

The Tweed Trout & Grayling Initiative

Federation of
Border
Angling
Associations



Free Newsletter No. 3

(January 2007)

2006 Trout & Grayling Catch Log Book Report

What follows is a short summary on the trout and grayling fishing in the river Tweed during the 2006 trout fishing season. The data the report is based on comes from catch log books handed out with local season tickets by the Tweed Trout & Grayling Initiative (TTGI) and filled in by Tweed anglers. In total 90 log books were filled in by anglers and returned to the TTGI covering over 600 fishing trips and 1900 fishing hours around the Tweed catchment.

Note: Information on standardized size limits, how trout sizes were determined, results left out of the report, and the Angling Associations that fall into each of the separate areas of the Tweed listed in this newsletter is detailed at the end.

Section 1 – Catch rates for the Tweed during 2006

Table 1 – Catch Rates for the Tweed Catchment (shown as an average time taken, in hours and minutes, to catch one fish).

	All Wild Trout	Wild Trout Oversize	Wild Trout Undersize	Oversize Grayling
All Tweed (w/d)	58m	3h 6m	1h 23m	7h 40m
Teviot (w)	31m	6h 50m	34m	3h 13m
Whiteadder (w)	52m	6h 44m	59m	249h 30m
Upper Tweed (w)	1h 26m	5h 57m	1h 53m	21h 9m
Middle Tweed (d)	1h 14m	2h 10m	2h 50m	5h 27m
Lower Tweed (d)	46m	1h 39m	1h 26m	3h 58m

Note: A “w” next to an area fished means the area was dominated by wet fly anglers, whereas a “d” next to an area fished means the area was dominated by dry fly anglers.

