

either side of the mid-line with a series of parallel diagonal lines, making an angle of 40 degrees with the mid-line. By aligning the margins of the tail with these it was possible to spread the tail to an arbitrary, constant angle of 80 degrees.

Owing to the mixture of herring of different age groups in the samples, it was not feasible to take the average size in treating the material. The smallness of the numbers representing certain age groups in many of the samples rendered the results unsuitable for extensive statistical treatment. The only feasible method was a compromise and therefore somewhat open to objection.

The relative frequency of the various length groups in a sample indicated whether the sample consisted of more than one age group and also showed the mean size in each group. The various groups could in that way be traced through successive samples and their rates of growth determined.

The following table gives the results of the measurements:—

Locality.	Date.	Length in Centimetres.																											
		7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28						
Back Bay.....	I, 14.....				2	3	38	140	89	16	2	2	1	1															
St. Andrews.....	IV, 16.....				3	5	16	43	79	59	25	3	4	3	1														
St. Andrews.....	V, 13.....		29	29	12	11	25	49	83	45	27	3	4	5	2	1													
St. Andrews.....	V, 24.....		4	108	92	32	15	10		1																			
St. Andrews.....	VI, 2.....	1	32	150	46	32	18	10	5	5	7	2	1	1		1													
St. Andrews.....	VI, 15.....				7	22	53	68	90	40	25	12	3	1		1													
St. Andrews.....	VI, 28.....				76	183	29	9	3	1																			
St. Andrews.....	VII, 20.....				7	155	47	17	10	4	1	1																	
St. Andrews.....	VII, 27.....	2	5			28	68	20	17	18	38	36	22	6															
St. Andrews.....	VIII, 12.....		5	9	8	71	77	14	17	29	38	29	13	1	3	2													
St. Andrews.....	VIII, 19.....			1	9	2	21	60	30	25	26	38	37	26	8	2	2	1											
St. Andrews.....	VIII, 30.....				1	13	2	6	11	6	8	24	40	32	15	3	2												
St. Andrews.....	IX, 7.....		1	3	10	5	3	6	3	3	12	49	33	30	15	11	1			1	5	1							
Jonesport.....	IX, 13.....					1					1	19	62	52	45	12	21	20	8	6	2								
L'Etang.....	IX, 14.....						2		2	4	10	51	98	47	20	2													
Lepreau.....	IX, 14.....	1	15	16	8	7	6	12	14	26	69	58	25	8	3	1													
Pocologan.....	IX, 14.....							3	8	14	53	55	39	24	2	2													
Grand Harbour.....	IX, 15.....						1		2	1	2	15	51	69	49	21	17	9	4	3	1	1							
Bocabec I.....	IX, 16.....								7	1	3	16	53	37	10	2													
Bocabec II.....	IX, 16.....									2	23	24	36	60	98	50	13	1	1										
Bocabec III.....	IX, 16.....					4	11	5	6	10	9	18	59	76	45	10													
Oak Bay.....	IX, 28.....				1	9	10	7	1	1	1	11	55	83	57	7	4	2	2	2	1								
Bocabec.....	X, 4.....					3	10	5	2	1	8	38	47	63	11	7	6	1											
St. Andrews I.....	X, 14.....				1	6	23	25	27	23	19	44	64	68	67	47	14	9	5	7	1	1	2						
St. Andrews II.....	X, 14.....					12	28	18	17	20	24	45	36	46	35	20	5	8	7	2	2	2							
St. Andrews.....	X, 25.....					1	25	32	19	8	10	23	51	60	19	12	1	2											
St. Andrews.....	X, 29.....					29	124	69	5	1	1																		
St. Andrews.....	XI, 3.....					16	49	75	38	16	38	46	24	8		1													
St. Andrews.....	XI, 10.....					9	32	49	28	19	26	43	61	37	13	2	3	1											
St. Andrews.....	XI, 23.....						12	13	58	26	18	13	31	23	10	4	3												
Back Bay.....	XI, 29.....					2	13	67	35	47	33	49	30	10	5	6	3												
St. Andrews.....	XII, 6.....					1	9	12	32	34	21	17	8	7	6	7	8	15	8	4	1								
Bliss Harbour.....	XII, 21.....	2	13	20	38	91	88	37	24	9	2	7	1																
Mascarene.....	XII, 24.....		2	4	17	83	91	72	16	6	4	2																	
Bliss Harbour.....	XII, 29.....		2	5	18	95	111	63	21	10	4	6	4	2	4														

Two of the samples may be said to be homogeneous, consisting of only one age group. They are those of June 28 and October 29. In both the actual range in size is 6 cm. (9-14 and 11-16) and the practical range is only 4 cm. (9-12 and 11-14) or perhaps 3 cm. (9-11 and 11-13). There can be no doubt that in these cases we have to do with only one age group. The curve for the sample of June 28, obtained by plotting the lengths against the numbers of individuals is given by the continuous line in fig. 1. Evidently too few length groups have been taken to give the most satisfactory curve, but we will not be far astray in taking 10 cm. as representing the mean length of the herring in the sample of June 28 and 12 cm. for those of October 29.