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REDFISH OTOLITH EXCHANGE PROGRAM

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Following a recommendation from the Eleventh Annual Meeting of ICNAF in June, 1961, a Redfish Otolith Exchange Program was carried out during 1961-1963. Eight samples of redfish otoliths each containing from 10 to 20 otoliths and made up of commercial-sized fish and/or smaller fish were exchanged among interested scientists in two member countries. Four of the samples were from Subarea 1, one from Subarea 2, two from Subarea 3, and one from Subarea 4. One of the samples was taken in 1956, and one in 1957, one in 1958 and five were taken in 1959.

The results of these calculations show that of the seventy (70) commercial-size otoliths aged, there were only seven (7) occasions in which there was agreement; of the forty (40) small-size otoliths aged, there were only eight (8) occasions in which there was agreement.

Since there have been only two readings for the estimated age of each sample no averages or deviations are calculable. The tables which follow summarize a comparison of these readings.

Sample: ADate Collected: October 20, 1959Location: Gulf of St. Lawrence

48°-56'-30"N. 63°-50'-00"W (Subarea 4)

Depth: 140-144 fathomsCollected By: Biological Station,  
St. John's, NewfoundlandGear: Otter Trawler

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) (Sandeman)	Denmark (G) (Horsted)	
A - 1	32	♂	15	12-13?	Canada: Selected from North American mentella type fish. Selected only on basis of length and sex from random sample of research vessel catch.
2	34	♂	17	12?	
3	35	♂	45	14??	
4	36	♂	44	16??	
5	37	♂	45	13?	
6	39	♂	44	16?	
7	40	♂	45	16?	
8	40	♂	50	14??	
9	40	♂	46	19??	
10	40	♂	45	19??	
As- 1	13	♂	3	3 or 5	
2	13	♂	4	6-8	
3	13	♂	4	6+	
4	15	♂	4	6	
5	15	♂	4	6?	
6	10	♂	2	4	
7	12	♂	3	6	
8	12	♂	2	6	
9	13	♂	3	6-7	
10	14	♂	3	6	

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FISH OTOLITH EXCHANGE PROGRAM (continued)

Sample: B Depth: 124-144 fathoms  
Date Collected: September 6, 1957 Collected By: Biological Station,  
Location: Hermitage Bay St. John's, Newfoundland  
(S.E.Coast of Newfoundland) (Sub-area 3) Gear: Otter Trawler

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Horsted	
B - 1	31	♀	11	13(12-14)	Canada: Selected from North American mentella-type fish. Selected only on basis of length and sex from a stratified sample of research vessel catches.
2	31	♀	13	12	
3	31	♀	14	11-12	
4	36	♀	65	19?	
5	36	♀	31	14?	
6	30	♀	11	12? 13?	
7	31	♀	11	12	
8	32	♀	13	16?	
9	36	♀	30	17?	
10	36	♀	33	21????	
Bs- 1	13	♀	4	6	
2	14	♀	4	5(6)	
3	14	♀	4	6	
4	19	♀	6	7	
5	19	♀	6	7(8)	
6	13	♀	4	6+	
7	14	♀	4	5-6	
8	15	♀	6	6-7	
9	19	♀	7	7?	
10	19	♀	6	6+	

Sample: C Depth: 300-304 fathoms  
Date Collected: August 6, 1958 Collected By: Biological Station,  
Location: Hamilton Inlet Bank St. John's, Newfoundland  
54°-52'-00"N; 53°-46'-00"W (Sub-area 2) Gear: Otter Trawl

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Horsted	
C - 1	35	♀	15	14-15	Canada: Selected from North American mentella-type fish. Selected on basis of length and sex from a random sample of a research vessel catch.
2	35	♀	16	18(15-18)	
3	35	♀	15	15?	
4	36	♀	15	15	
5	37	♀	16	15	
6	34	♀	14	15-16	
7	38	♀	16	18	
8	38	♀	16	16?	
9	40	♀	16	18-19	
10	40	♀	16	16-19	

Sample: D Depth: 150 fathoms  
Date Collected: June 10, 1959 Collected By: Biological Station,  
Location: S. E. Grand Bank St. John's, Newfoundland  
43°-47'N; 48°-56'W (Sub-area 3) Gear: Otter Trawl

