RYBA

Newsletter of the Minnesota Chapter of the American Fisheries Society

Year 1998 No. 4
November Issue

President's Message

by Bruce Vondracek

The year is rapidly drawing to a close which means the annual meeting will soon be here. Paul Radomski reported to the Chapter Excom that the Tri-Chapter meeting is expected to draw a large crowd. I look forward to seeing most of you and the interactions that will occur at the meeting. I attended the annual AFS meeting in Hartford at the end of August and have many news items from the Board of Governors meeting that preceded the meeting. The meeting itself was well attended more than 1300 participants registered and 600 papers were presented.

The most important news was the acceptance of Paul Brouha's resignation by the Board of Governors. Bob Kendall the director of publications will serve as the interim director and a national search scheduled for Paul's replacement. AFS has been productive during the 12 years Paul Brouha was involved at the Society Office, see the most recent Fisheries for a recap by Paul. One of the important activities that Paul was involved in was the Fishable Waters Act, if enacted could affect the way we do business in years to come (the Act is highlighted later in the newsletter for more information).

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The Chapter publishes ***RYBA*** four times a year (Jan., May, Sept., and Nov.). Deadlines for article submission are: April 15, Aug. 15, Oct. 15, and Dec. 15. Necessary Burbot Legal Language: The views and opinions expressed herein are not necessarily those of the Minnesota Chapter. Printed on butchered trees.

The next annual AFS meeting will be in Charlotte, NC with a cost of $275. The cost appears rather high, but includes all the activities related to the meeting rather than separate charges for registration, the banquet, etc.

AFS has hired a consultant to insure that AFS2000 reaches its goal of $1.25 million, primarily to establish a fund to support publishing Society books rather than having to seek funding from outside sources every time the Society has a publishing project. The fund currently contains $400,000. The Society with the help of the consultant have submitted proposals for contributions to foundations that total about $2.2 million. Thus, if only 1/3 of the money requested is forthcoming the fund should be at or close to the original goal.

Page charges for Society journals will be phased out during the next three years. The plan is to charge the same rate in year 1, but invest 1/2 money into a fund to support journal publication, year 2 charges to 1/2 current rate invest 1/2, and year 3 no charges.

A membership survey was recently completed, and rather than go through all the highlights I encourage you to read the results of the survey in the most recent Fisheries magazine.

The Certification committee has completed its task, 3 subcommittees will take over to monitor progress and by 2001 National office staff will review and track all applications.

And finally, the Society's Strategic plan for the next 5 years is currently under review. I encourage your participation in the review.

Closer to home there are two items that should be of interest to everyone in the Chapter. First, and with potential long-term consequences, is ballot initiative #2 that will appear on the November ballot, asking the citizens of Minnesota to consider whether to guarantee fishing and hunting to citizens in the state constitution. At the most recent Chapter Excom meeting a vote to support the amendment was passed. I ask each of you to consider this ballot initiative seriously, talk with your constituents, friends, and neighbors about your thoughts on this issue. The vote is likely to be rather close, especially since 2.5 million people now live in the seven county metropolitan area, many with only urban concerns. The Fish and Wildlife Legislative Alliance, of which the Chapter is a member, strongly supports passage of the ballot initiative.

The second issue is the walleye stocking issue is alive and well. The Fish and Wildlife Legislative Alliance has formally passed a resolution supporting current stocking levels and the current strategy of the DNR regarding stocking.

Again, I hope to see you at the upcoming Tri-Chapter meeting.

INSIDE

Quote of the Issue

"The expectations of resource users are often formed during periods of high resource productivity." Susan Hanna

Committee Reports

Membership Committee Report - by Doug Kingsley
During 1998 we have had 167 MN Chapter AFS members renew their membership (77% of 1997 members). That means we still have 48 (22%) who haven't renewed their membership. We're still lagging behind the 87% of 1996 members who renewed in 1997. We have gained 41 new members so far in 1998, compared to 65 in 1997.

We still have a bit of 1998 left yet, but if you haven't renewed either through the parent society or with the chapter, be sure to do so. The two digit number behind your name on your newsletter mailing label will indicate the year that you last paid dues. A "98" or later means you're current, a "97" means you're delinquent. If you haven't renewed by mid-November, we will be sending you a reminder letter. Save the Chapter the cost of mailing and please renew now if you're not current.

If anyone finds an error in their address on the mailing label, or if anyone has a change of address please be sure to bring it to my attention. We are also trying to keep track of affiliation, telephone and fax numbers, e-mail address, title, whether a member of the parent society (including year of first membership and number), and the year that each person joined the Chapter. The latter is particularly important in case you might be eligible for awards in the future. If you think we don't have any of that information please call or send it to me to add it to our database. My phone number is listed in the newsletter under Committee Chairs (218.732.4153). My address is: 301 S Grove Ave, Park Rapids, MN 56470. Thanks for your help.

Continuing Education Committee - by Mark Hove and Laurie Sovell
Our next course will explore the interesting world of ethics. Lively discussions on this topic have recently arisen in Fisheries and at national society meetings. Last year the parent society revised its code of professional ethics. The course will run a half or full day prior to the annual meeting next winter in La Crosse, WI. See details elsewhere in *RYBA*, and register now for this very interesting workshop.

Nomination Committee - by Melissa Drake
Please vote for new officers. The ballot is in this issue of *RYBA*.

Public Awareness Committee - by Linda Bylander
For the second year, the MN Chapter AFS display was on exhibit at the Minnesota State Fair. The display was placed in the Natural Resources building. Thousands of state fair goers were able to read about our chapter and get information on membership. The winter project for the Public Affairs Committee is to redesign the display. We want to make the text easier to read by using heading, subheading and larger type. Our goal is to make the display wording easy to read from a four-foot distance. This is the distance state fair goers typically stand from the display. If you're interested in helping with this project please contact me at 218.828.6044.

Rivers and Streams Committee Rep to NCD - by Dennis Topp
The winter meeting of the Rivers and Streams Technical Committee will be held in December in Cincinnati, in conjunction with the Midwest Fish and Wildlife Conference. Anyone who has information that I could pass on to the committee should forward it to me prior to the December meeting.

A common theme among the state reports at our summer meeting in Davenport was dam removal and modification. We discussed the appropriateness of sponsoring a workshop on this topic - likely in conjunction with a Midwest Fish and Wildlife Conference. There has been a number of dam modification and dam removal projects in Minnesota in recent years. If anyone thinks that a symposium on this topic would be beneficial, please let me know.

Project Update, Whitewater River Restoration Project: I know that there are lots of ongoing river and stream projects in Minnesota. As part of my chapter report, beginning with this issue of *RYBA*, I thought it may be worthwhile to briefly highlight at least one ongoing project.

Whitewater River Restoration Project: According to Tim Schlagenhaft, Area DNR Fisheries Supervisor in Lake City, approximately 4.6 miles of the Whitewater River in Winona and Wabasha counties were channelized in the late 1950's, reducing the stream length to 2.7 miles.

The project focuses on restoring the natural river channel and floodplain functions of this portion of the river. The work involves diverting flows from the current channel into the historic channel at two locations. Restoring flows to the historic channel will reduce peak flows and sediment delivery to downstream waterways while increasing fish habitat.

The permits have been granted for this project. Excavation is expected to start in October, and the project is expected to be completed in about a year. The contact person for information on this project is Tim Schlagenhaft.

Member News

Best wishes for a speedy recovery to Dr. Tom Waters, Professor Emeritus, at the University of Minnesota. Dr. Waters was recently hospitalized for treatment of Guillan-Barre syndrome, an auto-immune condition that affects the nervous system and muscle control. Those affected typically recover well, but it often takes some time. Dr. Waters is a long-time member of AFS and was one of the founding members of the Minnesota Chapter. Reports are that Tom is recovering quickly and hasn't ruled out a late season grouse hunt yet. With a little more time, he should be ready for spring trout fishing. The Chapter Executive Committee has sent a card on behalf of

chapter members.

Some Chapter members are on the move. Recent (and soon to be) graduates at the University of Minnesota that have new positions:
Bill Ardren (Ph.D., Anne Kapuscinski) - Former student ExCom representative. Assistant Professor of Biology, Luther College, Decorah, IA.

Jerry Grant (Ph.D., Bruce Vondracek) - Former student ExCom representative. Fisheries Biologist, DNR, Brainerd.

Fred Henson (M.S., Ray Newman) - Fisheries Specialist, DNR, Ortonville.

Jingyin Li (Ph.D., Ira Adelman) - Research Associate, Dept. Fisheries and Wildlife, University of Minnesota.

Loren Miller (Ph.D., Kapuscinski) - Former student ExCom representative. Research Associate, Dept. Fisheries and Wildlife, University of Minnesota.

Derek Ogle (Ph.D., Spangler) - Former student ExCom representative. Assistant Professor of Mathematics, Northland College, Ashland, WI.

Joe Ostazeski (M.S., Spangler) - Fisheries Specialist, DNR, Duluth.

Pat Rivers (M.S., Spangler) - Fisheries Specialist, DNR, Lake City.

Laurie Sovell (M.S., Vondracek) - Pollution Control Agency, Mankato

Recent graduates at the school of hard knocks also have new positions. They include:
Jack Skrypek, Chief of DNR-Fisheries, has accepted a new position as the DNR's lakes policy director. Jack's new challenge will be the DNR's lake management program and leading the lakes initiative for the commissioner.

Ron Payer, DNR-Fisheries Operations Manager, was promoted to Fisheries Chief.

Steve Hirsch, DNR-Fisheries Program Manager, accepted the duties of the Fisheries Operations Manager.

Minutes of Chapter Meetings

See the January issue of ***RYBA*** for the fall EXCOM meeting minutes.

Division Technical Committees

Esocid Technical Committee by Rod Pierce

The annual summer meeting of the Esocid Technical Committee was held in LaCrosse, Wisconsin during July 21-22, 1998. The meeting brought together 20 biologists concerned with management of esocids from eleven states and provinces. States and provinces represented were Missouri, Nebraska, Iowa, South Dakota, Minnesota, Wisconsin, Illinois, Ohio, Pennsylvania, New York, and Ontario.

