



# RYBA

Newsletter of the Minnesota Chapter of the American Fisheries Society

Year 1999 No. 3  
September Issue

## President's Message

by Paul Radomski

On vacation.

## INSIDE

Committee Reports.....	3
Upcoming Events.....	8
Contributions: Letters and Commentary.....	8
Interesting Articles and Publications.....	9
Editorial.....	9
Of Interest.....	10
On the Underside.....	12

## Quote of the Issue

"Tradition is what you resort to when you don't have the time or the money to do it right." Kurt Herbert Adler.

## Officer and Excom Reports

### President-Elect - by Mark Hove

See Call for Papers in this **RYBA**.

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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.

### Open - by Brian Borkholder

The second year of Tribal harvest in the 1837 Ceded Territory is underway. Currently, the six Wisconsin Bands along with the Mille Lacs and Fond du Lac Bands have speared and netted 42,300 pounds of walleye from Mille Lacs Lake from their 55,000 pound declaration. Additional species harvested from Mille Lacs includes, to date, 2900 pounds of northern pike (11,500 pounds allocated) and 538 pounds of yellow perch (101,000 pounds allocated). As of the 7 July, DNR creel surveys estimate state harvest on Mille Lacs to be 415,000 pounds of walleye (495,000 pounds allocated to the State), 12,600 pounds of northern pike, and 206,000 pounds of yellow perch. Five inland lakes were also speared this past spring, with tribal fishermen harvesting a total of 508.5 pounds of walleye from all five lakes.

This past spring, the electrofishing assessments by the Bands produced adult walleye population estimates on Green and Goose Lakes, both in Chisago County. The Bands also performed standard net assessments (gill and trap nets) on Green and Goose Lakes, and on East and West Rush Lakes.

The 1837 Fisheries Technical Committee met again in July, with representatives from both the Bands and State.

Discussions focused on tribal harvest on lakes without recent net assessments, and on addressing potential harvest overruns by the Mille Lacs recreational fishery. Creel survey reports were given and data exchanged. The Bands reported that the fall walleye YOY sampling schedule would be finalized and sent to the State by mid August. The group then discussed the timeline for exchanging Mille Lacs data, and immediately the modelers began drooling in anticipation. By alas, they'll have to wait until December to begin playing with the

numbers. I want to say that since I've been involved with this committee, I've been very pleased with it's progress. It's not easy getting two groups with different perspectives and who represent two completely different constituencies to work together in complete harmony. While there have been some very heated debates in the past, for the most part we've been able to come to agreement on the issues. I really appreciate the integrity, patience, and hard work shown by Jack Wingate, Rick Bruesewitz, and Paul Radomski. These three individuals have been able to keep the group focused on the issues at hand despite the emotional discussions.

In the very near future, we can all begin preparing for Phase 2 of the 1854 Ceded Territory litigation. In Phase 1, the Judge decided that the three Bands, Fond du Lac, Bois Forte, and Grand Portage, retained hunting, fishing, and gathering rights in the Arrowhead region of the state. Phase 2 will soon begin, which, near as I can tell, involves the scope of these rights and how the Bands will regulate their own activities. "Business as usual" will probably be undergoing some changes as the State and Bands enter a new relationship based upon cooperation for the management of the various resources in this area.

### Federal - by Chantel Cook

#### *Summer Storms*

Heavy summer rainfall has caused record high water levels on many lakes in northern Minnesota. On July 4, 1999 a massive wind and rain storm hit Northeastern Minnesota, causing significant impacts to the Chippewa and Superior National Forests and Boundary Waters Canoe Area Wilderness. The heavy rain and high winds resulted in significant erosion on Cass Lake and Lake Winnibigoshish, which were already

plagued by high water levels. Several recent shoreline stabilization projects were damaged in this and subsequent storm events.

Additional sporadic damage occurred throughout the Chippewa National Forest, including approximately 1000 acres of timber blowdown in the Walker (Cass County) and Deer River (Itasca County) areas, spillway and structural damage to Knutson Dam on Cass Lake, and erosion and loss of access to private homes on National Forest System lands.

On the Superior National Forest, approximately 350,000 acres of forest, including lands within the Boundary Waters Canoe Area Wilderness (BWCAW), received some damage from the July 4th storm. The storm toppled most of the trees in an area 10-12 miles wide and 35 miles long in the Gunflint area of the BWCAW, blocking portages and destroying campsites.

President Clinton signed a Federal Declaration of Emergency on Wednesday, July 26, 1999 to assist in the recovery efforts from this significant weather event. The Chippewa and Superior National Forests are developing a Storm Recovery Plan and proposing a Storm Recovery Team to coordinate projects for the next one to two years.

Recovery efforts on the Chippewa National Forest include salvage sales to reduce the build up of fuels in areas at risk for potential wildfire, inspection and repair to Knutson Dam, road and trail clearing and reconstruction, shoreline sandbagging, and preserving long term shoreline stabilization investments along the Mississippi River system. All portages and 95% of the campsites in the Superior's BWCAW are now cleared and open. A fuels assessment and wildfire prevention are top priorities for future recovery efforts.

#### *Forest Plan Revision*

The Chippewa and Superior National Forests are in the midst of revising their Forest Plans. The Planning Team has been developing a preliminary set of alternatives for managing National Forest

System lands and defining the associated management area direction. During late May and early June, Forest Service employees worked on further defining the alternatives, management area descriptions and maps.

The next step is to share this information with other government agencies - tribal, state and county. Several meetings will be held with these groups during July to insure management coordination between all land ownerships within the Forest boundary.

Later this year the public will have an opportunity to review the preliminary set of alternatives at one of several open houses to be held at District offices and other locations around Minnesota. The primary objectives of the open houses are for the public to see how their previous comments have been used in formulating the alternatives, to provide suggestions for changes to the preliminary set of alternatives, and to ensure that the alternatives are understandable.

The Chippewa and Superior National Forests will be mailing out a package of information about three weeks before the open houses. The information will include a list of times and locations for the open houses, descriptions and maps of the preliminary set of alternatives, and a narrative of the management areas. For more information, contact Duane Lula, Forest Planner (218) 626-4383 or dlula/r9\_superior@fs.fed.us.

#### *Updating the Regional Forester's Sensitive Species List*

This past June and July, the Eastern Region of the Forest Service began the process of updating the Regional Forester Sensitive Species (RFSS) List. The update to the 1994 list is necessary to meet the agency's responsibilities to avoid trends toward federal listing under the Endangered Species Act and to maintain viability under the National Forest Management Act. While Threatened and Endangered Species are assigned by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, each Region of the Forest Service, in collaboration with States and

The Nature Conservancy, designates Sensitive Species. The Endangered Species Act (ESA) requires federal agencies to ". . . implement a program to conserve fish, wildlife and plants . . . to insure their actions do not jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat." The National Forest Management Act (NFMA) requires National Forests to maintain viable populations of "native and desired nonnative vertebrate species . . . well distributed in the planning area."

The Eastern Region Sensitive Species List was last updated in 1994. Forest Service Biologists, Botanists and Ecologists recently screened potential sensitive species using a risk evaluation process. In early August, Sensitive Species Lists will be posted on the internet at [www.fs.fed.us/r9](http://www.fs.fed.us/r9). The public is invited to review and comment on the species proposed for the Eastern Region Regional Forester Sensitive Species List. Comments must be received by September 2, 1999. A final Regional Forester Sensitive Species List is planned to be released this fall.

#### *American Heritage Rivers*

In February 1997, President Clinton announced the American Heritage Rivers Initiative in his State of the Union address. Fifty-eight community leaders along the Upper Mississippi River, from Bemidji, MN, to St. Louis, MO, formed a task force which later nominated the Upper Mississippi for consideration as an American Heritage River. In July, 1998, the river was designated as one of 14 American Heritage Rivers. This designation will draw national recognition for the river's historical, cultural, and natural heritage, and will result in increased support for community-based programs & projects throughout the Upper Mississippi River. Designated communities in the Upper Mississippi River watershed will receive streamlined access to Federal resources, in order to carry out economic revitalization, natural resource and water quality protection, historic & cultural preservation, and education and training. The Chippewa

National Forest, which is bisected by the Mississippi River and its reservoirs (Cass Lake and Lake Winnibigoshish), is a key participant in the American Heritage Rivers initiative.

### **DNR - by Jeff Reed**

It is no secret that the belt tightening continues within the Section of Fisheries after the legislature ran out of time to act on a fee increase this past session. Securing funding for the Division of Fish and Wildlife will be a top priority in the next session. The chapter and its members will need to play a vital role in making sure our resources are adequately protected- stay tuned!

Other than the budget talk that appears in the popular press on a regular basis, perhaps the hottest news stories in the fish world this summer have been the red-hot walleye action on Mille Lacs and the discovery of what appears to be a good year-class of walleye on Red Lake. Former EXCOM reps Tom Jones and Rick Brusewitz have been keeping tabs on the Mille Lacs harvest.

New research projects initiated this year include former student representative Gerry Grant's look at gill net encounter of walleyes. Gerry is quite literally looking at how numbers and sizes of walleye which encounter, contact and are retained by gill nets with the use of some high tech submerged video cameras. He hopes to fine tune Charles Anderson's gill net selectivity model which will allow managers to make more accurate estimates of walleye abundance. Donna Dustin is designing two stream habitat improvement projects in the Detroit Lakes area and will be evaluating their effectiveness in increasing walleye fry production in the improved stream reaches. I am examining what role lakeshore development has on nest site selection by largemouth bass and black crappie. I am also evaluating an EPA method for assessing littoral and riparian habitat.

