Dakota—Illinois—Indiana—Iowa—Kansas—Michigan—Mid-Canada—
Minnesota—Missouri—Nebraska—Ohio—Ontario—Wisconsin

Mainstream

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President's Message by Randy Schultz

At this year's annual meeting in Pittsburgh, President Wayne Hubert revealed his Plan of Work for his term. President Hubert's key initiatives include global fisheries leadership, education, and membership. As NCD President for this next year, I plan on directing our Division's activities to fit within President Hubert's framework, to help guide our Division and the Society. Admittedly, the goal of global fisheries leadership caused me to pause over the NCD's role here. But then I realized we met this goal this past summer when the NCD co-sponsored the 2010 Catfish Symposium with the Southern Division. International catfish fisheries were a common theme amongst the plenary speakers, and we had presentations from Canada, Mexico, Georgia, and Argentina. It was a very successful meeting, and I hope we can develop similar cooperative projects in the near future. Hats off to the Catfish 2010 Steering Committee!

Specifically, for the upcoming year, I am hopeful we can continue NCD excom visits to Chapter meetings this winter; I truly believe this is a great way to dovetail with all three goals of President Hubert's Plan of Work. I know I speak for the other excom members when I say we are very appreciative of all the efforts our Chapters have gone through to help get the NCD excom to their meetings. This has been a great way for the excom to become aware of issues in your Chapters and states to help guide us, and we thank you! Please know the NCD excom and Society leadership takes the value of membership seriously. As a testament to such, President Hubert is going to further develop Past-president Jackson's initiative to improve and advance web and electronic services. Much emphasis is being placed on developing "virtual meeting attendance" by members unable to attend Division or Society meetings. We have great expertise within the NCD to help develop this technology, and I look forward to helping advance meeting attendance in this way.

Our main venue for communicating with NCD members will continue to be our website. Our webmaster Andy Fowler has superbly kept our website updated, so please check in periodically, as we continue to upgrade and add to the various pages. As NCD Past-president Mark Porath noted in his April President's Message, the NCD excom developed a new NCD Resolutions section for our webpage,

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This newsletter is published twice a year. Deadlines for submission are April and September 1st. The views and opinions expressed herein are not necessarily those of the NCD.

Editors: Tom Slawski
Sara Teske

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President's Message continued by Randy Schultz

and we continue to make progress toward developing a resolution on Ecological Separation of the Great Lakes and Mississippi River Drainage Basins. Phil Moy has done a great job coalescing interests from NCD Chapters that have initiated resolutions on this topic. The NCD Governing Board hopes to be able to consider this resolution in the very near future, and, if advanced by the Governing Board, bring this resolution before our membership for a vote. The Parent level excom has been appraised that this may be a resolution advanced to them, should our members direct the NCD excom as such.

Now, if you've read this far, you may be waiting for some inspirational words from your new President! It's not uncommon for people to ask me why they should belong to AFS. For me, AFS has been an important aspect of my career and professional life. Sure, most of us understand the value of belonging to a professional society, and the value of AFS publications has surely helped each and every one of us, if not on a regular basis, at least periodically. Plus the social aspect of AFS meetings provide me a chance to greet old friends, make new ones, and keep me updated on hot topic issues. You see, it's all about the contacts I make through networking opportunities that I most prize as an AFS member. These contacts, new and old, provide a human resource that complements the technical guidance needed to do my job. I have developed true friends that I would never have met, otherwise. You have nothing to lose and everything to gain when you take the opportunity to participate in AFS-sponsored events to build your professional network. This doesn't happen overnight, it is something I continue to build, and something that has benefitted my professional life.

As I look forward to my term this year I am excited about all the varied activities the Division and our members are involved in, and I am excited to see how the next year unfolds. Please feel free to contact me anytime, & I truly look forward to serving you.

COMMITTEE REPORTS

Centrarchid Technical Committee by Mark A. Kaemingk

We had a total of six chapter representatives attend the 2010 summer CTC meeting in LaCrosse, WI, which has been the most attended meeting since I took over the chair position. Because the centrarchid technical committee is in charge of disseminating information on so many different species (comparatively speaking with Esocid and Walleye technical committees), it was discussed that we choose a group of species (e.g., black bass, panfish) to highlight each meeting. By doing this it may allow meetings to be more productive by giving more in depth summaries to those species being covered rather than a broad summary of all species. In addition, it was also suggested we come up with a five year plan as to what the CTC wants to accomplish in the next five years as far as involvement with future projects, symposia's, special reports, etc. We hope to have a draft of the plan in the near future so we can discuss it at this winter's CTC meeting which is in conjunction with the Midwest Fish and Wildlife Meeting in Minneapolis, MN. Special thanks to all those who attended this summer's meeting and for those of you who submitted reports. CTC chapter reports can be viewed on the North Central Division AFS website.

Continuing Education Committee by Rebecca Papke

Three workshops will be offered at the 71st Fish & Wildlife Conference being held in Minneapolis. We will be offering a full day course on "Getting the Most from Excel: Tips, Tools, & Techniques" taught by Dr. John Roese of Lake Superior State University School of Biology. Next, a full day course will be taught by Dr. Daniel Hayes of the Fisheries & Wildlife Department of Michigan State University on "Building and Interpreting Fishery and Wildlife Models". Finally, a half-day workshop will be taught on "The Role of Human Dimensions in Fisheries and Wildlife Management". Course registration and full description of the workshops can be found on the conference website at http://www.midwest2010.org/ce.php.

Continuing educations credit will be given at no additional charge for the full day workshops and can be used towards professional certification through AFS and TWS (The Wildlife Society).

Future workshops are being compiled for the following year. For suggestions, please email Becky Papke papker@michigan.gov.

Interim Membership Committee by Tim Simonson

Current membership in 2010 is 235. This is good, considering that I have not yet included student chapters (they are not in session yet). I also do not yet have a final count of members that paid WI dues through the parent society.

During 2009, we added the names of present and past members from the last 3 years to the WIAFS distribution list. I also added the email addresses of all parent society members living in WI (that aren't already members). That distribution list should be a comprehensive list of current and previous members, so no one should be missing out on information from the chapter. I think this helped bring a few people out of the woodwork. We will continue to maintain the distribution list as an all inclusive list to encourage as many people as possible to keep and stay in touch with WI AFS.

Year	Total Members	Student Members	Parent Society
2003	141	- -	- -
2004	152	15 (10%)	- -
2005	181	36 (19.9%)	77 (43%)
2006	180	33 (18%)	92 (51%)
2007	201	33 (16%)	92 (46%)
2008	272	92 (34%)	72 (26%)
2009	266	131 (49%)	81 (30%)
2010	235	52	24

EsocidTechnical Committee by Rodney Pierce

The following notes highlight discussions from the ETC business meeting held 29 July 2010. The meeting followed a full day *Age and Growth Workshop: Modern Techniques and Applications* (Dr. Daniel Isermann, University of Wisconsin Stevens Point, as facilitator) and another day of technical presentations during a joint meeting between the Esocid, Walleye, and Centrarchid technical committees. ETC members in attendance at the business meeting were D. Rowe, K. Battige, G. Drach, K. Koupal, M. Faust, J. Molenhouse, J. Diana, J. Weeks, S. Stewart, G. Wanner, and R. Pierce.

Winter Meeting Announcement: Members of the ETC were invited to attend the 71st Midwest Fish and Wildlife Conference during 12-15 December 2010 in Minneapolis. Your Minnesota hosts are expecting a large turn-out and a great program. A suggestion that the winter ETC meeting be held on a week day instead of Sunday (e.g. lunch time or evening) will be explored by Rod Pierce.

Coolwater Fishes Symposium: Rod Pierce has been organizing this symposium for the 71st Midwest Fish and Wildlife Conference. The symposium is a joint initiative between the ETC and WTC, and will be a 1-1.5 day session. Early registrations for the symposium included 15 presentations covering population genetics, population rehabilitation, regulations, recruitment, fish aging, modeling population dynamics, and landscape scale management and broad-scale monitoring. Early registrants were polled about their interest in publishing symposium proceedings, and interest was low so participants are encouraged to publish their work elsewhere. (Update: there will be a whopping total of 25 papers for the symposium.)

Past and Future Leadership: A "thank you" plaque was presented to Dr. Jim Diana (Immediate Past Chair) for his active leadership and enthusiasm for the ETC since the committee's inception. A chair-elect was sought from Iowa due to the 2011 Midwest Conference being held in Iowa. Jonathan Meerbeek (Iowa DNR) volunteered and was unanimously voted chair-elect for 2011.

Themes/Location/Dates for 2011 Summer Meeting: Potential topics for the next summer meeting were discussed and included GIS, sampling and evaluating recruitment, new tagging methodologies (and hands-on workshop), angler retention and human dimensions, quantitative techniques, and long term databases and trend analyses. A joint meeting with WTC and CTC was preferred and suggested locations included LaCrosse, Dubuque, and the Quad Cities during the last two weeks in July. The location should hopefully be convenient for the new chair-elect.

Budget: The July 2010 balance in the ETC account was $2,154.64. However, the ETC borrowed $5,100.50 from the North Central Division AFS to publish 100 copies of the 2006 International Pike Symposium. The intent was to sell the books at $60 each, but only $1,450 has been generated in sales and 68 books remain unsold. Therefore, we still owe $3,650.50 to the North Central Division AFS. After some discussion about options, we decided to reduce the book price to $30 each and set up a table at the Coolwater Fishes Symposium to market more of them. We will staff the table with ETC members and students. In addition, Jordan Weeks will put in a plug for the book in a column he writes for Muskie Magazine. (Update: 10 more of the books were sold since the ETC meeting.) Anyone interested in purchasing a copy of the book should contact Rod Pierce. ***They're now ½ price folks!***

News Items: The University of Wisconsin – Stevens Point is in the process of establishing a Fishery Analysis Center, and one of the objectives of the center is to build a gallery of structures from known-age fish. An on-line version would allow people to sharpen their fish ageing skills.

Muskies Inc. is considering a 2016 repeat of the Muskellunge Symposium that was held in Indiana in 2005.

State and Provincial Reports:
Dakotas (G. Wanner)
Current Research: Dr. Brian Blackwell – *Age structure and recruitment patterns of northern pike populations in northeast South Dakota.* In 2008, objectives were to describe northern pike population characteristics in 18 lakes among three different types of water bodies including: 1) permanent natural complex fish communities, 2) marginal natural simple fish communities, and 3) newly flooded wetlands/lakes. Additionally, the study will add six lakes that are shallow semi-permanent wetlands. The study will produce and report and publication in late 2010. SDGFP changed the daily limit of northern pike in Lake Oahe from 3 fish to 6 fish and 12 fish in possession to match the statewide daily/

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possession limits., however, more years of high water will be needed to bring it back to what it once was.

Dakota northern pike and muskellunge angling regulation changes and management: Both North and South Dakota have seen tremendous natural reproduction last year due to all the flooded vegetation in the Missouri River system and district lakes.

