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Length, ages, growth of cod in Subareas -1-2-3-(1.965)

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The present report is based on observations made on board commercial trawlers by one member of the "Bochorno" ship of the Cod Fishery Company PYSBE in Subareas 1, 2, and 3. The samples were taken, at random, for data on length and age composition, and sex ratio.

For the age-length keys we have used a subsample obtained from the initial random samples by choosing a number of otoliths, in each 3-cm length class (2 males and 2 females if possible)

SUBAREA 1

I. Cod

Samples were obtained in Div. 1B between 1 and 7 September as follows:

<u>Sample n^o</u>	<u>Date</u>	<u>Depths (m)</u>	<u>N^o Lengths</u>	<u>N^o Aged</u>
1-7	1-7 Sept.	28-115	3,981	38

a. Lengths (Fig. 1) ranged from 34 to 97 cm classes. The mean length is: 52'36 cm.

b. Ages (Fig. 1)

The age-group V (1960 year class) is dominant followed by the VI (1959 year class) in this month of September.

c. Growth is shown in the following table of average lengths (figures in brackets are number of fish)

TABLE I

Age Group	3 rd Quarter September
V	61'0 (10)
VI	67'0 (8)
VII	74'0 (2)
VIII	79'0 (2)
IX	-
X	-
XI	-
XII	100'0 (1)

d. Sex ratio

There were 48'1 % of males and 51'9 % of females.

SUBAREA 2

I. Cod

Samples were taken from the 2J division from 11 September to 14 November, as follows:

<u>Sample Group</u>	<u>Sample No</u>	<u>Date</u>	<u>Depths (m)</u>	<u>No Length</u>	<u>No Aged</u>
A	8-25	11-30 Sept.	135-272	13,736	54
B	26-38	1-13 October	150-290	9,667	52
C	39-47	1-14 Novemb.	179-274	6,457	25
				<u>29,860</u>	<u>131</u>

a. Lengths

In division 2J (Fig. 2) lengths ranged from 25 cm to 127 cm classes (September from 28 to 118; October, 25 to 127 and November from 28 to 106 cm classes).

Mean lengths were: A = 51'12 cm, B = 51'4 cm, C = 51'33 cm.

b. Ages

In division 2J (Fig. 2) age-group VIII (1957 year class) is dominant followed by age-group IX (1956 year class)

c. Growth

(Figures in brackets are number of fish)

TABLE II

<u>Age Group</u>	<u>3rd Quarter</u>		<u>4th Quarter</u>	
	<u>September</u>		<u>October</u>	<u>November</u>
VI	59'0	(1)	63'0	(1)
VII	61'3	(3)	64'0	(2)
VIII	60'8	(6)	63'8	(5)
IX	69'0	(1)	68'8	(5)
X	71'8	(4)	74'7	(3)
XI	76'5	(2)	78'5	(2)
XII	80'0	(3)	-	-
XIII	-	-	82'0	(2)
XIV	-	-	88'0	(1)
XV	-	-	85'7	(3)
XVI	-	-	97'0	(2)
XVII	-	-	97'0	(1)
XVIII	-	-	-	-
XIX	-	-	92'5	(2)
XX	102'0	(1)	-	-
XXI	-	-	-	-
XXII	-	-	-	-
XXIII	-	-	-	-
XXIV	98'0	(1)	-	-

d. Sex ratio

There were 29'8 % of males and 70'2 % of females distributed as follows:

	September	October	November
Males	28'9%	27'2%	46'3%
Females	71'1%	72'8%	53'7%

SUBAREA 3

I. Cod

Samples were taken from the landings from 26 July to 23 November in Division 3K and from 19 to 25 July in Div. 3L, as follows:

For Div. 3K

<u>Sample Group</u>	<u>Sample No</u>	<u>Date</u>	<u>Depths(m)</u>	<u>No Lengths</u>	<u>No Aged</u>
A	48-52	26-31 July	210-290	4.010	47
B	54-72	1-27 August	160-290	12.001	57
C	73-81	3-23 November	170-315	4.817	32
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				20.828	136

For Div. 3L

	82-88	19-25 July	155-245	2.563	61
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For Div. 3M

	89-100	17-29 October	214-290	8.930	37
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a. Lengths

In div. 3K (Fig. 2) lengths ranged from 31 to 136 cm classes with a relatively small variation between months (34-121 in July; 34-136 in August; 31-124 in November).

