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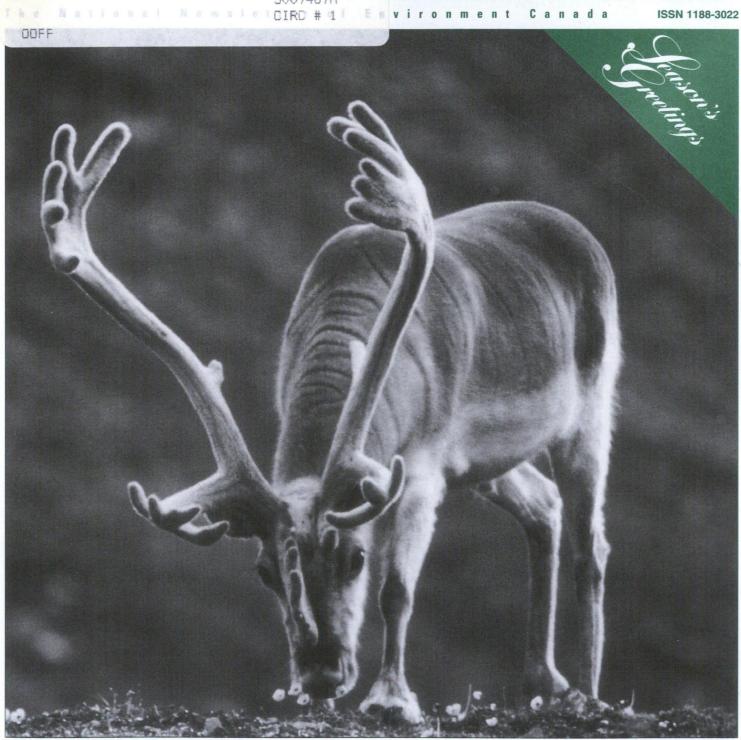
Environment Canada Environnement

Let's talk green

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New federal legislation gives Canadian endangered species a new lease on life.

What's Happening with the CEPA Review?

CEPA is on the move! Check out what led up to its tabling on December 10, 1996.

A foggy situation may relieve water supply deficiencies in Chile, Peru and other arid countries.



Peary Caribou—this uniquely Canadian subspecies is found only in the Canadian High Arctic and no where else in the world. <u>ENDANGERED</u>

100

B.C. on CD—ROM, that is
The Right Stuff—It's Right Here at EC
Winter Driving Yuk!9
Coming soon to a TV screen near you10
International Oil Spill10
NPRI up, pollutants down11
The mission? Stop emissions!11
Federal Departments Join Forces
Harvest time comes again13
Celebrating 125 years of weather service
Environment and the law14
Engaging the voice of youth15
Environment Canada's Green Corps16
The Canadian Weather Trivia Calendar18
4th Annual Photo Contest Winners
Awards20
Upcoming Events22
Retirements22
EC Crossword Puzzle23
Pictorial: Endangered Species24



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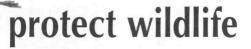
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ENVIRONMENTAL CONSERVATION SERVICE

Canada takes action to





Canada has given endangered species protection on federal lands, air and water "legal teeth", for the first time ever.

Environment Minister
Sergio Marchi introduced the
Canada Endangered Species
Protection Act (CESPA) in the
House of Commons on October 31,
and hopes to have it passed by
spring.

Environment Canada will administer the overall Act, and share responsibilities with the department of Fisheries and Oceans as well as the department of Canadian

Heritage.

More pressure on government

The new law gives the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) the mandate to designate a species as extinct, extirpated (no longer found in the wild), endangered, threatened, vulnerable or not at risk. Government must protect a species at risk through prohibitions (against harming or killing an animal at risk, or damaging its residence). It also requires that recovery plans for endangered and threatened species and management plans for vulnerable species be developed.

"This law puts a lot more pressure on the federal government to follow through on wildlife protection," says Chuck Dauphiné, an endangered species biologist with EC. "This is a more formal approach to deciding the actual help to be given a species."

COSEWIC, a group of scientists, environmental experts and government representatives, was formed in 1978. To date, they have designated 276 species as being at varying stages of risk, including species which are now extinct.

Another group, the Recovery of Nationally Endangered Wildlife (RENEW), has worked since 1988 to plan ways to help those at risk.

In the jungle, the mighty jungle

Downtown Toronto—it's not exactly the epicentre of Canadian wildlife. Yet this concrete jungle is what one family of peregrine falcons calls home.

Two years ago, a pair of these magnificent birds—which have spent the last 40 years on the brink of extinction—nested outside the 20th floor of an office building here. They liked it enough to come back again.

Shortly after its creation in 1978, COSEWIC listed the peregrine as endangered. Since then, a cooperative

Peregrine Falcon—VULNERABLE

effort of many groups and individuals led by the Canadian Wildlife Service has helped in its recovery.

Thanks to organizations such as COSEWIC and RENEW, Canada has been successful in pulling other species back from the brink of extinction. Canadian success stories include the sea otter in British Columbia, the swift fox, the Cooper's hawk, the Trumpeter swan and the Eastern bluebird. The CESPA puts into law the government's commitment to wildlife protection.



The new legislation "goes beyond enabling-it requires action," says Theresa Aniskowicz, scientific advisor to the CESPA. Under the Act, government must implement recovery plans within one year for endangered species, and two years for threatened species. If a species' survival is under imminent threat, COSEWIC can call for the immediate protection of its habitat.

Penalties for breaking the law include fines of up to \$500 000 for each specimen harmed, and up to \$1 million for repeat offenders.

Federal cornerstone of protection

In October, provinces and territories agreed in principal to a National Accord for the Protection of Species at Risk, whereby they will put complementary legislation and programs into place. Together with the CESPA, Canada's wildlife will benefit from comprehensive protection throughout Canada.

Only Ontario, Quebec, Manitoba and New Brunswick currently have stand-alone endangered species protection laws.

According to Minister Marchi; "The new Act—plus the Accord—equals protection for endangered species from coast to coast to coast."

Information: Debbie Griff (819) 997-1687.

Visit our internet site:

http://www.doe.ca/cws-scf/es/default.htm



Swift Fox—EXTIRPATED

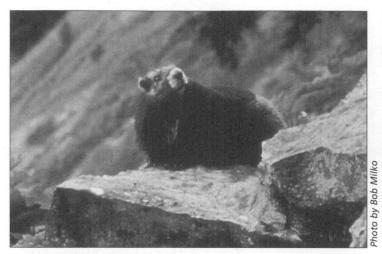
What does it all mean?

- ullet **Extinct** species no longer exist anywhere.
- Extirpated species no longer exist in the wild in Canada, but they occur elsewhere.
- Endangered species face imminent extinction
- Threatened species are likely to become endangered if limiting factors are not reversed.
- Vulnerable species are of special concern because of characteristics that make them particularly sensitive to human activities or

Canada Endangered Species Protection Act: A bird's eye view

- What's covered—migratory birds: marine mammals. fish and other aquatic species; species that cross international borders and all those on federal lands.
- Where it applies—federal lands, including the two territories, air and water. That's about 63% of the country!
- Who's responsible—the Minister of the Environment will oversee the administration of the Act and is responsible for migratory birds, crossborder species and those on federal lands, except for National Parks which is the responsibility of the Minister of Heritage. The Minister of Fisheries and Oceans is responsible for aquatic species.
- How it works—COSEWIC is established as an independent assessment body and will designate and publish the results of their deliberation for species at risk. Once designated, the federal government will, through an Order In Council, produce the official list of species at risk, which will result in a species given immediate protection through prohibitions against harming, killing, etc. Mandatory recovery plans must be made within a specified time period.





