

Minnesota Chapter of the American Fisheries Society

OF THE

Year 1996 No. 3
September Issue

President's Message

Larry Kallemeyn, FROM THE NATION'S ICEBOX. Summer did finally arrive despite our setting records for cold, snowfall, and lateness of iceout. Despite all that, initial survey results indicate that the fish were able to compensate and successfully reproduce in a manner of days rather than the two to three weeks they commonly take. All that snow we had resulted in the best water levels we've had for spawning in several years.

I want to take this opportunity to thank Steve Quinn, Virginia Snarski, Carl Richards, and Jeff Gunderson for all their efforts in putting together the hospitality suite and press event at the Outdoor Writers Association of America conference in Duluth. I'd also like to thank Jack Wingate, Paul Pajak, Don Schreiner, and Dennis Pratt for making the presentations at the press event. Written feedback for all their efforts has been slim but one freelance writer did contact the AFS headquarters to thank them and to indicate that he was pleased to see that fishery biologists from Minnesota were taking an ecosystem approach to management of the state's aquatic resources. Hopefully, the other writers who picked up the presentation summaries at the hospitality suite are incorporating the material into their articles and newspaper columns.

One other item relative to the Outdoor Writers conference. A three panel display showing various aquatic habitats, fish, and fish sampling activities as well as text on our chapter was developed with the assistance of my wife and several chapter members who provided photographs for copying. **The display was developed for the use of all of**

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The Chapter publishes this newsletter four times a year (Jan., May, Sept., and Nov.). Deadlines for article submission are: April 15, Aug 15, Oct 15, and Dec 15.

our members. Steve Quinn currently has the display so if you would like to use it contact him to make the arrangements for picking it up or having it shipped to you.

As far as upcoming meetings, Tim Goeman assures me that planning for our joint meeting with the Dakota Chapter members is right on schedule. The North Central Division meeting will be held in Omaha in December in conjunction with the Midwest Fish and Wildlife Conference. The Division meeting provides the best opportunity for our chapter to express its concerns and opinions. If you don't think you will be able to attend the meeting but think there is an issue that needs to be addressed please contact me or one of the other chapter excom members.

I recently had the pleasure of attending a reunion of fishery folks who had worked for the Fish and Wildlife Service's North Central Reservoir Investigations in South Dakota in the 1960s and 1970s. Dick Seifert, a past president of our chapter, and Bill Nelson, who saw the light and moved back to Minnesota from the state of Washington when he retired, organized the reunion. As reunions often do, this one made me appreciate even more the quality of the people that have chosen to be in our profession.

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Quote of the Issue

"if we can recognize that change and uncertainty are basic principles, we can greet the future and the transformation we are undergoing with the understanding that we do not know enough to be pessimistic" Hazel Henderson, *The Politics of the Solar Age* (1981).

Committee Reports

Awards Committee - by Bruce Vondracek

I am still soliciting nominations for the Chapter Award of Excellence and for the Special Recognition Award. Nomination forms are in the back of this newsletter.

The purpose of the Award of Excellence is to recognize long-term excellence in the fisheries profession or outstanding performance in an activity or furthers the goals of the Minnesota Chapter of the AFS. This award may be presented to any individual or group, regardless of their membership in AFS. The nomination should indicate how and why the nominee is worthy of the award. Describe the impact or significant contribution of the individual or group in one or two pages.

Special Recognition Awards are presented to acknowledge personal services contributed to the Chapter or a special project that advances the goals of the Chapter. Any Chapter member is eligible. A short statement describing the service to the Chapter should be provided.

Continuing Education Committee - by Mark Hove and Deserae Bushong

The next Continuing Education Workshop will be 'Use of Global Positioning Systems (GPS) & Geographic Information Systems (GIS) in Fisheries Management'.

GPS/GIS technology is used by natural resource managers to rapidly and accurately obtain location information and is becoming more commonplace in our profession. In fact, the state of Minnesota recently signed a contract to provide a real-time DGPS service for statewide coverage which can be used by a broad range of GPS receivers. For these reasons the Continuing Education Committee is organizing a one day seminar on GPS/GIS data collection, processing, analysis and applications. The course will be taught by Corvallis MicroTechnology, Inc., a group recommended by the AFS Parent Society and has been approved for 0.7 CEU's. The workshop will be available in early spring next year and cost approximately \$170.

For more information please contact Mark Hove, MN AFS Continuing Education Co-Chair.

Membership Committee - by Jeff Reed

There are two ways become a member:
(1) fill out a Minnesota Chapter membership form and send to Henry VanOffelen, chapter secretary-treasurer,

with seven dollars (the form is in the back of this newsletter), or (2) join the American Fisheries Society and pay your Minnesota Chapter dues through them (the chapter gets reimbursed). To join the parent society call me for a form.



Long Range Planning - by Tracy Close

The executive committee of the chapter recently commissioned a private marketing research firm to telephone survey 100 randomly selected individuals working in fisheries related fields in Minnesota. The purpose of the survey was to determine their level of satisfaction with the society and the chapter, and to seek suggestions that might increase membership and participation in chapter activities. The committee will be reviewing the survey results in detail and considering suggestions made by the respondents. Questions regarding survey results should be directed to a committee member or subcommittee chair. Questions regarding the survey methodology should be directed to Tracy Close. Following is the executive summary of the survey.

EXECUTIVE SUMMARY

Survey participants reported working in the fisheries field for an average of nearly 18 years. Fully 83% had worked in fisheries for 10 years or more, while 17% had worked in the field for nine years or less.

Some 25% reported working in fisheries for from 10 to 15 years; 21% for from 21 to 25 years; 20% for from 16 to 20 years; 12% for from 26 to 30 years. Another 12% of those surveyed reported working in the fisheries field for from six to nine years, while 5% said they worked in the field more than 30 years.

Of those who had worked in the fisheries field for 10 years or more, 41% said they had attended no meetings of the Minnesota Chapter within the last 10 years. More than 9% reported attending only one meeting during that time, while slightly more than 13% said

they had attended two meetings in the last 10 years. Yet, slightly more than 7% said they had attended three meetings and 6% reported attending four and five meetings respectively.

Nearly 53% of those who had been in the fisheries field for less than 10 years said they had attended no meetings since they began working in the field. Nevertheless, some 23.5% reported attending two meetings, and nearly 12% said they had attended three meetings.

Fully 26% of those interviewed were fisheries specialists. Another 23% described themselves as fisheries technicians. 17% said they were regional or area fisheries managers or supervisors, while 10% were biologists, 9% research scientists, and 4% hatchery specialists or supervisors.

When asked, if Chapter annual meetings were less formal, i.e. having more informational type presentations and less reports about research studies, fully 68% of those interviewed said their attendance at annual meetings would remain the same. Yet, 24% said their attendance would be more likely.

Some 37% said their active participation in the Chapter would be more likely if public agencies, such as the DNR and PCA, were more concerned about the Chapter's participation on issues of public policy and that concern resulted in public policy more in line with the Chapter's views. However, 62% said their participation would be no different if such were the case.

More than a quarter, 26%, of those interviewed reported that their employers reimbursed their expenses for attending annual Chapter meetings. Some 60% said they were not reimbursed, while 14% said they didn't know whether their employer reimbursed such expenses.

However, of those whose employers did not reimburse expenses incurred by attending the Chapter's annual meetings and of those who said they didn't know whether their employers did reimburse such expenses, more than 63% said they would be more likely to attend the meetings if their employers did reimburse their expenses.

