

LUDGERSHALL  
 EASTERN SECTOR  
 NUMBERS OF OYSTER SHELLS  
 TABLE 7.1

PHASE	MNI	No. Valves	Left valves	Damaged	Right Valves	Damaged
C1	0	0	0	0	0	0
C2	0	0	0	0	0	0
C3	0	0	0	0	0	0
C4	6	10	4	1	6	1
C5	5	8	3	1	5	1
C4/6	1	1	0	0	1	0
C5/6	17	28	11	6	17	2
C6	2	3	2	1	1	1
C6/HL5	8	16	8	0	8	0
C6/HL2	2	2	0	0	2	1
C7	4	5	1	0	4	1
HL1	11	17	11	5	6	2
HL2	28	56	28	4	28	2
HL3	11	21	11	4	10	2
HL3/HL4	1	1	1	1	0	0
HL4	138	276	138	23	138	13
HL4   DESTRUCTION	17	31	14	6	17	9
HL5	8	12	4	2	8	1
HL5 / DESTRUCTION	10	11	1	0	10	4
DESTRUCTION	101	196	101	25	95	15
FARMYARD	1041	2021	980	279	1041	145
MODERN	240	457	217	80	240	52
MODERN	44	87	43	6	44	6
TOTAL	1695	3259	1578	440 (28b)	1681	258 (15b)

MNI Minimum number of individuals

TABLE 7.2  
 LUDGERSHALL  
 SOUTH EAST SECTOR  
 NUMBERS OF OYSTER SHELLS

PHASE	MNI	No. Valves	Left valves	Damaged	Right valves	Damaged
Pre-castle	2	3	2	1	2	0
Timber 1 / Timber 2	1	1	1	0	0	0
Timber 2 / Post-castle	2	2	0	0	2	0
Timber 2 / 3	0	0	0	0	0	0
Timber 3	7	9	2	1	7	3
Timber 3 / 4	1	1	1	0	0	0
Timber 4	6	9	3	2	6	1
Timber 4 / Post-castle	2	2	0	0	2	1
Post-castle	28	48	20	9	28	8
Post-castle destruction	49	93	44	8	49	9
Modern	53	91	38	16	53	14
Ditch fill	2	2	0	0	2	0
TOTAL	153	261	111	37 (33b)	151	36 (24b)

LUDGERSHALL  
 SOUTH WEST SECTOR  
 NUMBERS OF OYSTER SHELLS  
 TABLE 7.3

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PHASE	MNI	No. valves	Left valves	Damaged	Right valves	Damaged
12th century	30	46	16	2	30	5
Medieval clay spread	2	2	2	0	0	0
Late med. chalk spread	3	6	3	0	3	0
Late med. clay spread	1	0	1	1	0	0
Late-post med. chalk spread	1	1	0	0	1	0
Post-medieval	2	2	2	0	0	0
Modern	5	9	4	2	5	2
TOTAL	44	67	28	5 (18%)	39	7 (18%)

TABLE 7.4  
 LUDGERSHALL  
 ALL SECTORS  
 NUMBERS OF OYSTER SHELLS

SECTOR	MNI	No. v	LV	% damage	RV	% damage
SOUTH WEST	40	67	28	18	39	18
SOUTH EAST	153	261	111	33	151	24
EAST	1695	3259	1578	28	1681	15
	1888	3587	1717	28	1871	16

SOUTH WEST SECTOR  
GROUPED DATASUMMARY OF DATA FOR GROUPED SAMPLES FROM  
THE SOUTH WEST SECTOR LUDGERSHALL

LEFT VALVE MAX. WIDTH PHASE	Number n	Mean $\bar{x}$	Variance $s^2$	Standard deviation s
12th century	15	56.666667	56.4	7.8
Medieval clay spread	2	69	25	7.071068
Late med. chalk spread	4	64.5	164.25	14.798649
Late-postmed. chalk spread	0			
Post-medieval	2	53	100	14.142136
Modern	4	60.5	337.25	21.205345
LEFT VALVE MAX. LENGTH				
12th century	15	47.066667	35.262222	6.146621
Medieval clay spread	2	67	100	14.142136
Late med. chalk spread	4	63	52	8.326664
Late-postmed. chalk spread	0			
Post-medieval	2	60.5	240.25	21.920310
Modern		54.666667	5.555556	2.886751
RIGHT VALVE MAX. WIDTH				
12th century	26	55.692308	72.674556	8.693764
Medieval clay spread	0			
Late med. chalk spread	3	46.666667	20.222222	5.507571
Late-postmed. chalk spread	1	97		
Post-medieval	0			
Modern	5	51.8	72.96	9.549869
RIGHT VALVE MAX. LENGTH				
12th century	26	48.384615	79.852071	9.112966
Medieval clay spread	0			
Late med. chalk spread	3	53	18	5.196152
Late-post-med chalk spread	1	84		
Post-medieval	0			
Modern	5	48.8	148.16	13.608821

TABLE 7.5

**TABLE 7.6a**  
**Ludgershall summary of data for grouped samples of oyster shells from south-east sector**

PHASE	N	MEAN	ST.DEV.
<b>LEFT VALVE MAXIMUM WIDTH</b>			
Pre-castle, natural	1	88.0	
Timber 1/Timber2	1	60.0	
Timber 2/Post-castle	0		
Timber 3	2	69.5	21.9
Timber 3/4	1	61.0	
Timber 4	1	62.0	
Timber 4/Post-cast dest	0		
Post-castle	19	56.8	14.4
Post-castle destruction	44	63.5	13.2
Modern	38	60.7	13.8
Ditch fill	0		
<b>LEFT VALVE MAXIMUM LENGTH</b>			
Pre-castle, natural	1	75.0	
Timber 1/Timber2	1	55.0	
Timber 2/Post-castle	0		
Timber 3	2	66.0	15.6
Timber 3/4	1	54.0	
Timber 4	1	53.0	
Timber 4/Post-cast dest	0		
Post-castle	19	48.6	13.6
Post-castle destruction	44	57.6	12.5
Modern	38	55.0	13.9
Ditch fill	0		

**TABLE 7.6b**  
**Ludgershall summary of data for grouped samples of oyster shells from south-east sector**

PHASE	N	MEAN	ST.DEV.
<b>RIGHT VALVE MAXIMUM WIDTH</b>			
Pre-castle, natural	2	62.5	10.6
Timber 1/Timber2	0		
Timber 2/Post-castle	2	58.0	7.1
Timber 3	7	53.9	
Timber 3/4	0		
Timber 4	6	72.2	11.4
Timber 4/Post-cast dest	2	50.5	19.9
Post-castle	28	49.9	10.9
Post-castle destruction	49	57.6	11.3
Modern	53	60.3	11.7
Ditch fill	2	60.5	0.7
<b>RIGHT VALVE MAXIMUM LENGTH</b>			
Pre-castle, natural	2	58.0	12.7
Timber 1/Timber2	0		
Timber 2/Post-castle	2	55.5	17.7
Timber 3	7	52.3	5.3
Timber 3/4	0		
Timber 4	6	62.6	6.7
Timber 4/Post-cast dest	2	39.5	9.2
Post-castle	28	43.6	10.6
Post-castle destruction	49	52.4	10.0
Modern	53	52.8	10.5
Ditch fill	2	58.5	0.7

TABLE 7.7a Ludgershall eastern sector summary of data (LVNH)

PHASE	CONTEXT	N	MEAN	ST.DEV.
C4	Grouped	4	73.8	9.1
C5	Grouped	3	77.0	14.8
C5/6	Grouped	11	69.6	7.5
C5/6	CY 18	8	68.1	4.6
C6/HL5	C15 111 F67	8	65.6	15.5
C6/HL5	C15 111 F67	4	64.0	17.0
C6/HL5	Grouped	8	65.6	15.5
HL1	Grouped	11	67.9	9.4
HL2	L21 1214 F442	26	74.8	9.8
HL2	Grouped	28	74.0	9.9
HL3	Grouped	10	62.7	10.7
HL4	C21 15	5	67.6	12.4
HL4	HL4	37	61.2	10.3
HL4	H26 16	4	55.5	4.4
HL4	B23 17	3	70.3	17.6
HL4	J13 19 F1004	7	68.1	11.5
HL4	J13 110 F1004	26	69.6	9.8
HL4	D21 115	3	75.7	7.5
HL4	F21 115	8	71.7	9.1
HL4	D21 116	15	67.7	13.7
HL4	H26 F474	11	57.6	8.9
HL4	Grouped	137	65.6	12.3
HL4/ Destruction	Grouped	4	57.0	8.5
HL5	A28 F472	101	58.7	11.3
HL4/D	D26 13-5	14	58.9	10.5
Destruction	B23 13	4	61.0	16.2
Destruction	C28 13	2	57.0	9.9
Destruction	D24 13	5	74.2	11.7
Destruction	H19 13	5	69.4	8.0
Destruction	H21 13	12	57.8	10.0
Destruction	J17 13	7	51.6	13.0
Destruction	J24 13	44	60.1	10.4
Destruction	L17 13	29	60.7	7.6
Destruction	L24 13	107	60.5	9.9
Destruction	L24 13 F18	10	68.2	10.0
Destruction	N24 13	6	76.2	8.9
Destruction	A19 14	7	74.6	12.2
Destruction	A24 14	8	61.3	10.2
Destruction	A28 14	10	55.4	5.4
Destruction	C15 14	24	64.2	9.7
Destruction	J13 14 F1004	100	69.5	11.7
Destruction	J17 14	2	46.5	4.9
Destruction	J23 14	4	64.0	4.7
Destruction	J24 14	28	66.4	10.5
Destruction	L17 14	4	53.5	7.9
Destruction	L24 14	22	63.1	9.9
Destruction	N21 14	7	70.9	15.8
Destruction	A19 15	15	62.5	12.7

TABLE 7.7a continued

PHASE	CONTEXT	N	MEAN	ST.DEV.
Destruction	A21 15	10	81.7	9.2
Destruction	C15 15	21	74.1	10.2
Destruction	H21 15	10	63.8	14.7
Destruction	J24 15	13	62.9	9.1
Destruction	L17 15	8	52.5	11.9
Destruction	L24 15	6	61.8	11.9
Destruction	A21 16	14	70.6	11.3
Destruction	F21 16	7	56.1	2.2
Destruction	J13 16 F1004	88	66.2	10.8
Destruction	J21 16	26	60.9	9.7
Destruction	J24 16	5	67.0	9.8
Destruction	L24 16	4	58.3	20.6
Destruction	L24 16 F22	5	77.6	1.9
Destruction	N19 16	3	78.0	5.3
Destruction	A21 17	24	71.7	10.8
Destruction	C15 17	91	64.3	10.9
Destruction	C11 18	7	69.6	14.2
Destruction	D19 19	6	48.8	9.8
Destruction	F19 110	4	82.0	17.1
Destruction	F19 121	5	67.2	5.9
Destruction	A21 F406	5	61.8	15.2
Destruction	D26 F454	25	56.6	14.7
Destruction	J21 F393	15	59.7	9.7
Destruction	Grouped	976	64.4	12.1
Farmyard	A28 12	31	63.9	8.3
Farmyard	H21 12	8	60.6	12.3
Farmyard	H23 12	27	56.2	8.8
Farmyard	N19 12	12	56.5	10.5
Farmyard	A21 13	10	78.9	6.5
Farmyard	L26 13	4	73.0	5.4
Farmyard	D19 14	2	65.0	24.0
Farmyard	D28 14	7	67.7	17.2
Farmyards	F21 14	5	63.6	13.2
Farmyard	H23 14	3	71.0	13.9
Farmyard	L26 14	4	66.8	13.3
Farmyard	F19 15	5	59.0	3.4
Farmyard	J21 15	10	59.5	12.8
Farmyard	Baulk F19/21 15	5	70.0	12.5
Farmyard	H21 F481	34	58.1	7.1
Farmyard	Grouped	214	61.5	10.8
Modern	L21 11	6	64.0	13.3
Modern	N24 11	14	67.2	8.1
Modern	J24 12	7	58.9	6.9
Modern	L26 12	11	68.8	11.6
Modern	Grouped	43	65.5	10.1

TABLE 7.7b Ludgershall eastern sector summary of data (LYML)

PHASE	CONTEXT	N	MEAN	ST.DEV.
C4	Grouped	4	65.3	3.4
C5	Grouped	3	67.0	1.7
C5/6	Grouped	11	63.5	8.7
C5/6	CY 18	8	48.3	7.4
C6/HL5	C15 111 F67	8	62.6	18.0
C6/HL5	C15 111 F67	4	63.0	12.7
C6/HL5	Grouped	8	62.6	18.0
HL1	Grouped	11	62.0	9.3
HL2	L21 1214 F442	26	70.9	10.0
HL2	Grouped	28	69.8	10.3
HL3	Grouped	9	60.7	10.2
HL4	C21 15	5	61.6	15.4
HL4	B23 16	37	53.8	10.5
HL4	H26 16	5	48.0	8.6
HL4	B23 17	3	60.3	21.0
HL4	J13 19 F1004	7	60.9	10.0
HL4	J13 110 F1004	26	69.6	9.8
HL4	D21 115	3	63.7	15.0
HL4	HL4	8	66.3	9.5
HL4	D21 116	15	61.9	9.8
HL4	H26 F474	11	52.4	6.9
HL4	Grouped	137	59.3	12.2
HL4/Destruction	Grouped	4	54.8	10.3
HL5	A28 F472	101	52.1	11.1
HL4/D	D26 13-5	14	53.4	8.5
Destruction	B23 13	4	57.0	15.1
Destruction	C28 13	2	51.0	5.7
Destruction	D24 13	5	66.8	6.4
Destruction	H19 13	5	58.6	8.4
Destruction	H21 13	12	53.3	10.4
Destruction	J17 13	7	45.7	9.1
Destruction	J24 13	44	54.2	9.6
Destruction	L17 13	29	53.6	9.9
Destruction	L24 13	107	54.3	9.7
Destruction	L24 13 F18	10	60.7	10.1
Destruction	N24 13	6	66.0	11.7
Destruction	A19 14	7	72.4	10.6
Destruction	A24 14	8	52.3	9.9
Destruction	A28 14	10	48.4	4.6
Destruction	C15 14	24	63.1	12.2
Destruction	J13 14 F1004	100	62.9	10.5
Destruction	J17 14	2	43.5	0.7
Destruction	J23 14	4	56.5	3.7
Destruction	J24 14	28	60.6	10.5
Destruction	L17 14	4	49.0	11.7
Destruction	L24 14	22	57.6	10.4
Destruction	N21 14	7	64.9	14.8
Destruction	A19 15	15	59.4	11.7

TABLE 7.7b continued

PHASE	CONTEXT	N	MEAN	ST.DEV.
Destruction	A21 15	10	75.8	7.9
Destruction	C15 15	21	72.3	11.8
Destruction	H21 15	10	57.0	13.3
Destruction	J24 15	13	55.2	10.9
Destruction	L17 15	8	48.3	7.5
Destruction	L24 15	6	55.7	12.6
Destruction	A21 16	14	67.0	10.3
Destruction	F21 16	7	50.1	4.6
Destruction	J13 16 F1004	88	63.1	12.6
Destruction	J21 16	26	55.7	8.4
Destruction	J24 16	5	60.0	8.1
Destruction	L24 16	4	53.5	19.3
Destruction	L24 16 F22	5	72.2	4.7
Destruction	N19 16	3	67.3	15.5
Destruction	A21 17	24	64.9	12.7
Destruction	C15 17	91	62.3	12.7
Destruction	C11 18	7	59.6	14.7
Destruction	D19 19	6	48.8	6.6
Destruction	F19 110	4	66.3	16.5
Destruction	F19 121	5	65.8	8.1
Destruction	A21 F406	5	52.8	15.4
Destruction	D26 F454	25	48.6	14.4
Destruction	J21 F393	15	52.0	9.0
Destruction	Grouped	976	59.2	12.5
Farmyard	A28 12	31	57.6	10.2
Farmyard	H21 12	8	57.1	11.1
Farmyard	H23 12	28	49.8	7.3
Farmyard	N19 12	12	55.0	11.5
Farmyard	A21 13	10	71.2	9.6
Farmyard	L26 13	4	71.8	3.5
Farmyard	D19 14	2	59.5	14.9
Farmyard	D28 14	7	60.0	15.3
Farmyard	F21 14	5	54.5	11.4
Farmyard	H23 14	3	60.3	10.0
Farmyard	L26 14	4	58.8	16.1
Farmyard	F19 15	5	49.8	5.8
Farmyard	J21 15	10	53.1	13.5
Farmyard	Baulk F19/21 15	5	63.0	12.3
Farmyard	H21 F481	34	55.5	7.3
Farmyard	Grouped	214	56.4	10.9
Modern	L21 11	6	54.5	13.7
Modern	N24 11	14	62.1	9.9
Modern	J24 12	7	56.0	8.6
Modern	L26 12	11	62.0	9.8
Modern	Grouped	43	59.9	10.5

TABLE 7.7c Ludgershall eastern sector summary of data (RVMW)

PHASE	CONTEXT	N	MEAN	ST.DEV.
C4	Grouped	6	58.8	9.3
C5	Grouped	5	60.2	14.5
C5/6	Grouped	17	71.2	9.6
C5/6	CY 18	15	71.3	10.3
C6/HL5	C15 111 F67	6	52.0	7.5
C6/HL5	C15 111 F67	7	60.7	6.4
C6/HL5	Grouped	8	51.4	6.5
HL1	Grouped	6	69.8	9.4
HL2	L21 1214 F442	16	61.3	11.1
HL2	Grouped	28	60.1	13.3
HL3	Grouped	10	60.7	6.4
HL4	C21 15	5	68.6	11.9
HL4	B23 16	33	55.4	9.6
HL4	H26 16	7	48.4	4.7
HL4	B23 17	7	66.1	9.8
HL4	D28 17	6	54.0	7.5
HL4	J13 19 F1004	3	56.7	16.5
HL4	J13 110 F1004	21	60.6	9.1
HL4	D21 115	7	64.1	19.4
HL4	F21 114	6	75.2	13.8
HL4	F21 115	7	66.3	7.7
HL4	D21 116	12	56.2	14.5
HL4	H26 F474	10	49.3	5.8
HL4	Grouped	137	59.4	12.4
HL4/Destruction	Grouped	8	54.6	6.7
HL5	A28 F472	93	53.3	10.0
HL5	Grouped	10	54.6	9.0
HL4/D	D26 13-5	17	56.4	10.0
Destruction	Z15 12	5	60.4	3.7
Destruction	B23 13	7	56.9	8.8
Destruction	C28 13	5	60.0	6.3
Destruction	D24 13	5	63.4	10.6
Destruction	H21 13	16	58.1	7.2
Destruction	J17 13	5	54.0	8.1
Destruction	J24 13	65	52.0	8.8
Destruction	L17 13	29	54.7	8.0
Destruction	L19 13	5	44.2	11.8
Destruction	L24 13	87	55.3	8.9
Destruction	L24 13 F18	20	55.3	9.8
Destruction	N24 13	7	62.3	12.7
Destruction	A19 14	3	74.7	5.0
Destruction	A24 14	4	59.8	2.9
Destruction	A28 14	15	59.1	9.3
Destruction	C15 14	22	64.6	11.3
Destruction	J13 14 F1004	105	59.7	10.3
Destruction	J17 14	5	47.6	11.8
Destruction	J23 14	9	56.2	6.2
Destruction	J24 14	31	56.6	7.2

