Minutes of the 2009 Southern Division AFS Trout Committee

April 28-29, 2009

Warm Springs, Virginia

April 28, 2009

Call to Order

Dan Rankin (SC), trout committee chair, called the annual meeting to order at 8:00 a.m. at the Meadow Lane Lodge facility in Warm Springs, Virginia. Dan welcomed meeting attendees and committee members and announced that we had a quorum with 15 committee members in attendance. Attendees introduced themselves and an attendance sheet was passed around the table. Committee members in attendance were: Dave Dreves (KY-DFWR), Mark Hudy (USFS), James Civiello (MO-DOC), Jim Habera (TWRA), Jeb Wofford and David Demarest (NPS), Alan Heft (MD-DNR), Steve Moore (GSMNP), Larry Mohn, Steve Reeser, Paul Bugas, Jason Hallacher, Steve Owens, and Bud LaRoche (VA-DGIF), Dan Rankin (SC-DNR), and Jeff Williams (AGFC). Meeting site host Larry Mohn provided "housekeeping" info including the days field trip to the under construction Coursey Springs fish hatchery in Williamsville, Va., and angling opportunities at the Lodge.

Old Business

Chair Dan Rankin asked for changes to the minutes from the 2008 meeting in NC, none were suggested. A motion was made to approve the minutes, seconded, and approved unanimously.

Officers Report

Updates from Chair Dan Rankin included the approval of travel fund reimbursement for Jack VanDeventer to the 2008 TC meeting and the submittal of a news blurb for inclusion in the 2008 SDAFS newsletter.

Treasurer's Report

Jeff Williams provided a Treasurer's Report handout to attendees. The Trout Committee treasury is held in a Bank of America account. Jeff reported the starting balance on the account as of April 1, 2008 was $2,434.21; and as of march 31, 2009 it was $2,344.81. Credits to the account during the past year were $531.20 (Reg. fees 2008 TC mtg = $520.00; Excess postage funds brown trout workshop = $11.20). Disbursements from the account totaled $620.60 (Reimbursement to Doug Besler for 2008 mtg. expenditures = $277.38; Reimbursement to Jack VanDeventer for 2008 mtg. expenses = $255.22; monthly maintenance fees = $88.00). Jeff informed us that the waiver of the monthly maintenance fee of $11.00 had expired and we are again paying this monthly fee. A motion was made to approve the treasurers report, seconded, and passed unanimously.

Distinguished Service Committee

No actions were undertaken by this committee for 2009.

SDAFS Annual Meeting Report

An informal gathering of the TC was held at the annual SDAFS meeting, in attendance were Jeff Williams, D. Besler (NC), and Ray Morgan (UMCES). Doug spoke on North Carolina's brook trout friendly development certification program, with the aim of creating an economic incentive for developers to design brook trout/environmentally "friendly" developments. Ray provided an update on brook trout genetics work.

AC / DC Electrofishing Gear Comparison

Jim Habera provided an update on the AC/DC electrofishing gear comparison study. A manuscript submitted to NAJFM encountered difficulties from reviewers in regards to the methods. Editors asked for changes to the paper, the revised paper will focus on the three pass depletion efficiency. A discussion of the suggested edits ensued. Steve Moore commented that precision is excellent, don't need true N for management work. Review of Peterson studies suggest underestimates of population size of 50%, this paper reports finding 80-90% upper

intervals include N estimates, plenty accurate for management work. Dan Rankin asked if paper would suggest changes to the TC sampling protocol. This lead to a spirited discussion on the status of the TC electrofishing protocol in relation to the AC/DC paper. Jim H. reiterated that for larger sample sites use mark-recapture, and for smaller sites use depletion. Dan R. asked if the TC EF protocol should be updated to reflect the mark-recapture suggestion for large sample sites. Members agreed to continue promised funding of $500.00 from 2008 towards publication costs for the AC/DC paper if published.

EBTJV Update

Steve Moore, chair of the southern workgroup of the EBTJV, spoke on the the 7 objectives hoped to be achieved by 2012. A group discussion ensued on how to prioritize restoration needs for EBTJV work. The question was asked "should the southern workgroup develop a master list to work from?" The point was made that this list would illustrate how many projects need to be done and possibly better communicate the need for restoration. The consensus of the group was that a master list, updated annually, should be used. Larry Mohn, speaking on behalf of funding coordinator Callie McMunigall (USFWS), passed on that at that time it appeared that all projects selected for 2009 EBTJV restoration funding would be funded.