Those interviewed said they would be willing to incur out-of-pocket expenses amounting to an average of \$80 to attend the Chapter's annual meetings if the meeting format and agenda were "completely" to their liking. Indeed, some 47% said they would be willing to spend from \$100 to \$200 to attend such meetings, while 30% said they would be willing to spend from

\$50 to \$75.

Fully 41% of those interviewed said their participation in AFS would be more likely if their affiliation with the organization improved their credibility with the public.

Those interviewed said they would be willing to travel an average of 174 miles to attend a Chapter's annual meeting, even if they were not reimbursed, if the content of the meeting agenda was to their liking. Some 62% said they would be willing to travel from 100 to 200 miles, while 23% said they would travel more than 200 miles. Indeed, 15% said they would travel as far as 300 miles.

Fully 40% of those interviewed said their attendance at annual meetings would be more likely if more people in their job class also attended meetings.

Yet, 97% said their attendance at annual meetings would not be affected if research studies were presented using less technical language, making them easier to understand.

And, only 19% said their participation would be more likely if the Chapter kept them up-to-date on fisheries issues and AFS activities via the Internet.

Even fewer, 17%, said they would be more likely to attend Chapter annual meetings if they could get more information at the meetings about improving their professional and personal lives.

Some 36% of those interviewed said they were members of the AFS. Of those who weren't members, nearly 36% said they would be more inclined to join the AFS if they got an invitation to join.

Only 12% said they would be more likely to attend Chapter annual meetings if the meetings had more social activities and less business and technical sessions. A higher percentage, 15%, said they would be less likely to attend under those circumstances.

Exactly 44% said they would be more likely to actively participate in the AFS if their bosses encouraged them to be more active. And, 66% said they would be more likely to attend annual meetings if their bosses specifically encouraged them to attend.

Nearly 60% said they would be more likely to actively participate in Chapter activities if the Chapter was more active in educating the public about fisheries issues. And, more than 20% said they would be more likely to actively participate in the Chapter if the Chapter was more active at promoting and ensuring ethical conduct and professionalism among its members.

Those interviewed rated the international parent organization of the AFS, based in Bethesda MD a 3.43 on a scale of 1 to 5, with 1 being extremely negative and 5, extremely positive. Using the same scale, those interviewed rated the Minnesota Chapter a 3.44.

Public Awareness and Education Committee - by Steve Quinn

On June 18, 1996, the Minnesota Chapter, with planning and input from the AFS Public Visibility Committee, sponsored a Press Conference and Hospitality Suite at the annual meeting of the Outdoor Writer's Association of America (OWAA). The Chapter had become a supporting member of the OWAA in the hopes that awareness of fisheries activities and the role of the AFS would inspire outdoor journalists to write articles about these topics.

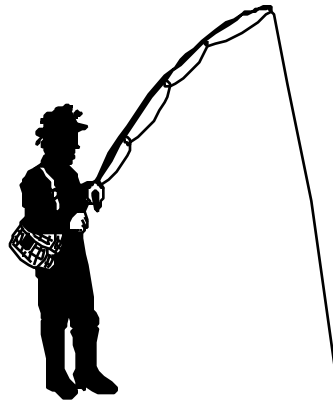
At the Press Conference, a dozen or so writers in attendance were very interested by the 4 presentations: "Exotic Species-the Big Picture" by Dennis Pratt of the Wisconsin Department of Natural Resources; "The Lake Superior Success Story: Is It Sustainable?" by Don Schreiner of the Minnesota Department of Natural Resources; "Ecosystem Based Management-Threat or Opportunity?" by Paul Pajak of the Minnesota Environmental Quality Board; and "The American Fisheries Society-Focus for Fishery Management Today" by Jack Wingate, AFS President and MNDNR Fisheries Research Manager.

Following the hour-long press conference, presenter, attenders and other AFS members hosted a hospitality suite featuring Lake Superior smelt and chips. Many OWAA members stopped by to meet AFS members, discuss fisheries issues, and collect press releases on specific issues and materials about the AFS.

Resolutions Committee - by Wayne Barstad

The Resolutions Committee reminds all members that the resolution process is a simple and effective way to become involved in the life of the Chapter. Resolutions stimulate thought and discussion, and help guide our professional conduct.

The Resolutions Committee encourages all members to think about societal matters that affect fisheries resources. Discuss these matters with your colleagues, in the pages of this newsletter or in any other way possible, and recommend resolutions for consideration by the Chapter membership. In addition, if anyone knows of a fisheries issue that the Chapter should take a position on let me know.



Division Technical Committees

Centrarchid Technical Committee submitted by Melissa Drake

The third annual CTC mid-year meeting was held in Prairie du Chien, Wisconsin on July 16-17, 1996 at Wyalusing State Park. Fifteen people attended. The committee thanks Doug Beard for his efforts with the local arrangements.

NCD president-elect, Don Pereira, addressed the committee on the latest division activities, including the divisions new world wide web page. The address of the web page is www.fw.umn.edu/ncdafs/. The CTC activities are included on this web page along with the activities of other committees.

The status of the publication of companion papers of the presentations given at the symposium ("Centrarchid Reproductive Behavior: Implications for Management) sponsored by the CTC at the 1995 Midwest Fish and Wildlife conference in North American Journal of Fisheries Management (NAJFM) was given. Currently, all manuscripts have been reviewed and publication recommendations are being sent to the authors. If revisions go smoothly the module should be published in the May 1997 issue of NAJFM.

No students took us up on our offer to fund student travel to our summer meeting.

Due to the resignation of our grey literature (agency reports) coordinator, we revisited our decision to index agency grey literature relating to centrarchids. The committee decided this was still a worthwhile task. Melissa Drake volunteered to coordinate this effort. Contact people for each of the states present at the meeting were chosen. Contact people are still needed from Michigan, Ohio, Kansas, the Dakotas, Canada, and Indiana.

A group discussion on member activity and direction of the committee occurred. It was decided that we should continue this discussion at the winter meeting where hopefully attendance will be higher. The discussion included the possibility of conducting summer meetings only when specific issues warranted enough interest. Several members, however, stated that they wish to continue conducting annual summer meetings.

Don Pereira asked the committees opinion on conducting a single joint meeting of the Centrarchid, Esocid, and Walleye technical committees. Approximately one half of the members favored the idea, but some members did express concern that some states might only provide funding for one person to attend a joint meeting.

Doug Beard led a group discussion on the sampling methodology (summary by Doug).

CTC Standardized Sampling Discussion

During the midsummer meeting, the CTC had a discussion on standardized sampling methods for Lepomids and Pomoxids. It was agreed that this information would be passed along to interested states.

We agreed to focus our discussion on sampling for bluegill and crappie, since these were the species with the most interest. We also focused on standardization for management sampling regimes. We also choose to concentrate on sampling for adults. We first had each state present discuss how they sample these species. Most states have a standardized sampling regime which concentrate on species composition not single species. A discussion of the bluegill sampling methods follow.

MN-Summer trap net June-August. Generate Length-frequency/CPE and Age data.

IN-spring electrofishing (night).

IL-spring electrofishing (day).

IA-After mid-June electrofishing (day) to avoid W_r , PSD bias.

MO-Spring electrofishing (day) 65-75⁰. Age every 3 years, small waters Schnabel estimates. Length-frequency/CPE.

WI-Spring electrofishing (night), pre-spawn. Length frequency/CPE.

NE-Spring Trap netting, 50-70⁰.