TABLE 7.7c continued

PHASE	CONTEXT	N	MEAN	ST.DEV.
Destruction	L17 14	10	52.4	7.3
Destruction	L24 14	24	51.4	7.2
Destruction	N21 14	4	59.0	7.5
Destruction	A19 15	19	59.5	9.5
Destruction	A21 15	9	69.1	8.3
Destruction	C15 15	27	59.8	8.7
Destruction	H21 15	14	51.7	10.4
Destruction	J24 15	15	58.9	11.8
Destruction	L17 15	8	50.9	13.9
Destruction	L24 15	5	50.8	7.7
Destruction	A21 16	9	60.1	16.1
Destruction	J13 16 F1004	92	57.0	9.1
Destruction	J21 16	39	52.4	7.7
Destruction	J24 16	7	57.0	9.1
Destruction	L24 16	7	52.6	9.0
Destruction	L24 16 F22	9	67.6	9.8
Destruction	N19 16	5	50.6	5.1
Destruction	A21 17	13	64.8	9.8
Destruction	C15 17	75	53.7	10.3
Destruction	F11 18	7	73.0	13.7
Destruction	F19 110	13	73.7	11.6
Destruction	A21 F406	7	54.9	6.5
Destruction	D26 F454	18	51.1	8.3
Destruction	J21 F393	4	55.0	5.7
Destruction	Grouped	1039	56.7	10.4
Farmyard	A28 12	32	54.2	9.6
Farmyard	H19 12	7	52.4	6.8
Farmyard	H21 12	3	55.3	13.7
Farmyard	H23 12	25	52.0	9.6
Farmyard	N19 12	9	51.0	5.4
Farmyard	A21 13	12	63.8	10.5
Farmyard	L26 13	6	62.3	8.2
Farmyard	D19 14	5	53.4	9.2
Farmyard	D28 14	10	53.8	5.6
Farmyard	F21 14	5	56.8	14.2
Farmyard	H23 14	8	53.9	8.1
Farmyard	L26 14	8	55.4	5.2
Farmyard	J21 15	6	55.3	10.5
Farmyard	Baulk F19/21 15	13	56.5	10.7
Farmyard	H21 F481	30	54.2	8.8
Farmyard	Grouped	239	55.1	10.1
Modern	L21 11	4	57.8	9.0
Modern	N24 11	12	57.5	9.7
Modern	J24 12	3	58.0	3.6
Modern	L26 12	13	60.5	8.9
Modern	Grouped	42	60.1	9.5



TABLE 7.7d Ludgershall eastern sector summary of data (RVHL)

PHASE	CONTEXT	N	MEAN	ST.DEV.
C4	Grouped	6	54.1	8.1
C5	Grouped	5	52.6	13.0
C5/6	Grouped	17	63.0	7.4
C5/6	CY 18	15	63.2	7.9
C6/HL5	C15 111 F67	6	44.8	7.4
C6/HL5	C15 111 F67	7	54.9	8.2
C6/HL5	Grouped	8	44.8	6.5
HL1	Grouped	6	58.5	6.1
HL2	L21 1214 F442	16	53.6	10.4
HL2	Grouped	28	53.5	11.1
HL3	Grouped	10	55.6	7.1
HL4	C21 15	5	57.6	11.6
HL4	B23 16	34	47.5	8.9
HL4	H26 16	6	43.2	6.9
HL4	B23 17	7	61.4	8.8
HL4	H26 17	6	47.8	7.9
HL4	J13 19 F1004	3	50.7	14.5
HL4	J13 110 F1004	21	53.5	8.4
HL4	D21 115	7	60.7	20.9
HL4	F21 114	6	61.2	8.4
HL4	F21 115	7	62.1	2.3
HL4	D21 116	12	52.3	11.7
HL4	H26 F474	9	43.2	6.0
HL4	Grouped	136	52.7	11.5
HL4/Destruction	Grouped	8	48.0	6.0
HL5	A28 F472	93	46.9	9.3
HL5	Grouped	10	48.5	8.4
HL4/D	D26 13-5	17	51.2	9.7
Destruction	Z15 12	5	54.0	7.1
Destruction	B23 13	7	47.7	4.4
Destruction	C28 13	5	49.4	7.1
Destruction	D24 13	5	53.8	6.3
Destruction	H21 13	16	50.6	7.0
Destruction	J17 13	5	46.2	2.8
Destruction	J24 13	65	45.7	8.0
Destruction	L17 13	29	48.6	7.6
Destruction	L19 13	5	40.0	8.3
Destruction	L24 13	87	47.6	8.1
Destruction	L24 13 F18	20	48.4	9.3
Destruction	N24 13	7	52.1	8.9
Destruction	A19 14	3	69.3	5.8
Destruction	A24 14	4	46.3	5.3
Destruction	A28 14	15	50.2	12.0
Destruction	C15 14	22	56.1	9.6
Destruction	J13 14 F1004	106	51.6	10.2
Destruction	J17 14	5	41.6	6.1
Destruction	J23 14	9	47.0	5.7
Destruction	J24 14	31	48.3	6.4

TABLE 7.7d continued

PHASE	CONTEXT	N	MEAN	ST.DEV.
Destruction	L17 14	10	45.2	7.8
Destruction	L24 14	24	45.5	7.4
Destruction	N21 14	4	50.0	7.6
Destruction	A19 15	19	52.2	8.6
Destruction	A21 15	9	64.0	10.4
Destruction	C15 15	27	55.7	9.2
Destruction	H21 15	14	46.3	9.9
Destruction	J24 15	15	51.4	10.6
Destruction	L17 15	8	44.4	13.2
Destruction	L24 15	5	44.8	7.3
Destruction	A21 16	9	53.4	15.7
Destruction	J13 16 F1004	92	51.0	8.9
Destruction	J21 16	39	46.4	8.0
Destruction	J24 16	7	49.9	8.6
Destruction	L24 16	7	47.9	9.1
Destruction	L24 16 F22	9	59.1	9.0
Destruction	N19 16	5	44.2	4.5
Destruction	A21 17	13	55.6	8.7
Destruction	C15 17	75	48.3	11.1
Destruction	C11 18	7	61.7	12.3
Destruction	F19 110	13	64.2	11.1
Destruction	A21 F406	7	49.4	6.2
Destruction	D26 F454	18	43.4	8.2
Destruction	J21 F393	4	48.0	7.4
Destruction	Grouped	1042	50.1	10.1
Farmyard	A28 12	32	47.4	7.5
Farmyard	H19 12	7	43.9	5.8
Farmyard	H21 12	3	50.0	4.4
Farmyard	H23 12	24	46.3	9.5
Farmyard	N19 12	9	48.0	6.9
Farmyard	A21 13	12	53.8	11.6
Farmyard	L26 13	6	52.8	6.2
Farmyard	D19 14	5	52.6	8.9
Farmyard	D28 14	10	47.2	6.7
Farmyard	F21 14	5	49.8	11.4
Farmyard	H23 14	8	49.8	5.6
Farmyard	L26 14	8	48.3	6.5
Farmyard	D19 15	6	55.8	9.8
Farmyard	J21 15	6	51.8	9.4
Farmyard	Baulk F19/21 15	13	51.8	10.9
Farmyard	H21 F481	30	47.3	7.2
Farmyard	Grouped	238	48.9	9.1
Modern	L21 11	4	47.5	5.8
Modern	N24 11	12	48.6	9.2
Modern	J24 12	3	48.7	8.2
Modern	L26 12	13	52.6	7.5
Modern	Grouped	44	51.2	9.8

Figure GRAPH TO SHOW THE CHANGES IN ARITHMETIC MEAN OF GROUPED SAMPLES 7.1a FROM MAJOR PHASES IN THE EAST SECTOR. LEFT VALVE MAXIMUM WIDTH

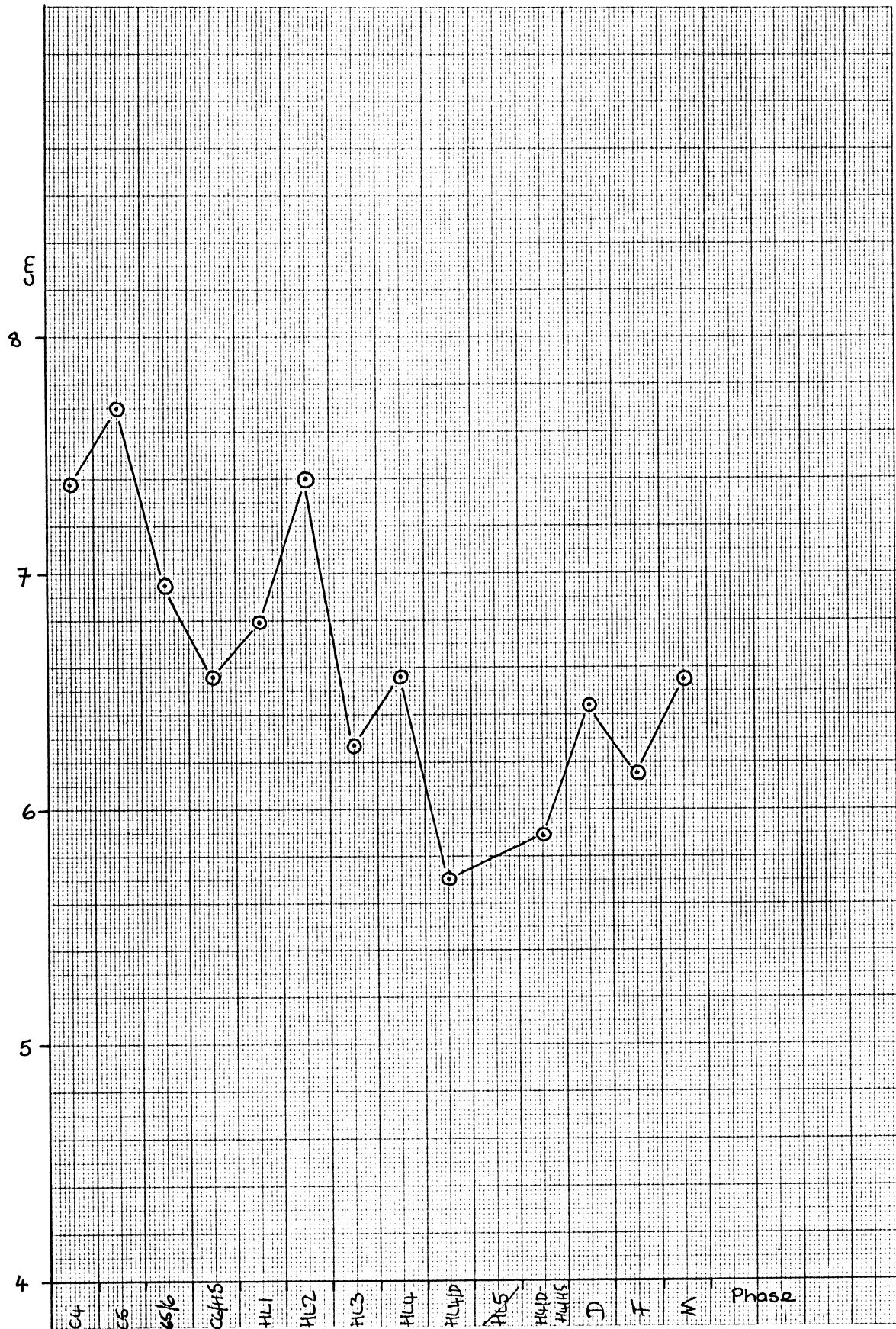
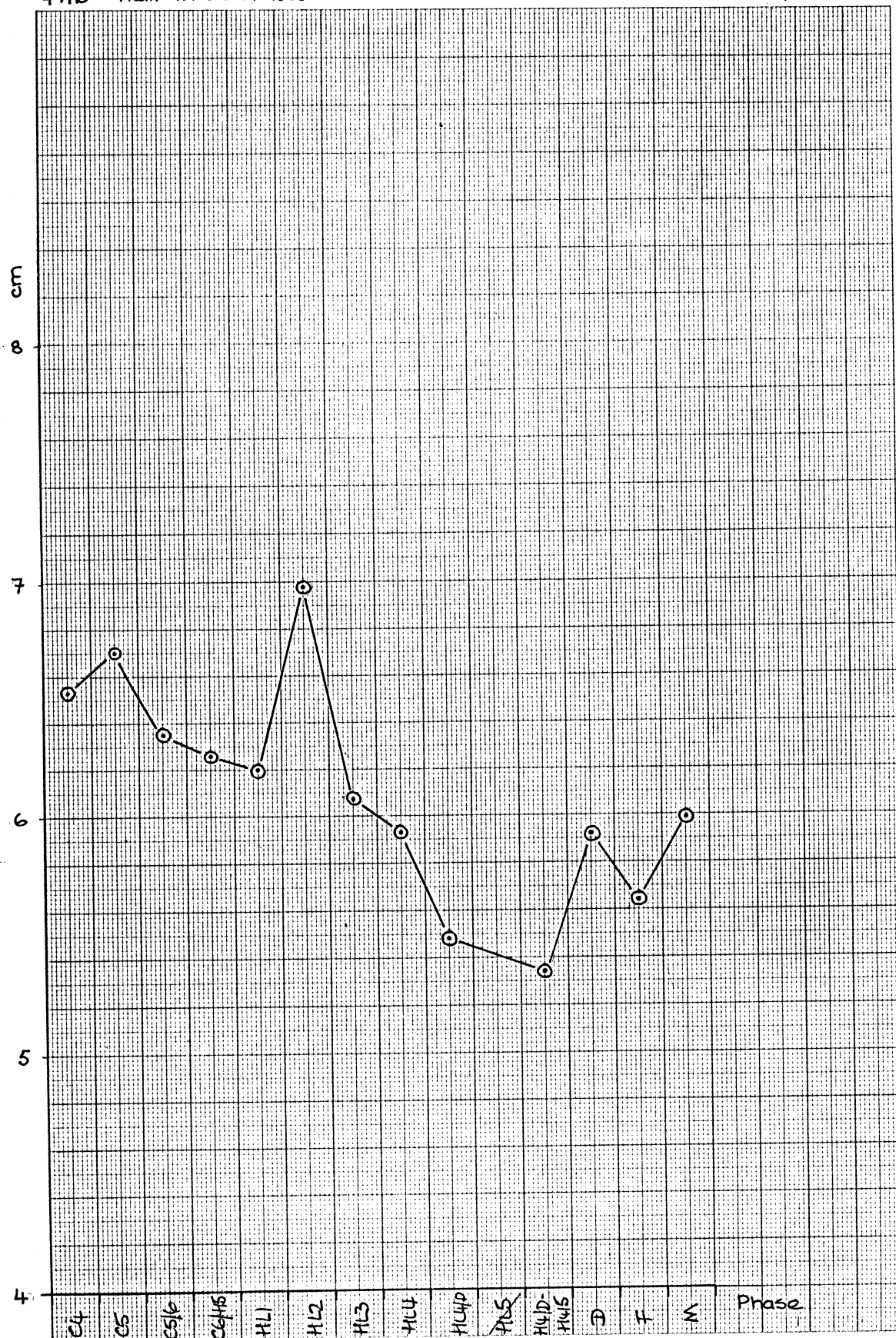


Figure 7.1b GRAPH TO SHOW THE CHANGES IN ARITHMETIC MEAN OF GROUPED SAMPLES FROM MAJOR PHASES IN THE EAST SECTOR. LEFT VALVES MAXIMUM LENGTH



7.1c

Figure GRAPH TO SHOW THE CHANGES IN ARITHMETIC MEAN OF GROUPED SAMPLES 7.1c FROM MAJOR PHASES IN THE EAST SECTOR. RIGHT VALVES MAXIMUM WIDTH

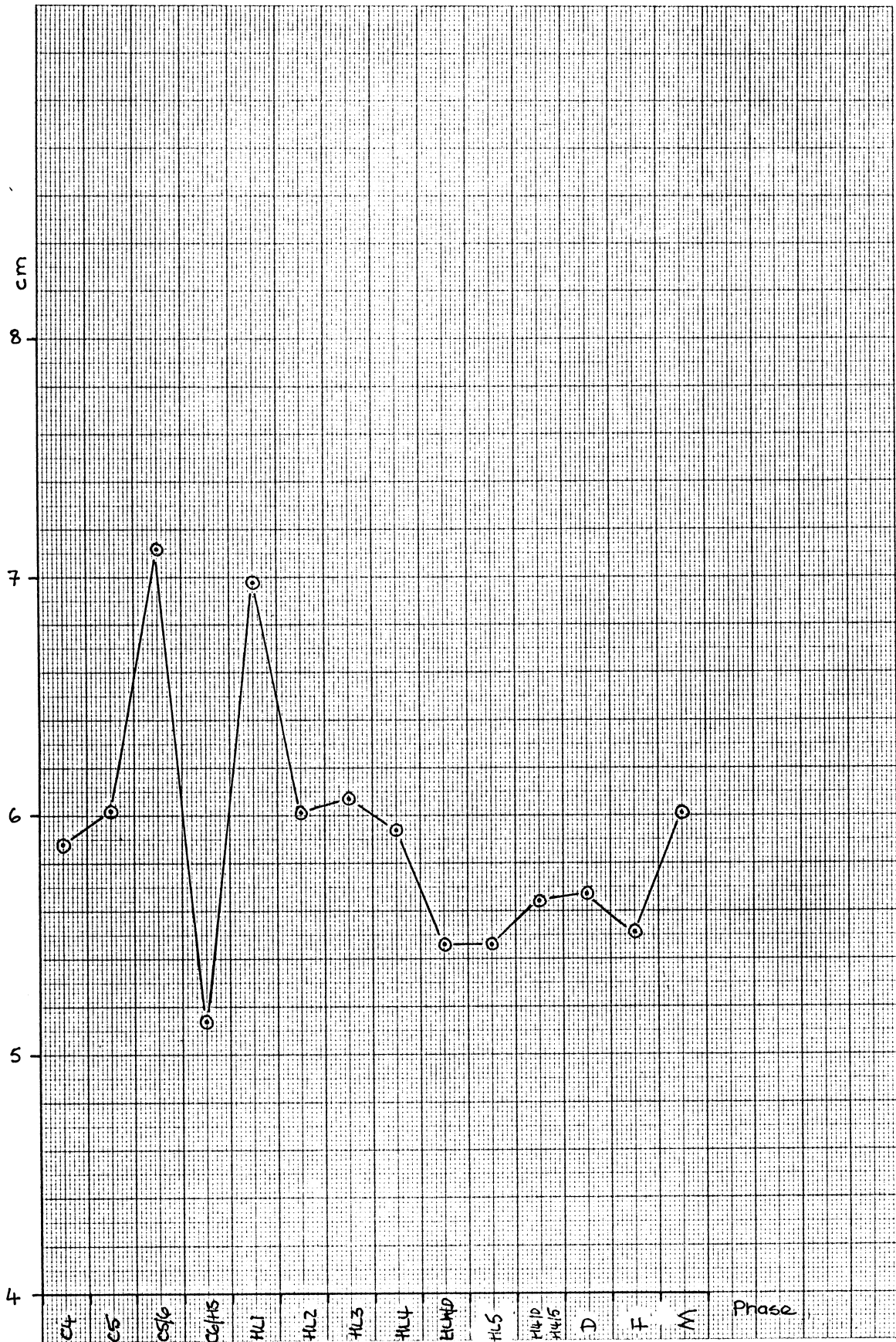
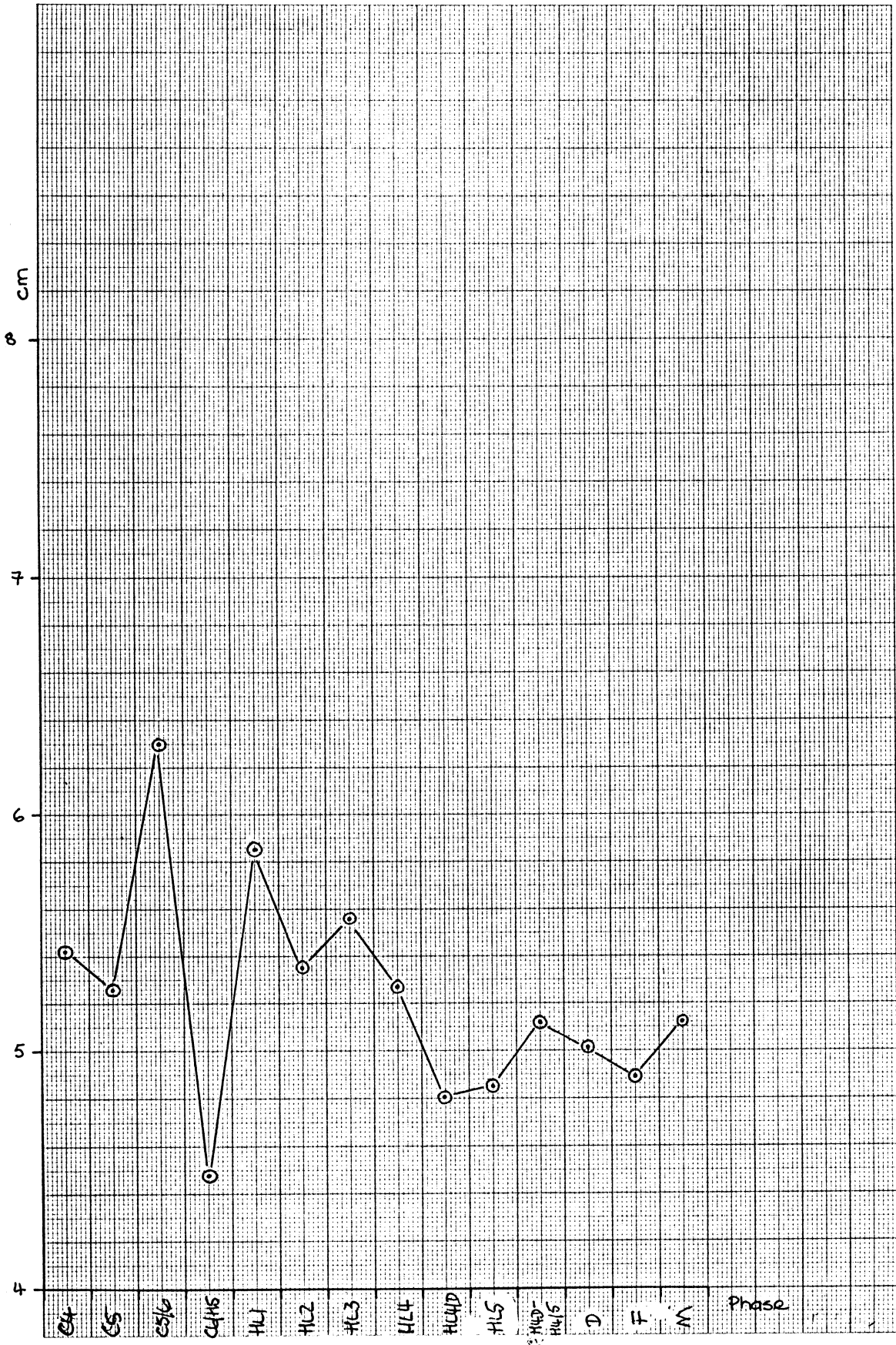