In other Glenwood happenings, Howard Fullhart, a graduate student from South Dakota State University is undertaking a

companion project to Brad Parson's larval black crappie study. Howard is examining the role age-1 and older yellow perch play in the trophic dynamics of our "centrarchid" lakes. Howard is advised by Dr. Dave Willis.

### **Academic - by Andrew Simons**

The Bell Museum Fish collection is serving as the repository for the County Biological Survey and surveys done by the Minnesota Pollution Control Agency. These materials will be sorted, identified and catalogued this fall. This fall we also intend to continue adding non-Minnesota records to the computerized catalog and to start computerizing the herpetology collection.

We have responded to a number of requests for information regarding fish distributions in Minnesota as well as providing specimens for research and educational purposes.

## **Committee Reports**

### **Awards Committee - by Julie Westerlund**

It's been a busy summer, but the Awards Committee has not yet received any nominations for awards to be given in 2000. Please send in your nominations now! There is plenty of great fisheries - related work being done in this state - let's recognize those individuals and groups!

The Award of Excellence recognizes either long term excellence in the fishery profession or outstanding performance in an activity that furthers the goals of the Minnesota Chapter of the AFS. The recipient of the award may be any individual or group, and is not limited to AFS membership. To make a nomination, please submit one to two pages that describes how and why the nominee is worthy of the award, and include a description of the individual or group's accomplishments or contribution to the field of fishery science.

Special Recognition Awards may be

presented to individuals who have made special contributions to the chapter. This includes personal time and services or special projects that advance the goals of the chapter. Eligibility extends to all chapter members in good standing. Nominations should describe the special service to the chapter in one or two paragraphs.

Nominations will be accepted from any Minnesota Chapter member between now and December. Please send nominations to Julie Westerlund at 1200 Warner Road, St. Paul, MN 55106 or [julie.westerlund@dnr.state.mn.us](mailto:julie.westerlund@dnr.state.mn.us).

### **Long Range Planning - by Henry VanOffelen**

Financial Survey results:

Thanks to all members who provided input into what the Chapter should do with the surplus money that has been saved over the past few years. A total of 38 responses were received via email or conventional mail. Seventeen respondents (45%) indicated that the money should be used to fund an annual undergraduate scholarship. An additional, eight respondents (21%) indicated that they wanted to fund a best student paper award. There was little support for funding a non-profit organization. Many people also had specific suggestions that they wanted to have considered for funding. These specific written suggestions are listed below. Members are encouraged to continue to think and discuss these ideas prior to the annual meeting. The EXCOM will make some specific recommendations for the membership to vote on at the annual meeting.

Add another best paper award (have student and non-student); AFS 2000 donation; Invite speakers to the annual meeting; Bring in top-notch speakers to annual meetings; Sponsor and publish a worthwhile symposium; Pay for outside speaker at annual meeting (human dimensions emphasis); Help sponsor publication of symposium; Develop a trust fund for major initiatives; Set-up a competitive research grant; RIM donation for habitat match; Matching grant for fish habitat restoration; Make sure to keep

rainy day fund; Travel grant to Midwest or parent society; Student travel to Midwest; Student travel grants chapter and midwest; Scholarship fund for minorities; Scholarship for non-traditional students; Scholarship for native americans; Grad student scholarship; Ear mark some money to buy AFS journal for a University with limited funds (e.g., in Russia or Mexico); Reduce meeting fees; Audio and video spots that we pay for to get out good messages; Buy some good PR for the AFS; Fund continuing education of working members; Reduce cost of continuing education; Outreach to fisheries employees; Sponsor social activity in conjunction with annual meeting; Reduce annual meeting registration fee; Lower chapter dues; Do not get rid of the money just because it is there.

#### **Membership Committee - by Doug Kingsley**

The membership committee has not seen much action. We have received only one new membership since the last newsletter. As reported in the last newsletter, students will not be receiving this or future editions of the newsletter unless they choose to pay chapter membership dues. They can access the newsletter from the chapter's website. Remember to renew chapter dues either directly to Tim Brastrup or through the parent society if you haven't already done so.

#### **Resolutions Committee - by Todd Marwitz**

The proposed resolution urging the U.S. Fish and Wildlife Service to place a greater emphasis on fisheries within the Upper Mississippi River Wildlife and Fish Refuge was submitted to the Chapter membership for a vote in the May issue of **RYBA**. The voting members of the Minnesota Chapter of the AFS were unanimous in their support of the resolution. A letter was drafted and sent, along with the resolution, to the manager of the Upper Mississippi River Wildlife and Fish Refuge. The letter emphasized our Chapter's primary mission of promoting the conservation and wise use of fish and their habitat in

the State of Minnesota, and our desire to join the Iowa and Wisconsin Chapters of the AFS in urging a greater fisheries emphasis to the overall management of the Upper Mississippi River Wildlife and Fish Refuge. A special thanks goes out to all the members that took the time and effort to vote on this particular resolution.

Reminder: For a resolution to receive committee attention, it should be submitted with background information necessary for evaluation of its accuracy and importance. Resolutions seeking action from the parent Society must carry national or international significance. Please feel free to e-mail or snail-mail any resolution to me at [todd.marwitz@dnr.state.mn.us](mailto:todd.marwitz@dnr.state.mn.us) or 1801 S. Oak St., Lake City, MN 55041.

#### **FWLA Delegate - by Don Pereira and Bruce Vondracek**

Below is the legislative-year end report from FWLA which summarizes important legislative action: When the Legislature came into town last January, the FWLA had high hopes of getting some things done to improve, protect, and enhance the natural resources of this state. The outdoor community was fresh off a 77% ballot box victory on the right to hunt and fish. We had a new governor, a Republican controlled House, and the traditional Democrat controlled Senate.

Things turned sour quickly. The Governor's budget not only did not contain a hunting, trapping, and fishing license fee increase, but it did not provide the general fund dollars that were part of the deal of 1997, when fishing licenses were raised 15% and matched with \$3 million in general funds. In addition, no general fund money was provided for a walleye stocking initiative. That number was projected to be \$1 million, by both the Special Senate Subcommittee that worked on the issue last year and the January Fishing Roundtable. Budget bills were put together in both the House and the Senate. The Senate bill contained a 3:1 match of general funds to license fee increases, but not before two votes were taken in committee to get it added. New Deputy DNR Commissioner Steve

Morse indicated the Governor's support for a 3:1 match. The House bill provided for a 2:1 match.

The Senate Environment and Natural Resources Budget bill reached the floor first. Without the Governor's written support, the Senate was reluctant to increase fees with such a large surplus in the bank, and took the license fee language out of the bill on a voice vote. Not too long after the Senate vote the Governor sent a letter to key Legislators indicating support for a 3:1 match.

Next the House took up their version of the Budget Bill. This time an amendment by a freshman Republican passed 99-33 to take the license fee out of the bill. Why? Because we have this 'big surplus' and 'how can we raise fees, because fees are taxes!'

By the time the Budget bill came out of conference committee, the bill contained \$3.1 million in new general funds for the DNR and another \$1 million for the walleye stocking initiative. But not license fee increases. Why? The Governor was not on board. This bill passed both the House and Senate on Saturday, the second to the last day of the session.

During the last week of the legislative session Senator Lessard amended a license fee increase to the FWLA's 'little blaze orange bill' introduced for the Minnesota Trappers Association (MTA). This bill had become the Omnibus Game & Fish Policy Bill. This happens every year. Some little bill becomes the vehicle for a number of smaller miscellaneous game and fish policy bills and amendments-- mostly amendments. The Senate bill was small compared to the House Omnibus bill. It contained language dealing with falconers and turkey land. It passed the Senate easily!

The House companion lay in the House Ways & Means Committee. Finally, on the last Thursday of the session, a meeting was called to add the license fee increase to the blaze orange/Omnibus bill and send it to the House floor. This bill lay on the House Calendar all day Friday, all day Saturday, and as it turned out, all

day Monday--the last day of the 1999 session.

An effort was organized to pass other bills in the Senate before midnight. Senator Lessard took the lead and offered an amendment to a little game and fish bill. The bill passed with 35 votes--34 are need to pass a bill in the Senate. This action took place some time after 10 PM. Two hours left and the clock was running!

Meanwhile back at the House, the body was finally moving its big bills. Minute by minute big bills and small bills were passing off the Speaker's desk. Minute by minute the license fee bill, now over from the Senate, remained on the desk. As the clock moved its way toward Midnight, we knew we were not going to make it. When the House adjourned at the stroke of twelve, a feeling of defeat and frustration set in! We had become victims of the clock! A number of bills were left behind, and we had ownership in one of them.

Just when you think the story is over, the Governor steps up to the plate and line item vetoes some of the limited successes we had on the Hill.

Now for the good news and the bad news.