Bluegill Standardized Sampling

Spring electrofishing when waters temperatures are 60-65⁰. Daytime if secchi depth less than 1 meter, night if secchi is greater than 1 meter. Develop length-frequencies and CPE values from this information.

Crappie Standardized Sampling

This discussion was more disjointed, with the majority of true crappie sampling done in the southern states in the region. The following was suggested as a sampling regime. Fall trap netting (? mesh). Develop age composition, CPE, YOY and length-frequency information.

It was agreed that a letter, suggesting the following sampling strategies, would be developed for the presidents signature and mailed to fish chiefs in each state.

The following technical presentation were given by committee members:

Cindy Tomcko (MN) - In search of... the density dependence of bluegill growth

Chris Storlie (WI) - Role of dense vegetation in shaping the littoral zone of the centrarchid community in Fish Lake

Mike McInerny (MN) - Evaluation of shoreline electrofishing for sampling largemouth bass in Minnesota lakes

Pete Jacobson (MN) - Minnesota bluegill regulation study

Doug Beard (WI) - Differential harvest of male bluegill in Wisconsin

Membership: Doug Beard (WI) continues to maintain the committee mailing list.

Assigned chapter representatives are:

Dakota - Kevin Pope (SD), B. Kreft (ND)

Illinois - Dan Stephenson

Indiana - vacant

Iowa - Don Kline

Kansas - Randy Schultz

Michigan - Jim Breck

Mid-Canada - vacant

Minnesota - Mike McInerny

Missouri - Steve Fischer

Nebraska - Dave Tunink

NW Ontario - vacant

Ohio - Tom Hall

S. Ontario - Mark Ridgeway

Wisconsin - Doug Beard

Winter Meeting: The 1996 winter meeting will held on December 8, 1996 from 2:00 to 3:30 pm at the 1996 Midwest Fish and Wildlife Conference in Omaha, Nebraska. At this time, the new chair, Steve Fischer (MO) will take over leadership of the committee.

Walleye Technical Committee submitted by Tim Goeman

Sixty-one AFS members from 14 states attended the mid-year workshop meeting of the Walleye Technical Committee held in Dubuque IA July 16-18, 1996. The meeting began with an evening social with pizza and beverage at a historic Dubuque landmark. During the workshop, 10 technical presentations were made by committee members, and lively discussion followed many of these presentations. The traditional steak cookout completed the day of formal meeting. Committee business was conducted on the last morning with adjournment before noon. Among important business items was a discussion of the possibility of holding a joint meeting with other NCD technical committees in the summer of 1997. Dick McWilliams (IA) was presented with the NCD Certificate of Appreciation for 10 years of service as the Secretary of the Walleye Technical Committee. The Committee provided lodging for a student at the meeting in an effort to increase student involvement in technical committee activities.

The following talks were presented:

Management implications of upper Midwest walleye genetic stock structure. Michael Hudson, Robert Fields, and David Philipp, IL Natural History Survey, Center for Aquatic Ecology, 607 E Peabody Dr, Champaign IL 61820 and Program in Natural Resource Ecology and Conservation Biology, University of Illinois, Urbana IL 61801, (217)244-3946, FAX (217)333-6294

Assessment of rainbow trout vulnerability to walleye predation. Daniel Yule and Roy Whaley, Reservoir Research Unit, WY Game and Fish Dept, 3030 Energy Lane, Suite 100, Casper WY 82604 and Steve Flickinger and Brett Johnson, Dept of Fishery and Wildlife Biology, Colorado State University, Fort Collins CO 80523.

Walleye in Spirit and the Okoboji Lakes: Management Expectations and Answering the Questions. Joe Larscheid, IA DNR, 611 252nd Ave, Spirit Lake IA, (712)336-1840, FAX (712)336-0921.

A walleye catchability model from Minnesota waters. Estimating exploitation rates using Minnesota's walleye catchability model. Dennis Schupp, MN DNR, Fisheries Research Unit, 1601 Minnesota Dr, Brainerd MN 56401 (218)828-2554, FAX (218)828-6022.

Spring movement of walleye among interconnected lakes in northern Wisconsin: implications for management of a joint tribal-sport angler fishery. Paul

Rasmussen, WI DNR, 1350 Femrite Dr, Monona WI 53716 and Steve Hewett, WI DNR, PO Box 7921, Madison WI 53707.

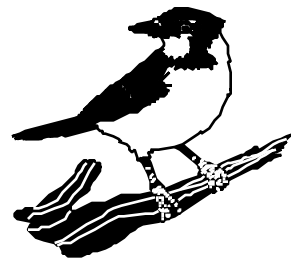
An evaluation of the "safe harvest" system for regulating walleye harvest in a joint tribal-angler fishery. Steve Hewett, Doug Beard, Steve Gilbert, Ruth King, and Qing Yang. WI DNR, PO Box 7921, Madison WI 53707.

Evaluation of walleye and saugeye in two small Iowa lakes. Kay Hill, IA DNR, SW District Office, Cold Springs State Park, Lewis IA 51544, (712)769-2587.

Hybridization between walleye and sauger: case histories including an update on the Illinois River, Neil Billington, Greg Moyer, Ronald Brooks, and Roy Heidinger. Cooperative Fisheries Research Laboratory, Southern Illinois University, Carbondale IL 62901-6511.

Enhanced production of percid fingerlings using inorganic fertilizers. David Insley, Pat Keyes, and Jim Stafford, OH DNR, Inland Fisheries Research, 10517 Canal Rd, Hebron OH 43025, (614)928-7034, FAX (614)928-6039.

Saginaw Bay walleye, a blueprint for restoration. Dave Fielder, MI DNR, Alpena Great Lakes Fisheries Research Station, 160 E Fletcher, Alpena MI 49707, (517)356-3232, FAX (517)356-1951, dfielder@northland.lib.mi.us



Minutes of Chapter Meetings

EXCOM Meeting Minutes - DRAFT

Executive Committee Meeting; April 25, 1996; Brainerd, Minnesota.

Call To Order - The meeting was called to order by President Larry Kallemeyn at 10:10 a.m.

President's Report - Larry Kallemeyn

Larry was involved with parent society issues including completion of several surveys and recommending that the history section get their annual calendar out faster. He also reviewed his February trip

to the parent society's mid-winter EXCOM meeting. The parent societies budget was apparently in terrible shape and they were considering laying -off some Bethesda staff people unless the budget situation improved. At the mid-year business meeting the societies biodiversity position statement was quite controversial in regards to issues surrounding cultured fishes. It was finally decided to table this position statement pending further review. News of the new wetlands bill was well received.

Treasurer's Report - Henry VanOffelen

The current checking balance was reviewed. The Human Dimensions workshop was anticipated to make over \$1000. It was moved and seconded to approve the treasurer's report. Motion carried.

1997 Chapter Meeting Plans - Tim Goeman

Tim talked with representatives of the Dakota chapter and they were interested in holding a joint meeting. Tim also had looked into holding a low cost meeting at the Camp Ripley education center. Tim explained that the camp facilities had all been remodeled and the facility was in good condition. Much discussion followed about holding low cost meetings on a more regular basis. Finally, it was moved that we hold a joint meeting with the Dakota chapter in 1997 and plan on holding a low cost meeting at Camp Ripley in 1998.

Committee Reports

Awards - Bruce Vondracek

Bruce briefly discussed the need for the chapter to better promote the excellence in fisheries or special recognition awards in the newsletter.

Continuing Education - Mark Hove & Deserae Bushong

Thirty-one people attended the Human Dimension workshop. Attendants included more upper level DNR personnel than anyone could remember. Deserae also let the EXCOM know that she would be stepping down as co-chair of the committee after this year.

