

LATERAL LINES

VOLUME 12, NO. 2 APRIL, 1996

THE NEWSLETTER OF THE IOWA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

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PRESIDENT'S CORNER

Similar to what Bernie mentioned following last years chapter meeting, if you weren't able to make it to the annual chapter meeting with Nebraska in Council Bluffs, then "You missed it". One of my office mates summed it up best by commenting that Council Bluffs was actually the perfect fishery professional's atmosphere: shitty rooms, cold cheap beer, gambling boats, canceled aquarium tours, and an excellent technical program put together by Tom Boland. Following the buffet style banquet meal, Dick Schultz of the ISU Forestry Department presented updated information on riparian buffer strips. We then watched in amazement as auctioneer/comedian Dick Turpin inspired the Nebraskans (and the motel bartender) to bid up astronomical prices on our prized white elephant items.

Both chapters were also pleased to have past AFS president Lee Redmond and current NCD president Tom Coon address business meeting attendants. Our chapter is experiencing near record membership and participation thanks in part to increased attendance from university students. As I'm sure you have heard before, active participation is crucial to having the most effective chapter. Tom Boland is spearheading efforts to host a national ictalurid symposium which is not officially slated to take place during the summer of 1998 in the Quad Cities. For those of you who are not arm twisted into helping out with some specified duty, there will be plenty of opportunity for chapter members to get involved, especially since this event will be hosted in Iowa!

I'd also like to see our chapter become more visible and active through involvement in public education activities, either through direct participation, simple representation, or co-sponsorship of selected public awareness or educational programs. It seems that as a chapter, we go through repeated cycles of drafting letters to congress on common sense environmental issues as they relate to fisheries. It may be more effective to have a better informed and educated public, especially among school age kids, and then let their voices and opinions elect and guide our legislators.

The next Chapter meeting will likely be held in conjunction with the Midwest Fish & Wildlife Conference in Omaha. This means there will probably be no technical session of our own - This also means that the next president elect will have a very easy job (you can still volunteer your nomination!). Details of how this will be coordinated are still being worked out - right Tom?? The 1998 meeting will be held with Wisconsin somewhere on the eastern border (Finally!!). 

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Gary

Deep-Water Fish Sampling Methodology

Bendway weirs are an innovative, successful, and cost effective means to maintain a safe and dependable navigation channel on the Mississippi River. These weirs significantly improve navigation conditions around bends by creating desired navigation channel dimensions.

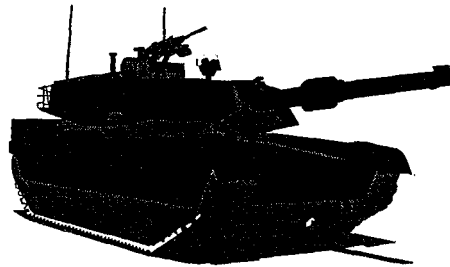
Although, more than 100 of these structures have been placed in 13 bends of the Mississippi River, their effects on the aquatic environment had not been evaluated. Of particular concern was the effect of the weirs on the pallid sturgeon, a fish species protected under the Endangered Species Act.

A major obstacle in collecting these data was sampling in deep water, high velocity environments. Conventional sampling techniques, such as electrofishing and netting, generally have been limited to depths less than 20 ft., and velocities below 2 to 3 ft./sec. In a bendway weir field, depths can exceed 50 ft., and velocities can exceed 6 ft./sec.

A Deep Water Sampling Committee (DWSC), consisting of representatives from the Corps of Engineers St. Louis District and Lower Mississippi Valley Division, Waterways Experimental Station, U.S. Fish and Wildlife Service, Long Term Resource Monitoring Program, Missouri Department of Conservation, Illinois Department of Conservation, and Southern Illinois University was formed in 1994 to identify potential useful sampling methods. These included explosives, shocking, gill netting, trammel netting, trotlining, and hoop netting.

The DWSC decided on using explosives as potentially the most effective sampling technique. Placement of explosives, weighting of the nets, and anchoring of trotlines was completed using conventional buoy blocks from the M.V.

