

The Tweed Trout & Grayling Initiative

Federation of
Border
Angling
Associations



Free Newsletter No. 5

(January 2008)

The Tweed Trout & Grayling Initiative (TTGI) would like to take this opportunity to thank all of those who filled in catch log books during 2006 and 2007 and we hope you continue to do so in the future. It has been brought to our attention that a small number of log books or TTGI Badges may have been lost in the post. Although the matter was out-with our control we apologise for any inconvenience this may have caused.

2007 Trout & Grayling Catch Log Book Report

Angler catch returns are vitally important. As catches provide a sample of what is in our rivers they can be used to monitor the health of our fish stocks. Because angler catches can be biased by weather, time of year, fishing method, angler ability, etc the more catch returns we receive from each area of the Tweed catchment the more accurate the results are (large amounts of catch data allow biases to be averaged out). Therefore the TTGI would be grateful if you could fill in the catch log book accompanying this newsletter during the 2008 trout fishing season and return it at the end, allowing us to monitor the health of the Tweed's fish stocks on behalf of anglers.

What follows is a short summary of the trout and grayling fishing in the River Tweed system during the 2007 trout fishing season (April to September). The data the report is based on comes from catch log books handed out with local season tickets by the TTGI and filled in by Tweed anglers. In total 82 log books were filled in and returned to the TTGI, covering 834 fishing trips and 2493 fishing hours around the Tweed catchment. Each angler who returned a log book has/will receive a TTGI metal enameled badge and was entered into a prize draw, the results from which accompany this newsletter.

The catch results (i.e. angler catch rates) from the log books are presented in two main ways; in **Tables** the data is presented as an *average time taken to catch a fish*, so that the shorter the time taken the better the fishing is; while in **Graphs** the data is presented as an *average catch per four hours of fishing*, so that the bigger the bar is in each graph the better the fishing is. Most of the other data is presented as a percentage. So that all different areas of the Tweed catchment can be compared the size limit for all log book data has been standardized at 10 inches. The results for all Angling Associations with a size limit less than 10 inches had therefore to be altered and some trout that were classified as "oversize" had to be re-categorised as "undersize". All information on fish sizes is based on angler estimates and where results are referred to as "all Tweed" they refer to the whole Tweed catchment and not just the River Tweed itself. The results from the Gala Angling Association's stretch of the River Tweed have been included in the "Upper Tweed" results. The Gala AA's stretch of the Tweed falls across the Middle Tweed/Upper Tweed boundary and in theory the Association's catch results could be included within either the Middle or Upper Tweed results. The decision to include them with the Upper Tweed is on the basis that they most resemble Upper Tweed results.

Section 1 – Catch Rates for the Tweed Catchment during 2006 and 2007

The catch rates recorded in the 2007 log books show that the trout catches in 2007 were generally better than those in 2006, while the Grayling catches were generally worse. The biggest increase in trout catches appears to be in the "medium" and "smaller" sized waters of the Tweed catchment with the Upper Tweed, Whiteadder and Leader all showing significantly improved catches, while the catches from the Middle and Lower Tweed only improved slightly or stayed roughly the same. The one exception to this is the

River Teviot, the catches from which were heavily influenced by changes in the fishing methods used in the returned log books between 2006 and 2007 (this shows why numerous catch returns are needed so that biases, such as those caused by fishing method, can be averaged out), although the Teviot did see a significant increase in the catch rate of “takeable” trout. Grayling catches appear to have dropped significantly in the “larger” channels fished (Middle and Lower Tweed) while improvements were seen in some of the tributaries.

