage to fool a few brook trout in the small stream near our home. One thing I also remember is that each package contained a black and yellow fly which looked like a bumblebee. Although I didn't know it then, this fly is called a McGinty, and it has a long history. I never paid much attention to it, and never tied it myself, but a comment from a friend from Antigonish last year changed my opinion of the value of this fly. He told me of catching some nice rainbow trout in late September in the South River, and when he examined their stom-

ach contents they were full of wasps.

Bees and wasps belong to an order of insects known as the Hymenoptera and, and anglers a lot smarter than me have known of its effectiveness for many years. Back in the third century the Roman naturalist Claudius Aelianus wrote of bee and wasp flies for catching fish, and Dame Juliana Berners in her *Treatise of Fishing With an Angle*, written in 1496, listed a number of fishing flies and the first on her list was the "wasp fly" (shown below).

The fact that fish will feed on what is available to them is an important fact to remember. I worked in the Baddeck area in the mid 1970s when the spruce budworm outbreak was at its worst. At night the flies were so thick that it was like driving in a snowstorm. Local trout, and trout anglers, keyed in on the large number of these flies that were ending up in lakes and streams and I can remember that the spruce budworm fly was a very popular, and effective pattern for several years until the outbreak ended.

The fall, with its cooling temperatures is probably one of the most effective times to fish flies which imitate bees and wasps. Many of these bees and wasps fly, or fall

into lakes and streams to be eaten by hungry trout. While the McGinty is perhaps the best known pattern, there are several others equally effective. One of them, the steelhead bee was developed by famous Canadian angling writer, the late Roderick Haig-Brown.



The McGinty is usually tied as a wet fly:

Hook: Mustad 94840 size 10-14

Tail: Few strands of red hackle

Body: Alternating wraps of black and yellow chenille.

Wing: Grizzly hackle tips

Hackle: Black

Tight Lines

Don MacLean is a Nova Scotia biologist who writes on sportfishing topics. His book, Discover Nova Scotia Sportfishing, was published in 2003.

Nieforth Steel Products Ltd.

Steel Roofing for
Camps and Houses

Tel: (902) 758-2527

49015A

Seaforth Canvas & Marine

(902) 827-3374

Canvas Repair, Resewing Small
Boat Covers etc.

Hammocks, Deck Furniture.

749067L

Windsor Wear Factory Outlet

Nova Scotia Textiles Limited
Manufactures of T-Shirts, Sweater & Underwear
6 Water St., Windsor, Nova Scotia
(902) 798-0379

49022H

Good Angling!

Keep the
wilderness of
Nova Scotia clean.

For information call:
902-485-5056

NOVA SCOTIA
The Honourable Chris d'Entremont
Minister of Agriculture and Fisheries

49088A

Elm River Park

RR #1, Debert, N.S. B0M 1G0

(902) 662-3162

49038H

Stewiacke Home Hardware, Building & Hunting Supplies Ltd.

Stewiacke, Nova Scotia

Ph: 1-902-639-2347

Fax: 1-902-639-9045

49017E

HUBBARD'S BEACH Campgrounds & Cottages

Shore Club Rd., NS

(902) 857-9460

www.hubbardsbeach.com

49503L



**APPLE
Auto Glass**
We Re-Upholster Motorcycle
A.T.V. and Snowmobile seats

41 "A" Isley Ave | 3200 Kempt Rd.
Dartmouth, N.S. | Halifax, N.S.
Ph: 468-8201 | Ph: 455-0494

49162-0831

Scotia Speedworld

70 Isley Avenue
Dartmouth, NS
481-2514

49505H

B.C.R. EQUIPMENT LIMITED

P.O. Box 95, Enfield, NS B2T 1C6
(902) 883-9993

49032H

Halifax Regional Fire & Emergency Services

Support the Nova Outdoors
in fostering sound wildlife management and
the conservation of all renewable resources.

www.hfx.ca

(902) 490-5330

49034H

The Old, The New and The Practical...

Continued from page 18.

the potential bacteria count, use clean drinkable water. Also, anything that will force some pressured water; an irrigation syringe or even a plastic bag with a poked hole to clean it out. Use of various topical antiseptics are yours to explore. Keep in mind they are all fine for "minor" cuts and scrapes. TAKE NOTE: Hydrogen Peroxide is now highly de-emphasized as a preferred option.

