

Summary of 2010 electrofishing for volunteers

McIntosh and Beehunter Creeks in Allegany State Park

In mid-June, with the help of angler volunteers, we sampled brook trout at 35 sites on McIntosh and Beehunter Creeks. This was the third year of sampling to evaluate the habitat improvement work that DEC, TU, USFWS and Allegany State Park under took on McIntosh Creek in July 2008. We first sampled in June 2008 to evaluate the wild brook trout population before habitat work and we are planning on four years (2009-2012) of post work sampling. Beehunter Creek had no habitat work done and is used as our “control” stream for this project.

Table 1 shows the population estimates for adult (yearling and older) and young-of-year wild brook trout in 2008-2010 for the entire length of both streams.

Table 1. Estimated populations of adult and young-of-year (YOY) wild brook trout in McIntosh and Beehunter Creeks, 2008-2010. 95% confidence limits in parenthesis.

	McIntosh Creek		Beehunter Creek	
	Adult	YOY	Adult	YOY
2008	169 (97-241)	Numbers too low for estimate	334 (153-515)	Numbers too low for estimate
2009	88 (49-127)	912 (657-1167)	154 (88-220)	565 (173-957)
2010	581 (473-689)	521 (319-723)	584 (391-777)	1014 (316-1712)

You will note in the above table that in our initial year of sampling, before the habitat work, there were moderate numbers of adult wild brook trout, but essentially no reproduction with only one YOY found in McIntosh and 12 in Beehunter. We also found very low numbers of yearling trout. Almost the entire trout populations were made up of age 2 and 3 fish, with a couple fish that may have been 4 or 5 years of age. We fully expected to see fewer adults in 2009 as many of the adults we found in 2008 would have died naturally before the 2009 sampling. That is exactly what we saw. However, we were glad to see that the



9 inch McIntosh Creek brookie

2009 year class was very strong in both streams, indicating they had good spawning and rearing conditions. You will note that reproduction in 2009 was slightly better in McIntosh than Beehunter.

In 2010, we anticipated much higher numbers of adults in both streams with the majority being yearlings. The numbers backed that up, with good numbers of adults (primarily yearlings) in both streams. In addition, we again saw good reproduction in 2010, but this year Beehunter Creek appeared to have the better spawning and rearing conditions.

While the increase in abundance of adult wild brook trout in McIntosh Creek from 2008 to 2010 was statistically significant (look for the lack of overlap in confidence limits), we cannot say with confidence yet that this was due to the habitat work. As you will note, a similar, but not quite statistically significant increase was also seen in Beehunter Creek from 2008 to 2010. Hopefully two more years of sampling will allow us to fully evaluate the success of this habitat improvement project.

N. Branch Wiscoy Creek prior to habitat improvement project

Region 9 Fisheries staff, assisted by USFWS staff and angler volunteers sampled the wild trout population in a section of the N. Branch of Wiscoy Creek where extensive habitat improvement is planned for 2011. The purpose of this sampling was to compare the “before work” trout population with the population after we do the project. Two “control sites” (where no habitat work is planned) were also sampled. The section of the N. Branch where we will be doing the habitat improvement was cleared for farming in the 1800’s and had been pastured by cattle until the 1950’s or 1960’s. This disturbance has left a stream that is abnormally wide and very shallow, providing very little in-stream shelter for adult trout. The stream banks in much of the section are stable, but densely overgrown with alder, making angling difficult. The stream has excellent water quality, with cold temperatures and very stable flow. Wild brown trout reproduction in the entire 4 mile long stream is outstanding.



Alder choked section of N. Br. Wiscoy

In 2009, a 0.6 mile section of public fishing easement was purchased on the stream, making it eligible for habitat work by DEC. The planned habitat improvement work will take advantage of the streams potential to support a high abundance of quality size wild brown trout by retaining the streams stability, decreasing the average width, increasing the depth and greatly increasing the amount of overhead bank shelter for adult wild trout.

In July, 2009, we electrofished a 2,100 foot section of the stream where the majority of

the improvement work will take place. We collected 451 yearling and older wild brown trout in the section, yielding an adult trout population estimate of 471 trout (1,183/mile) within the sampled section. The vast majority of these fish were yearling trout, with very low numbers of larger fish. We found that 90/mile of the trout were >10 inches long, 15/mile were >12 inches and 3/mile were >14 inches. Reproduction was excellent in this section where we found over 1,300 (3,370/mile) young of year brown trout, spawned in the fall of 2009.