The program sampled management strategies from various regions. Steven Mooradian and Paul McKeown (New York DEC) related the history of muskellunge regulations, population monitoring, and propagation techniques for Chautauqua Lake from 1888 to the present. Steve Kerr (Ontario MNR) provided an overview of esocid fisheries, muskellunge management strategies, and future challenges for esocid management in Ontario. Mike Larson (Minnesota DNR) described the trophy northern pike fishery associated with Lake-of-the-Woods and the rationale behind new slot length limits that were put in place to conserve the trophy fishery. Tom Mosindy (Ontario MNR) summarized changes in northern pike and muskellunge fisheries in Lake-of-the-Woods that have resulted from changing size limits in Ontario. Tom also related changes that occurred in the northern pike population in Shoal Lake after collapse of the commercial walleye fishery. Bob Lorantas (Pennsylvania FBC) described regulations, monitoring, and stocking strategies for esocids in Pennsylvania.

Although the focus of the meeting was on the rationale behind esocid management strategies that have evolved in different regions, other topics such as red spot disease and propagation techniques were also discussed. Particularly interesting was a talk by Dr. Gerald Bucholtz (Wisconsin Muskies Inc.) on polarized vision in muskellunge.

One of the goals of the Esocid Technical Committee has been to facilitate exchange of technical information about esocids. The Esocid Technical Committee has established a grey literature library that is being maintained by the U. S. Fish and Wildlife Reference Service. We are currently spearheading an effort to publish (in the North American Journal of Fisheries Management) proceedings of a Muskie Symposium held at the 1997 Midwest Fish and Wildlife Conference in Milwaukee. A goal for the Esocid Technical Committee this year is publication of synopses on stocking strategies and on regulations for esocids. The Esocid Technical Committee is also considering sponsoring a session at the year 2000 Midwest Fish and Wildlife conference.

Walleye Technical Committee by Dick McWilliams

Walleye Technical Committee summer workshop was on July 13-15, at Moline, IL. Chair Ron Brooks (IL) set-up an OTC mark identification demonstration during the general discussion session, and during the day Tuesday for interested members. Chair Brooks (IL) opening the technical session with 39 WTC members in attendance. Papers presented were:

1. Oxytetracycline marking results in Saginaw Bay, MI. Dave Fielder, Michigan DNR.
2. Use of oxytetracycline to evaluate relative contributions of stocked larval and juvenile walleye. Mike Vogelsang, Wisconsin DNR.
3. Walleye recruitment in Minnesota's Large Lakes. Don Pereira, Minnesota DNR.
4. Relative growth and survival of pond and fall fingerlings in New York Lakes. Mark Olson, Cornell University.

5. Comparison of naturally reproducing and stocked walleye populations, angler catch and harvest rates. Steve Hewett, Wisconsin DNR
6. Walleye exploitation rates in the Wisconsin ceded territory. John Kubisiak, Wisconsin DNR Treaty Fisheries database analyst.
7. Removal of the 14 inch minimum regulation on Lake Sakakawea, ND. Jeff Hendrickson North Dakota Game and Fish Department, Fisheries Biologist.
8. What happened with the reservoir walleye, the foreshadowing of things to come, and our options. Charlie Munger, Texas Wildlife and Parks.
9. Update of Walleye Exploitation study in northern Wisconsin. Steve Newman, Wisconsin DNR.
10. Geographical distribution of mitochondrial DNA variation in walleye, sauger and yellow perch. Neil Billington, Southern Illinois University, Carbondale.
11. Walleye and Sauger Telemetry Project on Pool 2 of the Upper Mississippi River. Scott Gangl, University of Minnesota.
12. Walleye and Sauger Telemetry Project on Pool 4 of the Upper Mississippi River. Brian Ickes, University of Minnesota.
13. Ontario's Walleye Synthesis Products. George Morgan, Ontario Cooperative Freshwater Ecology Unit.

In addition, posters papers were presented on walleye work being conducted in Canada and sauger work done in South Dakota.

Chair Ron Brooks (IL) opened the WTC business meeting.
Financial Report: Dick McWilliams (IA) reported prior to the 98 summer workshop the sub-account balance was $3,378.82, plus interest accrual of $133.91 for a total of $3,512.73. Expenses for the summer workshop were $1,601.38 and income (reg., etc.) was $1,375.00 for a debit of $126.38. The current balance is $3,386.35.

Membership: Sec. Dick McWilliams (IA) has 235 members of the WTC. Membership lists were mailed to state/provincial representatives. Although not all responses were returned, the numbers of members decreased due to retirements, transfers, etc. The primary value of the membership list is for individual mailings, if one becomes necessary. WTC minutes are published in the Mainstream, and also posted on the WTC webpage. In recent years, WTC members are connecting via e-mail, and although not all members have e-mail access, more are being listed each year, and is an increasingly valuable tool in communication efforts. Members are urged to contact the Chair, Chair-elect or Sec. to have e-mail addresses added to the list. To help with possible individual mailings, it was also decided to contact each member later this year to up-date the membership list, and to add "new" addresses and communication sites. Chair Brooks passed along information that the webpage is functional. It is accessible through the AFS-NCD Homepage as well as the search engines. At present, the site contains information including meetings (past and present); agendas (maps and minutes); a member list (that needs updating); the WTC mission statement, goals and objectives. It also includes the addresses of the Chair, Chair-Elect and Secretary. Ron asks everyone with the capability to visit the site and advise him on suggestions for improving the information.

Team Saugeye Project up-date: Tom Mosher (KS) has been working on the report. Ron Brooks will contact Tom about the project, and will have a report at the next WTC meeting.

Walleye Poster: Tim Goeman (MN) has 500-600 walleye posters still available. If anyone is interested, please contact an officer, or Tim.

Walleye Waters (update): Ron Brooks (IL) pointed out this is still an excellent opportunity to highlight and educate the angling public. Steve Quinn (MN) is still interested in having articles, and has published everything that has been submitted. Steve also pointed out that the articles need not be confined to lakes, and there are excellent river fisheries that deserve attention, nor do they need to be confined to walleye, but could also include sauger. As reported earlier, articles need not be long (2-3 typewritten pages). Contributors should work directly with Steve Quinn at In-Fisherman, 651 Edgewood Drive, PO Box 999, Brainerd, MN 56401.

1998 Midwest Fish and Wildlife Conference: The WTC will be meeting Sunday, although the time and place is not yet known. Please check the conference schedule for the time and place.

Tri-State Project on Transport Stress in Juvenile Walleye: Dave Lucchesi (SD) reported. The South Dakota/Minnesota part of this project is being headed up by Alf Haukenes, Ph.D. student at the University of South Dakota under Dr. Bruce Barton. The first part of this study involved collecting plasma samples from pond-reared large walleye fingerlings during trap and transfer procedures. From the plasma samples, cortisol and chloride ion content were measured to estimate the magnitude of stress and osmoregulatory upset associated with handling and transport. Plasma samples were collected in the trapnets, boat hauling tanks, and at 1 and 3 hours in transport. Cortisol levels were significantly elevated during handling procedures. Likewise, chloride ion concentration was depressed. These two factors indicate that handling and transporting are very stressful to fingerling walleyes. In 1997, Haukenes looked at several measures to mitigate stress in handled walleye fingerlings. Mitigate measures included transporting fingerlings in Aquahaul and transporting them at 50% of normal density. Means for plasma indices did not show a consistent pattern that would indicate that these mitigative measures were successful at reducing stress. In addition, freeze branded test groups (control, Aquahaul and 50% of normal density) were stocked into two bodies of water that were electrofished this spring to determine relative survival. Unfortunately, spring electrofishing samples were too small to accurately detect any differences in survival. Haukenes has also evaluated avoidance/response behavior in handled juvenile walleyes. He simulated trap and

transport in the lab by dipping walleye fingerlings from the tank, placing them into an aerated cooler for a designated period and then dipping them into the testing tank. At designated times after handling, walleye fingerlings were then exposed to an overhead light and the time for each fish to find cover was measured. The 1-hour post handling test group had the highest median time to reach cover (11 sec.) while all other group reached cover in close to 3 seconds. This behavior study provides additional evidence that handling and transport temporarily stresses walleye fingerlings.

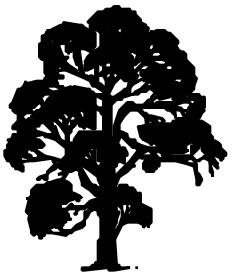
Jim Forsberg (IA) provided the following information for inclusion in the minutes. Study leaders: James Forsberg (IA), Dr. Robert Summerfelt (IA) and Dr. Bruce Barton (SD). Previous studies by Iowa DNR personnel indicated survival of walleye fingerlings following long hauls (6-7h) was substantially less than survival of walleye transported less than 1 h. Walleye were lethargic upon stocking in lakes following long hauls. It was suspected dissolved carbon dioxide (CO2) concentrations in tank water were increasing during hauls and sedating the fish. In addition, supersaturated oxygen concentrations might slow the breathing rate of walleyes, resulting in high CO2 levels. We evacuated a method (ram ventilation) for reducing excessive concentrations of dissolved CO2 and O2 from fish tank water during hauling. Tanks equipped with ram ventilators had significantly ($P<0.05$) lower values for CO2 and O2 (35.2 mg/L CO2 and 8.4 mg/L O2) than control tanks (104 mg/L CO2 and 10.3 mg/L O2). To measure physiological effects on fish, blood samples were drawn before and after the trip. Walleye from control tanks had an excessive blood CO2 level (19.8 pCO2) after the haul relative to the pre-trip value (11.2). Walleye fingerlings in tanks equipped with ram ventilators had blood gas levels (13.4 pCO2 and 8.2 pO2) at the end of the trip (6 h) only slightly different than pre-trip values (10.6 pCO2 and 10.3 pO2). Installation of ram ventilators improved water quality during the 6-h transportation event by reducing dissolved CO2 in hauling tanks.

OTC INAD 8096: Dave Lucchesi (SD) had the following:
Action items for cooperators in 1998 include:

1. Requests for 1999 amendments (new species, increased numbers of additional marking facilities) need to be submitted by December 1998. Last minute requests will be reserved for newcomers only.
2. Annual reports should be submitted to me by January 1, 1999.

