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SECTION 4.4 GRAYLING FISHING IN THE TWEED CATCHMENT

The Grayling is not native to the Tweed: it was deliberately introduced to be a sporting fish for the Winter, when trout and salmon were out of season (see Section 3). It spread very rapidly and soon became considered a nuisance and for many years some angling club rules required that every Grayling caught be killed, to reduce their competition with trout. In the last ten years or so, however, Grayling have come to be considered as something worth fishing for, though few are eaten (despite the fact that they are very good to eat, especially the smaller ones). The information on the Grayling fishery comes from only one source at present - the annual competition held on the second Saturday in January by the Earlston Angling Club on the waters from Melrose down to Dryburgh – but in future data from the Grayling Catch Logbook scheme started as part of the TTGI will provide information on catches over the whole river. Additional Grayling fishing competitions have also been started as part of the TTGI in order to extend the sources of data on Grayling fishing and they, too, will yield data in the future.

A: The Earlston Grayling Competition : This started in 1994 as a small local competition but quickly became a large event attracting anglers from all over Britain and Ireland. Until 2000 all the fish were killed and the carcasses given to the Tweed Foundation for measurement, scale-taking, diet analyses etc. From 2001 to 2003, it was Catch and Release, with the fish being recorded in size groups of "Undersized"; "20-30cms"; "30-40cms" and "40+". From 2004, fish were individually measured before being released. There is therefore a gap of three years in the data on individual sizes of fish being caught. From 1994 to 2000, fishing methods were whatever an angler chose to use, but from 2001-2004 there were separate Fly and Bait competitions and from 2005, it became Fly Only.

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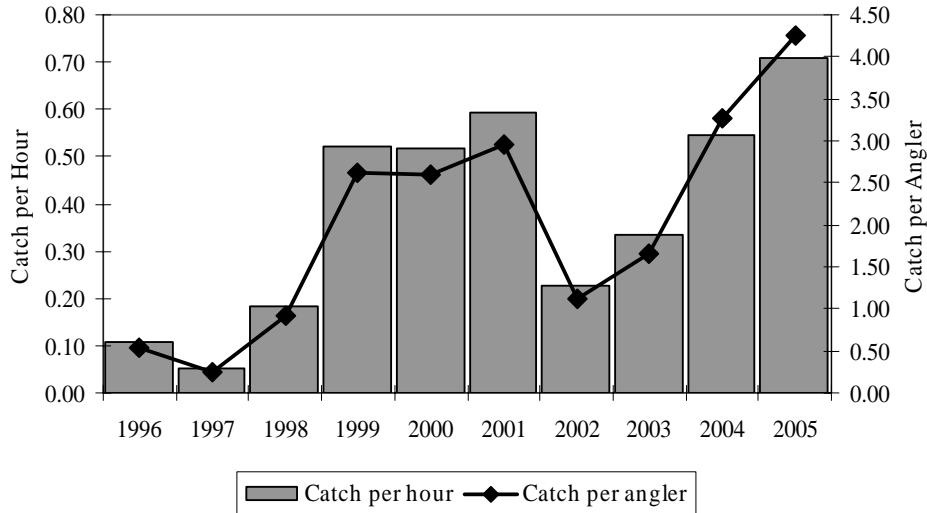
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Graph 4.4.1: Catch Rates per hour and per angler of oversized fish at the Earlston Grayling Competition (rate data not available for 1994 & 1995)



The impression given is of two troughs and two peaks in catches and if the sizes of fish being caught in these competitions are examined (Graph 4.4.2) it can be seen that the increased catch rates in 1999 & 2000 are related to the appearance of significant numbers of smaller and younger fish in those years, sizes which had been largely absent from catches before.

Graph 4.4.2 : This graph, on the following page, shows the size frequencies of catches in the Earlston competition 1994-2000

