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THE MATERIALS ON DISTRIBUTION OF REDFISH (SEBASTES MENTELLA)
IN THE NORTHWEST ATLANTIC(Polar Research Institute of Marine Fisheries
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In accordance with the recommendations proposed at the XI and XII ICNAF Annual Meetings to find out some regularity in distribution of age-length groups of redfish by depths, 1962, Polar Research Institute of Marine Fisheries and Oceanography fulfilled series of special trawlings in some conventional areas.

These trawlings were carried out by the research vessels of "Kremlin" and "Pioneer" types. A total of 40 special hauls were made at certain depths (200-300, 300-400, 400-500, 500-600 m).

Parallel with mass measurements of redfish, some samples for age determination and these ones for determination of food composition were collected in some areas investigated. The whole material was analysed for males and females separately. The data on fishing area, time and catches are presented in Table I. The length composition of redfish captured at certain depths is shown in diagrams II, III and IV.

The materials obtained by the hauls were classified by months and subareas. As it is evident from the results of the mass measurements, the length of redfish males and females varies synchronously with different depths in all areas investigated, i.e. decrease in males length resulted in lower length of females.

In many subareas (2J-July, 3M-August, 3L-October, 3O-November, 4V-November) decrease of redfish length by depths was observed.

Changes in redfish length are more evident in the places where relatively good quantities of materials were collected. For instance, in July redfish males of 34 cm and females of 42 cm long prevailed at the depth of 200-300 m in subarea 2J. Males of 33 cm and females of 32 cm length dominated at the depths of 300-400 m.

In the southern part of 3M subarea predominant length of redfish gradually decreased at the depths of 200-600 m in August: for males - from 34 cm to 32 cm, for females - from 41-37 to 34 cm.

In the subareas 2H (July), 3L (August), 2J (October), 3K (November), redfish length increased according to depth. In subarea 2J (October) the experimental trawlings were at the depths of 300-600 m and showed the clear increase of redfish length according to depth.

In subarea 3K (November), at all depths, redfish males almost did not differ from females by length; predominant length of males and females increased with increase of the depths from 300 to 600 m.

The analysis of the materials on feeding showed that in all the areas investigated redfish fed most intensively at the depths of

300-500 m.

Studies on distribution of redfish will be continued in 1963.

TABLE I
Results of Hauls on Study of Redfish Distribution
in the Northwest Atlantic Areas

Subarea	Month	Depths m	Number of hauls	Catch (in tons) per hour of trawling
2H	VII	400-500	1	0.51
		500-600	1	2.55
2J	VII	200-300	1	0.34
		300-400	2	0.85
2J	X	300-400	1	0.85
		400-500	2	2.55
		500-600	1	0.17
3K	XI	300-400	1	1.02
		400-500	1	1.70
		500-600	1	1.19
3L	VII	300-400	1	0.34
		400-500	1	0.17
3L	VIII	300-400	1	1.36
		400-500	2	1.79
		500-600	3	0.56
3L	X	400-500	1	0.34
		500-600	1	0.17
3M	VIII	200-300	1	0.68
		300-400	4	0.93
		400-500	4	1.06
30	XI	500-600	2	1.02
		200-300	1	0.17
30	XI	300-400	1	0.17
		400-500	1	0.17
		400-500	1	0.17
30	XII	300-400	1	0.17
		400-500	1	0.17
4V	XI	100-200	1	0.17
		300-400	1	0.17

DATA ON DISTRIBUTION OF SEBASTES MARINUS MENTEI WITHIN THE DEPTHS UP TO 600 m (each 100 m) ACCORDING TO 1957-1961 DATA (in tons per one hour of trawling)

Years	Area	Months Depths	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
1957	3 L	200-300										2.0	2.4	1.5	
		300-400										2.2	1.9	2.0	
		400-500													2.0
1958	3 M	300-400	3.8	4.8	6.2	3.1	4.8	2.8	1.9	4.1	2.8	1.9		1.4	
		400-500													
		500-600													
1959	3 K	200-300	2.6	4.4	2.5	4.3	2.0	2.5	3.5	2.4	2.4	0.6	1.0	0.4	
		300-400	2.8	3.0	2.2	3.2	2.5	3.3	0.7	0.8	0.7	0.5	0.9		
		400-500	1.5	2.3	0.9	3.0	2.3	1.9	1.4	1.1	0.5	0.7	0.5		
1960	2 I	200-300	1.9	2.4	2.7	3.4	3.2	2.4	2.4	1.9	2.0	1.8	2.0	4.0	
		300-400													
		400-500													
1961	3 M	200-300	2.5	2.8	3.1	2.0	2.1	2.0	1.9	1.6	2.0	1.7	1.6		
		300-400	3.2	3.4	2.6	2.5	1.9	1.9	2.2	1.6	1.9	1.8	2.0		
		400-500	2.8	3.4	2.8	2.6	2.0	2.2	2.2	2.4	2.1	1.9	1.1		
1962	3 K	200-300	1.7	1.9	1.6	1.7	0.6	0.8	0.8	0.5	0.8	0.5	0.5	1.1	
		300-400	1.4	1.7	1.6	1.6	1.0	1.0	0.5	0.5	0.5	0.5	0.5	1.1	
		400-500	1.7	1.9	1.6	1.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	