FIGURE GRAPH TO SHOW THE CHANGES IN ARITHMETIC MEAN OF GROUPED SAMPLES  
7.1d FROM MAJOR PHASES IN THE EAST SECTOR . RIGHT VALVES MAXIMUM LENGTH



LUDGERSHALL, EASTERN SECTOR, COMPARISON OF MEASUREMENTS FOR GROUPED DATA OF EACH PHASE

PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	C4	-	-	-	-	-	-	-	-	S	O	+	-	+	-	
2	C5	-	-	-	-	-	-	-	-	-	-	+	-	+	-	
3	C5/6	-	-	-	-	-	-	-	-	-	-	+	X	+	-	
4	C6/HLS	-	-	-	-	-	-	-	-	-	-	+	-	-	-	
5	HL1	-	-	-	-	-	-	-	-	-	-	+	-	-	+	
6	HL2	-	-	-	-	-	-	+	+	-	-	+	+	-	+	
7	HL3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	HL4	-	-	-	-	-	-	-	-	-	-	+	-	+	-	
9	HL4   DESTRUCTION	S														
10	HLS	O														
11	HLS   DESTRUCTION												+	+	+	
12	DESTRUCTION												+	-		
13	FARMYARD														+	
14	MODERN															
1	C4	-	-	-	-	-	-	-	-	+	S	O	+	+	+	X
2	C5	-	-	-	-	-	-	-	-	+			+	+	+	+
3	C5/6	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-
4	C6/HLS	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
5	HL1	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-
6	HL2	-	-	-	-	-	-	+	+	-	-	-	+	+	+	+
7	HL3	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
8	HL4	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-
9	HL4   DESTRUCTION	S														
10	HLS	O														
11	HLS   DESTRUCTION													+	+	+
12	DESTRUCTION													+	-	
13	FARMYARD															-
14	MODERN															
1	C4	+	X	-	-	-	-	-	-	-	-	-	-	-	-	
2	C5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	C5/6	+	-	+	+	+	+	+	+	+	+	+	+	+	+	
4	C6/HLS	+	X	+	X	-	-	-	-	-	-	-	-	-	+	
5	HL1	-	X	X	+	+	+	+	+	+	+	+	+	+	+	
6	HL2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	HL3	-	-	-	-	-	-	-	X	-	+	-	+	-	-	
8	HL4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	HL4   DESTRUCTION															
10	HLS															
11	HLS   DESTRUCTION													+	-	+
12	DESTRUCTION													+	+	
13	FARMYARD															+
14	MODERN															
1	C4	-	X	X	-	-	-	-	-	-	-	-	-	-	-	
2	C5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	C5/6	+	-	+	X	+	+	+	+	+	+	+	+	+	+	
4	C6/HLS	+	-	+	-	-	-	-	-	-	-	-	-	-	-	
5	HL1	-	-	-	X	+	X	+	+	+	+	+	+	+	-	
6	HL2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	HL3	-	-	-	-	-	-	-	X	X	+	+	+	-	-	
8	HL4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	HL4   DESTRUCTION															
10	HLS															
11	HLS   DESTRUCTION													+	-	+
12	DESTRUCTION													-	-	
13	FARMYARD															-
14	MODERN															

LEFT VALVE MAXIMUM WIDTH

LEFT VALVE MAXIMUM LENGTH

RIGHT VALVE MAXIMUM WIDTH

RIGHT VALVE MAXIMUM LENGTH

- NO SIGNIFICANT DIFFERENCE  
 + SIGNIFICANT DIFFERENCE  
 X SIG. DIFF. BUT STATS. LESS RELIABLE  
 S TOO SMALL A SAMPLE < 5  
 O NO SAMPLE

LUDGERSHALL, EASTERN SECTOR HL4 PHASE COMPARISON OF MEASUREMENTS

CONTEXT			
13	C 21 ⑤		-- S O -- O S -- -- --
14	B 23 ⑥		- - + + -- +
15	H 26 ⑥		- + + -- --
17	B 23 ⑦	S	
16	D 28 ⑦	O	
21	J 13 ⑨ 1004		- -- X -
22	J 13 ⑩ 1004		-- + +
19	F 21 ⑭	O	
14	D 21 ⑮	S	
18	F 21 ⑮		- + -
15	D 21 ⑯		X -
20	H 26 ⑰ 474		+
GROUPED DATA			
13	C 21 ⑤		-- S O -- O S -- -- --
14	B 23 ⑥		- - + + -- +
15	H 26 ⑥		X + + -- +
17	B 23 ⑦	S	
16	D 28 ⑦	O	
21	J 13 ⑨ 1004		- -- X -
22	J 13 ⑩ 1004		-- X +
19	F 21 ⑭	O	
14	D 21 ⑮	S	
18	F 21 ⑮		+ + -
15	D 21 ⑯		--
20	H 26 ⑰ 474		X
GROUPED DATA			
13	C 21 ⑤		+ + - X S -- -- -- X + -
14	B 23 ⑥		X + + - + - + - - -
15	H 26 ⑥		+ - + + - + - - +
17	B 23 ⑦		X - - - - - + -
16	D 28 ⑦		- + - + - - -
21	J 13 ⑨ 1004	S	
22	J 13 ⑩ 1004		+ - - - + -
19	F 21 ⑭		- - X + X
14	D 21 ⑮		- - - -
18	F 21 ⑮		X + X
15	D 21 ⑯		- -
20	H 26 ⑰ 474		+
GROUPED DATA			
13	C 21 ⑤		+ X -- S -- -- -- + -
14	B 23 ⑥		- + - + + - + - - X
15	H 26 ⑥		+ - + + - + - - +
17	B 23 ⑦		+ X - - - + +
16	D 28 ⑦		- + - + - - -
21	J 13 ⑨ 1004	S	
22	J 13 ⑩ 1004		- - + - + -
19	F 21 ⑭		- - - + -
14	D 21 ⑮		- - - -
18	F 21 ⑮		+ + +
15	D 21 ⑯		X -
20	H 26 ⑰ 474		+
GROUPED DATA			

- NO SIGNIFICANT DIFFERENCE  
 + SIGNIFICANT DIFFERENCE  
 X SIGNIFICANT DIFFERENCE  
 S TOO SMALL A SAMPLE < 5  
 O NO SAMPLE

LEFT VALVE MAX. WIDTH

LEFT VALVE MAX. LENGTH

RIGHT VALVE MAX. WIDTH

RIGHT VALVE MAX. LENGTH

LUICKERSHALL, EASTERN SECTOR, DESTRUCTION PHASE, COMPARISON OF MEASUREMENTS  
LEFT VALVE MAXIMUM WIDTH

CONTEXT	O	S	S	S	S	S	S	S	S	S
Z 16 (2)										
B 23 (2)										
C 28 (2)										
D 24 (2)										
H 19 (2)										
H 21 (2)										
J 17 (2)										
J 24 (2)										
L 17 (2)										
L 19 (2)										
L 24 (2)										
L 24 (2) 18										
N 24 (2)										
A 19 (2)										
A 24 (2)										
A 28 (2)										
C 15 (2)										
J 13 (2) 1004										
J 17 (2)										
J 23 (2)										
J 24 (2)										
L 17 (2)										
L 24 (2)										
N 21 (2)										
A 19 (2)										
A 21 (2)										
C 15 (2)										
H 21 (2)										
J 24 (2)										
L 17 (2)										
L 24 (2)										
A 21 (2)										
F 21 (2)										
J 13 (2) 1004										
J 21 (2)										
J 24 (2)										
L 24 (2)										
L 24 (2) 22										
N 19 (2)										
A 21 (2)										
C 15 (2)										
C 11 (2)										
D 19 (2)										
F 19 (2)										
F 19 (2)										
A 21 (2) 406										
D 26 (2) 454										
J 21 (2) 393										

- NO SIGNIFICANT DIFFERENCE  
 + SIGNIFICANT DIFFERENCE  
 X SIG. DIFF. BUT STATISTICS LESS REUABLE  
 S TOO SMALL A SAMPLE < 5  
 O NO SAMPLE



LUDEGERSHALL, EASTERN SECTOR, DESTRUCTION PHASE, COMPARISON OF MEASUREMENTS  
LEFT VALUE MAXIMUM LENGTH

CONTEXT	0	5	5	S	S	S	S	S	S	S	S	S	S	S	S
Z 15 (2)	0	S	S												
B 23 (3)	S														
C 28 (3)	S														
D 24 (3)		-	+	+	+	+	+	-	X	-	-	-	-	-	+
H 19 (3)		-	X	-	-	-	X	+	-	-	-	-	X	-	-
H 21 (3)		-	-	-	X	+	-	+	+	+	+	+	+	+	-
J 17 (3)		+	-	+	+	+	+	+	+	+	+	+	+	+	+
J 24 (3)		-	+	+	+	+	X	+	+	+	+	+	+	+	+
L 17 (3)		-	+	+	+	+	+	+	+	+	+	+	+	+	+
L 19 (3)	S														
L 24 (3)		-	+	+	+	+	+	+	+	+	+	+	+	+	+
L 24 (3) [18]		-	X	+	-	-	-	+	X	-	-	-	X	-	-
N 24 (3)		-	X	+	-	-	-	-	X	-	-	-	-	X	-
A 17 (4)															
A 24 (4)															
A 28 (4)															
C 15 (4)															
J 13 (4) [1004]															
J 17 (4)	S														
J 23 (4)	S														
J 24 (4)															
L 17 (4)	S														
L 24 (4)		-	+	+	+	-	X	+	+	X	-	-	+	-	-
N 21 (4)		-	+	+	+	-	X	-	X	-	-	-	X	-	-
A 19 (5)		+	+	+	+	+	+	+	+	+	+	+	+	+	+
A 21 (5)		-	+	+	+	+	+	+	+	+	+	+	+	+	+
C 15 (5)		+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 (5)		-	+	+	+	+	+	+	+	+	+	+	+	+	+
J 24 (5)		-	+	+	+	+	+	+	+	+	+	+	+	+	+
L 17 (5)		-	+	+	+	+	+	+	+	+	+	+	+	+	+
L 24 (5)		-	+	+	+	+	+	+	+	+	+	+	+	+	+
A 21 (6)		+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 21 (6)		+	+	+	+	+	+	+	+	+	+	+	+	+	+
J 13 (6) [1004]		+	+	+	+	+	+	+	+	+	+	+	+	+	+
J 21 (6)		+	+	+	+	+	+	+	+	+	+	+	+	+	+
J 24 (6)		+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 24 (6)	S														
L 24 (6) [22]															
N 19 (6)	S														
A 21 (7)															
C 15 (7)															
C 11 (8)															
D 19 (8)															
F 19 (8)	S														
F 19 (8)	S														
F 19 (21)															
A 21 [406]															
D 26 [454]															
J 21 [343]	S														

- NO SIGNIFICANT DIFFERENCE  
 + SIGNIFICANT DIFFERENCE  
 X SIG. DIFF. BUT STATISTICS LESS RELIABLE  
 S TOO SMALL ASAMPLE < 5  
 O NO SAMPLE





LUDGERSHALL EASTERN SECTOR FARMHARD PHASE COMPARISON OF MEASUREMENTS

CONTEXT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A 28 ②	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 19 ④	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 23 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
N 19 ②		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A 21 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 28 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
J 21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Boyle F19/21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GROUPED DATA		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A 28 ②	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 19 ④	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 23 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
N 19 ②		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A 21 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 28 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
J 21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Boyle F19/21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GROUPED DATA		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

LEFT VALUE MAXIMUM WIDTH

LEFT VALUE MAXIMUM LENGTH

CONTEXT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A 28 ②	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 19 ④	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 23 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
N 19 ②		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A 21 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 28 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
J 21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Boyle F19/21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GROUPED DATA		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A 28 ②	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 19 ④	S	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 23 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
N 19 ②		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A 21 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ③		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 28 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 21 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
L 26 ④		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F 19 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
J 21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Boyle F19/21 ⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H 21 ④⑤		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GROUPED DATA		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

RIGHT VALUE MAXIMUM WIDTH

RIGHT VALUE MAXIMUM LENGTH

- NO SIGNIFICANT DIFFERENCE
- + SIGNIFICANT DIFFERENCE
- X SIG. DIFF. BUT STATISTICS LESS RELIABLE
- S TOO SMALL A SAMPLE < 5
- O NO SAMPLE

**TABLE 7.12**  
**Linear regression in size of oyster shells from grouped samples in**  
**the southwest and southeast sectors**

SECTOR & PHASE		N	SLOPE	CORR CO-EFF	y-INTER CEPT
Southwest					
12th c. grouped	L	16	0.87	0.73	15.73
	R	27	0.67	0.71	23.13
Southeast					
Post-castle destruction	L	44	0.94	0.89	9.30
	R	49	1.03	0.91	3.62
Modern	L	38	0.87	0.88	12.95
	R	53	0.96	0.87	9.47

TABLE 7.13 Ludgershall eastern sector linear regressions in selected samples of oyster shells

SAMPLE		N	SLOPE	CORR CO-EFF	y-INTER- CEPT
C4 grouped	L	4	2.17	0.81	-67.55
	R	6	1.13	0.98	- 2.43
C5 grouped	L	3	0.99	not calculated	
	R	5	1.08	0.97	3.16
C5/6 grouped	L	11	0.42	0.48	43.15
	R	17	1.10	0.85	2.07
C5/HL5					
C15 111 F67	L	8	0.78	0.90	16.75
	R	8	0.71	0.71	19.59
HL1 grouped	L	11	0.78	0.77	19.51
	R	6	1.31	0.85	- 6.84
HL2 grouped incl F442	L	28	0.63	0.66	30.15
	R	28	1.05	0.87	4.19
HL3 grouped	L	9	0.82	0.84	14.92
	R	10	0.67	0.75	23.32
HL4 B23 12	L	37	0.75	0.77	20.67
	R	33	1.03	0.94	6.92
HL4 J13 110 F1004	L	26	0.73	0.75	21.59
	R	21	1.01	0.93	6.76
HL5/D A28 F472	L	100	0.90	0.88	11.77
	R	93	0.91	0.85	10.72
DESTRUCTION					
C15 17	L	91	0.75	0.87	17.75
	R	75	0.89	0.95	10.98
L24 13	L	100	0.78	0.76	17.98
	R	87	0.92	0.84	11.72
J13 16 F1004	L	88	0.72	0.84	20.68
	R	92	0.88	0.87	12.27
J13 14 F1004	L		0.93	0.84	11.07
	R		0.93	0.89	11.68
J24 13	L	44	0.94	0.87	8.95
	R	65	0.95	0.87	8.42
FARMYARD					
A28 12	L	31	0.57	0.70	30.85
	R	32	1.12	0.86	1.10
Farmyard H21 F481	L	34	0.59	0.60	25.22
	R	34	1.05	0.85	4.73
MODERN					
Grouped	L	43	0.75	0.77	20.80
	R	42	0.86	0.86	15.36





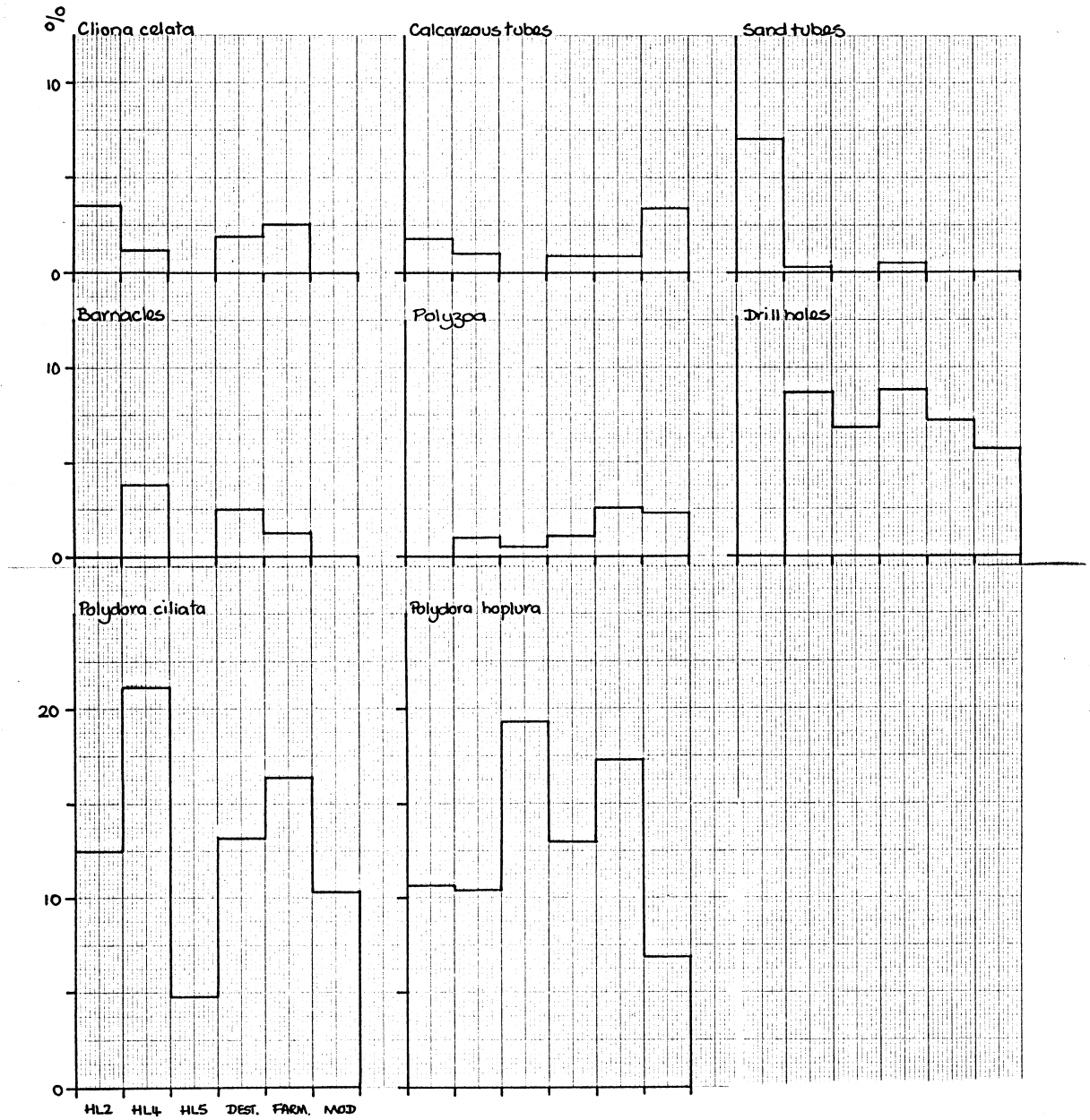


EAST SECTOR

INFESTATION OF OYSTER SHELLS FROM THE EAST SECTOR

	No. shells in sample	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Ciona celata</i>	<i>Calcarius tuba</i>	Sand tube	Barnacle	Polychaeta	Drill hole	<i>Sadolla oyster</i>	Oyster spat
C1	0	-	-	-	-	-	-	-	-	-	-
C2	0	-	-	-	-	-	-	-	-	-	-
C3	0	-	-	-	-	-	-	-	-	-	-
C4	10	3	3	-	-	-	-	-	3	-	-
C5	8	4	-	-	-	-	-	-	-	-	-
C4/6	1	-	-	-	-	-	-	-	-	-	-
C5/6	28	5	3	-	-	-	-	-	2	-	-
C6	3	1	2	-	-	-	-	-	1	-	-
C6/HL5	16	-	1	-	-	-	2	-	-	-	3
C6/HL2	2	-	-	-	-	-	-	-	-	-	-
C7	5	1	2	-	-	-	-	-	-	-	-
HL1	17	3	4	1	-	-	-	-	2	-	-
HL2	56	7	6	2	1	4	-	-	-	4	1
HL3	21	3	4	-	-	-	-	-	3	2	2
HL3/HL4	1	-	-	-	-	-	-	-	-	-	-
HL4	307	61	26	1	3	1	10	3	21	2	8
HL4/Destruction	12	-	4	3	-	-	1	-	4	1	-
HL5	11	5	2	-	-	-	-	1	1	-	-
HL5/Destruction	196	5	38	-	-	-	-	-	13	2	6
Destruction	2021	266	263	39	20	11	50	22	178	87	81
Farmyard	457	75	79	12	4	0	6	12	33	11	11
Modern	87	9	6	-	3	-	-	2	5	4	1
Total numbers	3259	448	443	58	31	16	69	40	266	113	113
% of total		13.7	13.6	1.8	1.0	0.5	2.1	1.2	8.1	3.5	3.5

