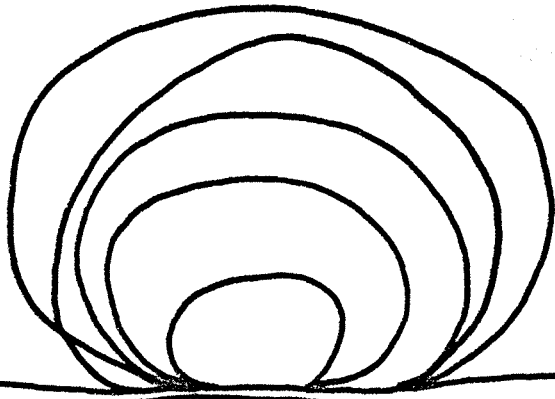
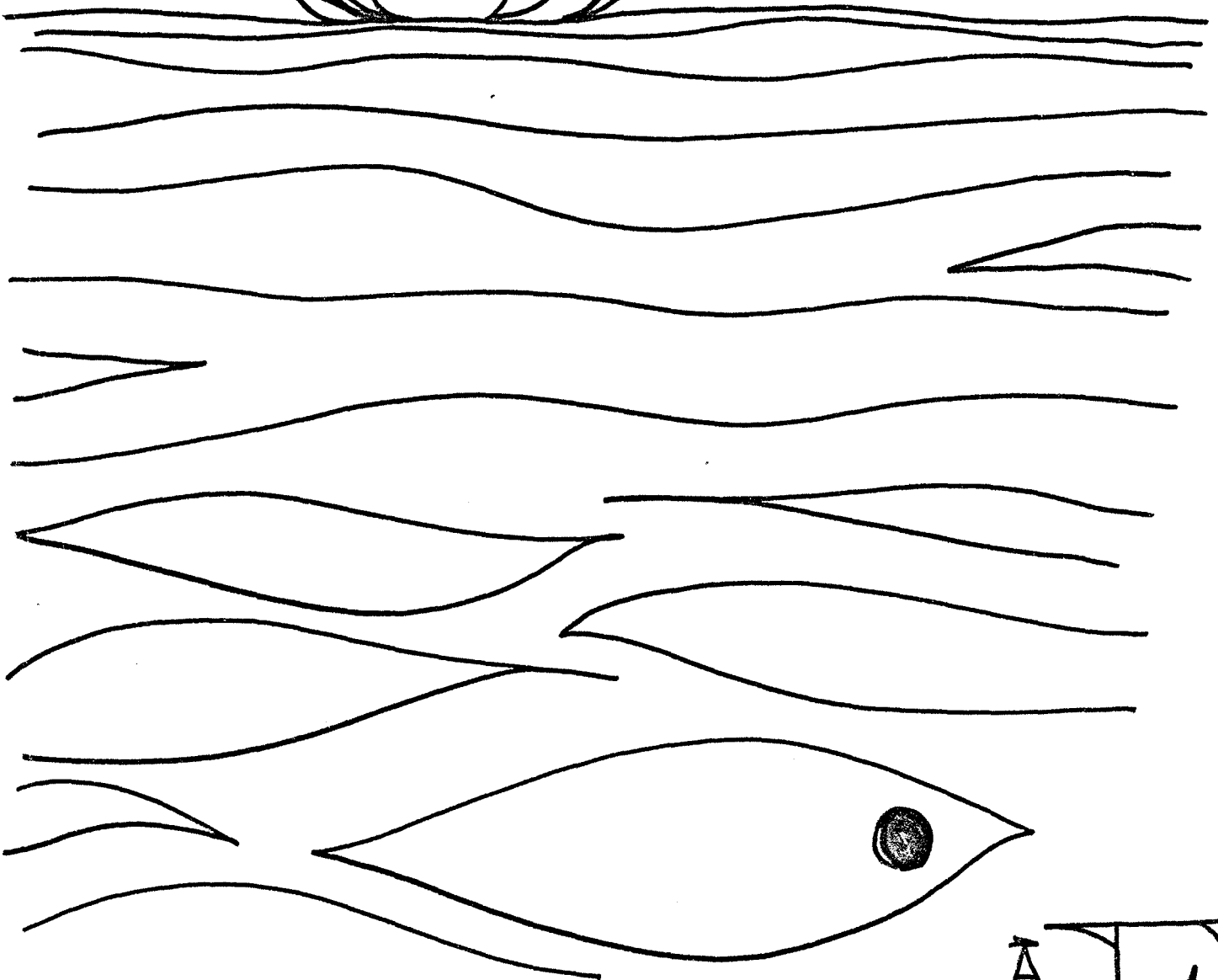


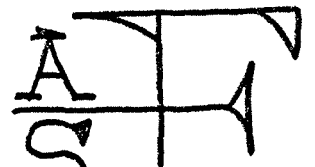
NORTHWESTERN ONTARIO CHAPTER



VOL 3 (3)



ANNUAL CONFERENCE REGISTRATION INSIDE



The Newsletter of the Northwestern Ontario Chapter of the American Fisheries Society is printed periodically three times annually and sent out to its members free of charge.