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DATA ON DISTRIBUTION OF SEBASTES MARINUS MENTELLA WITHIN THE DEPTHS
UP TO 600 m (each 100 m) ACCORDING TO 1957-1961 DATA
(in tons per one hour of trawling)

cont'd

Years	Area	Months Depths	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1960	3 K	400-500			1.6	1.2	1.2	1.2	0.7					
		500-600			1.6	1.1	0.7							
	3 L	200-300	4.0	2.5	2.5	2.6	1.6	1.6	1.7	3.4	2.2	1.9		
		300-400				2.7			1.3	1.8	1.5	1.3		
3 M	200-300				1.9	1.6	1.6	1.5	1.4	1.4	1.4	1.4	1.4	
		300-400			2.3	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
	400-500			2.0	1.9	1.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5
		500-600					1.9							
3 N	100-200								4.8					
		200-300								2.0				
	300-400								1.9	1.8	1.8	1.5	1.5	
		400-500							1.5	1.5	1.9	1.9	1.9	1.7
3 O	200-300													
		300-400												
	400-500													
		500-600												
1961	2 I	200-300	0.7	1.2	1.1	1.8	1.5	2.6						
		300-400	0.8	2.1	1.5	1.6	3.0	1.2						
	300-400													
		400-500	0.9		1.4	1.7	2.0	0.8	2.1					
3 K	200-300													
		300-400												
	400-500													
		500-600												
3 M	200-300													
		300-400												
	400-500													
		500-600												
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		300-400												
	400-500													
		500-600												
3 O	200-300													
		300-400												
	400-500													
		500-600												