NDGF is anxiously looking forward to getting back in the muskie business. NDGF historically got muskies from PA, but the VHS threat to Great Lakes states has prohibited their ability to get fish to stock in ND lakes. The PA hatcheries have tested disease free for three years, so NDGF got a request to obtain tiger muskies this year.

SDGFP changed the daily limit of northern pike in Lake Oahe from 3 fish to 6 fish and 12 fish in possession to match the statewide daily/ possession limits.

From Geno Adams, SDGFP – Lake Oahe was once known as the premiere northern pike fishery of SD. While catch rates were high for anglers targeting the species, the real draw for many fishermen was the chance to catch a true "twenty pounder". The popularity of this fishery has declined in recent years due to decreased catch rates, which is ultimately a factor of low water yield in the Missouri River. Northern pike recruitment in the reservoir is highly dependent on water levels because of the specific habitat needs during spawning. Northern pike spawn on flooded vegetation and during low water years, this habitat is nearly nonexistent. During the recent upturn in water levels, northern pike production was documented in Lake Oahe in 2008 and again in 2009, the first since the late 1990s. Also, anglers have reported catching "many small pike" in 2009 indicating that there has also been successful recruitment. The future is promising for this northern pike fishery, however, more years of high water will be needed to bring it back to what it once was.

Indiana (N. Thomas)
The Indiana Department of Natural Resources finished up its multiyear pit-tagging study of muskies in Lake Webster. Below is an excerpt summarizing its findings: Lake Webster is one of the Midwest's premier muskie fisheries and serves as brood stock for Indiana's muskie hatchery production. The population is based on annual fingerling stockings at 5/acre – higher than stocking rates in other states - prompting concerns that the rate may be too high to sustain good growth even though anglers have expressed interest in a higher size limit (40 inches) to improve quality. Since 2007, muskie fingerlings stocked in Webster have been fed live minnows for 30 days prior to release, down from 90 days prior to 2007. Therefore, long-term abundance, growth, and survival, as well as how the recent diet change might affect the muskie population are being monitored.

Altogether, 640 muskies (including recaptures) were caught during brood stock operations from 2006 through 2009 at the rate of 3.7/day/ trap. During that time, the catch rate declined 48%. Individual muskies ranged in length from 16 to 47 inches, but size distributions shifted toward larger fish through 2008 before declining in 2009.

Annual survival of age-4 and older muskies was 78% and annual mortality was 22%. Annual mortality was 40% among age-5 and older muskies but 78% among age-8 and older muskies. Seber-Jolly estimates of muskie numbers varied from 1,461 in 2007 (1.9/ac) to 2,761 in 2006 (3.6/ac). The average annual estimate was 1,925 (2.5/ac).

Length distributions, mean length at age at time of capture, and growth increments differed between male and female muskies. Overall, males increased 4.2 inches from age-5 to age-8, whereas females increased 8.0 inches. Based on PIT-tag data, male muskies grew only 1-2 inches per year after 30 inches, while female muskies grew 1-2 inches per year after 36 inches.

Lake Webster continues to support a high-density population of adult muskies that may be near its carrying capacity. Increasing the size limit may only slow growth further, given the high density, current growth rate, and low exploitation of the population. A larger size limit might be useful if the stocking rate is reduced, but a lower density could result in a shortage of brood stock. Reducing the stocking rate at this time, however, would confound results of a study to examine the diet change and pose a risk to the fishery and brood stock capability.

Additionally, stocking rates were reduced from 2/ac to 1/ac at Upper Long Lake, a lake stocked by the local chapter of Muskies Inc, due to local angler complaints. The Division of Fish and Wildlife is currently evaluating the success of

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muskies in Upper Long, as well as changes in the fish population that have occurred since stockings began in 1996. A proposal has been made to stock the remaining fingerlings in Everett Lake in Allen Co, which was the subject of a selective rotenone treatment targeting overabundant gizzard shad. In 2010, gizzard shad had returned to nuisance levels and may provide an adequate prey base for stocked muskies.

Michigan (J. Diana)
Statewide management plans for both northern pike and muskellunge were approved by the management team of the Michigan Department of Natural Resources and Environment in August 2009. Public and other comments were issued, and these plans were updated in January 2010. Management plans do not include regulation changes, and the target for regulation changes is April 1, 2012. The proposed regulation changes for pike are being evaluated by Fisheries Division staff during fall 2010. In addition, a Great Lakes Muskellunge Broodstock Program is still being considered, with the target of 2011 for the first planting of reared Lake St. Clair muskellunge. It will most likely take 7-10 years before the broodstock lake is ready to supply the hatchery for regular production of Great Lakes muskellunge.

Two regulation changes are being proposed by the public to the Coolwater Regulations Steering Committee, which should meet in late August. These include a liberalized regulation for muskellunge, which is proposed by the Spearing Association, and an increase in the minimum size limit for muskellunge, which is being proposed by the Michigan Muskies Alliance. It is most likely that neither regulation change will receive serious consideration this year, especially since they conflict.

Probably the largest change in the management plans has to do with the proposal for a protected slot for northern pike. The exact details are not yet set, but the proposal is essentially for a protected slot from 24-30 inches on all lakes. There is potential for a few lakes to be managed in a trophy status, but all stunted pike lakes will be managed under this slot regulation as well.

Minnesota (R. Pierce)
Evaluations of experimental regulations for northern pike are now available in two publications 1) Pierce, R. B. 2010. Long-term evaluations of northern pike experimental regulations in Minnesota lakes. Minnesota DNR Investigational Report 556 (can be found at our website www.dnr.state.mn.us/publications/fisheries/investigational_reports.html); and 2) Pierce, R. B. 2010. Long-term evaluations of length limit regulations for northern pike in Minnesota. North American Journal of Fisheries Management 30: 412-432.

A new study is measuring the thermal habitat and depths used by northern pike. Pike were implanted with acoustic transmitters that emit temperature and depth information. Fixed-station hydrophones in the lake are recording acoustic signals from the fish. One of the study goals is to compare thermal habitat used by large versus small northern pike.

A goal of the long-range plan for muskellunge management in Minnesota was to expand the number of lakes managed for muskellunge. The expansion is somewhat controversial, but due to growing interest in muskellunge fishing, five new waters are being proposed for muskie stocking in fall 2011. Public input meetings concerning the five lakes will be held this fall.

Missouri (M. Anderson)
A notable change in muskellunge management in Missouri was the removal of Henry Sever Lake (158 ac.) from the program. Reasons for removing Henry Sever Lake from the program is best explained below, an excerpt from my spring Show-Me Muskie Project cooperator newsletter: "Henry Sever Lake was first stocked with muskies in 1996 and was originally anticipated as a secondary brood stock lake for Missouri. A quality muskie fishery was developing until 2001 when a tremendous rainfall event caused the lake to overflow. Once the water receded, muskie skeletons and bone fragments were found below the principal and emergency spillways. We felt that we had lost a significant number of muskies during this event and our suspicions were confirmed when our 2002-2004 spring fyke net catch rates declined to less than 1 muskie per net. Muskies were stocked in 2002 and 2005-2008, and evidently survived well as catch rates in the spring of 2006 rose to nearly 6 muskies per net! Since 2006, catch rates have averaged nearly 3 fish per net including 2008 and 2009 when high water levels and poor

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lake and weather conditions curtailed muskie sampling. A spillway barrier was put in place in 2007 to reduce the chances of another exodus of muskies after a heavy rainfall event.

With that said, I'm sure many of you are wondering why we would discontinue Henry Sever Lake from the muskie program. The answer is quite obvious—the lack of angler interest. From 2000 through 2008, only 17 anglers reported fishing for muskies at Henry Sever Lake, and only one angler from 2005 through 2008 according to Show-Me Muskie Project Trip records. The local conservation agent and other local MDC staff had not observed anyone fishing for muskies at Henry Sever Lake in the past three years. We have tried to promote the muskie fishery at Henry Sever Lake though numerous media outlets and by sending letters to prospective muskie anglers. Again, we observed no increase in fishing pressure. Some of you have told me that the lack of a large town nearby with hotels and restaurants deterred traveling a great distance. Henry Sever Lake is located in rural southeast Knox County, approximately one hour in either direction from Kirksville or Hannibal. Undoubtedly, the economy and high gasoline prices are also factors that kept muskie anglers from fishing Henry Sever Lake. After reviewing objectives and strategies listed in the current muskie plan (http://mdc4.mdc.mo.gov/Documents/14422.pdf), Show-Me Muskie Project results, local staff observations, MDC muskie committee member's opinions and a response from the Pomme de Terre Chapter Muskies Inc., and MDC's Fisheries Division Management Team decided to forego further muskie stocking at Henry Sever Lake. This was a very tough decision for all involved and was not made hastily".

Currently, four lakes in Missouri are now managed for muskies: Pomme de Terre Lake (7,820 ac.), Fellows Lake (820 ac.), Hazel Creek Lake (530 ac.) and Lake 35, Busch Conservation Area (62 ac.). Standard fyke netting surveys were conducted at Pomme de Terre, Fellows and Hazel Creek this spring and the results are as follows:

Pomme de Terre Lake: 27 net-days resulting in a total catch of 122 muskies or a catch rate of 4.5 fish/net-day. Proportional Stock Density was 90% and RSD36 = 53%. Twelve percent were greater than 42 inches long.

Fellow Lake: 25 net-days resulting in a total catch of 90 muskies or a catch rate of 3.6 fish/net-day. Proportional Stock Density was 83% and RSD36 = 41%. The largest fish captured was 46.8 inches and weighed 28 pounds.

Hazel Creek Lake: 12 net-days resulting in a total catch of 50 muskies or a catch rate of 4.2 fish/net-day. Proportional Stock Density was 100% and RSD36 = 66%. The largest fish captured was 45.5 inches long and weighed 31 pounds.

This fall, 12-14 inch muskie fingerlings will be stocked at a rate of 1 fish/acre at Fellow Lake, Hazel Creek Lake and Lake 35, Busch CA. Pomme de Terre Lake will be stocked with 4000, 12-14 inch fingerlings (0.5 muskies/acre).

Nebraska (K. Koupal)

Nebraska has limited use of esocids within our systems. Even this limited use has come with some headaches. The following issues were provided for this technical committee report in hopes that the experience of other states may shed some light on these issues.

Northern pike management – we have instituted a 28-34" protective size limit on northern in Box Butte Reservoir (NW Nebraska 1600 SA). The bag limit is 10 fish with only 1 fish allowed to be over the protective slot. The history in this lake is a lot of smaller 20-28" northern that most people were not harvesting and managers felt these fish were limiting recruitment of yellow perch. We are entering our 3rd year for this regulation and anecdotally are seeing some increased harvest for pickling smaller northern and the light reduction has allowed some increased presence of 6" or greater yellow perch. Increased water levels this spring have created a strong northern year-class. The regulation is kind of working but not as well as we hoped …. Do we need to let it go a few more years to see a greater impact; what have other states found over time to be successful (Minnesota reported 2 of 3 lakes were successful); are there alternative regulations or methods to reduce small pike numbers that others would suggest?