Pathfinder. The Pathfinder also assisted in collection the nets. Each agency provided at least one catch boat to capture fish after the charge was detonated. In such swift current, fish could surface many hundreds of feet downstream, so several boats were required to effectively cover the area.



On 19 September 1995 a 300 ft. section over a bendway weir field was sampled. Preparations for the sampling (placing charges and catch nets), took approximately 6 hours. Then the explosives were detonated fish immediately began surfacing. In all, 217 fish of 13 different species were captured,

including 75 freshwater drum up to 20 pounds, 58 gizzard shad, 24 blue catfish up to 35 pounds, and numerous other species, including one sturgeon.

Other collection methods generally resulted in reduced catch rates. The initial consensus was that current velocity and sediment movement in bends caused nets to move too much of become silted over. These methods will be reevaluated and modifications will be made before they are tested again.

The alternative method with the most promise consisted of rigging an electro-shocker on the bow of the M.V. Pathfinder. This shocker could be lowered to depths exceeding 40 ft. and a charge induced through the electrodes to stun fish. A specially designed net captures the fish. This method worked exceptionally well when the boat was stationary. Although further modifications will be required to allow more maneuverability, this procedure has potential for future use.

Source: *LMRCC Newsletter*, Volume 2, Number 4, December 1995



It's Getting to be Election Time!

I know most of you are sick of hearing about elections, but this time the election is for something important - The President-Elect and Secretary/Treasurer for the Iowa Chapter of the American Fisheries Society. The current President-Elect is Tom Boland and the Secretary/Treasurer is Mark Cornish. The nominations committee has come up with some good candidates for the upcoming elections, but if anyone has any other nominations they would like to submit please send them to Mike Steuck at the Manchester Fish Hatchery by June 30 1996. The nominations that are submitted will be summarized and ballots will be included in the next issue of Lateral Lines.

Catfish 2000

Tom Boland reports that the International Ictalurid symposium and sport show will be held in June of 1998 in the Quad Cities. The purpose of this meeting is to bring together specialists from international resource agencies and the general fishing public to discuss and share their knowledge concerning the management, research, and culture of "catfishes" and to help promote the "catfish family" as important sport and commercial species. Organizers are planning a 3-day symposium covering catfish concurrent with or followed by a 3-4 day catfish sport show along the banks of the Mighty Mississippi River. Co-sponsors thus far include the American Fisheries Society - Iowa and Illinois Chapters, In-Fisherman Inc., Quad City Conservation Alliance (QCCA), and the Upper Mississippi River Conservation Committee (UMRCC).

A small organizing group of co-sponsors met earlier this month to develop a brief symposium outline. However, in order for an event of this scope to become a reality, much help will be needed. If you are interested in helping with **Catfish 2000** in any capacity, please contact: Tom Boland, Iowa DNR, 24143 Highway 52, Bellevue, IA 52031. Phone: 319/872-4976, Fax: 319/872-4945 or Steve Quinn, In-Fisherman Inc., Brainerd, MN 56401, Phone 218/829-1648, Fax: 218/829-2371



Call for Nominations

Meritorious Service

There is a call for nominations for the *Meritorious Service Award*. Closing date to subunit (Iowa Chapter) nominations is June 15, 1996. It is awarded to an individual AFS member for unwavering loyalty, dedication, and meritorious service to the Society over a long period of time; and for exceptional commitment to the program, ideals, objectives, and long-term goals of AFS. Nomination forms are available from Carolyn A. Griswold, Chair, Meritorious Service Award Committee, Northeast Fisheries Science Center, Narragansett Laboratory, 28 Tarzwell Dr., Narragansett, RI 02882-1199

Mentoring for Professional Diversity

Nomination deadline for the 1996 award for *Mentoring for Professional Diversity in Fisheries* is July 1. The purpose of this new award is to recognize an AFS member who has contributed to increasing the diversity of our profession by assisting in the professional development of fisheries students or new fisheries professionals from underrepresented groups. Contact MaryLouise Keefe, Oregon Dept. of Fish & Wildlife, 211 Inlow Hall - EOSC, La Grande, OR 97850; 503/962-3777; Fax 503/962-3849

Do you know someone who would like to become an Iowa Chapter AFS Member?