Long Range Planning - Tracy Close

Tracy has been collaborating with Larry on the 1996 action agenda.

Membership - Jeff Reed

There were 178 paid members.

Newsletter - Paul Radomski

Paul handed out five draft copies of the newsletter. The newsletter would be printed the following week. Some discussion followed about where it was best to establish our bulk mailing permit so that we did not have to renew it every time we change newsletter editors. Paul will look into establishing the permit in St. Paul.

Paul also noted that the Minnesota AFS home page was up and running.

Procedural Manual - Brad Parsons

Brad converted the procedural manual to WordPerfect. It will be part of the Web site.

Nominations - No report

Public Awareness - Steve Quinn

Steve and Ginny Snarki have lined-up the hospitality room and press event for the Outdoor Writers annual meeting in June. The four speakers that agreed to talk at the press event were Don Schreiner, Rich Hess, Paul Pajak, and Jack Wingate. Larry and Steve will put together a MN AFS brochure for the event and a display board. Steve was looking for ideas for new public service announcements.

Resolutions - Wayne Barstad (absent)

Please submit resolutions to Wayne.

Rivers and Streams - Paul Glander (absent)

Paul sent a brief written report about committee activities.

Students - Jerry Grant

Nothing to report.

Finance - Henry VanOffelen

Nothing to report.

Old Business

Abstracts - Bruce Vondracek

Little progress since the chapter meeting. Will work on them with some students.

Chapter Brochure - Larry Kallemeyn

Larry has been working on a chapter brochure with Steve Quinn.

Ethical Guidelines - Dennis Anderson, Jay Hatch (absent); Larry reported that Dennis Anderson and Jay were still working on a draft of the document.

Membership/Non-Participation Survey - Tracy Close

Tracy reviewed his idea of surveying DNR personnel who are not chapter members to identify why they do not participate in the chapter. He had drafted a set of survey questions and talked with several consultants about costs associated with a phone survey. After some discussion, it was moved and seconded to authorize spending up to \$1,000 to conduct a non-participation survey. Motion carried.

New Business

1996 Action Items - Larry Kallemeyn

Larry discussed his action agenda. Discussions of possible news release topics followed including putting together one on funding sources and a DNR license increase.

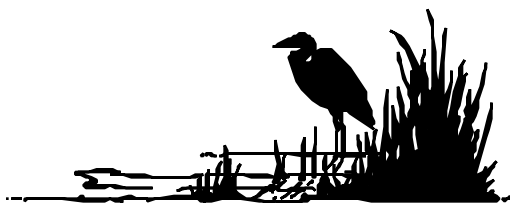
Information Items

Academic - Bruce Vondracek; nothing to report.

DNR - Tom Jones; budget situation OK for now. A license increase is needed next year or there will be more staffing cuts.

Federal - Bruce Vondracek; Bruce discussed some aspects of the complicated federal budget issues that face the USFWS and the NBS. It looks like these agencies would be nested into the Biological Resources Division of the USGS with severe administrative cutbacks likely.

Other - Brian Borkholder; no report.



Upcoming Events

September 16-18: New Approaches to Rural Nonpoint Source Pollution: What Makes Them Work. Holiday Inn, La Crosse, Wisconsin. Talk to Larry Gates about this conference at 507.280.5065

October 3-4, 1996: Minnesota Conference on Sustainable Development: Building and Investing in Sustainable Communities. Minneapolis Convention Center. A conference to exchange ideas on cutting edge approaches to integrating ecology, economics, and social issues into natural resource management.

November 13-16: 16th Annual Meeting of the North American Lake Management Society. People, Lakes and Land: Puzzling Relationships. Radisson South, Minneapolis, Minnesota. Contact Steve Heiskary, PCA, 612.296.7217. This symposium will address important developments in lake and watershed management through a full array of sessions, workshops, and exhibitors.

December 8-11: Annual Meeting of the AFS North Central Division. Omaha, Nebraska. Contact Darrell Feit 402.332.3901.

February 10-14, 1997: American Society of Limnology and Oceanography, Aquatic Sciences Meeting. Sante Fe, New Mexico. Contact Jonathon Cole 914.677.5343, or Susan Weiler 509.527.5948.

February 25-27, 1997: Minnesota Chapter of the American Fisheries Society Annual Meeting. Holiday Inn, Fargo, North Dakota. This is a joint meeting with the Dakota Chapters. Contact Tim Goeman 218.828.2246 (see details below).



Contributions: Letters and Commentary

Catfish 2000: First Call for Papers submitted by Steve Quinn

The program committee for the First International Ictalurid Symposium invites contributed papers for this conference scheduled for June 23-28, 1998, in Davenport Iowa. Sessions will cover biology and management of channel, flathead, blue, and white catfish, as well as smaller members of the family. We especially solicit presentations that focus on: population dynamics including age-growth, recruitment, reproduction, and mortality; assessments of stockings of public waters; genetic relationships among catfishes; catfish behavior and sensory capabilities; movement and migration studies; population characteristics in large rivers, streams, lakes, and reservoirs; human dimensions including socioeconomic analyses, angler attitudes, competitive fishing, and edibility and consumption advisories; sampling techniques; effects of angling and non-angling of fishing; habitat requirements; effects of habitat alteration on populations; harvest management through regulations. The committee will consider all submissions.

The committee recognizes that some studies may not yet be complete but abstracts should be as definitive as possible. Papers may report results of recent investigations or cover topics from a historical perspective, or review a topic. In all cases, authors should relate their results to the broader literature.

Please submit abstracts ranging in length from 150 to 350 words. Send inquiries and submissions to Steve

Eder by February 1, 1997. Acceptance of abstracts will be based on review by the program committee and outside reviewers. Once abstracts are accepted, first-draft manuscripts will be due by January 15, 1998. Manuscripts will be peer-reviewed. Papers accepted and presented will be published in a hard cover proceedings that will serve as a reference for catfish researchers in the future.

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Wherefore Wildlife Ecology?

editor's note: this is from a recent lecture to wildlife students.

At the beginning of this course I did not try to define its object, because any attempt at definition would at that time have consisted of meaningless words. I shall now confide in you what the course is driving at.

The object is to teach you how to read the land. Land is soil, water, plants, and animals. Each of these "organs" of land has meaning as a separate entity, just as fingers, toes, and teeth have. But each has a much larger meaning as the component parts of the organism. No one can understand an animal by learning only its parts, yet when we attempt to say that an animal is "useful," "ugly," or "cruel" we are failing to see it as part of the land. We do not make the error of calling a carburetor "greedy." We see it as part of a functioning motor.

Much can be learned about land with amateur equipment, provided one learns how to think in scientific terms. Hence I am asking you to read the best professional literature, but in the field to use only the eyes, ears, and notebook which everybody carries. The lectures try to connect the two.

What I hope to teach is perhaps ecological research as an outdoor "sport." Yet "sport" is hardly accurate, because in sport one tries to do well what thousands have done better. In ecology one tries to do well what few have ever done at all, at least not in one's home region. The thing I am teaching, then, is amateur exploration, research for fun, in the field of land.

I have an ulterior motive, as everyone has. I am interested in the thing called "conservation." For this I have two reasons: (1) without it, our economy will ultimately fall apart; (2) without it many plants, animals, and places of entrancing interest to me as an explorer will cease to exist. I do not like to think of economic bankruptcy, or do I see much object in continuing the human enterprise in a habitat stripped of what interests me most.