Marmot—ENDANGERED

Classification clarification

One of COSEWIC's first jobs will be to develop new criteria to determine categories of species at risk.

Members now use subjective standards which they try to apply consistently, says Chuck Dauphiné, scientific authority of COSEWIC.

"The legislation will change that. The committee will establish more concrete, objective criteria," says Dauphiné.

Working together to put Nature first

Wildlife knows no boundaries, so how can we? Saving wildlife is not a solitary endeavor. With the CESPA, EC is spearheading a national program that needs partners to help fight extinction:

- The federal government, provinces, territories and Canada's Aboriginal people share responsibility for wildlife management. Last October, provinces and territories agreed in principal to a National Accord by which they will establish complementary legislation and programs. This, plus the CESPA, means Canada's wildlife will have more comprehensive protection.
- Individuals and private groups can get involved in the planning recovery process by participating on recovery teams and helping to implement the recovery plan.
- This is the first federal legislation under which individuals may ask the Minister to investigate if any offence may have been committed and to take civil action to stop an alleged contravention to the Act.

TICK TOCK goes the extinction clock

Canada is not facing an immediate crisis when it comes to protecting wildlife. But that's not to say there isn't room for improvement...

- 4% of Canada's mammal species and 3% of its birds are currently listed as threatened or endangered;
- 276 species of fish, amphibians, reptiles, plants and mammals in Canada are currently classified as threatened, vulnerable, endangered, extinct or extirpated;
- since settlers first came to Canada, we have lost 10 animal species— 11 others still exist, but are no longer found in this country;
- the most recent reports from IUCN (International Union for the Conservation of Nature) list more than 5 000 animal species at risk worldwide;
- over the last eight months, more than 550 species of animals, plants and birds have disappeared from the Earth—that's about three a day.



ENVIRONMENTAL PROTECTION SERVICE

What's Happening with the CEPA Review?

s vou may know, the roots A of the CEPA Review go back to 1988, the year the Canadian Environmental Protection Act came into force. Included in the original Act is the requirement that it be reviewed after five years of its enactment. Accordingly, in June 1994 the Standing Committee on **Environment and Sustainable** Development began a comprehensive review of the provisions and operation of the Act in order to arrive at recommendations for an improved CEPA. The result of this exercise, the Standing Committee's report entitled 'It's About our Health! Towards Pollution Prevention'. was tabled in June of 1995.

The Government Response of December 1995 addresses each of the recommendations made in the Standing Committee's Report. The Response, in addition to feedback received from over 400 Canadians during the 90-day comment period, provided the foundation of the drafting instructions for the renewed CEPA. Since June 1996, legislative drafting of the Bill has been a Departmental priority.

Since the summer, the CEPA office on the 18th floor of Place Vincent Massey in Hull has been a veritable flurry of activity. Lawyers worked alongside program staff, coming to agreements on how to capture the technical details of each provision of the new CEPA. Countless meetings between Environment

Canada, our partners from Health Canada, and other government departments were held to resolve issues of concern. All of this took place under the watchful eye of Heather Smith, Manager of the Office, and Ed Norrena, the DG responsible for the CEPA Review.

CEPA is one of Environment Canada's legislative pillars—both a Red Book and a Throne Speech commitment. A renewed CEPA will give the Department up-to-date tools to do our job more effectively. For more information on the CEPA Review, check the Green Lane on the Internet at http://www.ec.gc.ca or call the CEPA Office directly at 819-953-0142.

Information: **Carrie Spencer** (819) 953-9399.



9



s another year draws to a close let us all look back and reflect on the challenges and many changes we have faced. Let us take pride in knowing we have done an excellent job. From all the staff of Atlantic Region, warmest wishes to you and your family for this holiday season and throughout the coming year.

Garth Bangay, RDG Atlantic Region ooking back on 1996, I am impressed
as always by the quality and dedication of
the men and women who work for this department.
I wish all of you—and Environment Canada—success
in the coming year.

Laura Talbot-Allan, ADM Corporate Services



Let's Talk Green

PACIFIC AND YUKON REGION

B.C. on CD—ROM, that is...

Interested in ROMing through beautiful British Columbia? Need some hard facts about the province's environment? Now, thanks to Environment Canada staffers, it's as close as your P.C.



EC's Vic Bartnik and Donald Bernard of Pacific and Yukon region produced a multimedia CD-ROM package—EC's first that features 150 screens of environmental facts, trends and information about B.C.'s people, land, water, plants, animals and air. It highlights some of the key environmental issues facing the province.

The package is being targeted for use in schools and libraries, and by the general public.

"It's definitely an indispensable tool for educators, students and anyone who wants a better understanding of B.C.'s environment," says Bartnik. "If we can fulfill our mandate of providing high-quality scientific information and help people make environmentally responsible decisions, it's a win-win situation."

Bartnik and Bernard undertook the CD-ROM project after completing the State of the Environment Report for British Columbia. They said they wanted to reach as wide an audience as possible.

Together with the provincial Ministry of Environment, Lands and Parks, and the Open Learning Agency, EC also produced a one-hour television show highlighting the report.

For sample footage of the new multimedia package, log onto http://www.pwc.bc.doe.ca/es/market/soe_bc.html on the Green Lane.

Information: **Vic Bartnik** (604) 664-4007, and **Donald J. Bernard** (604) 664-4051.

The Right Stuff— It's Right Here at EC

During National Science and Technology Week October 18-27, Environment Canada was one of many partners that helped celebrate this country's achievements in the fields of science, technology, engineering and mathematics.

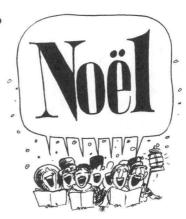
This year's theme was "Science is Inventing." People around the world use inventions developed by our scientists. Here are just a few examples:

- The UV Index—Part of our daily lives, the Index was developed by EC scientists. Many countries have used it as a model for their own.
- Oil Spills—Sophisticated equipment to detect oil spills so they can be quickly contained and cleaned up was developed right here. It was used during the Exxon Valdez spill several years ago, and flown overhead in a specially-equipped plane while the Irving Whale was towed to port this past summer.
- Forecasting Assistant—A suite of computer applications developed at EC helps weather forecasters do their jobs more quickly and accurately. It has been licensed to several companies.

And that's just a sample. EC's known for getting the job done, at home and internationally.

Information: Louise Lépine (819) 994-7499.

o all of you who make each issue special—many thanks! Happy holidays from "Let's Talk Green"!





ATMOSPHERIC ENVIRONMENT SERVICE

Clouds On Tap

With a little help from Environment Canada scientists, Nature is supplying its own remedy to the hardships it has visited on the arid regions of South and Central America. The solution is fog, and scientists have been learning how to harness it to help bring water to parched areas of our planet.

