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ANNUAL MEETING - JUNE 1972Gutted weight versus total length of
Atlantic salmon at West Greenland

by

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Data on the relationship between gutted weight and total length of Atlantic salmon taken at West Greenland are provided in response to a request from the Planning Group for the 1972 tagging experiment, contained in the report of its meeting of 18-20 January, 1972.

Material was collected in 1968(20-25 September) from salmon taken by shore nets and delivered to the fish factory at Godthaab, and in 1969 to 1971 during the course of drift net fishing by the Canadian research vessel A. I. Cameron. Dates of collections were in 1969 Sept. 6 - Oct. 2, in 1970 Sept. 3 - Oct. 4, and in 1971 Sept. 6 - 23. Most of the material is from the northern part of the West Greenland fishing area.

Fig. 1 attached gives the fitted curve to the combined material for 1968-1971, calculated from weighted average values of gutted weight at each cm total length.

West Greenland 1968-1971
Gutted weight (Kg.) vs. total length (cm.)

Total length (cm.)	Average Gutted weight (Kg.)	N	Range (Kg.)	Calculated weight (Kg.)
59	1.557	7	1.4 - 1.8	1.552
60	1.630	10	1.5 - 1.8	1.638
61	1.735	20	1.5 - 2.0	1.726
62	1.873	15	1.6 - 2.1	1.820
63	1.896	25	1.6 - 2.1	1.914
64	1.976	46	1.7 - 2.2	2.015
65	2.110	50	1.8 - 2.6	2.117
66	2.214	50	1.8 - 2.6	2.223
67	2.298	65	1.9 - 2.7	2.334
68	2.474	54	2.1 - 3.1	2.447
69	2.557	72	2.2 - 3.2	2.565
70	2.696	96	2.3 - 3.5	2.687
71	2.826	72	2.3 - 3.4	2.814
72	2.974	77	2.4 - 3.6	2.942
73	3.123	93	2.5 - 4.3	3.075
74	3.191	65	2.4 - 3.8	3.212
75	3.329	56	2.9 - 4.2	3.356
76	3.530	54	3.0 - 4.1	3.500
77	3.683	29	3.1 - 4.2	3.652
78	3.776	25	3.3 - 4.7	3.806
79	3.821	14	3.3 - 4.4	3.964
80	4.231	13	3.3 - 5.3	4.129
81	4.460	5	3.5 - 4.9	4.297
82	4.200	3	3.8 - 4.7	4.469
83	4.600	1	-	4.648
84	5.125	4	4.7 - 5.4	4.831
85	5.300	2	4.8 - 5.8	5.017
86	5.200	1	-	5.210
87	4.800	4	3.8 - 5.4	5.406
88	5.900	1	-	5.610
89	5.600	2	4.8 - 6.4	5.817
90	5.750	2	5.2 - 6.3	6.027
91	5.500	1	-	6.246
92	6.150	2	5.2 - 7.1	6.471
93	6.267	3	5.5 - 6.8	6.701
94	7.900	1	-	6.933

1040

Log-log Regression
Slope = 3.2154
Intercept = -5.5034

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Godthab, 1968

Gutted weight (Kg.) vs. total length (cm.)

Total length (cm.)	Average Gutted weight (Kg.)	N	Range (Kg.)	Calculated weight (Kg.)
59	1.560	5	1.4 - 1.8	1.574
60	1.671	7	1.5 - 1.8	1.661
61	1.763	16	1.5 - 2.0	1.749
62	1.911	9	1.6 - 2.1	1.842
63	1.923	13	1.6 - 2.1	1.937
64	2.005	20	1.8 - 2.2	2.037
65	2.150	26	1.9 - 2.5	2.140
66	2.200	22	1.9 - 2.4	2.246
67	2.324	25	2.0 - 2.6	2.357
68	2.527	26	2.1 - 3.1	2.469
69	2.559	29	2.2 - 3.1	2.586
70	2.764	25	2.3 - 3.4	2.708
71	2.839	18	2.5 - 3.4	2.833
72	2.962	13	2.7 - 3.3	2.961
73	3.125	20	2.7 - 3.7	3.093
74	3.133	12	2.6 - 3.7	3.229
75	3.143	7	2.9 - 3.4	3.372
76	3.409	11	3.1 - 3.6	3.516
77	4.000	4	3.8 - 4.2	3.665
78	3.550	2	3.5 - 3.6	3.819
79	3.700	1	-	3.975
80	4.300	1	-	4.138
81	4.700	3	4.6 - 4.9	4.305
82	4.700	1	-	4.475
84	5.050	2	4.7 - 5.4	4.832
85	5.800	1	-	5.016
86	5.200	1	-	5.206
87	5.300	2	5.2 - 5.4	5.400
92	6.150	2	5.2 - 7.1	6.451
93	6.800	1	-	6.676
94	7.900	1	-	6.904

326

Log-log regression

Slope = 3.1754

Intercept = -5.4263

A.T. Cameron Cruise 164, 1969

Gutted weight (Kg.) vs. total length (cm.)