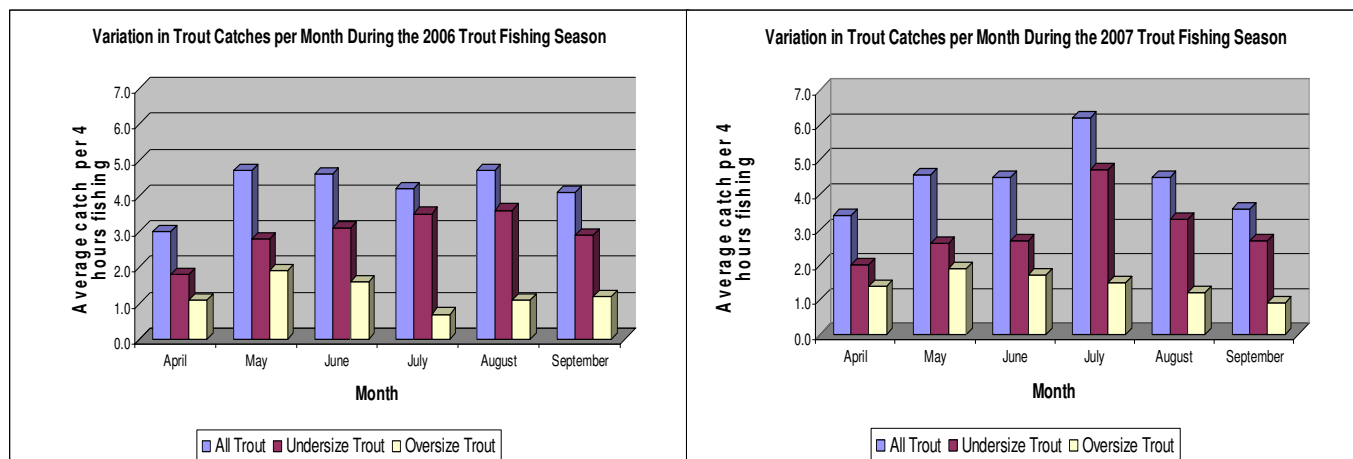
Table 1 – The catch rates for grayling and wild trout for different parts of the Tweed catchment during the 2006 and 2007 trout fishing seasons (expressed as an average time in hours/minutes taken to catch a fish)

	All Wild Trout		Wild Trout Under 10”		Wild Trout Over 10”		Grayling	
	2006	2007	2006	2007	2006	2007	2006	2007
All Tweed Results	57m	54m	1h 24m	1h 24m	3h 6m	2h 42m	6h 36m	11h 48m
River Blackadder*	No data	18m	No data	30m	No data	54m	n/a	n/a
River Eye*	No data	24m	No data	30m	No data	3h 12m	n/a	n/a
River Jed*	12m	No data	18m	No data	11h 6m	No data	5h 36m	No data
River Gala*	No data	40m	No data	42m	No data	15h 18m	No data	30h 30m
River Leader*	1h 6m	18m	1h 6m	20m	0 caught	3h 24m	7h 12m	5h 6m
Ettrick & Yarrow*	5h 18m	No data	15h 48m	No data	7h 54m	No data	31h 30m	No data
River Teviot	30m	48m	35m	1h 6m	11h 20m	3h 54m	6h	2h 12m
River Whiteadder	54m	36m	1h 10m	42m	4h 50m	4h 42m	161h 30m	331h
Upper Tweed	1h 43m	1h 18m	1h 54m	1h 48m	6h	4h 24m	15h 54m	20h
Middle Tweed	1h 12m	1h 6m	2h 48m	2h 24m	2h 12m	2h 6m	4h 36m	7h 54m
Lower Tweed	48m	48m	1h 35m	1h 42m	1h 45m	1h 24m	4h 48m	7h 36m

(* the results are taken from a relatively small number of catch records and therefore may be influenced by angler ability, weather, time of year, etc., to a greater extent than in areas with high catch returns)

One possible explanation for the change in catch rates is not an increase in trout numbers, although it is possible that trout survival was better in 2007, but the weather. Graphs 1 and 2 compare the average catch rate per four hours of fishing effort for each month of the Trout season during 2006 and 2007.

Graphs 1 and 2 - The average catch rate per four hours of fishing effort for each month of the Trout season during 2006 and 2007