Muskie stocking – low water levels and uncertain reservoir future had suspended stocking of muskie at Elwood Reservoir (had been pro

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ducing an incredible catch rate for muskie). The recent wet years have put water back into the reservoir as part of the delivery system for CNPPID, so we will begin stocking again providing we can get and grow the muskies. Northern pike production – the last 3 years we have had a difficult time getting sufficient eye-up from northern spawned in our Sandhill lakes district. In 2008 Dewey Lake produced 0-8% eye-up; 2009 found 0-44% eye-up from Dewey and Pelican lakes; 2010 had a mean eye -up of 8% on first efforts and 7% on the second efforts from Pelican Lake. The same Pelican females were mixed with males from Merritt and 88% eye-up was produced, while males and females from Merritt Reservoir produced 72% eye-up. The milt appears to be discolored from the Sandhill lakes (compared to Merritt) and does not distribute well in the mixing bowl. Also, the eggs become more clumpy when using Sandhill lake only broodstock. Does anyone have ideas as to what might be going on?

Northern pike production has been somewhat limited in our production ponds as far as number return. We used to set aside a pond but now must use it for other species throughout the year. The lack of vegetation development might be hampering productivity. Does anyone use artificial substrates or know of a good surrogate habitat approach for these ponds?

Washington (B. Bolding)
The Washington Department of Fish and Wildlife continues to stock seven lakes across the state, yearly, with tiger muskies. The target number for stocking statewide is 6,000 1-year-old fish. The program also continues to increase in popularity and use every year. According to the last two angler preference surveys (2003 and 2008), three percent of licensed anglers (16,000) said they fished for tiger muskies in Washington. Another measure of popularity is the formation of a third tiger muskie club in Washington this June. It is the second Muskie Inc. chapter in the state (Chapter 60). State Fish and Wildlife should be completing an eight-year diet study of tiger muskies this year.

Washington faces a new esocid challenge in the form of a relatively new and rapidly expanding population of northern pike. This population is the product of illegal stockings in western Montana. From the Clark Fork River in Montana, they traveled downstream into Lake Pend Oreille in Idaho and then out and down the Pend Oreille River into Northeast Washington. Pike are an unwanted species in Washington and have the potential to negatively impact native Westslope cutthroat and bull trout in the Pend Oreille River system. Another important concern is the further spread of pike to other nearby waters and/or possible movement downstream from the Pend Oreille River into the Columbia River.

Wisconsin (D. Rowe)
Jordan Weeks will be new Wisconsin chapter Rep replacing Tim Simonson.

WDNR Musky Management Policy Team is working on moving the statewide size limit to 40 inch minimum length limit. Several biological and social criteria support increasing the minimum length limit in Wisconsin. This was proposed in 2009 rules cycle but several local fish managers felt that there was no option for lakes that didn't benefit from a higher size limit. The WDNR musky management team identified 4 criteria describing reproduction, density, and growth that would allow local managers to exempt a lake from the 40 inch minimum:

1. Population sustained through natural reproduction; and
2. Density > 0.6 muskellunge/acre (75^{th} percentile); and
3. Mean length at age 6 < 30" (lower 25^{th} percentile; scales ages acceptable); or
4. PSD38 < 5% (10^{th} percentile); PSD40 or PSD42 = 0.

If the first 2 and either 3 or 4 are met then the population would be considered high density and slow growing and could be exempted from the 40"minimum length.

We applied these criteria to lakes where we had some data available and came up with a proposed list of about 40 waters for exemption. We are in the process of reviewing that list with biologists and coming up with a final version for inclusion in the rule proposal, which we anticipate will go out for public hearing in spring 2011. The management team is still collecting preferences on alternative regulations for high density slow growth populations. So far including; no min, 28" min length (current regulation), a 30-40 inch protected slot, and 40 inch maximum length. For

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regulation simplicity we are hoping to have only one high density slow growth alternative reg.

University of Wisconsin-Stevens Point and WDNR acquired funding from Muskies Inc. to conduct a survey of muskellunge anglers in Wisconsin. The survey has been conducted at approximately 10-year intervals since 1990. The survey is largely complete with the exception of 5-6 new questions that will address currently relevant questions regarding muskellunge management and fishing in the state. These questions will be discussed at the Musky Standing Team Meeting in late August. The survey will be administered on-line to a randomly-selected sample of anglers who purchased a Wisconsin fishing license and a sample of members of organizations focused on muskellunge. The survey will be administered during January-March of 2011 and a final report will be available by early summer 2011.

WDNR is fine tuning their Musky propagation and stocking practices which were recently published in Fisheries, "Implementation of Genetic Conservation Practices in a Muskellunge Propagation and Stocking Program". Jennings etal**.** *Fisheries* 2010; 35: 388-395.

Both Art Oehmke (AOH) and Governor Thompson (GTH) State Fish Hatcheries completed another year where we almost carried-out all the parts of the policy. In both cases, we fell just short of utilizing the number of spawning individuals that the policy recommends. In both cases, also, we have had the greatest difficulty coming up with the specified number of males. While in 2009, GTH and AOH filled all of their statewide quotas, at the current time this year, it looks like we will be short (at least at GTH). We are now looking at adjusting the brood stock policy somewhat, to make up for what is looking to be insufficient numbers of lakes with naturally reproducing populations that have sufficient populations to meet pairing goals, in both AOH's and GTH's part of the northern region. We developed several recommendations for refinement or our brood stock management guidelines: 1) Drop back to a 4-lake (versus 5-lake) rotation, with each lake being spawned for two consecutive years, due to difficulty in finding enough large NR lakes. This will effectively allow for an 8-yr rotation on recipient waters. OR Drop back to a 3-lake rotation, allowing for a 6-yr effective rotation among recipient waters (Brian Sloss will analyze these options and provide a final recommendation). The 4-lake option seems better from a genetic standpoint, but a 3-lake option will be more acceptable to biologists. 2) Spawn 25 to 36 pairs at 1 female : 1 male (versus 26 females at 1 female : 3 males). 3) PIT tag adults used for spawning in order to document the proportion spawned more that once. 4) Allow stocking -back of large fingerlings in brood lakes during the years that eggs are taken (only in one of the years if a two consecutive year option is chosen). The stocking rate is TBD. 5) Take genetic samples from production fish for the next 1 or 2 years. 6) Evaluate Pelican Lake and Rhinelander Flowage as potential brood lakes in the Upper WI River basin. Obtain genetic samples and document fyke net catches. 7) Evaluate Sand/Sissabagama Lakes (these lakes are connected), in the Upper Chippewa Basin. Obtain genetic samples and document fyke net catches. 8) Retain the following lakes in the rotation: UPPER WI – Minocqua Chain, Big and Little Arbor Vitae, Pelican (potential), and Rhinelander Chain (potential); UPPER CHIP – LCO, Lost Land/Teal, Chippewa Flowage (West), Chippewa Flowage (East), Sand/Sissabagama (potential?). DROP North/South Twin, Moen Chain, and Plum lakes. 9) Pursue 50" minimum length limits on all brood lakes (Lost Land/Teal, Big/Little Arb, Minocqua Chain, Rhinelander Chain (if suited), Sand/Siss (if suited).

The Green Bay Great Lakes spotted musky project is continuing, and in 2009 WDNR established 3 inland brood lakes for fish that are being imported from Georgian Bay, Lake Huron with the Ontario Ministry of Natural Resources and Sir Sanford Fleming College. So far 2 year classes of fish (2008 and 2009) have been stocked into the lakes. These fish have been marked (Fin Clips or PIT tags) to differentiate family groups to prevent inbreeding when gametes are collected in the future. The fish should begin maturing by 2015 allowing collection and production of offspring for Green Bay.

In 2009 and 2010 we used oviduct radio transmitters to study spawning behavior and location selection of muskies in Green Bay. At identified spawning sites habitat characteristics were quantified at the time of deposition and twice more throughout the summer as well as fish community composition. We have documented natural reproduction now for the last three years.

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This study is funded by a FWS Great Lakes Fish and Wildlife Restoration Act grant. We are also doing some genetic sampling to evaluate the genetic make-up and diversity of the re-established population and compare with the new and original source populations.

Spawning Habitat Model - WDNR is fully funded to complete the application of Joe Nohner's model to the natural reproduction lakes of the state. The result will be development of a layer of "sensitive habitat" for use by regional teams in the development of Critical Habitat Designations. We are waiting for a few refinements to the model from Joe Nohner. Otherwise, we just need to free up some of Steve Bolssen's time to do the GIS work and run the model.

Walleye Technical Committee *by Justin VanDeHey*

2010 Age and Growth Workshop: In conjunction with the summer 2010 joint WTC, ETC, and CTC meeting on July 28th, the WTC sponsored an age and growth workshop held at the University of Wisconsin-LaCrosse. Drs. Dan Isermann (University of Wisconsin-Stevens Point) and Brian Graeb (South Dakota State University) co-instructed the one day, hands on workshop. A total of 26 people attended the workshop. We had a lot of fun and learned a lot. Thanks to Drs. Isermann and Graeb for taking the time to put on the workshop. Thanks to Dale Logsdon and Ryan Koenigs for additional information at the workshop. Also, a tremendous thank you goes out to Dr. Roger Haro, the University of Wisconsin-LaCrosse (UW-L), and the UW-L Rivers Study Center for allowing us to use their facilities and all their gracious support. The workshop certainly would not have been a success without their help.

Dr. Dan Isermann illustrates the process of otolith removal during the 2010 age and growth workshop.

Workshop attendee Ryan Andvik "digs in", illustrating the process of otolith removal to on lookers during the 2010 age and growth workshop.

2010 Summer Meeting: From July 28-29 the WTC in conjunction with the ETC and CTC held their joint annual meeting at Stoney Creek Inn in Onalaska, WI. A total of 48 people were in attendance. We had a total of 13 scientific papers presented at the meeting including talks from seven students. Additionally, we had a wonderful welcome social and catfish fry to talk a little science, meet new people, and re-acquaint with old friends. Thanks to the folks at Stoney Creek Inn for their hospitality and support. Also, a big thanks to Jordan Weeks for providing local arrangements and helping out with meeting logistics. We are looking forward to another successful summer meeting in 2011. Let's keep the momentum rolling! Information from our meeting is below.

State and Provincial Reports:

Michigan, Patrick Hanchin:

Walleye rearing/stocking continues at approximately 1/3 of pre-VHS levels and will likely not change until disinfection techniques are confirmed. We are mainly stocking walleyes in isolated

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lakes, or lakes with immediate connection to the Great Lakes. Walleye are not being stocked in the Lake Superior drainage, though we are planning on initiating a brood source for that drainage (Portage-Torch lake system). A lawsuit is ongoing by a commercial fisherman for the right to harvest walleyes in Saginaw Bay.