Total length (cm.)	Average Gutted weight (Kg.)	N	Range (Kg.)	Calculated weight (Kg.)
60	1.500	1	-	1.664
62	1.867	3	1.8 - 2.0	1.858
63	2.100	1	-	1.960
64	1.967	3	1.9 - 2.0	2.067
65	2.129	7	1.9 - 2.6	2.178
66	2.382	11	2.1 - 2.6	2.293
67	2.371	17	2.1 - 2.7	2.413
68	2.486	7	2.1 - 2.9	2.536
69	2.619	16	2.3 - 3.2	2.663
70	2.727	30	2.4 - 3.5	2.796
71	2.912	17	2.5 - 3.2	2.933
72	3.165	23	2.7 - 3.6	3.073
73	3.324	25	2.9 - 4.3	3.219
74	3.416	19	3.2 - 3.7	3.370
75	3.585	13	3.2 - 4.2	3.527
76	3.714	21	3.3 - 4.1	3.686
77	3.940	5	3.6 - 4.2	3.853
78	4.043	7	3.8 - 4.7	4.024
79	3.917	6	3.4 - 4.4	4.200
80	4.200	6	3.3 - 5.3	4.382
81	4.700	1	-	4.568
84	5.000	1	-	5.164
88	5.900	1	-	6.039
89	6.400	1	-	6.273
93	6.500	1	-	7.274

243

Log-log regression

Slope = 3.3656

Intercept = -5.7634

A.T. Cameron Cruise 177, 1970

Gutted weight (Kg.) vs. total length (cm.)

Total length (cm.)	Average Gutted weight (Kg.)	N	Range (Kg.)	Calculated weight (Kg.)
61	1.700	1	-	1.770
62	1.700	1	-	1.856
63	1.900	2	-	1.942
64	1.900	5	1.7 - 2.0	2.032
65	2.100	4	1.9 - 2.5	2.124
66	2.267	3	2.2 - 2.3	2.220
67	2.288	8	2.1 - 2.5	2.319
68	2.467	9	2.2 - 2.7	2.419
69	2.529	7	2.2 - 2.9	2.523
70	2.615	13	2.4 - 2.9	2.629
71	2.836	11	2.3 - 3.4	2.740
72	2.750	14	2.6 - 2.9	2.851
73	2.978	23	2.6 - 3.4	2.967
74	3.108	13	2.5 - 3.5	3.085
75	3.222	18	2.9 - 3.8	3.207
76	3.470	10	3.1 - 3.7	3.332
77	3.475	8	3.1 - 4.0	3.459
78	3.763	8	3.3 - 4.4	3.590
79	3.720	5	3.3 - 4.0	3.724
80	4.100	3	3.8 - 4.5	3.862
81	3.500	1	-	4.002
82	3.800	1	-	4.146
85	4.800	1	-	4.596
87	4.300	2	3.8 - 4.8	4.915
89	4.800	1	-	5.248
90	5.200	1	-	5.418
91	5.500	1	-	5.593
93	5.500	1	-	5.955

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Log-log regression

Slope = 2.8764

Intercept = -4.8873

A.T. Cameron Cruise 190, 1971

Gutted weight (Kg.) vs. total length (cm.)

Total length (cm.)	Average Gutted weight (Kg.)	N	Range (Kg.)	Calculated weight (Kg.)
59	1.550	2	1.5 - 1.6	1.479
60	1.550	2	1.5 - 1.6	1.564
61	1.600	3	1.5 - 1.7	1.652
62	1.800	2	1.7 - 1.9	1.745
63	1.833	9	1.6 - 2.0	1.840
64	1.967	18	1.7 - 2.2	1.940
65	2.023	13	1.8 - 2.2	2.043
66	2.093	14	1.8 - 2.3	2.149
67	2.180	15	1.9 - 2.5	2.260
68	2.358	12	2.2 - 2.6	2.374
69	2.515	20	2.3 - 2.8	2.492
70	2.639	28	2.4 - 3.0	2.616
71	2.758	26	2.5 - 3.2	2.744
72	2.933	27	2.4 - 3.4	2.873
73	3.052	25	2.5 - 3.6	3.008
74	3.071	21	2.4 - 3.8	3.148
75	3.322	18	3.0 - 3.8	3.294
76	3.367	12	3.0 - 3.8	3.442
77	3.608	12	3.2 - 3.9	3.596
78	3.613	8	3.3 - 3.9	3.753
79	3.850	2	3.8 - 3.9	3.915
80	4.400	3	4.3 - 4.6	4.085
82	4.100	1	-	4.435
83	4.600	1	-	4.618
84	5.400	1	-	4.807
90	6.300	1	-	6.049