Over the Counter Approval for OTC Immersion for Fish Marking purposes: Dave Lucchesi (SD). Meg Oeller, FDA, is assembling a public masterfile (PMF) for immersion marking with OTC. The PMF is basically a compendium of existing information on a specific use or uses of a drug. The PMF is often picked up by a drug company who uses it with its own data to obtain over-the-counter approval and develop a label. In talking with Meg, she mentioned that members of WTC could help by providing her with information including: list of species currently being marked, list of species for which marking would be useful, age and size at which these species are to be marked, dose and duration of marks, adverse effects of marking on fish, actual form of OTC used in marking, disposal of drug-treated water, any information on residuals in fish, grow out times for various species, safety precautions taken. Much of the requested information could be found in the INAD 8096 file kept by the FDA. However, any information in the gray literature that might be difficult to locate would be greatly appreciated. Please send copies of these studies to Dave Lucchesi, 4500 S. Oxbow Ave., Sioux Falls, SD 57106-4114.

Walleye Stocking and Recruitment Assessment Symposium: Chair Ron Brooks (IL) has been contacted concerning a possible symposium on an up-date of walleye stocking and recruitment. The symposium would be held at the Mid-West Fish and Wildlife Conference in Minneapolis, MN in 1999. It will have been 10 years since the WTC sponsored the first symposium, and there has continued to be considerable amount of activity on determination of stocking and recruitment. Ron will be contacting representatives of as many states as possible to determine research interests and current programs. At that time he will provide information about symposium plans and determine whether biologists would present papers, and whether they would be interested in publishing. Ron hopes to have the information and have a discussion at the 1998 winter meeting.



Upcoming Events

November 4-6, 1998. 2nd International Symposium in Fisheries Ecology: Essential Fish Habitat and Marine Reserves. Sarasota, Florida. Contact Chuck Jones, 850.644.2653, cjones@cpd.fsu.edu

November 10-13, 1998. 18th International Symposium of the North American Lake Management Society. Banff, Alberta. Contact: rzurawel@gpu.srv.ualberta.ca

November 21-22, 1998. Minnesota Audubon Council Fall Membership Meeting. College of St. Catherine, St. Paul. Contact the Council at 651.225.1830

December 6-9, 1998. 60th Midwest Fish and Wildlife Conference. Hyatt Regency, Cincinnati, OH. Contact Kevin Kayle 440.352.6100, kevin.kayle@dnr.state.oh.us

January 5-7, 1999. Minnesota Chapter Annual Meeting (to be held jointly with Wisconsin and Iowa Chapters). Yacht Club Resort, LaCrosse, Wisconsin. See details in this issue of ***RYBA***

February 1-5, 1999. Limnology and Oceanography: Navigating into the next

century. The American Society of Limnology and Oceanography. Contact: Helen Schneider Lemay, 800.929.ASLO, business@aslo.org

March 2-4, 1999. International Symposium on Geographic Information Systems (GIS) in Fishery Sciences. Seattle, Washington. Contact William L. Fisher, Oklahoma Cooperative Fish and Wildlife Research Unit, email: wfisher@okway.okstate.edu, Tel: 405.744.6342

March 15-16, 1999. Population Viability Analysis: Assessing Models for Recovering Endangered Species. San Diego, CA. at the Town and Country Hotel in Mission Valley. Contact William Hull (510.465.4962; whull@cgbd.org) or visit the conference web site at http://www.cccweb.com/tws-west/pva.

May 9-14, 1999. 15th International Symposium on Biotelemetry. Juneau, Alaska. The Conference is sponsored by the International Society on Biotelemetry (ISOB) and is hosted by the U.S. National Marine Fisheries Service, Auke Bay Laboratory. Contact: 15th ISOB Organizing Committee, P.O. Box 35205, Juneau, Alaska 99803, 907.789.6033, Fax 907.789.6094, e-mail: john.eiler@noaa.gov www.indstate.edu/isb/

May 23-27, 1999. Wilderness Science in a Time of Change. Missoula, Montana. Contact Clare Kelly 888.254.2544, ckelly@selway.umt.edu

May 25-28, 1999. North American Benthological Society's 47th Annual Meeting. Duluth, Minnesota. Contact: Carl Richards 218.720.4332, www.benthos.org

July 12-16, 1999. 3rd International Symposium on Ecohydraulics. Salt Lake City, Utah. See www.conference.usu.edu/ecohydraulics for more information.

Contributions: Letters and Commentary

Of interest to all fish biologists and managers is a new initiative from the Fishable Waters Coalition. This group has worked to produce a 48-page draft fisheries amendment to the Clean Water Act (CWA) of 1972. The goal of the proposed amendment, known as the Fishable Waters Act (FWA), is to provide effective protection of aquatic habitat essential to achieving the fishable goals of the CWA. Over 40% of the waters of the U.S. have not achieved the fishable/swimmable goal of the original CWA.

What will FWA do that the 1972 CWA did not?
The 1972 CWA was very effective at improving the quality of water discharged from industry and municipal sewage treatment systems. The FWA targets improving fish habitat by focusing on non-point source problems within the watershed, stream flows, flood plain management strategies and it places major emphasis on habitat, access and fishing opportunity in urban areas.

Why would you expect the conservative 105th Congress to pass tough water quality enhancements when the 104th Congress tried to weaken the CWA?
Because the FWA does not use a federally mandated, hard-line regulatory approach. Rather, locally controlled, state administered 'Watershed Councils' will represent interests in a basin. They will work together to implement voluntary, incentive-driven habitat improvement solutions.

Does federal money imply federal influence on local planning?
No. After state approval, the governor, or tribal authority of jurisdiction, submits a Watershed Council plan to the Department of Agriculture (DOA). Upon approval by DOA, the Administrator of EPA will provide funding to the state. The state then funds the projects.

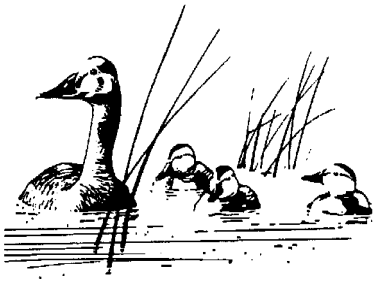
How can an 'official' Watershed Council get sanctioned?
An organization files an application with a state or Indian Tribe, as appropriate. The Governor or tribal authority responds and a public comment period begins. Once designated as a Council, planning money becomes available to develop the watershed plan.

Who is the Fishable Waters Coalition?
A group of organizations interested in improving fish and fish habitat. American Fisheries Society, International Association of Fish and Wildlife Agencies, Izaak Walton League of America, B.A.S.S. Inc, Congressional Sportsman Foundation, Trout Unlimited, Pacific Rivers Council, and the lead and sponsoring organization, American Sportfishing Association.

For more information on this proposed Act access the American Sportfishing Association's web site at: www.asafishing.org.

Interesting Articles and Publications

Consilience: the unity of knowledge. Edward O. Wilson. Knopf Inc. ISBN 0679450777. Wilson states that solutions to environmental problems will come from the intersection of environmental policy, social science, ethics, and biology. The consilience of knowledge will have to occur to adequately apply knowledge gained from all the fragmented fields of science. A good book from my hero.



Editorial

"In the end they will lay their freedom at our feet and say to us, 'make us your slaves, but feed us.'" -- The Grand Inquisitor in Dostoevsky's parable

The Slow Conversion from a Democracy to Corporate Socialism*: Implications to Fish Management

The U.S. Global Change Research Program Seminar held in Washington, DC, on October 22nd was titled "Which World? - A Look at Three Plausible Trend-Based Scenarios of the Future". The scenarios were developed from a complex analysis of demographic, economic, environmental, and social trends. The 3 scenarios were:

"1) Market World - a future based on the belief that market forces and new technology will lead to rising prosperity and will offer humanity a bright future, a future in which markets rule and global corporations dominate. In this scenario, economic reform and technological innovation fuel rapid economic growth. Developing regions are integrated into the global economy, creating a powerful global market, and bringing modern techniques and products to virtually all countries. The result is widespread prosperity, peace, and stability. This vision of the future is explicitly or implicitly endorsed by the vast majority of corporate leaders and economic theorists whose voices appear to be bolstered by the failure of centrally-planned economies.

2) Fortress World - a grimmer future in which islands of prosperity are surrounded by oceans of poverty and despair, a future of conflict, violence, instability, social chaos, and growing environmental degradation. This scenario is a pessimistic vision based on the failure of market-led growth to redress social wrongs and prevent environmental disasters, at least in many parts of the world, so that on the belief that unconstrained markets will exacerbate these problems, large portions of humanity will be left out of the prosperity that markets bring to others. In this scenario these failures eventually destroy the natural resources and social framework on which markets and economic growth depend. Economic stagnation spreads as more resources are diverted to maintain security and stability. Economic fragmentation occurs where conflict dominates or the social order breaks down. In this scenario enclaves of wealth and prosperity coexist, in tension, with widening misery and growing desperation.

3) Transformed World - a future in which fundamental social and political changes offer hope of fulfilling human aspirations. This is a visionary scenario in which fundamental social and political change, possibly even changed values and cultural norms, give rise to enlightened policies and voluntary actions that direct or supplement market forces. This scenario envisions a society in which power is more widely shared and in which new social coalitions work from the grass roots up to shape what institutions and governments do. Although markets become effective tools for economic progress, they do not substitute for deliberate social choices. In this scenario economic competition exists but does not outweigh the larger needs for cooperation and solidarity among the world's peoples and for the fulfillment of basic human needs. This vision asserts the possibility of fundamental change for the better - in politics, social institutions, and the environment."

The question is what scenario do you think is most likely - or do you have another vision?

I would like to believe that scenario #3 is the world's future. However, if the past and present have any value in predicting the future, then I fear the future will look like scenario #2. Let me attempt to outline why--I have three reasons.

First, uncontrolled capitalism or market forces produces unstable societies. The basic design of capitalism according to Kelly (1996) is increasing the wealth of the rich. Capitalism produces classes within the society based on ownership of wealth. It's contract with society is to decrease the wealth of many to increase the wealth of one, the owner (Kelly 1996). Without government attempts to redistribute some of the wealth produced by capitalists the system produces a growing divergence between the classes. This produces social unrest.

You can see the inequality and unrest increasing today. You see gated neighborhoods, exclusive clubs, home security businesses, and ghettos. The wealthy protect what they have accumulated, and they wish not to interact with people of the lowest classes. In the U.S. between 1977 and 1994, income of the top 1% of Americans rose by 72%, while the poorest fifth declined 16%. One percent of the population owns 48% of the nation's financial assets. The minimum wage is not a livable wage, but most politicians and business leaders don't want it to be. The differential in compensation between corporate elite and workers/labors is ridiculous. In 1973 corporate heads took 16% of the total employee compensation. In 1993, they took 24%. It continues to grow. Corporate profits grow and worker wages don't. Capitalism produces social chaos--it is inherit to the system.