Wisconsin, Steve Gilbert:

1. The issue of walleye – bass interactions has been a major issue in the state in the last year. There are biologists that say that once naturally recruiting walleye waters are now being taken over by bass. They feel that once high density bass fisheries become established in these waters that walleye stocking success is affected. In 2010, regulations were passed on 21 lakes in the northwestern part of the state to increase bass harvest and reduce walleye harvest on these waters. The regulations passed resulted in no minimum size limit on bass (was 14") and raising the size limit on walleye to 18" (was 15") and lowering the bag to 3 fish (was 5).

   On the other side there are biologists who feel that walleye are suppressing bass populations. This is an issue on waters with high natural walleye recruitment. There is evidence that shows that on some bass/panfish waters where walleye were introduced that once they started pulling off natural year classes bass numbers declined.

   There is a recent article (June 2010) in the Wisconsin Natural resources magazine that does a fairly good job of presenting this issue. The title is sustaining a fishery or fighting natural change? and can be found on line at: dnr.wi.gov/wnrmag/2010/06/fishery.htm

2. There is a proposal to change the baseline walleye regulation in the southern two thirds of the state from a 15" minimum and 5 bag to an 18" minimum and 3 bag. This has been proposed due to faster growth rates in this region, the presence of mostly stocked fisheries, and to improve the potential for natural recruitment. The main debate at this point is where to draw the north south line and how to exempt waters.

3. A new WDNR research report (#190) came out in March of this year and evaluates the 14 to 18 inch protected walleye slot on several waters in the state. The title is oddly enough An Evaluation of the efficacy of a 14 to 18 inch slot size limit in Northern Wisconsin and can be found on line at: http://dnr.wi.gov/org/es/science/publications/PUB-SS-590-2010.pdf It has some issues with it and will eventually make it to a journal once these items are addressed.

4. The state is also evaluating issues related to survival of stocked walleye at various sizes and stocking rates. This is an issue most states in our region are wrestling with. Size vs. production capacity vs. cost vs. survival is the debated issues as usual. It is unclear how this will shake out at this time.

Minnesota, Dale Logsdon:

VHS testing continues. Pete Jacobsen is constructing a curve to be used as a tool for stocking rates based on differential survival by size of fish stocked. This is especially important as the product received from hatcheries is not universal and flexibility is needed. Some managers are trying to make correlations with lake types as some systems need larger fish for adequate survival.

OTC marking has become a challenge as production of the drug used was discontinued. However, the AADAP office in Bozeman MT came up with a suitable substitute to be used under INAD exemption. Four large lakes are primarily used for egg-take and these are re-stocked with fry at 10%.

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However, either survival or hatch rates are less than 1% so it is felt that this stocking rate needs re-evaluation.

The state sales tax increase known as the **Clean Water, Wildlife, Cultural Heritage and Natural Areas Amendment**.was passed. It increased the sales tax throughout the state by three-eighths of one percent. That tax increase will amount to about $300 million a year of new revenue for the state government. The measure was a legislative referral placed on the ballot by the Minnesota State Legislature. Money raised through the new tax is dedicated to pay for natural resource protection and cultural heritage programs. The tax dollars raised through the increase is distributed according to the following formula: 33 percent to restore, protect, and enhance wetlands, prairies, forests, and habitat for fish, game, and wildlife; 33 percent to protect, enhance, and restore water quality in lakes, rivers, and streams and to protect groundwater from degradation (at least five percent of the this amount must be spent only to protect drinking water sources); 14.25 percent to support the state's parks and trails; and 19.75 percent for the arts and cultural heritage purposes. The DNR needs to direct dollars to specific projects and must compete with private entities for grant monies.

On-going studies:

Some state slot limits have been in place long enough to gather information that can be evaluated. There are some indications that there have been recruitment reductions.

Leech Lake has been having cormorant issues and has legislative mandated walleye stocking. This is to be at the rate of 1,000 fry per acre every other year, and fry must be OTC-marked. Wild fry abundance can then be evaluated in off years.

The "fryling" stocking study is being evaluated as ethanol production and increased development of duck habitat are claiming natural ponds used for walleye culture.

Red Lake is in recovery. Native Americans own three-fourths of the shoreline and are ramping up their commercial fishery. They are currently staying below safe harvest level as public opinion of gillnetting is that it kills fish. However, hook and line capture is not reported.

Kansas, Andy Jansen:

Kansas is undertaking an age and growth/recruitment project based on a paper recently published online by Mike Quist et al. regarding how supplemental stocking affects recruitment and overfishing:
Exploitation of walleye in a Great Plains reservoir: harvest patterns and management scenarios
M. C. QUIST, J. L. STEPHEN, S. T. LYNOTT, J. M. GOECKLER, R. D. SCHULTZ
Published Online: Jun 14 2010 10:03AM
DOI: 10.1111/j.1365-2400.2010.00752.x
Fisheries Management and Ecology

Kansas currently has nine lakes with known infestations of zebra mussels and there are filtered water protocols to be followed and genetic testing to be done when taking walleye eggs.

South Dakota, Justin VanDeHey and Megan Thul:

Megan reports that there are many research projects going on, but the primary one is her current master's program evaluating two lakes. One lake has stable recruitment and the other does not. The poor recruitment lake has a population of freshwater drum and it is suspected that there may be diet

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overlap and competition between young drum and young walleye. Megan is doing some stable isotope evaluation of many sizes, and based on some research done by Flammang et. al. she is looking at food availability, water quality issues, and differential productivity. Dr. Casey Schoenebeck commented that he found freshwater drum to consume cladocerans, which are also a preferred food of young walleye.

Justin reported that feeding interactions between smallmouth bass and walleye had been reported in Melissa Wuellner's dissertation but they were finding that these were most likely system specific and not widespread. However, there was not a lot of good information for comparison as CPUE data for bass was limited until recent years. There are some lakes that have very good smallmouth populations which increases diversity, but there are conflicts between walleye anglers who are smallmouth haters and consider them to be trash fish. Others are concerned that smallmouth are consuming too many yellow perch and depriving walleye of this forage. A research project will begin in 2011 to assess yellow perch/ smallmouth bass interactions. Long-term datasets indicate that there is a relationship between Age-0 walleye abundance and larval yellow perch abundance across multiple systems and that simple systems have strong yellow perch/walleye associations. The state is increasing its OTC marking of walleye and yellow perch.

Washington, Bruce Bolding:

The Washington Department of Fish and Wildlife will be in its ninth year of FWIN (Fall Walleye Index Netting) sampling this fall. The sampling has been the most important improvement in walleye management since walleye were first identified in Washington in 1960. The sampling gives biologists and managers an immediate and accurate picture of population status at the time of sampling, along with comparative and trend values from previous years. The sampling has also resulted in improved regulations on most of the waters we survey.

Walleye continue to be an immensely popular fishery in the eastern part of the state and the lower Columbia River. It plays the role of both trophy and harvest fishery to the delight of many anglers. The state record of 19 lbs. 5 oz, caught in 2007 still stands although many feel that record could be shattered at any time. Although walleye in Washington have many thousands of loyal followers, they also have their detractors. Native fish advocates point the finger at walleye and implicate them as having significant negative impacts on outmigrating salmon and steelhead smolts in the main stem of the Columbia River, even though diet studies don't particularly support that viewpoint. A new study in the lower Columbia will once again look at walleye diet and hopefully will help resolve the contentious issue of warmwater fish management in that area. A possible outcome in the future could be a loosening of sport regulations.

Iowa, Donna Muhm:

Iowa is beginning to evaluate cost-effectiveness of producing advanced fingerling walleye based on their survival, and the evaluation of walleye loss at reservoirs, specifically Rathbun Reservoir.

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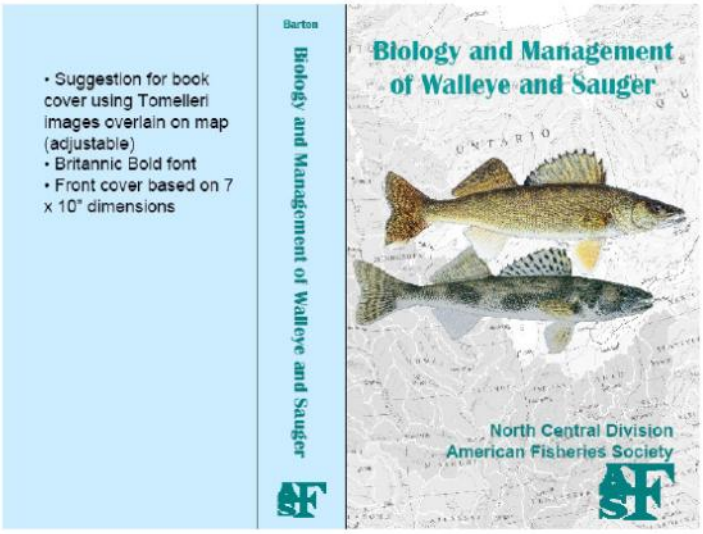
Walleye Synopsis Update (*submitted by Patrick Hanchin, steering committee chair*):

Update on the "Biology, Management and Culture of Walleye and Sauger"



One-half of the twelve chapters are completed have been sent to the AFS books department to begin the production process. The remaining chapters are in the final stages of review/revision and will (hopefully) be ready for the production stage by the time the books department is completed with the first half. We look forward to having a completed manuscript soon! Thanks to Patrick and Bruce Barton for all their hard work on this project.

Update provided by Patrick Hanchin (contract manager for WTC book project)
MDNR Charlevoix Fisheries Station
96 Grant Street
Charlevoix, MI 49720
231-547-2914 x227
hanchinp@michigan.gov

2010 Midwest Fish and Wildlife Conference: The WTC along with the Esocid Technical Committee are co-sponsoring a "Coolwater Fisheries Management Symposium" to be held at the 2010 Midwest Fish and Wildlife Conference in Minneapolis, MN this December. We have lots of great talks scheduled so mark this symposium on your calendar!

Additionally, the WTC will hold its annual winter business meeting on Sunday, December 12th right before the 2010 Midwest Fish and Wildlife Conference begins. Stay tuned for the actual time and room location for the meeting.

2011 Chair-elect: We are looking for someone to fill the position of chair-elect for 2011. This is essentially a two-year commitment with one year as chair-elect and a year as chair. This is a fantastic opportunity to get involved with AFS at the regional level, as well as a great way to meet new people, attend some fun and informational meetings and help advance your career. If you are interested in this position please contact Justin VanDeHey (Justin.vandehey@sdstate.edu), Andy Jansen (andrew.jansen@ksoutdoors.com), or Donna Muhm (donna.muhm@dnr.state.ia.us) for more information.