It has been said that the leading cause of evacuation from the back country in North America is infection. This speaks to illness matters in addition to our soft tissue discussion. Be sure to clean your wounds well, even the little ones. When you start to see swelling at the site, discharge, hot and foul scents; open and re-irrigate. A fever and red striated lines leading away from the wound is a solid indicator you need to get to a hospital fast, as systemic sepsis (blood poisoning) is taking root. That's not good; antibiotics are likely going to be your new friend for awhile.

If you are not aware, using a tourniquet to stop the blood flow is old news. If attempted, it should be the last ditch effort

because when doing so you often cause the entire area below where you tied to become unsalvageable. By squeezing on pressure points above the wound you can act as the "gas pedal" and slow blood flow to the limb, but DO NOT tie it unless you are prepared to possibly lose the area below in order to save the person.

Some other things to be aware of when loading a first aid kit for the woods is the quality of the metal in scissors and tweezers - stainless steel will take a lot longer to disintegrate. A lot of the new wound control options are excellent. Some are gel-based and will be frozen if temperatures are sub zero. Moleskin can be a foot saver if you are doing any amount of hiking. This can make the difference between going home or staying when you get a friction blister born by your new boots rubbing new pressure points on your now tender tootsies. This could be an article all by itself! Feel free to add in a bit from your home medicine chest too. Over the counter drugs like anti-inflammatory and pain meds can take the edge off a swelling injury or deal with a simple headache. Be sure to keep meds in their tablet form and in

their original containers. Nothing like playing musical tablets at two in the morning around your emergency fire!

One thing hasn't changed - if it happens to you in the back of beyond, you have a larger concern on your hands. The wilderness is called the great magnifier for this reason. A Wilderness and Remote First Aid program will give you a better sense of what can go wrong and what to do when Murphy's Law rules the next jaunt to the fishing hole. Developing what's behind your eyeballs (your brain) will empower you to treat when injuries go well beyond the "Golden Hour".

To find out more on suggested wilderness FA kit contents, check out the contact information below. ◀

Blair Doyle is a Wilderness and Remote First Aid Instructor Trainer for the Atlantic Zone of the Canadian Red Cross

Email: adventure@hfx.eastlink.ca

Website: <http://users.eastlink.ca/~adventure/>

Dedicated to Wildlife Management and Conservation of Renewable Resources

Honourable Carolyn Bolivar-Getson
MLA for Lunenburg West Constituency

Constituency Office
410 King Street, Bridgewater
N.S. B4V 1A9
Ph: (902) 530-0001
Fax: (902) 530-0004
bolivargetson@eastlink.ca
www.gov.ns.ca



496036H



HALIFAX
REGIONAL MUNICIPALITY

Councillor Bob Harvey
District 20 - Lower Sackville
Tel: 488-4820 Fax: 869-4031
Email: harveyb@halifax.ca

49607

John Chatawat, MLA

Chester / St. Margaret's
PO Box 330, 76 Highway #3
Hubbards, NS B0J 1T0



Ph: (902)857-5646
Fax: (902)857-5648
Toll Free: 1-877-762-2886
Email: chatawaymla@hfx.eastlink.ca

49603H



Gerald Keddy, M.P.
SOUTH SHORE



82 Aberdeen Road
Bridgewater, N.S. B4V 2S6
Tel: (902) 527-5655
Fax: (902) 527-5656
Toll Free: 1-888-816-4446

704 Justice Building
House of Commons
Ottawa, ON K1A0A6
Tel: (613) 996-0077
Fax: (613) 996-0878
Email: keddyg@parl.gc.ca

48698H

Chris d'Entremont
MLA/Député, Argyle



NOVA SCOTIA
NOUVELLE-ÉCOSSE

Tel/tél: 902-648-2020
Fax/télé: 902-648-2001
info@chrisdentrement.com
www.chrisdentrement.com

49602H

HALIFAX
REGIONAL MUNICIPALITY

Steve Streach
Deputy Mayor, HRM



Musquodoboit Valley
384 - 2109
Eastren Shore
889 - 4010

49606H



Constituency Office
Honourable **Kerry Morash, CRSP**
MLA for Queens

PO Box 1750 Liverpool
NS, Canada B0T 1K0
Tel: 902-354-3538
Fax: 902-354-2851

kgmorashmla@ns.aliantzinc.ca
www.gov.ns.ca

OPPORTUNITIES

496096H



JAMIE MUIR
M.L.A.