Capitalism's effects are global. Twenty percent of people account for 86% of consumption. The poorest 20% of the world's population consume only 1.3%. The richest 5% buy 9 times as much meat than the poorest fifth. Americans spent more on cosmetics than it would cost to provide safe drinking water, primary education, and sanitation to more than 2 billion people who now lack them. Of the world's 100 largest economies, 50 are corporations.

Second, corporate interests are increasingly dominating U.S. politics. Corporate leaders have time and money to spend invading, infiltrating, and subverting government institutions. The examples are overwhelming. See Who Will Tell the People : The Betrayal of American Democracy by William Greider (Touchstone Books; 1993, ISBN: 0671867407). Read Tony Dean in the Outdoor News. Read a newspaper! Lets face up to the facts that many of our politicians are puppets of the corporate elite. Some politicians are acquired outright through campaign donations. Some politicians are just business fundamentalists (i.e. analogous to the religious fundamentalists found throughout the world). People used to say that campaign donations had no effects, then pundits said they bought access. Reality, supported with meta-analysis, is that corporations have corrupted the corruptible ruling class.

The third reason is the most ugly of all. The labors of capitalism, the sheep of the country--no not me, I'm a government employee--have been brainwashed by the perverse economic system to work for our modern 'wants'. People on the street wage their ethical debates with currency and the winner is gauged by dollars. For example, a fisherman celebrity dazzled the people at a recent walleye stocking meeting by reducing the stocking issue to an economic lesson. He explained that what the DNR would waste in dollars from excess walleye stocking would be a pittance compared to the lake tourism economy. He was right on the economics. In for stocking one walleye, in for billions. The details of who and what pays the cost are lost, but those costs are sure to be paid by the less fortunate and by the environment. Oh woe are we.

What does this all mean for fish and the aquatic environment? Cats and dogs falling from the sky... sorry. It means the more of the same if scenario #2 is our future: the continuing degradation of fish habitat, overfishing of commercial fish stocks, increasing use of aquaculture as the substitute for collapsed wild fish stocks, and the subjugation of good natural resource policy by policies good for corporate elites.

There is hope. Very bright people predict that scenario #3 is possible. It requires us to start questioning the foundations of our global economic and social systems. I am willing to try--are you? Get involved in your community, vote out your corrupt politicians instead of voting for them every year, start to work towards changing the system. And by the way, good fishing.

* - definition:
corporate socialism *n.* **1.** A political and social unit based upon this form of rule. **2.** A social condition of inequality where influence and respect are based on money. **3.** Corporations possess both political and economic power. **4.** Government not by the people but by CEOs exercised through elected representatives that are puppets to big business.

Of Interest

AFS journals are now on the web. All four journals beginning with the 1998 volumes and are on the web for to everyone to use until December 31, 1998. The web address is: www.afs.allenpress.com. Starting in 1999 each journal will cost members $15 per year.

EPA's Office of Research and Development is making available a report entitled, "Ecological Research Strategy." The report outlines EPA's long-term goals and objectives for ecological research to better understand and manage risks to ecosystems. Ecosystems provide essential resources and services such as food, timber, water storage and contaminant removal. The report outlines research plans for important environmental stressors and problems such as mercury, nitrogen, pesticides, global climate change and algal blooms. Much of the ecological research will be in high priority geographical areas such as the Chesapeake Bay, the Everglades, the Great Lakes and the Gulf of Mexico. The strategy is one of a set being prepared to guide EPA's research in important human health and environmental issues. Other completed strategies address research topics such as drinking water and endocrine disruptors. Copies of the strategies can be obtained through the Internet at: http://www.epa.gov/ORD/WebPubs /final/. Printed copies will be available from ORD's Center for Environmental Research Information by calling 513.569.7562.

Guide to Fisheries Education Resources for Grades K-12 by Alan Crook & Michaela Zint and the Youth Education Committee, Education Section, American Fisheries Society, is now available. To request a copy, please contact: American Fisheries Society, 5410 Grosvenor Lane, Suite 110, Bethesda, MD 20814-2199, Ph: 301.897.8616. This Guide summarizes the results from a review of 51 fisheries education materials for youth. It includes a description of the materials and how they may be obtained as well as a chart comparing various characteristics of these materials. The Guide should be a valuable resource to fisheries professionals and formal and non-formal educators, among others.

Stream Corridor Restoration: Principles, Processes, and Practices
http://www2.hqnet.usda.gov /stream_restoration/
The Natural Resources Conservation Service (NRCS) and fifteen federal agencies have collaborated to create this "common reference for people who are involved in planning, designing, and implementing stream corridor restorations." Preceding the release of the printed version (October 1998), this online version includes full text, color

graphics, a slide show on stream corridors, three case studies from streams in New Mexico and Washington, and a collection of useful links to related sites in education, research techniques, and river management.

News from Around the World
Submitted by John Fields and others

DDT MAY STILL BE HAVING AN IMPACT ON CORMORANTS
Although DDT was banned in the U.S. in the 1970s, results of a 1994-1995 study suggest DDT may still be adversely affecting reproduction of the double-crested cormorant. The study examined the effects of organochlorines, including DDE (a degradation product of DDT) and PCBs (polychlorinated biphenyls), on the reproductive success of double-crested cormorants nesting on Cat Island in southern Green Bay, Wis. This research was undertaken to clarify conflicting evidence about the effects of PCB on cormorant reproduction. Researchers monitored cormorants from egg-laying through the departure of young from the nest. Reduced hatching success of cormorant eggs was related to higer amounts of DDE in eggs and to thinner eggshells. ("Effects of Organochlorine Contaminants on Double-Crested Cormorants Nesting in Green Bay, Wisconsin," by Thomas W. Custer and Christine M. Custer, USGS, LaCrosse, Wis.; Kenneth L. Stromborg, U.S. Fish and Wildlife Service, Green Bay, Wis.; Mark J. Melancon, USGS, Laurel, Md.)

THE TREE SWALLOW AS SENTINAL FOR PCBS IN AQUATIC SEDIMENTS
Tree swallows are an excellent indicator of PCB (polychlorinated biphenyl) contamination in aquatic environments, a recent study suggests. Researchers examined birds exposed to PCBs in field sites with differing concentrations of PCBs as well as in birds exposed in controlled laboratory settings. The study revealed a highly significant correlation between PCB concentrations in tree swallow eggs and nestlings and concentrations found in aquatic sediments. Tree swallows live in many North American habitats, are easily attracted to nestboxes, and because they feed extensively on aquatic insects, can serve as a non-fish-eating sentinel species for contaminant exposure from the aquatic environment. ("Biomarker Response of Tree Swallows to PCBs," by Mark J. Melancon and Amy L Yorks Kutay, USGS, Laurel, Md.)

GLACIAL WATERS POLLUTED WITH BANNED TOXINS
by Ed Struzik, Edmonton Journal
DDT, PCBs and many other banned toxic substances are rearing their ugly heads again in the Canadian environment. This time, it's not peregrine falcon eggs, beluga whale blubber or Inuit mother's milk that's the source of the concern. It's the cool, clear waters flowing out of the glaciers of the Rocky Mountains.

University of Alberta scientist David Schindler says the warmer weather that has caused a rapid meltdown of the Columbia Icefields in recent decades is beginning to unleash layers of airborne pollutants that were deposited and then frozen in the glacial cores decades ago. The icefields are the Prairies' most important water supply. Some of the runoff that is now spilling into Alberta's rivers and lakes is coming from ice and snow that was formed in the years that many toxic chemicals such as DDT, toxaphene and PCBs were in widespread use.

Schindler notes that some of the toxins are showing up in flesh of Rocky Mountain fish. "The immediate message is that we cannot escape our past," Schindler said. "If current climatic trends continue, we may be forced to deal with this for decades or hundreds of years."

PAUL EHRLICH ACCEPTS PRIZE, GIVES ENVIRONMENTAL UPDATE
by David F. Salisbury
The past decade has been critical for the environmental sciences because of developments in three major areas, according to Paul R. Ehrlich, the Bing Professor of Population Studies at Stanford and president of Stanford's Center for Conservation Biology.

Ehrlich reviewed what has happened in those areas - human population growth, impact on the biosphere, and scientific efforts to overcome the problems of achieving sustainable growth - in a lecture he delivered on Sept. 25 in Amsterdam.

The speech was part of the ceremonies presenting Ehrlich with the $125,000 H. P. Heineken Prize for Sciences by the Royal Netherlands Academy of Arts and Sciences. Ehrlich noted the scale of the human enterprise, as measured by energy use, has increased some 20-fold since 1850. In the past five years, it has increased by about 5 percent. One positive development has been a small but significant decline in fertility rates in many nations of the world. Although this is a move in the right direction, Ehrlich said, this decline simply moves the projected date when the population will pass 8 billion from 2019 to 2024. That compares to estimates of the world's long-term carrying capacity of about 2 billion.

Thirty years ago, finding ways to slow and halt population growth was near the top of the agenda of the environmental science community. Curbing runaway consumption may be even more difficult. The most serious population growth in the world is in the United States because of its extremely high levels of consumption. But the consumption patterns in the rich sectors of some developing countries are beginning to rival those in America. For instance, China already has surpassed the U.S. consumption per capita of both pork and eggs, and the 6 million residents of Hong Kong devour 300,000 tons of seafood annually.

Despite a determined campaign of denial by certain elements of industry and of the

science community, it has become increasingly clear that human activities are influencing the global climate. Equally important is growing documentation that human activities are increasingly disrupting the functioning of ecosystems around the world. Humanity is now using more than half of the world's accessible freshwater runoff, and some 43 percent of Earth's vegetated land area has been degraded by human activity.

Environmental scientists are making important gains in understanding the significance of negative environmental trends by finding ways to counter them and helping to move humanity onto a path to sustainability. There is a rapidly growing cooperation between economists and ecologists to find policies that can help preserve humanity's natural capital.