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2011 Summer Meeting Location and Theme: Discussions were held during the summer business meeting regarding a theme and location for the 2011 summer meeting. Several possibilities were suggested, such as La Crosse, Dubuque, Iowa, and the Quad Cities. Currently our member Megan Thul and Chair-elect Andy Jansen are researching logistics for Dubuque and comparing them to prices, etc… from our La Crosse location. It was decided that the theme should be tagging, so talks regarding mark and recapture or tagging studies will be solicited. Additionally, the possibility of holding a tagging, mark-recapture workshop in conjunction with the 2011 summer meeting was discussed. Andy Jansen and Justin VanDeHey will look into logistics and potential speakers for either a workshop or special session during the meeting. If you have feedback on this issue please contact Justin VanDeHey (Justin.vandehey@sdstate.edu), Andy Jansen (andrew.jansen@ksoutdoors.com), or Donna Muhm (donna.muhm@dnr.state.ia.us) with information.

Upcoming Events

2010 Midwest Fish and Wildlife Conference

The Midwest Fish and Wildlife Conference is coming to Minneapolis this December! Go to http://www.midwest2010.org to learn about plenary speakers, see schedules, get registered, find information about submitting abstracts, or even become a Facebook friend!

The 71st Midwest Fish and Wildlife Conference is December 12-15, 2010 at the Hyatt in downtown Minneapolis.

Beginning Your Professional Journey—A full day workshop for undergraduate students

Are you trying to figure out the requirements and best way to apply to graduate school, or what types of positions employers have for new graduates and what they're looking for in future employees? Eager to prepare for those inevitable interview questions such as "Why should we hire you for this position?" If so, 'Beginning your Professional Journey' is the workshop for you! Four sessions will include Resumes and Professional Correspondence, Academic and Employer Panels, Networking, and Interview Skills. Participants will receive binders full of resource materials for future use. And for those who register for the Midwest Fish and Wildlife Conference, there will be ample opportunity to (1) learn about ongoing research in fisheries and wildlife as you listen to talks given by professionals and students and (2) practice your newly acquired skills during Sunday evening's reception and several other Conference events. Previous participants gave the workshop a "thumbs up!" From a student participant, "*It would be hard to find this much information anywhere else."*

The workshop will be held on Sunday, December 12 from 8:30a.m. – 5:00 p.m., and is limited to the first 50 pre-paid registrants. Workshop cost (including breaks, lunch and a binder stuffed with relevant resources) is only $20! **NOTE: Registration for the conference is NOT included in this fee. To register for the workshop and/or Conference, please do so at http://www.midwest2010.org.

Questions? Contact co-organizers: Rebecca Christoffel (christof@iastate.edu) or Jim Schneider (schne181@msu.edu). We look forward to seeing you in St. Paul!

Attention Professionals!

Are you interested in interacting with students? **Mentoring the future generation of professionals?** If so, we hope you'll assist us with the 5th "Beginning Your Professional Journey" workshop in St. Paul!
We are in need of professionals who would be willing to serve on our employer or academic panel, and of professionals who would be willing to serve as table leaders during the workshop. Table leaders assist participants by leading small group discussions and exercises and by answering individual questions.
The workshop will be held on Sunday, December 12 from 8:30a.m. – 5:00 p.m. We will provide lunch and a mid-morning and afternoon break.
Interested in helping? Please contact co-organizers: Rebecca Christoffel (christof@iastate.edu) or Jim Schneider (schne181@msu.edu). We'd be happy to answer any questions you may have and to have your participation. ***Thank you!***

71th Midwest Fish and Wildlife Conference

December 12 – 15, 2010, Minneapolis, Minnesota
http://www.midwest2010.org/

Janice Lee Fenske Memorial Award for Outstanding Students

Monday, December 13, 7:30-8:30 a.m.

Sponsored by:
North Central Division, Minnesota Chapter, and Michigan Chapter of the American Fisheries Society
North Central Section, Minnesota Chapter, and Michigan Chapter of The Wildlife Society
Midwest Fish and Wildlife Conference Steering Committee

We are pleased to accept applications from students for the *Janice Lee Fenske Memorial Award*. Up to 25 outstanding students majoring in fisheries or wildlife management will be selected, formally recognized for their achievements, and invited to attend an exclusive breakfast held during the Midwest Fish and Wildlife Conference in honor of the late Jan Fenske. The breakfast will provide a unique opportunity for students to meet and closely network with many fish and wildlife leaders from around the region.

Undergraduate and graduate students who plan to attend the Conference are encouraged to apply. Student finalists will be selected based on academic ability and scholarly achievements. Two of the student finalists, one majoring in fisheries management and one majoring in wildlife management, will be presented with a Fenske Memorial Award that includes a scholarship of $500. The two winners of the Fenske Memorial Award will be selected based on the characteristics that made Jan a remarkable fisheries biologist, including enthusiasm to protect fisheries and wildlife resources through management activities, selflessness and motivation to teach others, interest in professional involvement, and integrity, positive attitude, and compassion. For more information, please visit http://www.fisheries.org/units/miafs/jfenske_award.html.

To apply, please submit a resume including your GPA, two letters of recommendation from academic advisors or professionals in fisheries or wildlife management, and a cover letter including future career goals and reasons for attending the Midwest Fish and Wildlife Conference to:

Jessica Mistak, Fenske Award Committee Chair
mistakj@michigan.gov

Deadline for submission is October 30, 2010. E-mail submissions are preferred. Please have the recommendation letters e-mailed directly from the academic advisor or resource professional. Student applicants selected as finalists will be notified by November 20, 2010.

6/30/2010

Awards Nominations Requested For North Central Division

Description of Awards:

Most Active Chapter Awards

Two awards (Large Chapter- more than 100 AFS members and Small Chapter- less than 100 AFS members) may be given to the NCD Chapters that have carried out the most active programs of enhancing professionalism and fisheries science, relative to its size and the geographic distribution of its membership. Most often, members will nominate their own chapter. Nomination materials should include the number of members, names of officers, number and type of meetings, special activities, recruitment activities, and a brief (1 page) description of what makes this chapter an active and important contributor to the NCD, AFS, and fisheries profession. Additional materials of support may also be included.

Most Active Student Subunit Award

This award will be given to the NCD student subunit that has carried out the most active program in developing interest among undergraduate and graduate students in fisheries science and fulfilling the mission of the AFS. Most often members will nominate their own subunit.

Best Communications Award

This award will be given to the NCD Chapter that has developed the most efficient, useful, and attractive newsletter and website to disseminate information to its members. Both printed and electronic newsletters will be considered. Submissions should include copies of two or three of the Chapter's most recent newsletters and a brief description of the newsletter, including frequency of publication, readership, and primary means of distribution.

Fisheries Excellence Award

This award will be given to a NCD member who has made an outstanding contribution to the fisheries profession. This contribution may be a single activity or a collection of achievements over the individual's career. Former Division members may be nominated if most of their work occurred while they were NCD members. Nominations should include the names and signatures of at least 2 nominators, a brief (1 page) biographical sketch of the nominee, a brief (1 page) narrative of significant contributions made by the nominee, and copies of any additional materials to support the application.

Meritorious Service Award

This award will recognize extraordinary service to the AFS by a NCD member. Nominations may be based on a single outstanding achievement or a variety of service activities, and may include the Chapter, Division, Section or Parent Society level. In the nomination, evidence must be presented that this service has gone beyond the routine and that it has made a genuine and lasting contribution to the betterment of the Society. Nominations should include the names and signatures of at least 2 nominators, a brief (1 page) biographical sketch, a brief (1 page) narrative of significant contributions made by the nominee, and copies of any additional materials to support the application.

Nominations must be sent to Gwen White [gwen@djcase.com], by **November 12, 2010**.

71st Midwest Fish and Wildlife Conference
Minneapolis, Minnesota
December 12 - 15 2010

Midwest Fish and Wildlife Continuing Education Workshops

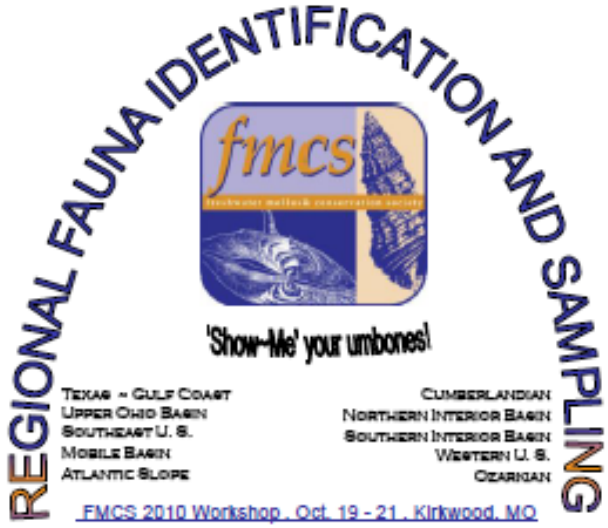
Have you been looking forward to learning new skills in your job? Would you like to learn how to create new research avenues? The Continuing Education Committee of the North Central Division of the American Fisheries Society is proud to be offering *"three"* diverse workshops at the *71st Midwest Fish & Wildlife Conference* being held in Minneapolis. These workshops will not only give you the opportunity to meet researchers and scientists in fisheries and wildlife, but will give you the chance to discuss projects and new concepts with the knowledgeable instructors that will be offering the courses. Continuing education credits will be offered through the American Fisheries Society and the Wildlife Society.

Sunday December 12, 2010

Getting the Most From Excel: Tips, Tools, & Techniques	Building and Interpreting Fishery and Wildlife Models	The Role of Human Dimensions in Fisheries and Wildlife Management
Dr. John Roese, assisting will be Dr. Geoffrey Steinhart and Dr. Ashley Moerke, School of Biological Science, Lake Superior State University	*Dr. Daniel Hayes, Department of Fisheries and Wildlife, Michigan State University*	*Dr. David C. Fulton, U.S. Geological Survey, Minnesota Cooperative Fish & Wildlife Research Unit, Dept. of Fisheries, Wildlife and Conservation Biology, University of Minnesota*
This full day workshop will introduce participants to features of Excel that can simplify and clarify complex or repetitive tasks. Topics to be covered include named and dynamic arrays, graphing, "power" functions, conditional formatting, Pivot-Tables, Goal-Seek, Solver, and What-If Analysis. Laptop required for course exercises. Registration fee: $80 Sponsors – AFS Fisheries Information Technology Section and North Central Division	This full day workshop will provide an overview of a systems modeling approach. After taking the course, students will have a basic understanding of how to build conceptual and basic mathematical models, learn approaches for fitting models to data, and if time permits, have an appreciation for the principles of model selection. Instruction will be accomplished with a mix of lecture and computer exercises, as well as group discussions. Laptop required for course exercises. Registration fee: $90 Sponsors – Minnesota Chapter Wildlife Society and AFS North Central Division	This half-day workshop is an introduction to basic approaches, conceptual frameworks, and methods used in applied human dimensions research. After the workshop, participants will have an understanding of the key concepts used in the human dimensions field and an understanding of study design and methods using these concepts to address applied management questions in fisheries and wildlife. Laptop required for course exercises. Registration fee: $40 Sponsors –AFS Minnesota Chapter and North Central Division

To register for the workshops, download the continuing education registration form. Registration is limited to 25 members – be sure to register early. For more information, you may contact Becky Papke at papker@michigan.gov 906-399-8817, Fax 906- 249-3190, North Central Division AFS Continuing Education Committee Chair.