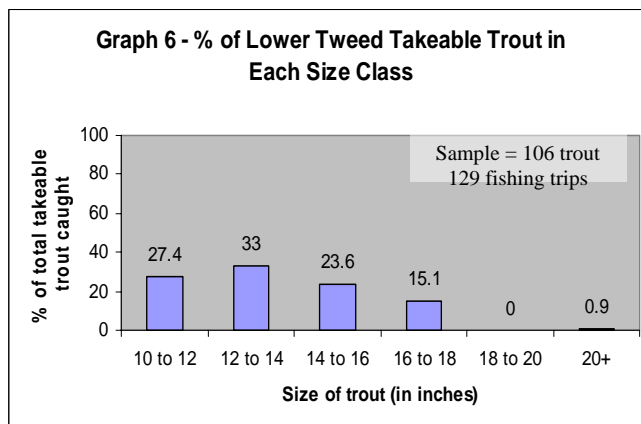
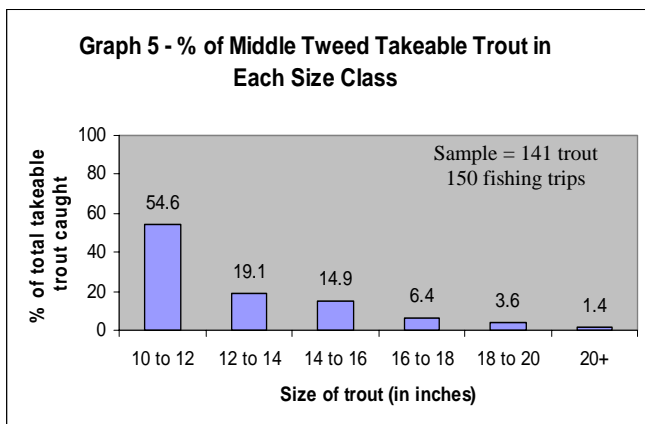
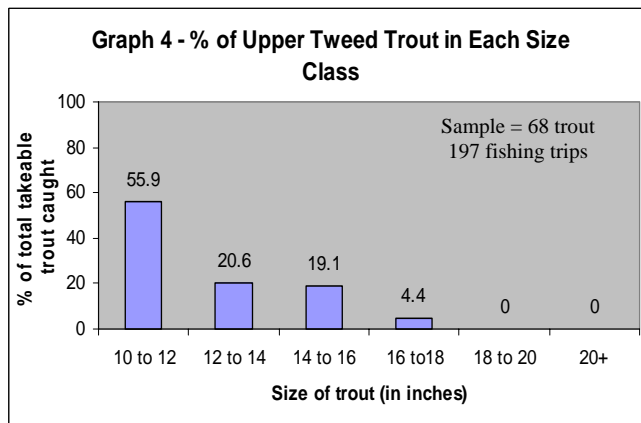
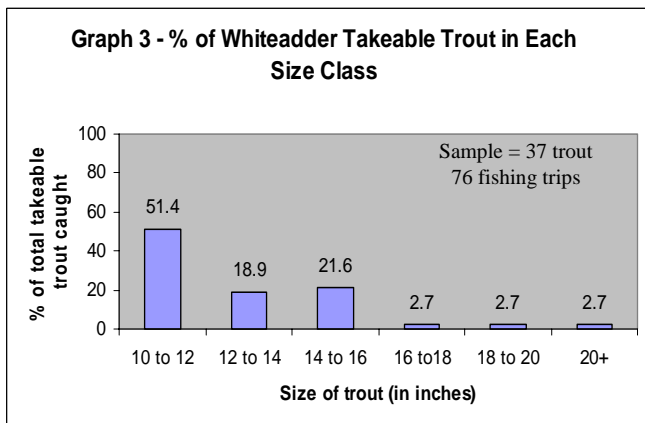
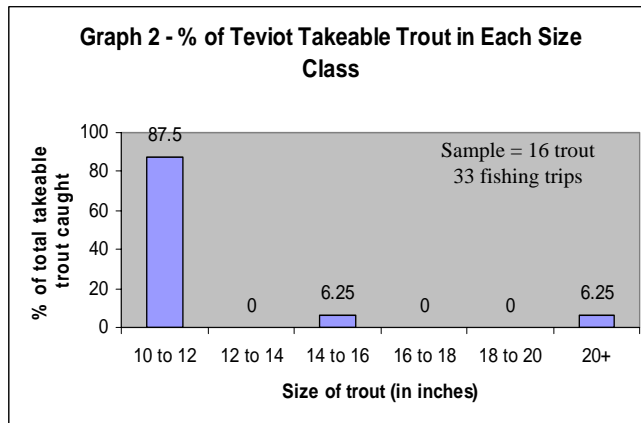
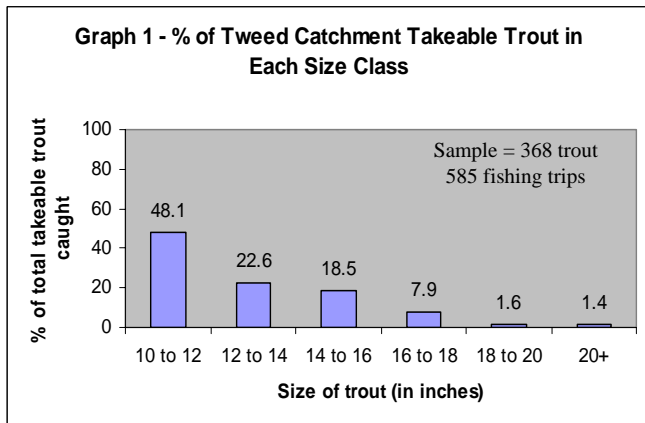
The assumption is that most Tweed Brown Trout start off their lives in small burns (generally averaging less than 2m in width) and work their way further and further downstream as they get larger and need more food and depth of water. As a result the number and size of takeable trout should increase as you go further downstream. The 2006 catch returns support this theory, with the Teviot and Whiteadder having the lowest takeable trout catch rate (of the areas featured) followed by the upper Tweed, middle Tweed and then finally the lower Tweed which has the highest catch rate of 10 inch + trout. It may be the case that many of the takeable trout caught in the middle and lower Tweed have dropped down from the upper Tweed and numerous Tweed tributaries.