Mean lengths were: A = 57'01 cm; B = 53'94 cm; C = 52'75 cm.

In div. 3L the lengths ranged from 31 to 133 cm classes, mean length being: 58'00 cm.

In div. 3M the lengths ranged from 28 to 130 cm classes average length was = 54'23 cm.

b. Ages

In div. 3K (Fig. 2) the VII and IX age-group is dominant in July; in August is the VIII and in November the IX.

In div. 3L (Fig. 1) the VII age-group (1958 year class) is dominant.

In div. 3M (Fig. 1) the VII age-group is dominant followed by the VIII age group.

c. Growth

(Figures in brackets are number of fish)

Division 3K

Age Group	2nd Quarter		3rd Quarter
	July	August	November
IV	45,2 (4)	-	-
V	54'8 (5)	47'0 (2)	-
VI	55'0 (1)	55'8 (6)	66'0 (1)
VII	63'1 (9)	55'7 (8)	67'0 (2)
VIII	64'0 (4)	60'6 (6)	72'0 (2)
IX	66'0 (7)	70'0 (3)	74'2 (5)
X	78'0 (5)	74'5 (2)	71'3 (3)
XI	82'0 (2)	87'0 (1)	-
XII	-	83'0 (2)	-
XIII	-	87'5 (2)	79'5 (2)
XIV	-	96'0 (1)	80'0 (1)
XV	-	-	87'0 (1)
XVI	-	-	-
XVII	-	98'0 (1)	-

Fig. 1.