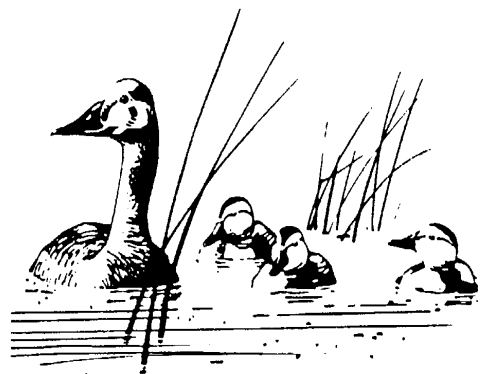
That there is some basic fallacy in present-day conservation is shown by our response to it. Instead of living it, we turn it over to bureaus. Even the landowner, who has the best opportunity to practice it, thinks of it as something for government to worry about.

I think I know what the fallacy is. It is the assumption, clearly borrowed from modern science, that the human relation to land is only economic. It is, or should be, esthetic as well. In this respect our present culture, and especially our science, is false, ignoble, and self-destructive.

If the individual has a warm personal understanding of land, he will perceive of his own accord that it is something more than a breadbasket. He will see land as a community of which he is only a member, albeit now the dominant one. He will see the beauty, as well as the utility, of the whole, and know the two cannot be separated. We love (and make intelligent use of) what we have learned to understand.

Hence this course, I am trying to teach you that this alphabet of "natural objects" (soil and rivers, birds and beasts) spells out a story, which he who runs may read--if he knows how. Once you learn to read the land, I have no fear of what you will do to it, or with it. And I know many pleasant things it will do to you.

By Aldo Leopold, spring 1947.



A President's Thoughts

by **Kirk Schroeder, Oregon Chapter President**
(from the Piscatorial Press, newsletter of the Oregon Chapter of the AFS)

The Pacific Northwest is facing a tremendous challenge on how we will live within the landscape. We are truly at a critical juncture with regard to the fate of some of our natural resources in this region. How society responds to these challenges will greatly affect how our region will look in the future, and natural resource agencies can play a large role in shaping the response of society.

Fortunately, several factors could aid the recovery of natural resources in the Pacific Northwest. First, we are blessed with a large base of public land. Second, many of this region's citizens are interested in public resource management. Third, this region has ties to a recent history when resource were abundant, we have reference points about the landscape that are not that abstract. This latter factor is critical because debate about maintaining and recovering our biological diversity can be made in terms of attainable goals and realistic choices that are based on recent history, and to which many people have a connection.

However, we have a limited amount of time to make our arguments for the fish and their habitat. Society continues to change; reference points shift, connections to the landscape and living things of the landscape become frayed. Where one generation remembers a stream teeming with salmon, or a high desert stream with year-round flow and a riparian oasis, another generation is seeing a stream with a few returning fish, or a dry wash cut into a sagebrush flat. In addition, recovery will take time and patience on a scale that may be viewed as unrealistic by a society immersed in a fast-paced world full of rapid change.

What are some measures professionals can take? We can support educational programs that gets children out on the banks of streams and into the water. The Oregon Chapter has given financial support to the Salmon Watch program and many members have participated in the program, but they can always use more help to expand the program. We can work to retain some wild places, not just on a large scale, but around schools, neighborhoods, and towns so children have some place to explore and use their imaginations.

We can preserve the history of our landscape and become more creative in communicating this to the public and policy makers. We can use pilot programs to demonstrate the potential for recovery, being careful to place projects in a proper context within the landscape. And we can make certain the interests of

fish and their habitat are voiced when decisions are made.

AS the natural resource pie shrinks, the human impulse is to split smaller and smaller pieces among the resource users at the table. Sometimes scientific information influences the manner in which decisions are made. However, many resource decisions will be based on political, social, cultural, and legal factors. As scientists, we have a duty to speak for the fish that are not at the table. As good citizens, we must speak for the future generations to insure they will inherit some options and opportunities. I hope the legacy of the scientific community will be that we not only provided necessary and pertinent information, but that we communicated to society the implications of certain actions or inactions. However, most importantly, I hope our legacy shows that we not only supplied information, but that we cared enough to take action to save the fish.

In the years I have been involved with AFS, I have been inspired by the dedication of members who are working hard on behalf of the resource. They do so as scientists and public citizens who feel compelled to take actions because of a professional and ethical responsibility. Hard as it is to feel optimistic at times, I find hope in the knowledge that we have an active group of people in this state who are willing to give extra time and energy for fish and their habitat. I feel optimistic that the collective dedication of these people and an informed public will outlast catchy slogans, political expediency, and empty rhetoric. A key role of a professional society like AFS is to provide for our colleagues a base of support that may not be available within the confines of their employer, whether it is a public agency, a private company, or a tribal agency. We certainly don't agree with each other all the time in AFS, but more times than not the common denominator is a concern for the fish.

"Economics has been the primary lens with which our culture has looked out on the world" Terry Tempest Williams

How we look at the world influences the way in which we approach it. A common theme these days is for natural resource agencies to compare themselves to corporations and to operate "like a business". I have difficulty with these comparisons.

First, given the record of many corporations in their treatment of the environment, their stockholder, their workers, and even their customer, I am troubled that they are being touted as the model we should be emulating. Second, the nature of the "bottom line" is quite distinct between the corporation and the public

agency. The driving motivation of corporations is profit; the driving motivation of natural resource agencies should be stewardship. It seems that if resource agencies looked out on the world with an ecological lens rather than an economic one, they might find a different approach to satisfying the bottom line of stewardship. And they would undoubtedly find a different answer to the basic questions: Where do we want the resource to be in the future? How can we get there? Finally, it is good to remember that most natural resource agencies were created to take care of a public good that could not be entrusted to the private business sector.

Although those of us who work for public agencies can always us a reminder about serving "our customer", we must also keep in mind who comprises the customer base and how we measure service. Our customers are more than anglers, hunters, timber companies, or ranchers. Our customers also include other users of resources and future generations. The ultimate measure of opportunity - closed campgrounds and closed or restricted fishing seasons. They will remember the loss of species to habitat destruction, loss of water quality, and the loss of opportunity to interact with nature. No amount of public relations will be able to paint a rosy picture of ghost streams empty of salmon.



Fisheries Action Network

By Jeff Reed

Summer has been pretty slow in the political arena. Congress was still trying to pass their version of grazing reform and there was a little movement on the Clean Water Act. My guess is that there won't be much done until after the election. Since it was slow I have included the following discussion on professionalism. There has been a great deal of discussion about professionalism within all levels of AFS. The Chapter is currently reviewing the standards of professionalism, the "President's Hook" in the pages of *Fisheries* frequently deals with standards of

professionalism. When we think profession, we often dwell on the tangible standards that set a professional apart from others. Things such as specialized training, membership in a society or organization that promotes the profession and maintains standards of its membership, and excellence and prestige. I recently came across a 25 year-old paper from the *Journal of Wildlife Management* by D.L. Gilbert that speaks of the intangible standards that a professional must adhere to. I think they are still relevant, (maybe more), today

Capability. This not only refers to the technical aspects of the profession but also in dealing with people. Dr. Gilbert notes that after college the technical capabilities should be there - we need to work on our ability in human relations.

Tolerance and Understanding. As soon as we view a problem as fisheries manager versus developer, or farmer versus wildlife manager, we have drawn a line in the sand and the turf war is set. Dr. Gilbert suggested that we need to view all ideas objectively and even our own ideas should be subjected to self-criticism. When dealing with other resource disciplines, we must recognize and tolerate the limitations and biases within each field. (It is hard to believe but fisheries managers have resource biases too!) As Will Rogers once said "Everyone is ignorant, but about different things".