EC is working in cooperation with a number of organizations to help supply clean water for villages which can get as little as 10 millimetres of rain a year.

EC cloud physicist Bob Schemenauer has been working on fog collection since 1984. Though many people think it's a new technology, Schemenauer traces fog collection back 2 000 years.

"The really good scientific and technical work has been done in the last 10 years," he says. "But in fact there are reports that go back 2 000 years, when villagers in the Canary Islands collected fog by putting stone basins at the base of trees. When the wind blew the fog against the trees, tiny droplets of water would run down and collect in the basins."

Fog collection was first used in acid rain-related scientific studies in Canada to determine the chemical make-up of fog and its effect on the environment.

So how do you collect fog now? Scientists use plastic mesh. Almost 4 000 square metres of the mesh was used to "catch" 11 000 litres of fog water a day for villagers along the north coast of Chile in the first "fog water" project in 1985.

Fog water has also been used in reforestation projects near Lima, Peru. The water is used to irrigate fruit-bearing cacti. More recent fog water projects have produced as much as 18 000 litres of water a day—an incredible amount when you consider that it takes 10 million droplets of fog to make a droplet of water the size of the head of a match!

Schemenauer has been "loaned" to the International Development Research Centre and the Canadian International Development Agency for Third World projects in places like Ecuador and Namibia. "Building the collection units is the simple part," says Schemenauer. "What's difficult is understanding the meteorology and finding an area with the right winds and landscape to get frequent fog."

EC is one of a number of sponsors of the First International Conference on Fog and Fog Collection, to be held July 19-24, 1998 in Vancouver. More than 100 participants from 40 countries have already registered. The conference's themes include how to use fog to sustain forests and help developing areas.

Information: Bob Schemenauer (416) 739-4606.



Bob Schemenauer demonstrates fog collection techniques at the Museum of Civilization in Hull Quebec. Ken Harp, ECS Communications, looks on.



Tiny droplets of "fog water" run down a mesh screen. This technique has produced as much as 18 000 litres of water a day.



hoto by Rhonda Arsena

What is fog? Solution=Pollution

At a glance, everyone thinks they know the answer to that question! But EC research scientist Bob Schemenauer has spent many years determining the difference between fog and regular clouds. And a big part of that answer is pollution.

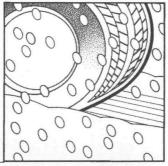
Fog is made up of minuscule liquid droplets of water— essentially, a cloud on the ground. It takes 10 million droplets of fog to make one droplet of water the size of the head of a match!

What scientists have learned is that fog is formed from the most polluted part of the cloud—the bottom. As you move up a cloud, the water generally becomes cleaner. Water droplets that form rain are generally a mix of the clean and polluted areas. Fog, therefore, is more acidic than rain.

Schemenauer is one of several scientists who want to know the effects this polluted fog has on forests and other natural areas. Studies are now being carried out in Quebec and the Atlantic region.

HUMAN RESOURCES

Winter Driving... Yuk!



It's here again and most of us can't avoid it ...

Winter.

The cold! The snow! The shoveling! The driving!

By Mike de la Ronde, Atlantic Region Safety and Health Coordinator.

The great Canadian winter throws just about everything imaginable at us in the way of weather, and the highways department provides the salt and sand. What should we do to make sure we survive winter on the highways?

Start with defensive driving driving to prevent collisions in spite of the actions of others and the conditions around you.

Defensive drivers tailor their driving behaviour to the six conditions that are always present when driving: Light, Weather, Road, Traffic, Vehicle and the Driver. The standard accident prevention formula that can be applied to any one or all of these conditions is to:

- recognize the hazard
- understand the defence
- act in time

Situations that require us to use this formula are in avoiding collisions with the driver ahead / the driver behind, while passing, while being passed, with on-coming vehicles, at intersections and the single vehicle crash. As we approach Christmas, what is for many of us the most important holiday of the year, and, let's not forget New Years

Eve, we should pay
particular attention to
our number one traffic
hazard—alcohol. Fifty
percent of all driver
deaths involve alcohol.
We find ourselves enraged
at the disregard shown,
by those people who
drink and drive, for the
law and the safety of
others. Of course it's
always those other
people. Or is it?

Don't be ignorant of the physiological effects of alcohol. The fact of the matter is a 341 ml bottle of beer = a 43 ml drink of 80 proof liquor = 85 ml glass of wine.

When you are driving this winter or any other time do so carefully. If you are partying this Christmas do it with a conscience.

Information: **Robin Grabell** (819) 953-2431.



Coming soon to a TV screen near you...

The communications groups of EPS, ECS and AES have produced a series of 12 videos. The series highlights Environment Canada's science and technology, and will be broadcast starting in January 1997 on @Discovery.ca, The Discovery Channel's flagship science program. Each 5 minute video profiles some of the exciting work our department is involved with.

Stay tuned!!



After a year of hard work it's important to remember what life's all about; family, cherished friends and fond memories. Please take the time to enjoy them all. All the best during this holiday season.

Tony Clarke, ADM Environmental Protection Service ATLANTIC REGION

International Oil Spill

On September 22, a large oil tanker spilled 9 000 tonnes of bunker oil and more than 1 500 tonnes of diesel during a routine transit in the Grand Manan Island area. The ship dropped about 20 tonnes of diesel while unloading at an oil-handling facility. Then, continuing on its way, it ran aground, releasing the rest of its murky cargo. The potential effects on the resources in the area—birds, whales, fish and seals—were staggering. It could also wreak havoc with Grand Manan's extensive eco-tourism industry, as well as salmon aquaculture and fish processing.

Before you start wondering why you didn't read all about it in the dailies, this particular spill was the product of some very fertile imaginations—an emergency preparedness exercise that Environment Canada scientists and experts from 35 other Canadian and U.S. agencies tackled last September.

These international oil spill simulations have taken place every two years since the early 1980s as part of a Canada-U.S. agreement. The Canadian and U.S. Coast Guard are the two lead agencies; EC is involved in a scientific and technical advisory capacity.

"We bring science and technology to the table," says Sinclair Dewis, who was one of many EC staffers from the Atlantic region to take part in the exercise.

"We provide the responsible party and Coast Guard with information on the resources at risk, the fate and effects of the spilled oil and methods for minimizing potential impacts".

There are 10 000 spills reported across Canada each year, ranging from minor residential spills to major shipping accidents like this simulated one. Eastern Canada is particularly vulnerable to ship accidents as about 70% of Canadian traffic passes through this region.

Sinclair says this year's three-day exercise was an unqualified success. "Of course, there's no such thing as a bad exercise," he says. "It gives you the opportunity to put procedures to the test,

and find out how they work. This particular exercise was especially important as it tested the new spill response regime recently established by the *Canada Shipping Act.*"

Information: **Sinclair Dewis** (902) 426-6318.



ENVIRONMENTAL PROTECTION SERVICE

NPRI up, pollutants down

Ye're making progress! The 1994 National Pollutant Release Inventory (NPRI) shows a 16% reduction in the amount of reported pollutants released into the environment since 1993.

