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STATISTICS ON LANDINGS OF ATLANTIC SALMON IN GREENLAND, 1967.

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The material used for this paper is based partly on information from the Royal Greenland Trade Department (K.G.H.) and from Godthåb Fiskeindustri (G.F.I.) and partly on the tagging experiment in Godthåb 1967.

The number of salmon caught is estimated from the measurements of length and weight carried out on five different places in West Greenland, combined with the Greenlanders' landings of salmon, which are grouped by weight. All measurements apply to round fresh fish and forked length. The conversion factor used for gutted fish with head on is 1.11.

The total 1967 landing of salmon in Subarea 1 per division and month is shown in Table I. The total catch landed in Greenland was in 1967 1283 metric tons against 1250 metric tons in 1966, corresponding to a 2.6% increase.

Table I. Total landings of salmon, 1967. Round fresh fish, metric tons.

Div.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1A	-	0.1	1.4	0.8	-	2.3
1B	0.2	17.7	121.8	60.9	2.4	203.0
1C	0.8	70.4	251.0	59.4	1.1	382.7
1D	25.7	119.0	69.2	17.2	1.6	232.7
1E	78.5	188.5	86.6	11.2	-	336.8
1F	59.9	52.9	12.3	2.2	-	125.3
Total	163.1	448.6	514.3	151.7	5.1	1282.8

All salmon landed in Greenland were caught by gill-nets.

The total catch in Subarea 1 was in 1967 1588 metric tons, and break down by gears.

Gill-nets:	1283 metric tons		
Drift-nets:			
Danish vessels	85	"	"
Norwegian and Faroese vessels	220	"	"
Total	1588 metric tons		

The Greenlanders' landing in Divisions 1A-1F distributed in size-groups as used commercially by K.G.H. is shown in Table II.

For comparison the total catch in each size-group from 1966 is shown in the same table.

Table II. Greenlanders' landings in Divisions 1A-1F in metric tons per size-group used commercially of K.G.H.

Div.	below 3.3 kg	3.3/5.6 kg	5.6/ kg	Total
1A	-	1.0	1.3	2.3
1B	29.6	124.9	48.5	203.0
1C	111.2	232.9	38.6	382.7
1D	99.5	125.0	82.0	232.7
1E	205.8	120.6	10.4	336.8
1F	45.0	67.4	12.9	125.3
Total 1967	491.1	671.7	119.9	1282.8
" 1966	640.5	502.1	107.1	1249.7

Table III gives the number of salmon landed in Greenland per 3 cm group and per division. The same table shows the number of salmon caught in 1966 in each division.

The length-weight relationship Fig.1 is estimated from the logarithmic formula,

$$w = a L^n$$

$$\log w = \log a + n \log L$$

where w = weight, L = Length, a is a constant, and n an exponent. Values for a and n are determined empirically. The figure is estimated from 2245 length-weight measurements plus 434 measurements of length. The measurements have been taken at five different places in West Greenland - Sydprøven Div. 1F, Frederikshåb Div. 1E, Godthåb Div 1D, Holsteinsborg Div. 1B, and Prøven Div. 1A - at four of the places over a period of two months. The length-weight relationship is the same in 1967 as in 1966.

A comparison between the landings in 1967 and those in 1966 (Table II and III) shows that the mean-weight was higher in 1967 than in 1966, 3.5 kg against 3.2 kg. The difference in weight corresponds closely to a difference in mean-length, 65 cm against 63 cm, because the length-weight relationship was the same in 1967 as in 1966.

The weight and length composition is different from division to division, Table IV and Fig. 2. Table IV gives the size composition in 3 cm groups in percent per division for 1966 and 1967, and Fig. 2 shows the size composition in weight groups.

Table IV and Fig. 2 show that the mean-size of salmon is generally decreasing from 1A to 1E. In the southernmost Division 1F there is again - in comparison with Divs. 1E and 1D - a higher percentage of bigger salmon.