Bills that didn't pass in 1999 (highlighting only fishing-related legislation): Increases in subagents take for selling licenses, Restrictions of underwater cameras used while fishing, Initiative & Referendum, Drainage law changes, No net loss of private lands in certain counties, Setting up a Department of Game & Fish, Conveying Consolidated Conservation Lands to certain counties, Dedication of a portion of the state sales tax for game & fish fund (Missouri Plan), Exempting lottery tickets for the sales in order to provide additional revenue to the ETF, Using all, or a portion of, the current sales revenue generated from lottery ticket sales for the game and fish fund, 24-Hour only fishing license using the lottery machines to issue, Hunting and fishing license increase for senior citizens.

Bills that passed but were line item vetoed (highlighting only fishing-related legislation): Game and fish fund general fund (\$1,565,000) for the second year, Walleye Stocking general funds (\$500,000) for the second year, Trout Stream protection general funds (\$1,200,000), Ditch assessment payments to three counties (\$232,000).

Bills that passed in 1999 (highlighting only fishing-related legislation): \$500,000 from the general fund for walleye stocking for the first year, \$1,565,000 in extra general fund dollars to the game & fish fund for the first year, Electronic licensing the DNR was instructed to get the telephone and Internet transaction program going first, \$50,000 to plan for a fishing museum in Little Falls, \$25,000 for an actuarial study of the fee structure for lifetime hunting and fishing licenses, \$2.8 million for RIM, including game and fish, critical habitat, and wetlands, \$42 million in LCMR projects, many of which affect the outdoors community directly, Inclusion of hunting and fishing license prohibition in cases of child support non-payment, Rescind the Commissioner of the DNR's order of January 1999 designating certain Con Con lands as wildlife management areas, Three year licenses for PWC reduced to \$25. Licenses on boats over 19 feet increased by 50%, Allowing Red Lake Indian Reservation to possess and ship wild animals.

Where do we go from here?

The 2000 legislative session begins in early February. The legislature is expected to be in session for only 6-7 weeks next year.

The Governor has said there will not be any supplemental budget bills next year. One good thing about the Governor's line item actions and message was that he appears to be taking a leadership role in calling for a license fee increase next session. That is the leadership we need badly.

The FWLA will continue to push for a dedication of sales tax to be used for

conservation type programs, especially game and fish related. This so-called 'Missouri Plan' was introduced this year and was discussed a number of times on how to fund the game and fish fund. We will ask the Governor to lead this proposal. Next session is the year that the Senate considers constitutional amendments. The FWLA believes the constitutional dedication of a portion of sales tax is far more important than Initiative & Referendum, which the House has already passed and the Senate is expected to act on next year.

In 1998, the Minnesota voters supported both the constitutional protection to hunt and fish and the extension of the Environmental Trust Fund with overwhelming 77% votes. The FWLA believes strongly that the voters deserve the opportunity to decide on the 'Minnesota Plan', whether of not to constitutionally dedicate a new revenue stream to natural resources management, agricultural and habitat programs like RIM, and environmental needs, such as water quality. With the Governor's leadership, we can get this proposal passed.

Send Don Periera (651) 772-7962 or Bruce Vondracek (612) 624-8748 your comments so we can pass the information on to the FWLA. The FWLA would appreciate your input and comments.

### **Rivers and Streams NCD Rep - by Dennis Topp**

The upcoming symposium on dam removal and fish passage around dams continues to be the biggest item on the agenda of the Rivers and Streams Technical Committee. The symposium is being held during the Midwest Fish and Wildlife Conference this December in Chicago. Information on the symposium is available through a link at the NCD home page, or from me. Speaking of dam modifications and dam removal, there is a lot of recent activity in the Red River watershed. There are eight lowhead dams in U.S. waters of the Red River. Each of these dams has been a barrier to fish passage. The Midtown Dam in Moorhead-Fargo was modified last year to accommodate fish passage and to alleviate

safety concerns. The modification involves strategically placing boulders below the dam to form a series of rapids and pools. This modification has been very well received in the community, and has opened the door for additional dam modification on the Red River.

Work is ready to start on the Kidder dam at Breckenridge-Wahpeton, which is going to be modified using a design similar to the Midtown dam work. The initial engineering study has been completed for a plan to provide similar modifications to the Moorhead North dam and the Moorhead South dam.

Officials in North Dakota and Minnesota, as well as representatives of the Corps of Engineers, are also discussing ways to address fish passage, safety, and erosion problems associated with dams in East Grand Forks-Grand Forks and Drayton, North Dakota.

There also appears to be momentum to remove the other two dams on the main stem Red River, at Christine and Hickson.

In addition to the work being done on these Red River dams, several dams on Red River tributaries have been modified or removed, and there are plans to render this treatment to others as well.

It is encouraging to see the focus on fisheries issues associated with these dams. There are obviously many ecological benefits to removing or modifying the dams, and reconnecting several hundred miles of river. Since there are literally hundreds of dams in the Red River watershed, hopefully the snowball will keep rolling. Luther Aadland, MN DNR Ecological Services in Fergus Falls, is involved with each of the Red River dam projects, and is a good source for information on this topic.

### **Salmonid NCD TC Rep - by Pat Rivers**

The NCD Salmonid Technical Committee held its summer meeting July 13-14 in LaCrosse, WI. The following talks were given at the last meeting: Overview of Minnesota lake trout

research since 1980 with management implications- G. Siessennop  
A coldwater IBI for the Upper Midwest- N. Mundahl

Evaluation of a brown trout fingerling stocking program- B. Moody  
History of an experimental regulation- P. Rivers

Evaluation of the "large trout" stocking program in the Black Hills- J. Erickson  
Eagle Creek stream restoration project- J. Moeckel

Trout regulation change proposal- J. Dexter

Measuring habitat quality in streams with stream survey variables- B. Thorn  
Preliminary results of wild (feral) brown trout stocking in Northeast Wisconsin streams- L. Meyers

A Trout and Trout Angler Workshop is scheduled for July 6-8, 2000 and will be held at the Radisson Hotel in LaCrosse WI.

The committee discussed ideas on fund-raising as well as ways to use this funding. One of the more popular ideas was to fund a publication. Topics for publication included the Midwest 2000 symposium (Native trout within their range), proceedings from the Trout and Trout Angler Workshop, or gray literature from state agencies within the NCD.

Mark Tonello (MI DNR) reported that whirling disease was discovered again at a private trout farm on the North Branch of the Manistee River (Whirling disease was first found in Michigan in 1968 at three private hatcheries). That facility sold fish to 36 other farms and sites, and 5 more trout farms were then found to be infected. Preliminarily, whirling disease may also be in the Little Manistee river, which is Michigan's wild brood stock river for the Michigan winter-run strain steelhead (Indiana and Ohio also stock these fish). Fish from the Little Manistee were sampled again in July and the results are not yet known. MI DNR is in the process of sampling 38-48 systems this and next summer to learn the full extent of infected waters. No infected waters in the upper peninsula have been found, and the rivers listed

above are basically in the northern half of the lower peninsula. However, these infections obviously could have Great-Lakes wide repercussions, especially if steelhead become infected. The one positive thing is that although the disease is being detected, MI DNR is not seeing any associated mortality. According to Tonello, "The fish really don't seem to be affected all that much. We are simply not seeing any external symptoms."

News From Southeastern Minnesota:  
The final stage of the Whitewater River Restoration project is underway. One section of the river was diverted into historic and newly created channel in late August. A larger diversion located upstream will be diverted in September and all but complete the project.

Slimy sculpin (*Cottus cognatus*) from Cold Spring Brook in Wabasha county may be used for re-introducing sculpin to Lake City area streams. The Cold Spring Brook sculpin were disease tested in March and found negative for kidney disease and viruses. Candidate streams for re-introduction and other source streams are being discussed.

## **Minutes of Chapter Meetings**

see next **RYBA** for fall EXCOM minutes.

## **Division Technical Committees**

### **Centrarchid Technical Committee by Mike McInerny**

The summer meeting of the North Central Division (NCD) Centrarchid Technical Committee (CTC) occurred on 27-28 July at the Ak-Sar-Ben Aquarium near Gretna, NE. The meeting was attended by 35 people from seven states. The meeting started off with Don Gablehouse (NE) giving a presentation on centrarchid fisheries in Nebraska. Overall, Nebraska anglers rank crappies rank third, largemouth bass fourth,

bluegills fifth, and smallmouth bass seventh in preference of all species fished in Nebraska waters. However, crappies rank first and bluegills rank second in numbers of fish harvested. Distribution of centrarchid fisheries has increased through time because numerous impoundments, pits, and ponds have been built and stocked with centrarchids.

A panel of CTC representatives presented summaries on past and current regulations in their respective states. Historical trends among states were fairly similar as those in Minnesota. Presently, crappie and bluegill creel limits among NCD states range from 15 crappie and 25 bluegill to no limits on either species. Most states have applied more restrictive harvest regulations of either lower creel limits, minimum length limits, or both in some of their waters. Creel limits on black basses range from four to six, and several states have statewide minimum length limits. Nearly all states have more restrictive harvest regulations on black basses ranging from reduced creel, longer minimum length, or no kill. Most managers at the meeting feel that slot limits on largemouth bass do not work because few anglers keep largemouth bass < 12 inches.