Tact. Tact is necessary in making our position, actions, and policies known and getting them implemented. It is needed in all dealings, with employees and customers, with the boss or the subordinate. Dr. Gilbert notes that a tactful individual will be a bigger success sooner - and longer - than a less tactful one.

Flexibility. The resource professional needs the proper approach to the specific audience. The workday may find you talking to a kindergarten class in the morning, a State Senator in the afternoon, and a group of anglers in the evening. Flexibility also refers to adjusting to change. As a science we must recognize new information and incorporate it into our way of doing things. "A professional accepts changes and considers them as steps forward".

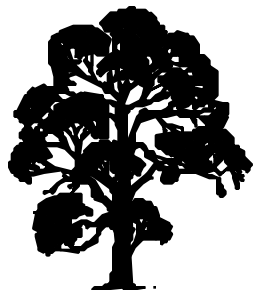
Communication. Knowledge is worthless unless it can be communicated to others. When communicating the message must be appealing, interesting and understandable. NOTE: Even in 1971 Dr. Gilbert acknowledged that a lack of adequate communications, or desire to communicate, was one of the biggest problems in natural resource management!

Honesty. This really should speak for itself!

A professional is honest to co-workers and constituents.

Willingness to help others. The true professional is never too busy to lend a sympathetic ear or help in the search for a solution.

Dr. Gilbert concluded that the professional is an individual with an ethical outlook plus training and capabilities as demonstrated by performance. Degrees, certificates, and other documents are only indicators not proof.



Other Important News

Resolution of Respect

As noted in the last newsletter, the R.V. Frie Memorial Fund has been established in memory of Dr. Richard Frie. This memorial fund is at the University of Wisconsin - Stevens Point where it finances scholarships for fisheries students. If you would like to contribute, please make your check out to the R.V. Frie Memorial Fund, and send it to the following address:

R.V. Frie Memorial Fund
c/o Sue Cox
College of Natural Resources
University of Wisconsin-Stevens Point
Stevens Point, WI 54481

Student Travel Grant Program -- Students Take Note!

The North Central Division once again allocated \$1400 to support the Student Travel Grant Program. The purpose of the program is to provide funding to facilitate student travel to the annual NCD meeting held in conjunction with the Midwest Fish and Wildlife Conference. The program is designed to assist students who might not otherwise be able to attend the meeting.

The North Central Division will fund 14 grants--one grant per chapter. One hundred dollars is provided per

each selected student. Minnesota students should send a letter to Larry Kallemeyn, president of the Minnesota Chapter, which includes: your name, addresses, school, degree, a short description of current studies or research, reasons why you wish to attend this meeting (e.g. paper presentation, sub-unit business, applicable technical papers to your work), and reasons why monetary assistance is needed.

Panic Underwater by Laurence Wiland, from Littoral Drift, February 1995, newsletter of the University of Wisconsin Sea Grant Institute

The peaceful scene of scuba divers gliding through a silent underwater world may not be quite as serene as it looks. Not, at least, according to a new UW Sea Grant-funded national diver survey. More than half of the scuba divers in the survey reported that they had experienced panic or near-panic on one or more occasions, according to William Morgan, director of the UW-Madison Sport Psychology Laboratory.

Morgan has conducted several Sea Grant-funded diver panic studies over the last 10 years. "In simple terms, panic behavior is when a diver behaves in an irrational manner," Morgan said. "There is usually an objective, observable stimulus responsible for this behavior, such as the sudden appearance of a shark, loss of visibility, loss of air and so on."

Most experts agree that panic is responsible for many of the diving accidents and fatalities that occur among scuba divers. "Of those divers who have not reported panic episodes up to this point, it's probable that a number of these individuals will experience a panic attack in the future," Morgan said.

Other findings in Morgan's diver study include: Incidence of panic was higher in women (64 percent) than men (50 percent), though more men (48 percent) than women (35 percent) perceived the events as life-threatening. Panic attacks are not restricted to novice divers; veteran divers also can experience attacks. It was possible to predict panic behavior in beginning scuba divers with 88 percent accuracy using a measure of trait anxiety. Divers who score significantly higher on a measure of trait anxiety than divers in general are potentially at greater risk of experiencing a panic attack while diving. Using psychological treatments such as biofeedback, hypnosis or imagery to reduce anxiety responses in scuba divers exposed to various stressors has not been successful in the limited research conducted up to this time. Anxiety responses during and following scuba diving exercise were associated with the interaction between water temperature and protective apparel worn by divers. That is, divers who

did not wear a suit in cold water or wore a suit in warm water were more prone to panic.

The risks and dangers of panic attacks during scuba diving are not well known among the recreational scuba diving community. Such terms as anxiety, stress and fatalities do not appear in the index of commonly used scuba training books, nor are topics such as panic even addressed in most training manuals, Morgan said.

Morgan said he hoped his panic studies will help prevent fatalities by informing diving instructors and divers about the panic phenomenon in order to screen out divers who might be susceptible to potentially life-threatening panic attacks. Results of Morgan's study were published in the December 1995 issue of *Sports Medicine*.

Watershed Information Resource System

The WIRS Database is an online resource center for information on lake and watershed restoration, protection, and management. Operated by the Terrene Institute in partnership with the U.S. EPA's Clean Lakes Program, WIRS may be accessed at: <http://www.e2b2.com> or by phoning 800.726.LAKE.

Skin Cancer, from an article in the University of California at Berkeley *Wellness Letter* (vol. 12, issue 11, August 1996).

The incidence of two types of skin cancer--squamous cell cancer and melanoma--has been increasing faster among Americans than nearly any other cancer. Most sun damage occurs in the young, and the damage is cumulative over a lifetime.

There are three kinds of skin cancer. Basal cell and squamous cell carcinomas are most common (800,000 new cases reported in the U.S. annually). Fortunately both types are highly curable when detected and treated early. Malignant melanoma, the most dangerous kind of skin cancer, is less common, but its incidence has increased 4% a year since 1973 (38,300 new cases expected here in 1996). In 1935, only one American in 1,500 was diagnosed with melanoma. By 1991 the lifetime risk was 1 in 105--and it may be 1 in 75 by the year 2000.

In Australia, skin cancer rates are worse. It has high ultraviolet radiation levels, which may rise because of the depletion of the ozone layer over the Southern Hemisphere. It has a highly sensitive population, since a large proportion are fair-skinned people of Northern European descent. In addition, people there liked to get a suntan. Two out of three Australians will

eventually develop skin cancer, according to the Anti-Cancer Council of Victoria.

Australia is taking action. Most primary schools now require kids to wear hats or stay out of the sun during peak sun hours. More trees are being planted in school yards, at beaches, and in other public places. Most importantly, Australian attitudes about the sun and suntanning are changing.

Climate Change, from an article in the *Ecological Society of America Newsletter* (issue #48)

Several pre-eminent scientists publicly endorsed the United Nations Intergovernmental Panel of Climate Change's (IPCC) conclusions. The IPCC's latest scientific assessment concluded that "the balance of evidence suggests a discernable human influence on global climate."