Membership in the Chapter may be obtained by remitting \$5.00 to the Secretary-Treasurer. Chapter members are urged to consider joining the Parent Organization.

Editor: Harald Schraeder

NEWSLETTER

OF THE NORTHWESTERN ONTARIO CHAPTER of the AMERICAN FISHERIES SOCIETY

PRESIDENT Bob Walroth, Box 970, MNR, Nipigon
PRESIDENT-ELECT Dominic Baccante, Box 5000, MNR, Thunder Bay
PAST-PRESIDENT Chris Brousseau, MNR, Cochrane
SECRETARY-TREASURER . . Ken Cullis, Box 5000, MNR, Thunder Bay

CONTENTS

Volume 3(3)

June 1983

ANNOUNCEMENTS

	Page
1. President's Message	1
2. NALMS Symposium	3
3. 45th Midwest Fish & Wildlife Conference	3

PARENT SOCIETY NEWS

1. Notes from the AFS Diary	5
---------------------------------------	---

CHAPTER NEWS

1. Chapter Logo Contest - We have a winner!	6
2. Chapter Representation at the NCD's Annual Meeting	6
3. NWO Chapter Annual Meeting and Conference - 1983 Agenda	8
4. Fisheries Special Employment Program - AFS involvement a conflict of interest?	11

GENERAL INTEREST

1. Use of Metric measurements in professional journals - English units aren't cricket?!	11
2. Fish Hatcheries on Way Out? A confidential federal govern- ment report says so.	12
3. A New Record!	3
4. Poisoned Fish Live Longer - getting hatchery fish ready for that big bad world out there	14
5. New Gear Opens Ocean Frontier - freshwater feasibility?	15
6. Pollution found in Arctic Air - a Sino-Ruskie plot?	16

NEW MEMBERS	18
-----------------------	----

CONTRIBUTORS	19
------------------------	----

Cover page courtesy of Hal Schraeder

ANNOUNCEMENTS

1. *President's Message*

Annual Business Meeting and Fisheries Conference:

Our upcoming 1983 annual meeting and fisheries conference has been confirmed for Tuesday, September 6 (afternoon registration) until noon, Friday, September 9. The first session, sponsored by the Federal Department of Fisheries and Oceans, will be held at the Experimental Lakes Area near Dryden. Direction to the E.L.A. site will be sent to all registered participants at a later date.

The second session will be held at the North Shore Lodge on Eagle Lake beginning at noon on Thursday, September 8. A final agenda has been included in this newsletter for your information and I encourage all members to review it carefully.

A recently received letter from Art Holder, Director of Fisheries Branch, supporting this conference has been included in the newsletter. His encouraging support of our conference should allow most MNR employees to recover their expenses for attending the sessions.

As mentioned in a previous newsletter, space is limited at the E.L.A. site and therefore we must have a commitment prior to the end of July from those chapter members who plan to attend. Total registration for the conference will be \$145; this fee will cover three nights' accommodation at the E.L.A. and the North Shore Lodge, plus all meals including a beach barbecue at E.L.A.

If you plan to attend the conference, please complete the registration form inserted in this newsletter and return it to the address shown by July 31. Be sure to enclose your registration fee. Receipts will be mailed to participants for expense account purposes.

A second notice outlining final details will be sent to all registrants in early August. We are also arranging transportation from Dryden for those who will be flying in.

If you have any questions, please do not hesitate to contact any member of the executive. We hope to make this conference a productive and rewarding event for all attending. I hope to see you there!

Bob Walroth
Chapter President

April 14, 1983

Mr. Bob Walroth, President
Northwestern Ontario Chapter
American Fisheries Society
c/o Ministry of Natural Resources
Box 970
Nipigon, Ontario
P0T 2J0

Dear Bob:

I received your March 16 letter on the subject of a third annual fisheries conference. As you are aware, staff from this Branch have supported your previous conferences by attendance and by presenting papers; their comments have indicated that both assemblies were high quality, scientifically-oriented meetings, that provided the right atmosphere for science transfer. I know your third conference will continue this tradition.

It is in this light that I support your conference, because it should be useful in training and development of MNR fisheries managers and scientists. As well, this Branch will support the travel of any of its staff approved by supervisors to attend.