It is very difficult to explain the change in size distribution between 1E and 1F, but maybe explained by the fact that the distribution of recaptures of salmon tagged in North America and Europe has a tendency of a higher frequency of "European salmon" in Div. 1F than in the more northern divisions.

Table III. Length distribution of salmon (3 cm groups) from the Greenlanders' landings in Subarea 1.

cm \ Div.	1A	1B	1C	1D	1E	1F	Total
51-3	-	91	342	306	633	138	1510
54-6		599	2252	2015	4170	912	9948
57-9	1	2110	7930	7096	14683	3213	35033
60-2	2	4960	18650	16686	34530	7555	82383
63-5	70	11182	26128	17773	27498	8778	91429
66-8	103	12444	23200	12452	12015	6722	66936
69-71	66	8023	14954	8029	7747	4333	43152
72-4	25	3044	5674	3046	2939	1644	16372
75-7	32	1454	1509	521	563	478	4557
78-80	37	1436	1138	240	310	381	3542
81-3	42	1634	1294	273	351	433	4027
84-6	29	1138	903	191	246	302	2809
87-9	14	544	432	91	117	145	1343
90-2	17	643	510	108	139	171	1588
93-	3	99	79	17	21	26	245
Total 1967	441	49401	104995	68844	105962	35231	364874
" 1966	4411	59194	100628	68573	118473	38110	389389

Table IV. The size composition of salmon (3 cm groups) in percent per division for 1966 and 1967.

Div. cm	1A		1B		1C		1D		1E		1F	
	1966	1967	1966	1967	1966	1967	1966	1967	1966	1967	1966	1967
51-3				0.2	0.7	0.3	0.9	0.4	1.0	0.6	0.5	0.4
54-6	0.3		0.4	1.2	3.6	2.1	4.8	2.9	5.2	3.9	2.8	2.6
57-9	2.2	0.2	2.6	4.3	11.2	7.6	14.8	10.3	16.1	13.9	8.6	9.1
60-2	7.9	0.5	9.3	10.0	26.5	17.8	35.0	24.2	38.0	32.6	20.3	21.4
63-5	12.3	15.9	14.5	22.6	12.8	24.9	16.7	25.8	18.2	25.9	9.7	24.9
66-8	33.6	23.4	38.5	25.2	26.9	22.1	16.9	18.1	12.8	11.3	32.2	19.1
69-71	14.4	15.0	16.4	16.2	11.4	14.2	7.2	11.7	5.5	7.3	13.7	12.3
72-4	9.9	5.7	7.2	6.2	3.0	5.4	1.8	4.4	1.4	2.8	3.6	4.7
75-7	4.9	7.3	3.3	2.9	1.2	1.4	0.7	0.8	0.6	0.5	1.8	1.4
78-80	3.7	8.4	2.3	2.9	0.6	1.1	0.2	0.3	0.3	0.3	1.4	1.1
81-3	3.9	9.5	2.4	3.3	1.5	1.2	0.6	0.4	0.7	0.3	3.3	1.2
84-6	4.0	6.6	1.9	2.3	0.6	0.9	0.2	0.3	0.3	0.2	3.3	0.9
87-9	2.7	3.2	1.2	1.1	0.2	0.4	0.1	0.1	0.1	0.1	0.5	0.4
90-2	0.3	3.9	0.1	1.3	0.1	0.5	0.04	0.2	0.05	0.1	0.2	0.5
93-		0.7		0.2		0.08		0.02		0.02		0.7