Environmental scientists are realizing that they cannot depend on governments alone to solve the growing environmental crisis. Instead the emphasis is shifting to recruiting the business community into the struggle to achieve a sustainable society. Technological changes such as electronic communications instead of travel and substitution of environmentally more benign energy sources can help solve the world's environmental problems, but changes in lifestyle and human ambitions also will be necessary.

ANTARCTIC OZONE DEPLETION SETS NEW SIZE RECORD

NASA and NOAA satellites show that the Antarctic ozone thinning covers the largest expanse of territory since the depletion developed in the early 1980s. The measurements were obtained this year between mid-August and early October using the Total Ozone Mapping Spectrometer (TOMS) instrument aboard NASA's Earth Probe (TOMS-EP) satellite and the Solar Backscatter Ultraviolet Instrument (SBUV) aboard the NOAA-14 satellite.

"This is the largest Antarctic ozone hole we've ever observed, and it's nearly the deepest," said Dr. Richard McPeters, Principal Investigator for Earth Probe TOMS. Preliminary data from the satellites show that this year's ozone depletion reached a record size of 10.5 million square miles (27.3 million square kilometers) on Sept. 19, 1998. The previous record of 10.0 million square miles was set on Sept. 7, 1996.

The ozone level fell to 90 Dobson units on Sept. 30, 1998. This nearly equals the lowest value ever recorded of 88 Dobson Units seen on Sept. 28, 1994, over Antarctica. Scientists are not concerned that the hole might be growing because they know it is a direct result of unusually cold stratospheric temperatures, though they do not know why it is colder this year. The decrease in ozone, however, could result in more acute solar or ultraviolet radiation exposure in southern Chile and Argentina if the ozone hole were to pass over that region. One of the primary concerns with an ozone hole of this size is that as the hole "breaks up," the ozone-depleted air will diffuse and reduce the overall ozone levels in the mid-latitudes of the southern hemisphere.

These ozone losses are caused by chlorine and bromine compounds released by chlorofluorocarbons (CFCs) and halons. Year-to-year variations of size and depth of the ozone hole depend on the variations in meteorological conditions. Scientists believe that the decrease in Antarctic ozone is attributed to unusually cold (by 5-9 degrees Fahrenheit) temperatures in the southern middle and polar latitudes. "This year was colder than normal and therefore enables greater activation of reactive chlorine that ultimately causes more ozone loss and lower ozone levels," said Dr. Alvin J. Miller of the National Centers for Environmental Prediction (NCEP).

This decrease in ozone was observed earlier than usual with the hole opening in mid-August about two weeks before a typical year. This is consistent with expectations, since chlorine levels have slightly increased since the early 1990s. As a result of international agreements known as the Montreal Protocol on ozone-depleting substances (and its amendments), chlorine levels from CFCs already have peaked in the lower atmosphere and should peak in the Antarctic stratosphere within a few years. As we move into the next century, chlorine-catalyzed ozone losses resulting from CFCs and other chlorine-containing species will be reduced.

"An ozone hole of substantial depth and size is likely to continue to form for the next few years or until the stratospheric chlorine amount drops to its pre-ozone hole values," said Dr. Paul Newman at NASA's Goddard Space Flight Center (GSFC), Greenbelt, MD. "The decrease in chlorine in our atmosphere is analogous to using a small air cleaner to recycle all of the air in a large indoor sports stadium -- it will take a very, very long time." Scientists and others have a keen interest in ozone depletion, given that the increased amounts of ultraviolet radiation that reach the Earth's surface because of ozone loss have the potential to increase the incidence of skin cancer and cataracts in humans, harm some crops, and interfere with aquatic life.

NASA and NOAA instruments have been measuring Antarctic ozone levels since the early 1970s. Since the discovery of the ozone hole in 1985, TOMS and SBUV have been key instruments for monitoring ozone levels over the Earth. Analysis of TOMS and SBUV data have traced in detail the annual development of the Antarctic "ozone hole," a large area of intense ozone depletion that occurs between late August and early October. Analysis of the historical data indicated that the hole has existed since at least 1979. A Dobson unit measures the physical thickness of the ozone layer at the pressure of the Earth's surface. The global average ozone layer thickness is 300 Dobson units, which equals three millimeters or 1/8th of an inch, and while not uniform, averages the thickness of two stacked pennies. In contrast during these annual occurrences, the ozone layer thickness in the ozone hole is about 100 Dobson units (1/25th of an inch or 1 millimeter thick), approximately the thickness of a single dime.

NATIONAL ORGANIZATIONS HAIL NEW CONGRESSIONAL FUNDING PROPOSAL FOR WILDLIFE
Teaming with Wildlife supporters hailed the introduction of The Conservation and Reinvestment Act of 1998 in the U.S. House of Representatives, H.R.4717 and in the Senate, the Reinvestment and Environmental Restoration Act of 1998 S. 2566.

"This legislation is the best opportunity that we will have in our lifetime to fund wildlife conservation programs in this country, " said David Waller, Director of the Georgia Wildlife Resources Division and Chair of the International Association of Fish and Wildlife Agencies Teaming with Wildlife Committee.

The Conservation and Reinvestment Act and Reinvestment and Environmental Restoration Act both will provide funding for three purposes: Title I is for coastal impact assistance; Title II is for land based recreation, Title III is for wildlife conservation. Under Title III, the new legislation directs funds to states to help conserve wildlife populations and their habitats and to provide more opportunities for wildlife education and recreation.

Both bills, in their Title III sections, dedicate a percentage of federal offshore oil and gas revenues to states for wildlife programs. The House bill dedicates 10% and the Senate bill dedicates 7% for wildlife conservation purposes with the total oil and gas revenues expected to be $4-5 billion in the years ahead.

Roger Holmes, President of the International Association of Fish and Wildlife Agencies, and Director of the Minnesota Division of Fish and Wildlife, speaking on behalf of state wildlife agencies across the nation says, "These funds will be used to prevent wildlife from becoming threatened or endangered by protecting habitats critical to their survival, doing needed research and population monitoring, providing wildlife recreational and educational opportunities, all of which will protect the country's rich wildlife heritage for future generations. He further says, "these are all needs that the public has expressed strong support for but for which funds have been extremely limited and in some states even non-existent".

EARTH WARMER NOW THAN IN FIVE CENTURIES
by Lori Valigra, UPI Science News
The average surface temperature of the Earth in the 20th century is warmer than it has been in the past five centuries, a government-funded study says. The first globally-focused study of its kind compiled measurements from 358 boreholes in North America, Europe, Africa and Australia to find the average surface temperature increased about 1 degree Fahrenheit (0.5 degree Celsius) during this century, and about 2 degrees Fahrenheit (1 degree Celsius) over the past five centuries. The scientists who authored the study said the data confirm earlier research that there is indeed global warming, a trend that has remained in dispute among some scientists and industrialists.

"This data should lay to rest the debate over whether the Earth is warming," said Henry Pollack, professor of geophysics at the University of Michigan in Ann Arbor and co-author of the study, which appears in a recent issue of the journal Science. Pollack said the study backs other, direct evidence of global warming including weather measurements, receding glaciers, longer growing seasons, melting permafrost and birds laying eggs earlier.

Pollack and his colleagues compiled measurements from the boreholes to assess temperature changes to the Earth, which acts as a kind of thermal tape recorder. Temperature changes at the Earth's surface propagate slowly downward into rocks beneath its surface and change the ambient thermal conditions. It is similar to the way coffee poured into a cold mug will eventually pass heat through glass to warm the outside of the mug. The boreholes are 200 to 600 meters deep. The scientists are compiling measurements from an additional 300 to 400 boreholes in other areas of the world.

NORTHERN POACHERS NABBED
(Star Tribune)
Conservation officer Lloyd Steen and another officer were checking boats on Lake Kabetogama and found one with three anglers who had 10 northerns on board, one over their limit of three apiece.

An honest mistake? "They became evasive almost immediately," Steen said. "I could tell right away that something was wrong." Steen and the group went back to the resort where the visitors were staying to check for additional fish. Complicating the investigation was that only one of the three spoke English. Two were Polish-Americans from Chicago, and one was a Polish citizen. The one who spoke English had been to the resort several times and knew about Minnesota's fishing regulations, Steen said. Steen checked the resort freezer and found another nine northerns belonging to the trio, who had been fishing the lake for six days. A check of their cabin turned up many more northerns and some walleyes, some in bags frozen, others in chunks in jars being pickled. The final conservative estimate by Steen: 62 northerns, eight walleyes. Most of the northerns were in the 3-to 4-pound range, Steen said; the biggest was around 8 pounds.

Each of the men was fined $1,008, and one spent the night in jail until he could come up with the cash. Then they headed home and are expected to forfeit the cash rather than contest the charges in court Monday. "They went home with no fish and less change," said Steen, who was amazed the three had caught so many northerns. "It actually shocked me. I haven't seen that kind of northern fishing in years."

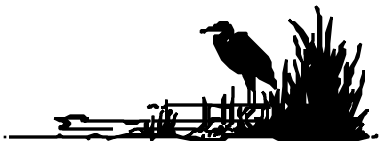
A SYNONYMIZED CHECKLIST OF THE VASCULAR FLORA OF THE UNITED STATES
http://www.csdl.tamu.edu/FLORA/b98/check98.htm
Provided by the Biota of North America

Program (BONAP) in collaboration with the Texas A&M Bioinformatics Working Group (TAMU-BWG), The BONAP Synonymized Checklist is more than a typical checklist. It is a database, offering multiple layers of vascular flora information at several different taxonomic levels. Understanding the organization of the site is central to its utility; to enter the database, users may select options to browse by family name, query by genera or common name, query text (for text strings), or follow links to the Flowering Plant Family Finder (Cronquist classification system). Once inside the database, users can drill down to distribution maps of the selected family, genus, or species. In many cases, species images accompany distribution maps through links to the Vascular Plant Image Gallery. This new resource unifies and deepens the already impressive wealth of TAMU-BWG/BONAP information on vascular flora on the Web. [Scout Report, http://scout.cs.wisc.edu/]

PERCH FISH FARM MAY HELP RED LAKE BAND from Seiche, newsletter of the Minnesota Sea Grant, June 1998
The Red Lake Band's commercial fishery used to pump more than a million dollars annually into the local economy of the Bemidji, Minnesota, area. Overfishing of the walleye and yellow perch found in the Upper and Lower Red Lakes changed all that, causing a voluntary fishing moratorium in 1997 that cost nearly 700 band members their jobs.