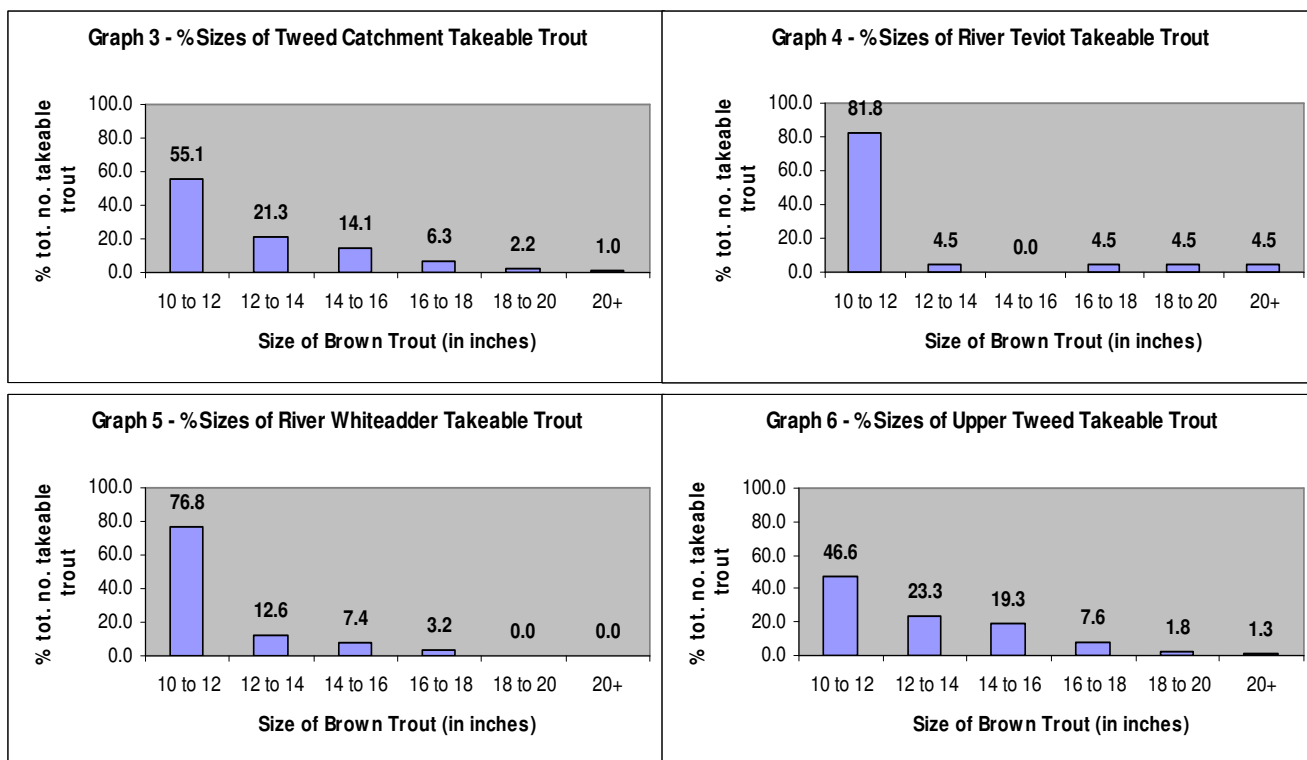
At first glance the two graphs look very similar, and the catch rates are for most of each year. However, the results differ greatly during July. In 2006 it is one of the poorer months of the season for trout catches and is the worst month for catching “takeable” sized trout. In 2007 July is the best month for catching trout in general and is the third best month for catching “takeable” trout. The most obvious explanation for this would be the differences in the July weather between 2006 and 2007. In July 2006 the rivers were low and clear and the weather was warm and sunny, as is normally the case in this month, and as a result catches were poor. In 2007, however, river levels were up and down and generally coloured in July and the weather was often cool and cloudy, which is unusual for this month and as a result the catches were good. As was shown in Table 1 the catches from the “larger” channels fished during 2007 (Middle and Lower Tweed) do not appear to have changed much, suggesting that they saw no benefit from the wet July (in fact, if anything, anglers may have been kept off the water for long periods of time as the river stays “bigger” longer the further down-river you go). As Table 1 shows that the catches in the “medium” and “smaller” waters (Upper Tweed, Whiteadder and Leader) increased this suggests that it was the “medium” and “small” waters of the Tweed catchment that saw the benefit.