Deadline for workshop registration is October 30, 2010.
(For inquiries on registration after October 30, contact me directly.)



Freshwater Mollusk Conservation Society 2010 Workshop – Regional Fauna Identification and Sampling

'Show-Me' your unbones!

The 2010 workshop of the Freshwater Mollusk Conservation Society will be held October 19 – 21, 2010 in Kirkwood, Missouri. The workshop will focus on regional fauna identification and sampling techniques. A panel of regional fauna experts representing Texas, Gulf Coast, upper Ohio Basin, Southeast U.S., Mobile Basin, Atlantic Slope, Cumberlandian, Interior Basin, Western U.S., and the Ozark regions has been assembled. The experts will give presentations on mussels unique to their area, common species shared with other regions that "just look different here", and the ever popular "problem children". They will also give tips and pointers on unique collecting methods used in the region. Additional experts will give presentations on general freshwater mussel identification and sampling techniques. In addition to presentations, there will be ample time to view representative specimens from the regions, and time to spend discussing characters with the experts.

The workshop will be held at Missouri Department of Conservation's Powder Valley Conservation Nature Center (http://www.mdc.mo.gov/areas/cnc/powder), located in a 112 acre oak-hickory forest just southwest of St. Louis, Missouri in the lower Meramec River watershed. In addition to 2 floors of exhibits, a large aquarium, and 3 hiking trails, the center has 3 classrooms and a 250 seat auditorium. Powder Valley is located at the intersection of Interstates 270 and 44 just southwest of St. Louis, Missouri, and is easily accessible from multiple Interstates and Lambert-St. Louis International Airport. We have secured a block of rooms for workshop attendees at the Holiday Inn Southwest Viking Conference Center (www.stlouis.com/holiday-inn-southwest). Registration will include box lunches for Tuesday and Wednesday and a social on Tuesday night. There are numerous nearby dining and entertainment options and downtown St. Louis is reasonably accessible.

Following the workshop, field trips to the nearby Meramec River, Mississippi River and the U.S. Geological Survey's Columbia Environmental Research Center are planned.

Be sure to register early, as we will have to limit the workshop to 200 attendees.

CHAPTER REPORTS

Michigan Chapter by Mark Tonello

Plans are underway for Michigan Chapter's annual meeting, which is tentatively scheduled during the first full week of April, at North Central Michigan College, in Petoskey. It will be a joint meeting held with the Michigan Ornithological Congress and the Michigan Chapter of the Wildlife Society, so it should be a great opportunity for dialogue between Fisheries and Wildlife folks. We will likely also hold a workshop in conjunction with the meeting. Also, the Lake Superior State Subunit is organizing a panel of professionals to discuss tips, techniques, and etiquette for job hunting, applications, and interviewing. The discussion will focus on what undergraduate and graduate students should (and should not) do to find and secure a job or graduate position. More details on the annual meeting will be coming out later this fall. Geoff Steinhart (906-635-2093; gsteinhart@lssu.edu), president-elect for the Michigan Chapter of AFS is serving as chair of the Program Committee for the annual meeting.

Dr. Kelley Smith, a longtime Michigan AFS Chapter member, was recently honored by the Equal Opportunities Section of AFS. He received the Mentoring for Professional Diversity in Fisheries/Aquatic Sciences Award. Congratulations Kelley!

Several Michigan AFS members have recently stepped up to accept leadership roles within the Michigan Chapter. Chris Eilers, Fisheries Biologist for the Little River Band of Ottawa Indians has volunteered to take over chairmanship of the Rivers and Streams Committee of the Michigan Chapter. Also, Dr. Heather Dawson, Asst. Professor of Biology for the University of Michigan-Flint, has volunteered to represent the Michigan Chapter on the NCD Centrarchid Committee. Thanks to these two for stepping up!

Check out our website at http://www.fisheries.org/units/miafs/index.html to see what we're up to!

Iowa Chapter by Andy Fowler

Our chapter sponsored a continuing education workshop entitled, "Aquatic Vegetation Identification" which was held on West Okoboji Lake in northwest Iowa in early August. It was a big success attended by many people. Participants brought different specimens from all over the state as well as collected specimens on two field trips in the Iowa Great Lakes area. By the end of the workshop, everyone had been exposed to many new plants and all attendees found the workshop very useful.

The chapter recently awarded a grant to the student subunit at Iowa State University for the publication of large informational fish posters. They are now almost into the printing stage, the posters look great, and they will be a huge asset to the fisheries education program in Iowa.

Our annual meeting is still in the early planning stages. It is preliminarily scheduled for late January or early February. Further, information will be forthcoming and will be found at our website located at: http://www.fisheries.org/units/iowa/aboutiaafs.html

Wisconsin Chapter by Brad Eggold

The Wisconsin Chapter of the American Fisheries Society is currently planning it's 40th Anniversary in Stevens Point, Wisconsin on January 31 - February 2, 2010. Our annual meeting will highlight the activities that we have participated in for the last 40 years. For more information, visit our website at www.wi-afs.org.

Recently, our Chapter has been involved with supporting legislation on two major issues vital to Wisconsin including 1) protection of surface and groundwater resources and 2) controlling Asian carp and preventing their establishment in the Great Lakes ecosystem. Both of these issues have the potential for affecting the ecosystems throughout the Great Lakes and should be addressed by any organization concerned with protection of these vital natural resources.

Wisconsin Chapter Student Sub-unit by Chris Cahill

Membership numbers are up for the student subchapter at the University of Wisconsin – Stevens Point with over 80 graduate and undergraduate students for the 2010-2011 academic year. In an effort to get to know new members we have been going on bi-weekly "fish-fry" outings in addition to our weekly business meetings.
In October we will be showcasing "End of the Line," a documentary film on the effects of overfishing around the world. By showing this film we hope to increase awareness of global overfishing and "hook" a few new members.
Also, this year we have been showcasing speakers from around the Midwest to present on a wide range of fisheries-related topics to members at our weekly meetings. Here is a brief list of current presenters this semester:

Dr. Ronald Bruch, Wisconsin Department of Natural Resources (Oshkosh)
Mr. David Ullrich, Great Lakes Fisheries Commission and St. Lawrence Cities Initiative (Chicago)
Tom Meronek, Wisconsin Department of Natural Resources (Wausau)
Kurt Welke and Lisie Kitchell, Wisconsin Department of Natural Resources (Dane County)
Dr. Michael Hansen, UW – SP Professor of Fisheries, Great Lakes Fisheries Commission (Stevens Point)
Dr. Daniel Isermann, UW – SP Assistant Professor of Fisheries (Stevens Point)

Most of the spring semester presentation dates are still open and are filled on a first come-first serve basis. Parties interested in presenting to the student subchapter can contact Chris Cahill at ccahi413@uwsp.edu
In addition to our weekly presentations we have two field surveys this fall: The Little Plover River electrofishing survey and the Wisconsin River fyke net survey. Each multi-day survey offers students a crash-course in fisheries techniques including project logistics, electrofishing, pulling, setting, and repairing fyke nets, and removing age estimation structures from fish.

For the first time this fall we will be using the fish structures from our projects in a hands-on age and growth workshop for members. The project lineup for this spring includes our fish crib building project, Wisconsin River fyke net project, Lake Joanis fyke net survey, kids fishing day, and the newly added sturgeon spawn project with the Wisconsin Department of Natural Resources. Additionally, we are creating standard operating procedures for each project to minimize the loss of information from transitioning officers.
Late last semester the student subchapter at Stevens Point helped the Middleton high school Envirothon team study for the state tournament by presenting on topics including native and exotic fish identification, aquatic insect ecology and identification, and fish habitat. The Middleton team won the state tournament and then traveled to Fresno, California for the national tournament. At nationals the Wisconsin-Middleton team took first in orals and sixth in wildlife/fisheries—and all students received $1400 scholarships for college. Congratulations Middleton!
Lastly, Dr. Daniel Isermann was given the faculty advisor position by Dr. Michael Hansen early this semester. We would like to welcome Dr. Isermann to the advisor position and extend our greatest thanks and appreciation to Dr. Hansen for 14 years of excellent service to the student subchapter at UW-SP.

South Dakota State University Student Subunit by McLain Johnson

Since the election of new officers in December of 2009, the SDSU Student Subunit has been busy with newly developed programs, as well as maintained our participation in our established activities. Here are a few of the highlights: At the Annual Meeting of the Dakota Chapter (February 2010), many undergraduate and graduate students presented their research through posters and oral presentations. Our mark was left on the conference not only through the organizing the raffle and volunteer help, but several members took home awards and scholarships: Best Undergraduate Presentation (Jessica Howell), Best Graduate Student Paper (Justin VanDeHey), Schmulbach Scholarship (Bobbi Adams), Sauger Scholarships (Donna Abler, Jessica Howell, Bobbi Adams, and Nikki Hegna), and photography awards (Luke Schultz, Will Schreck, Breanna VanDeHey, Justin VanDeHey, and Michael Weber).

The spring semester included fundraising activities, guest speakers, an undergraduate social, ice fishing, and a career fair. Our new development program (led by Mark Kaemingk), aimed at getting undergraduate students field experience, was established and has continued to grow throughout this year.

Since January, Subunit member Luke Schultz has been busy planning the 4th Annual Midwest Student Colloquium. This event will be held in Brookings, SD on January 21st and 22nd (contact Luke for more information, luke.schultz@sdstate.edu). Following tradition, the Student Colloquium will provide an opportunity for graduate and undergraduate students from across the Midwest to meet other students and present their research in a relaxed and peer-friendly environment.

The fall semester kicked off with a fish fry and the 5th annual Scout Fishing clinic (led by Megan Thul). The semester is going to be a busy one as a career workshop, guest speakers, and more community involvement are planned.

McLain Johnson -President
Mark Kaemingk -Vice President
Hilary Meyer –Treasurer
Megan Thul - Secretary

SDSU Subunit Vice-President Mark Kaemingk instructs Boy Scouts in fish identification at the 5th Annual Scout Fish Clinic held in Brookings, SD.

SDSU Subunit members Hilary Meyer and James Baker instructing Boy Scouts in fishing tackle and knot tying at the 5th Annual Scout Fishing Clinic held in Brookings, SD.

SDSU Subunit member Eli Felts takes a Boy Scout member fishing at the 5th Annual Scout Fishing Clinic held in Brookings, SD.

South Dakota State University Student Fisheries Colloquium

4th Annual Midwest Student Fisheries Colloquium

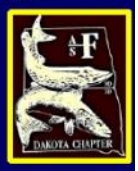
When: Friday and Saturday, January 21 & 22, 2011

Where: South Dakota State University; Brookings, SD

What: Following tradition, the Student Colloquium will provide an opportunity for graduate and undergraduate students from across the Midwest to meet other students and present their research in a relaxed and peer-friendly environment.

Registration for the Colloquium is only **$15** and includes all meals and beverages.