I presented a paper on growth and growth patterns of black crappie in southern Minnesota lakes. First-year growth was faster in more productive lakes, but the number of years to reach 200 mm was not affected by first-year growth. Growth after the first year was faster in lakes with low (< 3.8 per lift) gill net catch per lift (CPUE) of black crappie than in lakes with high (> 3.8 per lift) gill net CPUE. Growth was not linked with growing season. Black crappies exhibit two basic growth patterns, sigmoidal and nonsigmoidal. Sigmoidal growth describes patterns where the second- or third-year growth increment exceeds the first-year increment, and nonsigmoidal growth describes patterns where the first-year increment is the longest (von Bertalanffy growth). Growth patterns were not associated with lake productivity, but sigmoidal growth occurred in lakes with lower gill net

CPUE of black crappie.

Lynn Davignon (KS) presented an evaluation of a 10-in minimum length limit regulation on crappie in a Kansas reservoir. The crappie fishery exhibited symptoms of overexploitation (low trap net CPUE, crappies reaching 10-in in less than 3 yr, few crappie older than 3) before the length limit was implemented. During the length limit restriction, growth of crappie < 10 inches decreased and trap net CPUE of crappie < 10 inches increased; results suggesting stockpiling below 10 inches. After three years the regulation was lifted and the fishery became similar to pre-regulation, which was more desirable.

Keith Hurley (NE) presented another evaluation of a 10-in minimum length limit on crappies in two Nebraska reservoirs. The crappie fisheries in both reservoirs also exhibited symptoms of overexploitation. After implementation of the length limit, trap net CPUE increased, growth decreased, and annual mortality decreased. Furthermore, potential yield decreased because natural mortality was still too high, and fishing pressure declined. Thus, this regulation did not provide desirable results. A limited harvest has been proposed which will allow unrestricted crappie fishing for one month during the winter. Because winter anglers keep smaller crappies than summer anglers, this regulation is designed to reduce density of smaller crappie and increase growth of the survivors.

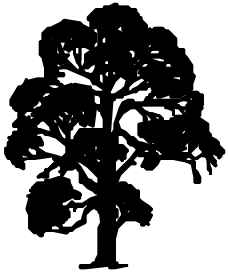
Richard Zweifel (MO), a student at the University of Missouri-Columbia, presented a paper showing that C-max, the maximum prey eaten at a given water temperature, decreased with increasing water temperature and increasing length of white crappie. He also reported that size structure of white crappie were inversely correlated with the number of days they are exposed to water temperature > 27 oC in Missouri impoundments.

Jake Allman (MO) presented a paper on an easy way to plant water willows as habitat for fish in reservoirs. Except for

Minnesota, Wisconsin, and Michigan, most fisheries in NCD states occur in manmade water bodies (i.e., reservoirs, impoundments, and pits). These water bodies often lack vegetation; therefore substantial efforts, such as water willow planting, have been made to create habitat.

Randy Winter (NE) provided an overview of the Nebraska Aquatic Habitat Program. This was a program initiated by the Nebraska Game, Fish, and Parks who identified a need to improve habitat in their fishing waters. This program was accomplished by providing to interested public information on the benefits of habitat to fish. Then 8 to 12 of these interested individuals from each region of the state were randomly 'drafted' to attend an all-expense paid conference. Discussion and consensus on project priorities, budgets, funding mechanisms, and legislative savvy were made at this conference. Because of the grassroots nature of this project, the Nebraska legislature passed a law requiring all anglers to purchase a \$5 aquatic habitat stamp in addition to their fishing license. This stamp plus Sport Fishing Restoration funds and some proceeds from lotteries provides about \$2.5 million annually for habitat creation and maintenance.

I was unable to attend the second day of this meeting which included a business meeting and several more presentations. Topics addressed at the business meeting included symposium participation at AFS meetings, posters, and appointment of a new chair. Jeff Jackson (NE) gave a paper on crappie and bluegill catches in 0.5 and 0.625" mesh trap nets, Craig Paukert (SD), an SDSU graduate student, provided information on bluegill populations in Nebraska Sandhills lakes, Travis Horton (KS) presented data on spotted bass movements, and Jake Allman (MO) gave a paper on a restricted harvest regulation on bluegill in a heavily fished lake near Kansas City, MO. I should be receiving meeting notes on the highlights of the business meeting and the second-day presentations, which I will provide in the next issue of **RYBA**.



## Upcoming Events

September 6-16, 1999. The Twelfth International Association of Phytoplankton Taxonomy and Ecology Workshop (IAP). The first part of the workshop (6-10 Sept) will be held at the University of Manitoba Field Station (Delta Marsh), Manitoba, Canada. The second half (10-16 Sept) will be held at the Department of Fisheries and Oceans Experimental Lakes Area Field Station, Ontario, Canada.

October 18-22, 1999. Predicting Species Occurrences: Issues Of Scale And Accuracy: A symposium. Snowbird, Utah. Contact Kathy Merk (208-885-2750; kmerk@uidaho.edu).

October 24-27, 1999. 4th Microcomputer Applications in Fish and Wildlife Conference. Stateline, NV. Contact Doug Beard 608.267.9427.

December 6-8, 1999. Symposium: Effects Of Dam Removal On Aquatic Ecosystems. Sponsored By American Fisheries Society, North Central Division Rivers and Streams Technical Committee [The MN Chapter contributed money to this Technical Committee for this symposium]. 61st Midwest Fish and Wildlife Conference Chicago, Illinois.

January 4-6, 2000. 29th Annual WI Chapter AFS Meeting. Manitowoc, WI. Contact Lee Meyers 920.492.5834.

January 19-21, 2000. 33rd Annual Minnesota Chapter AFS meeting. Meeting with The Wildlife Society. Contact Mark Hove 612.624.3019. See call for papers in this **RYBA**.

July 9-12. WATERSHED 2000

Vancouver, British Columbia, Canada  
Phone: 800.666.0206 or  
703.684.2452, E-mail: msc@wef.org).

August 20-24, 2000. 130th Annual AFS Meeting. St. Louis, MO. Contact Betsy Fritz 301.897.8616.



## Contributions: Letters and Commentary

### Should We Change Our Approach to Fish Management? My Personal Opinion. By Jack (Paul) Wingate

For most of the years that we have been managing freshwater sport fisheries, we have operated on the principle that angling was self-regulating and would not lead to the collapse of a fish population. Bag limits and seasons have been used for a similar length of time, but often with little biological basis for the numbers and dates that were used.

With the advent of better roads and angling equipment as well as new technology, we now have a very mobile, effective angler who is able to go to where the fishing is the best at that particular moment. Additionally, we have had a large increase in anglers as well as an increase in fishing trips per angler. On many waters throughout the state, this increased angling pressure equates to more variability in recruitment, a decrease in catch rate, and a decrease in the size of angler caught fish. It appears to me that we will be unable to continue to manage by self-regulation if we are to supply the quality fishery that our constituents desire.

I suggest that we explore options for managing the sport fishery in a different way. The option that I would suggest would be to manage all of our lakes for a safe harvest level. On Mille Lacs and

other water bodies within the 1837 Ceded Territory, we are managing for F0.1 which, for walleye, equates to approximately 25% exploitation of those fish over 12 inches in length. This exploitation rate appears to be conservative enough to sustain a quality fishery into the foreseeable future. Management for this goal should reduce the variability in recruitment and improve the fish sizes that are caught by the angler.

By managing in this manner, there becomes a direct correlation between our lake and creel surveys and the regulation that is placed on a particular water body. Because of the large number of lakes that we manage, it probably means that we would have to group lakes based on their lake class. This will mean that some lakes may be harvested at levels above or below the F0.1 level because of the variability in the lake's productivity.

Some will argue that this will unnecessarily complicate the regulations for anglers as they move from one area of the state to another. However, we already have some of this in place with experimental regulations and border water regulations. Additionally, hunters have for years adapted quite successfully to far more complex regulations than those applied to anglers. I assume that anglers are as intelligent as hunters. Those in the business of selling fish through a resort will argue that their clients will not like the more complicated regulations and may actually stay away. We have seen on many of our experimental regulations waters that angling pressure has actually increased as the anglers perceive they will be able to catch more quality sized fish.

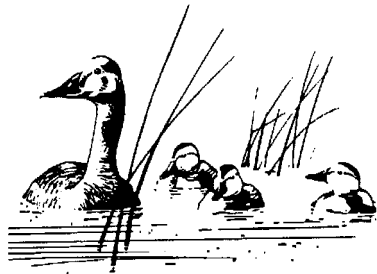
Managing for a safe harvest level will be more complicated than the current way we are doing business. It will certainly complicate life for an angler. It will complicate life for the business communities that make their living from recreational fishing. By managing in this different way, we will have an opportunity to provide quality fishing well into the 21<sup>st</sup> century in spite of increased fishing pressure and further degradation of aquatic habitat.



## Interesting Articles and Publications

Fishery Stock Assessment Models, Edited by F. Funk et al. University of Alaska Sea Grant. 1998. Proceedings of the International Symposium on Fish Stock Assessment Models for the 21st Century. ISBN 1-56612-057-8. Fifty-five peer-reviewed papers on modeling--enough to make you cry in excitement.

Cod: A biography of the fish that changed the world. Mark Kurlansky. 1997. Walker Publishing. ISBN 0-8027-1326-2. Well written book that is a quick read. Fun and very interesting. This history lesson, that was so vividly expressed in this book, was not taught in any class I had. Read this book and find out how the exploitation of cod shaped nations and people.



## Editorial

*Declaration of Dependence*  
July 4, 1999

The Unanimous Declaration of Earth Inhabitants (Minus One).