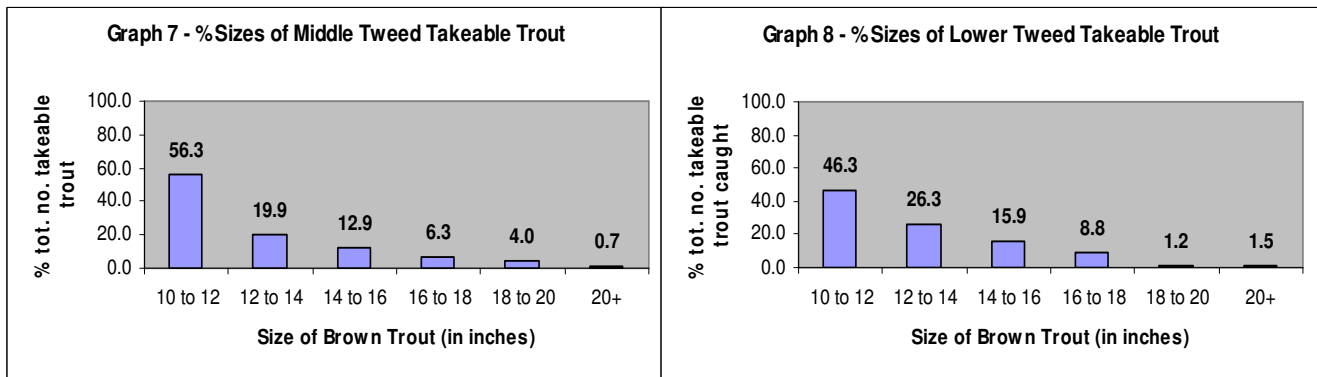
This suggests two things; firstly, it appears that only the larger channels of the Tweed system “fish well” in low water conditions (although other variables such as sunshine and temperature may still affect catches). Secondly, one of the predictions of climate change is warmer, drier, summers and if this is the case then climate change may make a marked difference to summer trout fishing.

As the grayling catches appear to have decreased, and as anecdotal evidence suggests grayling are harder to catch in coloured water, the wet summer may have caused the decline in grayling catches. As grayling catches would appear to do the opposite to trout catches and decrease with summer rainfall it could be suggested that climate change would benefit grayling catches due to more low, clear, summer flows. However, any increase in average summer water temperatures that would be associated with drier summers would be detrimental to grayling which appear to struggle in high water temperatures. (Anyone who has caught a grayling in high water temperatures will know that they fight far less than they do in cold water.)

Section 2 – Size Classes of Takeable Brown Trout caught during 2006 and 2007

Graphs 3 to 8 – The percentage of takeable Brown Trout caught during the combined 2006 and 2007 trout fishing seasons