Yours sincerely,

A.S. Holder
Director
Fisheries Branch
Whitney Block, Queen's Park
Toronto, Ontario
M7A 1W3

DPD/bf

cc: Assistant Deputy Minister, N. Ontario
cc: All Regional Directors
cc: Section Supervisors, Fisheries Branch

2. *North American Lake Management Society*

Bob Johnson, President of NALMS, has sent us information introducing his Society and its upcoming International Symposium to be held in Knoxville, Tennessee, October 18-20, 1983.

Initial response to the Symposium has been excellent: nearly 100 scientists, limnologists and lake managers from throughout the United States, Canada, Mexico and Europe have indicated interest in presenting papers, and attendance is expected to exceed 1,000.

Delta Airlines is giving a 30 percent discount on air fares to those attending the Symposium, and space has been reserved in major hotels within walking distance of Knoxville's convention center. Additional information on both Delta's toll-free reservation number and reservation forms for the hotels is available from Bob Walroth.

The Symposium will center on lake and reservoir management, emphasizing techniques and research oriented toward management goals. Because of the international coverage, those attending will experience a unique opportunity to exchange information.

We encourage you to participate in this Symposium - and to join the North American Lake Management Society in its efforts to protect and restore the inland waters on this continent. Symposium information is available from the following:

Papers & Abstract Submittal

Lowell Klessig, College of Natural Resources,
University of Wisconsin, Stevens Point,
Wisconsin 54481 (715) 346-3783

Exhibit Space

Kent Thornton, P.O. Box 927, Vicksburg,
Mississippi 39180 (601) 634-8782

Conference Attendance

Wayne Poppe, Tennessee Valley Authority,
248-401 Bldg., Chattanooga, Tennessee
37401 (615) 751-7333

3. *1983 Midwest Fish and Wildlife Conference*

An announcement and final call for papers for the 45th Midwest Fish & Wildlife Conference appears in this newsletter for your information and is referred to later on under Chapter News.



Announcement And Final Call For Papers 45th Midwest Fish & Wildlife Conference

The Missouri Department of Conservation and the School of Forestry, Fisheries, and Wildlife, University of Missouri-Columbia will host the 45th Midwest Fish and Wildlife Conference. The conference site is the Sheraton St. Louis Hotel. THE DATES ARE DECEMBER 4-7, 1983. Because St. Louis is centrally located and easily accessible by land, air, and even water, we are planning for a great turnout. Naturally, we hope to continue the Midwest Conference tradition of attracting *outstanding papers, interested and informed audiences* and, of course, *providing cordial hospitality*. We hope you'll participate in the first 2 categories—those handling the latter are already at work!

The theme we've chosen for the conference is: **POSITIVE THINKING FOR FISH AND WILDLIFE**. This theme strikes an optimistic note and we hope that attitude will reverberate throughout the conference.

Two symposia will be featured this year—Ruffed Grouse and Paddlefish. The program will also include an opening plenary session, fisheries and wildlife technical sessions, poster presentations, an art exhibit, and lots more. So, please mark your calendar for December 4-7, 1983 and... "Meet Me In St. Louis".

A form is enclosed for those who wish to prepare a paper or a poster for presentation during the conference. To be considered you must complete the form and return it, with an abstract, before July 1, 1983.

If your group would like to hold a meeting during the conference, we will be pleased to make the necessary arrangements for you. Another form is enclosed for that purpose.

PLEASE POST OR PASS ON TO A FRIEND

MISSOURI DEPARTMENT OF CONSERVATION

Midwest Steering Committee
P.O. Box 180
Jefferson City, MO 65102
314/751-4115

Midwest Arrangements/Program Committees
1110 College Ave.
Columbia, MO 65201
314/449-3761

PARENT SOCIETY NEWS

1. *The AFS Diary*

The following are excerpts from recent issues of the Diary:

THE 38-PAGE NORTHWESTERN ONTARIO CHAPTER NEWSLETTER (Vol 3, No. 2) has reached us and it appears that they continue to produce the most detailed newsletter of any Chapter. The Northwestern Ontario is the only entirely Canadian Chapter in the Society. They have a strong operating base of 200 AFS members who live in Ontario.

A RESOLUTION TO CHANGE AFS TO NORTH AMERICAN FISHERIES SOCIETY has been approved by the North Pacific International Chapter. My personal choice (as you will note in March/April FISHERIES) is for a change to THE FISHERIES SOCIETY.

OUR BACKLOG OF PUBLICATION ORDERS has finally been eliminated. The problem developed from the large volume sales of the Acid Rain Symposium Proceedings and the new Fish Hatchery Management Manual.

THE OFFICE OF THE MINNESOTA ATTORNEY GENERAL has provided AFS with 2 additional case history reports of legal proceedings involving punitive damages resulting from fish kills. The information has been forwarded to the Monetary Values of Fishes Committee, where it will be added to the growing file record of such cases.