More than 1 700 facilities participated in the 1994 NPRI. That's up 14% from the previous vear.

Environment Canada first prepared the inventory for 1993 and published it in 1995; it was the first nation-wide, public database of on-site releases and off-site transfers of 178 substances released into air, water and land.

The NPRI was also the first program to give direct access to information on the types and quantities of substances released in our communities, on a facilityby-facility basis.

Companies with 10 or more employees which manufacture, process or otherwise use 10 or more tonnes of one of the 178 substances are required to report to the NPRI. The goal? To help Canadians develop a better understanding of the nature and quantity of specified substances released to the environment or transferred in wastes in Canada.



Marielle Nobert of the Pollution Data Branch prepared the 1994 NPRI Summary Report.

The horizon looks clearer still: three-year projections show a further 34% decrease in releases!

The NPRI is available on the Internet at http://www.doe.ca/pdb/npri.html.

Information: Marielle Nobert (819) 953-0669.

ONTARIO REGION

The mission? Stop emissions!



First, there were frequent flyer miles, then Zellers Club Z points and now, there could be emission reduction trading credits for companies that voluntarily reduce air emissions faster than they have to.

The credit program is the brain-child of the two-vear Pilot Emission Reduction Trading (PERT) project team, made up of a number of partners in the private and public sectors, including Environment Canada.

The idea is to allow companies who willingly improve their equipment or products in order to reduce air emissions to "bank credits," which they can then use to negotiate economic benefits. Hydro and other Ontario companies hope to persuade the government to recognize the reductions—and the creditsas part of a credit-trading system.

Last summer, the team held demonstration projects focusing on reductions in nitrogen

11

oxides and volatile organic compounds, precursors to smog on hot, sunny days. Smog is harmful to human, animal and plant life and is a difficult problem to combat because it comes from so many different sources.

Here are two of the first PERT-promoted actions to help control smog:

- the development of emission reduction initiatives at hospitals, universities and schools: and
- reductions by Ontario Hydro of nitrogen oxides at their Lambton and Nanticoke facilities.

Similar credit-based projects are under way in the United States, though it's too early to measure their success.

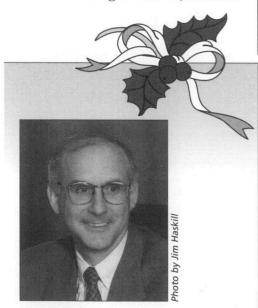
Information: Ray Rivers (905) 336-4949.





Invironment Canada's 25th
Canniversary year has indeed been
one to celebrate, marked by important
progress in safeguarding Canadians
and the environment. Congratulations
to all, and my best wishes for a
healthy and happy year ahead.

Sergio Marchi, Minister



hroughout the year, your work helps Environment Canada to achieve a better quality of life for all Canadians. Thank you for your dedication and effort, and may this season bring you joy with your family and friends who make each of our lives special.

Ian Glen, Deputy Minister



Environment Canada created, and continues to lead a team of representatives from other departments in developing a plan to manage the federal government's contaminated sites.

Contaminated sites are those with substances at concentrations above background levels that pose—or are likely to pose—an immediate or long-term threat to human health or the environment. Although the number of federal sites hasn't yet been officially tallied, it runs in the thousands.

A year ago, the team formed the Contaminated Sites Management Working Group (CSMWG), co-chaired by EC's Hazardous Waste Branch and the Department of National Defense. Active participants include Environment Canada, DND, DIAND, RCMP, Transport Canada, Public Works, Fisheries and Oceans, NRCan, Agriculture, Finance, Revenue, Heritage, and Treasury Board. Their goal is to develop a common approach for dealing with contaminated sites throughout the federal government.

"The collaborative work of the contaminated sites working

group helps bring cost-effective solutions into play for each department dealing with contaminated sites:, says co-chair George Cornwall, "while bringing attention to the need for all departments to increase commitment to assessing and remediating their own sites".

The group is currently working on common issues of site assessment and associated financial liability: standards: remediation technology; legal liability; funding policy and pollution prevention practices. A series of workshops are being held in five locations across Canada to inform federal departments of current approaches for assessment, risk management and remediation of contaminated sites. The workshop is being jointly prepared by EC's Guidelines Division and Water Technology International. Also in development in the Hazardous Waste Branch is a manual of best practices for facility operators and managers to prevent the formation of contaminated sites.

Information: **Robert Therrien** (819) 953-6033.



PACIFIC AND YUKON REGION

Harvest time comes again

Thanks to a cooperative partnership between Environment Canada, the Department of Fisheries and Oceans, and the B.C. pulp and paper industry, chemical pollution levels in shellfish found in the coastal waters off British Columbia have fallen dramatically.

In 1988, the government closed some crab, clam and oyster harvesting areas because of dioxin and furan contamination. Dioxins and furans are a family of organo-chlorine chemicals that are created when pulp and paper mills use chlorine in their bleaching processes.

With the closure of the shellfish harvesting waters, the federal government introduced regulations to reduce the formation of these



contaminants, and the B.C. pulp and paper industry moved away from the use of chlorine during the bleaching process.

Seven years later, the loading of dioxins and furans from pulp mills is down by 94% and 98% respectively!

To date, the government has been able to re-open almost half of the harvesting grounds. Mike Nassichuk, EC's Manager of Pollution Prevention and Assessment, says it's hard to predict when we can expect a full recovery, but he is optimistic with results achieved to date. "The recovery rate looks very promising," he says.

Information: Mike Nassichuk (604) 666-2799.

PACIFIC AND YUKON

Celebrating 125 years of weather service

It was "Back to the Future" October 1 to 4 as Pacific and Yukon regions celebrated 125 years of weather services in Canada.

Environment Canada staff from across the region and the country, special guests from the U.S. National Weather Service, and representatives from client and partner organizations attended—110 people in all.

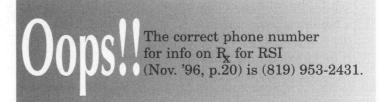
The highlight of the four-day workshop was the awards dinner attended by Deputy Minister Ian Glen and his executive assistant Judy Watling. Keynote speaker Susan Englbert, Regional Director for CBC Radio, gave an interesting presentation on digital radio and its potential impact on the weather service.

A total of 12 awards were presented to staff in recognition of their contribution to weather service programs regionally and nationally: **Dave Phillips**, **Al Wallace**, **Larry Funk**, **David Jones**,

Mark Madryga, Ford Doherty, Will Hayward, Peter Schwarzhoff, Kirk Johnson, Lyn Mainwaring, Rosemary Tabory, Garry Wells and Yukon Weather Centre staff.

Special **Merit Awards** were presented to **Cecilia Chang** for her contribution to services in the Asian community, and to **Bruno Tassone** for his contribution to the hydro-metric program (used to measure streamflow).

Information: Dave Phillips (604) 664-9185.



ENVIRONMENTAL PROTECTION SERVICE

Environment and the law: Compliance and Enforcement Report

This series of articles touches on Environment Canada's Compliance and Enforcement Report, Volume I, introduced in the September/October edition of Let's Talk Green. Each month, a chapter of the Report will be summarized and will include recent court decisions.