To join, fill out the information below and send a \$5.00 check

(payable to the Iowa Chapter AFS) to:



Mark Cornish, Sec/Treas
Fairport Fish Hatchery
3390 Highway 22
Muscatine, IA 52761



Name: _____
Street: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

News from I S U L o w a S t a t e U n i v e r s i t y

By Robert Summerfelt

ISU Welcomes John Downing

ISU's newest faculty member, John Downing, is interested in littoral zone ecology, the relation between land-and water quality, and biodiversity and sustainability in aquatic systems. John also has a project on mussel aquaculture in Brazil and he will be collaborating with Joe Morris on a new project examining the relationship between fish production and nutrient supply and stoichiometry in Iowa's ponds and a collaboration with the La Crosse lab on Zebra mussel ecology.

John was honored by his BSc alma mater, Hamline University with his induction into the Science Alumni Gallery of Achievement. John is one of 17 people in the 150 year history of Hamline University to receive this recognition.

Current Research

Fish Culture

Plankton management for fish culture ponds - Chuck Mischke dissertation (Joe Morris)

Historical use of copper compounds in a hatchery setting and effects of copper sulfate on larval fish and zooplankton - Beth Allen for MS (Joe Morris)

Intensively reared *Lepomis* hybrids under different culture regimes - Glenda Dike for MS (Joe Morris)

Effects of suspended solids on survival and development of larval walleye - Todd Phillips for MS (Robert Summerfelt)

Trout diets with fish meal analogs - Alan Johnson for MS (Robert Summerfelt) (ed. note: *Al is a graduate of the Fairport Fish Hatchery's Summer Academy of Hard Knocks!*)

Fish Management and Water Quality

Population dynamics of benthic fishes along the Missouri River - Mark Pegg dissertation (Clay Pierce)

Development of a statewide GIS database for fishery management in Iowa's interior rivers - Jeff Madejczyk for MS (Clay Pierce)

The effects of intensive agricultural land-use practices on small streams in the northwest - Jeff Kopaska for MS (Bruce Menzel)

Aquatic Invertebrates

Effects of slope and substrate composition on spatial distribution of freshwater mussels in a lacustrine system - Jeff Straka for MS (John Downing)

Filtration selectivity of unionid and zebra mussels - Katie Wissing for MS (John Downing)

Genetic variation in populations of freshwater mussel *Lampsilis radiata siliquoidea* - Katherine A. Tuxbury for MS (John Downing)

Effects of zebra mussels on phosphorus and nitrogen cycling in experimental aquatic ecosystems - Mark Hausler dissertation (Clay Pierce)

The foraging behavior of *Anax junius* (Odonata: Aeschnidae) and its potential as a behavioral endpoint in pesticide testing - Sandra Brewer dissertation (Gary Atchison)

Recent ISU Publications

Atchison, G.J., M.B. Sandheinrich, and M.D. Bryan. 1996. Effects of environmental stressors on interspecific interactions of aquatic animals. Pages 319-345 in M.C. Newman and C. Jagoe, editors. Quantitative ecotoxicology: A hierarchical approach. Lewis Publishers, Boca Raton, Florida.

Beauvais, S.L., J.G. Wiener, and G.J. Atchison. 1995. Cadmium and mercury in sediment and burrowing mayfly nymphs (*Hexagenia*) in the upper Mississippi River. Archives of Environmental Contamination and Toxicology.

Bristow, B.T., and R.C. Summerfelt. 1996. Comparative performance of intensively cultured larval walleye in clear, turbid, and colored water. Progressive Fish-Culturist 58:1-10.

Bryan, M.D., G.J. Atchison, and M.B. Sandheinrich. 1995. Effects of cadmium on the foraging behavior and growth of juvenile bluegill *Lepomis macrochirus*. Canadian Journal of Fisheries and Aquatic Sciences 52:1630-1638.

Hey, J., E. Farrar, B.T. Bristow, C. Stettner, and R.C. Summerfelt. 1996. Thyroid hormones and their influences on larval performance and incidence of cannibalism in walleye, *Stizostedion vitreum*. Journal of the World Aquaculture Society 27:40-51.