LUDGERSHALL HISTOGRAMS TO SHOW %FREQUENCY OF INFESTATION TYPES FOR PHASES IN EAST SECTOR  
EAST SECTOR FIGURE 7.2



LUDGERSHALL TABLE 7.17  
 SOUTH EAST SECTOR  
 INFESTATION AS A PERCENTAGE OF INDIVIDUAL SAMPLES

	Polydora ciliata	Polydora hoplura	Cirion celata	Calcareous tube	Sand tube	Barnacle	Polyzoa	Drill hole	Saddle oyster	Oyster spat
Post-castle	12.5	18.8	2.1	0	0	0	0	8.3	0	0
Post-castle destruction	17.2	10.8	4.3	0	0	4.3	0	6.5	5.4	0
Modern	26.4	7.7	2.2	1.1	0	0	0	6.6	2.2	0

LUDGERSHALL TABLE 7.18  
 EAST SECTOR  
 INFESTATION AS A PERCENTAGE OF INDIVIDUAL SAMPLES

	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Cliona celata</i>	Calcareous tube	Sand tube	Barnacle	Polyzoa	Drill hole	Saddle oyster	Oyster spat
HL2	12.5	10.7	3.6	1.8	7.1	-	-	-	7.1	1.8
HL4	19.9	8.5	0.3	1.0	0.3	3.3	1.0	6.8	0.7	2.6
HL4/Destruction	-	33.3	25	-	-	8.3	-	33.3	8.3	-
HL4 + HL4/Destruction	19.1	9.4	1.3	1.0	0.3	3.4	1.0	7.8	1.0	2.5
HL5	45.5	18.2	-	-	-	-	9.1	9.1	-	-
HL5/Destruction	2.6	19.4	-	-	-	-	-	6.6	1.0	3.1
HL5 + HL5/Destruction	4.8	19.3	-	-	-	-	0.5	6.8	1.0	2.9
Destruction	13.2	13	1.9	0.9	0.5	2.5	1.1	8.8	4.3	4.0
Farmyard	16.4	17.3	2.6	0.9	-	1.3	2.6	7.2	2.4	2.4
Modern	10.3	6.9	-	3.4	-	-	2.3	5.7	4.6	1.1
Farmyard + Modern	15.4	15.6	2.2	1.3	-	1.1	2.6	7.0	2.8	2.2

## FIGURE 7.3 LUDGERSHALL

## COUNTS AND DISTRIBUTION OF MARINE MOLLUSCS OTHER THAN OYSTER

	MUSSEL	COCKLE	WINKLE	WHELK
SOUTH WEST SECTOR				
12th century	-	3	1	-
Post medieval	1	-	-	-
SOUTH EAST SECTOR				
Timber 2/ Timber 3	-	-	1	-
Timber 3	-	-	2	-
Post-castle destruction	1	-	-	-
Modern	-	2	-	-
EAST SECTOR				
HL 2	1	-	-	-
HL 4	18	4	-	16
HL 5	3	-	-	-
Destruction	19	2	-	-
Farmyard	1	2	-	1
Modern	1	-	-	-

TABLE 7.19

SALISBURY W139 DISTRIBUTION OF OYSTER SHELLS BY PHASE

PHASE	LV	UMLV	TOT.LV	%UMLV	RV	UMRV	TOT.RV	%UMRV	TOTAL LV+RV	MNI	%SHE.TOT.
2a 13/14th c.	1	0	1	0	0	1	1	100	2	1	0.62
2b 14/15th c.	2	0	2	0	1	0	1	0	3	2	0.94
2 13-15th c.	13	6	21	38.1	25	13	38	34.21	59	38	18.38
3a 15/16th c.	10	9	19	47.4	11	9	20	45	39	20	12.15
3 15-17th c.	4	2	6	33.33	5	0	5	0	11	6	3.43
4 16/17th c.	2	1	3	33.33	5	1	6	16.66	9	6	2.8
(3a+3+4	16	12	28	42.86	21	10	31	32.26	59	32	18.38
5 17th c.	45	43	88	48.9	77	31	108	28.70	196	108	61.06
6 18/19th c.	0	0	0	0	2	0	2	0	2	2	0.62
COLUMN TOTALS	77	63	140	45	127	55	182	30.22	321	184	—

SALISBURY W139 SUMMARY OF SIZE DATA

	N	MEAN	MEDIAN	TRMEAN	STDEV	SEMEAN	MIN	MAX
salis.2	25	57.72	59.00	57.65	7.89	1.58	44.00	73.00
salis.3a	21	53.90	56.00	53.89	12.02	2.62	30.00	78.00
salis.5	77	57.65	58.00	57.20	11.48	1.31	35.00	95.00

N represents number in sample  
 TR MEAN represents transformed mean  
 STDEV represents standard deviation  
 SE MEAN represents standard error of the mean  
 MIN represents minimum measurement  
 MAX represents maximum measurement.

FIGURE 7.4 SALISBURY

Histogram of Salisbury W139 oyster shells Phase 2 n = 25

Midpoint	Count	
44	2	**
48	2	**
52	3	***
56	5	*****
60	4	****
64	6	*****
68	1	*
72	2	**

Histogram of Salisbury W139 oyster shells Phases 3, 3a + 4 n = 21

Midpoint	Count	
30	1	*
35	1	*
40	2	**
45	1	*
50	4	****
55	4	****
60	3	***
65	3	***
70	1	*
75	0	
80	1	*

Histogram of Salisbury W139 oyster shells phase 5 n = 77

Midpoint	Count	
35	2	**
40	5	*****
45	9	*****
50	10	*****
55	10	*****
60	17	*****
65	13	*****
70	5	*****
75	1	*
80	2	**
85	2	**
90	0	
95	1	*



FIGURE 7.5

SALISBURY W139 SIZE FREQUENCY OF OYSTER SHELLS RYMW PHASE 2 (incl. 2a + 2b) n = 26

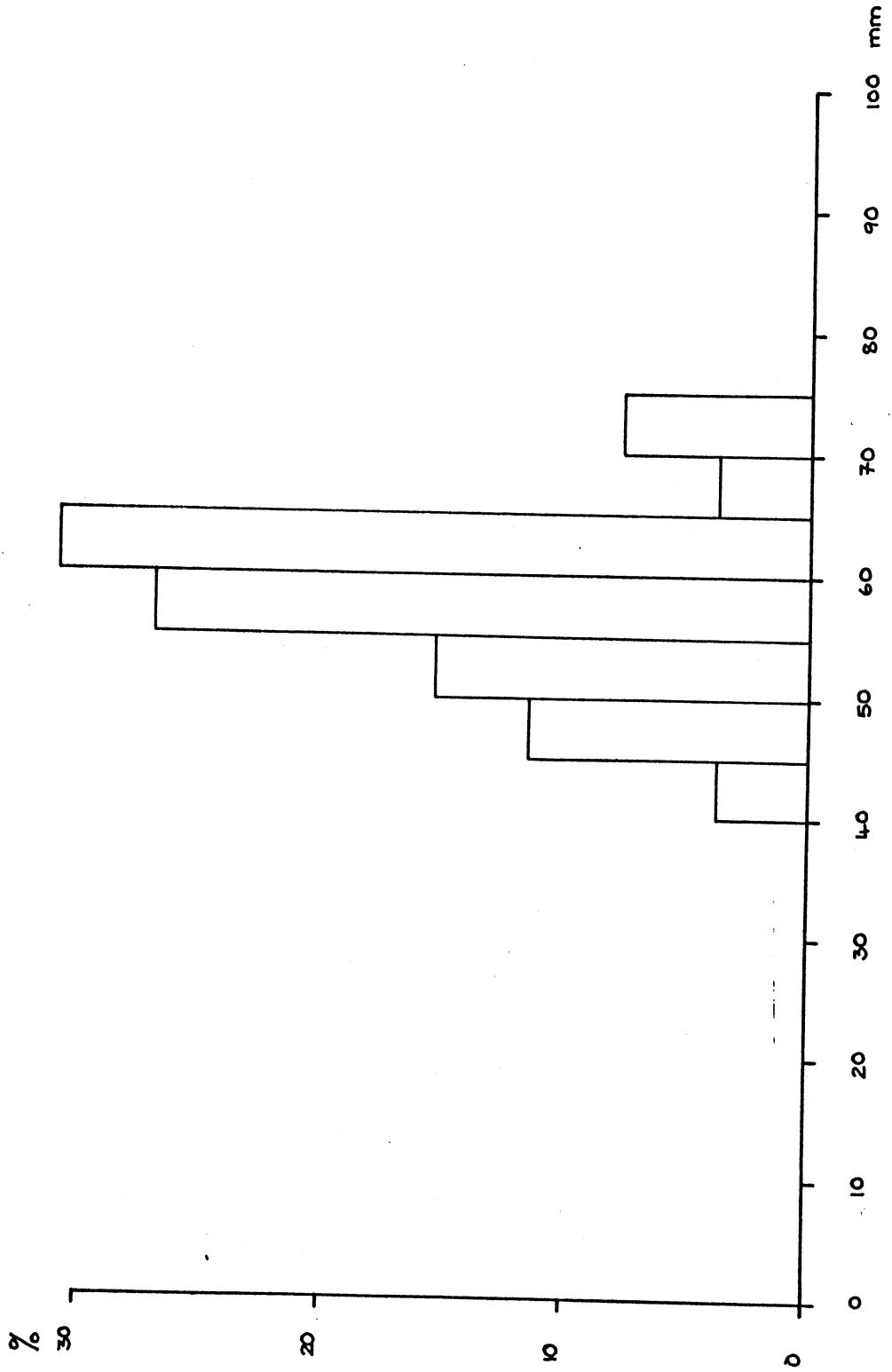


FIGURE 7.8

SALISBURY W139 SIZE FREQUENCY OF OYSTER SHELLS RVMW PHASE 3a(+3+4) n = 21

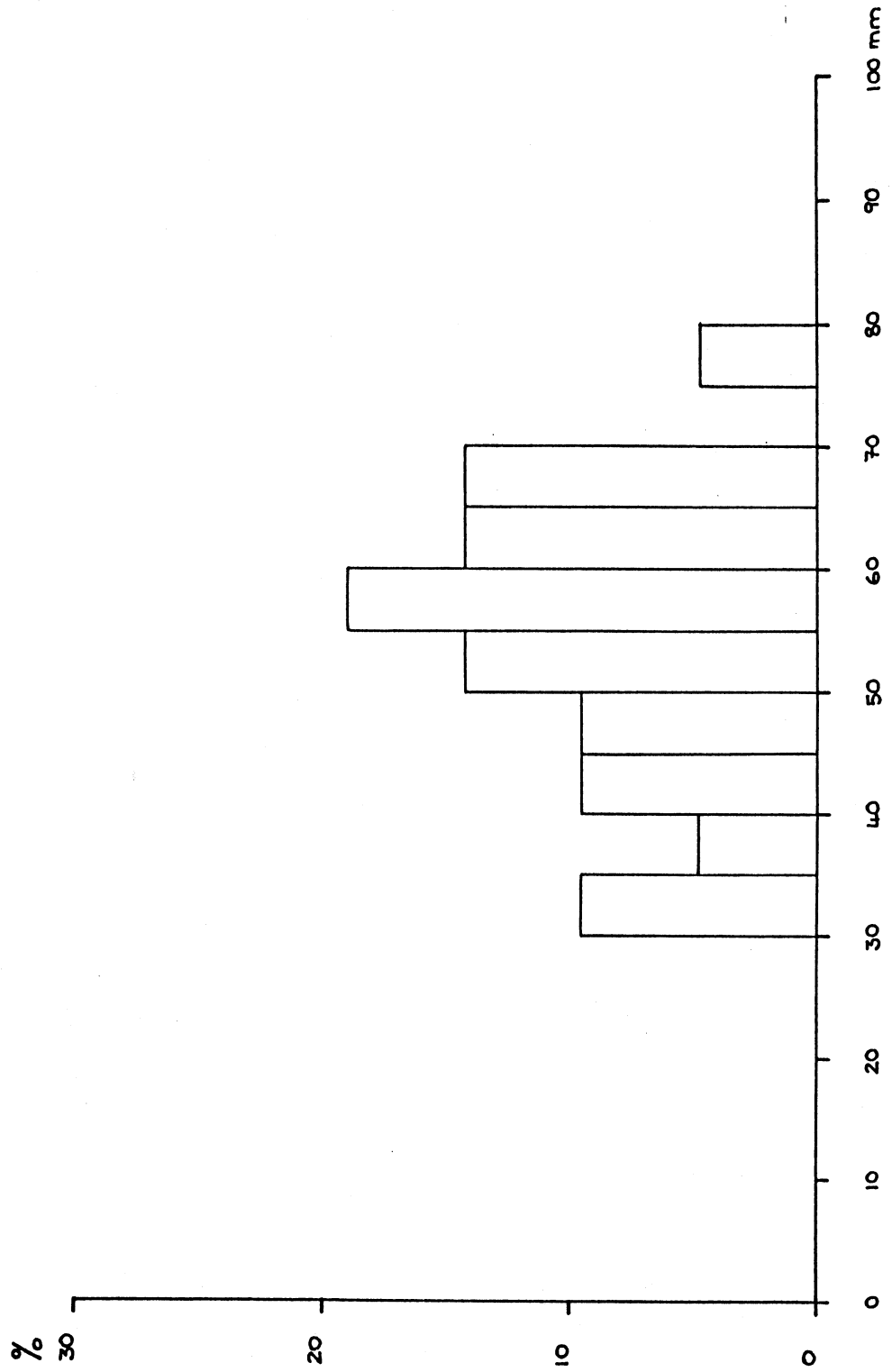
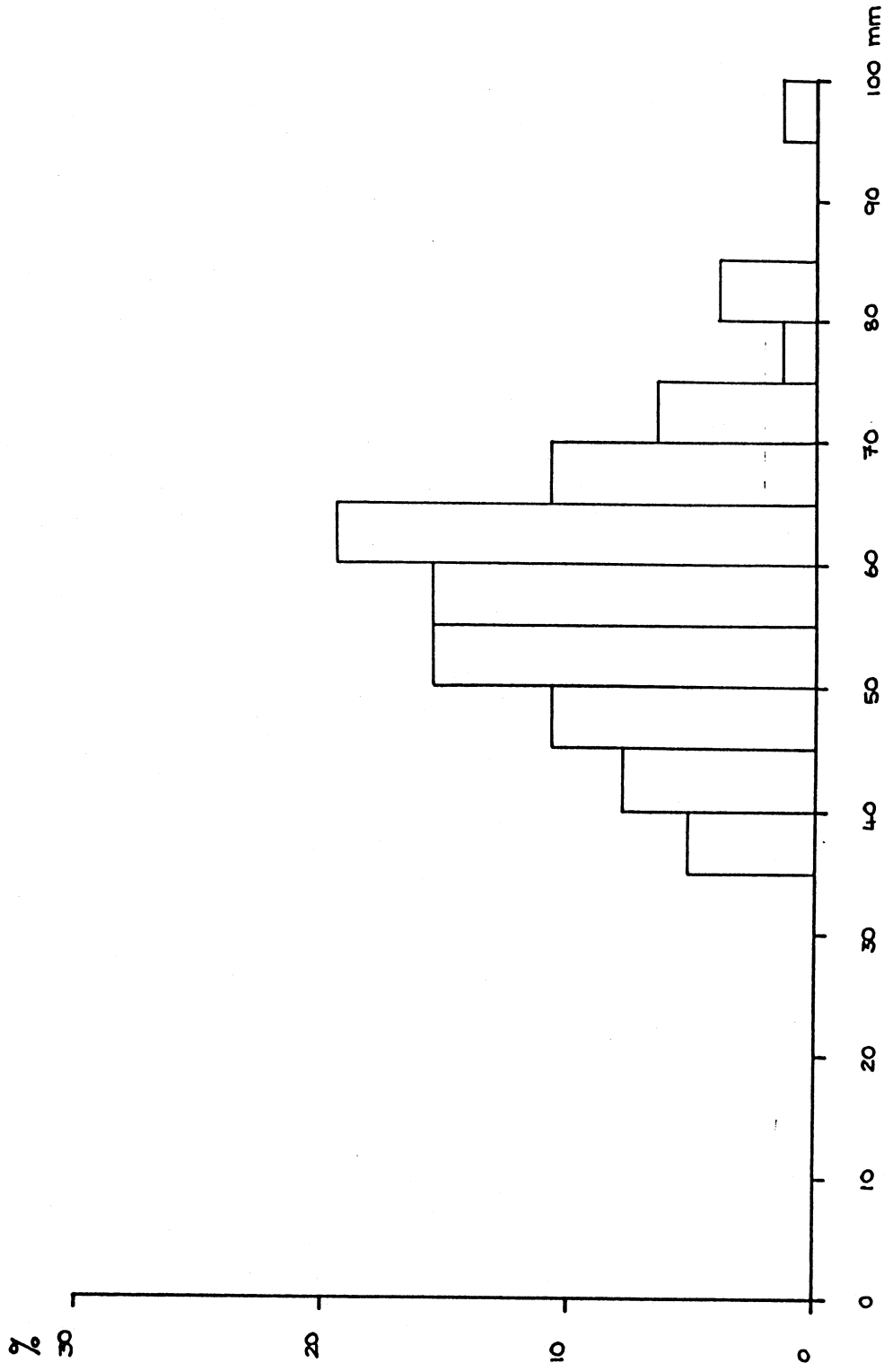


FIGURE 7.7

SALISBURY W139 SIZE FREQUENCY OF OYSTER SHELLS RYMW PHASE 5 n = 77



SALISBURY W139 MATRICES OF RESULTS FROM TWO SAMPLE T-TESTS ON RIGHT VALVE MAXIMUM WIDTH MEASUREMENTS OF OYSTER SHELL SAMPLES

ACTUAL T-VALUES

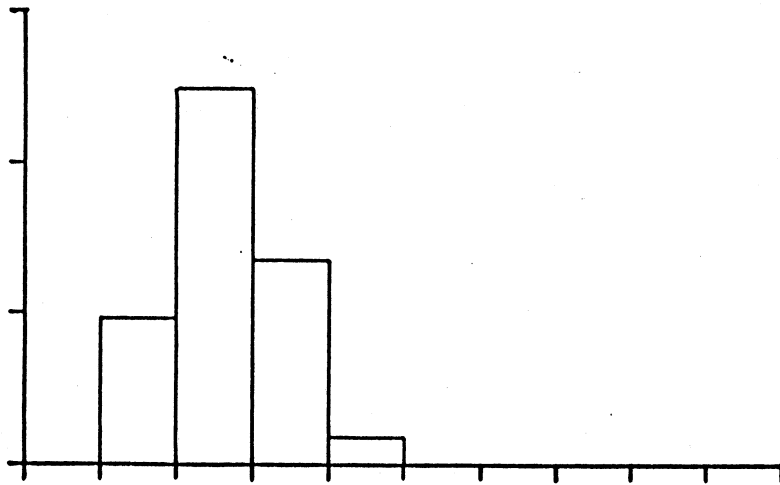
	Salisbury W139) 2	Salisbury W139) 3a +	Salisbury W139) 5
Salisbury W139) 2		1.25	0.03
Salisbury W139) 3a +			-1.28
Salisbury W139) 5			

Salisbury W139) 2		-	-
Salisbury W139) 3a +			-
Salisbury W139) 5			

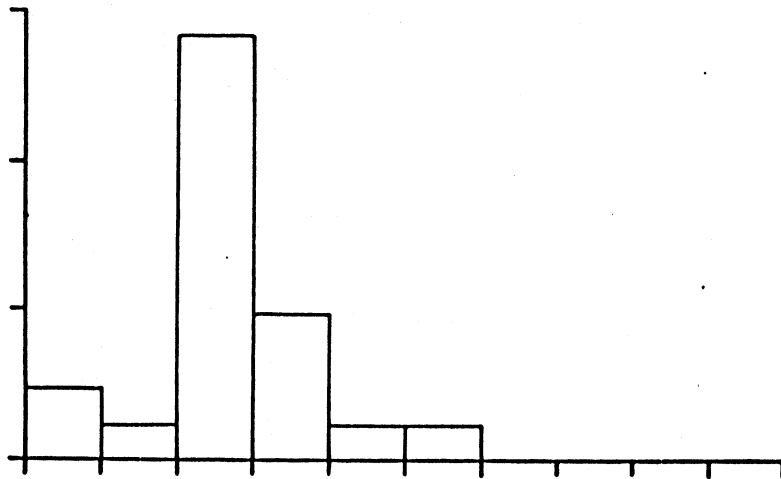
The symbol - denotes no significant difference.  
 The symbol + denotes a significant difference.