Chapter 2—Pulp and Paper Effluent Regulations under the *Fisheries Act*.

Por over a century, pulp and paper mills have released toxic effluent into Canadian rivers and lakes. Promulgated under the Fisheries Act in 1971, the Pulp and Paper Effluent Regulations limit the quantity of effluent discharged into watercourses

and control its quality. Fisheries and Oceans Canada is legally responsible for the *Fisheries Act* and the Pulp and Paper Effluent Regulations. In 1978, Environment Canada was given responsibility for sections dealing with pollution prevention.

By 1991, the pulp and paper industry had significantly reduced its pollutant discharges, but the Regulations applied only to mills built after 1971 (about 10 per cent of all mills), and were merely cited as guidelines for those built earlier. A 1992 amendment modernized the Regulations to cover the 157 Canadian mills and two off-site treatment facilities. The Regulations now reflect scientific and technological advances as well as public expectations.

Under the amended Regulations, 97 mills were granted transitional authorizations, allowing mill operators until December 1993 to modify or complete their effluent treatment systems. Extensions were approved to December 31, 1995 for 79 mills, after which all mills were expected to comply with full regulatory requirements.

The full Report with additional details on the promotion, enforcement, and compliance rates of these and other regulations, is available on the Internet Green Lane at: http://www.ec.gc.ca/enforce/index.htm.

Information: George Pilpe (819) 997-4712.

Regulatory requirements

That each mill:

- sample its effluent on a regular predetermined basis,
- · report the results, and
- ensure that effluent monitoring equipment is operational and accurate.

Guilty!!

Noranda Forest Inc. in Thorold, Ontario, pleaded guilty on August 28, 1996 to six counts of violating the Pulp and Paper Effluent Regulations made under the *Fisheries Act*. The six counts included two of unlawfully depositing a deleterious substance, two counts of failing to report to an inspector the deposit of a deleterious substance, and two counts of failing to file reports concerning results of monitoring to an authorized officer. These counts relate to violations in 1994 and 1995.

Noranda Forest Inc. was fined \$20 000 and has agreed to pay \$35 000 into a trust fund at Niagara College to establish a bursary to assist students enrolled in an environmental program at the College's Centre for Environmental Training, and a further \$35 000 to the Niagara Peninsula Conservation Foundation.

CORPORATE SERVICES

Engaging the voice of youth

by Regina Flores and Laila Zafar

From October 14 to 21, we had a unique opportunity to participate in the World Conservation Congress (WCC) in Montreal, Quebec—as youth journalists.

Our primary role was to report on the daily activities of the conference (workshops, special events and guest speakers), gather information and write articles for *Ookpik*, a daily publication available to all delegates, and for a Web site.

We were able to interact with delegates from around the world, from both non-government organizations (NGOs) and government agencies. This not only exposed us to various perspectives, but also allowed us to communicate our views to a wider audience.

Among many senior officials that we were fortunate to meet and talk to were the Right Honourable Jean Chretien, the Honourable Sergio Marchi, the Honourable Sheila Copps and Queen Noor of Jordan.

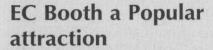
We gained a great deal of insight into the global conservation movement, explored such themes as sustainable development and biodiversity, and increased our understanding of the International Union for the Conservation of Nature (IUCN). In addition, we learned some practical communication and technical skills, and got to see first-hand how journalists work.

Throughout the conference, we made friends based on common interests and a shared concern for the health and survival of our planet. We feel that this was a valuable part of our experience, because it stimulated new ideas and encouraged us to continue with our efforts. The knowledge gained and materials collected will allow us to spread awareness throughout our schools and communities.

We are grateful to Environment Canada and *TG Magazine* for recognizing the importance of engaging the perspectives and abilities of young Canadians. They supported and encouraged us; we

hope that they will continue these worthwhile projects, and that others organizing conferences and events like this one will follow in

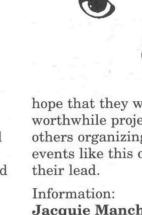
Information: **Jacquie Manchevsky** (819) 953-0084.



Over 3 000 delegates and members of the public attending the World Conservation Congress had the opportunity to visit the EC Booth. The exhibit illustrated Environment Canada's achievements under three themes:

- science and information;
- · assessment and policy; and
- citizenship and co-operation.

The exhibit showcased the Department's initiatives in a number of areas, such as wildlife protection, the implementation of national standards, monitoring environmental issues, education, and in participating with local groups to conserve and protect nature. A number of Environment Canada experts were on hand to answer questions and organizers would like to thank both participants and visitors for their support.





ishing you a safe and joyous holiday season with family and friends.
All the best in 1997.

John Mills, RDG Ontario Region





ENVIRONMENTAL CONSERVATION SERVICE

Environment Canada's Green Corps

Kathleen Fischer. Director. Green Corps Office.



Come developing nations, as well as a number Of less developed countries, are trying to improve their environmental programs. They recognize the importance of finding solutions to their environmental problems many are looking to Canada to acquire the necessary expertise and knowledge.

Canadian business and the environmental industry have developed a comprehensive range of products, services and expertise for these international clients. The Canadian government has considerable experience in developing and managing policy, regulatory and technical environmental programs. However, taking full advantage of the business potential requires a concerted and strategic effort to promote the opportunities for Canada.

The Environment Canada Solution

Building on successes to date, Environment Canada (EC) has launched an 18-month pilot program. The Green Corps will provide Departmental expertise to the Canadian environmental industry, international organizations and foreign governments. This program will support the Canadian International Business and Environmental Industry strategies as well as to contribute to the Government's Jobs & Growth Agenda. The Environment Management Board approved the Green Corps business plan in October 1996.

The Green Corps Office...

The Green Corps team, headed by Director, Kathleen Fischer, will serve the needs of external and internal clients, on a full cost recovery basis. This Policy & Communications program will include policy linkage to the government-wide agenda. It will also be a tool for strategic promotion and management of international cooperation.

A departmental advisory group will be set up to assist in establishing the operational framework and will provide advice throughout the pilot phase. An external industry advisory committee will ensure that the needs of the private sector are reflected in countries] are further development and program looking to delivery.

> Find out what the Green Corps can do for you! Watch for an upcoming issue of Let's Talk Green.

Information: Kathleen Fischer (819) 994-7319; E-mail: fischerk@cpits1.am.doe.ca.

At your service!

The Green Corps office will...

- identify and share opportunities for business development
- coordinate technical cooperation agreements
- profile and recover the cost of some international activities
- facilitate public-private sector partnerships
- develop an information base on EC expertise and maintain a web site
- manage requests from clients and prepare and administer agreements
- provide a contact point for information
- coordinate activities across services and departments; and
- deal with contingencies during projects.



[Less

developed

Canada to acquire

the necessary

expertise and

knowledge.

New partners in environmental management

Canada's technical expertise in environmental management is sought worldwide. One of its newest "clients" is the Republic of Trinidad and Tobago.

On October 9, EC Minister Sergio Marchi signed a Memorandum of Understanding (MOU) with the Republic's Prime Minister Panday creating a partnership to share Canada's expertise in environmental management. Trinidad and Tobago want help dealing with a range of environmental problems, including air and water pollution and waste management. EC staffers are lending a hand by consulting on-site, and organizing training seminars and workshops on new environmental management technology and procedures, in conjunction with the Canadian environmental industry. An upcoming event is an environmental management workshop set for January 21 and 22, in Port of Spain.