THIRD AND HOPEFULLY FINAL DUES BILLS have been sent to 1,365 members who have not yet renewed for 1983. Considering the cost of first class postage, it is easy to demonstrate the importance to the Society of having members pay when first billed.

QUESTIONNAIRES FOR OUR DIRECTORY OF NORTH AMERICAN FISHERIES SCIENTISTS are returning at a brisk pace. Copies of the survey form have been sent to all AFS members and have been distributed in bulk to all fisheries agencies. In a 100 survey random sample, 36 were AFS members and 63 were not. This suggests that roughly 33% of fisheries science professionals belong to AFS. DIARY readers are urged to motivate colleagues to return their survey forms so that our published Directory can be as complete as possible.

THE FIRST CALL FOR PAPERS FOR THE APRIL 4-6, 1984 MUSKY SYMPOSIUM has gone out. Authors wishing to present technical or poster papers should submit titles to Program Chairman, Mike Dombeck, immediately. Abstracts will be due by July 1 and must be less than 400 words. The Symposium, sponsored by Muskies, Inc. and AFS, will be held in LaCrosse, WI. Program Chairman Dombeck's address is USDA, Forest Service, Chequamegon National Forest, 157 N. 5th Avenue, Park Falls, WI 54552.

CHAPTER NEWS

1. *Chapter Logo Contest*

The NWO Chapter is pleased to announce that the winner of the Logo Contest is Rick Borecky, Biologist, Lake Nipigon Fisheries Assessment Unit. Rick graciously agreed to permit slight modifications to be made by a professional artist. The final proof will appear on the cover of this autumn's newsletter. A cheque for \$10 and a chapter cap will be presented to Rick during the annual business meeting in Dryden this September.

2. *Chapter Representation at the NCD Annual Meeting*

At a recent Chapter meeting a point was raised concerning the use of Chapter funds to help alleviate the cost of sending a representative to the North Central Division's annual business meeting. Since out-of-province travel is very difficult for MNR employees during these economic times, the Chapter cannot be assured of representation if it relies on the Ministry to cover travel expenses. A case in point occurred last fall when a Ministry travel restriction prevented our representative from attending the annual meeting in Des Moines, Iowa. Consequently, our Chapter's lake trout resolution was "shelved", probably because of a lack of understanding of the issue on the part of those present.

Since Chapter Members have the right to decide where their membership dues and other monies from fund raising activities are directed, I encourage you to complete the attached form and return it to the address shown.

In 1983, the annual business meeting will once more be part of the Midwest Fish & Wildlife Conference, and is to be held in St. Louis, Missouri from December 4-7 (as advertised in this issue). It is safe to assume that total expenses to attend, if commercial aircraft is the mode of travel, could probably approach \$1,000. The Chapter currently has a financial balance of approximately \$1,200. It should be understood that chapter funds would be used only if the representative is not an MNR employee, or if out-of-province travel is refused an MNR employee.

I AM IN FAVOUR OF SPENDING THE NECESSARY FUNDS TO COVER ALL EXPENSES CONNECTED WITH SENDING A CHAPTER REPRESENTATIVE TO THE ANNUAL BUSINESS MEETING OF THE NC DIVISION.

I AM NOT IN FAVOUR OF SPENDING ANY CHAPTER FUNDS TO SEND A REPRESENTATIVE TO THE ANNUAL BUSINESS MEETING OF THE NC DIVISION.

I AM IN FAVOUR OF COVERING A PORTION OF THE TRAVEL EXPENSES UP TO A MAXIMUM OF \$ _____ TO SEND A REPRESENTATIVE TO THE ANNUAL BUSINESS MEETING OF THE NC DIVISION.

Mail to: Bob Walroth
 Nipigon District
 Ontario Ministry of Natural
 Resources
 NIPIGON, Ontario
 P0T 2J0

REGISTRATION FORM

PLEASE FIND ENCLOSED A CHEQUE FOR \$145.00 TO COVER THE TOTAL REGISTRATION FEE FOR THE UPCOMING NORTHWESTERN ONTARIO CHAPTER AFS FISHERIES CONFERENCE AND WORKSHOP.

SINCE I AM INTERESTED IN ATTENDING ONLY THE FIRST SESSION AT THE E.L.A. CAMP, PLEASE FIND ENCLOSED MY PART REGISTRATION FEE OF \$55.00.

SINCE I AM INTERESTED IN ATTENDING ONLY THE SECOND SESSION ON THE PRESENTATION OF FISHERIES PAPERS FROM THE W.P.L.U.P., PLEASE FIND ENCLOSED MY PART REGISTRATION FEE OF \$90.00.