Just as the number of takeable trout should increase as you go further downstream the number of undersize trout should increase as you go further upstream. The 2006 data does seem to show this; however, there appears to be one exception to this rule: as expected the Teviot and Whiteadder have the highest catch rate for undersize trout with the upper Tweed having a lesser catch rate, and the middle Tweed having a lower catch rate still. The lower Tweed, however, appears to have a catch rate for undersize trout that is similar to that of a tributary. Why this is the case is unclear as the lower Tweed has very few trout spawning burns.

The angler catch rate for grayling depends greatly on the fishing method employed (as is shown later) so the percentage of anglers in a given area fishing the more effective methods can greatly affect the catch

rates. The lower Tweed seems to have the highest Grayling catch rate (in comparison to the % of anglers fishing using the more effective methods) during the trout fishing season, whereas the Whiteadder has the lowest catch rate (only one grayling was recorded from the Whiteadder). Future grayling catch rates from the Whiteadder will be interesting to observe as it appears that the Whiteadder is only just beginning to be colonised by grayling.

Graphs 1 - 6 – Size classes of takeable trout.



Note: the data from the Teviot and Whiteadder comes from a small number of takeable trout and therefore may not be as accurate as the data from the lower, middle and upper Tweed.

Graph 1 shows the % of takeable trout caught in each size class over all of the Tweed catchment. The percentage of fish caught falls as the size classes get bigger. This is to be expected as there should always be fewer older fish than younger. The graph also shows that the fall in trout numbers varies between size classes of trout. A large drop can suggest below average survival in a year class of trout or it may be that a small drop indicates an above average survival in a year class.

The majority of takeable trout caught in the Teviot appear in the 10 to 12 inch size class with few larger trout, which is possibly explained by a lack of data. The data from the Whiteadder graph suggests that the

sizes of its takeable trout are larger than those in the Teviot (Graph 2, roughly 50% are over 12 inches). The takeable trout in the middle and upper Tweed appear to be generally the same size (roughly 55% are under 12 inches and roughly 25% are over 14 inches (11b)), although the previous data would suggest that they are more numerous in the middle Tweed. Graph 6, from the lower Tweed, suggests that as well as being more numerous in the lower Tweed (as shown earlier) the oversize trout are larger (almost 40% of the takeable trout are over 14 inches). Surprisingly there appear to be more trout in the 12 to 14 inch size class than there are in the 10 to 12 inch size class. Once again this suggests that trout are dropping down into the lower Tweed from the upper Tweed and the numerous tributaries. It could also explain the large drop between trout in the 10 to 12 inch size classes and 12 to 14 inch size classes we see in the graphs from the Teviot, Whiteadder, upper Tweed and middle Tweed.

As in Table 1, angling methods may be effecting the takeable trout capture rate for the different areas listed.

Section 2 – Which Month and Which Time of Day Fished Best?

Table 2 – Angling Success Compared to Time of Year (shown as an average time taken, in hours and minutes, to catch one fish).

	All Wild Trout	Wild Trout Oversize	Wild Trout Undersize	Oversize Grayling
April	1h 21m	3h 34m	2h 11m	9h 18m
May	51m	2h 10m	1h 25m	48h 15m
June	43m	2h 31m	1h 19m	15h 1m
July	57m	5h 47m	1h 8m	6h 1m
August	43m	3h 42m	1h 7m	4h 12m
September	59m	3h 22m	1h 23m	4h 24m

The table above seems to show what most Tweed anglers already know: takeable trout are easiest to catch early in the trout season and get harder to catch as the season progresses. In April and July, however, the catch rate of takeable trout seems to be far lower than in the surrounding months. This is probably explained by trout being put off surface feeding by, firstly, the unusually cold weather which was experienced in April, and, secondly, by the unusually warm and dry weather in July.