EC Minister Sergio Marchi and the Honourable Basdeo Panday (Prime Minister of the Republic of Trinidad and Tobago) at MOU signing ceremony.

Trinidad and Tobago is also drawing on Canadian experts from the academic and private sectors and other levels of government.

EC expertise is being provided on a costrecovery basis through the Green Corps office.





he past year has brought changes and challenges all through this department—and we have turned them into opportunities. Perhaps more importantly we've worked as colleagues in facing these challenges and living our values. Thanks to all of Environment Canada's people, whose hard work is making our vision a reality.

Avrim Lazar, ADM Policy & Communications

am pleased with the excellent work accomplished by the Quebec regional team this year. It is a reflection of your professionalism and commitment. The holidays provide us with the opportunity to stand back, relax and spend time with our families. Many thanks to all and very best wishes of the Season.

François Guimont, RDG Quebec Region



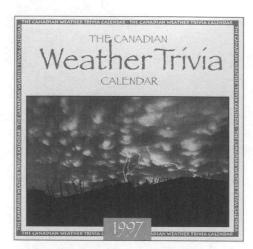
ATMOSPHERIC ENVIRONMENT SERVICES

The Canadian Weather Trivia Calendar... back for another year!

L ast year it was the best selling wall calendar in Canada, emptying bookstore shelves by mid-December with over 20 000 copies sold. Now Canada's "weather guru", our very own David Phillips, is back with The 1997 Canadian Weather Trivia Calendar, packed with NEW weather stories, zany weather trivia and weather history from Canada and around the world.

Back by popular demand, you'll find the Weather-Wise Quiz as well as Weather Flashes, a 16 page mini-magazine insert. New to the calendar is Winston the Weather Dog (aka the Phillips' family dog) with his tips for taking care of your pets in Canada's hot and cold season.

The 1997 Canadian Weather Trivia Calendar sells for \$14.95 and is now available at book and stationery stores and Environment Canada weather offices across the country. Toll-free ordering is also available. For



Western Canada, Yukon, and NWT call 1-800-360-8826 and in Eastern Canada call 1-800-565-9523.

Excerpts from the 1997 calendar...

Only in Canada...

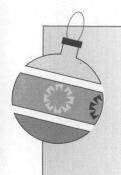
When Australia's first secretary to Canada arrived in Ottawa, he celebrated his new posting by buying 6 cases of beer, which promptly froze in his garage. The temperature that night fell to -19.2°C. Said the senior officer, "I realized this is the only country in the world where you have to put your beer in the fridge to keep it warm".

Rain, rain...

It always rains more on weekends, right? Well, maybe in Saskatoon, Winnipeg, and Yellowknife, but not in Quebec and St. John's. Generally, though, in major Canadian cities it is more likely to rain on Tuesdays and Wednesdays and snow on Saturdays and Sundays than on the other days.

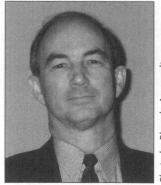
Freak Lightning Strikes...

A farmer was struck by lightning. On the way to the hospital, another lightning bolt hit, causing the ambulance to crash, killing the injured man.

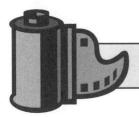


1996 will be remembered as the year we celebrated two important anniversaries, EC's 25th and the 125th anniversary of weather services in Canada. EC's most valuable resource continues to be its people and I wish each and every one of you a joyful holiday season and a healthy and prosperous new year.

Gord McBean, ADM Atmospheric Environment Service



hoto by Rhonda Arsenault



4th Annual Photo Contest Winners

GRAND PRIZE:

Jamie 'neath the Big Sky-Richard Russell Hull, Quebec

People:

- 1. Untitled—Zoran Djukic Ste-Foy, Quebec
- 2. Tendresse—Nycole Dumais Gatineau, Quebec
- 3. Into the Mist—Vija Tate Scarborough, Ontario Hon. Mention: Rabbit Ear Friends—Brian Yee Regina, Saskatchewan

Fauna:

- 1. Mallard Ducks-Caje Rodrigues Ottawa, Ontario
- 2. Mute Swan—Vija Tate Scarborough, Ontario
- 3. Swans in Serenity— Colleen Auringer Victoria, B.C.

Hon. Mention: Artic Welcoming Party— **Richard Russell** Hull, Quebec

Action:

- 1. 100% Effort—Brian Yee Regina, Saskatchewan
- 2. Algate Glissade, Glacier National Park—Bob Crosley Canmore, Alberta
- 3. Untitled—Gilles Larche Vanier, Ontario

Open:

- 1. Woody Point Sentinel— **Danielle Bridgett** Gloucester, Ontario
- 2. Down at Murray's Farm-**Danielle Bridgett** Gloucester, Ontario
- 3. Mamozekel Brook, Mount Carleton Provincial Park— **Daniel Cattoni** Rexton, N.B.

Hon. Mention: Tors Cove-Bev McMullen St. Catharines, Ontario

Flora:

- 1. Lupine Wind— **Marianne Murray** Hollinston, USA
- 2. Tulip in Colour—Vija Tate Scarborough, Ontario
- 3. Untitled—Gilles Larche Vanier, Ontario Hon. Mention: Pink Lady at Champer's Bluff-

Danielle Bridgett Gloucester, Ontario

For winning photos see colour insert.

Richard Martin, deep in concentration, as he judges "Let's Talk Green's" 4th Annual

Landscape / **Scenery:**

- 1. Winter's Mist—Vija Tate Scarborough, Ontario
- 2. Waiting for the Cod— **Danielle Bridgett** Gloucester, Ontario
- 3. Untitled—William Settle Edmonton, Alberta Hon. Mention: Autumn's Lace—Mary Hilchie Ottawa, Ontario

Kid's Stuff:

- 1. Ducking for Cover— **Vincent Fernandes** Mississauga, Ontario
- 2. Frigid Flight—Gabe Hill Lethbridge, Alberta

Lethbridge, Alberta

3. Wetland Warmth—Gabe Hill Lethbridge, Alberta Hon. Mention: The Big Stretch—Gabe Hill



by Jim Haskill





Awards

Dr. Jon Gerrard, Secretary of State for Science and Western Economic Diversification, is this year's recipient of the **Fran and Frederick Hammerstrum Award**. This award, presented by the Raptor Research Foundation, inc. is one of the most prestigious awards within the raptor research community, and

recognizes individuals who have contributed significantly to the understanding of raptor ecology and natural history.

Dr. Gerrard's work with

raptor's began in the mid 1960s

when he initiated a long-term population study on Besnard Lake, a remote location in northern Saskatchewan. He has also published several papers, and co-authored a book; *The Bald Eagle, Haunts and Habits of a Wilderness Monarch* with Gary Bortolotti. The Raptor Research Foundation, inc. is a non-profit organization, founded in 1966, which stimulates and coordinates the information holdings on the biology and management of birds of prey and their habitats.