When, in the course of ecological events, it becomes necessary for life forms to dissolve the bonds which have connected them with another, and to assume among the powers of the Earth, the separate and equal station to which the laws of nature entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel

them to the separation.

We hold these truths to be self-evident, that all organisms evolved equally, that they are endowed through evolution with certain unalienable rights, that among these are life, liberty and the pursuit of happiness. That to secure these rights, relationships are instituted among organisms, deriving their just powers from the consent of the governed. That whenever any form of relationship becomes destructive to these ends, it is the right of all life forms to alter or to abolish it, and to institute new relationships, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their safety and happiness. Prudence, indeed, will dictate that relationships long established should not be changed for light and transient causes; and accordingly all experience hath shown that we are more disposed to suffer, while evils are sufferable, than to right ourselves by abolishing the forms to which we are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same object evinces a design to reduce them under absolute despotism, it is their right, it is their duty, to throw off such relationships, and to provide new guards for their future security. --Such has been the patient sufferance of all creatures on Earth; and such is now the necessity which constrains them to alter their former systems of relationship. The recent history of Humanity is a history of repeated injuries and usurpations, all having in direct object the establishment of an absolute tyranny over these organisms. To prove this, let facts be submitted to a candid world.

He has refused his assent to nature's laws, the most wholesome and necessary for the public good.

He has forbidden his governors to pass laws of immediate and pressing importance, unless suspended in their operation till his assent should be obtained; and when so suspended, he has utterly neglected to attend to them.

He has refused to pass other laws for the

accommodation of large districts of wilderness, a right inestimable to them and formidable to tyrants only.

He has dissolved representative houses repeatedly, for opposing with manly firmness his invasions on the rights of the other Earth inhabitants.

He has endeavored to overpopulate; for that purpose obstructing the laws for naturalization and evolution, and raising the conditions of new appropriations of lands.

He has obstructed the administration of justice, by refusing his assent to natural laws for establishing justice.

He has erected a multitude of new offices, and sent hither swarms of officers to harass organisms, and eat out their substance.

He has kept among us, in times of peace, standing armies without the consent of other species.

He has tried to subject us to a jurisdiction foreign to our constitution, and unacknowledged by our laws:

For quartering large bodies of armed and ignorant troops among us:

For cutting off energy transfer with all parts of the world:

For imposing over exploitation on us:

For depriving us in many cases, of the benefits of clean air and water:

For transporting us beyond seas to be exploited for pretended offenses:

For taking away our fellow organisms forever (extinction), ignoring our most valuable laws, and altering fundamentally the forms of our relationships:

For suspending our earlier natural order, and declaring themselves invested with power to regulate us in all cases whatsoever.

He has abdicated relationships here, by declaring some of us useless and waging war against us.

He has plundered our seas, ravaged our coasts, burned our forests, and destroyed the lives of countless species on the scale

of a large asteroid impact.

He is at this time transporting large armies of foreign (genetically engineered) mercenaries and chemical agents to complete the works of death, desolation and tyranny, already begun with circumstances of cruelty and perfidy scarcely paralleled in the most barbarous ages, and totally unworthy the head of an intelligent organism.

He has constrained fellow Earth organisms taken captive on the high seas and distant lands to bear arms against other ecosystems, to become the executioners of organisms that have not coevolved.

He has produced domesticates to weaken us.

In every stage of these oppressions we have petitioned for redress in the most humble terms: our repeated petitions have been answered only by repeated injury. A prince, whose character is thus marked by every act which may define a tyrant, is unfit to be the ruler of a free Earth.

Nor have we been wanting in attention to our Earth brethren. We have warned Humanity from time to time of attempts by their leaders to extend an unwarrantable jurisdiction over us. We have reminded them of the circumstances of our evolution and settlement here. We have appealed to their native justice and magnanimity, and we have conjured them by the ties of our common kindred to disavow these usurpations, which, would inevitably interrupt our connections and correspondence. We must, therefore, acquiesce in the necessity, which denounces our separation, and hold them enemies in war, in peace friends.

We, therefore, the representatives of the planet Earth, in General Congress, assembled, appealing to the Supreme Judge of the world for the rectitude of our intentions, do, in the name, and by the authority of the good life forms of these ecosystems, solemnly publish and declare, that these ecosystems are, and of right ought to be free and dependent environments; that they are absolved

from all allegiance to Humanity, and that all connection between them and this Solar System, is and ought to be totally dissolved; and that as free and dependent organisms, they have full power to levy war, conclude peace, contract alliances, establish energy transfer, and to do all other acts and things which dependent ecosystems may of right do. And for the support of this declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other our lives, our fortunes and our sacred honor.

Signed Bacteria to Blue Whale



## Of Interest

**American Fisheries Society Appoints New Executive Director**  
Bethesda, Md.--Ghassan ("Gus") Rassam, a recognized leader in the online publishing and nonprofit association communities, has been appointed the fifth executive director of the American Fisheries Society (AFS). As such, Rassam will head the world's largest and oldest organization of fisheries professionals at a time when the Society is launching a five-year strategic plan that focuses on fisheries and aquatic stewardship, professional development, and a greatly expanded communications program.

"Gus joins AFS at an auspicious time," said Robert Kendall, acting director during the executive search. "Moving the Society toward the goals of our ambitious strategic plan will require great management skill and an ability to keep AFS on a sound and growing financial base, qualities Gus has shown abundantly in his previous positions. His skills match up well with our institutional

needs as we embark on a new era of fisheries management, science, and conservation. I am very pleased with his appointment."

Barbara Knuth, Cornell University professor and member of the AFS Search Committee, agreed, saying she was impressed by Rassam's "great potential to address all three major goals in the new strategic plan as well as bring his considerable expertise to bear on a related goal, financial security." Rassam trained in the geosciences, earning a master's degree at Miami University (Ohio) and a Ph.D at the University of Minnesota. He has been a Fulbright scholar and did graduate study at the Sorbonne University in Paris. Prior to moving into the association management field, Rassam spent several decades as a petroleum geologist, database developer, and teacher in the United States and France. In 1987 he merged his scientific background and communications skills when he became director of marketing and public information, and assistant director of publications with the American Geophysical Union. Among his responsibilities were electronic publications, a weekly newspaper, a monthly magazine for nonprofessionals, and public affairs programs.

In 1994 Rassam moved to the Optical Society of America, a professional society devoted to the fields of fiber optics and laser technology. There, he served as director of publications and was part of a three-person team that ran the \$18-million organization for a year. His development of the organization's electronic journal publication, book publishing and marketing programs brought him wide recognition in the science publishing community and proved his ability to raise significant funds for major projects aimed at advancing the profession and science. Ultimately, Rassam took charge of marketing, customer relations, program development, and several other key activities. Among his many accomplishments was the institution of an international development program.

Rassam also has shared both his

communications and scientific expertise with numerous government and professional entities. He chaired the Commission on Geological Documentation of the International Union of Geological Sciences and served on the executive board of the International Council for Scientific and Technical Information. He also was president of the Association of Earth Science Editors and was a member of the governing board and executive committee of the American Institute of Physics.

"Gus has an exceptionally strong background in managing large and complex professional societies like AFS," said Society President Robert Carline. "This is the type of experience that AFS vitally needs to ensure our continued vitality and ability to promote fisheries conservation."

**EPA Upgrades Watershed Indicators**  
EPA has recently upgraded its Index of Watershed Indicators, an Internet-based compilation of 16 primary indicators used to characterize the health of the nation's waters. The new version updates six of the original fifteen indicators and adds atmospheric deposition estimates for nitrogen. The Index provides watershed assessments through available information on surface and ground waters, drinking water sources, wetlands, runoff, fish advisories, contaminated sediments as well as other indicators. EPA first released the index as a public right-to-know initiative in October 1997. The new version 1.3 is available at: <http://www.epa.gov/surf2/iwi/update/>

**The Wetlands Resource Centre**  
<http://www.wetlands.ca/wetcentre/>  
Provided by the Canada-based WetNet Project, a consortium of organizations dedicated to wetland conservation and research in the Americas, The Wetlands Resource Centre was created to act as a hub for Internet resources on wetlands and shorebirds in the Western Hemisphere. The site offers access to resources via "modules," sections devoted to topics with a concentration of resources. Information is currently bimodal (i.e., shorebirds or Canadian wetlands), but further topics will be covered as new

information becomes available. At present, the site links users to Canada's Federal Policy on Wetland Conservation, Maps and Wetland Regions of Canada (and accompanying Wetland Inventory Data), The Western Hemisphere Shorebird Reserve Network, The Shorebird Handbook, and a host of related sites.

**The AFS Introduced Fish Section** provides members with an array of information on many aspects of introduced fish. Information is provided through their newsletter (3 issues a year), organization and sponsorship of symposia. The section also presents \$150 to the student having the best poster or presentation on introduced aquatic species at the AFS annual meeting. Membership in the section is \$5 and should be sent to Charles Brown, USDA, APHIS, 4700 River Rd, Unit 149, Riverside, MD 20737-1238.