"The record 1992-93 perch harvest was worth several million dollars," said tribal fisheries biologist Pat Brown. "There historically has been a huge demand for Red Lake walleye and perch in this region." When the fishery closed, the whole local economy was impacted, not only the reservation, Brown said. The band wants to revitalize their commercial fishery. Along with long-term efforts to recover the wild stocks, they plan to raise perch in tanks. "We have the trained work force, the market, and the processing plant as well as the tradition," said Dave Conner, Red Lake tribal fisheries director. "So we began exploring alternatives, such as aquaculture. When we first started noticing a decline in the fishery a couple of years ago, the Bureau of Indian Affairs recommended we contact Fred Binkowski."

Binkowski, an aquaculture expert with the Wisconsin Sea Grant Institute, has been raising Red Lake perch broodstock at his Milwaukee laboratory since 1995. Binkowski and Conner's work led to the recent signing of an agreement between the band and the University of Wisconsin System's Aquaculture Institute in Milwaukee to study the potential for raising yellow perch at an aquaculture facility to be built on the Red Lake Reservation. For more information, contact Binkowski at 414.382.1700.



MN AND CHIPPEWA TRIBAL FISHING RIGHTS. On Dec. 2, 1998, the U.S. Supreme Court will hear arguments on a dispute between MN and Chippewa Mille Lacs and seven other Bands over whether aboriginal fishing and hunting rights have been extinguished. The lower courts have ruled that the Chippewa retain rights to certain natural resources. [Assoc Press]

CANYON FERRY WALLEYE AND TROUT. In early October 1998, a fisheries task force recommended that the MT Dept. of Fish, Wildlife, and Parks (FWP) manage Canyon Ferry Lake to support both trout and unauthorized walleye. Currently FWP manages Canyon Ferry Lake for trout, considering walleye an illegally introduced species. [Assoc Press]

LAKE TROUT IN YELLOWSTONE LAKE. In early October 1998, National Park Service biologists reported that they had removed more than 7,000 nonindigenous lake trout from Yellowstone Lake thus far in 1998 -- more than triple the combined take in the previous 3 years. [Assoc Press]

ANS FUNDING. On Oct. 5, 1998, the U.S. Fish and Wildlife Service announced that the states of MI, MN, OH, and WI along with the Great Lakes Indian Fish and Wildlife Commission received a combined total of $133,500 to implement approved aquatic nuisance species (ANS) management plans -- the OH and MI state plans and a St. Croix River Basin interstate plan. [U.S. Fish and Wildlife Service press release]

WHIRLING DISEASE. In late September 1998, WY Game and Fish Dept. officials announced that whirling disease, a parasitic infection affecting freshwater fish including cutthroat and rainbow trout, had been confirmed in the Green River drainage for the first time. [Assoc Press]

HOUSATONIC RIVER CLEANUP. On Sept. 24, 1998, General Electric (GE) agreed to a $200 million settlement of environmental claims for chemical releases at its Pittsfield, MA, plant. The settlement addresses claims that polychlorinated biphenyls (PCBs) and other hazardous substances were released form the plant causing injury to natural resources in the Housatonic River downstream from the plant. In addition to contaminant cleanup, GE agreed to pay $15 million in natural resource damages.

LICENSED ANGLERS DECLINE. In late September 1998, the U.S. Fish and Wildlife Service released figures indicating the number of fishing licenses sold nationally declined from 29.9 million in 1996 to 29.3 million in 1997. However, the expenditures for these licenses and permits rose from $447 million in 1996 to $498.4 million in 1997. [U.S. Fish and Wildlife Service press release]

NEW ZEALAND FISHERY MANAGEMENT POLICY. On Sept. 30, 1998, an independent panel reported to New Zealand Biosecurity Minister John Luxton, recommending 1) serious consideration of reducing the proportion of government fishery management and administrative costs recovered from commercial fishing operators, 2) realignment of the roles of government and fishery stakeholders, 3)

implementation of transparent consultation and decision-making processes, and 4) greater devolution of the responsibility for fishery management, including the Quota Management System, to fishery stakeholders. [Dow Jones News]

SUMMER FLOUNDER QUOTA. On Sept. 29, 1998, U.S. District Judge Robert Doumar ruled that Secretary of Commerce failed to conduct an economic impact study prior to setting the 1997 summer flounder quota, and failed to make quota adjustments in a timely manner. The NMFS economic analysis was faulted as failing to consider the effect on fishing communities. Subsequently, Judge Doumar, in his 41-page opinion, allocated an additional 400,000 pounds to NC's fall 1998 quota for summer flounder, and ordered that this additional quota not be counted as an overage to reduce future quotas. On Oct. 9, 1998, the NC Fisheries Association is scheduled to meet in Washington, NC, to develop recommendations on when NC should reopen the flounder fishery. [Assoc Press, Carteret County (NC) News-Times]

SOUTHERN BLUEFIN TUNA. On Sept. 22, 1998, the Australian Embassy in Tokyo released a statement calling the Japanese experimental fishing program fundamentally flawed in design, implementation, and analysis, resulting in no indication that southern bluefin tuna stocks were recovering or that increased catch could be justified. [Dow Jones News]

FISHERY MANAGEMENT PLAN REVISIONS. On Oct. 14, 1998, a coalition of U.S. environmental groups issued statements of concern and evaluations of how several regional fishery management councils had missed the Oct. 11, 1998 deadline to revise fishery management plans to address overfishing, bycatch minimization, and fish habitat protection as well as prepare rebuilding plans for overfished species as directed by the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act. [Center for Marine Conservation press release]

STREPTOCOCCAL INFECTION FROM TILAPIA. On Sept. 26, 1998, scientists reported to the 38th Interscience Conference on Antimicrobial Agents and Chemotherapy in San Diego, CA, that a new streptococcal infection is being transmitted by puncture wounds from sharp dorsal spines during handling or cleaning of tilapia. The bacteria, Streptococcus iniae, causes cellulitis at the wound site. At least 15 cases have been confirmed, most from consumers patronizing Asian grocery stores where live tilapia are marketed. [Fox News]

BC FARMED SALMON REPRODUCING IN THE WILD? In mid-September 1998, BC fishery managers reported that a small number of juvenile Atlantic salmon were found in mid-August 1998 in the Tsitka River on Vancouver Island, allegedly the first verified evidence that these farmed fish may be reproducing in the wild. Critics have questioned this report. [Assoc Press, BC Salmon Farmers Association press release]

FAO FISHERIES STATISTICS FOR 1997. On Sept. 18, 1998, the United Nations Food and Agriculture Organization reported that global fish production was virtually unchanged in 1997 at 122 million metric tons. Japan imports about 30% of the global trade in seafood. Shrimp and tuna are the main seafood commodities traded on international markets, comprising 20% and 11%, respectively, of the total. [Reuters]

SD WALLEYE RESTRICTIONS. On Sept. 9, 1998, officials of the SD Game, Fish, and Parks Commission released recommendations by Game, Fish, and Parks Dept. fishery biologists proposing to restrict walleye fishing on Missouri River reservoirs to manage for a sustainable trophy fishery. Resort owners and fishing guides oppose the proposed restrictions, fearing loss of income. Regulations for the 1999 season were to be adopted by the Commission on Oct. 8, 1998. Emergency restrictions for the remainder of 1998 may also be considered. [Assoc Press]

TAHOE JET SKI BAN UPHELD: ENN reports a federal district court recently upheld a ban on jet skis, set for 6/99. All 18 claims brought against the agency by Jet Ski proponents were dropped. The ban would forbid boats using two-stoke engines, common in most jet skis, from operating on Lake Tahoe. Two-stroke engines commonly discharges 40% of their fuel into the water. League to Save Lake Tahoe attorney Stephan Volker said the decision "clears the way for other regulatory agencies across the country to ban needlessly polluting watercraft from sensitive habitat…" [Greenlines]

ANCIENT FISH FOUND: A 9/24 AP story says a new population of an ancient fish species once thought extinct was discovered off the coast of Sulawesi, Indonesia. The species, called a coelacanth, was first discovered in 1938 off the coast of Madagascar. At the time, scientists believed the species died 65 million years ago. The Indonesian population, discovered by UC Berkeley biologist Mark Erdmann, is only the second known population. Erdmann says future expeditions will find more populations of the rare fish. [Greenlines]

NO PUBLIC INTEREST: A 9/17 Los Angeles Times op-ed by Rodger Schlickeisen of Defenders of Wildlife says 65 of 69 anti-environmental riders attached to appropriations bills by Republicans are evidence the party has undergone a "radical transformation." From the party that "earlier helped enact our most important environmental laws," Republicans have "redefine[d] political conservatism to mean anti-conservation wherever someone wanted to make a buck exploiting nature." Schlickeisen said, "if Republican senators are ever going to show that they still have an environmental conscience, this should be the time." [Greenlines]

FIRST CRIMINAL GREAT LAKES ILLEGAL FISHING CASE FILED

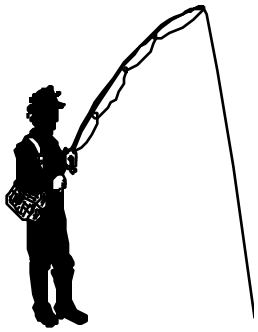
The first criminal, rather than civil, charges for illegally fishing in U.S. Great Lakes waters were filed Monday in U.S. Federal Court in Cleveland, Ohio. A Canadian commercial fisherman from Port Stanley, Ontario, was charged with violating a federal wildlife protection law after illegally harvesting fish from Lake Erie in November 1997. Larry R. Jackson, 60, and L.R. Jackson Fisheries, Ltd., are charged with one felony and one misdemeanor. If convicted, Jackson and his company face up to one year imprisonment and $500,000 in fines. Charges against Jackson result from an unprecedented international investigative effort by the U.S. Coast Guard, the Ontario Ministry of Natural Resources, Ohio Division of Wildlife and the U.S. Fish and Wildlife Service. [ENS]