Representing Bible Hill, Millbrook,
Salmon River and Truro

Office Hours: Mon. - Thurs. 8:30 a.m. - 1:00 p.m.
2:00 p.m. - 4:30 p.m.

28A Esplanade (Truro Centre)
Truro, N.S. B2N 2K3

893-8679

49605H

Charlie Parker

Pictou West MLA
P.O. Box 149
Pictou, N.S.
B0K 1H0



Phone: (902) 485-4550
Fax (902) 485-7088
Email: charlieparkermmla@ns.aliantzinc.ca

49604H



Nova Scotia Federation of Anglers and Hunters ORDER FORM

RECEIVED

SHIPPED

office use only

If you have



order by phone (902) 477-8898. Mon.-Fri. 8am-4pm

Mr. Mrs. Ms. Miss.

____ - ____ - ____

Please allow
4 to 6 weeks
for delivery

NAME _____
ADDRESS _____
CITY _____ PROVINCE _____ POSTAL CODE _____
Print clearly. Please indicate any changes to name or address

MERCHANDISE (Please print clearly)

QUANTITY	CODE	DESCRIPTION	EACH	TOTAL

Please add \$4.00 for handling to all merchandise orders **\$4.00**

FOR MEMBERSHIP

- You will receive a:
 - NSFAH Membership Card
 - Nova Outdoors®
 - NSFAH Recognition Item

Auto & Home Insurance Discounts

Family includes husband, wife, and all children under 18 years of age. Names & ages of all family members must be included on an attached sheet.

MEMBERSHIPS		NEW <input type="checkbox"/>	RENEWAL <input type="checkbox"/>
QUANTITY	DESCRIPTION	EACH	TOTAL
	Individual Membership	\$20.00	
	Contributing Membership	\$50.00	
	Supporting Membership	\$75.00	
	Family Membership	\$30.00	

Add \$4.00 for each membership outside Canada

HELP LINE FOR NSFAH SAY "YES"

Additional donation for wildlife conservation *

TOTAL

CAN YOU HELP? The NSFAH is always looking for volunteers to help with its projects. Work on wildlife or environmental committees or just to stuff and address envelopes. We need all types of workers. Just say "YES" on the order form. Thanks.

* Please check box if you require a tax receipt for donations over and above \$20.00 membership cost

PAYMENT METHOD

TOTAL AMOUNT \$ _____

CHEQUE OR MONEY ORDER



____ - ____ - ____

____ - ____ EXPIRY DATE

X

signature


Please make cheque or money order payable to and send to:
NOVA SCOTIA FEDERATION OF ANGLERS AND HUNTERS
P.O. Box 654, Halifax, NS B3J 2T3

NSFAH Guarantee All our merchandise is guaranteed to give you 100% satisfaction. If for any reason you are not completely satisfied with your purchase, just return it to us within 30 days of receipt. We will replace or exchange the merchandise, refund your purchase price, or credit your charge card.

Phone Orders Credit card holders may order memberships and merchandise and make donations by calling 1-902-477-8898 between 10 am and 3 pm - Monday to Friday. To ensure accuracy and convenience please have your Visa or Mastercard handy as well as your completed order form. Please note that this telephone number is for placing orders only and that we do not accept collect calls.

Returns and Exchanges If you wish to return or exchange any merchandise: 1-Package item securely. 2-Include the packing slip that accommodated your order, if available. 3-Write a short note explaining why you are returning your purchase and what you wish in exchange. We will make every effort to handle your exchange as quickly as possible. Please remember, however, that it takes time for us to receive your goods, process your request, and ship you package back to you.


FOLD THIS FLAP IN FIRST (A)