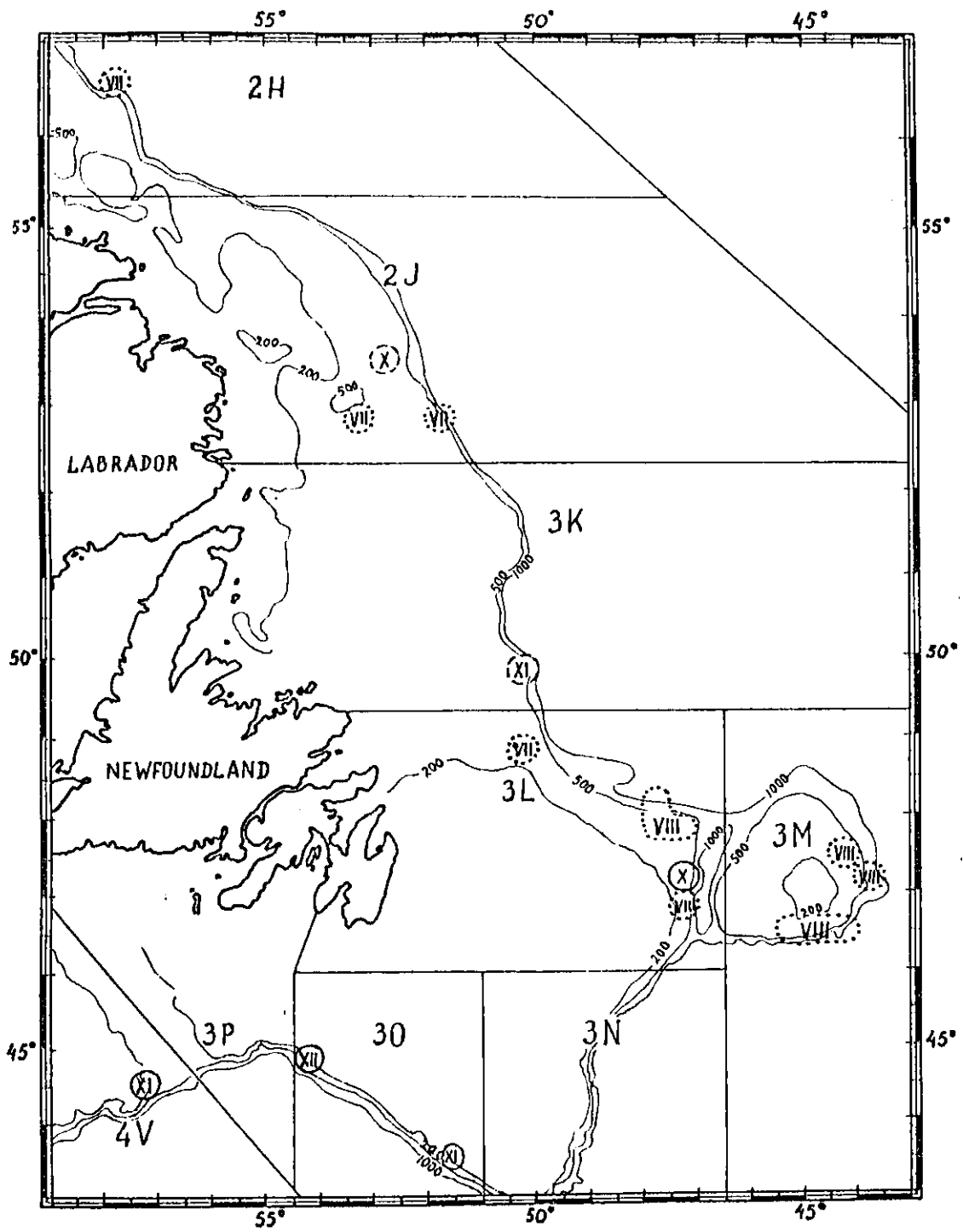


Figure 1. Locations and time of trawlings.