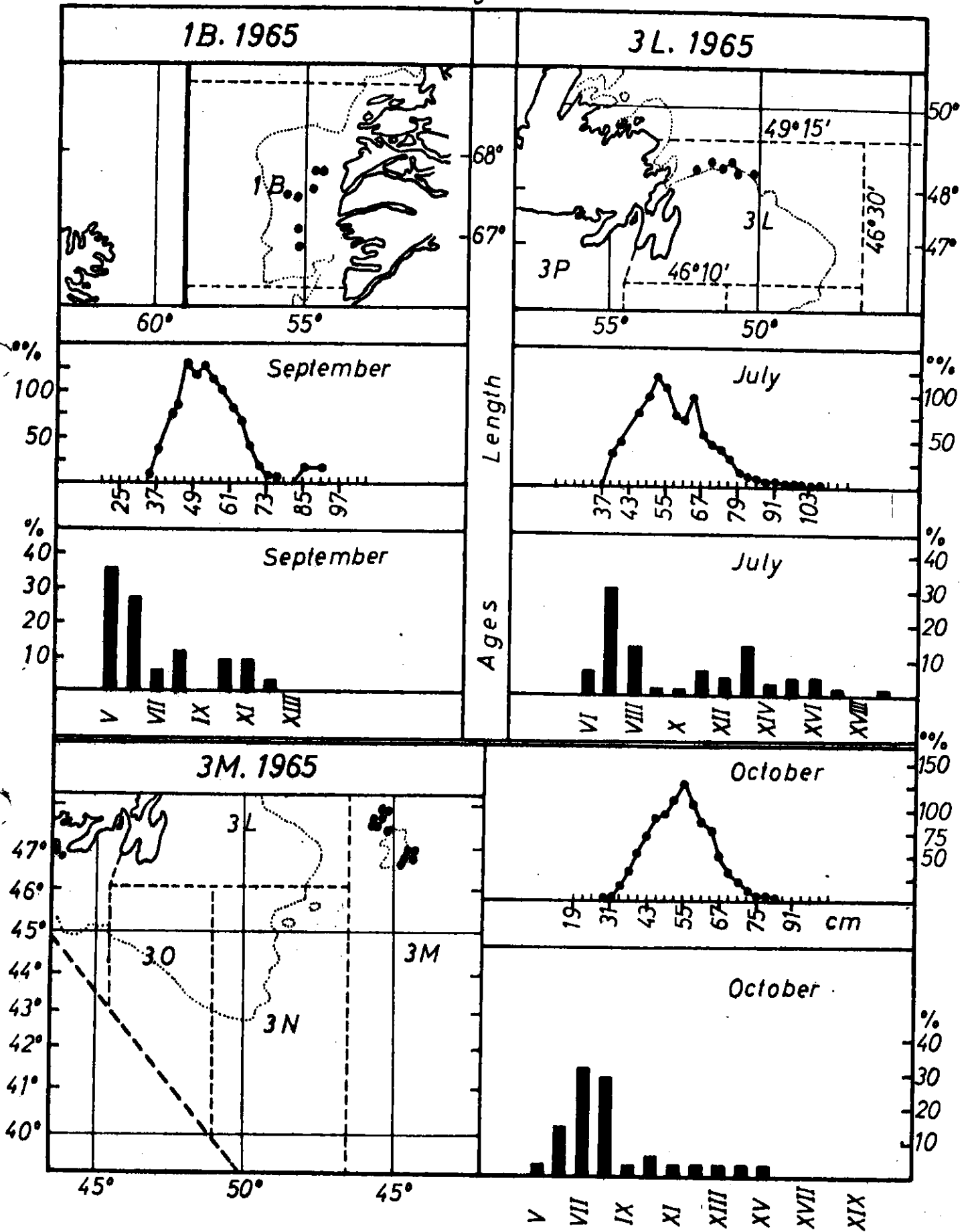


Fig. 2.