Luzier, J.M., R.C. Summerfelt, and H.G. Ketola. 1995. Partial replacement of fish meal with spray-dried blood powder to reduce phosphorus concentrations in diets for juvenile rainbow trout, *Onchorynchus mykiss* (Waubaum). Aquaculture Research 26:577-587.

Marty, G.D., D.E. Hinton, and R.C. Summerfelt. 1995. Histopathology of swimbladder noninflation in walleye (*Stizostedion vitreum*) larvae: role of development and inflammation. Aquaculture 138:35-48.

Don Kline

When Lorene and Allen Kline stared down at their new baby boy Donald on April 23, 1943, how could they have known they had just given birth to a founding father of the Iowa Chapter. Young Don's interest in the out-of-doors developed during boyhood while roaming the hills and valleys along the North River in Warren County, Iowa. Don said of his youth "I have been a naturalist/ecologist as long as I can remember". He graduated from Carlisle Consolidated High School in Carlisle, Iowa 1961, attended Central Missouri State College in Warrensburg, Missouri from 1961-1963, and achieved his BS in Fisheries & Wildlife Biology from Iowa State University in 1967. Don married Marjorie C. Radke and has one son, William, and two grandchildren, Morgan & Sarah.

Don joined the AFS parent society in 1967 and helped establish the Iowa Chapter in 1969. At his office at Lake Darling, he proudly displays Certified Fisheries Scientist plaque no. 1,294 which he received in 1978. Don has been active in the Chapter as chair of numerous committees and served as President of the Iowa Chapter in 1976.

Don began his fisheries career with the Iowa Conservation Commission in August, 1967 after two internships. "My training began on the pre-impoundment study of Red Rock Reservoir under the leadership of Jim Mayhew. Then on to Sioux City and Brown's Lake in Western Iowa. I set up studies along the Missouri River Drainage looking at fish distribution and oxbow lake fisheries."

After the Fish Management Section (now Bureau) was organized in the early 1970's, Don moved to the new fisheries management district in southeast Iowa at Lake Darling. His new area stretched from the lower half of the Mississippi River to the just-completed Rathbun Reservoir and everything in between.

Don's Mississippi River duties included work on the last compendium of fisheries data on the Mississippi and also dredge spoil disposal site inspection. Don says, "At that time we thought you could get it all in one document", we know better than that now. Another misconception was "that the Corps of Engineers were there to help", time has shown that wasn't always true.

Fisheries surveys were the main management objective of the Conservation Commission in the 70's. This was done by using a two to four page report form which guided management, which was mostly stocking. Don was involved in many projects at that time; "I got involved in the start up of the County Conservation Board cage catfish program and was among the first to see white amur - grass carp in Iowa." Don will always remember 1972 as

the "Year of the Creel" because he set up the format and ran eight creels in that year.

In the mid-70's Don's district was split into three. Don knew that the Iowa angler would benefit from the new districts on the Mississippi River and in the Rathbun region. As his area of responsibility lessened, Don had more time to concentrate on habitat and water quality. Much of his work in the 80's centered on Lake Geode near Burlington, Iowa. "Draining Lake Geode to get rid of the gizzard shad in 1981 was a major event because it was a struggle to get past the public disapproval." Don also saw a problem in Geode that he had seen in other Iowa lakes, "just looking down from the dam and seeing a wet hole with habitat only ringing the shoreline" disturbed him. Don and his crew alleviated this by placing habitat structures throughout the lake bottom. His work at Geode also included destratification in the late 80's with motor driven fan blades. He said, "We learned, you can do it, but mechanical problems will abound."

After seeing the positive changes accomplished in Lake Geode, Don said, "It heightened my conviction to work harder on habitat." He shifted his focus to Lake Darling in 1991 and 1992. "We trucked broken concrete, from the Richland pavement project to use as armor for shaped shoreline. Since we had more shoreline than concrete, I helped tour the surrounding communities and ask for donations. We raised \$12,000.00 for rock habitat which we purchased, hauled, and placed." Don credits this project with teaching him to operate a dozer and earth scraper which he tirelessly used to create fish and wildlife habitat.