In comparison to the section we sampled this year, which had very limited adult trout habitat, upstream 0.25 miles there is a section of stream where the private landowner has done extensive habitat improvement work (permitted by DEC). We sampled this section in 2009 and there we found 6,475 yearling and older wild brown trout per mile (six times the abundance where we sampled this year). Even more impressively, in the section with improved habitat, 2,100/mile of the trout were >10 inches, 975/mile were >12 inches and 375/mile were >14 inches.

Prior to the habitat improvement work in July-August, 2011, we will do further sampling so we have two years of “pre-work” fish population data. We also plan to do several years of habitat and population monitoring to evaluate the overall success of this project.

Clear Creek – Ellington

In late August, 2010, Region 9 Fisheries staff, assisted by many angler volunteers sampled the wild trout population in Clear Creek. The stream, located near the Village of Ellington, flows for 13 miles through Chautauqua and Cattaraugus Counties. The stream has 10.4 continuous miles of public fishing rights easements from the mouth upstream. The stream was last sampled in 2005 (it was being stocked with yearling and two-year old brown trout at that time) when a substantial wild brown trout population was confirmed. All trout stocking was eliminated beginning in 2006. Sampling had also occurred on the stream in 1990, 1991 and 1995.



Electrofishing on Clear Creek

Five sites were electrofished, duplicating those done in 2005. A total of 277 yearling and older wild brown trout were captured, yielding a population estimate of 287, indicating very good capture efficiency. Moderate numbers of young-of-year brown trout were also captured, mainly at the upper three sites. In addition, wild rainbow trout were also captured at two sites. Rainbow trout were first encountered in 2005 at the same two sites.



Good one on! Got him surrounded.

In this year's sampling we found an average of 663 adult wild brown trout/mile compared with 823/mile in the 2005 survey (Table 2). The average biomass of wild adult brown trout in 2010 was 88 lbs/acre, which was slightly higher than the 80 lbs/acre found in 2005. While the overall abundance of wild brown trout was slightly lower in 2010, the biomass was similar because this year the percentage of the trout that were large was substantially higher than in

2005. In 2005, the percent of the trout population greater than 12 inches long was 7% (58/mile), while this year it was 17% (115/mile) (Table 2). The same pattern held true for fish greater than 14 inches. In 2005, 2% (20/mile) were >14 inches and this year 6% (42/mile) were >14 inches. Six of the fish we captured this year were >16 inches long (2% of the total or 14/mile), which was also higher than in 2005. The largest wild brown trout captured in Clear Creek this year was just less than 21 inches long.

Table 2. Abundance (#/mile). (#/mile >12"), (#/mile >14") and biomass (lbs/acre) for adult wild brown (BT) and rainbow trout (RT) in Clear Creek – Ellington, 2005 and 2010.

	2005		2010	
	Brown trout	Rainbow trout	Brown trout	Rainbow trout
#/mile	823	3	663	25
#/mile >12"	58	---	115	2
#/mile >14"	20	---	42	---
Lbs/acre	80	<1	88	2

In 2010, wild rainbow trout were found at the same two sites (upstream of Ellington) as in 2005. However, the abundance of rainbow trout does appear to be slowly increasing (Table 2). Substantial numbers of young-of-year rainbow trout were found along with three year classes of adults. The largest rainbow trout captured was 12.4 inches. It is strongly suspected that the wild rainbow trout found in Clear Creek are the result of illegal stocking by anglers.

Overall, the wild brown trout population in Clear Creek remains very substantial and should provide high quality, challenging angling with no stocking of hatchery trout required. If wild rainbow trout continue to increase in abundance, they will also contribute to the angler catch.



21 inch wild brown from Clear Creek



...and another nice brown

Surveying for undocumented wild brook trout populations

Beginning in mid-June, 2010 two seasonal technicians began a three year project conducting surveys on streams across DEC Region 9, most that have never before been assessed. The primary focus for this work is to locate undocumented wild brook trout populations or other wild trout species. The work in 2010 has focused on the Upper Genesee and upper Allegheny watersheds, mainly in Allegany and Cattaraugus Counties. Through September 24th, the crew had assessed 261 streams, finding wild brook trout populations in 36 of the streams and wild brown trout in another 11 streams. At least one sub-watershed (Cryder Creek) appears to contain a very high number of streams supporting wild brook trout. However, even in this sub-watershed, the fish are not very abundant. They face continued threats to their existence such as competition with brown trout, elevated water temperatures and poor land use practices. On the positive side, several surprisingly large specimens of both wild brook and brown trout have been found in the surveys.



Small stream wild brown trout



Small stream wild brook trout