New Business

Chair Dan Rankin distributed the Trout Committee membership roster and asked that attendees update their contact information as needed.

Distinguished Service Awards

No action was proposed by the committee for 2009. Dan R. took a moment to recognize and thank Jim H. for his continued efforts on consolidating and updating the TC proceedings documents and meeting minutes.

TC Website

There was no discussion on the status/updating of the TC website.

2009 TC Meeting Location

As suggested at the 2008 TC meeting it was again agreed to hold the 2010 meeting in Missouri. Larry Civiello indicated they have had preliminary discussions and that the meeting location will be at Bennett Spring State Park in Lebanon, MO on April 26-28, 2010. Alan Heft offered to host the 2011 meeting in western Maryland, at the Savage River lodge near Frostburg, located in the heart of the Savage river no kill brook trout management area.

Nomination and Election of New Officers

Dan Rankin announced the need for nominations and election of new Trout Committee officers. Jeff Williams, Treasurer, is on a 3-yr term, which lasts through 2008. Jeff was nominated for treasurer again and unanimously elected for another term. Jeb Wofford was the only nominee for Chair-Elect and was unanimously elected.

Wild Trout Meeting

Steve Reeser (VA) brought up that it was approaching the time for another East Coast Wild Trout meeting, the last having been at Lock Haven, PA, in 2005. The suggestion was made for spring of 2012 (June) as the time for the next meeting, no official action was taken on planning and location for this potential meeting.

Presentations

<u>A Review of MicroFish Distribution and Use Worldwide and a Sneak Preview of the Next Version, MicroFish 4.0 for Excel – Jack Van DeVenter</u>

Jack reviewed the history of MicroFish development and how it works, and highlighted some changes for the future; these included adding in GIS and economic value components. He is now working on MicroFish version 4.0 for excel and showed some slides of what the new version would like. The timeline is to have the new version ready by the TC annual meeting in 2010; TC members will have first access to the new version. Jack thanked the committee for its past help with the development of MicroFish and asked for member input on the new version. Jim

Habera and Dan Rankin expressed thanks on behalf of the TC to Jack for his efforts over the years.

Quantitative Assessment of *Didymo* on the Jackson River Tailwater - Paul Bugas, VDGIF

Paul spoke on the status of *Didymo* in the Jackson river (downstream of Gaithright dam) and a technique developed to measure impact on the aquatic resources. The Jackson river has developed over the past 25 years into a blue ribbon trout fishery, with increasing public accessibility, and yearround coldwater flows. *Didymo* has also been found in 3 other Virginia rivers (Smith, Den, and Pound), all of which are tailwater rivers also. The study on the Jackson looked at physical and chemical conditions and fish response to the *Didymo* infestation. Paul reported that high flows did not seem to deter *Didymo* growth, and that Rainbow trout density had declined but was remaining stable; sculpins were still abundant also. Invertebrate sampling results indicated a loss after infestation. VDGIF is pursuing efforts to prevent the spread of *Didymo* by distributing information cards to the public. A response from the TC members to Paul's talk was that experience in other states also found that high flows didn't impact *Didymo,* only extreme flows may have an effect.

Round Table Discussion

Virginia Department of Game and Inland Fisheries – Steve Reeser and Larry Mohn

Steve spoke on the status of the Coursey Springs Fish Hatchery renovation that was generated by adverse water quality discharges (solids). The hatchery was originally built in the 1960's, and was not capable of meeting current discharge conditions, requiring a renovation at a cost of $13.5 million dollars. Production will be increased from 200k lbs/year to 350k lbs/year.

Larry added that they are continuing identifying and working on spring creeks to restore extirpated wild BT trophy fisheries.

A study of how long put and take stocked trout stay in a stream is underway. They are looking at numbers of fish remaining in the stream at 3, 7, and 14 day intervals

after stocking. Results to date indicate a steady decline over time, but many fish remaining till at least the 14 day interval.

A steelhead stocking program is being planned for the upper Jackson river to establish an additional recreational opportunity.