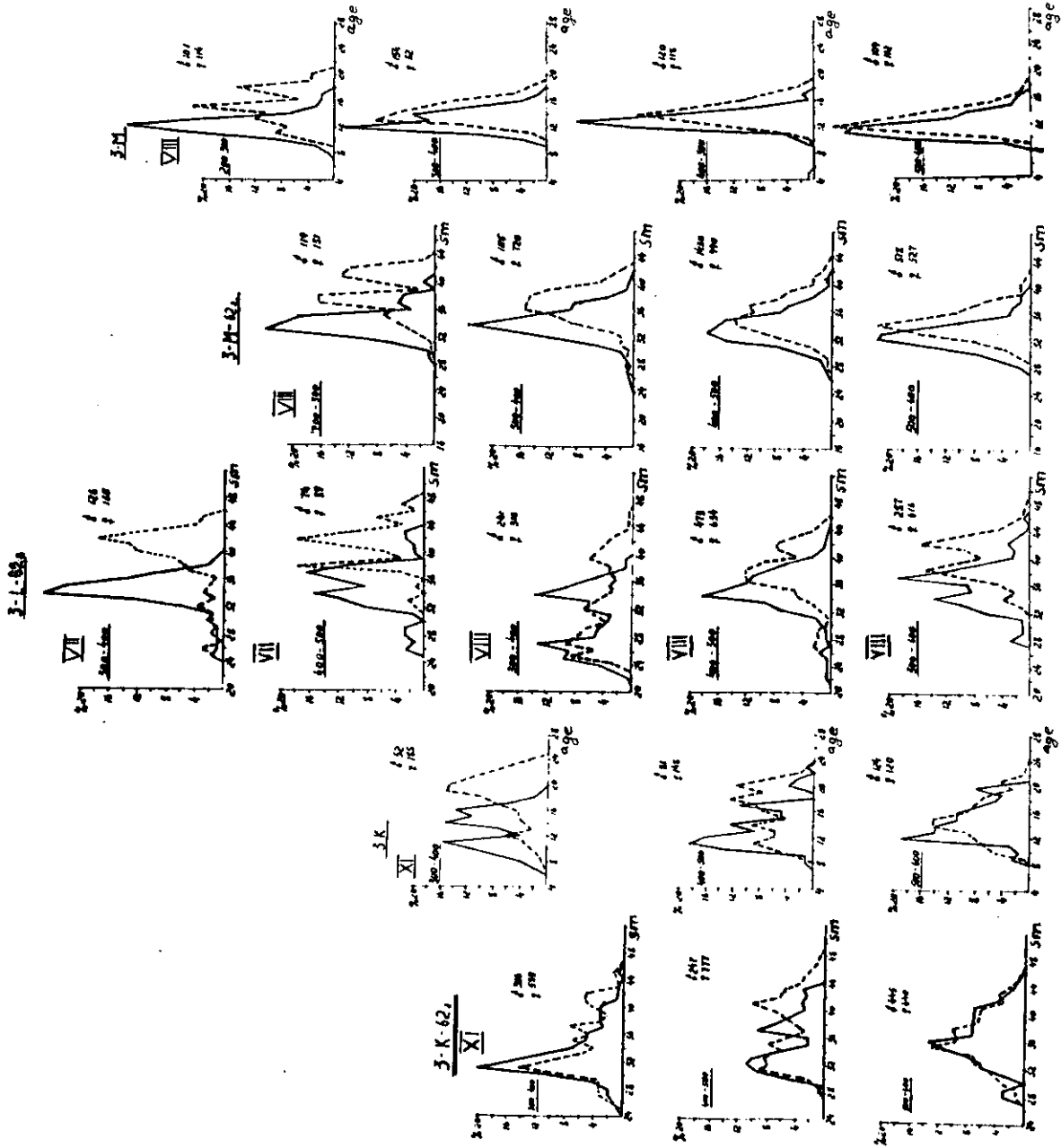


Figure 2. Length and age composition of *Sebastes mentella* by the experimental trawlings.

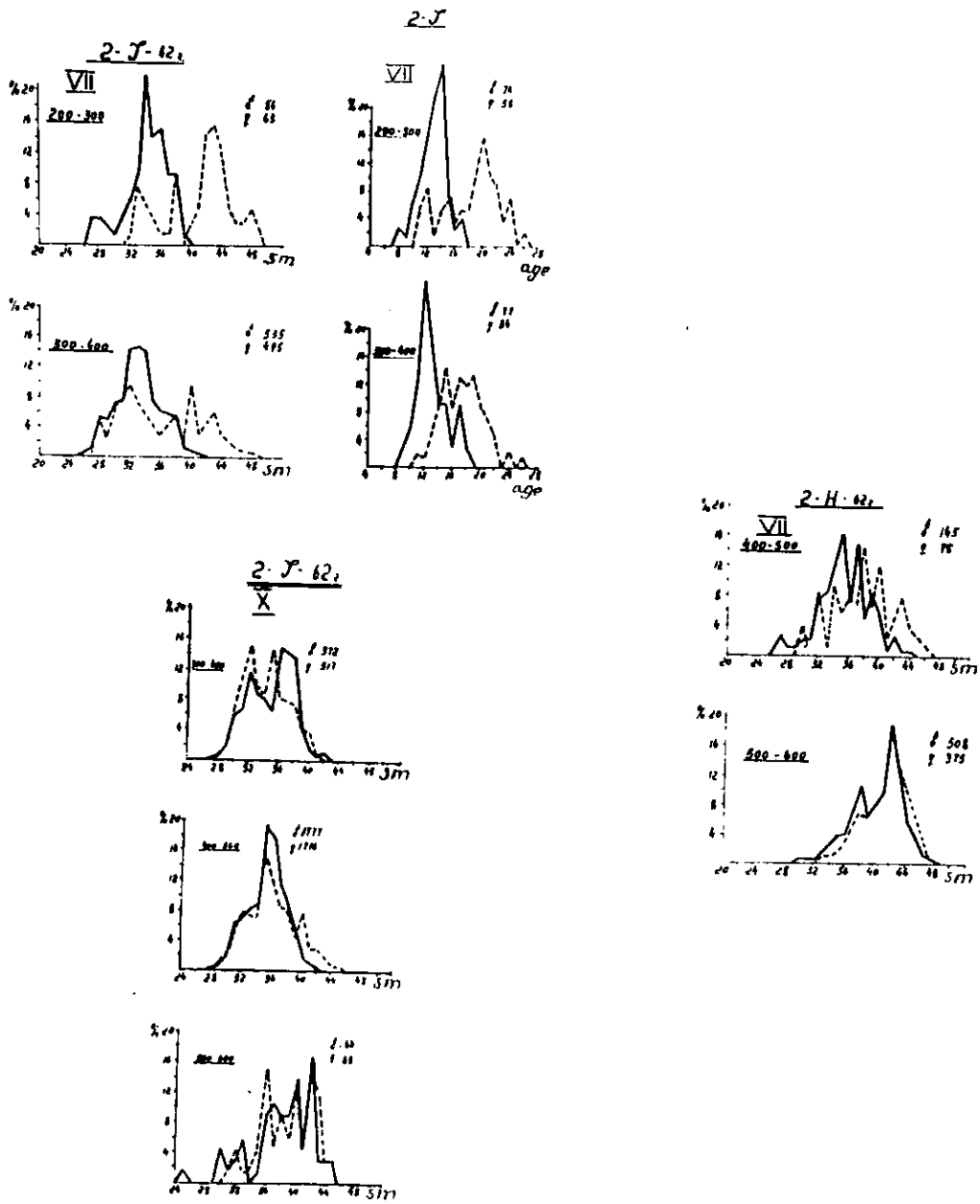


Figure 3. Length and age composition of Sebastes mentella by the experimental trawlings.