Please contact Luke Schultz with any questions



(luke.schultz@sdstate.edu)

Funding for the 4th Annual Midwest Student Fisheries Colloquium is provided by the Education Section, the Dakota Chapter, and the SDSU sub-unit of AFS

News and Announcements

DNRE Fisheries Chief Kelley Smith Honored with American Fisheries Society Mentoring Award.

Dr. Kelley Smith, chief of the Department of Natural Resources and Environment Fisheries Division, recently received a prestigious national award from the American Fisheries Society, recognizing his commitment to increasing workplace diversity through the mentoring of students and colleagues from minority or underrepresented groups.

Smith was named the recipient of the Mentoring for Professional Diversity in Fisheries/Aquatic Sciences Award at a recent AFS annual meeting in Pittsburgh. The award honors individuals who, through professional mentoring, have challenged intellectual growth, provided networking opportunities and career development, offered professional encouragement, support and advocacy, and acted as a positive role model for students and young professionals of diverse backgrounds.

Smith is known by his colleagues as a supportive manager who encourages his staff to pursue professional development and leadership opportunities to achieve their career goals, while using creative strategies to increase knowledge building on the job.

"Kelley is an enthusiastic mentor who willingly and unconditionally shares his time and knowledge with colleagues and peers, and most especially, with students who have an interest in fisheries management," said DNRE Fish Production Manager Gary Whelan. "He has had a dramatic impact on increasing diversity among our future natural resource leaders and we are better for it."

Smith began his career with the DNRE as a research biologist in 1985, was promoted to Fish Production Manager in 1996, and has served as Fisheries Division Chief since 1997. In 2005, Fisheries Division staff founded the Fenske Memorial Award to honor Smith's late wife, Janice Fenske, who was the first female fisheries biologist hired by the DNRE. Smith proudly plays an active role in this award program, which recognizes outstanding young fisheries and wildlife college students and provides networking opportunities and financial assistance to help the students begin their new careers.

In 2006, Smith also established the Fenske Fellowship program at Michigan State University, which provides substantial funding to graduate students from minority or underrepresented groups to undertake a one-year project with a government fisheries resource agency. During the fellowship, the student works with a mentor from within the agency, who assists the fellow in navigating and understanding the resource agency while providing opportunities for professional development and networking. During the 2009-2010 academic year, Smith served as the Fenske Fellow mentor.

"With a true zeal and commitment to professional diversity, Kelley has personally taken individuals under his tutelage and has challenged them to improve their abilities by providing a broad range of leadership training opportunities, while also ensuring that students from underrepresented or minority groups are recognized for their accomplishments and treated fairly," said Michigan State University Distinguished Professor William Taylor. "I simply cannot imagine a more deserving individual of this award."

In his acceptance comments, Smith said he will continue to focus on encouraging students as they embark on their new careers and become the next generation of natural resource managers.

"My reward over the years has been watching the excited faces of those young students who have benefited from the opportunities presented by the Fenske Award and Fenske Fellowship programs, not to mention tracking the successful starts of their careers," Smith said. "I truly believe additional recognition is not necessary, but I greatly appreciate this award. It is probably the best recognition I have received during my career, and I accept this on behalf of all those who have helped me make a difference in Jan's memory."

Smith earned a B.S. in Fisheries Biology and Management from Michigan State University in 1978, and received both an M.S. in Biometrics and a Ph.D. in Fisheries Biology and Management from the University of Michigan.

The Department of Natural Resources and Environment is committed to the conservation, protection, management, and accessible use and enjoyment of the state's environment, natural resources, and related economic interests for current and future generations. Learn more at www.michigan.gov/dnre.

Aquatic Survey Underway in Southern Indiana

Region 9 ~ 06/28/2010
Forty inland lakes and the Ohio River surveyed across southern Indiana for aquatic plants. By: Teena Ligman (*R09_Hoosier*)
Three men and a lady, two kayaks, and two vans full of gear are making quick work of surveying Indiana's lakes and rivers this summer. Their assignment: to survey the Ohio River as two crews, its major tributaries, and 40 of the largest lakes in southern Indiana for aquatic invasive plants. When the team, hired by Notre Dame University in a partnership with The Nature Conservancy complete their job in Indiana, they'll be off to southeastern Ohio to do much the same thing, then on to southern Illinois.

They began with a visual survey of any plants floating in the water around the boat ramp. Then, if the water is clear enough that they can see to safely snorkel, one member of the team suits up to dive, the other rigs up the kayak. The kayaker stays close to the diver for safety and if the diver finds an unusual plant, they may hand it off to the kayaker, otherwise they stuff the plants collected in a cloth bag as they dive and move along the lake.

Alex Roth explained, "The protocol is that we dive for thirty minutes and go about an equal distance in all directions around the boat ramp." He explained that in the past they've found that after twenty minutes very few new plants are found but they continue to search the extra ten minutes just to be sure. "We include all the habitats along the shoreline - if there are rocky areas, marshy patches, shaded woods, meadows, we collect samples along the edges of each of those areas, because likely the types of plants could be different," he explained.

Roth carried a GPS unit which maps the route of the diver as he followed the diver, Mike Miller through the water. He said later they can map each route to see how the routes affect what they find and will help show how effectively they cover the area.

The crew takes readings of the temperature, pH, and turbidity of the water in each lake as well as the depth of the water. They collected a sample of water from each lake to do the conductivity test later. The conductivity reading gives information such as the nutrient levels in the water.

Once out of the water, the diver dumps his bag of collected plants and together the crew sorts through the plants and identifies what they've found, checking off each specimen. They confer together when in doubt and pull out a field identification guide to consult.

Between lakes they carefully clean their equipment and clothing. "We definitely don't want to be vectors or part of the problem," Miller said as he measures out bleach and pours a bleach and water solution into a tub with his wetsuit. They scrub down their kayak, oars, and diving equipment. The bleach should eliminate any possibility of spreading invasive plants or organisms.

"If we'd found zebra mussels, or had any indication or word that zebra mussels were in this lake, we'd have to boil the water first." Erick Elgin, crew leader said. When the crew surveyed Lake Monroe they used the boiling water regimen before moving on to another lake because zebra mussels may be in Lake Monroe. Elgin noted, "We won't even re-use our wetsuits between lakes without boiling them if there's any chance of zebra mussels."

The crews do a quick survey around each boat ramp and walk the perimeter of the parking areas looking for any of a list of terrestrial invasive plants that were also part of their survey. The list included purple loosestrife, Japanese knotweed, Japanese chaff flower, and pragmites. Within the Forest Service boundary the crews also map the terrestrial invasive species. They drive slowly down Forest roads and if they see one of the listed plants they GPS its location, and estimate the number of plants or size of the infestation and density of the patch.

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The crew was six days into their survey and so far, had only found one "really bad invasive plant. We found hydrilla over by West Boggs. Not even in the lake, in a drainage ditch, which unfortunately feeds into a stream which feeds into the river," said Roth. Hydrilla is an exotic plant which is sometimes used in aquariums. When dumped in native waters, the plant causes dense mats in low light, crowding out native vegetation and costs many states millions of dollars a year in control. According to Roth the hydrilla infestation was identified a couple years ago and supposedly treated but still survives.

In the Forest Service lakes the main invasive they were finding was brittle naiad, which while invasive, is not one of the really bad ones. Elgin said they've really enjoyed the lakes in southern Indiana. "It's the first time we've dived around lotus - they are so beautiful and it's a totally new experience. The petioles are sort of rough and they're not all that pleasant to swim against but they are just so pretty!" He has also been pleased at how clear our lakes are. "We feel we get better results if we can snorkel but if the lakes are turbid, it isn't safe to dive because we might run into rebar or something sharp in the water and we don't want to risk injury to our divers. If the water is murky we use a rake toss method instead. On your lakes, we haven't had to use a rake toss method at all." He said the non-developed shorelines in southern Indiana make for cleaner, clearer lakes.

Along the Ohio River they did use the rake-toss method. "We tried really hard to find plants," Elgin said, "We even went further than our usual parameters looking for some kind of habitat that we might be able to find plants along the shoreline but we didn't find anything." They did not just find no invasive plants, they didn't find ANY plants. They couldn't explain exactly why this was so, but it was a concern to everyone. They had not yet surveyed any of the Ohio River embayments so were hopeful that plant life might be doing a bit better in those areas.

The project is the result of a partnership between the Southern Indiana Cooperative Weed Management Area (CWMA), the River to River CWMA in Illinois and the Iron Furnace CWMA in Ohio. A year ago the three CWMAs combined efforts as a group called the Central Hardwood Invasive Plant Network (CHIP-N) and begin applying for grants. They received money from US Forest Service, State and Private Forestry; the Eastern Region of the US Forest Service, from Indiana and Ohio DNRs, and from a private benefactor in Chicago. The Nature Conservancy's Lindsay Chadderton, agreed to head up the effort and hire crews to do the surveys and the project was off and running.

The second part of the CHIP-N project will involve volunteers surveying for purple loosestrife in late July and early August when the plant starts to bloom. For any questions regarding the aquatic surveys in Indiana contact Teena Ligman at 812-275-5987.

Crew members included Erick Elgin, Alex Roth, Mike Miller and Angela Dow.

Recovery Act—Chippewa National Forest Pigeon River Fish Passage

The Chippewa National Forest worked with the Minnesota Department of Natural Resources and the Leech Lake Band of Ojibwe (LLBO) to re-construct an escapement channel through the Pigeon Lake Impoundment. The completed channel is approximately 15 feet wide and designed to allow for passage of spawning fish and other organisms. The Upper East Winnie Environmental Assessment decision signed on August 23, 2009 includes this Recovery Act project. Chippewa National Forest has approximately 45 impoundments that are maintained by the LLBO and the USFS.

The Pigeon River Fish Passage project was done at the Pigeon Lake Impoundment north of Lake Winnibigoshish on the Chippewa National Forest. The contract for the survey and design phase of the Pigeon River Fish Passage Project was awarded in October of 2009 with actual design work and surveying starting this past spring. The goal was to naturalize the channel and provide a flow of water suitable for fish traveling upstream.

With the start of summer, work on the ground began at the Pigeon River Impoundment in July. As a family of trumpeter swans watched on, 4000 tons of rock was hauled in, taking over three weeks. Construction work on the passage began on August 18. Delicately, the backhoe operator placed each rock in the passage and visually there was rapid change and improvement everyday! The existing inlet structures were removed and replaced with eight rock weirs that were strategically placed to ensure fish passage. From one weir to the next, there is a gradual drop in elevation to reach the final water elevation level. The new passage slows the current flow from six cubic feet per second (cfs) to three cfs so that fish can navigate more easily to the impoundment. As grasses re-establish themselves between the rocks, the banks of the Pigeon River will appear as a natural flowing stream bank.

Removal of inlet structure at Pigeon Lake Impoundment

The Pigeon River Fish Passage project will help improve the overall health of the Lake Winnie watershed by providing passage for all aquatic organisms which include northern pike, walleye, yellow perch and forage fish. Long-term, the project may also increase fish populations throughout this area.