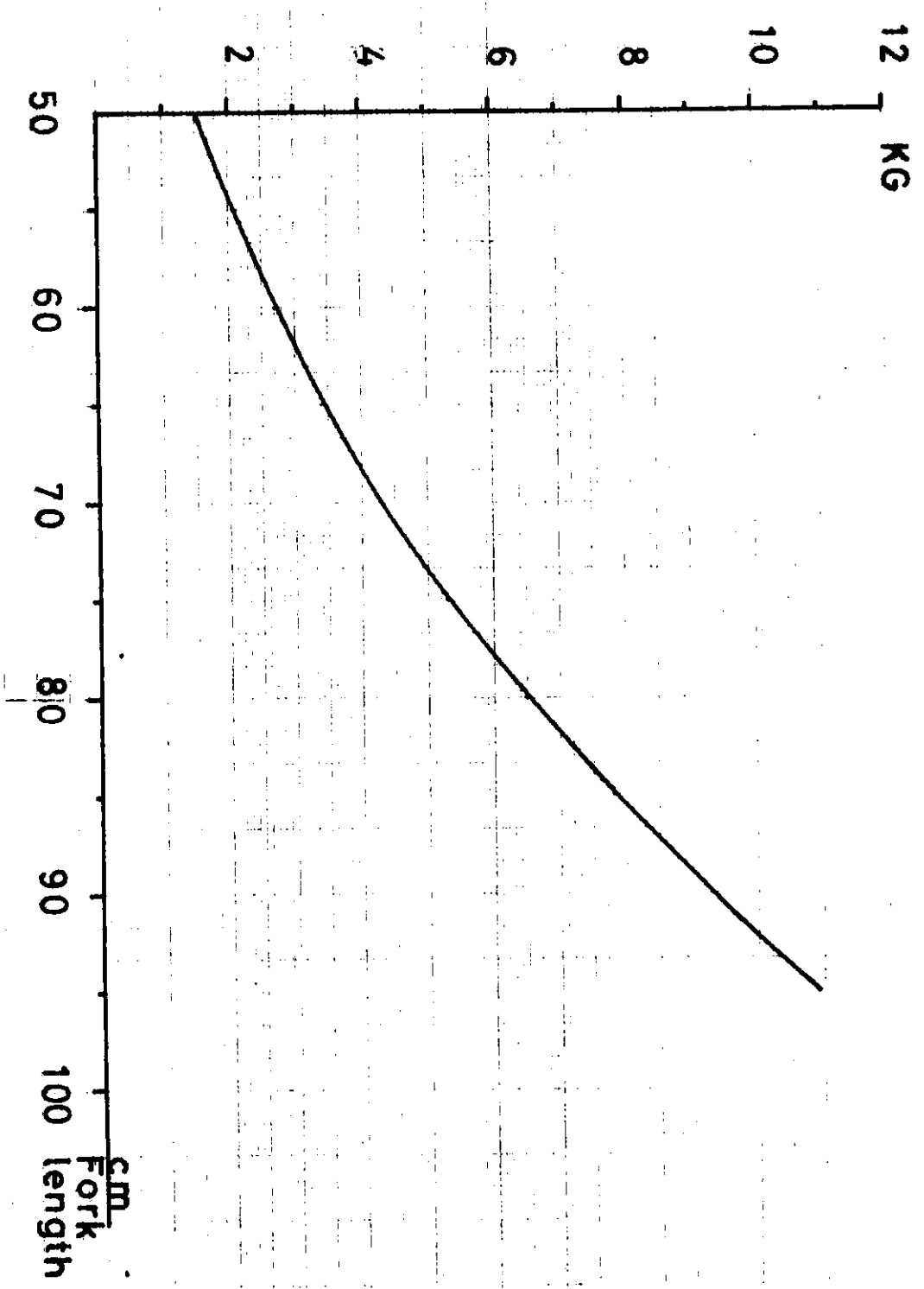


Fig. 1. The length-weight relationship of the salmon caught in inshore waters in Greenland, 1967 - Log a = 5.0133, n = 3.06