NAME: _____
ADDRESS: _____

DEADLINE FOR REGISTRATION IS JULY 31, 1983.
INITIAL REGISTRATION IS OPEN TO AFS MEMBERS ONLY.
OFFICIAL RECEIPTS WILL BE FORWARDED TO ALL PAID REGISTRANTS. MAIL REGISTRATION FORMS TO:

KEN CULLIS
SECRETARY-TREASURER, NWO CHAPTER, AFS
C/O LAKE SUPERIOR FISHERIES ASSESSMENT UNIT
ONTARIO MINISTRY OF NATURAL RESOURCES
P.O. BOX 5000, 435 JAMES STREET, SOUTH
THUNDER BAY, ONTARIO
P7C 5G6

CHAPTER NEWS, Continued

4. *NWO Chapter Involvement in the Fisheries Special Employment Program*

Many of you are aware that our Chapter was approached several months ago by the Ministry of Natural Resources' North Central Region to sponsor their Fisheries Special Employment Projects for 1983. The initial concensus among our chapter's executive concerning this proposal was favourable although many questions about our involvement remained unanswered.

Subsequent investigation into this matter involved a possible conflict of interest with regard to executive of the sponsory agency becoming supervisors of FSEP projects in their capacity as MNR employees. Mr. Wm Foster, Deputy Minister (MNR), relayed this concern to Bob Walroth, President, NWO Chapter (AFS), by stating that,

"although these projects are very worthwhile and, I am sure, everything is above board, I consider this to be a perceived conflict of interest and I must advise you to not become involved in having the local chapter of the American Fisheries Society sponsor these projects".

Thus possible AFS sponsorship of projects in the NCR quickly came to a halt. Fortunately the MNR had pursued alternative sponsorship and managed to secure the Lakehead and Regional Conservation Authority for 1983.

GENERAL INTEREST ARTICLES

1. *Use of Metric measurements in professional journals*

Dominic (Nick) Baccante, Fisheries Research - Walleye Unit, has forwarded some information about an issue he is contending.

The following is a reply by Mercer Patriarche, Editor of the N.A. Journal of Fisheries Management, to a letter he sent him, in which he expressed his disagreement with the use of both metric and english units of measurement in the journal.

He is still not satisfied with the answer he received because he felt that, as professionals, we should set an example for the public, especially at a time when people need to be reassured that the metric system is not really that bad! He doesn't think the editorial board of the journal is doing those people who prefer to use the english system a favour, in light of the

GENERAL INTEREST ARTICLES, Continued

fact that the metric system is the language used by scientists world-wide, to communicate, so why not get everybody using it!

Dear Mr. Baccante:

I have your inquiry of May 3 relative to the use of English units in the management journal. At the outset when initial plans were made for this Journal, I decided to permit either English or metric units in a ms. because I felt that many managers felt comfortable with the English system of measurement and might well be reluctant to write papers if they had to be in metric. After all, this publication was created largely to encourage communication among these professionals although certainly we wanted other segments of the profession to participate also. At the instigation of one of your colleagues, and my friend, Dick Ryder we reviewed this policy ('we' being members of the Editorial Board and some members of the Management Section) at the last Society meeting in Hilton Head, S.C. last fall. The concensus was to continue with this procedure, not wanting to do anything to discourage participation by fish managers. There have been a few managers and biologists alike who have appreciated this policy. Hence, we will continue to permit both. The conversion table in the back of each issue should be helpful in converting data when such is desired. So, that is where we stand at the moment and I thank you for your concerns about the Journal.

Sincerely,

*Mercer H. Patriarche, Editor
North American J. Fish. Mgmt.*

2. *Fish Hatcheries On Way Out?*

The following appeared in the Victoria Times (March 1983):

A confidential report prepared by the federal fisheries department recommends all future plans for coho and chinook hatcheries along the B.C. coast be scrapped immediately.

The report, which will likely be made public by the end of this month, cites problems with hatchery-raised fish eliminating natural fish stocks as reason for halting further hatchery programs.

Where fishing of mixed stocks takes place, hatcheries are promoting competition between natural and wild stocks, the report states, and the wild stock, which is the basis of the salmonid genetic pool, is being decimated.

GENERAL INTEREST ARTICLES, Continued

The report was prepared by Dr. Wally Johnson, senior advisor to Fisheries Minister Romeo LeBlanc on fisheries research throughout Canada. He prepared the report for the federal-provincial Salmonid Enhancement Project and will deliver it at the SEP board meeting at Vancouver, May 27.

In the report, Johnson expresses concern that hatcheries are being seen as the be-all and end-all of salmonid enhancement. He recommends efforts be directed towards natural enhancement of wild salmonid stocks.

In a telephone interview Monday, Johnson said his report is based on results from the American experience with fish hatcheries and, to a lesser extent, Canadian hatcheries.