**Northeast Wetland Flora**  
<http://www.npwrc.usgs.gov/resource/1999/neflor/neflor.htm>  
The US Department of Agriculture's (USDA) Soil Conservation Service branch in Fort Worth, Texas produced the Southern Wetland Flora: Field Office Guide to Plant Species, and the USDA Natural Resource Conservation Service's Northeast National Technical Center in Chester, Pennsylvania produced the Northeast Wetland Flora. Both guides contain black and white illustrations, full species descriptions (with color photographs, illustrations, and small distribution maps), illustrated glossaries, an alphabetical species list (each provides common and scientific names for 300 species of vascular plants), and a key to generalized plant groups. Both guides may be browsed online or downloaded in .zip format.

**Great Lakes Ecopages -- EPA**  
<http://www.epa.gov/glnpo/ecopage.html>  
Maintained by the Environmental Protection Agency, the recently updated Great Lakes Ecopages offer information on ecology, restoration, and protection of Great Lakes ecosystems. Eight sections form the backbone of the site and cover

basic ecological information on the Great Lakes (and oak savannas), case studies, green landscaping, habitat demonstration grants, and a photo essay; the science and technology section is currently under construction. Although the amount and depth of information varies by section, certain sections include a wealth of information, and the overall collection of material is very informative.

**NOAA and University of Michigan Scientists Discover Tumors in Freshwater Zooplankton**  
Zooplankton, near the bottom of marine and freshwater food chains, can develop tumors like those of higher life forms, according to scientists at the Commerce Department's National Oceanic and Atmospheric Administration's Great Lakes Environmental Research Laboratory and the University of Michigan Center for Great Lakes and Aquatic Sciences in Ann Arbor, Michigan. Images of the zooplankton showing the growths discussed above are available at: <ftp://ftp.glerl.noaa.gov/publications/>

**Status and Trends of the Nation's Biological Resources -- USGS [pdf]**  
<http://biology.usgs.gov/s+t/SNT/index.htm>  
The online version of this recent two-volume book from the US Geological Surveys provides "the first large-scale assessment of the health of the nation's plants, animals, and ecosystems and is intended for use by managers, scientists, policy makers, and the general public." The Status and Trends of the Nation's Biological Resources is organized into two parts: Factors Affecting Biological Resources (abiotic and biotic) and Regional Trends in Biological Resources (presented by region). Each of the 22 chapters is authored by an impressive list of experts within each field. The entire document, which is illustrated with color photographs, may be viewed online; interested users may also download the introduction (.pdf format). A glossary, indices, and appendix of common/scientific names follow the main text.

**Salamanders May One Day Monitor**

**Degradation In Small Streams**

Lungless salamanders may join fish and stream bugs as indicators of the environmental health of small streams, according to Penn State researchers. "In general, amphibians, are thought to be good ecological indicators and frogs and toads are often used for this purpose," says Gian L. Rocco, Ph.D. candidate in wildlife and fisheries science. "Stream dwelling salamander populations are considered generally more stable than temporary pool breeding amphibians and may offer another biological tool to assess stream habitat quality, especially where fish and bugs are absent." Contact: A'ndrea Elyse Messer aem1@psu.edu 814-865-9481 Penn State.



**News from Around the World  
Submitted by Cynthia Suchman  
and others**

**IL Aquaculture Development.** On Sept. 2, 1999, IL Governor George Ryan announced a new program providing \$1 million per year assistance for aquaculture research and development for the next 10 years. [MSNBC]

**Tribal Aquaculture.** On Aug. 17-20, 1999, the Univ. of WI-Milwaukee's Aquaculture Center held a 3-day training session for members of the Red Lake Band of Chippewa Indians on raising yellow perch in a recirculating aquaculture system. A commercial-scale aquaculture system has been installed on the Red Lake Reservation in MN. [NOAA press release]

**Professional Bass Fishing Hall of Fame.** On Sept. 2, 1999, AR Governor Mike Huckabee provided \$15,000 in state funds from the governor's discretionary fund to match the first \$15,000 in private donations to build a Professional Bass Fishing Hall of Fame on Lake Hamilton,

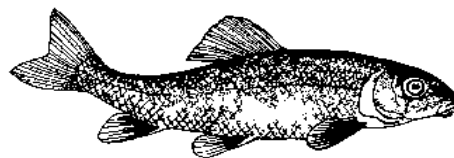
AR.[Hot Springs Sentinel-Record]

**Michigan Treaty Fisheries.** On Sept. 1, 1999, the State of Michigan and 5 Ottawa and Chippewa tribes are scheduled to file plans in federal court (Kalamazoo, MI) for negotiating a new agreement for fishing rights in parts of the Great Lakes. The current agreement expires in May 2000. [Assoc Press]

**Lake Davis Pike.** In mid-August 1999, invited northern pike experts from AK, WI, and ID toured CA waters in an effort to develop alternative approaches to eliminating pike from Lake Davis. [Assoc Press]

**Giant Salvinia.** On Aug. 5, 1999, U.S. Fish and Wildlife Service biologists collected giant salvinia, a harmful non-native aquatic plant, from the lower Colorado River. On Aug. 10, 1999, a rapid response team for aquatic nuisance species was formed to deal with the discovery. On Aug. 13, 1999, an aerial survey found giant salvinia was found growing in irrigation ditches on the CA side of the lower Colorado River near Palo Verde, CA.

**Spinier Water Flea.** In early August 1999, NY Dept. of Environmental Conservation officials confirmed the invasion of at least 3 of the Finger Lakes (Seneca, Canandaigua, and Cayuga) by Cercophagis pengoi, the spinier water flea. This invasive species was identified in Lake Ontario in 1998 and arrived from eastern Europe via ship ballast water. Transport to the Finger Lakes was likely in sport angler's boats. [Syracuse Herald Newspapers]



**On the Underside  
submitted by Charles Anderson,  
Dennis Schupp, Tim Goeman and  
others**

Do not walk behind me, for I may not

lead. Do not walk ahead of me, for I may not follow. Do not walk beside me, either. Just leave me alone.

The journey of a thousand miles begins with a broken fan belt and a leaky tire.

It's a small world. So you gotta use your elbows a lot.

Never test the depth of the water with both feet.

It is far more impressive when others discover your good qualities without your help.

If you haven't much education you must use your brain.

Who gossips to you will gossip of you.

When someone says, "Do you want my opinion?" -- it's always a negative one.

The difference between ordinary and extraordinary is that little extra.

God, grant me patience....and I want it right now!

How to figure the cost of living: Take your income and add 10%.

Definition: alarm clock - a device for waking up people who don't have small children.

Strange but true: Fat chance and slim chance mean the same thing.

The amount of sleep required by the average person is about five minutes more.

Misquotations are the only quotations that are never misquoted.

**Courtroom Funnies**

The following are from a little book called "Disorder in the Court." They're things people actually said in court, word for word.

Q: What is your date of birth?

A: July fifteenth.

Q: What year?

A: Every year.

Q: What gear were you in at the moment of the crash impact?

A: Gucci sweats and Reeboks.

Q: This myasthenia gravis-does it affect your memory at all?

A: Yes.

Q: And in what ways does it affect your memory?

A: I forget.

Q: You forget. Can you give us an example of something that you've forgotten?

Q: All your responses must be oral, OK? What school did you go to?

A: Oral.

Q: How old is your son--the one living with you.

A: Thirty-eight or thirty-five, I can't remember which.

Q: How long has he lived with you?

A: Forty-five years.

Q: What was the first thing your husband said to you when he woke that morning?

A: He said, "Where am I, Cathy?"

Q: And why did that upset you ?

A: My name is Susan.

Q: And where was the location of the accident?

A: Approximately milepost 499.

Q: And where is milepost 499?

A: Probably between milepost 498 and 500.

Q: Sir, what is your IQ?

A: Well, I can see pretty well, I think.

Q: Did you blow your horn or anything?

A: After the accident?

Q: Before the accident.

A: Sure, I played for ten years. I even went to school for it.

Q: Do you know if your daughter has ever been involved in the voodoo occult?

A: We both do.

Q: Voodoo?

A: We do.

Q: You do?

A: Yes, voodoo.

Q: Trooper, when you stopped the defendant, were your red and blue lights flashing?

A: Yes.

Q: Did the defendant say anything when she got out of her car?

A: Yes, sir.

Q: What did she say?

A: What disco am I at?

Recently reported in the Massachusetts Bar Association Lawyers journal, the following are questions actually asked of witnesses by attorneys during trials and, in certain cases, the responses given by insightful witnesses:

Question only

Q: Now doctor, isn't it true that when a person dies in his sleep, he doesn't know about it until the next morning?

Q: The youngest son, the twenty-year old, how old is he?

Q: Were you present when your picture was taken?

Q: Was it you or your younger brother who was killed in the war?

Q: Did he kill you?

Q: How far apart were the vehicles at the time of the collision?

Q: You were there until the time you left, is that true?

Q: How many times have you committed suicide?

Q: Are you qualified to give a urine sample?

Q: So the date of conception (of the baby) was August 8th?

A: Yes.

Q: And what were you doing at that time?

Q: She had three children, right?

A: Yes.

Q: How many were boys?

A: None.

Q: Were there any girls?

Q: You say the stairs went down to the basement?

A: Yes.

Q: And these stairs, did they go up also?

Q: Mr. Slatery, you went on a rather elaborate honeymoon, didn't you?

A: I went to Europe, sir.

Q: And you took your new wife?

Q: How was your first marriage terminated?

A: By death.

Q: And by whose death was it terminated?