Kentucky Department of Fish and Wildlife Resources - Dave Dreves

News

A trout stocking action plan and eventually a statewide trout management plan is still under development.

Cumberland Tailwater Update

Wolf Creek Dam repairs are continuing. The mandated lake level remains at 680 ft, the same as the previous two years. Last year was not quite as bad as 2007 in terms of extremely hot weather and drought, however the trout may be showing signs of stress due to the lower half of the 75 mile tailwater being too warm to support trout during the months of June through October. We have documented decreased growth rates and the catch rate of both rainbows and browns greater than 15 in has declined.

I am in the process of writing the final report on the brown trout research in the Cumberland tailwater that evaluated the 20 in minimum size limit/1fish creel limit regulation.

Missouri Department of Conservation – James Civiello

Fish Health Testing in Missouri

The Wildlife Code of Missouri has required health certification of imported salmonid fishes for at least 30 years. Given their habitat requirements, importation is the only likely way for coldwater fish to enter the state, and such requirements have been in place to protect the health of Department trout hatcheries and Missouri trout populations. Because of these requirements, and a further desire to prevent the movement of diseased fish within the state, the Department's Aquatic Animal Health Specialist and past fish pathologists have provided fish health testing to private trout producers for decades at no cost.

Other species of fish may enter Missouri through natural movements. Given this fact and the rarity of significant diseases in cultured cool- and warm-water fish species the Wildlife Code has no disease testing requirements for importation of species other than salmonids and the Department has not provided disease testing services to aquaculturists who produce these fish. However, the recent appearance of viral hemorrhagic septicemia in a variety of fish species has caused a proliferation of federal and state requirements for disease testing which affects at least 28 species of fish. In some cases, Missouri aquaculturists must satisfy these testing requirements before shipping fish to an other state. As a result, the demand for fish health testing services has increased as the industry and states takes a greater interest in protecting their own biosecurity. Given the lack of Missouri fish health regulations in the Wildlife Code, the responsibility of the Missouri Department of Agriculture for overseeing livestock diseases (products of aquaculture are considered livestock by state marketing law), and limited staff time for expanded testing, we have not extended our services beyond what has been traditionally provided to trout producers.

In recent discussions with the Missouri aquaculture industry and representatives of the Missouri Department of Agriculture, **it has been agreed that it is appropriate for the Department of Agriculture to play a larger role in the Missouri aquaculture industry's need for aquatic animal health testing.**

Missouri has very few veterinarians available that are familiar with aquaculture, fish health, and fish necropsy. A workshop is scheduled and is designed to train vets for their professional benefit as well as supporting aquaculture producers who cannot export fish without health inspections and the corresponding documentation.

Zebra Mussel Sampling

Missouri Invasive Species Oversight Committee is developing a list of candidate waters to sample for the existence of Zebra Mussels. They are shooting for 20 samples per water body. Plans are to sample for veligers in hatchery water supply lakes annually and do other reservoirs on a 3-year cycle.

We have taken a proactive approach to preventing zebra mussel spread through fish stocking from Department hatcheries. Unless stocked in the immediate waters of the hatchery (i.e. in a trout park or in a water body adjoining a hatchery) all trout are treated for zebra mussels in transit. We are particularly careful due to the fact that our largest trout hatchery, Shepherd of the Hills, receives its water from Table Rock Lake, a water body considered at high risk of zebra mussel infestation.

Missouri organizes hatchery Bio-security teams

The Goal of Biosecurity Planning includes three elements: 1) blocking the introduction of serious disease 2) limiting the spread of an introduced disease and 3) saving fish from disease and reducing impacts.

- Best way to go about developing the biosecurity plan.
- Identification and ranking of pathogens and aquatic nuisance species of concern to facilities--review answers for each facility--chart.
- Identifying high risk activities or problems
- Delineating work areas, zones of risk and assignment of a ranking to those areas.
- A discussion on best ideas and methods for:

  A. Disinfecting trucks and vehicles...when, how and where

  B. Disinfecting equipment and nets...with what, where, and when

  C. Disinfecting clothing: rain gear, rubber boots, waders etc.

  D. Disinfecting: raceways

  E. How to handle sick fish...how and when to isolate, transfer, stock, etc.

  F. Isolation facilities--is this possible

  G. Transferring fish between facilities

- What are things we can do now that are easy and practical versus things on a wish list for the future that can make our facilities the best they can be.