MEASURING THE GREAT LAKES' CHANGING ECOSYSTEM

The United States and Canada are consulting experts and stakeholders to finalize the first set of clear, comprehensive, objective scientific indicators to measure the Great Lakes ecosystem. 400 delegates attending a three-day State of the Lakes Ecosystem Conference (SOLEC) in Buffalo will advise on which of 92 candidate indicators should be used. Complex problems are facing the Lakes: nutrient pollution, persistent toxic chemicals, habitat destruction, loss of native species and introduction of exotic ones, shoreline alterations and atmospheric deposition of pollutants among them. Paul Horvatin of the U.S. EPA Great Lakes National Program Office said assessing the health of the Great Lakes Basin Ecosystem, containing one fifth of the world's fresh water, 10,000 miles (16,000 km) of shoreline, and 33.5 million residents, is a huge challenge. "Dozens of organizations and thousands of individuals routinely collect data, analyze it, and report on parts of the ecosystem," he said. "Establishing a set of indicators through SOLEC would allow all these pieces to be pulled into an integrated, coherent and comprehensive whole." [ENS]

U.S. & CANADA REPORT ACID RAIN PROGRESS

October 19, 1998 - The United States and Canada each report progress in reducing emissions of sulfur dioxide (SO2) and nitrogen oxides (NOx), ingredients in the formation of acid rain. A report issued jointly by the two governments Friday assesses progress on air quality issues under the 1991 United States/Canada Bilateral Air Quality Agreement. The assessment was conducted by the U.S./Canada Air Quality Committee under the joint chairmanship of Rafe Pomerance, deputy assistant secretary for the Environment and Development at the State Department and Francois Guimont, assistant deputy minister for the Environmental Protection Service of Environment Canada. Yet, despite some progress, acid rain is having a long-term detrimental effect on forests in both countries, the report states. "There is increasing evidence that decades of acid deposition have depleted the natural reserves of basic ions such as calcium and magnesium from forest soils that are naturally poor in bases. Such acidified soils can no longer protect downstream ecosystems from acid rain; waters that drain these forests carry both acids and toxic aluminum into streams, lakes and rivers." It is "extremely difficult" to predict how ecosystems will respond to this challenge over the next decades, the report acknowledges. [ENS]



$250 MILLION TO RESTORE OREGON STREAMS

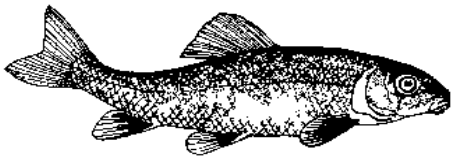
Oregon streams inhabited by endangered salmon and trout will receive protection under new $250 million federal-state conservation partnership Agriculture Secretary Dan Glickman announced recently. Up to 100,000 acres of environmentally sensitive land along 4,000 miles of salmon and trout streams throughout the state will be restored. "This new partnership will protect the habitats of eight different endangered salmon species and two endangered trout species," said Glickman, who was joined by Oregon Governor John Kitzhaber and U.S. Senator Ron Wyden for the announcement. The agreement creates the Oregon Conservation Reserve Enhancement Program, under which land along stream and river banks will be planted with trees to serve as riparian buffers to filter as much as 90 percent of sediment, nutrients, and other contaminants from surface runoff water before it reaches sensitive streams and rivers. They also provide shade to reduce stream temperatures. [ENS]

FISHERIES REFORM DEADLINE PASSES

An October 11th deadline for improving federal management of U.S. fisheries has passed in the Pacific region with little progress in meeting Congress' goal of fundamentally reforming fisheries management, according to a coalition of environmental and commercial fishing groups. "Many of the Pacific's fish populations will be in trouble without major reforms. It is going to require brave management, including the use of non-traditional measures like no-take marine reserves to conserve these fish populations for future generations," said Paul Engelmeyer of the National Audubon Society. "If current high levels of bycatch continue, it will be extremely difficult to rebuild several popular overfished species, including ling cod and Pacific red snapper," said Karen Garrison, senior policy analyst with the Natural Resources Defense Council. [ENS]

WTO BANS TURTLE LAW: A World Trade Organization Court ruled Monday the United States must accept shrimp imports from countries refusing to equip their fleets with turtle-excluder devices, according to a 10/12 AP story. The ruling upheld an April decision favoring shrimping fleets from Malaysia, Thailand, India and Pakistan. The court held a US law seeking to protect endangered sea turtles placed an undue trade restriction on poorer nations. The

decision is a major setback for environmental and trade organizations, who worry it will discourage other countries from restricting trade in products harming endangered species. The article says shrimping without turtle-excluder devices kills approximately 150,000 turtles annually. If the United States continues to enforce its law, it can face trade sanctions from the four countries.



On the Underside

submitted by Charles Anderson, Dennis Schupp, and others

The following is taken from a Florida newspaper:

A man was working on his motorcycle on his patio and his wife was in the house in the kitchen. The man was racing the engine on the motorcycle and somehow, the motorcycle slipped into gear. The man, still holding the handlebars, was dragged through a glass patio door and the motorcycle dumped onto the floor inside the house. The wife, hearing the crash, ran into the dining room, and found her husband laying on the floor, cut and bleeding, the motorcycle laying next to him and the patio door shattered.

The wife ran to the phone and summoned an ambulance. Because they lived on a fairly large hill, the wife went down the several flights of long steps to the street to direct the paramedics to her husband. After the ambulance arrived and transported the husband to the hospital, the wife up righted the motorcycle and pushed it outside. Seeing that gas had spilled on the floor, the wife obtained some papers towels, blotted up the gasoline, and threw the towels in the toilet.

The husband was treated at the hospital and was released to come home. After arriving home, he looked at the shattered patio door and the damage done to his motorcycle. He became despondent, went into the bathroom, sat on the toilet and smoked a cigarette. After finishing the cigarette, he flipped it between his legs into the toilet bowl while still seated.

The wife, who was in the kitchen, heard a loud explosion and her husband screaming. She ran into the bathroom and found her husband laying on the floor. His trousers had been blown away and he was suffering burns on the buttocks, the back of his legs and his groin. The wife again ran to the phone and called for an ambulance. The same ambulance crew was dispatched and the wife met them at the street. The paramedics loaded the husband on the stretcher and began carrying him to the street.

While they were going down the stairs to the street accompanied by the wife, one of the paramedics asked the wife how the husband had burned himself. She told them and the paramedics started laughing so hard, one of them tipped the stretcher and dumped the husband out. He fell down the remaining steps and broke his arm.

Now THAT is a bad day... (Something to remember when you think you are having one.)

Deep Thoughts:

One nice thing about egotists: they don't talk about other people.

Never underestimate the power of stupid people in large groups.

The older you get, the better you realize you were.

I doubt, therefore I might be.

Procrastination is the art of keeping up with yesterday.

Give a man a fish and he will eat for a day. Teach him how to fish, and he will sit in a boat and drink beer all day.

Politics: 'poli' in latin meaning 'many' and 'tics' meaning 'blood-sucking invertebrates'.

Circular Definition: see Definition, Circular.

Originality is the art of concealing your sources.

Paper clips are the larval stage of coat hangers.

A day without sunshine is like night.

The trouble with political jokes is they get elected.

Nothing's impossible for those who don't have to do it.

After four decimal places, nobody cares.

Law of Probable Dispersal: whatever hits the fan, will not be evenly distributed.

Why can you get a pizza to your house faster than an ambulance?

Cowboy Guide to Life:

Never kick a fresh turd on a hot day.

If you get thinkin' you're a person of some influence, try orderin' somebody else's dog around.

Never smack a man who's chewin' tobacco.

Never ask a barber if he thinks you need a haircut.

Good judgement comes from experience, and a lot of that comes from bad judgement.

Always drink upstream from the herd.

Never miss a good chance to shut up.

Tri-Chapter AFS Meeting
January 5-7, 1999
Yacht Club Resort
529 Park Plaza Drive
La Crosse, Wisconsin

Our next Chapter Annual Meeting will be a great event. Please plan on attending this unique Tri-Chapter AFS Meeting. Wisconsin, Minnesota, and Iowa Chapter members will meet in the backwaters of the Mississippi River for scientific presentations on fish and other aquatic resources. The Wisconsin Chapter celebrates its 28th Annual Meeting, and Minnesota its 32nd. About $45 will cover all breaks, social mixers, and the Wednesday evening banquet. Lodging reservations can be made at the Yacht Club ($62/double/night; 608.784.9500).

Tentative Schedule:

January 5th, 1999, Tuesday
Continuing Education Workshop - Fisheries Ethics
Evening Registration and Social
6:00 - 12:00 pm social mixer with beer and snacks

January 6th, 1999, Wednesday
Yacht Club, La Crosse
8:00 - noon: Registration
8:00 - 12:00: Papers
12:00: lunch on your own
1:00 - 4:00: Papers
4:00 - 5:00: Chapter Business Meetings
5:00 - 7:00: Social mixer
6:30 - 8:00: Banquet with Presentation by Dr. Calvin Fremling on the Mississippi River
Come enjoy good food, company, and listen to a great talk.

January 7th, 1999, Thursday
Yacht Club, La Crosse
8:00 - noon: Papers
12:00 - Lunch provided

Attention - Call for Papers (Abstracts)

The deadline for abstracts it is December 1st. Titles and abstracts should be submitted electronically, either mailed on floppy disk or sent via e-mail. Files on floppy disk must be in ASCII, Word, or WordPerfect file format; e-mail submissions can be in those file formats for an attached file or placed in the body of the message. Abstracts, including the author and title lines, are to be no more than 250 words. Include at the top of the file the following information for both title and abstract submissions: author(s), institution, mailing address, phone number, e-mail address, who will present paper and if a student or not, and preference for oral or poster presentation. Persons submitting titles and abstracts will be notified of their receipt. Titles and abstracts should be sent to: Paul Radomski, Minnesota DNR, 1601 Minnesota Drive, Brainerd, MN 56401, email: paul.radomski@dnr.state.mn.us. Talks will be scheduled for 20 minutes (15 minute presentation with 5 minutes for questions). People with questions on title or abstract submission could contact Paul Radomski at 218.828.2246.

Continuing Education Workshop

> "An ethic constitutes an ideal of human behavior. Although it is never perfectly realized in practice, an ethic nonetheless exerts a very real force on practice." J. Baird Callicott, Earth's Insights, 1994

The fine lines of ethics: money, ecology, and conscience

How do economics, ecology, and ethics relate in our professional life?

How practical is Leopold's land ethic in contemporary fisheries management?

How do you respond when asked to do something you know isn't right?