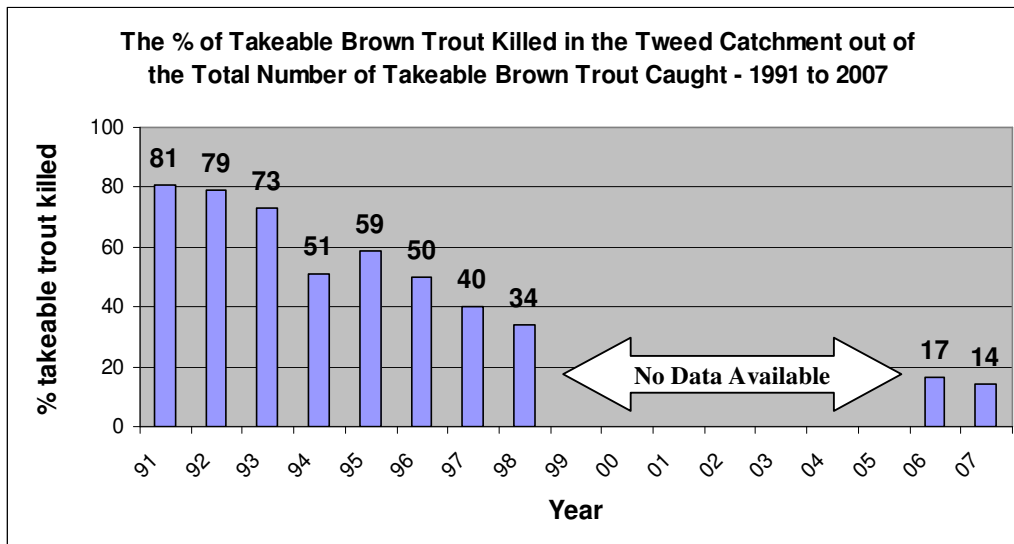




In theory, the lower down a river system you go the bigger the average size of trout should be (because there are more areas of “deeper” water to hold bigger trout), and the further up a river you go the smaller the trout should be (because there is more “shallow” water that can only hold small trout). Graphs 3 to 8 generally show this with the percentage of takeable trout caught that fall into the lowest size categories being higher in the tributaries (Teviot and Whiteadder). Interestingly the results shown in graphs 3 to 8, which are taken from all the takeable trout caught during the 2006 and 2007 trout fishing seasons, differ from the results from the 2006 season alone (these were printed in last year’s newsletter). The difference between the 2006 and 2007 results appear to be in the numbers of 10” to 12” Brown Trout - which appear to have been more abundant in 2007. The area that was most affected by this change in catches was the Lower Tweed where the dominant size class of takeable trout changed from a 12” to 14” Brown Trout in 2006 to a 10” to 12” Brown Trout in 2007. The increase in the numbers of 10” to 12” trout may be because of increased survival of “younger” trout in the areas fished by anglers: possibly as another result of the wet summer although more catch data from relatively wet and dry trout seasons is needed to be able to say if this is definitely the case.

Section 3 – The Percentage of Takeable Brown Trout Caught in the Tweed Catchment that are Killed – 1992 to 2007

Graph 9 shows the percentage (i.e. numbers out of every hundred) of the total number of takeable trout caught each year that are killed (and not the total number of trout killed – this caused some confusion in 2006). The graph shows a continuing trend amongst Tweed anglers towards releasing takeable trout, possibly showing a change in attitudes towards trout stocks. Even in the relatively short time period between 1992 and 2007 the increase in the percentage of takeable trout released by anglers has been quite dramatic, with an increase of 65%.

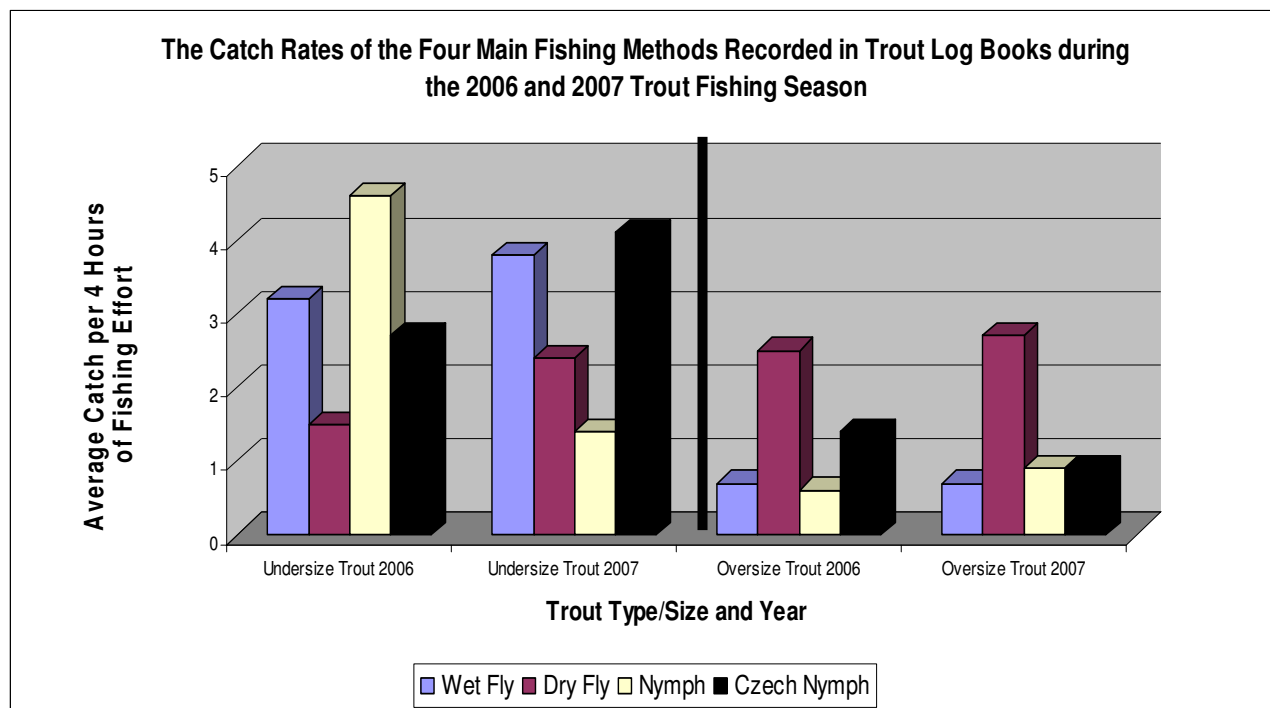


Graph 9 - The percentage of the total number of takeable trout caught in the Tweed Catchment each year that are killed from 1992 to 2007. The 1992-98 results are from TF log books.