Instant Awards were presented to John Myslicki (Hazardous Waste Division, EPS) and Charles Cormier (Transboundary Movements Division, EPS) for their technical assistance provided to the Republic of Estonia while working with the UNEP Basel Convention Secretariat. In a letter to Minister Marchi, Villu Reiljan, Minister for Environment of Estonia, commended Canada for their technical assistance on a Case Study for the environmentally sound management of hazardous waste destined for recovery operations. Both Myslicki and Cormier are personally congratulated for their exceptional contributions.

Four groups from Environment Canada received recognition at this year's Federal Awards of Excellence for IT Achievements in the Federal Government:

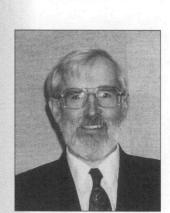
A Gold went to the Canadian Ice Service for their investment in the more reliable and cost-effective data they are obtaining through RADARSAT.

A Bronze was awarded to St. Lawrence Vision 2000, for developing a system to facilitate sharing information on Vision

of the St. Lawrence
River, and allowing
stake-holders to monitor
developments. Project
leader Paul Boudreault
was also recognized as a
finalist in the Leadership

category.

People and Jobs, the computerized inventory system which matches skills and opportunities, and the Sustainability Information Management System, which monitors and reports on the federal government's activities in support of sustainable development, were also recognized as finalists.





new year brings with it an opportunity to re-focus and renew directions in our own lives and as team members here at work. I wish everyone in the P&Y team renewed harmony and success in 1997 and, on behalf of P&Y staff, I send these same good wishes to all our colleagues across Canada.

Art Martell, RDG, Pacific & Yukon Region



Awards



25th Anniversary Awards were presented to the following Teams

ALPAC—EIA Review Team (P&N Region)

Adaptive Computer Technology (ACT) Centre

Analysis & Methods Division—ETC

Atlantic Regional Environmental Emergencies Team (REET)

Biodiversity Convention Office

Cabinet Liaison Unit 1991—1996

Canadian Bird Banding Office

Canadian Ice Service— RADARSAT (Montreal & Toronto)

Climate Modelling & Analysis 1990 & 1992 IPCC

Commercial Services Business Committee

Development & Implementation of a Global Forecast System in 1991 (Toronto & Montreal) Environmental Citizenship Primers Series

Équipe d'intervention Saint-Laurent (Quebec Region)

Geostationary Operational Environmental Satellite Team (P&Y Region)

Great Lakes Program (Ontario Region)

Hinterland Who's Who Wildlife Information Program

Human Resources Team

Locally Shared Support Services Program

L'équipe Bilan—Centre Saint-Laurent (Quebec Region)

L'équipe de l'Atlas des oiseaux nicheurs du Québec (Quebec Region)

Ministerial Correspondence Unit—EPS

Ministerial Briefing Unit— EPS

National Water Research Institute Staff No Waste Program

North American Waterfowl Management Plan

PNR NAWMP Team (P&N Region)

Planning Community & Reshaping Environment Canada

Pollution Measurement Division—ETC

Projects DOTS 1983-1987

Regional EP Support Team (P&Y Region)

Review Branch Team Work— Staff of 1995-1996

Severe Weather Program (Ontario Region)

State of the Environment Reporting

Transition Networking Team (TNT) (Atlantic Region)

UV Index Team

Vancouver Pops Team

Wildlife Toxicology Program

Individual Award (Additional): Ron Duval





Upcoming Events

January 21-22, 1997 Port of Spain, Trinidad

Sharing Experiences in Environmental Management: A Canadian Technical and Business Workshop

Contact: Lise Gendron (819) 953-9368

Fax: (819) 953-7253

January 30-31, 1997
Toronto, Ontario
Air and Waste Management
Association—Ontario Section:
Building Competitive Advantage
Contact: Gisella Linney (905) 773-9650

Fax: (905) 773-9751

June 8-13, 1997 Toronto, Ontario

Air and Waste Management Association's 90th Annual Meeting and Exhibition

Contact: Air and Waste Management Association—Pittsburgh, Pennsylvania (412) 232-3444

Fax: (412) 232-3450

Web site: http://www.awma.org

June 9-10, 1997 Vancouver, British Columbia 14th Technical Seminar on Chemical Spills Contact: Nanci Laroche (613) 991-1114

Fax: (613) 991-9485

June 11-13, 1997 Vancouver, British Columbia Arctic and Marine Oilspill Program Technical Seminar Contact: Nanci Laroche (613) 991-1114

Fax: (613) 991-9485

July 19-24, 1998

Vancouver, British Columbia

First International Conference on Fog and Fog Collection Contact: First Intl. Conf. On Fog and Fog Collection, P.O. Box 81541, 1057 Steeles Ave. West North York, ON, M2R 2X1



Retirements

Dr. Fred Chen, Chemical Industries Division, NOPP, has retired after 25 years of service with Environment Canada. Fred received his Ph.D. in chemical engineering from McGill University in 1968, then began his career at Quebec Iron and Titanium. He joined Inland Waters in Ottawa in 1971, then transferred to Burlington, Ontario where he worked as a research scientist conducting studies on oil/water/ice systems in relation to oil pollution in the

north. Fred returned to Ottawa in 1977 where he joined the Organic Chemical Division of Environment Canada. This Division, since renamed the Chemical Industries Division, is where Fred remained until his retirement. He plans to remain in Ottawa, and will spend some time in front of his recently acquired PC, writing, consulting, and Internet surfing. His colleagues wish him the very best in his retirement.



Dr. Fred Chen



1996 is a year marked by considerable accomplishments by ECS. Like Canada Geese who travel much further when flying together, the ECS team has made significant progress towards our common goal of putting nature first. Thank you for your support and have a happy holiday.

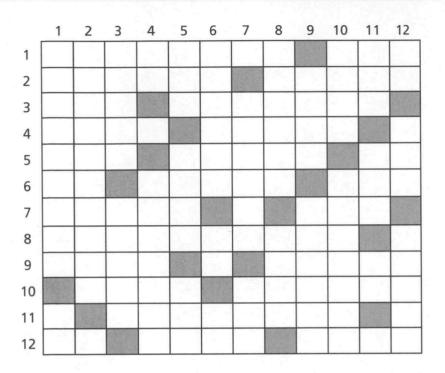
Bob Slater, ADM Environmental Conservation Service







Crossword



Horizontally:

- 1. If internationally significant, they could be Ramsar Convention's business. Greek letter T.
- Pertaining to birds. Either Orthodox religious portraits or a graphic symbols.
- To do tatting. a study of relations between the species and their environment.
- 4. Dash; impetuosity (Fr.). Either braid of hair or Spiranthes (sing.).
- 5. Unconstrained liberty (Webster's). A misleading move. off . (Prep.)
- 6. Fourth note on the music scale (F). To cook over a hot fire. Vase.
- 7. Aquatic, fish-eating animal of the weasel family. ..., not two!
- 8. Manageability, controllability.
- 9. An easy gait. Necessary to life.
- ...-tide; tide when high water is at its lowest level of the year (Oxford).
 Read carefully.
- 11. For initiates; abstruse.
- 12. The centre of the world.Famous college.Inclined plane down which logs slide.