Missouri amends Wildlife Code

Missouri proposes to amend the wildlife code to protect against the spread of parasitic copepods. All trout imported into Missouri, stocked into new licensed trout fishing areas or purchased by MDC must be certified free of parasitic copepods.

A Plan for Allocation and Stocking of Trout in Missouri

This document is still in draft form and is intended to provide a consistent framework and overall guidance for trout stocking conducted by the Missouri Department of Conservation. Managers should utilize, in a consistent, efficient and equitable manner, these stocking rates to distribute the limited number of trout available for stocking in Missouri. The result will be improved trout fishing for Missouri's anglers, furthering our goal of providing … *the highest quality trout fishing experience that can be offered*.

Trout will be allocated to individual waters based on consideration of pertinent factors including: capability to support trout either year 'round or throughout the winter, stream or impoundment surface area, angling pressure and public access, and in the case of ribbon trout areas, the status of any wild trout populations and adult trout habitat rating information. Trout should not be stocked into any waters where physical habitat conditions (e.g., flow, water temperature, water quality) or lack of public access are deemed unacceptable or inadequate.

Statewide Average Size for Rainbow trout

Since we are nearing the completion of renovations and new construction at Missouri's trout hatcheries, we are beginning to set goals for the annual average size produced at each facility to achieve the 12.5-inch system-wide goal established in the Missouri Trout Plan. We want to minimize the differences in stocking size between hatcheries as much as possible.

Cleaning Stations

Fish cleaning stations are planned for Bennett Spring and Montauk At Montauk, the facility will include a concrete slab, disabled accessible sidewalk and an open, gabled roof over the cleaning table. This station will include a grinder with rinse water available. This facility will be built and maintained by MDC.

2008 Rains Affect 2009 Trout Stocking

2008 was the wettest year in Missouri history, with nearly 6 feet of precipitation falling during the year in some areas and more than 12 inches of rain falling in less than 24 hours in others. These torrential rains affected trout hatchery operations in several ways. The most significant impact came from the forced release of massive amounts of water from Table Rock Dam in Taney county. This effectively drained Table Rock's hypolimnion and water temperatures reached 65 degrees at the intake to Shepherd of the Hills hatchery. A loss of 30,000 pounds of fish resulted. Flooding losses also occurred at Bennett Spring Hatchery and Maramec Spring Hatchery. To compensate, small fish were "pushed" and nearly all areas will experience a 10% reduction in stocking during 2009

<u>Tennessee WRA – Jim Habera</u>

1. The widespread drought during the past few years has notably reduced wild trout abundance in Tennessee's mountains streams. Monitoring data from the fall of 2008 indicate that biomass is down an average of about 50% from 2005 levels. Reproduction continues to be relatively good, thus abundance should recover quickly with a return to more normal stream flows. Monitoring data from sympatric (mixed) brook/rainbow populations continues to indicate that rainbow trout are impacted more substantially than are brook trout, resulting in increases in brook trout relative abundance in these areas.

2. Additional electrofishing in 2008 has essentially eliminated rainbow trout remaining in the lower portion of Left Prong Hampton Creek. This is TN's highest-abundance brook trout stream (biomass in the upper portion can exceed 100 kg/ha) and was recently (2007) protected with a new 9-foot waterfall fish barrier.

3. Recent brook trout stocking in two tailwaters has proven to be successful. Fingerlings were stocked in the Norris tailwater (Clinch River) in 2007, 2008, and will become part of the annual stocking mix during the current management plan term (2008-2013). During the most recent electrofishing samples at 12 monitoring stations (March 2009), 17 brook trout were collected (8-12 inches) from the dam to 10 miles downstream. Anglers frequently report catching brook trout and are quite pleased with this addition to the Norris tailwater trout fishery. Concurrent brook trout fingerling stockings in the Center Hill tailwater (Caney Fork) have also established a fishery there, with anglers reporting catching specimens up to 13 inches.