In the U.S., salmon catches climbed dramatically during the 1960's and '70's because of the heavy production of hatchery fish. However, with the advent of the 1980's, salmon catches have suddenly dropped. Continuing heavy fishing pressure is generally seen as the cause of the decline, no matter how much hatchery fish are produced, Johnson said.

The same effect is beginning to show up in the Canadian fishery.

"Thank goodness this is coming in time for us to benefit from the American experience," he said.

What has happened, Johnson said, is that as the numbers of fish, both wild and hatchery stocks have remained high, fishing pressure has also stayed high. As a result, the escapement of wild stock to spawning grounds has been dropping. Whereas 90 per cent of hatchery stocks can be fished and the run survive, only 75 per cent of wild stock can be caught to ensure survival of the run. Currently the federal government has been permitting about 85 per cent of the total stock to be fished, he said.

Salmonid Enhancement Project manager Bill Schouenbourg expressed similar concerns about over-emphasizing hatcheries during a recent interview with The News.

He said that in a mixed stock fishing area, such as Georgia Strait, where hatchery runs are mixing with wild stock, such as the

GENERAL INTEREST ARTICLES, Continued

Cowichan runs, the wild stocks are slowly being cut down in numbers through fishing pressure.

3. *A New Record!*

This appeared in the May 2nd Times-News of Thunder Bay:

"From Manitoba comes news of a world record fish caught by a sports angler.

"It's quite a thrill to see your name listed as a new world record holder," said John Richards of Winnipeg, on receiving his mounted trophy. John's catch pulled the scale down to nine pounds, 11 ounces, a full pound and seven ounces larger than the previous record.

Now this is all pretty heady stuff. But we must in honesty report too that John's catch was a Silver Redhorse, a species of sucker common in central and eastern Canada and the U.S.

Sucker or not, it's in the world fishing record book. And that's pretty good company to be in."

4. *Poisoned Fish Live Longer*

Before long, some fish raised in hatcheries could find their tanks deliberately polluted with aluminum and acids. The reason? To help them stay alive in the wild.

Over the years, the death toll in mountain lakes and ponds has been growing. Pollutants from industrial smokestacks settle on mountain slopes in the form of acid rain and snow. The acid, carrying with it toxic aluminum it leaches from the ground, spills into bodies of water, killing their occupants. According to the New York State Department of Environmental Conservation, almost half of the ponds and lakes surveyed in the Adirondack Mountains are either endangered or fatally polluted.

Restocking fouled lakes with new fish is not currently an answer. Laboratory tests indicate that between 70 and 100 percent of brook trout reared in hatcheries will die within a week or two of being transferred to polluted waters. But until real antipollution measures

GENERAL INTEREST ARTICLES, Continued

can be legislated and enforced, researchers are working to overcome this problem and ease fish bred in captivity into the wild.

One idea being developed involves a simple concept: Instead of the fish's being subjected to the sudden shock of a pollutant bath, their water is treated with gradually increasing amounts of acid and aluminum for about five days before they are transferred into lakes.

In the laboratory, at least, the idea works. New York conservation biologist Charles Guthrie has tested fish at various levels of acidity and found that for brook trout about a year old - the normal age for stocking - virtually all nonacclimatized fish die within a few weeks of exposure to polluted water. On the other hand, only 45 percent of acclimatized fish succumb. Guthrie hastens to point out that such comparatively encouraging results might not be achieved in all lakes, but, rather, only in those considered not "critically acidified."

To be sure, such measures are not the best solution to pollutant-related deaths. "In all cases, those fish that survived grew poorly in comparison with controls," Guthrie says. "And we should remember that fifty-five percent of the treated fish *did* die. Nonetheless, until pollution levels can be brought under control, this may buy us some time."

- Science Digest, June 1983

5. *New Gear opens ocean frontier*

The world's oceans, which on average are two miles deep, cover more than 70 percent of the planet. Why is it that they remain largely unexplored?

Conventional scuba divers rarely venture deeper than 200 feet before being stopped by the water's crushing pressure and lengthy decompression procedures. Submersibles ferry scientists as deep as 20,000 feet, but the risks that manned missions entail and the complexities of the vehicles themselves often restrict a project.

"The bathyscaphe Trieste took two people to the deepest part of the ocean, seven miles down, in 1960. We've never been back, yet we can fly seven miles *above* Earth with ease," notes marine biologist and explorer Sylvia Earle, of the California Academy of Sciences. "There are more footprints on the moon than there are even one-half mile under the sea."

GENERAL INTEREST ARTICLES, Continued

Now, innovative unmanned and manned submersibles, for both science and industry, are starting to facilitate underwater work. Remote-controlled SCARAB repairs and buries deep-sea phone cables; Rig Rover shimmies up and down offshore oil rigs, replacing divers in dangerous maintenance tasks. Other robotic devices recover boosters from shuttle launches and explore, sample and map the ocean floor faster than ever before.