Future projects for Don include keeping track of County Board ponds and the Skunk, Iowa, Cedar, and Wapsipinicon Rivers. A major project is the creation of the new Lost Grove Lake near Bettendorf, Iowa. As usual Don's mind is on fish habitat when he plans to plant over 25,000 seedling trees to make up for the lack of "brush" on the side slopes of the new lake.

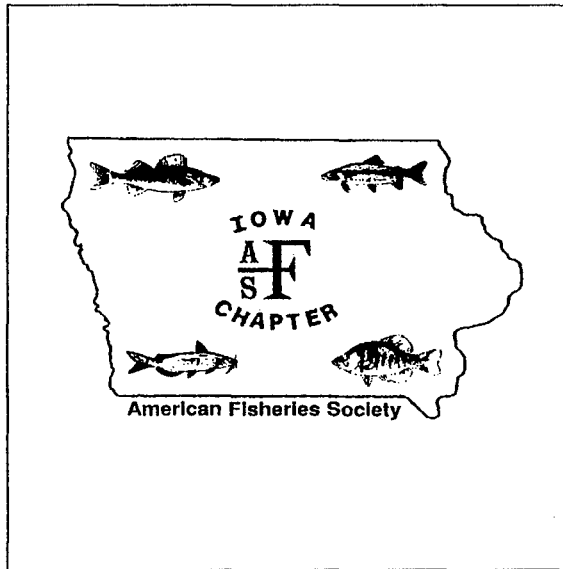
Don's favorite fishing hole is the Skunk River in southeast Iowa where you can find him drowning his favorite channel catfish stink bait on a nice summer day.

Don would like to acknowledge the many people that have influenced his career including: Dr. Kenneth Carlander, Larry Squibb, Larry Gepner, Joe Golden, Bob Middendorf, Jim Mayhew, Harry Harrison, and "the many fisheries people I have met along the way - Thanks." Don truly believes, "that we are making a difference."

The Iowa Chapter as well as the anglers of Iowa appreciate Don's continuous effort to improve the fisheries profession and the quality of angling in Iowa.

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Academic Angst

Match the Common Name to the Scientific Name

Common Name	Scientific Name
1 Freshwater Drum	A. <i>Etheostoma exile</i>
2 Gizzard Shad	B. <i>Micropterus salmoides</i>
3 Emerald Shiner	C. <i>Stizostedion canadense</i>
4 Iowa Darter	D. <i>Dorosoma cepedianum</i>
5 Sauger	E. <i>Morone chrysops</i>
6 White Bass	F. <i>Notropis antherinoides</i>
7 Largemouth Bass	G. <i>Pimephales promelas</i>
8 Blue Catfish	H. <i>Aplodinotus grunniens</i>
9 Fathead Minnow	I. <i>Ictalurus furcatus</i>
10 Bluegill	J. <i>Lepomis macrochirus</i>

Answers: 1 - H, 2 - D, 3 - F, 4 - A, 5 - C, 6 - E, 7 - B, 8 - I, 9 - G, 10 - J

1 correct "I touched a fish *once*"; 2-3 freshman; 4-5 sophomore; 6-7 junior; 8-9 senior; 10 graduate student



Brain Teasers

Cash Crop

Number of Fish Sold in Iowa by Private Producers in 1994

Species	Size	Count
Black Crappie	2"-8"	62,095
Bluegill	1"-8"	90,377
Bluegill Hybrid	1"-8"	137,979
Brown Trout	6"	275
Bullhead	8"	600
Channel Catfish	1"-5lbs	219,656
Chub	1"-6"	897
Fathead Minnow	1"-3"	120
Green Sunfish	3"-5"	875
Largemouth Bass	1"-4lbs	69,719
Northern Pike	2"-12"	36,663
Rainbow Trout	10"-2lbs	6,565
Striped Bass Hybrid	3"-6"	6,320
Tilapia	2"-2lbs	39,516
Walleye	1"-12"	128,397
White Amur	5"-12"	16,643
Yellow Perch	3"-4"	2,700

Who is Biggest?