fold here 

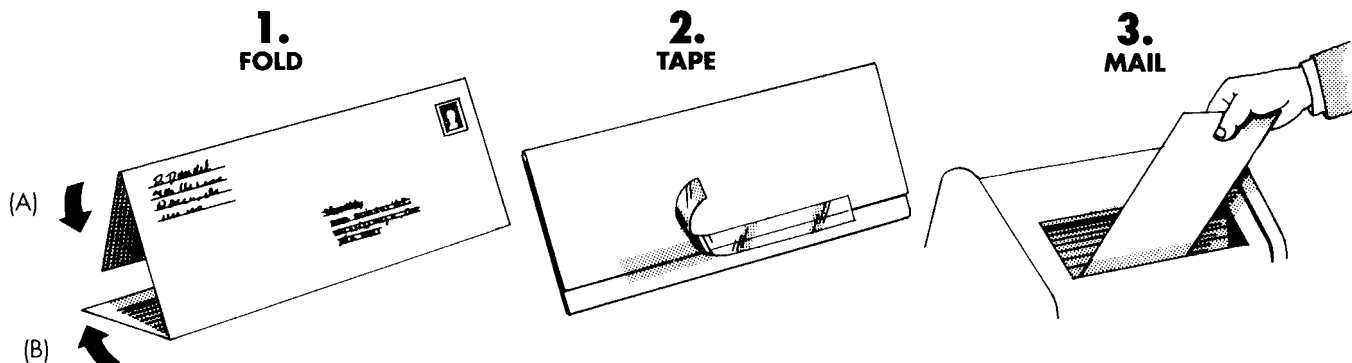


1000002385-B3J2T3-BR01

NOVA SCOTIA
FEDERATION OF ANGLERS AND HUNTERS
PO BOX 654 STN CENTRAL
HALIFAX NS B3J 9Z9

fold here 

NO ENVELOPE IS REQUIRED





Last year 65,000 Canadians purchased a Yamaha product.

Our Customer Satisfaction Survey tells us 9 out of 10 would recommend a Yamaha to their friends.

We think that's a pretty good reference.

Check us out at www.yamaha-motor.ca

Dennis Motors
830 Main Drive
Ellerslie, P.E.I. C0B 1J0
(902) 831-2229 (fax) 831-3046
dennis.motor@pei.sympatico.ca

Ramsay's Cycle & Sport
616 Keltic Dr.
Sydney, NS B1L 1B6
(902) 539-7644 (fax) 567-0832
sales@ramsays-online.com

Paul D'Entremont Marine Ltd.
P.O. Box 190
West Pubnico N.S. B1S 3S0
(902) 762-3301 (fax) 762-2484
paulmarine@auracom.com

Freedom Cycle
160 Chain Lake Drive
Halifax, N.S. B3S 1E9
(902) 450-0020 (fax) 450-0941
freedomcyclesales@ns.sympatico.ca

Adventure Motors
238 Archimedes Street
New Glasgow, NS
(902) 928-1015 (fax) 928-1528
www.adventuremotors.com



Husqvarna

Tough Name. Tough Equipment.



1-800-HUSKY62

www.husqvarna.com

available at your local dealer

Tractors Plus Ltd.
Box 219, 475 Hwy.6
Amherst, NS B4H 3Z2
(902) 667-1888

Wilson's Shopping Centre
3542 Hwy., Box 70
Barrington Passage, NS
(902) 632-2300

Mahar Sales & Service
Box 218, Main Street
Berwick, NS B0P 1E0
(902) 538-7449

**Veinottes Chainsaw
Sales & Service**
RR#2 Bridgewater, NS
B4V 2W1
(902) 543-4502

MacFarlands Rent-It
90 Wright Avenue
Dartmouth, NS B2Y 3Z6
(902) 468-2999

CAT RENTAL STORE
3523 Commission St.
Halifax, NS B3K 5P6
(902) 454-6480
186 Akerley Blvd.
Dartmouth, NS B3B 2B1
(902) 481-3455

Maritime Lawn & Garden
2756 Gladstone St.
Halifax, NS B3K 4W5
(902) 455-0208

Cross Small Engine Repair
69 Conquerall Rd.
Hebbs Cross, NS B4V 2W3
(902) 543-9683

**Scothorn Equipment &
Recreation Ltd.**
9200 Hwy 14, Milford Station
NS B0N 1Y0
(902) 758-2220
www.thetractordome.com

Proudfoot Motors
2681 Westville Road,
New Glasgow, NS B2H 5E3
(902) 752-6220

Jerry's RV Sales & Service
9384 Commercial Street
New Minas, NS B4N 3E9
(902) 681-9501

Cutters Edge Small Engine
10015 Granville Street, Box 28
St. Peters, NS B0E 3B0
Tel/Fax: (902) 535-3626

**Belmac Henderson
Supply Ltd.**
PO Box 1387
Sydney, NS B1P 6K3
(902) 539-6006

M.C. Power Equipment
4013 Route 236
Truro, NS B2N 5A9
(902) 895-2400

**Coulstrings Rentals
& Repairs**
29 Hubley Mill Lake Rd.
Upper Tantallon, NS B3Z 1E7
(902) 826-2872

Windsors Sales & Service
Box 109 Curry's Corner
Windsor, NS B0N 1H0
(902) 798-4008