Vertically:

- 1. Aquatic bird. To be, first person.
- 2. Assessment
- 3. Intelligent giant. Wigwam.
- 4. Sixth tone of scale (A). Let go.
- To be, second person. Shallow part of a stream you can cross on foot. • Vessel.
- Latin name of the Snowy Owl:... scandiaca. • Conditional. • Expressing motion towards.
- 7. Prayer. Small enclosure for cattle, sheep, poultry.
- 8. Quiet. At any time.
- 9. Price. Egyptian god, brother and husband of Isis.
- 10. Clothes (slang). Not glued together.
- 11. One out of many. Mineral from which metal is extracted. Like.
- 12. The centre of the world plus others. Hotel or tavern. Mixture.

Answers in the next issue



est wishes for a joyous holiday season to you and your families. All of us in the Human Resources Directorate would like to thank you for your support during the last year and look forward to a successful 1997.

Ginette Cloutier, DG Human Resources

rom all of us in Prairie and Northern Region to all of you across Canada, have a warm holiday season, and a successful new year.



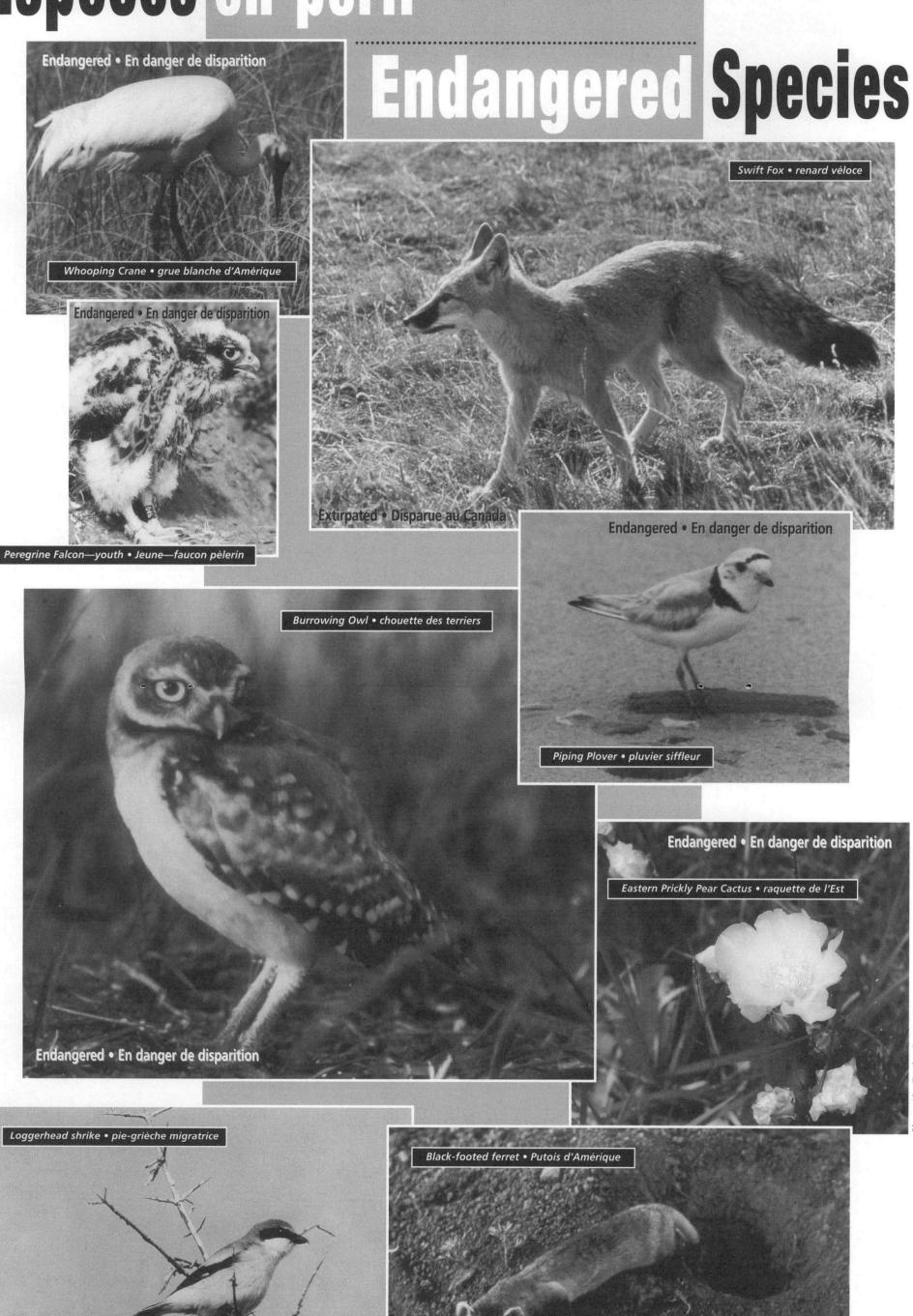
Jim Vollmershausen, RDG Prairie & North Region





Espèces en péril

Endangered • En danger de disparition



Extirpated • Disparue au Canada

Grand Prize / Grand prix



"Jamie 'neath the Big Sky" Richard Russell, Ottawa, Ontario

Action / Action



"100% Effort" Brian Yee, Regina, Saskatchewan

People / Personnes



Untitled Zoran Djukic, Ste-Foy, Quebec



Environment Environnement Canada Canada

· Ottawa (Hull), Ontario. KIA OH3

Phone: (819) 997-2037 • E-mail: Talkvert@ec.gc.ca

January / Janvier

SMTWTFS 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

February / Février

SMTWTFS 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

March / Mars

SMTWTFS 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

18 19 20 21 22 23 24 25 26 27 28 29 30 31

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Landscape - Scenery / Paysage - Panorama



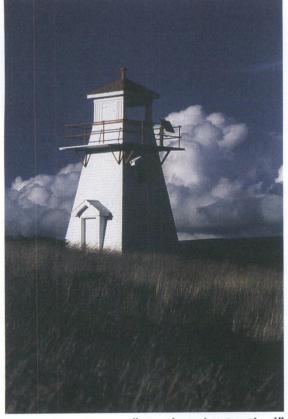
"Winter's Mist" Vija Tate, Scarborough, Ontario

Fauna / Faune



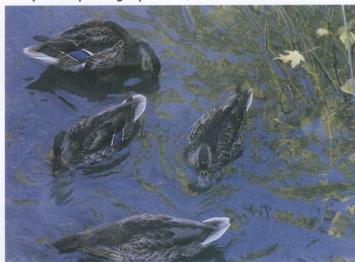
"Mallard Ducks" Caje Rodriques, Ottawa, Ontario

Open / Libre



"Woody Point Sentinel" Danielle Bridgett, Gloucester, Ontario

Kid's Stuff (photographers 14 and under) / Les jeunes photographes (14 ans et moins)



"Ducking for Cover" Vincent Fernandes, Mississauga, Ontario

Flora / Flore



"Lupine Wind" Marianne Murray, Hollinston, Maine





Canada 351 St. Joseph Blvd., 15th floor, PVM

Ottawa (Hull), Ontario. KIA OH3

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