Save the best for last~!!!!

Q: Doctor, how many autopsies have you performed on dead people?

A: All my autopsies are performed on dead people.

Q: Do you recall the time that you examined the body?

A: The autopsy started around 8:30 p.m.

Q: And Mr. Dennington was dead at the time ?

A: No, he was sitting on the table wondering why I was doing an autopsy.

Q: Doctor, before you performed the autopsy, did you check for a pulse?

A: No.

Q: Did you check for blood pressure?

A: No.

Q: Did you check for breathing?

A: No.

Q: So, then it is possible that the patient was alive when you began the autopsy?

A: No.

Q: How can you be so sure, Doctor?

A: Because his brain was sitting on my desk in a jar.

Q: But could the patient have still been alive nevertheless?

A: It is possible that he could have been alive and practicing law somewhere.



*President's Note: Please review this revised paper and come prepared to discuss it at the annual meeting. The EXCOM will vote on a recommendation to accept or reject at it's fall meeting and it will present it to the full membership for discussion and a vote.*

**Minnesota Chapter of the American Fisheries Society**  
**FINAL DRAFT**  
**Position Statement**  
**on**  
**Fish Stocking**

Larry W. Kallemeyn  
U. S. Geological Survey  
Biological Resources Division

Tom Jones  
Minnesota Department of Natural Resources  
Section of Fisheries

**Issue Definition**

The transfer of fish from one body of water to another has probably occurred for as long as man has had vessels that could hold water. Fish stocking has been used as a management tool in Minnesota since the late 1800's. For many of the state's citizens, the practice is synonymous with fisheries management. It is commonly viewed as a panacea for restoring or maintaining angling quality. Only in the last few decades, however, has stocking been critically examined. Questions relative to fish stocking have become increasingly complex and in some instances, controversial as our knowledge and understanding of its effects on fishes and aquatic ecosystems have expanded (Moyle et al. 1986; Li and Moyle 1993). Today, factors such as genetic conservation, biodiversity, and inter- and intra-specific interactions are increasingly major components of stocking programs, be they for the reintroduction of an extirpated species or the "enhancement" of existing populations. Continuing debates over the role of such factors and even the appropriateness of fish stocking has led to several symposia, including two on the uses and effects of cultured fish that were sponsored by the American Fisheries Society (Stroud 1986; Schramm and Piper 1995). In 1991, the Zoological Education Trust, a branch of the Canadian Society of Zoology, sponsored a symposium that addressed biological issues related to fish introductions and the regulatory framework that controls such introductions (Billington and Hebert 1991).

**Historical Overview**

Minnesota, like many states, has a long and mixed history in regard to fish stocking with both sanctioned and unsanctioned stocking having occurred. Brook trout (*Salvelinus fontinalis*), a native species, was first stocked in southeastern Minnesota in 1878, and by 1888, nonnative brown trout (*Salmo trutta*) and rainbow trout (*Oncorhynchus mykiss*) had been widely distributed (Thorn et al. 1997). Walleye (*Stizostedion vitreum*) propagation in Minnesota started in 1887 (Cobb 1923). Common carp (*Cyprinus carpio*) were introduced into Minnesota in 1883 (Eddy and Underhill 1974). A steelhead strain of rainbow trout was introduced from the Pacific coast into Lake Superior in 1895 (Lawrie and Rahrer 1972). Nico and Fuller (1999) reported that 46 nonindigenous fish taxa (i.e., species, hybrids, unidentified forms) have been introduced into Minnesota, some intentionally and some accidentally. Their count of nonindigenous fish taxa, which they defined as an individual, group, or population that was introduced by humans into an area outside its native range or ecosystem, included established, extirpated, and non-established species.

As a result of intentional introductions, Minnesota now has naturalized or self-sustaining populations of rainbow trout, brown trout, chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), and pink salmon (*O. korbuscha*). These salmonid introductions are generally considered to be successes despite the known adverse effects of the brown trout on brook trout (Waters 1983). Opinions differ on the continued stocking of chinook salmon in Lake Superior. Some anglers view this as a success while others believe their presence may be inhibiting the recovery of native lake trout (*Salvelinus namaycush*) and lake herring (*Coregonus artedii*). The Minnesota Department of Natural Resources's (MNDNR) stream trout lake program, which primarily supports popular put-grow-and-take fisheries for rainbow and brook trout, is generally considered successful despite its reliance on fish toxicants for the removal of native predators.

The status of other nonindigenous species is less certain. The intentional introduction of common carp, which was initially considered a success, is today viewed unfavorably by both the public and fisheries and wildlife managers due to their negative effects on aquatic vegetation and water quality. However, some anglers value them as game fish. Rainbow smelt (*Osmerus mordax*), which are now well established after being illegally introduced into the Rainy River drainage, have in some waters thought to be a beneficial addition to the forage base, while in others they have eliminated native fish and significantly altered the aquatic food web (Evans and Loftus 1987).

Stocking has also been used to introduce native species into new waters, and for population maintenance and supplementation. In Minnesota, more walleye have been stocked in more lakes than any other species. As a result, walleye now exist in hundreds of lakes where they weren't historically found. In the early 1900s, walleye fry were stocked in nearly all water bodies because most fisheries managers felt that stocking was required to maintain the populations (MNDNR 1996). As pond culture techniques improved in the 1940s (Smith and Moyle 1945), fingerling stocking expanded with peak production occurring in the 1980s. A more systematic approach to walleye stocking was developed in the 1970s and 1980s. Also during this period, studies evaluating the effectiveness of various aspects of the walleye stocking program were initiated (Johnson 1971; McInerney et al. 1991; Parsons et al. 1994; Li et al. 1996a, 1996b). Results of these and other studies conducted in other states and provinces have been used by the MNDNR to develop walleye stocking guidelines for their management biologists (MNDNR 1996). Today, the emphasis in walleye stocking is on maintenance stocking, which is most effective when natural reproduction is limited or non-existent. This type of stocking has been used to support walleye populations and angling in many lakes in southern Minnesota (Bandow et al 1993).

Northern pike (*Esox lucius*) have been stocked in Minnesota lakes for years with varying results. While three primary techniques have been used to obtain northern pike for stocking Minnesota waters (Johnson and Moyle 1969), the majority of the northern pike were obtained by using a flow of aerated water and fish traps to attract and capture wild northern pike from large, shallow winterkill lakes. In some instances, these fish when stocked produced notable northern pike fisheries (Maloney and Schupp 1977). However, in other cases the stocked pike altered fish communities through excessive predation on yellow perch (*Perca flavescens*) and other prey species (Anderson and Schupp 1986). Because of these negative effects, stocking of northern pike has been reduced significantly.

Muskellunge (*Esox masquinongy*) from Shoepack Lake near the Minnesota-Ontario border were used for stocking in Minnesota for over 30 years. In recent years, however, the MNDNR terminated its use of this strain and switched to a Mississippi strain from Leech Lake that has superior growth characteristics (Younk and Strand 1992). This decision was based on research that demonstrated genetic, behavioral, and morphological differences between the two strains (Hanson et al. 1983; Younk and Strand 1992).

Brook trout and lake trout have also been stocked in a variety of waters around the state. Historically, brook trout as well as nonnative brown and rainbow trout were stocked in streams in the southeast and in streams and lakes in the northeast. Stocking of catchable-sized trout in streams in both areas has been reduced, however, in recognition of the abundance of wild trout. Lake trout have been stocked in Lake Superior to help restore the population. Supplemental stocking of lake trout, which has occurred in numerous lakes in northeastern Minnesota, may have contributed to the loss of native stocks (Evans and Willox 1991). Genetic analysis revealed the presence of only the most recently stocked lake trout genotype in two native lake trout lakes in Voyageurs National Park that had been subjected to long-term supplemental stocking (Burnham-Curtis et al. 1997).

Numerous other species have been stocked throughout the state. Largemouth bass (*Micropterus salmoides*) and other centrarchid stocking projects were once common but are practiced less often now. Lake sturgeon (*Acipenser fulvescens*) are being reintroduced in the Red River drainage. Panfish, bullheads, and most recently channel catfish (*Ictalurus punctatus*) (Cross et al. 1991) have been stocked to provide fishing opportunities in urban areas. Flathead catfish (*Pylodictus olivaris*) have been stocked to reduce the abundance of certain undesirable fish species, particularly carp, bullheads (*Ameiurus* spp.), and small centrarchids (*Pomoxis* and *Lepomis* spp.) (Davis 1985).

In many instances, the long-term effect of stocking has been the homogenization of fish assemblages (Radomski and Goeman 1995). Walleye stocking done to provide additional angling opportunities in central Minnesota lakes resulted in greater species richness but reduced fish assemblage diversity. Most anglers are neither aware of or concerned with this loss of unique fish assemblages. Bait-bucket or illegal introductions of fish may also contribute to such changes. In some instances, fish that are illegally stocked are obtained from populations that were established legally.

Stocking practices in Minnesota have evolved as evaluations of these programs have become available. Initially, fish stocking was driven by production numbers with little or no consideration given to the fishes ultimate fate or their effect on the ecosystem. Little thought was given to planning and evaluation. Eventually, evaluations of stocking programs were initiated that addressed some of the many factors that need to be included in such assessments (Murphy and Kelso 1986; Heidinger 1993). Consequently, biological factors such as habitat requirements, inter- and intra- specific interactions, and genetics, as well as social and economic criteria are more likely

to be considered. Current MNDNR fisheries management guidelines for stocking recommend that every effort be made to use strains of fish that will maintain the genetic integrity of the existing population. Unfortunately, native aquatic biota, particularly forage and nongame species, continue to receive inadequate consideration in stocking program planning (Wingate 1991).