Section 4 – The Angling Methods used in the Tweed Catchment during the 2006 and 2007 Trout Fishing Season and their Effect on Angler Catches

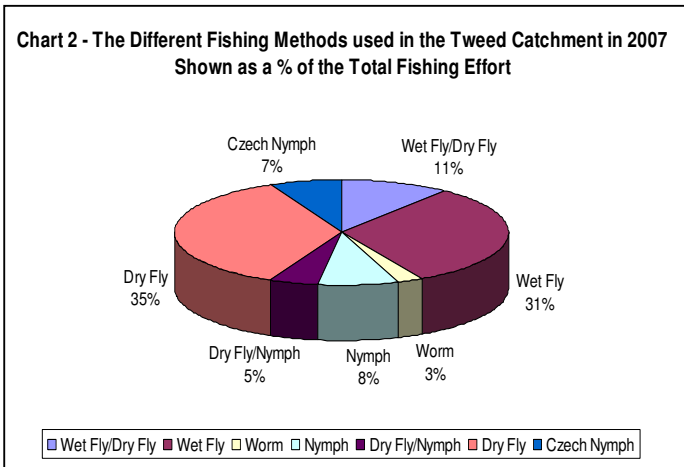
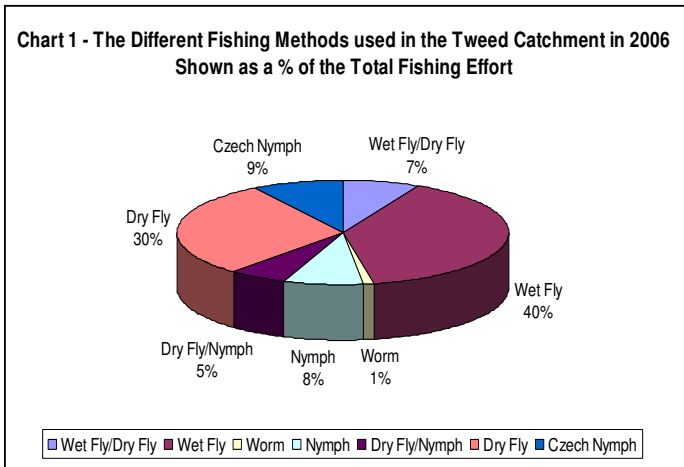
Graph 10 shows that Dry Fly fishing was by far the best method of catching takeable sized Brown Trout in both 2006 and 2007 and, although it remained one of the poorer methods for catching undersize trout, the Dry Fly catch rate slightly increased for both undersized and oversized trout in 2007. This suggests that 2007 was a slightly better year for Dry Fly fishing, possibly suggesting that the wet summer had a minor positive effect on its catches. Wet fly proved to be one of the least successful methods of catching takeable trout in both 2006 and 2007 but remained one of the best methods of catching undersize trout in both years. The Wet Fly catch rate slightly increased for both undersized and oversized trout in 2007 suggesting that 2007 was a slightly better year for Wet Fly fishing, again possibly because of the wet summer. The success rate of both Czech Nymph and Nymph fishers changed considerably between 2006 and 2007. The catch rates of Czech Nymphing decreased in 2007 for oversize trout (but was still the second most effective capture method) but increased for undersize trout. The catch rates for Nymph fishing saw the opposite change from that of Czech Nymphing. Oversize trout catch rates went up while undersize trout catch rates went down. This change is difficult to explain, especially considering that we only saw slight changes in the efficiency of both wet and dry fly anglers.