Species	Record Fish			
	Iowa	Illinois	Wisconsin	North America
Largemouth Bass	10 lb 12 oz	13 lb 1 oz	11 lb 3 oz	22 lb 4 oz
Bluegill	3 lb 2 oz	3 lb 8 oz	2 lb 6 oz	4 lb 12 oz
Channel Catfish	36 lb 8 oz	45 lb 4 oz	44 lb 0 oz	58 lb 0 oz
Walleye	14 lb 8 oz	14 lb 0 oz	18 lb 0 oz	25 lb 0 oz
Sauger	6 lb 8 oz	5 lb 12.5 oz	5 lb 3 oz	8 lb 12 oz
White Bass	3 lb 14 oz	4 lb 14 oz	4 lb 6 oz	6 lb 7 oz
Carp	50 lb 0 oz	51 lb 0 oz	57 lb 2 oz	57 lb 13 oz
Smallmouth Bass	7 lb 12 oz	6 lb 7 oz	11 lb 3 oz	11 lb 15 oz
Northern Pike	25 lb 5 oz	26 lb 15 oz	38 lb 0 oz	46 lb 2 oz
Muskellunge	45 lb 9 oz	34 lb 2.88 oz	69 lb 11 oz	69 lb 11 oz
Yellow Perch	2 lb 3 oz	2 lb 8.75 oz	3 lb 4 oz	4 lb 3 oz
Brown Trout	15 lb 6 oz	28 lb 8 oz	18 lb 6 oz	40 lb 4 oz





Meetings of Interest



April 25-26, 1996 **28th Annual Meeting of the Mississippi River Research Consortium.** Holiday Inn, La Crosse, Wisconsin, Contact Mark Sandheinrich, River Studies Center, Department of Biology and Microbiology, University of Wisconsin - La Crosse, La Crosse, WI 54601, 608/785-82611

May 18-23, 1996 **6th International Symposium on Society and Resource Management.** Pennsylvania State University, University Park, Pennsylvania. Contact A.E. Luloff, program cochair, Department of Agricultural Economics and Rural Sociology, 111 Armsby Bldg., The Pennsylvania State University, University Park, PA 16802, 814/863-8643

June 13-19, 1996 **76th Annual Meeting of the American Society of Ichthyologists and Herpetologists and 20th Annual Larval Fish Conference.** Hotel Intercontinental, New Orleans, Louisiana. Contact Richard F. Shaw, Director, Coastal Fisheries Institute, Louisiana State University, Baton Rouge, LA 70803-7503; 504/388-6455

June 20-24, 1996 **American River Management Society Symposium on River Management and Planning.** Ramada University Hotel and Conference Center, Columbus, Ohio. Contact Caroline Tan, 316 Daly Ave., Missoula, MT 59801; 406/549-0514

July 14-18, 1996 **International Congress on the Biology of Fishes.** San Francisco State University, San Francisco, California. Sponsored by the AFS Physiology Section. Contact Don MacKinlay, Fisheries and Oceans, 555 W. Hastings St., Vancouver, BC V6B 5G3, 604/666-3520

Aug 7-9, 1996 **Annual Meeting of the AFS Fish Health Section.** Madison, Wisconsin. Contact Terry Ott, La Crosse Fish Health Center, 555 Lester Avenue, Onalaska, WI 54650, 608/783-8443

Aug 25-29, 1996 **The 126th Annual Meeting of the AFS. Sustainable Fisheries: Economics, Ecology, and Ethics.** Hyatt Regency Hotel, Dearborn, Michigan. Contact Paul Brouha, AFS, 5410 Grosvenor Lane, Ste. 110; Bethesda, MD 20814-2199, 301/897-8616

Dec 8-11, 1996 **Annual Meeting of the AFS North Central Division.** Omaha, Nebraska. Contact Jim Diana, School of Natural Resources, University of Michigan, Ann Arbor, MI 48109, 313/763-5834

The American Fisheries Society supports the conservation of North America's fisheries and aquatic ecosystems by promoting professional excellence in fisheries science, management, and education.



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