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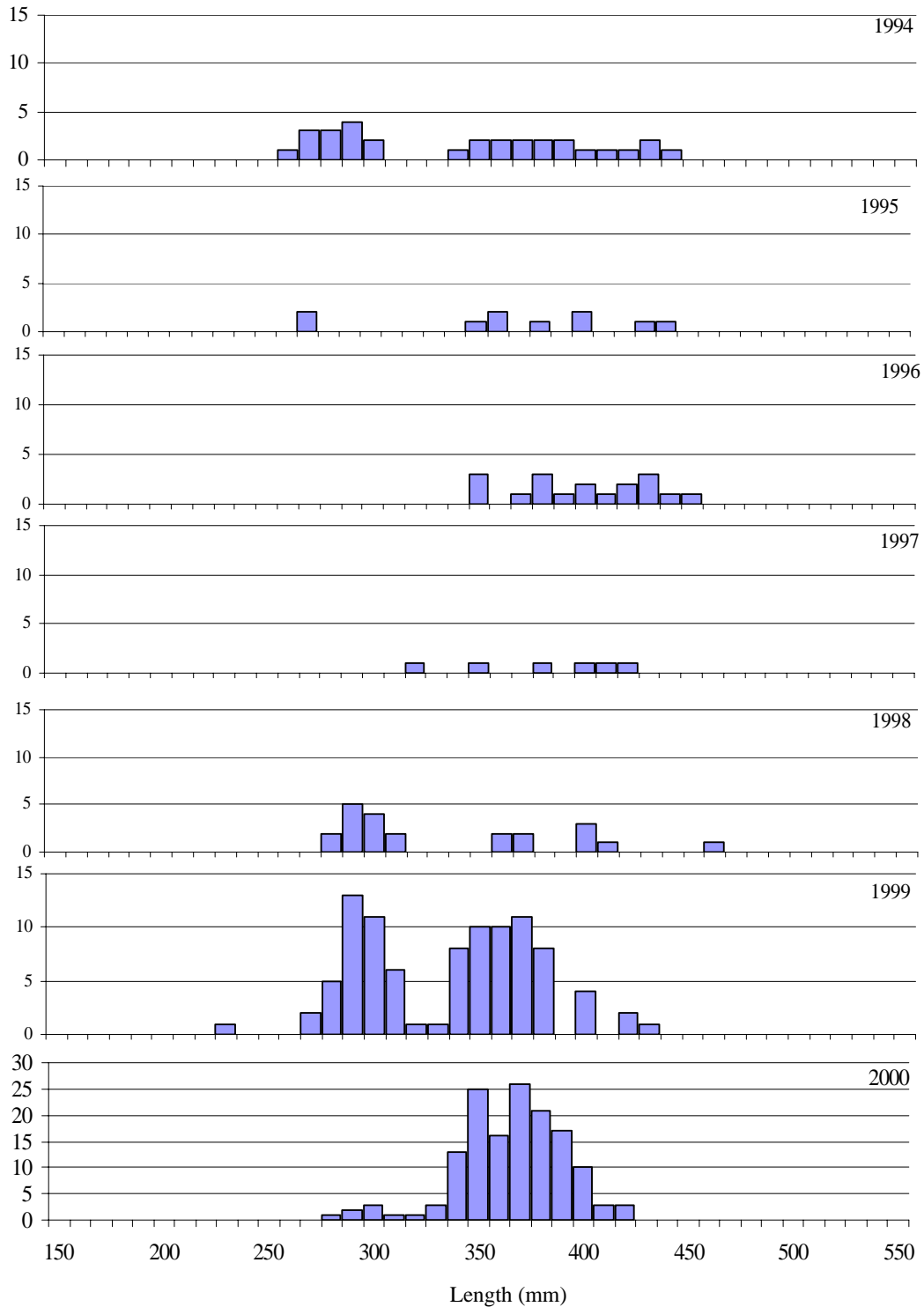
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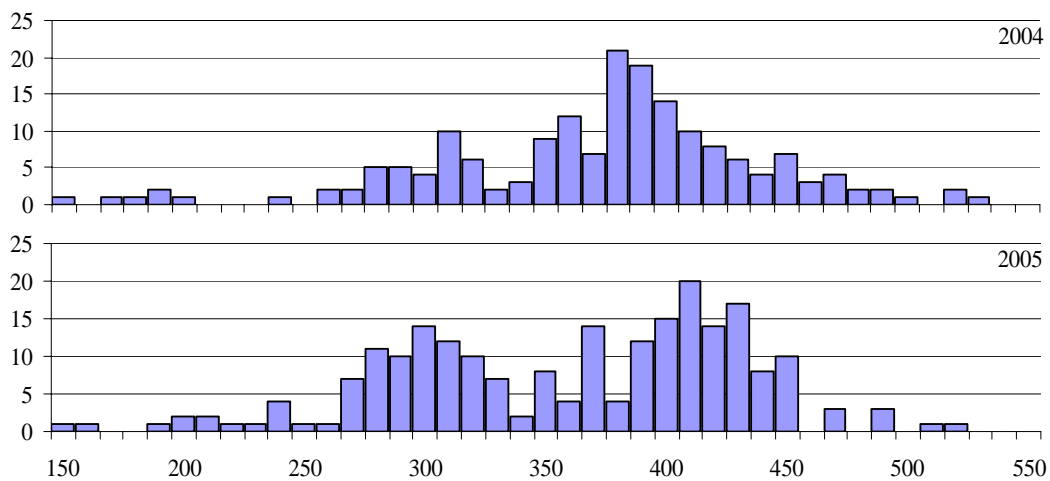


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This suggests some years of poor breeding success in which few young fish were available for catching followed by some better years. The higher catch rates of 2004 & 2005 are also linked to the appearance of more younger and smaller fish (Graph 4.4.3). Data on individual sizes is not available for the second "trough" in 2002 & 2003, when fish were being recorded in groups, but if the data from the years in which individual sizes were being recorded is put into these groups, a complete record can be made for 1994- 2005 and is shown in Table 4.4.1. This shows that the second period of low catch rates was also associated with fewer younger and smaller fish.