SALISBURY W139 AGE GROUPS OF OYSTER SHELLS (RYMW)

PHASE 2, 2a, 2b n=26



PHASE 3a, 3, 4 n=21



PHASE 5 n=76

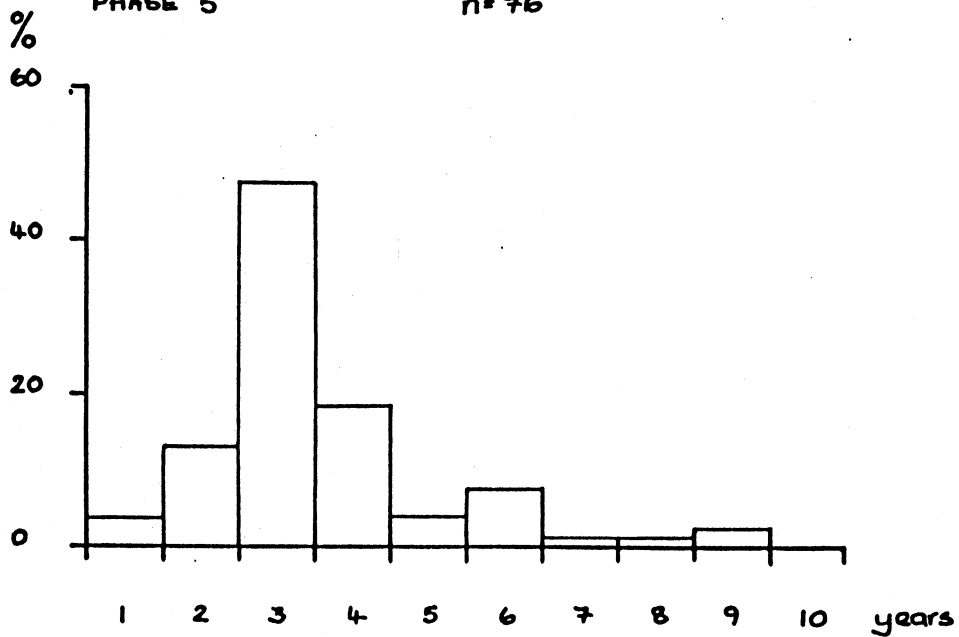


FIGURE 7.10

SALISBURY W139 PHASE 2 (incl. 2a, 2b) RY GROWTH RATE OYSTERS  
n = 26

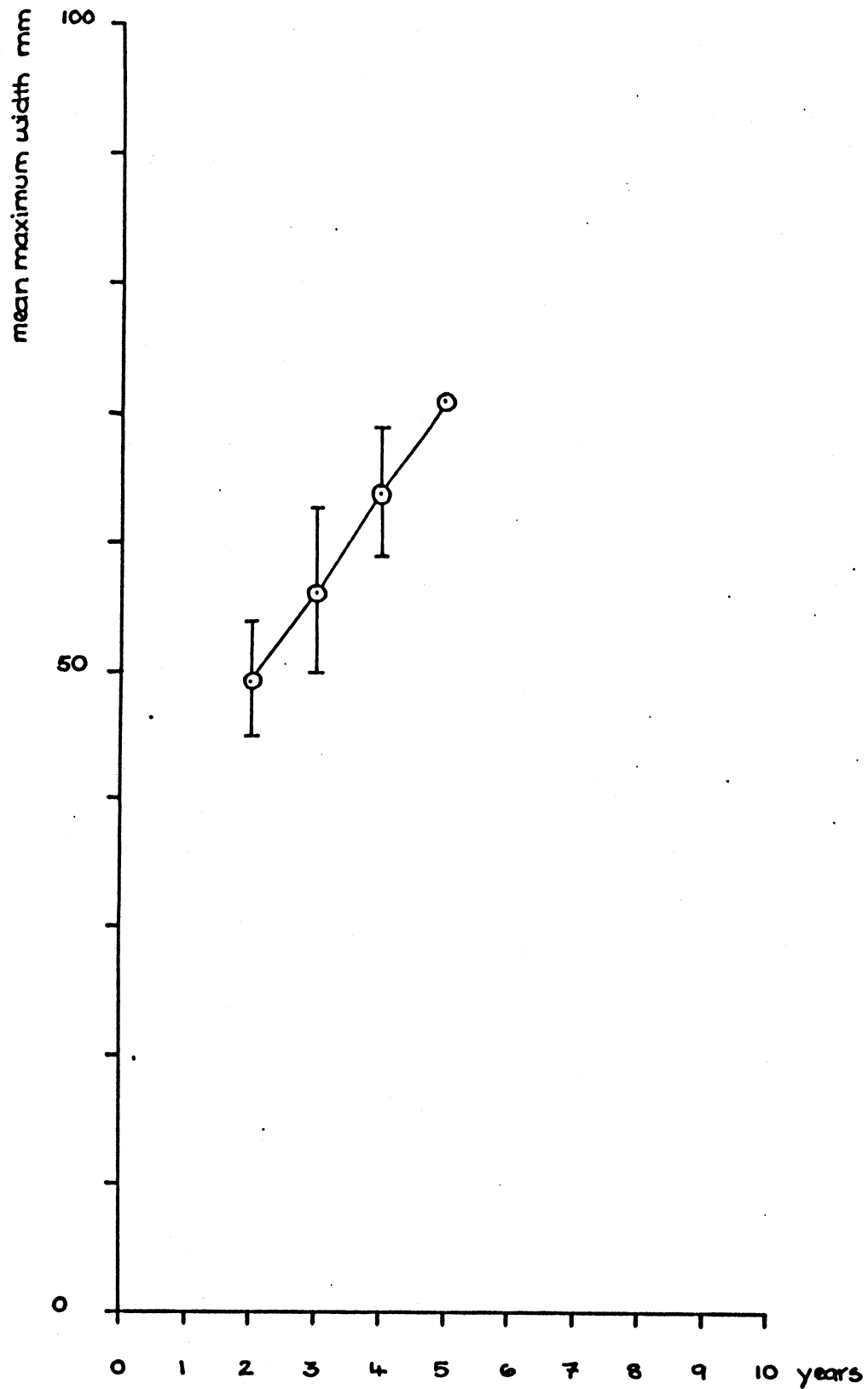


FIGURE 7.11

SALIBBURY W139 PHASE 3, 3a & 4 RY GROWTH RATE OYSTERS

n = 21

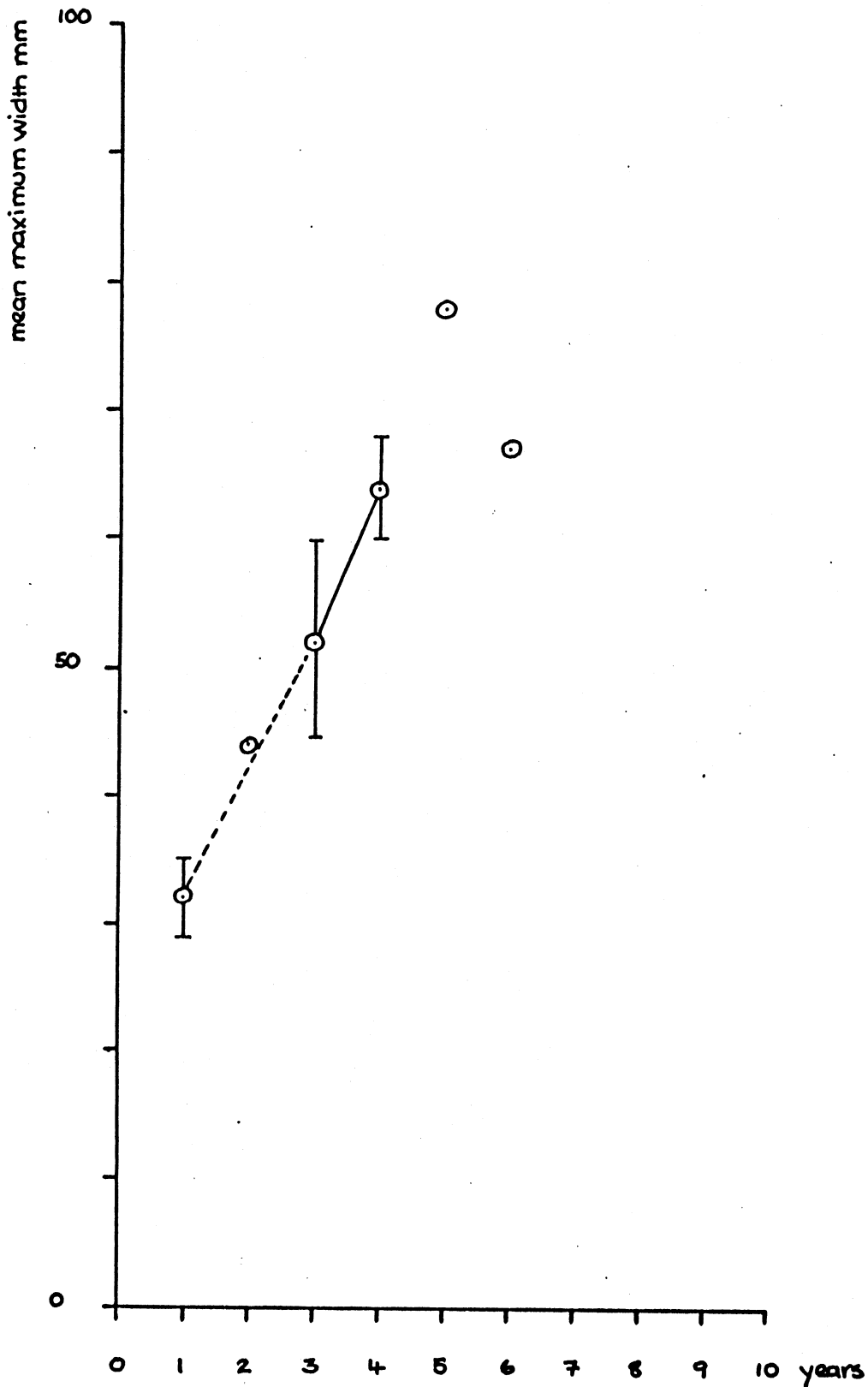


FIGURE 7.12

SALISBURY W139 PHASE 5 GROWTH RATE OF OYSTERS RV

n = 76

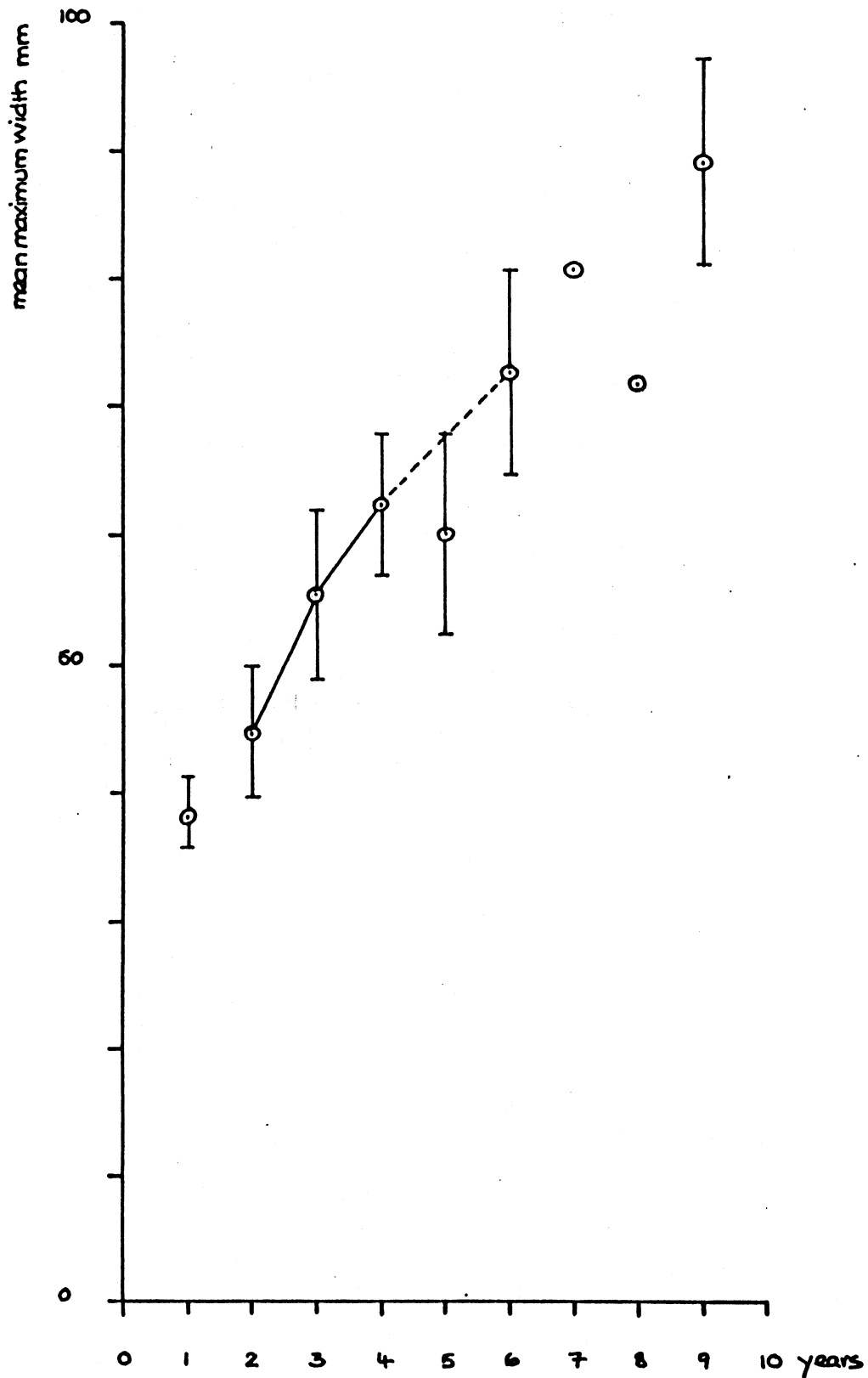




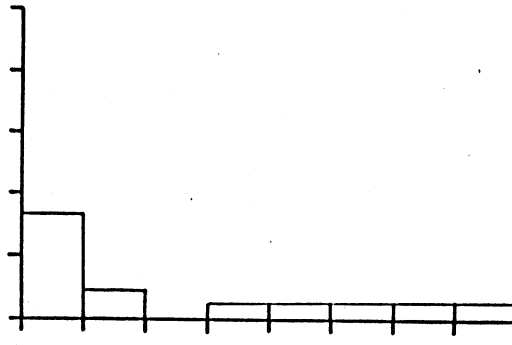
TABLE 7.21

SALISBURY W139 INFESTATION/ENCrustATION RATES IN OYSTERS LV+RV

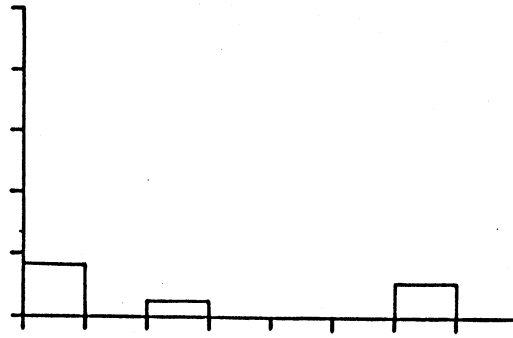
	Polydora ciliata		Polydora haplura		Clione celata		Calcareous tube		Barnacles		Polyzoa		Bore holes		Sand tube	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
PHASE 2 (n = 42)	7	16.67	2	4.76	0	0	1	2.38	1	2.38	1	2.38	1	2.38	1	2.38
PHASE 3,3a,4 (n = 37)	3	8.11	0	0	1	2.70	0	0	0	0	0	0	2	5.41	0	0
PHASE 5 (n = 122)	8	6.56	3	2.46	4	3.28	3	2.46	0	0	1	0.82	5	4.10	2	1.64

FIGURE 7.13  
 SALISBURY W139 RATE OF INFESTATION/ENCrustATION LV + RV  
 OF OYSTER SHELLS

PHASE 2 n = 42



PHASE 3, 3a + 4 n = 37



PHASE 5 n = 122

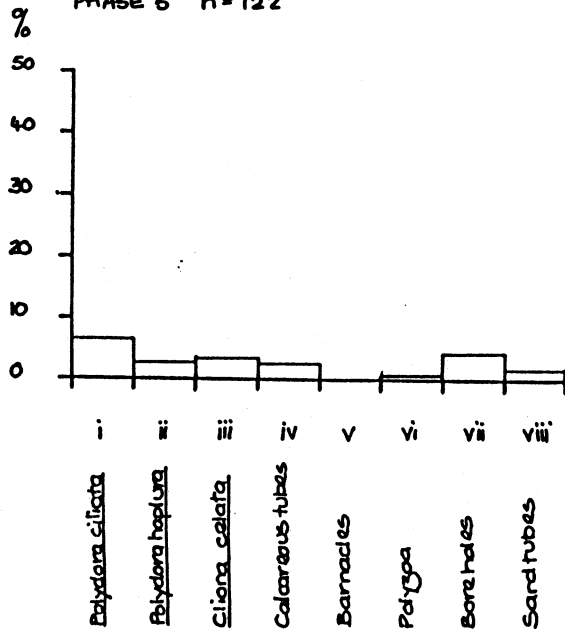


TABLE 7.22

DISTRIBUTION OF MARINE MOLLUSCS OTHER THAN OYSTERS SAUSBURY W139

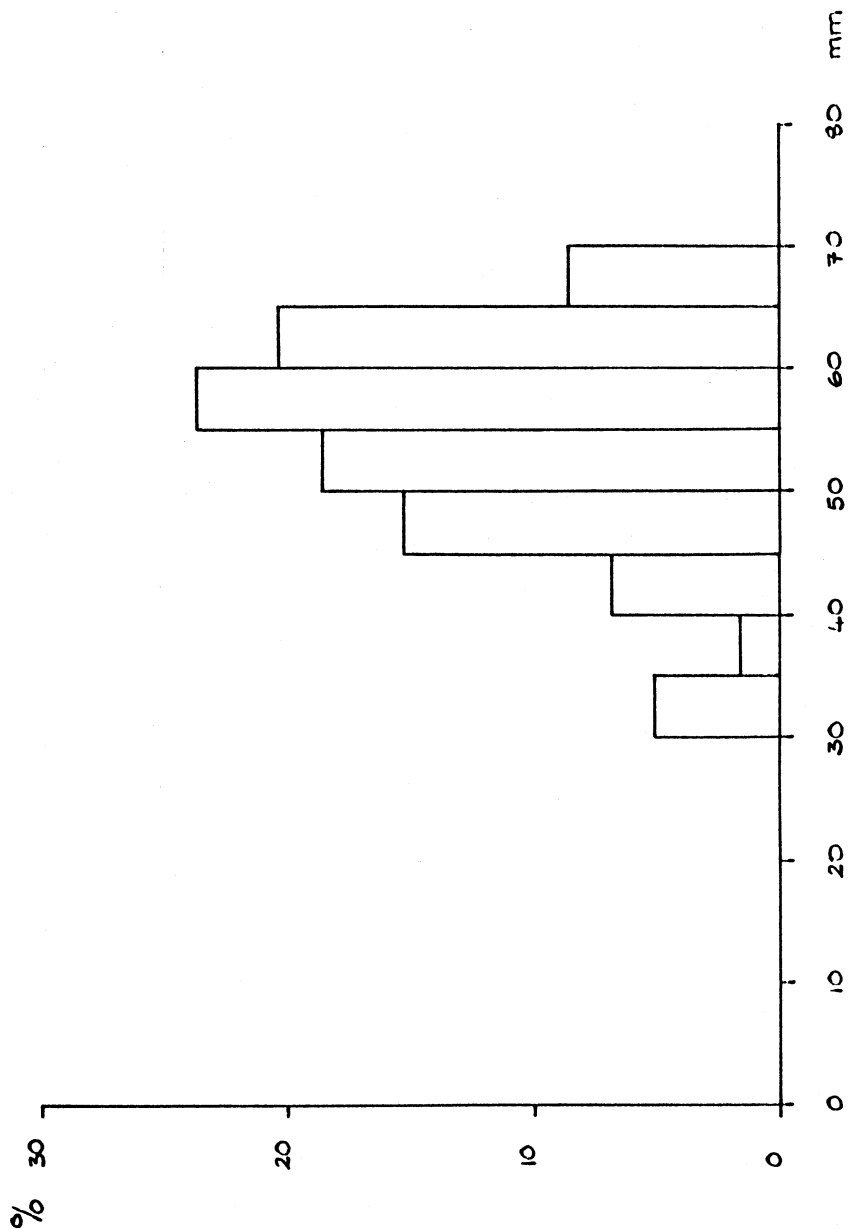
	PHASE 2 incl. 2a + 2b No. %		PHASE 3 incl. 3a No. %		PHASE 4 No. %		PHASE 5 No. %		PHASE 6 No. %		TOTAL FOR SITE
	No.	%	No.	%	No.	%	No.	%	No.	%	
<u>Anomia ephippium</u> valves (saddle oyster)	2	50	1	25	0	0	0	0	1	25	4
<u>Buccinum undatum</u> (whalk)	2	50	1	25	0	0	1	25	0	0	4
<u>Cerastoderma edule</u> valves (cockle)	3	30	2+1F	20	2	20	3	30	0	0	10+1F
<u>Mytilos edulis</u> valves (mussel)	6+1F	26.09	9+1F	39.13	5+1F	21.74	3+2F	13.04	0	0	23+5F