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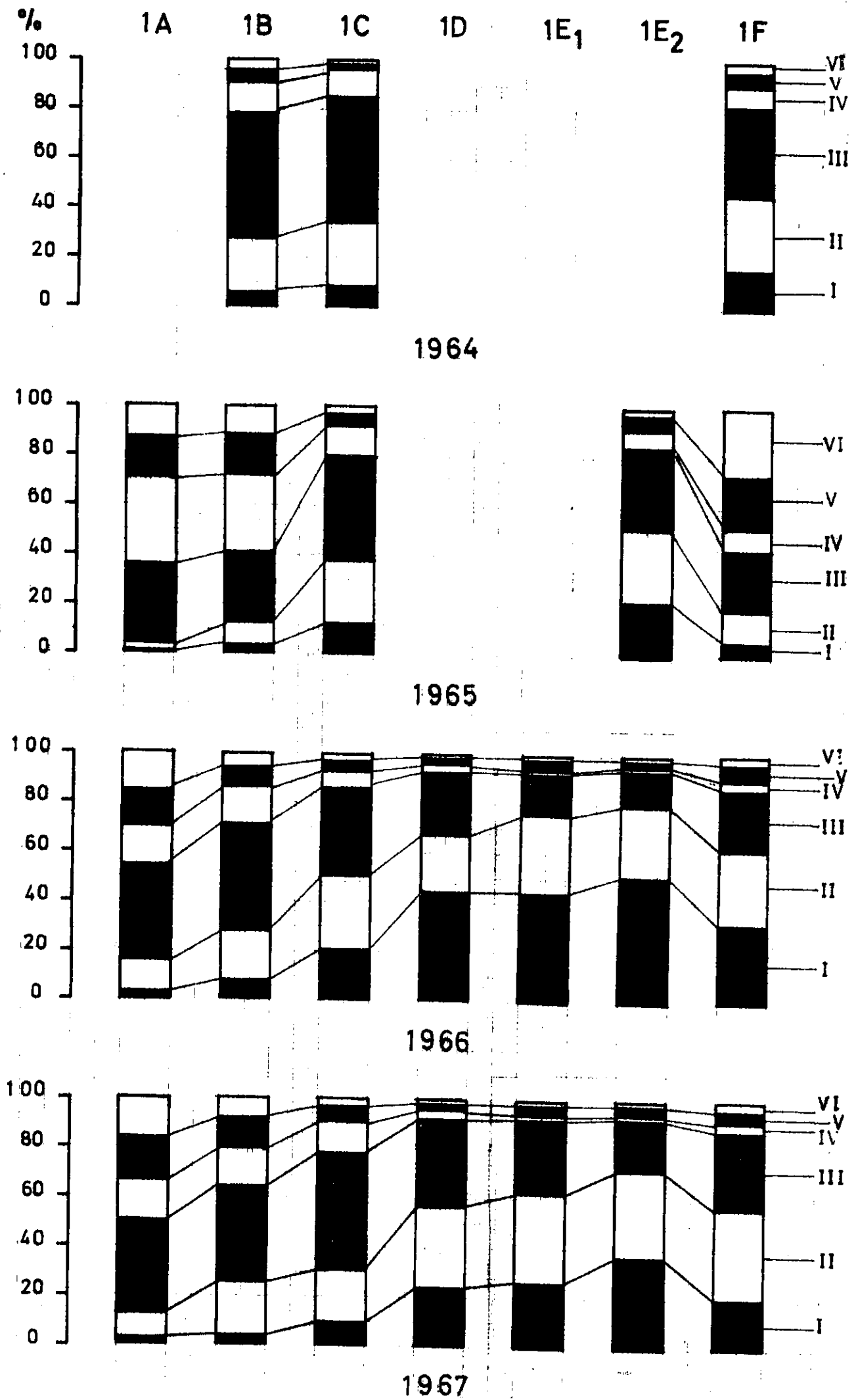


Fig. 2. The size composition of frozen salmon per year in cumulative figures.
1E₁: Frederikshåb - 1E₂: Arsuk - I: below/2.8 kg, II: 2.8/3.3 kg,
III: 3.3/4.4 kg, IV: 4.4/5.6 kg, V: 5.6/7.8 kg, and VI: 7.8/ kg.