4. A new 5-year management plan for the Wilbur tailwater (Watauga River) becomes effective in 2009, but this tailwater could not be sampled in 2008 or 2009 because TVA was unable to supply enough water for electrofishing boat operation (usually need ~4,000 cfs for 8-10 hrs.). Brook trout stocking in this tailwater will be discontinued in 2009 as part of the new plan, as a viable fishery was not established after eight years (only one brook trout was ever captured in a monitoring sample). Other management plan objectives include converting the brown trout fishery in the upper half of the tailwater to wild fish and evaluating the effectiveness of the Quality Zone (2-fish creel, 14 in. minimum size limit, artificial lures only).

5. The South Holston tailwater continues to support Tennessee's most abundant trout fishery, and is sustained largely by wild brown trout. The 2009 electrofishing catch rate for trout ≥7 in. averaged nearly 300 fish/h, while the catch rate for trout in the 16-22 in. protected slot was 20 fish/h (but has recently been near 30 fish/h). The new management plan for this tailwater (2009-2014) seeks to maintain the excellent quality of this fishery (no regulation changes are planned). A 43 inch brown trout was caught last fall in one of the spawning areas that is not subject to seasonal closure.

<u>Great Smoky Mountains National Park – Steve Moore</u>

Antimycin reclamation of native brook trout streams continues in the Park, in fall of 2008 rainbow trout were removed from approximately an 8.5 mile long BT

stream. The stream will be restocked with 1,000 BT in June of 2009 if surveys show it remains clear of RBT.

Steve and staff are working on a procedural manual for using Antimycin for fish reclamation in streams for the Park Service.

Conducting evaluation of water quality in park streams to document Clean Water Act violations due to low pH levels. Documented at least 6 native BT populations lost since the 1970's due to low pH. Relayed that it is likely the Federal government will sue coal fired power companies to force them to Clean Water Act requirements. Also relayed that a fair amount of the pollutants causing low stream pH levels are coming from car exhaust.

United States Forest Service – Mark Hudy and Dawn Kirk

Mark discussed the use of DNA markers to determine "family" status (relatedness) of BT in several Virginia first order streams over a 3 year period. The method worked well, basically acts as a "fancy" fish tag.

Mark also described the development of a passive vinyl fish tag detector strip that is placed across a stream bottom and can identify and count fish passing and direction of movement. Fish must pass within 3 feet to be detected. The strip will cost approximately $5000, and Mark suggested may have utility for fish passage studies for culverts, etc.

Dawn affirmed that BT restoration and research projects are ongoing on Forest Service lands.

Trout Unlimited – Seth Coffman and John Ross

Seth gave an overview of the TU Homeland Rivers Initiative, which is focused on streambank and restoration activities. Currently the initiative is focused on the Shenandoah valley region. He also mentioned that Gary Berti of TU is working on a similar initiative in the Potomac Rivers headwaters region of West Virginia.

John spoke on the TU "Trout in the Classroom" project whereby trout are raised by school students for stocking in local waters as a way to educate young people on

the importance of protecting water quality in streams. Numerous projects are ongoing in Virginia and hopes are to continue expanding the program.

Shenandoah National Park – Jeb Wofford

Jeb discussed coldwater related priorities in the Park as including assessing the existing fisheries database and performing analyses as needed, this work has not been done for many years. He also is looking to reassess the fish sampling protocol within the Park.

Hoping to receive Homeland Recovery Act funds, will go to fisheries maintenance activities.

He is also hopeful of being able to sample every stream in the park that is (or was) known to support fish including angler creel surveys on selected streams.

Arkansas Game and Fish Commission – Jeff Williams

Jeff reported that angling pressure on tailwaters was reduced in 2009 due to high water flows, and that low DO events also caused stocking schedule changes.

Research showed that stocked rainbows (11"+) exhibited poor growth in tailwaters, and were actually consuming algae, precipitating a change in stocking size to fingerlings. Preliminary results suggest this change is working with good growth of fingerlings, however the high water events limited sampling and more work needs to be done.

South Carolina – Dan Rankin

Dan reported on the controversy in SC in regards to access of navigable waters. In the past the state had allowed stream/river wade fishing if access was gained legally. At the time of the meeting this understanding remained in effect - if an angler obtains legal access adjacent shoreline owners cannot prohibit wade fishing.

SC is continuing to support and utilize its "Partners for Trout" program, which is geared to trout stream improvement activities.