TABLE 7.23 CROSS STREET, WOKINGHAM  
ABUNDANCE OF OYSTER SHELLS

CONTEXT	LEFT VALVES				RIGHT VALVES				VALVES	
	n	n(um)	MNI	%um	n	n(um)	MNI	%um	L+R	MNI
Late 14-15th c. 273	1	0	1	0	0	0	0	0	1	1
century c. 291	2	1	3	33.3	2	1	3	33.3	6	3
c. 292	0	0	0	0	1	0	1	0	1	1
c. 295	0	1	1	100	0	0	0	0	1	1
c. 336	0	0	0	0	0	1	1	100	1	1
c. 346	0	0	0	0	1	0	1	0	1	1
c. 374	0	1	1	100	0	1	1	100	2	1
15-16th century c. 110	0	0	0	0	1	0	1	0	1	1
161	1	0	1	0	0	0	0	0	1	1
201	19	0	19	0	15	4	19	21.1	38	19
290	1	0	1	0	0	0	0	0	1	1
II c. 37	0	0	0	0	1	0	1	0	1	1
? 15-16th century II c. 87	5	2	7	28.6	4	1	5	20.0	12	7
16th century c. 84	0	1	1	100	2	1	3	33.3	4	3
15-17th century c. 131	28	20	48	41.7	59	7	66	12.5	114	66
c. 216	0	1	1	100	0	0	0	0	1	1
15-19th century c. 127	8	2	10	20.0	6	1	7	14.3	17	10
late 16-18th century c. 163	4	10	14	71.4	3	8	11	72.7	25	14
17th century c. 32	0	0	0	0	0	1	1	100	1	1
17-18th century c. 15	0	0	0	0	0	1	1	100	1	1
c. 37	0	0	0	0	1	0	1	0	1	1
c. 55	0	1	1	100	0	0	0	0	1	1
c. 71	0	0	0	0	0	1	1	100	1	1
c. 77	0	1	1	100	0	0	0	0	1	1
c. 198	0	0	0	0	0	1	1	100	1	1
c. 218	3	0	3	0	0	0	0	0	3	3
c. 324	12	10	22	45.5	10	0	10	0	32	22
II c. 46	0	0	0	0	0	0	0	0	0	0
II c. 89	0	1	1	100	0	0	0	0	1	1
Late 17-18th c. 17	0	1	1	100	1	1	2	50.0	3	2
18-19th century c. 22	0	1	1	100	0	0	0	0	1	1
Uncertain c. 78	2	0	2	0	1	0	1	0	3	2
c. 123	0	0	0	0	1	2	3	66.7	3	3
c. 138	20	6	26	23.1	30	7	37	18.9	63	37
TOTALS	106	60			139	39			344	211

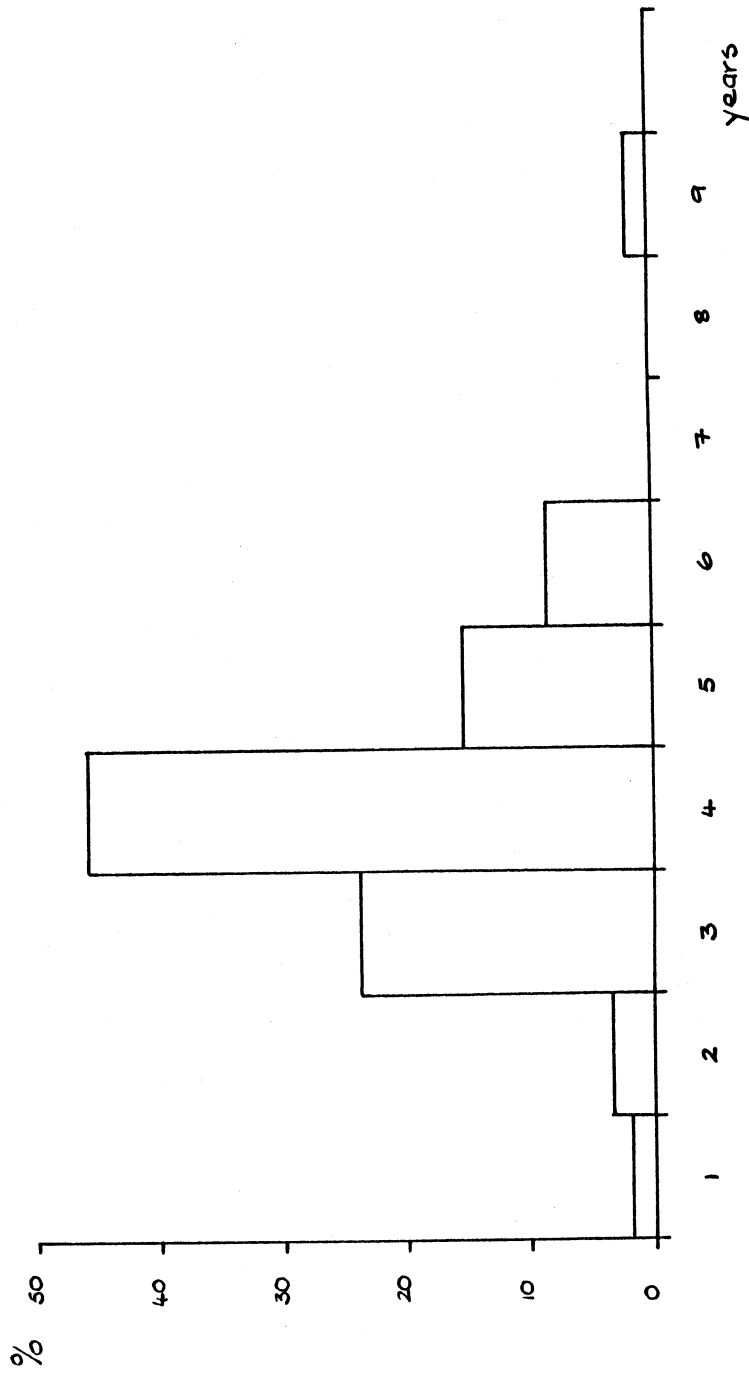
n represents number of measurable shells in sample  
n(um) represents number of unmeasurable (broken) shells  
MNI represents 'minimum number of individuals'.

FIGURE 7.14



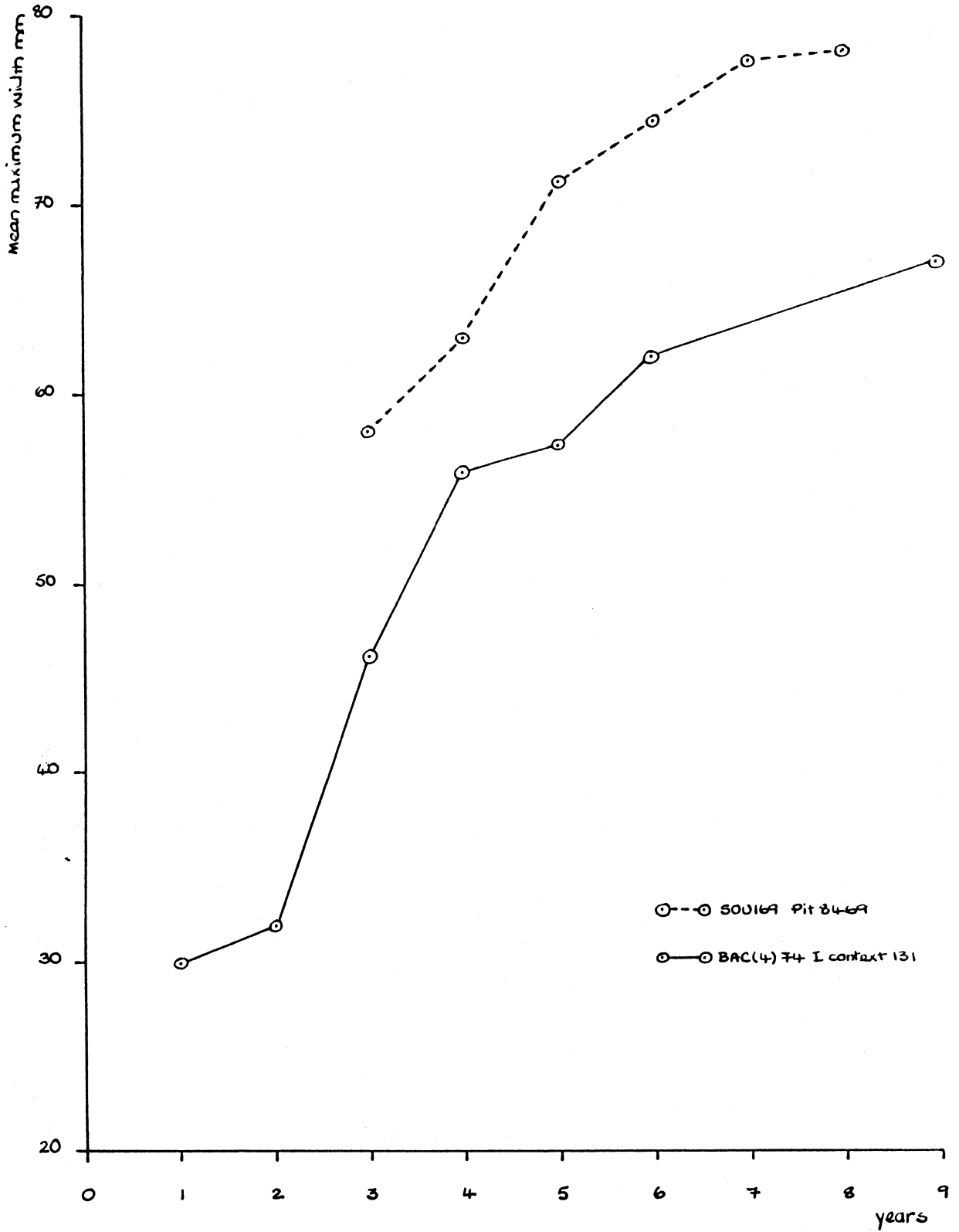
SIZE FREQUENCY OF OYSTER SHELLS FROM CROSS STREET, WORNINGHAM (BAC (4) 74 I c. 131).

FIGURE 7.15



AGE COMPOSITION OF A SAMPLE OF OYSTER SHELLS FROM CROSS STREET, WOKINGHAM  
(BAC(4)74 I context 131).

FIGURE 7.16



GROWTH RATE IN OYSTER SHELLS FROM CROSS STREET, WOKINGHAM (BAC(4)74 I c.131) COMPARED WITH THE LOWEST GROWTH RATE RECORDED FOR SAXON HAMWIC SHELLS (SOU169).

TABLE 7.24

TABLE 7.24  
 READING ABBEY WHARF W12 + W61A ABUNDANCE OF OYSTER SHELLS BY PERIOD  
 (W61B AND UNSTRATIFIED CONTEXTS OMITTED)

PERIOD	LV	UMLV	TOT.LV	%UMLV	RV	UMRV	TOT.RV	%UMRV	TOTAL LV+RV	MNI	% OF SITE TOTAL
PHASE 1A	0	0	0	0	0	0	0	0	0	0	0
PHASE 1B	0	0	0	0	0	0	0	0	0	0	0
PHASE 1C	0	0	0	0	0	0	0	0	0	0	0
PERIOD 2	4	0	4	0	3	0	3	0	7	4	0.8
PERIOD 3	3	1	4	25.0	4	1	5	20.0	9	5	1.0
PERIOD 4	57	17	74	23.0	52	16	68	23.5	142	74	15.1
PERIOD 5	122	44	166	26.5	128	26	154	16.9	320	166	33.9
PERIOD 6	63	72	135	53.3	51	37	88	42.1	223	135	27.6
PERIOD 7	53	30	83	36.2	71	23	94	24.5	177	94	19.2
PERIOD 8	1	3	4	75.0	2	4	6	66.7	10	6	1.2
PERIOD 9	3	2	5	40.0	4	0	4	0	9	5	1.0
TOTALS	306	169	475	35.6	315	107	422	25.4	897	489	



TABLE 7.25

READING ABBEY WHARF W12 + W61A

BASIC DATA FOR RIGHT VALVES OYSTER SHELLS  
(maximum width measurements in mm.)

PERIOD	SAMPLE NO.	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION
PERIOD 4	52	23	84	60.25	10.94
PERIOD 5	128	34	93	57.46	11.06
PERIOD 4+5	180	23	93	58.24	11.08
PERIOD 6	51	29	77	57.18	10.04
PERIOD 7	71	34	84	57.17	10.68