George Woodwell, Woods Hole Research Center, noted that the levels of carbon dioxide in the atmosphere doubled since the second half of the last century. Ellen Mosley-Thompson, Ohio State University, presented evidence of global warming based on ice core records and pointed out that research shows that the warming of the 20th century has been strongest and most evident in the tropics and subtropics and that tropical and sub-tropical ice caps and glaciers are disappearing worldwide. Kevin Trenberth, NOAA, noted that many uncertainties about climate change exist, but (1) carbon dioxide and several other gases are increasing from human activities, (2) these gases cause extra heating, and (3) changes from warming are already present.

New Invaders in Illinois, from the Illinois Chapter newsletter, articles by Jim Stoeckel and Kevin Cummings

Daphnia lumholtzi was collected from the Illinois River last year. *D. lumholtzi* is a species of water flea which is native to regions of Africa, Asia, and Australia. Like another exotic zooplankton, *Bythotrephes cederstroemi*, this daphnid is also spiny. Large individuals of *D. lumholtzi* can reach lengths of 1/4 inch (including spines) and are visible with the naked eye. The spines make it difficult for fish to eat it. Other *Daphnia* species have fewer, smaller spines and are an important food source for larval fish.

D. lumholtzi was collected in Texas and Missouri reservoirs in the early 1990s--the first known colonization of North America. Since then it has been found as far east as the coastal states, and has begun to spread in a northerly direction. The Illinois Natural

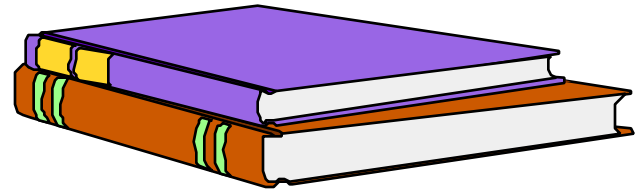
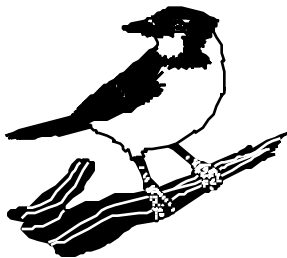
History Survey detected *D. lumholtzi* while monitoring another invader the zebra mussel. They have since found a relative high abundance of *D. lumholtzi* in the Illinois River. It now seems poised to invade the Great Lakes Basin via the Illinois River, but whether or not it becomes established in any of the Great Lakes remains to be seen.

For more information on *Daphnia lumholtzi* in the Illinois River, contact Jim Stoeckel, Illinois Natural History Survey, River Research Lab, P.O. Box 590, Havana, IL 62644; 309.543.3950; stoeckel@ux1.cs.uiuc.edu.

Another exotic species of freshwater snail is now established in at least five drainages in Illinois. The species is known as the Chinese Mystery Snail, *Cipangopaludina chinensis malleatus*. This species was first reported from North America in 1892 in a Chinese market in San Francisco. By the turn of the century, this species and the closely related *Cipangopaludina japonica* were securely established on the west coast of North America. In 1914, *C. chinensis malleatus* was collected in Boston. It is now widely introduced in the United States and is found in suitable habitat throughout most of the central, far western and eastern U.S. This snail prefers quiet water, either in slow-moving streams or ponds and lake margins, where there is some vegetation and a mud substrate.

Although this snail resembles some of our native species in the genus *Campeloma*, both of the introduced Oriental species (*Cipangopaludina chinensis* and *C. japonica*) may be distinguished from natives by their larger size and lack of banding at any growth stage.

For more information contact Kevin Cummings, Illinois Natural History Survey, 607 E Peabody Dr, Champaign, IL 61820; 217.333.1623.



Interesting Articles and Publications

Assessment Methodologies and Management: Proceedings of the World Fisheries Congress, Theme 5. 1995. G. T. Sakagawa, editor. Science Publishers, Inc. ISBN 1-886106-10-X. There are several interesting chapters in this book. Of particular interest is J.B. Reynolds discussion on the development and status of electrofishing.

Earth in Mind: on education, environment, and the human prospect. 1994. David W. Orr. Island Press. ISBN 1-55963-295-X. This is an excellent book; D.W. Orr details the problems with our current thinking and actions as they relate to saving the natural environment. He also provides guidance to educators and to those that wish to redesign public education. His previous book, Ecological Literacy, is also recommended reading.

Biodiversity: population versus ecosystem stability. 1996. D. Tilman. Ecology 77:350-363. D. Tilman's long term field work at the Cedar Creek Natural History Area indicates that biodiversity stabilizes ecosystem and community processes, but not individual population processes. These results support the diversity-stability hypothesis as applied to communities and ecosystems. (editor's note: Don Pereira submitted this paper summary)

Ecosystem Management and the Arrogance of Humanism. 1995. Thomas R. Stanley, Jr. Conservation Biology 9(2):255-262. T. Stanley asserts that "ecosystem management is yet another example of the arrogance of humanism", and that ecosystem management is humanistic. He makes valid points and challenges the latest trend in managing natural resources (or latest term applied to our work).

The Biophilia Hypothesis. 1993. Stephen R. Kellert and Edward O. Wilson, editors. Island Press. ISBN 1-55963-147-3. Numerous people interpret, challenge, or clarify Edward O. Wilson's theory that there is an inherent human need to affiliate with other living organisms and nature. Madhav Gadgil (chapter 12) states that humans may just have a "fascination for complex entities, whether artifacts or living organisms."

On the Underside
submitted by Charles Anderson
 Deep Thoughts:

Sometimes I think you have to march right in and demand your rights, even if you don't know what your rights are, or who the person is you're talking to. Then on the way out, slam the door.

If you're a cowboy and you're dragging a guy behind your horse, I bet it would really make you mad if you looked back and the guy was reading a magazine.

If your friend is already dead, and being eaten by vultures, I think it's okay to feed some bits of your friend to one of the vultures, to teach him to do some tricks. But only if you're serious about adopting the vulture.

Broken promises don't upset me. I just think, why did they believe me?

If you ever crawl inside an old hollow log and go to sleep, and while you're in there some guys come and seal up both ends and then put it on a truck and take it to another city, boy, I don't know what to tell you.

If you go to a costume party at your boss's house, wouldn't you think a good costume would be to dress up like the boss's wife? Trust me, it's not.

Most of the time it was probably real bad being stuck down in a dungeon. But some days, when there was a bad storm outside, you'd look out your little window and think, "Boy, I'm glad I'm not out in that."

For mad scientists who keep brains in jars, here's a tip: why not add a slice of lemon to each jar, for freshness?

I'd like to see a nature film where an eagle swoops down and pulls a fish out of a lake, and then maybe he's flying along, low to the ground, and the fish pulls a worm out of the ground. Now that's a documentary.

Sometimes you have to be careful when selecting a new name for yourself. For instance, let's say you have chosen the nickname "FlyHead." Normally you would think that "fly Head" would mean a person who has beautiful swept-back features, as if flying through the air. But think again. Couldn't it also mean "having a head like a fly"? I'm afraid some people might actually think that.

Somebody told me how frightening it was how much topsoil we are losing each year, but I told that story around the campfire and nobody got scared.

I hope that after I die, people will say of me: "That guy sure owed me a lot of money."

I wish I had a dollar for every time I spent a dollar, because then, Yahoo!, I'd have all my money back.

I think a good product would be "Baby Duck Hat." It's a fake baby duck, which you strap on top of your head. Then you go swimming underwater until you find a mommy duck and her babies, and you join them. Then all of a sudden, you stand up out of the water and roar like Godzilla. Man those ducks really take off!

The tired and thirsty prospector threw himself down at the edge of the watering hole and started to drink. But then he looked around and saw skulls and bones everywhere. "Uh-oh," he thought. "This watering hole is reserved for skeletons."