The Minnesota Chapter's Continuing Education Committee is producing a workshop on ethics in the fisheries profession to examine these and other issues. We will examine the role of ethics in fisheries management decisions, and how different ethical frameworks influence the fisheries professional's daily activities. Brian Stenquist will moderate sessions where participants identify ethical challenges experienced in the work place and then break into small groups to discuss them in detail.

Tentative guest speakers will include Christine Moffitt, American Fisheries Society President-Elect

The half-day workshop will be held **January 5, 1999,** in conjunction with the Tri-Chapter meeting at the Yacht Club Resort in LaCrosse, Wisconsin. Registrations will be accepted up to and including the day of the workshop. Registration fee is only $40.

Registration Form

Please register me for the Fisheries Ethics Workshop.

Name _____

Address _____

_____

Phone _____

Registration Fee $40

Amount Enclosed _____

Please send registration form and payment (checks payable to MN Chapter of AFS) to:

Mark Hove
University of Minnesota
Department of Fish and Wildlife
1980 Folwell Avenue
St. Paul, MN 55108

WANTED: OUTDOOR ADVENTURES

Your chapter needs your help. At this years tri-chapter meeting in LaCrosse we will auctioning off hunting and fishing trips sponsored by members of the Wisconsin, Iowa and Minnesota chapters. If you a day or two days to take someone musky fishing in northern Wisconsin, pheasant hunting in central Iowa or smallmouth bass fishing on Lake of the Woods, or any other outdoor (or indoor) adventure, we need your help. These trips will provide members of neighboring chapters opportunities to visit new places, make friends, while generating funds for your state chapter. If you are interested in sponsoring a trip contact Steve Gilbert by November 20, 1998. We need you help to make this program a success. Send your outdoor adventure to Steve Gilbert, 8770 Hwy J, Woodruff, WI 54568, fax 715.356.9174. If you have questions on this great social fund raising promotion call Steve at work 715.358.9229 or at home 715.477.2065.

AFS OUTDOOR ADVENTURES

Adventure Title:_____

Description of Adventure (what is included and what is not, deadlines for arrangements, location, and degree of your involvement, etc.):

_____

_____

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_____

_____

Date Restrictions:_____

Contact Person:_____

Mailing Address: _____

_____

Telephone: _____

Chapter Member: _____ Iowa _____ Minnesota _____Wisconsin

TO ALL MN/AFS MEMBERS:
BALLOT FOR 1999 MN/AFS CHAPTER OFFICERS

Please complete the following ballot and return it by mail if you wish to vote for candidates to serve as Chapter Officers in 1999. Mailed ballots must be received by December 31, 1998. You may also turn in your ballot at the annual meeting in LaCrosse prior to the business meeting.

Melissa T. Drake, Nominating Chair
DNR-Fisheries
1200 Warner Rd
St Paul, MN 55106

President Elect: (vote for one)

_____ Mark Hove University of Minnesota

_____ Jay Hatch Bell Museum of Natural History, University of Minnesota

Secretary-Treasurer (vote for one)

_____ Tom Groshens Minnesota DNR, Bemidji

_____ Tim Brastrup Minnesota DNR, Brainerd

Executive Committee Members at Large: (vote for one in each category)

Federal:	_____	Chantel Cook	USFS, Bemidji
MN DNR:	_____	Jeff Reed	Fisheries Research, Glenwood
	_____	Tom Burri	Fisheries Management, International Falls
Academic:	_____	Andrew Simons	Bell Museum, University of Minnesota
Open:	_____	Brian Borkholder	Fond du Lac Reservation, Cloquet
	_____	Frank Pafco	MN DOT, St. Paul

PRESIDENT-ELECT CANDIDATES:

Jay Hatch

I am currently an Associate Professor at the University of Minnesota, where I work with undergraduate and graduate students interested in the distribution, ecology and conservation of freshwater fishes. My love of fish and the lakes and streams in which they live began over 40 years ago in southwestern Ohio where I grew up. After ignoring my passion for finned critters during almost four years of college, I finally admitted that I was going to be an aquatic field biologist, earned a Masters degree in aquatic ecology, and joined the American Fisheries Society in 1973. Following four years of field work assessing impacts of the electrical power industry on fish populations in midwestern streams and the Great Lakes, I came to the University of Minnesota to work on a Ph.D. studying the life history and ecology of native fishes. I joined the University's faculty in 1982 and have continued studying our less well-known native species. In 1986, I became Associate Curator of Fishes in the Bell Museum of Natural History, where with the financial assistance of the Section of Fisheries, I have directed the development of a 60,000-record fish distribution database that includes data from 1877 to the present.

I have served on our Chapter's River and Stream Committee, twice on our Executive Committee, and I served four years as Secretary of the Early Life History Section at the national level. Although I have been disenchanted with the parent society at times, I believe strongly in its goals. As more and more stakeholders with very diverse views are making their voices heard, it becomes increasingly important for organizations like AFS to be among those voices. It behooves us here in Minnesota to be known by the general public; for us to be thought of as an information resource for local issues that arise; for us to be thought of as an ally to any group interested in the protection and thoughtful management of our resources. I would like to see our chapter make strides in that direction.

Mark Hove

Fish, streams and lakes have interested me since second grade when I began watching fish and aquatic insects in an aquarium. Throughout childhood my interests in fishes broadened to include fishing, drawing underwater scenes, and observing fish behavior. After completing an undergraduate degree in fisheries at the University of Minnesota (UMN) and a master's degree at Virginia Polytechnic Institute and State University (VPI), I was fortunate to begin work as a research biologist at the University of Minnesota. During my eight years of employment at the university I've enjoyed conducting research on freshwater mussel conservation, watershed bioassessment, gamefish aquaculture, museum collection and database management, and fish genetics.

I have grown to appreciate the variety of demands placed upon fisheries professionals through experiences I've had with AFS since 1983. Attending Minnesota Chapter meetings was a valuable addition to my education while attending the UMN. In Virginia I had the privilege of working with the energetic chapter at VPI. I assisted with some of the chapter's efforts including: rehabilitation of a local stream, production of annual fishing tournaments, and publication of the Southern Division AFS newsletter. I also chaired the Public Display Aquarium and Earth Day committees, and in 1989-90 served as chapter Vice-President. After returning to Minnesota I re-involved myself with the Minnesota Chapter through regular participation in annual meetings, Co-Chairing the Continuing Education Committee (starting in '94), and recently, representing the chapter at Minnesota's Fishing Roundtable.

I would be honored to continue serving the chapter as President-elect. I see within our membership a diversity of resources that can be brought together to promote growth and development of our chapter and our members. To facilitate this I will: (1) continue our chapter's strong tradition of providing education opportunities for our membership through insightful paper presentations at annual meetings and useful continuing education courses, (2) increase statewide visibility of fisheries issues through chapter participation in organizations with similar interests (e.g. Fishing Roundtable, Local Water Planners Conference, and Soil and Water Conservation Society) and through our active Public Awareness Committee, (3) support development of position papers on important fisheries issues, and (4) promote student participation in our chapter as an investment for the future.

There are two ways to become a member: (1) fill out this form and send it in with seven dollars, or (2) pay your Minnesota Chapter dues through the American Fisheries Society (the Chapter gets reimbursed).

1998 Dues Application

1998 Minnesota Chapter dues.....$7.00 _____

Total Enclosed..... _____

Send Check (pay to the order of: Minnesota Chapter AFS) and this form to:

Kevin Stauffer
DNR-Fisheries
2115 Birchmont Beach Rd NE
Bemidji, MN 56601

Name: _____

Address: _____

_____

_____

_____

Phone: _____

e-mail: _____ **(for email notices)**

Are you a member of AFS (parent society)?_____ yes _____ no. Membership Number_____
(AFS membership number is located on your *Fisheries* mailing label)

Affiliation: _____
(DNR, Federal Government, Academic, Tribal, or Private)

Check if you are a Student: _____

Check if you rather receive ***RYBA*** electronically:_____

Minnesota Chapter Officers

President	Bruce Vondracek	bcv@finsandfur.fw.umn.edu	612.624.3421; fax 612.625.5299
President-elect	Paul Radomski	paul.radomski@dnr.state.mn.us	218.828.2246; fax 218.828.6022
Past President	Tim Goeman	tim.goeman@dnr.state.mn.us	218.828.2256
Secretary-Treasurer	Kevin Stauffer	kevin.stauffer@dnr.state.mn.us	218.755.3959

Excom Members

Minnesota DNR	Steve Hirsch	steve.hirsch@dnr.state.mn.us	651.296.0791
Federal	Ann Schneider	ann_schneider@mail.fws.gov	612.725.3596
Academic	Loren Miller	lmm@fw.umn.edu	612.624.1271
Open	Richard Bruesewitz	rick.bruesewitz@dnr.state.mn.us	218.927.3752

Committee Chairs

Awards	Julie Westerlund	julie.westerlund@dnr.state.mn.us	651.772.7938
Continuing Education	Mark Hove Laurie Sovell	Mark.Hove@fw.umn.edu laurie.sovell@pca.mn.state.us	612.624.3019 651.296.8005
Fisheries Information Network	Fred Henson	fred.henson@dnr.state.mn.us	320.839.2656
Long Range Planning	Open	---	---
Membership:	Doug Kingsley	doug.kingsley@dnr.state.mn.us	218.732.4153
Nominations	Melissa Drake	melissa.drake@dnr.state.mn.us	651.772.7966
Procedure Manual	Brad Parsons	fishgeek@runestone.net	612.634.4573
Public Awareness	Linda Bylander	linda.bylander@dnr.state.mn.us	218.828.6044
Resolutions	Todd Marwitz	todd.marwitz@dnr.state.mn.us	612.345.3365
Rivers and Streams NCD rep	Dennis Topp	ourfish@means.net	218.634.2522
RYBA Editor - Newsletter	Paul Radomski Loren Miller	paul.radomski@dnr.state.mn.us lmm@fw.umn.edu	218.828.2246 612.624.1271
Students	Carl Ruetz	crr@fw.umn.edu	612.624.3785
Webmaster	Jingyin Li	jyl@fw.umn.edu	612.624.2720

Internet

Minnesota Chapter	www.fw.umn.edu/mnafs
North Central Division	www.fw.umn.edu/ncdafs
American Fisheries Society	www.fisheries.org

Minnesota Chapter AFS
Attn: Paul Radomski
1601 Minnesota Drive
Brainerd, MN 56401

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Abstract Deadline is December 1st