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Horsted	
D - 1	31	♀	12	13-16	Canada: Selected from North American mentella-type red-fish. Selected on basis of length and sex only from a random sample of a research vessel catch.
2	32	♀	11	15	
3	33	♀	34	-?	
4	34	♀	48	20? (19?)	
5	35	♀	35	20?	
6	31	♀	21	16 or 21	
7	35	♀	41	-?	
8	37	♀	22	13-15	
9	39	♀	38	-?	
10	40	♀	48	21-24	

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REDFISH OTOLITH EXCHANGE PROGRAM (continued)

Sample: E

Date Collected: September 17, 1959

Location: "Immanuel" St. 607  
Kangerdluarscrujuk, Julianehåb-district  
60°36'N; 45°52'W (Sub-area 1)

Depth:

Collected By: Sv. Aa. Horsted

Gear: Hand line and long line

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Hansen & Horsted	
E - 1	60	♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂	25	26?	Denmark(G): All otoliths read on the broken surface. Interpretation very difficult.
2	58		-	24?	
3	58		23	22?	
4	59		26	28	
5	60		26	30	
6	59		-	25	
7	51		20	21?	
8	50		25	24-25	
9	50		15	21	
10	49		23	26	

Sample: F

Date Collected: April 14-15, 1959

Location: "Tornaq" St. 1542  
Godthåb-fjord. 64°14'N; 50°57'W (Sub-area 1)

Depth:

Collected By: J. Kreutzmann

Gear: Hand line

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Hansen & Horsted	
F - 1	51	♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂	37	25??	Denmark(G): All otoliths read on the broken surface.
2	41		13	16-17	
3	43		20	16	
4	49		25	25	
5	42		17	15-18	
6	42		14	18	
7	41		20	17	
8	44		24	18	
9	47		21	18	
10	36		14	17	

Sample: G

Date Collected: September 29, 1956

Location: "Immanuel" St. 484,  
Tunugdliarfik, Julianehaab-district  
60°56'N; 45°47'W (Sub-area 1)

Depth:

Collected By: Sv. Aa. Horsted

Gear: Shrimp Trawl

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Hansen & Horsted	
G - 1	34	♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂ ♂	11	12	Denmark(G): All otoliths were read on the broken, polished surface.
2	35		12	11?	
3	35		14	12-13	
4	35		13	14	
5	36		21	13-15	
6	37		20	16-17	
7	38		16	14?	
8	38		16	13-16	
9	38		18	?	
10	60		12	24	

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REDFISH OTOLITH EXCHANGE PROGRAM (continued)

Sample: G (cont'd)

Date Collected: September 29, 1956

Location: "Immanuel" St. 484,  
Tunugdliarfik, Julianehaab-district  
60°56'N; 45°47'W (Sub-area 1)

Depth:

Collected By: Sv. Aa. Horsted

Gear: Shrimp Trawl

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Hansen & Horsted	
Gs- 1	9	-	1	3	
2	10	-	2	3	
3	11	-	-	3-4	
4	12	-	2	5	
5	15	-	3	4	
6	15	♀?	3	6?	
7	17	-	4	5-6	
8	25	♂	10	7?	
9	25	♂	12	10?	
10	29	♀	10	7	

Sample: H

Date Collected: November 11, 1959

Location: "Adolf Jensen" St. 3027

Godthaab-fjord

64°24'N; 50°23'W (Sub-area 1)

Depth:

Collected By: M/K "Adolf Jensen"

Gear:

Serial No.	Length (cm)	Sex	Estimated Age		Remarks
			Canada (N) Sandeman	Denmark (G) Hansen & Horsted	
Hs- 1	11.5	-	5	3+	Denmark (G): All otoliths were read on the broken surface.
2	9.0	-	1	2-3	
3	8.5	-	1	1+	
4	21.0	-	8	5-6	
5	18.5	-	6	6?	
6	10.0	-	1	2+	
7	15.5	-	7	4	
8	8.5	-	1	1+	
9	12.5	-	3	3	
10	7.0	-	1	1+	