FIGURE 7.17 READING ABBEY WHARF W12 + W61A PERIOD 4 SIZE FREQUENCY OF OYSTER SHELLS RYMW n = 52

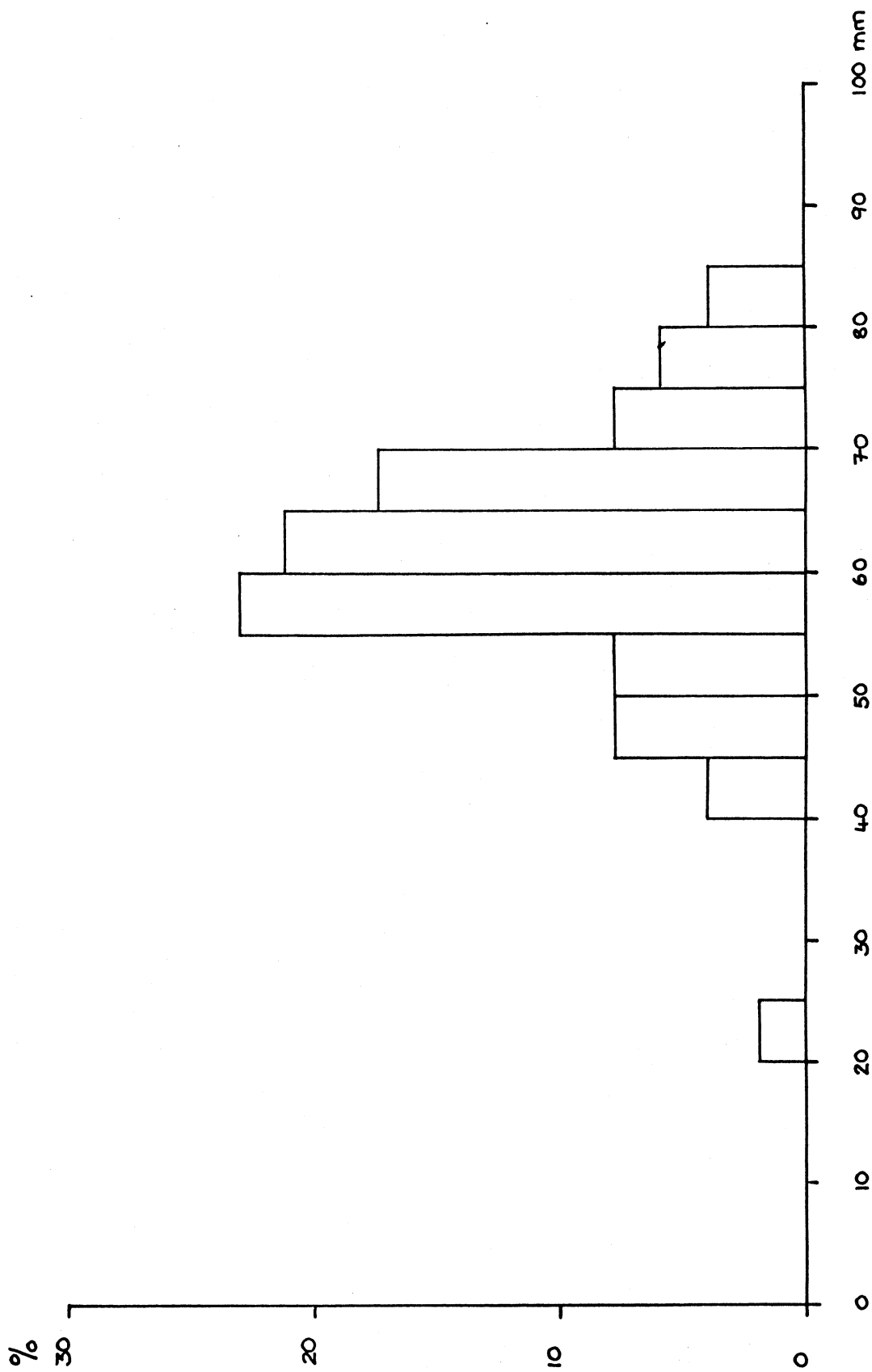


FIGURE 18 READING ABBEY WHARF W12 + W61A PERIOD 5 SIZE FREQUENCY OF OYSTER SHELLS RVMW n = 128

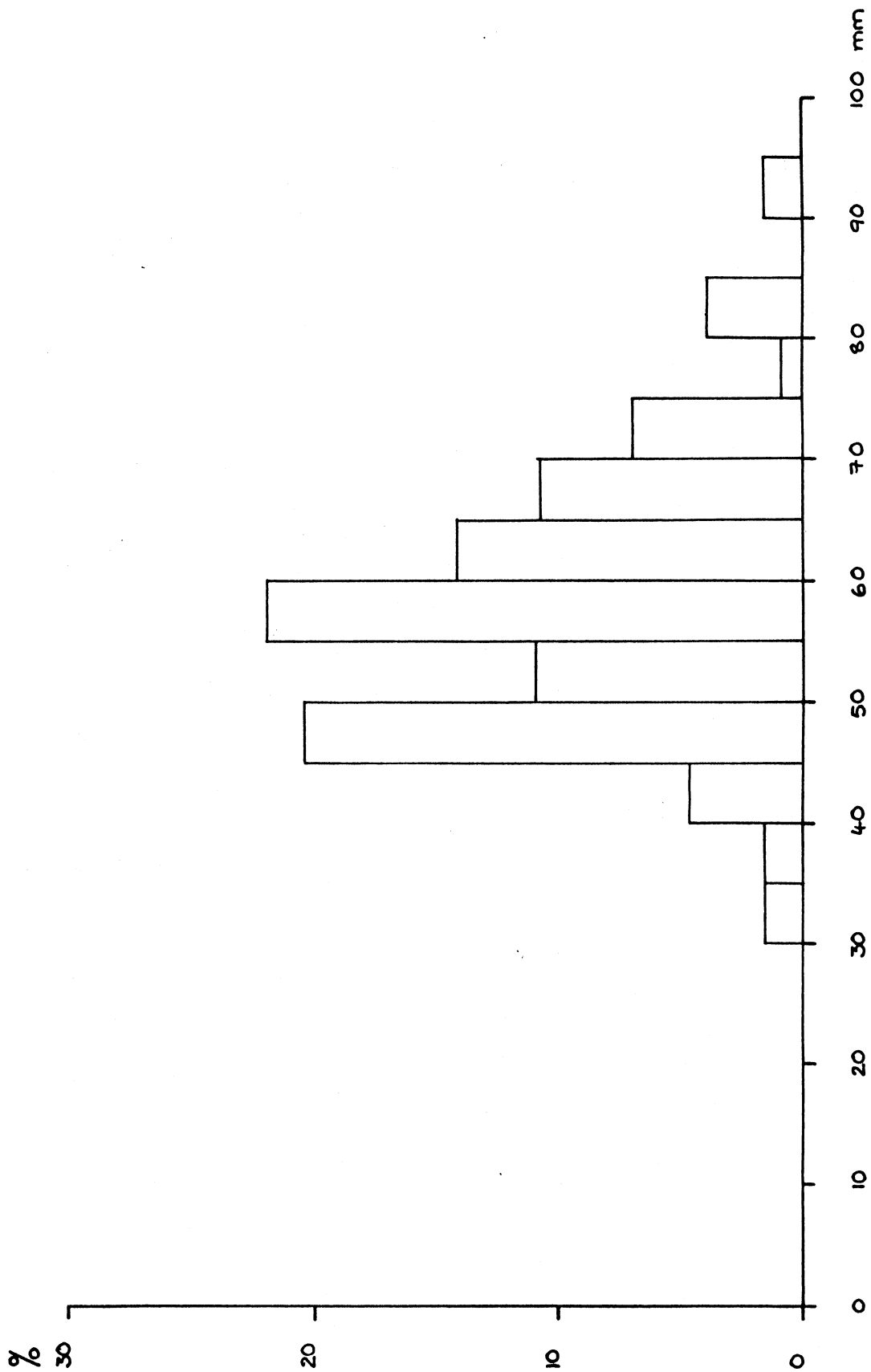


FIGURE 7.19 READING ABBEY WHARF W12+W161A PERIODS 4+5 SIZE FREQUENCY OF OYSTER SHELLS RYMUU n = 180

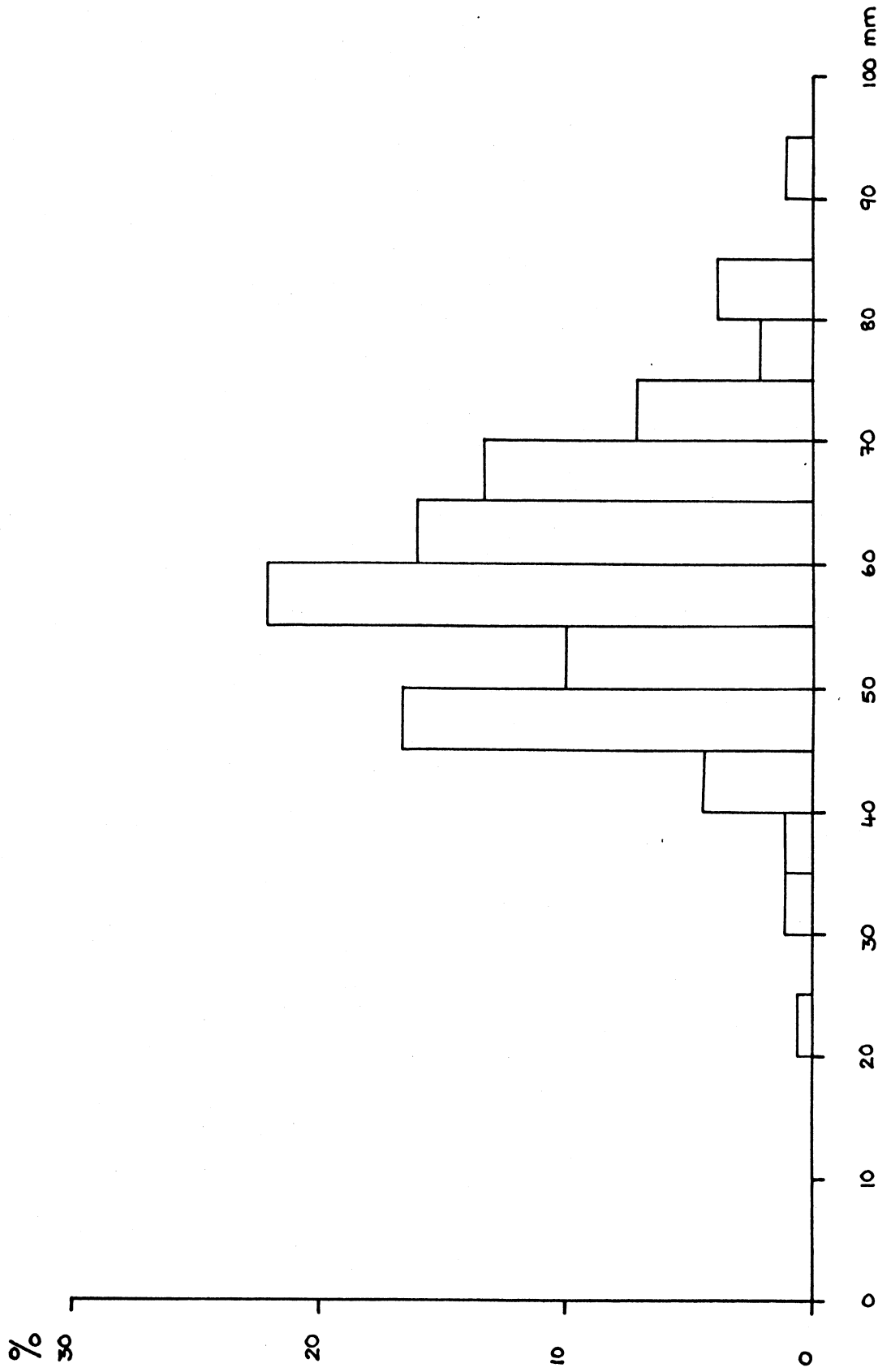


FIGURE 7.20 READING ABBEY WHARF W12 + W16A PERIOD 6 SIZE FREQUENCY OF OYSTER SHELLS RVMW n = 51

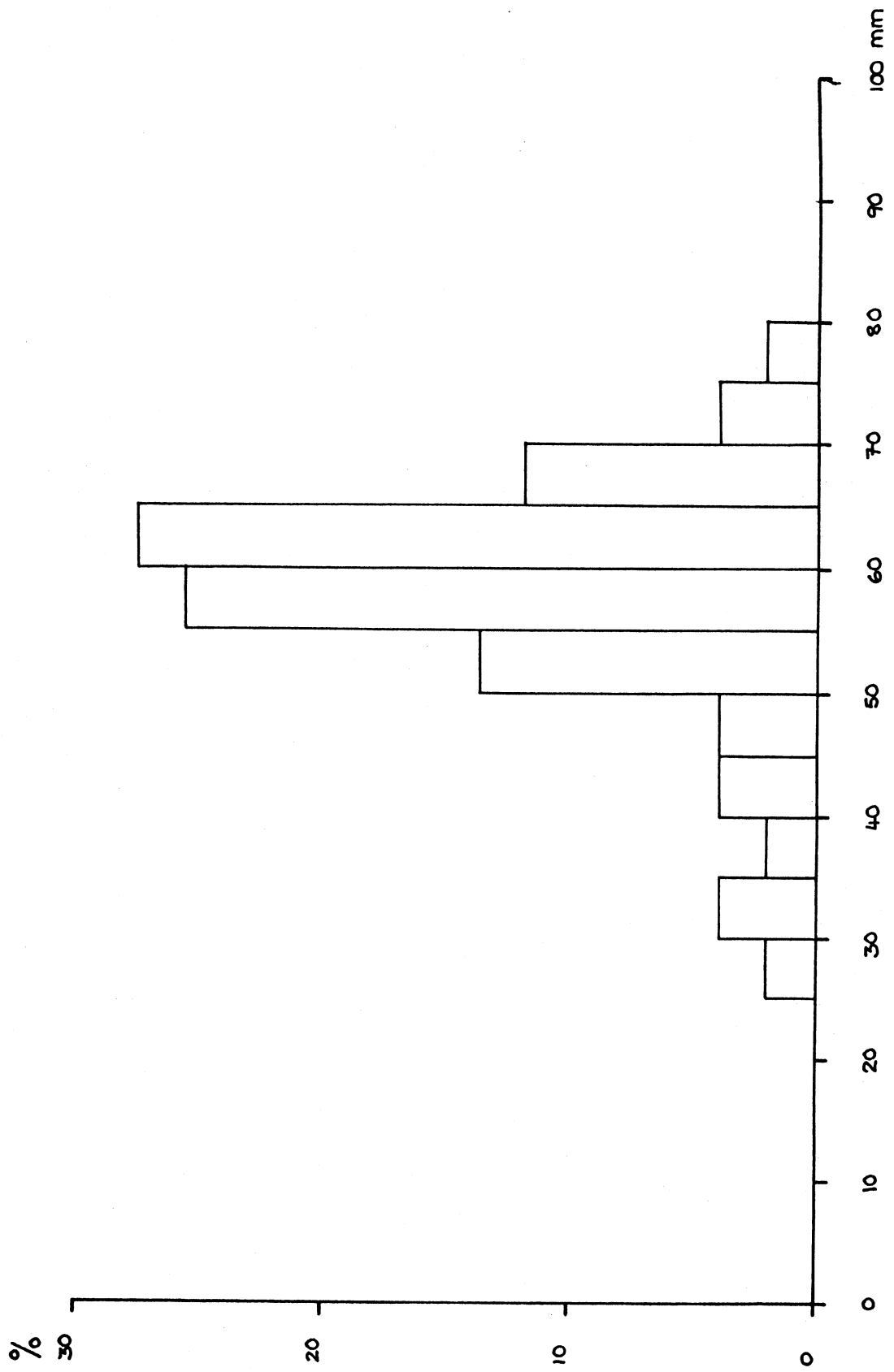


FIGURE 7.21 READING ABBEY WHARF W12+ W61A PERIOD 7 SIZE FREQUENCY OF OYSTER SHELLS RVMW n = 71

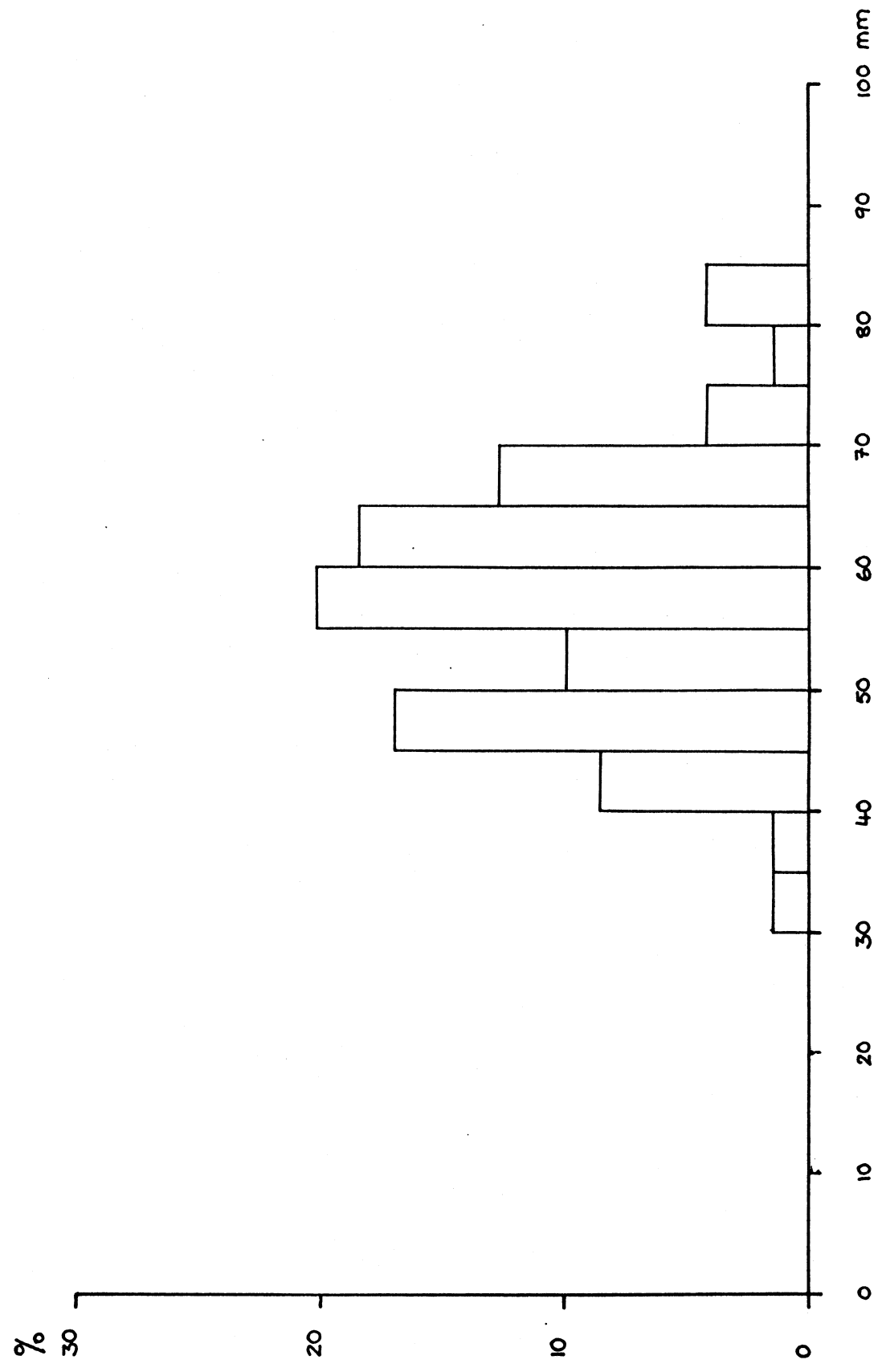


FIGURE 7.22.  
 READING ABBEY WHARF W12 + W61A AGE GROUPS OF OYSTER SHELLS (RV)