Submitted a proposal for funding to the EBTJV for Jocassee Forest streams. Over the past decades many brook trout streams have suffered habitat abuses, if

funded the project will focus on restoring habitat and brook trout to impacted streams, and creating a priority list of streams for restoration.

Statewide trout activities for 2009 included: 1) Rewriting all state fishery laws to update and clean up language, 2) looking to expand delayed harvest trout fishing areas, 3) Negotiate improvements to tailwater releases in the lower Salude river as part of FERC relicensing agreement, 4) Initiate a bioenergetics study for Lake Jocassee to determine best stocking rate for brown trout (growth has slowed over the last few years), and 5) look at triploid brown trout mortality in Lake Jocassee as part of the put and grow fishery.

Maryland DNR Inland Fisheries Management, Alan Heft

Maryland continues to monitor statewide tailwater fisheries for the presence of *Didymo*. Currently *Didymo* has been found at infestation level in the Gunpowder river tailwater. Recently *Didymo* was detected in the Savage river tailwater during routine water testing, but no signs of infestation have been seen.

Monitoring continues on the Savage River no kill brook trout, artificial lures only management area in western Maryland. This is the third year of the regulation and results to date are mixed. Several of the study streams have had significant increases in numbers and size of brook trout, while some have had little change. Overall there has been an increase in average size and the number of brook trout >8". Three consecutive years of poor spawning success due to adverse environmental conditions have occurred since the regulation has been implemented.

The Savage river brook trout regulation was strongly supported by anglers statewide, but a small, mainly local minority vociferously opposed the regulation. Over several years misinformation on the research and data that was used to develop the regulation was used by this opposition to state their case to remove the regulation. Maryland DNR decided to hold an open house meeting, a format where all the information was presented on easy to read posters in a large meeting hall with Biologists and Managers present to answer questions. The meeting format was a huge success as the data was clearly presented for all to see, and arguments based on false information could not be made. This format also

eliminated the opportunity for people to take over a public meeting by eliminating the opportunity to grandstand.

April 29, 2009

Presentations

Climate Change, Mark Hudy USFS

Mark gave a very enlightening talk on climate change and impact on brook trout survival, and prefaced his talk by asking us to keep a perspective on the biggest threat to brook trout – human influence on brook trout habitat. More brook trout habitat has and will be lost solely from human caused loss of habitat than from what is predicted from climate change! While climate change will affect brook trout survival over their range, Mark also related that local influences can alter the predicted climate change temperature curves and related this to a project he has been working on in Virginia. For this project on Smith Creek, artificial cover was used to simulate riparian cover over a stream. Water temperatures were substantially reduced to a level where brook trout were able to survive and thrive, where prior to this project temperatures were too high. The take home message was that even with predicted water temperature changes due to global warming projects at a local level to provide stream shading can protect brook trout populations.

Brook Trout Genetics Updates, Case Studies, Tim King, USFWS

Tim began his talk by suggesting that the brook trout management paradigm is changing, and that in many cases we need to as managers be looking at management at individual stream levels. Tim highlighted some of the results so far from genetics work done in the GSMNP, Shavers Fork WV, and Shenandoah NP. For GSMNP they found that in a reintroduction stocking in LeConte,of brook trout mixed from 3 different streams that post stocking mating indicated that 76% of trout produced had parents from the same source stream, not mixed parentages. Tim suggested two mechanisms to explain this, 1) positive assortative mating, adults searched out and only spawned with others from their original stream, and/or 2) post reproductive processes affected survival of young so that only

those with non-mixed parentage survived. For the Shavers Fork work, Tim related that because the mainstem remains cold enough to allow movement between tributaries that overall the population is more closely related than is found in systems where the trout are more isolated. And for the Shenandoah study, looking at 3 different streams they found a very large differentiation in genetic makeup, which was surprising and may be a result of past stockings.

Brook Trout Genetics in Virginia, JoAnne Davis, Virginia Tech

JoAnne gave a very informative talk on the status of southern and northern strain brook trout in Virginia, highlighting several years of her research. A major finding was that past stocking of northern strain brook trout in Virginia has "polluted" the native southern strain of brook trout in some systems. JoAnne also reiterated Tim's findings with some of her results, and indicated that microsatellite work is the way to go for future brook trout genetics research.