One-man systems increase a scientist's maneuverability. Self-propelled diving suits known as Wasp and Jim take their wearers far deeper than a scuba diver can go; oblong Mantis can be piloted to 2,300 feet and back on a tether. And a bubble called Deep Rover, nearly ready for testing, may one day glide unrestrained to any depth. Since all these craft are maintained at sea-level air pressure, the time that can be spent underwater is essentially unlimited.

Will one type of system ultimately prove more practical than the other? Unmanned submersibles don't have to rest and can go virtually anywhere; manned ones can perform a wider variety of chores. Unmanned submersibles suffered about 20 accidents last year; manned craft had none. A case can be made for both.

Earle, who is working on Deep Rover, believes manned submersibles are more versatile, but agrees that unmanned ones should not be abandoned. "Robotic devices can survey broad sweeps of terrain or can be used when the work to be done is accurately defined," she says. "But in the realm in between - exploration - you need a human brain and eyes to operate."

According to Woods Hole geologist Robert Ballard, who is building an unmanned system called Argo/Jason, "One-man submersibles such as Deep Rover are very romantic and very neat, but on a mass experimental level they're impractical. If you're not going to stick your head or hands out of a submersible," he claims, "you're looking out a window. If I create that window, it doesn't matter where it is, so long as the mind thinks it's on the bottom."

- Science Digest, May 1983

6. *Pollution Found in Arctic Air*

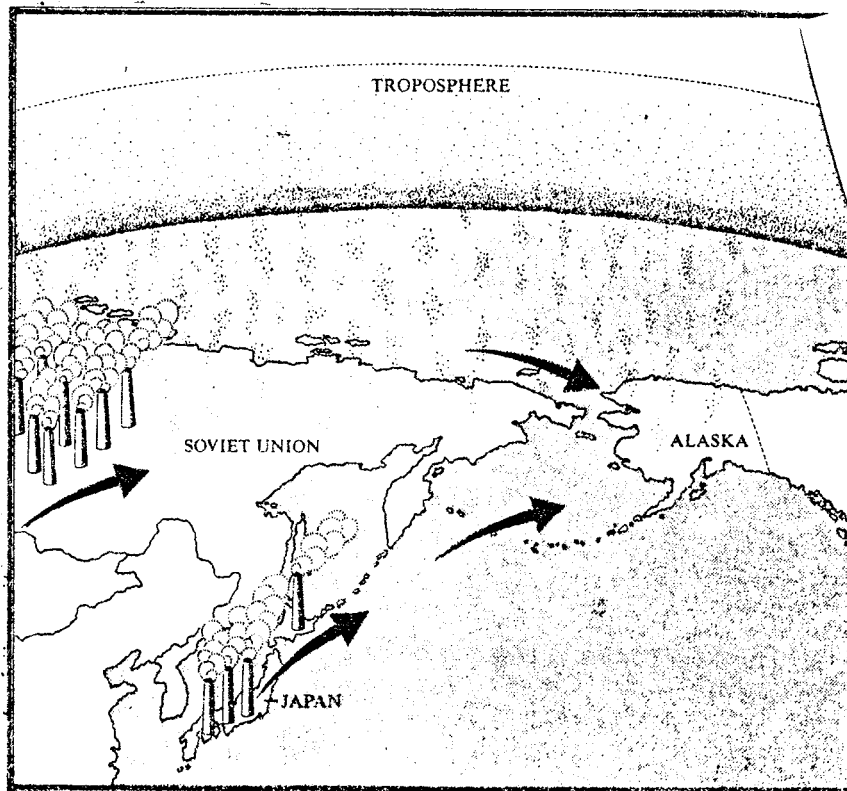
After checking the air filters at an air-quality monitoring station in northern-most Alaska, researchers were astounded: The filters were choked with carbonous soot. New screens were inserted, but within a week they too were clogged with the black filth.

GENERAL INTEREST ARTICLES, Continued

"We set up this station to study what really clean air was like," explains Hal Rosen of the Atmospheric Aerosol Research Group (AARG). "We thought we could better understand pollution if we examined a pollution-free atmosphere. Now we've got to explain this."

The AARG believes that the soot particles in the Arctic air come from Europe and Japan. In both areas, pollution-emission standards are comparatively lenient. Others feel that the Soviet Union may also be responsible. A recent study by the Office of Naval Research argues that Arctic haze originates from central Russia, where steel plants and other industrial facilities are found.