Minnesota, like many states, has recently placed more emphasis on biologically sound stocking (Smith and Reeves 1986). But, these efforts have frequently been met with strong political resistance. As a result, in many instances stocking is still being driven by social, economic, and political pressures (Wingate 1991). Attempts to reduce walleye stocking in lakes with natural reproduction are continually met with resistance even though studies have demonstrated the biological and economic inefficiency of such supplemental stocking (Laarman 1978; Li et al. 1996a). Because of its high profile and success in some waters, many anglers consider stocking more important than habitat protection and restoration (Radomski and Goeman 1995). Warnings concerning the negative effects of stocking are commonly ignored by citizens and decision-makers, including some fishery professionals who continue to pin their hopes for the future of fisheries on stocking programs (White et al. 1995). Laws (Minnesota Statutes, sections 97C and 17, Minnesota Rules, part 6250) designed to prevent the introduction of diseased or unwanted fish are also frequently compromised as a result of political pressure (Wingate 1991).

### **Chapter Position**

It is the position of the Minnesota Chapter of the American Fisheries Society that stocking is an acceptable fisheries management tool that can, if used responsibly, help fishery managers ensure the long-term sustainability of Minnesota's fisheries and aquatic resources. However, as history shows, stocking has the potential to have both positive and negative effects. To minimize the latter, stocking done by government agencies and private industry must be conducted in accordance with the best available scientific and professional information. This includes the applicable protocols of the American Fisheries Society and this Chapter on the introduction of aquatic species, the use of transgenic fishes, introductions of threatened and endangered species, the responsible use of fish and other aquatic organisms, and biodiversity. Stocking needs to be part of a comprehensive fisheries management program, not a means unto itself. Also, stocking should not be viewed as a politically expedient alternative to ecosystem restoration and harvest management.

### **Needed Actions**

The Minnesota Chapter of the American Fisheries Society endorses the checklist of considerations for the use of cultured fishes developed in 1994 by 71 individuals representing 41 fisheries resource management agencies (Schramm and Piper 1995). The principle factors included in the checklist are biological feasibility, effects analysis, economic evaluation, public involvement, interagency cooperation, and administrative considerations. This comprehensive list of factors and accompanying recommended actions should be incorporated into any fishery management plan involving fish stocking in Minnesota. The following actions expand on or are supplemental to the checklist.

- (1) Stocking programs must have explicit goals and objectives so that they can be objectively evaluated (Noble 1986). The goals should be compatible with broader, ecological management objectives. Before any stocking program is approved, there must be a detailed evaluation of all potential impacts. If it is approved and implemented, it must be evaluated to determine whether the goals and objectives have been met. In addition, communication with the public, other concerned agencies, and fishery professionals is essential.
- (2) Effects of stocking on forage and non-game fishes and other components of the aquatic community need to be seriously considered in all phases of any stocking program, including the decision whether to stock or not stock fish. Traditionally, this has either not occurred or has received minor attention.
- (3) To facilitate evaluation of stocking programs, all stocked fish should be marked.
- (4) Each agency that stocks fish should have a comprehensive educational program. The program needs to clearly articulate to anglers and nonanglers when and where stocking is or is not appropriate; the ecological and economic benefits and costs to society, natural populations, and ecosystems; the uncertainties associated with stocking; and alternatives to stocking. Agencies need to convey that stocking is not permissible if it will result in unacceptable ecological damages. Implementation of such a program may result in a public that will be more inclined to support ecologically and socially responsible stocking programs because they have more realistic expectations regarding stocking. Without more education, the future will likely resemble the past, with the amount of stocking driven more by economic and political pressures than by scientific understanding of fish populations. Fisheries management programs are more likely to be successful when the public better understands them. Understanding is an outcome of on-going public participation. Thus, the public is more likely to provide political support for responsible stocking programs (Krueger and Decker 1993).

(5) Stocking, both sanctioned and unsanctioned, has significantly altered fish communities throughout Minnesota. Because of this, it is imperative that those aquatic habitats and native fish communities that remain unaltered be identified and preserved. This should include fishless waters and lakes whose fish populations consist solely of species typically classified as non-game species. No stocking should be allowed in these waters.

(6) Genetic conservation must be a high priority in all stocking programs, including private stockings. Guidelines similar to those used by the MNDNR for walleye stocking need to be developed and implemented for other species. Guidelines proposed to the MNDNR by Fields et al. (1997) are a logical starting point. Their guidelines incorporate 10 Conservation Management Units (CMU) delineated on the basis of genetic analyses of six fish species from the three major drainages in Minnesota. Movement of fish between Units should be restricted since the CMU's encompass genetically distinct groups or populations.

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# SUCCESSFUL RIVER CORRIDOR MANAGEMENT: PLANNING AND POLICY CONSIDERATIONS

September 21-22, 1999  
Ramada Suites Plaza  
Fargo, ND

The Red River Basin Riparian Project is hosting this conference to provide opportunities for resource managers and policy makers to network and come to a common understanding on the management of river corridors. Perspectives on both urban and rural management goals and strategies will be explored. Presentations on general ecology, policy formulation, and management activities will be accompanied by small group discussions focusing on finding common ground among all stakeholders. Field tours and exercises will focus on illustrating the concepts presented during the presentations. Attendees can participate in riparian system data collection.

## September 21

8:00 REGISTRATION  
8:35 GEOLOGIC SETTING: POLICY IMPLICATIONS Dr. Frank Beaver, University of North Dakota  
9:15 STREAM ECOLOGY; Dr. Isaac Schlosser, University of North Dakota  
10:30 BREAK  
10:40 POLICY FORMULATION: Policy formulation at basin, watershed and state planning levels  
11:30 CASE STUDIES: Studies of policies of river management at different scales  
12:00 LUNCH  
1:00 CASE STUDIES continued  
2:00 SMALL GROUP DISCUSSION  
3:00 BREAK  
3:15 SUMMARY OF SMALL DISCUSSION GROUPS  
4:00 SCIENCE AND POLICY: Dr. James Karr, University of Washington  
5:30 FIELD TOUR (optional)  
Midtown Dam-improving fish habitat  
Crestville - bank failure  
6:30 PICNIC SUPPER:  
Lindenwood Park

## September 22

8:00 ASSESSMENT AND RESTORATION TOOLS AND CASE STUDIES OF RESTORATION ACTIVITIES  
12:00 LUNCH  
1:00 USING MULTIMETRIC INDEXES TO ASSESS WATER QUALITY: Dr. James Karr. Field presentation examining different sites with the objective of documenting benthic invertebrates.

Dr. James Karr University of Washington

Dr. Karr's research includes studies of stream ecology, watershed management, landscape ecology, conservation biology, ecological health, ecological risk, and environmental policy. His goal is to expand knowledge to protect the biological integrity of Earth's life-support systems. He developed the index of biotic integrity (IBI) as a biologically based approach to evaluate the quality of water resources. Originally developed for use with fish communities in the Midwest, IBI is now used on six continents, has been modified for use with benthic invertebrate communities, and is used by a number of state and federal agencies to guide water resource policies. His current primary concern is to improve the use of ecological information in the decision making process of society.

**Registration is \$50. Call Linda Kingery 701.352.3550 about conference registration. A block of rooms has been reserved (call Ramada at 701.277.9000 for reservations). This is a great opportunity to learn more about stream management, please attend this exciting event.**

# CALL FOR PAPERS

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## 33rd Annual Meeting Minnesota chapters of the American Fisheries Society & The Wildlife Society January 19-21, 2000

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Our next annual meeting will be held on the banks of the Mississippi River in conjunction with The Wildlife Society at the Kelly Inn, Hwy. 23 & 4th Ave. South, St. Cloud. The event will include a mixer the evening of the 19th, a full day of presentations and banquet on the 20th, and conclude with a half-day of presentations on the 21st. Lodging reservations can be made at:

*Best Western Kelly Inn*

320.253.0606

Approx. \$65

Other motels around St. Cloud include: Motel 6 320.253.7070 and Super 8 Motel 320.253.5530. For more information about lodging and entertainment in St. Cloud visit <http://stcloudcvb.com/> on the web.

The program is open to contributed papers on subjects related to fisheries and wildlife resources. Presentations must be no longer than 15 minutes. Please submit a short abstract electronically as an attachment **and** within the email message to Mark.Hove@fw.umn.edu, or mail the abstract on a disk (preferably) or paper to Mark Hove at 1980 Folwell Ave., St. Paul, MN 55108 **by December 1, 1999**. Include title, author(s), institution, mailing address, phone number, e-mail address, presenter (identify if student or not), and preference for oral or poster presentation at the top of the file. Ideas and organizers for special sessions are welcome.

Watch the chapter's web site (<http://www.fw.umn.edu/mnafs/doc/meeting.html>) for updates. For more information call Mark Hove at 612.624.3019.

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).

1999 Dues Application

1999 MN Chapter dues-Nonstudent.....	\$7.00	_____
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