Recently Observed Bumper Stickers:

I love animals - they taste great!
 Earth First!... We'll strip mine the other planets later
 Friends help you move... real friends help you move
 bodies

The gene pool could use a little chlorine
 Make it idiot proof... and someone will build a better
 idiot

He who laughs last thinks slowest
 Give me ambiguity, or give me something else
 A flashlight is nothing more than a dead battery
 carrying case

Lottery: a tax on people who are bad at math
 I wouldn't be caught dead with a necrophiliac
 Assassins... do it from behind

Puritanism: the haunting fear that someone,
 somewhere, is having fun

Consciousness: that annoying time between naps
 I don't suffer from insanity, I love every minute of it
 Where there's a will, I want to be in it

We have enough youth, how about a fountain of
 smart?

All generalizations are false, including this one
 "Criminal lawyer" is redundant

IRS = We've got what it takes to take what you've got
 We are born naked, wet and hungry; then things get
 worse

Artificial intelligence usually beats real stupidity
 Hard work has a future payoff; laziness pays off now
 Better to understand a little, than to misunderstand a lot
 Change is inevitable, except from a vending machine
 Reunite Gondwanaland!

Earth: love it or leave it.

1997 Annual Meeting Announcement

When: February 25-27, 1997

Where: Fargo, North Dakota

Tentative Schedule:

February 25, 1997 - Tuesday

1. Continuing Education Workshop - subject to be determined

2. Registration and Social

5:00 - 9:00 pm at Country Suites, Fargo (3 blocks from the Holiday Inn)
kegs, smoked fish, food, for about \$5 per person

February 26, 1997 - Wednesday

Holiday Inn, Fargo

8:00 - noon: Registration

8:00 - 12:00: Papers

12:00: Luncheon

1:00 - 5:00: Papers

5:30 - 7:00: Poolside social - cash bar

7:00 - 9:00: Banquet and Awards

February 27, 1997 - Thursday

Holiday Inn, Fargo

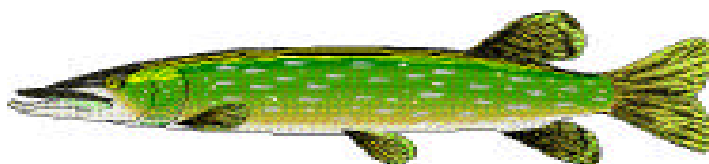
8:00 - noon: Papers

12:00: lunch on your own

1:00 - 2:45: Papers

3:00 - 4:30: Business meetings

About \$32 will cover all breaks, 1 noon lunch, and the Wednesday night banquet. Lodging reservations can be made at the Holiday Inn (\$64/double/night), the Holiday Express (\$49/double/night) which is 1/2 block from the Holiday Inn, the Comfort Inn West (\$40) which is 3 blocks from the Holiday Inn, or the Super8 (\$37) which is 5 blocks from the Holiday Inn. Call Tim Goeman at 218.828.2246 if you have any questions.



1996 Minnesota Chapter Application

Name: _____

Address: Work _____

Home _____

Phone: _____

Fax: _____

e-mail: _____

Send newsletter to _____ Home or _____ Work address?

Are you a member of AFS? _____ yes _____ no. Membership Number _____

(AFS membership number is located on your Fisheries mailing label)

Affiliation: _____

(DNR, Federal Government, Academic, Tribal, or Private)

Job Title: _____

Year Joined AFS: _____

Year Joined MN AFS: _____

Check if you are a Student: _____

Check if you don't want to be in the Chapter Directory: _____

Please send \$7.00 (Chapter dues) and the completed application to Henry VanOffelen, 1601 Minnesota Drive, Brainerd, MN 56401.

1996 Award Nomination Form

Check which Award:

_____ Chapter Award of Excellence

_____ Special Recognition Award

Name of Nominee: _____

How and Why the Nominee is worthy of the award:

Name of Person nominating the candidate (optional): _____

Please send the completed application to Bruce Vondracek, UM-Fish and Wildlife, 200 Hodson Hall, 1980 Folwell Avenue, St. Paul, MN 55108; fax 612.625.5299

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Procedure Manual: Brad Parsons 612.634.4573

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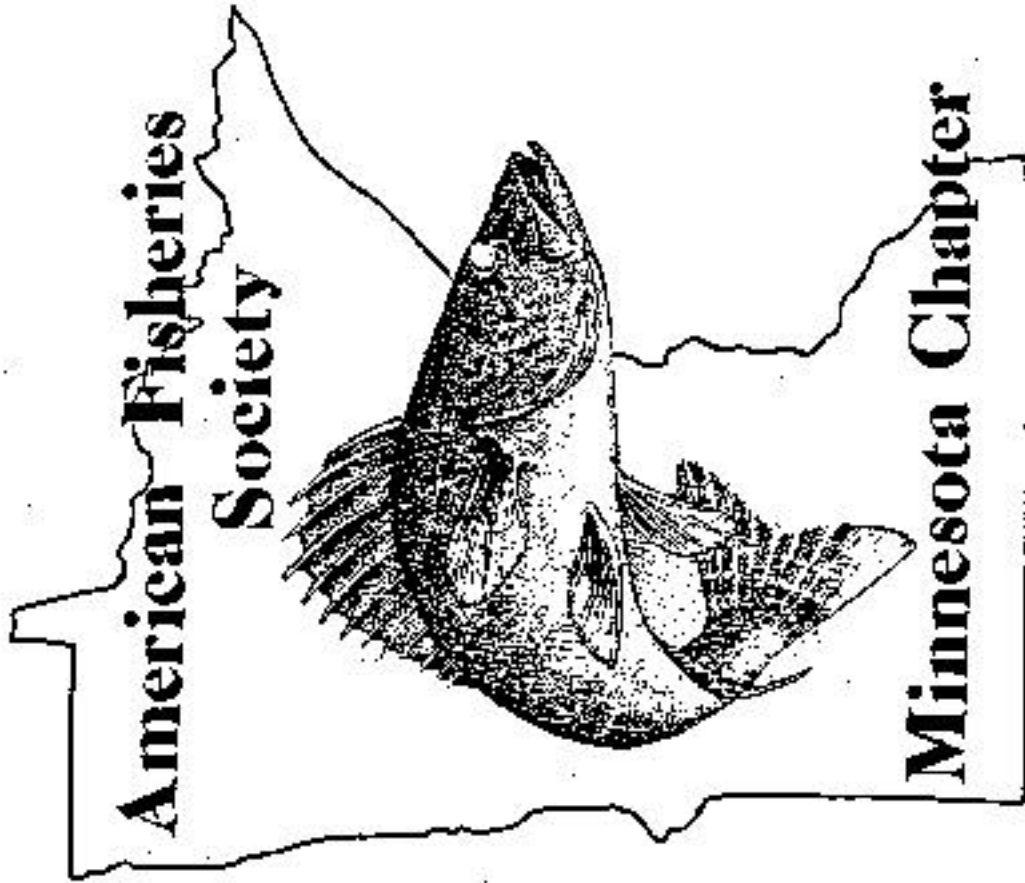
Internet and E-mail:

Minnesota Chapter of the AFS WWW page:
<http://www.fw.umn.edu/mnafs>

American Fisheries Society WWW page:
<http://www.esd.ornl.gov/AFS>

North Central Division of the AFS WWW page:
<http://www.fw.umn.edu/ncdafs>

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to subscribe, send e-mail to : majordomo@wyoming.com
leave the subject blank, with the following text:
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