Graph 10 – The catch rate for undersize and oversize trout of the four main fishing methods used during the 2006 and 2007 trout fishing seasons



Charts 1 and 2 show that the proportion of fishing effort made up by Wet Fly dropped from 2006 to 2007, while the proportion of Dry Fly increased. As fishing methods can affect catches it is possible that the slight change in fishing methods between 2006 and 2007 may have affected catches. If this was the case then we should see a decrease in catches of undersize trout related to the drop in Wet Fly fishing effort in 2007 (Wet Fly is most effective at catching undersize trout) and an increase in the catches of takeable trout related to the increase in Dry Fly fishing effort in 2007 (Dry Fly is most effective at catching takeable trout). As was show previously under the “All Tweed Results” section of Table 1 there was, in fact, an increase in the catch rate of takeable trout in 2007 but no decrease in the number of undersize trout and as such the changes in catches between 2006 and 2007 are unlikely to have been caused by changes in fishing method but instead by the wet summer as discussed earlier.

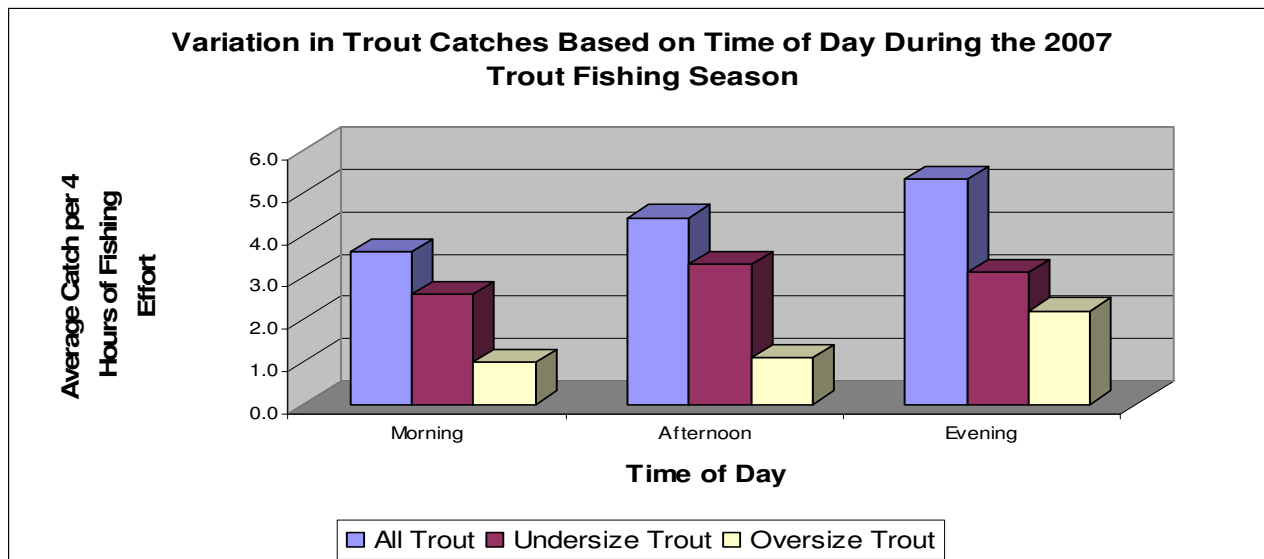
Charts 1 and 2 – The Methods used by Tweed anglers during the 2006 and 2007 Trout Fishing Seasons as a Percentage of the Total Fishing Effort



Section 5 – The Effect of Time of Day on Angling Success

Graph 11 shows that, in general, the evening offers by far the best fishing for takeable trout (the catch rate is more than double that of either the morning or the afternoon), while undersize trout are most frequently caught in the afternoon, with the morning generally being poorest for both undersize and oversize trout. The catch rates for the time of day at which fish were caught in 2007 were very similar to those in 2006 (shown in last year’s newsletter) although there was a slight increase in the capture of both undersize and oversize trout in the evening and in the catches of takeable trout in the afternoon in 2007. This slight variation may well be another effect of the wet summer in 2007 although it should be noted that the changes between 2006 and 2007 are small.

Graph 11 – The variation in catch rates of different sizes of trout during the 2007 trout fishing season according to time of day



The TTGI continues in its attempts to study and enhance the wild trout and grayling populations of the Tweed Catchment. If you would like to assist the Initiative during the 2008 trout fishing season your help would be greatly appreciated. For more information on the Initiative, or to request any details, visit our web-site @ www.ttgi.org.uk or phone the TTGI Biologist at the Tweed Foundation 01896 848 271, or e-mail him at kgalt@tweedfoundation.org.uk. The full report that this summary is based upon will soon be available on the TTGI web-site or on request from the Tweed Foundation in paper format.