Project Complete

Before Start of Project

Battling Invasives: Deployment of 4 Portable Boat Wash Systems in the Western U.P. of Michigan

Region 9 ~ 07/14/2010
Battling aquatic invasives through a proactive education program and establishment of boat washing stations on key lakes By: john wigand (*R09_Ottawa*)

Four new, portable high-pressure boat wash systems arrived at the Ottawa National Forest in June 2010 and training for employees and partners began immediately thereafter. A representative of Hydro Tek,the manufacturer of the equipment, provided the seven Forest Service employees and nine partners with training on how to use and maintain the equipment. Partners included Iron County Conservation District, Watersmeet Lake Guards, Lake Gogebic Improvement Association, and Bergland Township.

The goal of the project is to slow the spread of aquatic invasive species, as part of ongoing efforts by the Western Upper Peninsula Cooperative Weed and Pest Management Area. Purchase and staffing for the boat washers is funded by the Great Lakes Restoration Initiative (GLRI) and the Ottawa National Forest. Two-person crews will be stationed at the busiest boat landings across the Western Upper Peninsula of Michigan, washing boats and educating boaters about the harm caused by aquatic invasives and how to best prevent their spread. The portable wash stations allow the Forest to move the equipment as needed to follow fishing tournaments and other highly visible summer events. The boat washers were also featured in 4th of July parades, to help educate visitors about the need to inspect their boats and remove aquatic plants and animals.

Recent research has shown that these types of hot water, high-pressure systems are also highly effective at removing small-bodied organisms such as zebra mussels and spiny water-flea. Our boat washing and educational efforts, using the Clean Boats, Clean Waters program, will help keep the inland lakes and waters of the Great Lakes Basin great!

story by: John Rothlisberger
Aquatic Ecologist
USDA Forest Service, Eastern Region

Portable boat washers are moved from lake to lake and are important weapons in our battle against invasives.

U.S. Fish and Wildlife's D.C. Booth Preserves Fisheries History One Accession at a Time

by Leith Edgar

U.S. Fish and Wildlife's D.C. Booth Preserves Fisheries History One Accession at a Time

Deep in the catacombs of D.C. Booth lies treasure – not sparkling jewels, precious metals or fancy jewelry – but a veritable treasure trove of fisheries history.

The D.C. Booth Historic National Fish Hatchery and Archives in Spearfish, S.D., houses one of the nation's most extensive collections of fisheries-related historic artifacts. The Archives' voluminous number of items just keeps growing as the history of fisheries management unfolds.

The Archives' primary mission is the preservation of fisheries history by collecting items of historic significance. Each accession to the collection has a cumulative effect on the Archives; the additions enrich the overall collection and form the program's narrative from the U.S. Fish Commission era to the present.

"The D.C. Booth Historic National Fish Hatchery is the custodian of the rich and diverse history of fisheries. This Archive is much more than a collection and exhibits. Biologists and historians look toward D.C. Booth for vital knowledge and information," said Carlos Martinez, the director who oversees the multi-purpose facility.

Like the history of fisheries management, D.C. Booth has evolved over the years. Established as Spearfish National Fish Hatchery in 1896, the hatchery introduced trout populations to the Black Hills of South Dakota and Wyoming. In addition to producing trout, it served as an accumulation site for a large amount of historic materials, which individuals and facilities had collected over the years. Political closures forced the U.S. Fish and Wildlife Service to relinquish operational control of the hatchery to the city of Spearfish. For almost a decade the city operated the hatchery as a historic site. However, in 1989 the Service came back on board; and via a variety of partnerships, has transformed the hatchery into the phenomenal facility now known as D.C. Booth.

During the six years without the Service, the hatchery was held in trust by the mayor of Spearfish's Hatchery Advisory Board. The Board kept the hatchery productive and maintained the collection of historic items. After returning the facility to the Service's control, the Board sustained its contribution by morphing into the facility's friends group, the Booth Society. Today, the Booth Society is the premier fisheries friends group and assists other fisheries facilities in mentoring and creating friends groups. Even now the Booth Society plays a crucial role in the Archives' day-to-day operations: connecting visitors with fisheries history. Volunteers of the nonprofit serve as guides to visitors of the facility's numerous exhibits. The well-maintained grounds of D.C. Booth are spotted with pieces of fisheries history, which volunteers care for and introduce to visitors. A refurbished train-car restored to its period allows visitors to see how fish were once transported across the country. The Booth house is representative of how the facility's namesake and family lived more than 100 years ago. And the Hector Von Bayer Museum of Fisheries History showcases rotating exhibits for the public's fishery edification.

"Preserving this history is incredibly important for future generations, but it's imperative that people know it's here," said the Booth Society's executive director, Eric Davis.

Annually, the Booth Society contributes more than 14,000 volunteer hours to the facility; the effect is the equivalent of seven full-time employees, Davis said.

While visitors enjoy the fruits of the Archives, behind the scenes the pain-staking work of conserving fisheries' management history into the future is executed under the detail-oriented eye of its curator, Randi Smith. A rotating group of college interns and Booth Society volunteers assist her in the intake, cataloging and storage of each piece of incoming history.

The Archives uses the state-of-the-art Interior Collections Management System to file and catalog all incoming items. There is no end to incoming items. The Archives houses objects from fish culture and fisheries management's first days to more contemporary pieces. An in-house conservation lab assists Smith and her staff in conserving all incoming items. The objective is always the same: arrest decay, minimize future deterioration and protect from further harm. There is a real science to the conservation process. How an item chemically interacts with its protective case determines its lifespan. Each item's needs vary. One plastic might be fine for one item but accelerate the deterioration of

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another. Matching an item with the proper preservation precaution is one of the tricks of the archiving trade.

The Archives utilizes a multi-layered system of safeguards, including climate control systems to preserve and protect its precious contents from the elements.
Some of the Archives' items might seem unimportant, but they may prove invaluable to Service researchers of the future. Smith even preserves samples from fishery structures and materials.
The Archives are always looking for more Service or conservation-agency related items, such as photos, log books, uniforms, field equipment, lab equipment, blueprints, and maps. Most often the Archives look to Service employees in the twilight of their careers for contributions.

"We'd like them to think about us when they're deciding what to do with the Service-related stuff they've acquired over a full career," Smith said.
Often times Service employees save pieces of history otherwise destined for a landfill because they recognize the value of the items slated for disposal. To avoid losing the item forever, they often bring it home for safe keeping. When it's time for those items to find a new home, the Archives is ready to adopt them.

"The Archives is interested in anything fisheries related, regardless of the agency or time period," Martinez said. "We're even interested in items that are not fisheries related. As long as there is a tie to a current or former natural resource or conservation program. It is also important to keep in mind that items we use today may have some historical significance down the road."
The Archives largely depends on the generosity of Service employees, both past and present. Smith hopes retiring Service employees will strongly consider donating their collections to the Archives for prolonged safekeeping and use by future generations of fisheries' biologists, scientific researchers and historians.

"If it's important, you need to make arrangements for all the pieces of history you've acquired," Smith said. "All too often people outside the Service do not see the value in many of the items we prize here in the Archives."
Each acquisition adds a small piece to the rich tapestry of fisheries history that is the Archives.
"As the collection grows we can see where we need to fill in the gaps," Smith said. "We seriously consider all contributions, and we're more than happy to answer questions about the process of donating to the Archives. We want people to know that the Archives are open and inclusive; we'll work with you to get your contribution here."

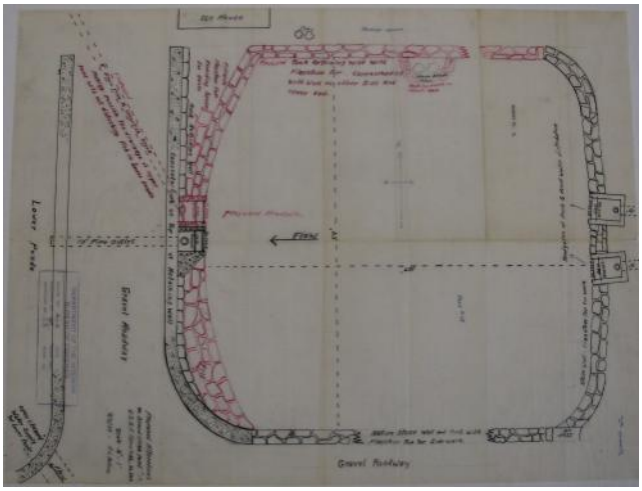
For additional information on the D.C. Booth Historic National Fish Hatchery and Archives contact Carlos Martinez, director (605) 642-7730, x223; carlos_martinez@fws.gov, or Randi Smith, curator, (605) 642-7730,x215; randi_smith@fws.gov

This photograph of Sylvan Lake and Hotel (circa 1910), located in Custer State Park and Wildlife Preserve, Black Hills, SD, is undergoing cleaning and preservation at the U.S. Fish and Wildlife Service's D.C. Booth in Spearfish, S.D. Photo by Randi Sue Smith, USFWS.

This metal USFWS sign is part of the museum collection at the U.S. Fish and Wildlife Service's D.C. Booth in Spearfish, S.D. Its original use and purpose are unknown. Photo by Randi Sue Smith, USFWS.

Spearfish National Fish Hatchery (now D.C. Booth) used this and other wood panniers to pack fish eggs in Yellowstone National Park, where it operated an egg-gathering substation from 1901-1911. Photo by Leith Edgar,

Overlooking some of D.C. Booth's active raceways, the Hector Von Bayer Museum in Spearfish, S.D., contains exhibits chronicling the rich history of fisheries management. Housed in a historic hatchery building (1899), the museum bears the name of the most prominent architect and engineer of the U.S. Fish Commission, the predecessor to today's U.S. Fish and Wildlife Service. Photo courtesy of Lee Voorhis, Royal Tine Images Inc.



This original drawing from 1935 details Works Progress Administration's construction of a stone hatchery at the Spearfish Station. Photo by Randi Sue Smith, USFWS.

The U.S. Fish and Wildlife Service's D.C. Booth Archives prizes historic Service photographs, such as this circa-1900 photo of U.S. Fish Commission employees performing fish-culture duties inside Leadville National. Fish Hatchery. After preserving them, the Archives makes them available to researchers. Photo by U.S.

The Fisheries Railcar Exhibit at D.C. Booth tells the story of an era when the U.S. Fish and Wildlife Service and others used railroad cars to transport fish across the country. Photo courtesy of Lee Voorhis, Royal Tine Images Inc.

April Gregory, a U.S. Fish and Wildlife Service intern, catalogs an incoming piece of fisheries history inside the D.C. Booth Archives in Spearfish, S.D.. Acquisitions from current and retired Service employees compose a large portion of the Archives' collection on fisheries history. Photo by Leith Edgar, USFWS.

Websites:

Parent company: http://www.fisheries.org
North Central Division: http://www.ncd-afs.org
NCD Listserve email to: ncdlist@lists.fisheries.org