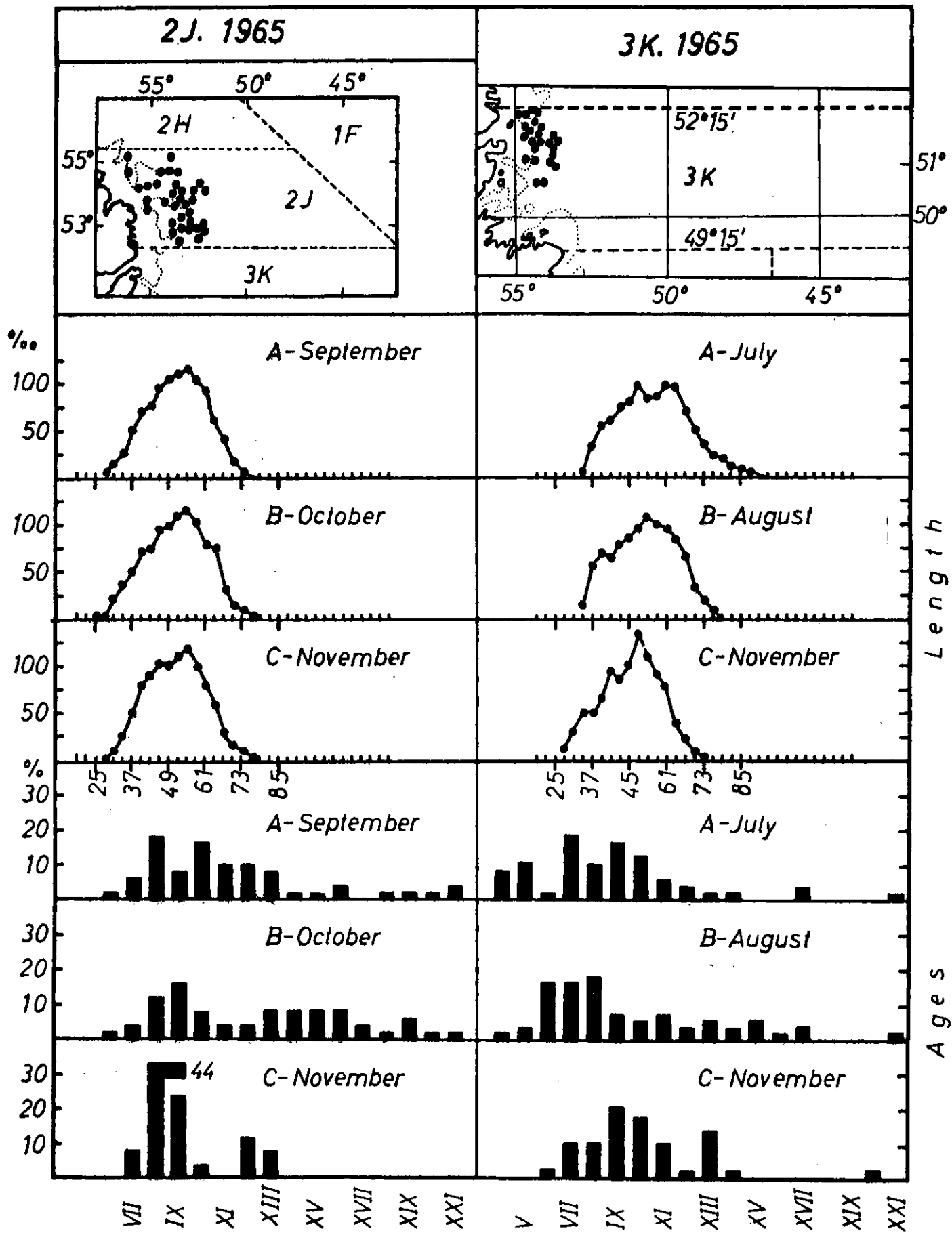


Fig. 3

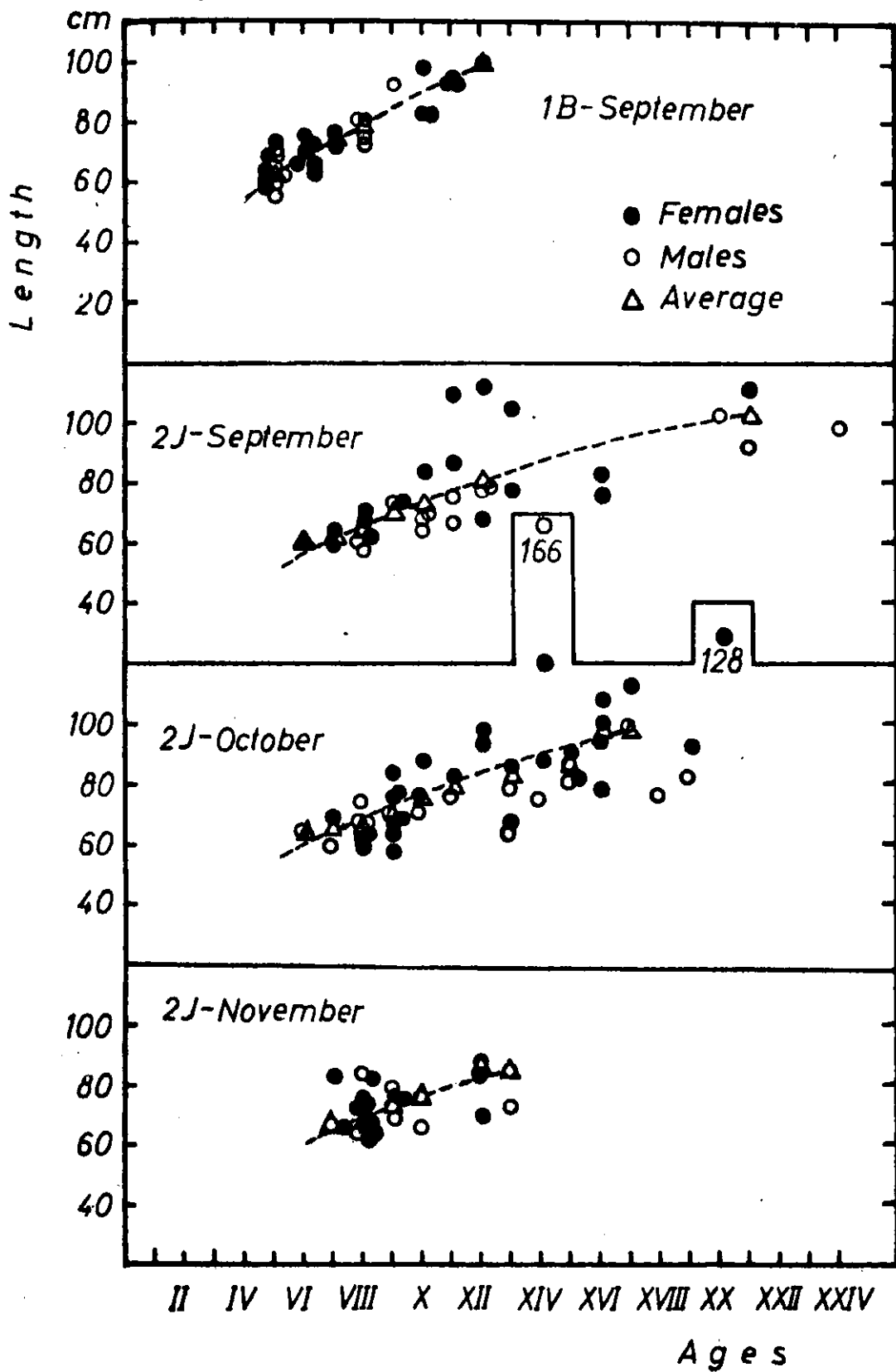


Fig. 4.

