



Lengths and Weights of Tweed Salmon

1. The graph below shows the relationship between length and weight for Tweed Salmon. As Salmon grow, their weight increases at a faster rate than their length as can be seen from the list below:

Weight lbs	Av Length cms	Weight increase	Length increase
5	61		
10	78	100%	27.9%
20	96	100%	23.1%
40	118	100%	22.9%

As weight doubles, length increases by less than a quarter, so while a 10lb fish is 78cms long, a 20lb fish which is double the weight is just under a quarter longer at 96cms. This means that the relationship between length and weight is not a straight line as it would be if it was a 1 to 1 ratio, it is curved as shown in the graph below:

2. The data for this graph is of two sorts:
- Under 112cms, the weights for each centimetre of length are averages of rod caught fish of that length. In all 6,541 rod caught Tweed Salmon, caught from 1991-95 (pre total "Catch & Release" for Spring Salmon) make up this set of data.
 - Fish over 112cms are much less common, so the weights for each centimetre of length over 105cms are of individual fish caught both by rods and nets. As fish vary in condition, weights vary more for individual fish than for averages.
3. The individual large fish over 112cms for which both length and weight are known are:-

cms	lbs	When & Where Caught	Girth (cms)
113	33	2003, Hornecliffe	
113	36.75	1963-09-10 Whitesands	
114	41	2005-09-13, Gardo nets	
114	40	1986-09-**, Scotch New Water	
114	34.75	1975-06-00 Yardford nets	
114	36	1985-08-13 North Bells nets	
115	36	1922-11-29, (Cast, I. L.)	
115	37.75	1976-07-17 Crabwater nets	
116	42	1908-11-19 Rutherford (Cast)	
119	47	1889-11-**, Birgham Dub	
119	42	1905-08-18 Yarrow nets	
122	41.5	1906-09-12 Huds Head nets	
122	44	1916-06-27 Low Bells nets	
122	37.5	1950-08-14 Toddles nets	
122	39	1984-08-31 Sandstell nets	
125	55	1889-11-**, Mertoun	
128	50.5	1888-08-27, Greathaugh nets	
129	56	The Lees	73.7
130	55	1913-11-07, The Lees	
130	57	1869-07-16 Goswick nets	
132	43	1920-04-22, Rutherford (cast)	
135	64	1886-10-27, Floors*	52.1
136	50.5	1893-07-27, Shoreside nets	
137	44	1889-11-** Wark	
136	65	1922.06.13 Tweed ?, on sale in fish	

* The bankside weight of this fish. The day after it was 57.5lbs,



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4. Other large fish have been recorded but either without weight or without length. If you know of any other fish over 112cms for which both length and weight are known, please contact the Tweed Foundation office.



TWEED SALMON LENGTH-WEIGHT RELATIONSHIP

Average weights for fish up to 112cms based on 6,541 pairs of lengths & weights of rod caught fish 1991-95 and on miscellaneous larger **rod & net** caught fish over 112cms