296

Log-log regression

Slope = 3.3369

Intercept = -5.7393

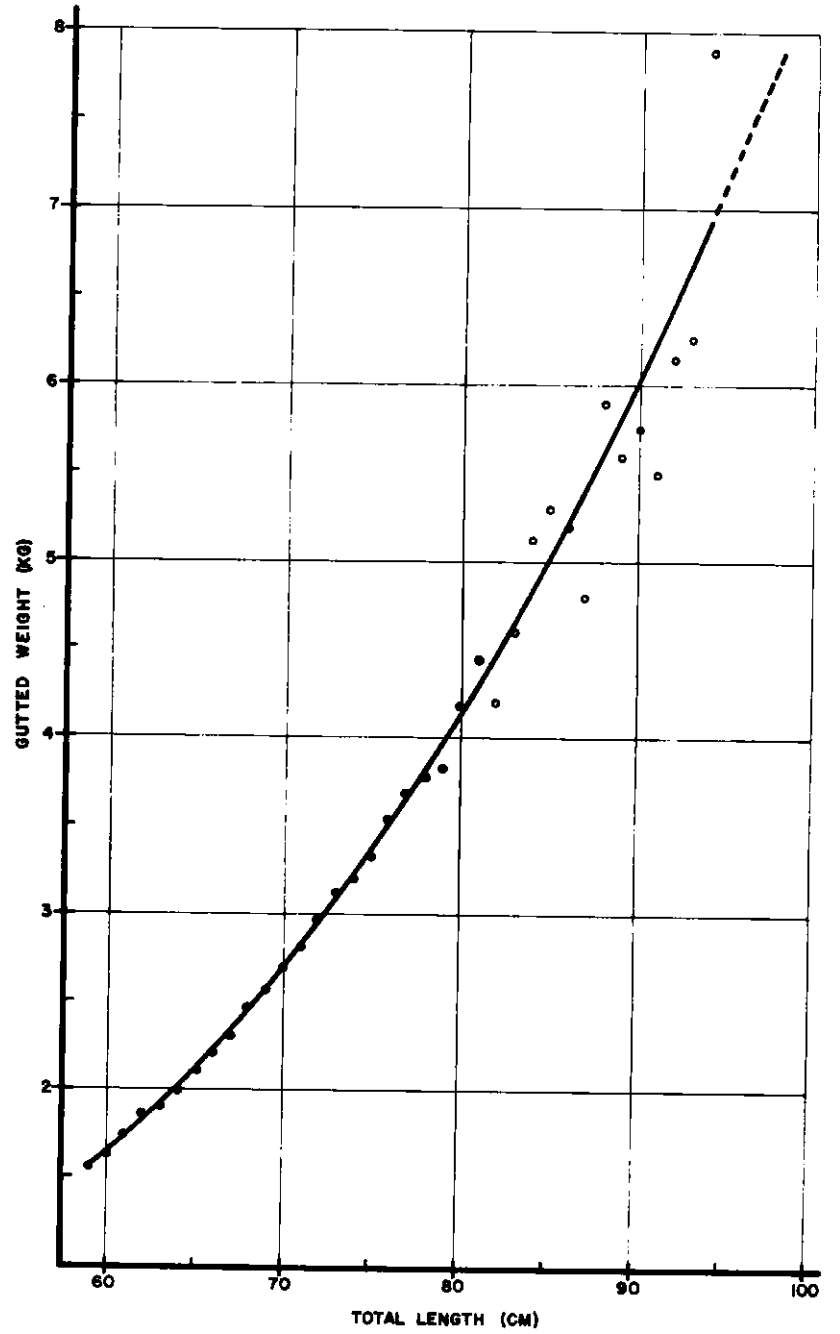


Figure 1. Relationship of gutted weight to total length for Atlantic salmon at West Greenland, 1968-1971. Open circles represent average weights based on less than 5 fish.