The catch rate of undersize trout appears to increase throughout the trout season, regardless of the weather (it may be that undersize trout are more tolerant of high water temperatures). Undersize trout should be dropping down into the main rivers from feeder streams throughout the trout season so this may partly explain this increase in catch rates.

The grayling fishing in the Tweed appears to improve dramatically in July, August and September but this is probably as a result of very few anglers deliberately fishing for grayling during April, May and June as these are the months when grayling recover from spawning in April. The warm dry weather in July appears to have affected the grayling catch rates as well as the trout catch rates.

Table 3 – Angling Success Compared to Time of Day (shown as an average time taken, in hours and minutes, to catch one fish).

	All Wild Trout	Wild Trout Oversize	Wild Trout Undersize	Oversize Grayling
Morning	1h 8m	3h 27m	1h 41m	4h 55m
Afternoon	50m	4h 8m	1h 4m	11h 37m
Evening	56m	2h 27m	1h 32m	9h 10m

Once again there appears to be a difference in behaviour between undersize and oversize trout with oversize trout being caught most frequently in the evening and undersize trout being caught most frequently in the afternoon, again possibly showing a greater tolerance to high water temperatures than oversize trout, or a greater tolerance to bright light.

Grayling catch rates appear to be at their greatest in the morning and then in the evening, again possibly showing their dislike for high summer water temperatures which peak in the afternoon.

Section 3 – Which Methods Fished Best?

Table 4 – Angling Success of Different Fishing Methods (shown as an average time taken, in hours and minutes, to catch one fish).

	All Wild Trout	Wild Trout Oversize	Wild Trout Undersize	Oversize Grayling
Wet Fly	1h 1m	5h 50m	1h 14m	35h 35m
Dry Fly	59m	1h 36m	2h 36m	16h 26m
Nymph	46m	6h 22m	52m	7h 43m
Czech Nymph	58m	2h 47m	1h 28m	1h 10m
Mixed	49m	4h 43m	59m	11h 26m

What Table 4 shows is a bit of a dilemma for Tweed anglers. It appears that the best methods for catching oversize trout (dry fly fishing and Czech nymphing) are the worst for catching undersize trout, and those that are best for catching undersize trout (wet fly and nymph fishing) appear to be the worst for catching oversize trout. When fishing for trout, regardless of size, the methods that catch most undersize trout (nymph fishing and wet fly fishing) generally fare slightly better, as most areas of the Tweed should have far more undersize trout than oversize.

Whith grayling fishing there is one method that seems to always out-fish the rest: Czech nymphing. This shows the importance of getting flies down to the riverbed where the grayling are feeding. Surprisingly Czech nymphing was the second most effective method of catching oversize trout. This could suggest that a significant proportion of adult trout feeding occurs in mid-water or on the bottom, reducing the trout's need to come to the surface.

It should be noted that the fishing methods used in different areas of the Tweed will have slightly effected the results described above (i.e. dry fly fishing is more commonly used in areas that appear to have the most takeable trout). The success rates for the different methods shown above were repeated in all of the different areas of the Tweed catchment, however, the length of time taken to catch a fish differed.

Section 4 – About Tweed Anglers

Table 5 – Fishing Methods Used in the Tweed Catchment as a Percentage of the Total Time Fished.

	All Tweed	Teviot	Whiteadder	Upper Tweed	Middle Tweed	Lower Tweed
Wet Fly	33.3%	51.1%	72.7%	51.9%	15%	33%
Dry Fly	30.3%	4.1%	4.4%	25.22%	42.39%	49.7%
Nymph	7.7%	11%	8.2%	1.93%	12.89%	2.2%
Czech Nymph	9.2%	13.7%	0%	5.52%	17.9%	6.1%
Mixed	12.6%	20.1%	14.6%	12.7%	11.9%	8.7%

What is interesting about this Table is that it shows that anglers who fish in areas that appear to have greater numbers of oversize trout (Table 1) tend to spend a greater length of time using the methods that are most efficient at catching oversize trout (dry fly). Whereas in the areas that appear to have greater numbers of undersize trout (Table 1), anglers tend to spend a greater length of time using the methods that are most efficient at catching undersize trout (wet fly). This poses several questions: are anglers adapting their methods to suit the fish that are there? Or, are angling catches a result of the fishing methods used by anglers? Or, do both effect the catches shown for different areas of the Tweed catchment? And, if so, to what extent?