Whatever its source, few dispute pollution's likely effects: Dark, suspended soot threatens to contribute to overall global warming. As solar radiation streams through the atmosphere, soot traps much of it in the troposphere, the layer of air closest to the ground. Similarly, as heat tries to escape from the planet, it too is snared by grime. Absorption in both directions causes the air to grow measurably warmer, and it is feared that eventually the air will heat the ground as well. Speculation abounds that an increase of as little as four to six degrees Fahrenheit could cause radical changes on a global scale.



Heavy industry in Europe, Japan and the USSR releases sooty pollutants into the Arctic air. Suspended in the troposphere, this grime could lead to global warming.

GENERAL INTEREST ARTICLES, Continued

What can be done to scrub the arctic atmosphere? Distressingly little, it seems. "I've never heard of cleaning the air itself," says West Virginia University physicist Bernard Cooper, head of an American Physical Society panel that recently issued a report on the processing and burning of coal. Cooper notes that the only answer would be to reduce the number of polluting particles that are added to the air. "Basically, there are three methods for reducing Arctic pollution," he says. "One, you only use fuels with the lowest sulfur content. Two, you purify dirtier fuels before burning. Three, you clean emissions before pollutants are vented."

These precautions, he notes, should be especially heeded by the nations that are the worst offenders. "But they just don't seem to care very much about emissions," he laments.

NEW MEMBERS

The Northwestern Ontario Chapter of the American Fisheries Society extends a sincere welcome to our most recent new members:

Tom Adamchick
124 Hill Street, South
Thunder Bay, Ontario

Ken Chambers
1292 Valley Drive
Kenora, Ontario

Gordon Coveyduck
36 Sheppard Street
Thunder Bay, Ontario

Antonio Damiani
P.O. Box 254
Nipigon, Ontario

Kelly Goodwin
c/o North Central Region Ageing Facility
Ontario Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario

Arnold Laine
325 Munro Street
Thunder Bay, Ontario

Tom Maher
Box 2014
Atikokan, Ontario

NEW MEMBERS, Continued

Tom Pigeon
Box 578
Nipigon, Ontario

Jill Prosdocimo
c/o North Central Region Ageing Facility
Ontario Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario

Bruce Ranta
304-1st Street, South
Apt. #3
Kenora, Ontario

Tim Riordan
P.O. Box 154
Beardmore, Ontario

Kevin Roberts
258 West Mary Street
Thunder Bay, Ontario

William Sloan
Box 970
Nipigon, Ontario

J. Weir
General Delivery
Napanee, Ontario

Guy Winterton
R.R. #1
Redditt Road
Kenora, Ontario

CONTRIBUTORS

The editor appreciates the efforts of the following people to maintain a high quality newsletter on relatively short notice:

Nick Baccante, Fisheries Research, Walleye Unit
Rick Borecky, Lake Nipigon Fisheries Assessment Unit
Ken Cullis, Lake Superior Fisheries Assessment Unit
Phil Ryan, Quetico-Mille Lacs Fisheries Assessment Unit
Bob Walroth, Nipigon District MNR
Neville Ward, Northwestern Region MNR
Lilli Bird, Lake Superior Fisheries Assessment Unit
Letizia Tamasi, Fisheries Research, Walleye Unit



American Fisheries Society

ORGANIZED 1870 | INCORPORATED 1910

WILLIAM M. LEWIS
PRESIDENT 1982-1983

CARL R. SULLIVAN
EXECUTIVE DIRECTOR

ROBERT L. KENDALL
EDITOR

The Northwestern Ontario Chapter of the A.F.S. has been active for over three years promoting the transfer of fisheries science among fisheries workers throughout Northwestern Ontario. It is the first entirely Canadian chapter of this international organization whose main objective is the promotion of scientific research and enlightened management of aquatic resources.

The Chapter publishes three Newsletters annually. It also hosts several lectures on various fisheries-related topics and conducts an annual business meeting and conference.

Inquiries about the chapter and its activities should be directed to Bob Walroth, President, c/o the Ontario Ministry of Natural Resources, P.O. Box 970, NIPIGON, Ontario P0T 2J0, or telephone (807)887-2120.

MEMBERSHIP IN THE NORTHWESTERN ONTARIO CHAPTER OF THE AMERICAN FISHERIES SOCIETY IS AVAILABLE FOR AN ANNUAL FEE OF \$5.00.

ALL PROSPECTIVE MEMBERS SHOULD COMPLETE THE FOLLOWING AND MAIL IT ALONG WITH THEIR DUES TO:

Ken Cullis
Secretary-Treasurer
Northwestern Ontario Chapter
American Fisheries Society
136 County Boulevard
THUNDER BAY, Ontario
P7A 7R7

APPLICATION FOR MEMBERSHIP IN THE NWO CHAPTER
A.F.S.

Name
Address
City/Town
Postal Code
Affiliation
Position