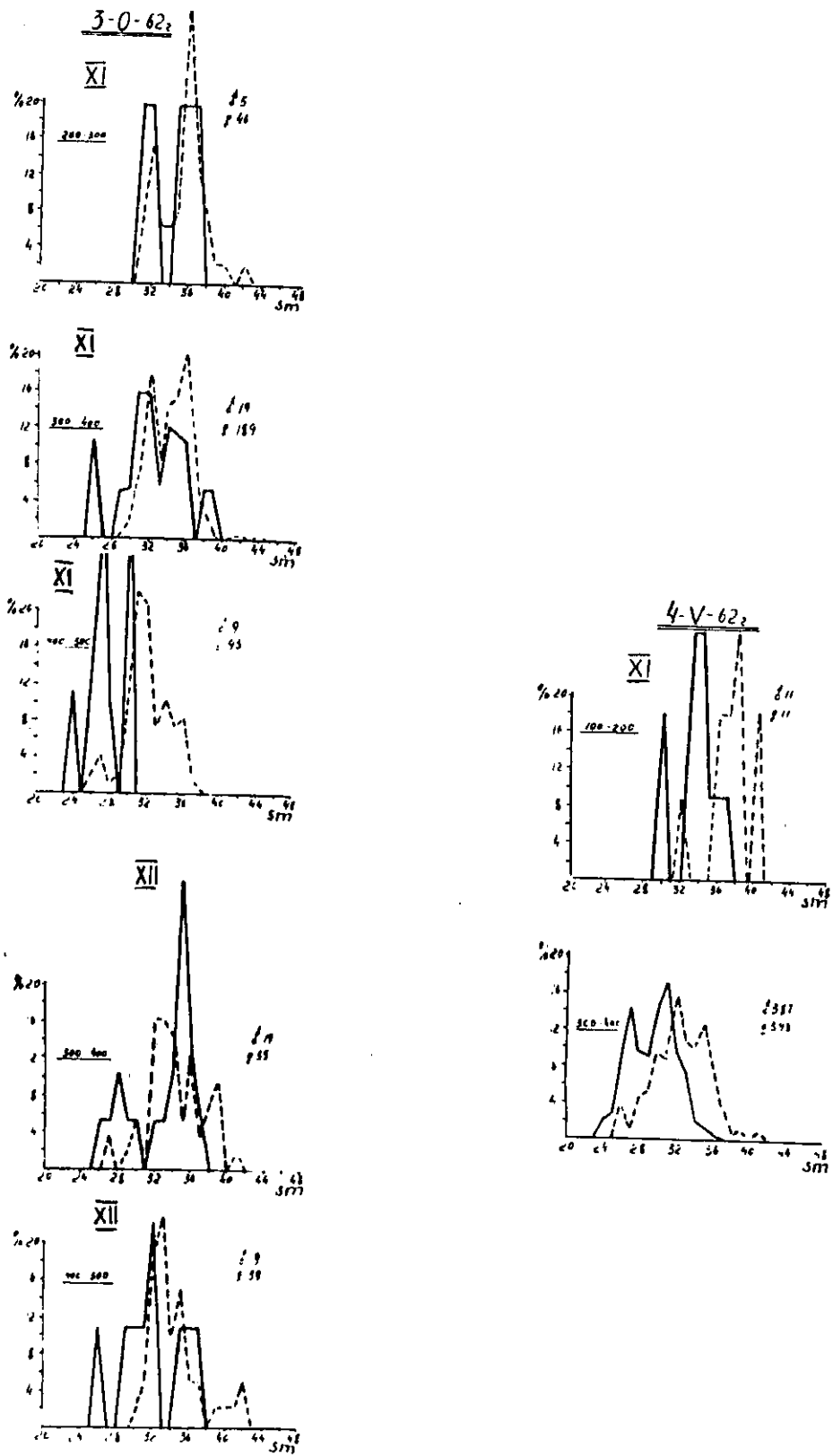


Figure 4. Length and age composition of *Sebastes mentella* by the experimental trawlings.