Section 5 – 2006: a Bad Year for Trout Angling?

The Tweed Foundation has catch records from the 1990's log book scheme and, although the data is stored in a different format, the TTGI has been able to make some comparisons between the 1990's and 2006.

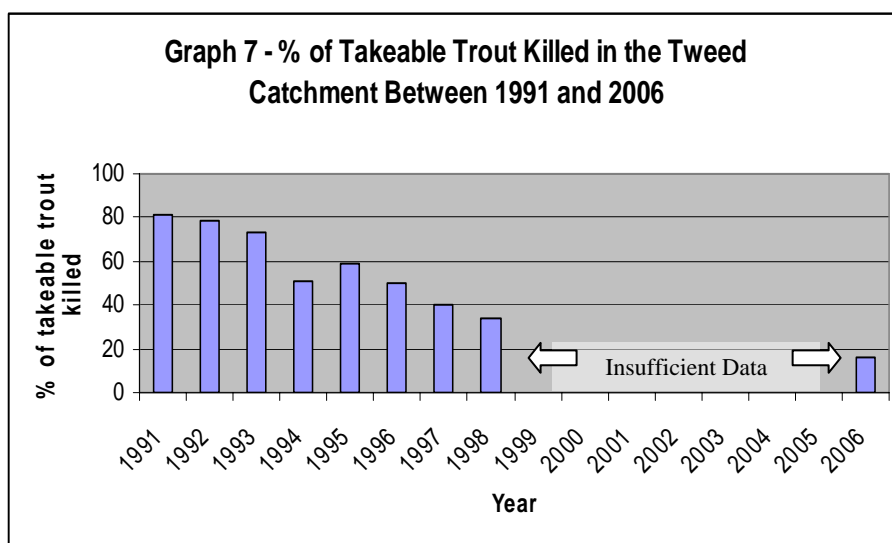
Table 6 – Trout Catch Rates (All Tweed) – 1991 to 1998 and 2006 (shown as an average time taken, in hours and minutes, to catch one fish).

1991	1992	1993	1994	1995	1996	1997	1998	2006
34m	34m	25m	24m	24m	28m	27m	27m	57m

The Table above shows that from the early to mid 1990's the average time taken to catch a trout in the Tweed catchment was fairly stable, varying by around 10 minutes from year to year. The catch rate from 2006 came as a bit of a shock as it is well below the average from the 1990's. The problem is that the catch data the TTGI received in 2006 differs somewhat from the data of the 90's. In 2006, a higher proportion of catch returns came from the main stem of the river Tweed (where there are fewer small fish - which make up the majority of each years catch returns). There is also a lower proportion of wet fly anglers in the 2006 catch data (wet fly is one of the best methods for catching large numbers of small trout) and, added to that, is the cold spell in April and the warm dry spell in July which appeared to effect catch rates. If the drop in catch rates is not down to these factors then it may mean that there is a problem. Unfortunately, because of the changes in log book data between the 1990's and 2006, it cannot be determined whether the decline is because of these factors or because there is a problem. Therefore, the TTGI urgently needs more catch records. With more records comparisons between like with like can be made in the future (i.e., wet fly fishers from the Leader Water in 2006 with wet fly fishers from the Leader Water in 2007, or data from recent years with 1990's data), something that can't really be done at the moment until more years' data is available.

