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Mean length of age groups in northern and
southern divisions of Subarea 1 (West Greenland).

by

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In the Danish Research Report, 1971 (Redbook 1972, Part II, p.26) it was mentioned that cod in the southern part of Subarea 1 seem to have a slower growth rate than cod in the northern part, and the same also seems to be evident in 1972. In order to see if this difference in growth may be a result of the environmental conditions in the most recent years, since 1969, (more cold water and ice from East Greenland to southwestern Greenland), a material of length measurements of various age groups in different divisions, back to 1965, is here put together in Table 1 for comparison. Age groups represented by less than 30 individuals in a measurement sample are excluded, and comparisons are only made between offshore samples mutually or inshore samples mutually. Measurements from 1972 are not in the table because offshore samples from northern divisions had to be compared with inshore samples from southern divisions, (see paper by Horsted, Res.Doc. 1973, Ann.Meeting).

A look at the table will show that even if the figures are not absolutely unambiguous some tendencies are outstanding. A comparison of the southern divisions, 1E and 1F, with the northern, especially 1C and 1D, does not show any remarkable differences in mean lengths during the years 1965-1968, but in the third quarter of 1969 there seems to have been a slower growth in the southern divisions, and this tendency is outstanding in most samples from 1970 and 1971, apart from samples in the second quarter of 1970.

Besides this tendency there also seems to be a general tendency to a slower growth in Div.1B than in 1C and 1D.

References:

- Horsted, Sv.Aa. and E.Smidt, 1972. Danish Research Report, 1971. Int.Comm.NW Atl Fish. Redbook 1972/II: 19-28.
- Horsted, Sv.Aa., 1973. Recent information on landings, age-composition and recruitment of Subarea 1 cod, and estimates of yield in 1972-74. ICNAF Res. Doc. June 1973.

Table 1. Mean lengths of cod age groups in Divisions 1B-1F in different years and quarters of years since 1965. Offshore and inshore zone separated. 1 = mean total length (cm below), 2 = standard deviation, 3 = number of individuals in sample.

Year Quarter Zone	1965			1966			1966			1968			1969		
	1B	1C	1D	1E	1B	1C	1D	1E	1B	1C	1D	1E	1C+1D	1D	1E
Age group															
III															
	1	51.6	51.5	49.4	51.4										
	2	3.16	3.13	4.71	3.78										
	3	106	144	183	117										
IV															
	1	57.9	58.6	60.3	59.9	57.4	58.5	57.2	57.6	56.5	57.9	57.1	54.7	53.2	
	2	4.70	4.94	5.62	4.15	3.69	4.71	5.25	4.95	4.77	5.38	4.15	4.74	4.83	
	3	546	268	204	88	1158	965	356	2785	204	65	1005	1655	1856	
V															
	1	66.4		68.4	67.3	64.3	65.4	65.0	67.9	65.4	66.6	63.1	61.2	60.6	68.0
	2	5.52		6.16	5.04	4.93	5.49	7.93	5.30	5.22	5.02	4.79	5.13	6.27	5.05
	3	47		55	73	864	592	258	1514	282	39	564	816	1773	320
VI															
	1	74.2	72.7	69.0	67.1	72.6	75.9					67.7	69.7	70.1	73.7
	2	5.73	5.55	4.66	7.02	3.64	5.30					4.33	5.32	7.01	4.96
	3	52	100	133	57	60	364					185	563	1976	217
VII															
	1	77.9	79.7	79.0	80.2	77.0	79.8					62.7	73.6	75.8	78.0
	2	5.36	5.70	5.75	7.59	6.78	5.71					9.55	5.10	7.78	6.37
	3	32	167	184	39	74	477					32	205	92	239
VIII															
	1	76.5	83.2	83.7	82.2										84.1
	2	5.70	5.63	6.18	7.00										5.35
	3	108	45	67	626										76
IX															
	1														80.1
	2														78
	3														57
X															

Table 1 cont

Year	1970			1970			1970			1971			1971			
	LC+LD	LD	IE	LC	LD	IE	LB	LC	LD	LF	LC	LD	LF	LC	LD	LF
Quarter	II offshore			III offshore			III inshore			II offshore			III offshore			
Zone	offshore			offshore			inshore			offshore			offshore			
Div.	LC+LD	LD	IE	LC	LD	IE	LB	LC	LD	LF	LC	LD	LF	LC	LD	LF
Age group																
1																
2																
3																
III																
1	47.1	42.9		49.8	51.0		45.7	48.8		47.9	41.5					
2	2.60	5.61		4.22	5.46		3.14	4.34		3.36	4.16					
3	76	138		35	44		388	142		140	618					
IV																
1	55.8	58.5	56.5	60.3	59.0	57.5	55.6	61.5		51.0				58.5	52.3	48.4
2	4.22	4.72	6.39	5.96	4.95	4.86	5.16	5.05		5.90				5.23	4.46	2.29
3	404	170	72	56	154	91	460	133		50				178	44	47
V																
1	58.8	56.5	59.0		65.1	58.2	62.7	68.8	58.2	55.5	68.9	66.5	61.8			
2	5.37	7.60	5.69		5.28	4.95	7.05	6.30	4.96	4.55	4.58	5.94	5.28			
3	217	87	114		84	127	72	34	35	243	547	271	47			
VI																
1	66.0	63.4	66.8	73.0	71.7	65.5	73.0	74.9	63.8	61.1	70.3	67.0	61.8			
2	5.73	7.16	7.06	6.02	6.77	7.16	6.02	6.04	5.22	5.18	7.22	5.92	4.96			
3	198	175	306	107	250	315	197	49	213	980	60	110	522			
VII																
1	70.0	71.8			77.3	72.7	78.9		66.8	63.8	74.4	72.6	66.6			
2	9.17	7.15			7.47	6.23	6.72		5.13	4.99	5.87	5.79	5.15			
3	56	110			75	103	37		48	230	71	141	750			
VIII																
1	80.8	80.1			83.2	79.7	82.0			69.2		78.6	70.1			
2	7.28	6.67			6.62	7.50	6.76			5.65		7.19	5.61			
3	102	52			59	46	122			72		38	137			
IX																
1	87.4	81.8										84.4	83.2	74.2		
2	7.24	7.75										4.65	8.42	5.07		
3	135	34										39	48	35		
X																