Graph 4.4.3 : Size frequencies of catches in the Earlston competition 2004-2005



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Table 4.4.1 : Grouped sizes of Grayling caught in the Earlston competition 1994-2005

	Undersized	20-30cms	30-40cms	40-50cms	50 cms +
1994	0	11	13	6	
1995	0	2	4	4	
1996	0	0	8	10	
1997	0	0	3	3	
1998	27	7	17	5	
1999	42	21	66	7	
2000	36	3	126	16	
2001	0	16	48	87	
2002	0	10	20	33	
2003	2	17	44	29	
2004	7	19	104	47	3
2005	7	63	121	82	2

This connection between catch rates and the presence or absence of significant numbers of smaller, younger, Grayling, shows the competition results are reflecting the underlying stocks of fish.

B: Exploitation rates of Grayling by rod fishing : With Grayling fishing growing in popularity it was necessary to find out what pressure the fishery might be putting on stocks, if any, and to try and gain some idea of the size of Grayling stocks. To do this Grayling were tagged, the fish being captured on specially arranged angling days or week-ends when good Grayling anglers were recruited to fish for them. Some were also tagged during main channel netting (see Appendix F4).

The results (Table 4.4.2) showed surprisingly high recapture rates and a number of multiple recaptures of the same fish, the record being one fish recaptured four times (making five captures, including the first one for tagging). One fish was also caught twice in the same day, by the same angler, in the same pool.

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Table 4.4.2 : Recaptures of tagged Grayling

Date Tagged	Area	Total Tagged	Individuals Recaptured	% Recapture	Dates of Recaptures		Multiple Recaptures
					First	Latest	
2004 Dec 11/12	Melrose / L Pavilion	22	10	45.5%	15th Jan 05	18th Feb 06	1 x 4, 1 x 2
2004 Dec 11/12	Tweedwood / Newstead	14	1	7.1%	11th Dec 05		
2005 Dec 10	Ancrum	4	0	0.0%			
2005 Dec 11	Melrose	10	3	30.0%	3rd Jan 06	28th Apr 06	
2005 Dec 17	Dryburgh / Mertoun	24	2	8.3%	8th April 06	24th June 06	
2006 Feb 25	Leader (Galadean)	4	3	75.0%	12th Nov 06	31st Jul 07	
2006 Apr 07	Leader (Drygrange)	3	1	33.3%	10th Mar 07	30th Mar 07	1 x 3
2006 Dec 10	Tweed (Melrose)	11	1	9.1%	3rd Feb 07		
2006 Dec 16	Leader (Drygrange)	5	3	60.0%	27th Dec 06	26th Jul 07	1 x 3*, 1 x 2
2006 Dec 16	Leader (Whitslaid) Tweed	8	1	12.5%	27th Dec 06		
2007 Feb 15	(Walkerburn)	5	1	20.0%	25th Jul 07	(2 netted 19th Sep 07)	
2007 Sep 19	Tweed (Walkerburn)	4	0	0.0%			
TOTALS		114	26	22.8%			

* The three times this fish was recaptured includes two recaptures in one day

What also became clear was the very limited movement of the fish after tagging. Almost all were recaptured in the same place that they had been tagged. Only one fish moved any distance : tagged at Dryburgh on the Tweed on the 5th December 2005, it was recaptured in a group of spawning Grayling at the well known spawning site at Drygrange on the Leader. This looks very much as if the fish had made a spawning migration up a tributary but it was the only example of this found. It does show, however, that spawning migration is possible for Grayling and that the populations in the tributaries can be linked to those in the main channel.

The picture seems to be of Grayling being very local in their movements, so that fish in popular fishing areas are fished over many times and are often caught more than once. Of the 22 caught and tagged at the Melrose / Lower

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Pavilion zone of the middle Tweed, 45% were recaptured by anglers, but of the 14 tagged in the section below, Tweedwood / Newstead, only one was recaptured (7%). The difference is explained by the fact that the former is angling club water and heavily fished while the latter is private water and is little fished by Grayling anglers.

If Grayling angling was not almost totally "Catch and Release", there would be significant pressure on stocks in heavily fished areas, given these high recapture rates. Many Grayling must also be caught more than once, giving an impression of bigger stocks than there actually are, particularly in smaller waters such as the Leader, where recaptures have been up to 75%.

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