Please help the TTGI to find out if there is a problem with our wild Brown Trout stocks by filling in the log book that accompanies this newsletter. All log books completed receive a TTGI badge and are entered into a prize draw.

Graph 7 – % Takeable Trout Killed – 1991 to 1998 and 2006.



The graph on the left is pretty straight forward; it shows how the numbers of trout killed in the Tweed catchment has generally reduced over recent years as angling attitudes have changed.

Section 6 – The Effect of Angling Method on Fishing Catches

Shown on the next page is an example from the river Teviot of how angling methods can affect fishing catches.

Table 8 – River Teviot (Kelso AA) Catch Data - 2006 and 1991 (shown as an average time taken, in hours and minutes, to catch one fish).

	All Wild Trout	Oversize Wild Trout	Undersize Wild Trout
1991	47m	2h 52m	1h 5m
2006	29m	6h 52m	31m

Despite the average trout catch rate from the Tweed in 2006 being below that of 1991, the catch rate for the Teviot in 2006 is actually better than it was in 1991. Although it appears at first that the Teviot has improved as a trout fishery closer inspection shows that this change in catch rate is down to a change in angling methods. In 1991, 86% of the catch returns came from anglers that fished using dry fly or from anglers spinning. Both methods are very effective at catching adult trout but are less effective at catching juvenile trout (Table 3). In 2006, 84% of the catch returns came from anglers using wet fly or nymphs. Both methods are very effective at catching undersize trout but are less effective at catching adult trout (Table 3). As a result undersize trout were caught more often in 2006 than in 1991 (on average it takes 18 minutes less to catch an undersize trout in 2006 than it did in 1991), whereas oversize trout were caught more often in 1991 than in 2006 (on average it took 4 hours less to catch an oversize trout in 1991 than it did in 2006). The catch is better in 2006 because there are a lot more undersize trout than oversize trout in Kelso’s area, as with the Tweed generally, and the methods used in 2006 were more likely to catch them.

The full report that this summary is based on will soon be available on the TTGI website (www.ttgi.org.uk) or can be requested from the Tweed Foundation – 01896 848 271.

Appendix: *Information on standardized size limits, how trout sizes were determined, results left out of the report and the Angling Associations that fall into each of the separate areas of the Tweed listed in this newsletter.*

- To make all areas of the Tweed comparable, the size limit for the trout in this report was standardized. Trout and grayling measuring 10 inches (26cm) or over are classified as takeable or oversized, whereas trout and grayling under 10 inches (26cm) are classified as undersize. Although not all Tweed Angling Associations have a 10 inch size limit, the information on takeable trout and grayling sizes included in the log books allowed the trout and grayling in the 8 and 9 inch size limits, that are recorded as takeable, to be reclassified as undersize. The log books contain very little information on the sizes of the undersize trout caught so the standardized size limit could not be taken as 8 or 9 inches.
- Much of the information on trout and grayling sizes included in this report is based on anglers estimating trout and grayling sizes when filling in their log books. Only catch records which had recorded the lengths of all the takeable trout caught were used when calculating size classes of takeable trout. Using catch records that only recorded the largest trout would bias the results.
- The results from some Tweed tributaries were omitted from this report as information was only available from a small number of fishing trips and although the results are being used to monitor fish stocks they may be heavily influenced by individual angler ability, weather, etc, so are not used when comparing different areas of the Tweed catchment.
- The different areas listed in this newsletter contain angling catch records from the following Angling Associations: – **Whiteadder** – Berwick & District AA and Whiteadder AA; **Teviot** – Hawick AC, Jedforest AA and Kelso AA; **Lower Tweed** – Kelso AA and Coldstream & District AA; **Middle Tweed** – Melrose & District AA & St Boswells, Newtown & District AA; **Upper Tweed** – Gala AA and Peeblesshire TFA.
- The association water of the Gala AA falls into both the upper and lower Tweed. For the sake of this report it was classified as the upper Tweed.



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