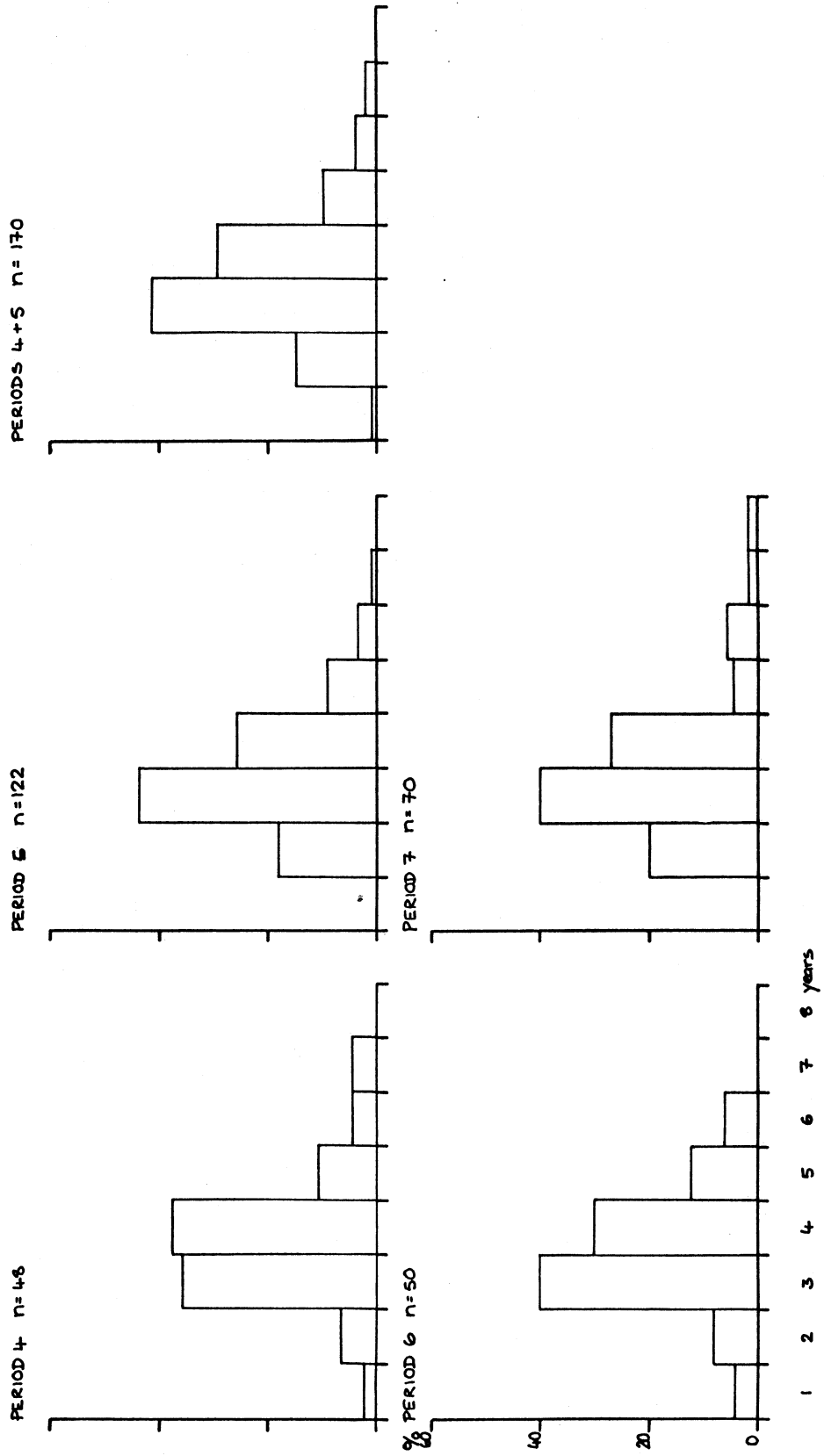


FIGURE 7.23  
READING ABBEY WHARF W12 & W61A GROWTH RATE OF OYSTERS  
PERIOD 4 n=48

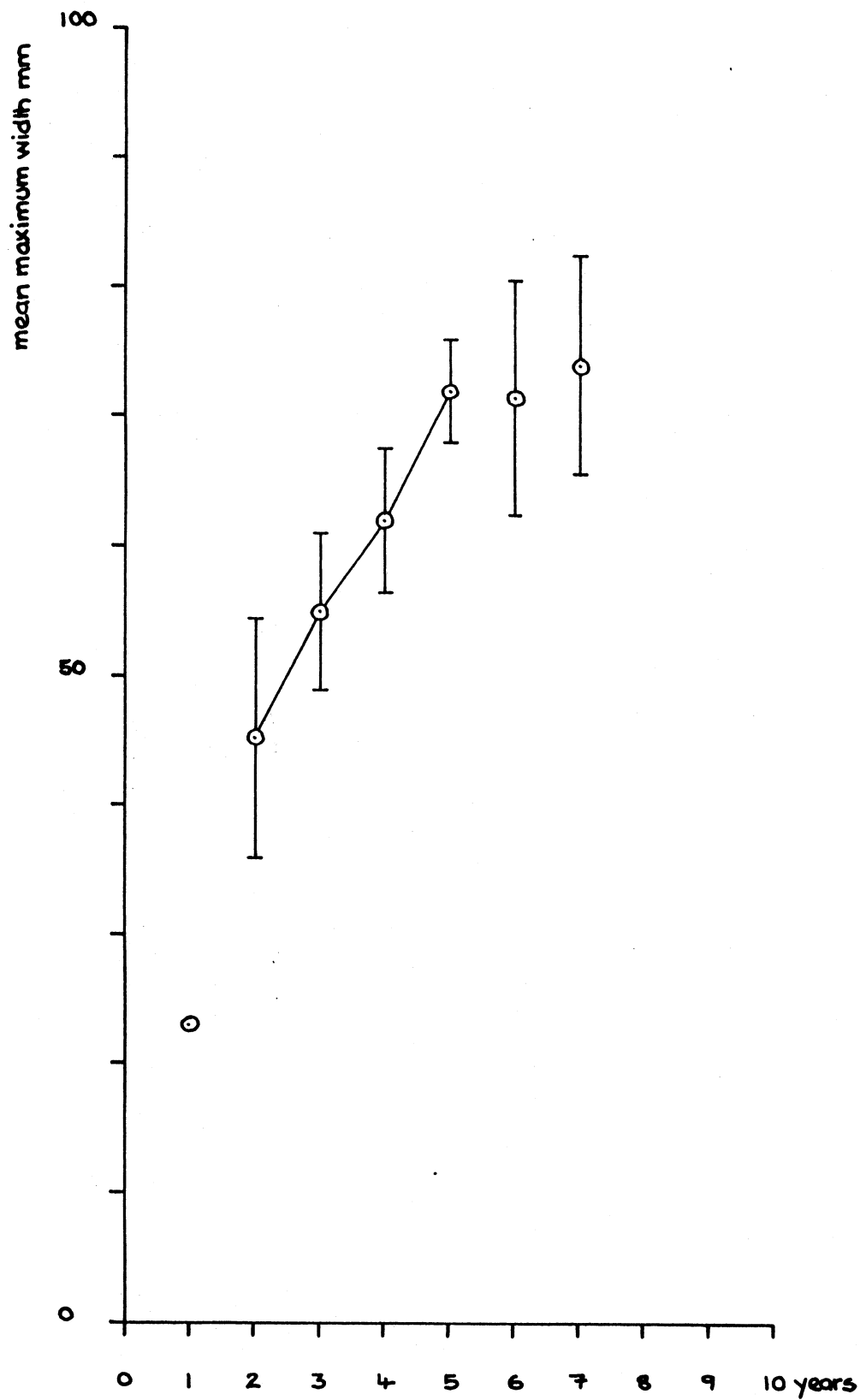




FIGURE 7.24

READING ABBEY WHARF W12+W61A GROWTH RATE OF OYSTERS  
PERIOD 5 n = 122

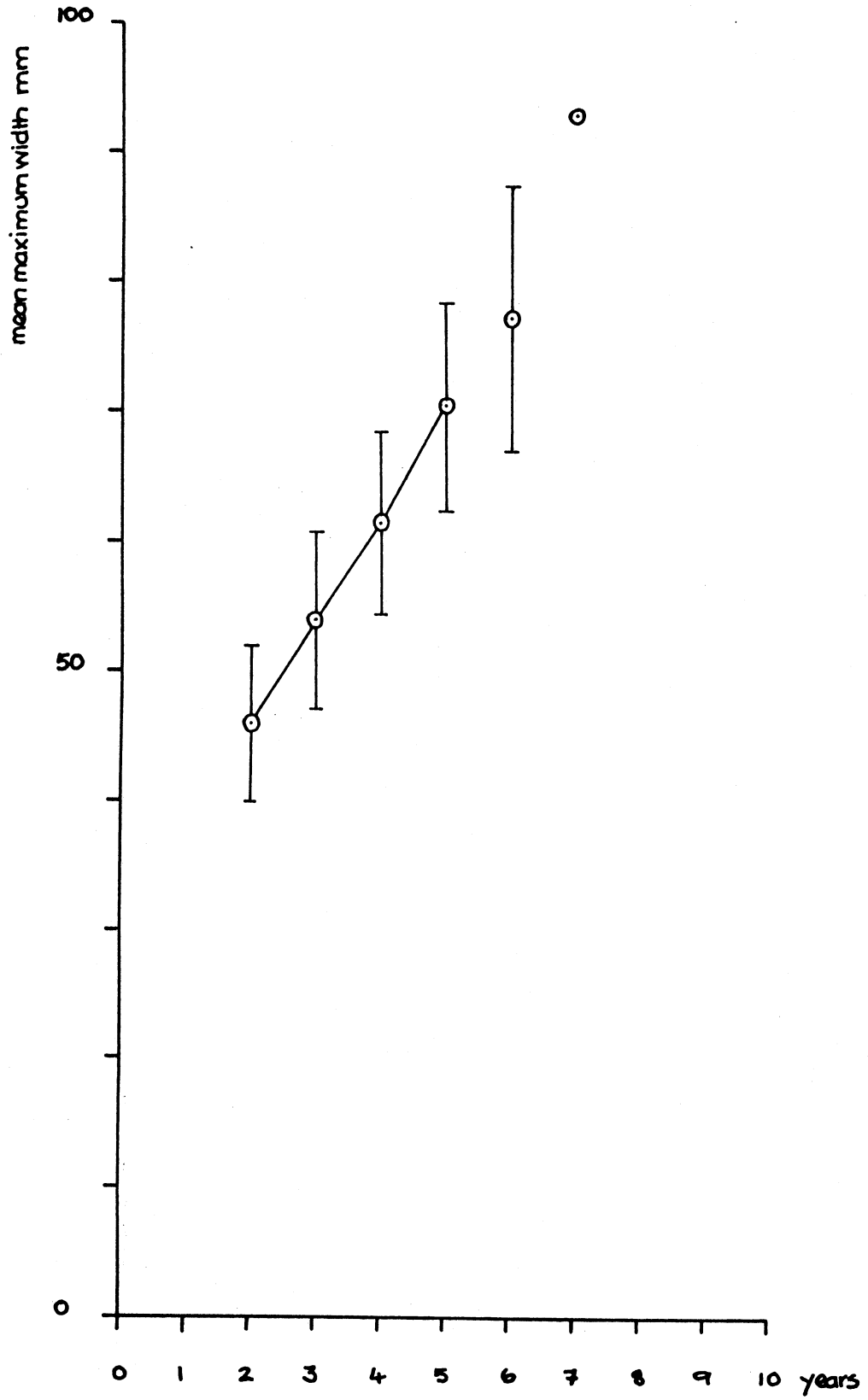


FIGURE 7.25

READING, ABBEY WHARF W12 & W61A

GROWTH RATE OF OYSTER SHELLS

PERIOD 6 n=50

600

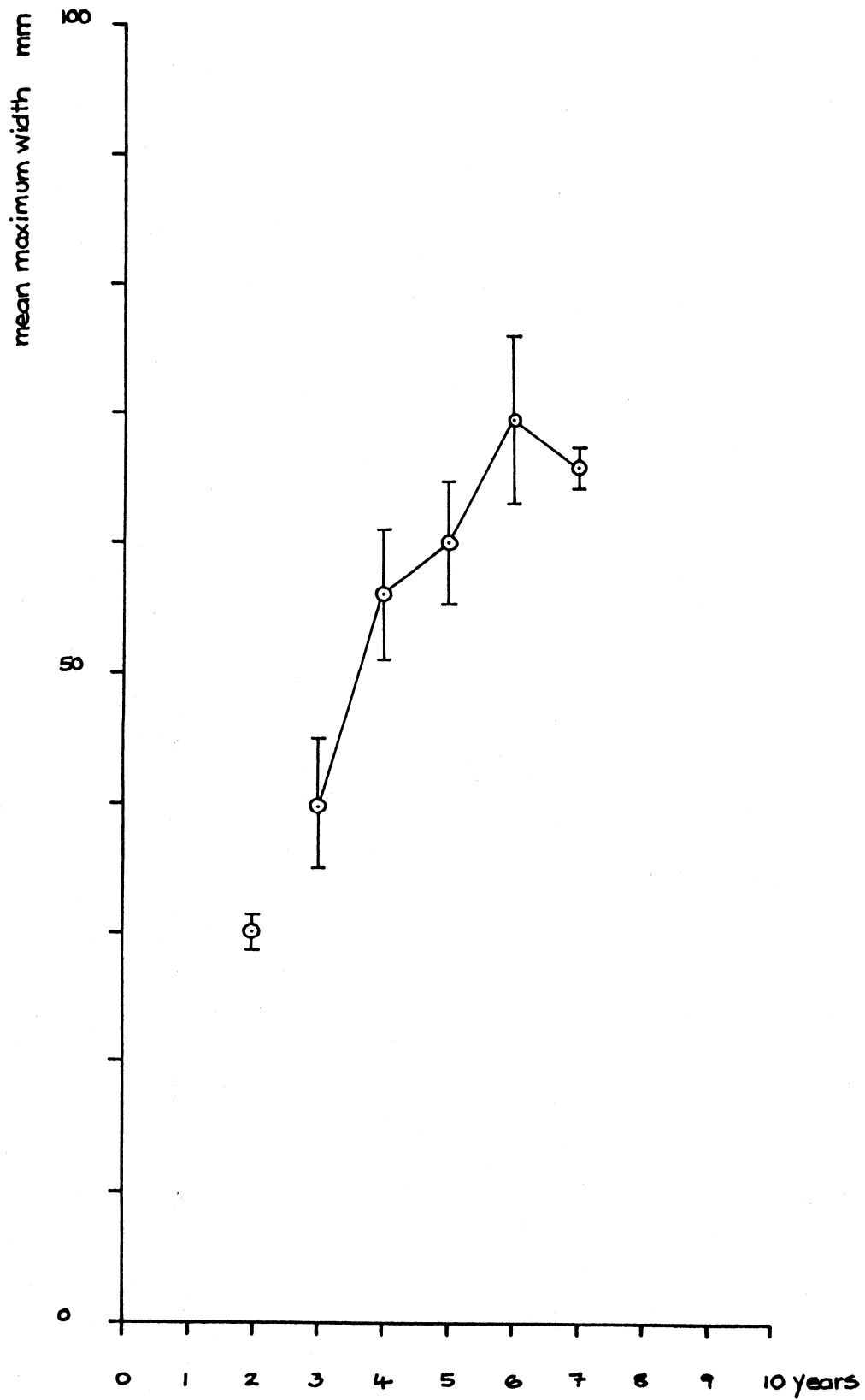


FIGURE 7.26

READING ABBEY WHARF W12 & W61A GROWTH RATE OF OYSTERS  
PERIOD 7 n = 70

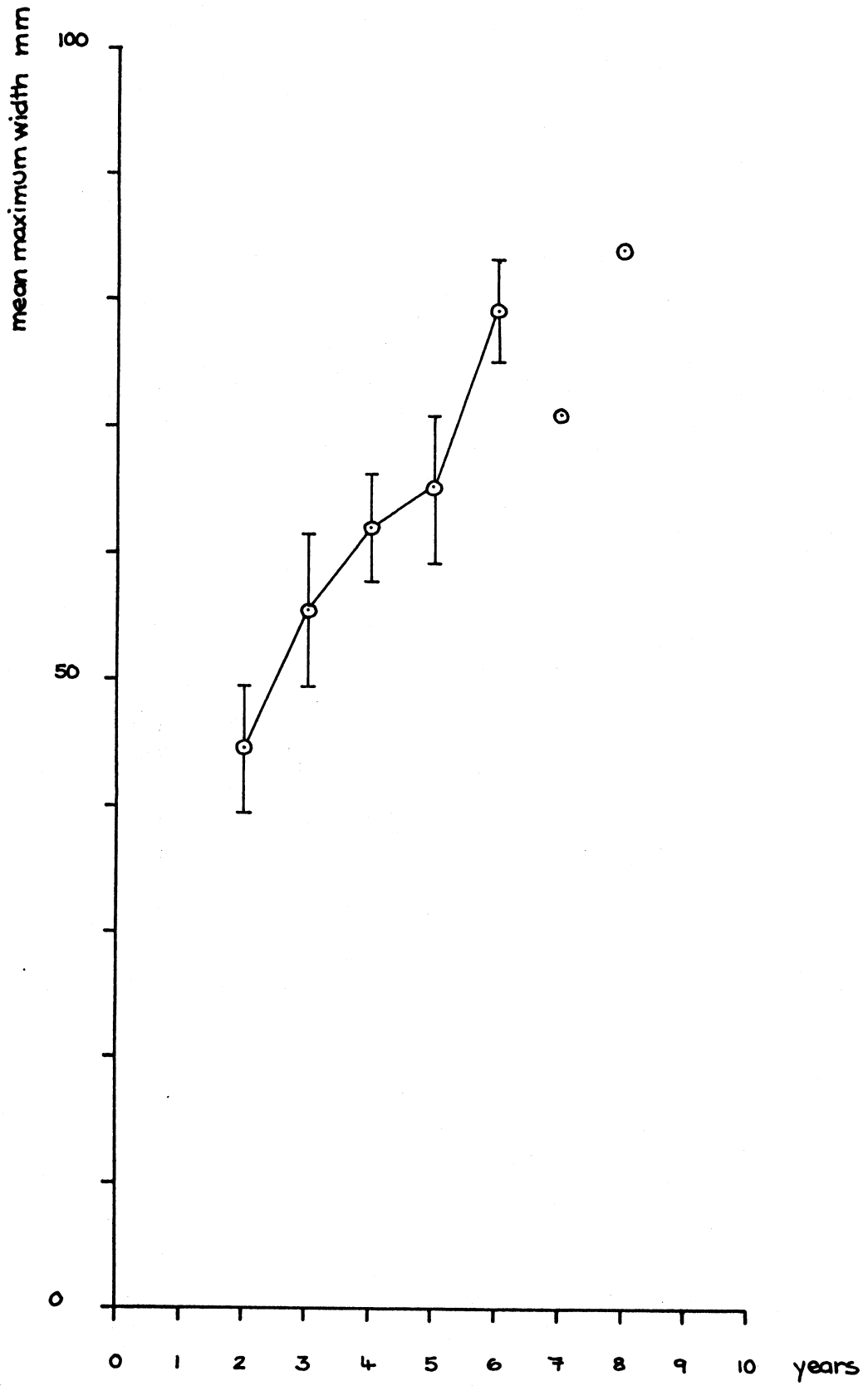
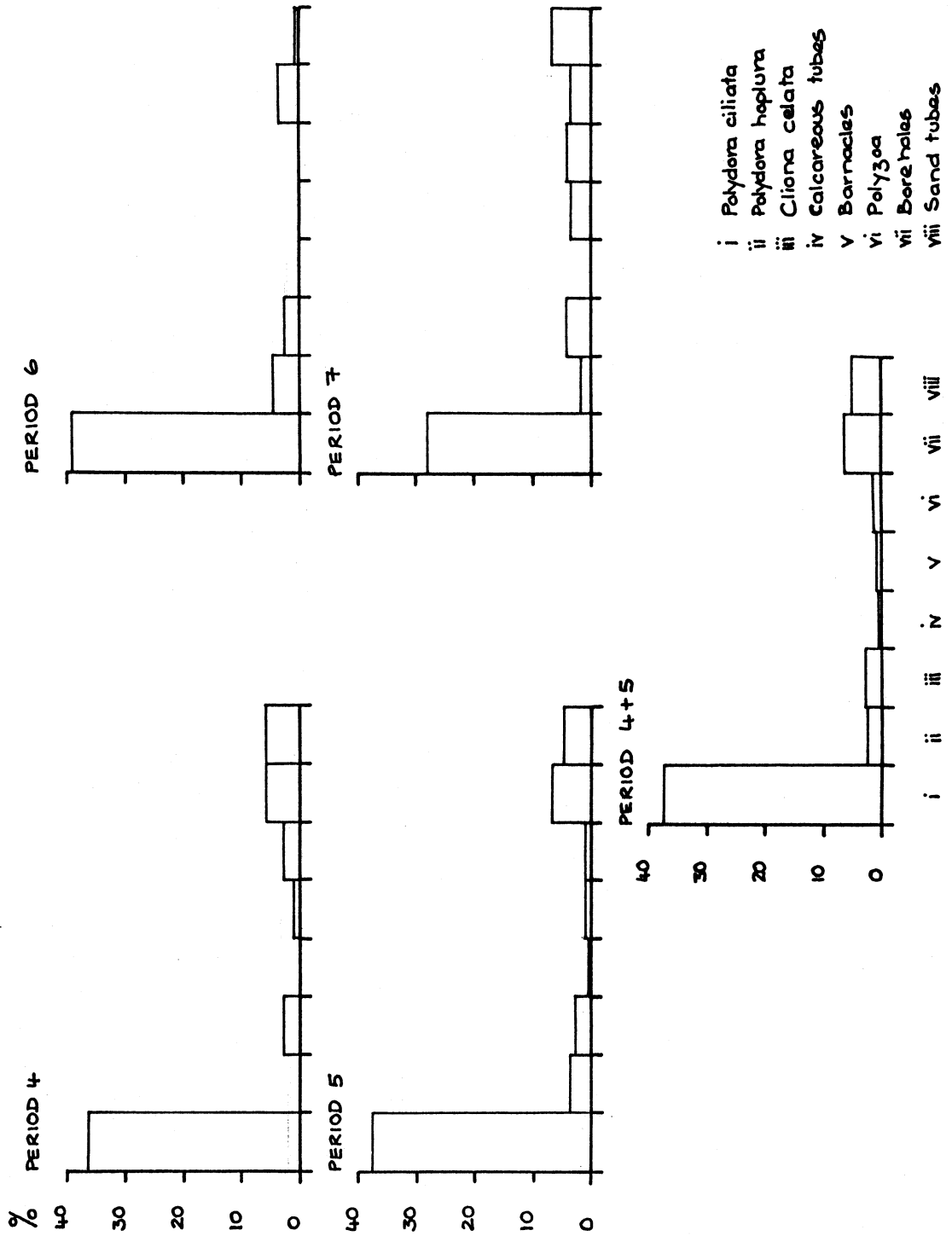


FIGURE 7.27

FIGURE 7.27 READING ABBEY WHARF W12 + W61A RATE OF INFESTATION/ENCrustATION OF OYSTER SHELLS LV+RV



## DEGREE OF FRAGMENTATION OF OYSTER SHELLS IN DIFFERENT CONTEXT TYPES

	Number of intact left valves plus right valves	Number of badly damaged left valves + right valves	Total number of intact and damaged shells	Percentage damaged
Channel contexts	312	83	395	21%
Reclamation contexts	193	172	365	47.1%
Other contexts	109	18	127	14.2%

RATE OF OCCURRENCE OF BLACKENED OYSTER SHELLS IN DIFFERENT CONTEXT TYPES.

	No. in sample (measured shells)	No. blackened	% blackened	No. contexts
Channel contexts	312	216	69.2%	49
Reclamation contexts	196	95	48.5%	46
Other contexts	110	35	31.8%	24

OTHER SPECIES OF MARINE AND FRESHWATER MOLLUSC SHELL ARRANGED BY CONTEXT TYPE

	<u>Buccinum undatum</u>	<u>Cerastoderma edule</u>	<u>Littorina littorea</u>	<u>Neptunea antiqua</u>	<u>Mytilus edulis</u>	<u>Venerupis clausata</u>	<u>Unio pictorum</u>	Large freshwater mussel ? <u>Anodonta</u>	Other freshwater spp.
RECLAMATION CONTEXTS	F	17+F	F	1	11+F	0	1	F	/
CHANNEL CONTEXTS	4	6+F	0	1	156	F	2	0	/
OTHER CONTEXTS	0	2+F	0	1	1+F	0	0	1	0
TOTALS	4+	25+	F	3	168+	F	3	1+	/

F denotes fragment  
/ unidentified species present.

OTHER SPECIES OF MARINE AND FRESHWATER SHELLS ARRANGED BY PERIOD

	<u>Buccinum undatum</u>	<u>Cerastoderma edule</u>	<u>Littorina littorea</u>	<u>Neptunea antiqua</u>	<u>Mytilus edulis</u>	<u>Venerupis clausata</u>	<u>Unio pictorum</u>	Large freshwater mussel ? <u>Anodonta</u>	Other freshwater spp.
PERIOD 1B	0	0	0	0	0	0	0	1	0
PERIOD 2	0	0	0	0	0	0	2	0	0
PERIOD 3	0	0	0	0	0	0	0	F	0
PERIOD 4	0	2+F	0	0	2+F	0	0	0	0
PERIOD 5	3	6+F	0	0	152+F	F	0	0	/
PERIOD 6	0	12+F	0	2	7	0	0	0	0
PERIOD 7	1	3+F	0	1	6+F	0	1	0	0
PERIOD 8	F	2+F	F	0	1	0	0	0	0
TOTALS	4+	25+	F	3	168+	F	3	1+	/

F denotes fragment  
/ denotes presence but unidentified .



	MOQ 86 c.51 general	MOQ 86 c.51 south side of pit	MOQ 86 c.51 all samples	MOQ 86 c.65 all samples	Pit 120 c.51 + 65
Common whelks	674	17	691	604	1295
Edible mussels - valves - mni	882 441	0 0	882 441	848 424	865
Oysters - right valves left valves total valves mni	70 52 122 70	62 56 118 62	132 108 240 132	116 65 181 116	248 173 421 248
Common cockles - valves - mni	36 18	0 0	36 18	132 66	168 84
Tellins - valves - mni	9 5	0 0	9 5	39 20	48 25
Winkles and periwinkles	0	0	0	11	11
Netted whelks	6	0	6	0	6
Dog whelks	0	0	0	2	2

TABLE 7.30

RELATIVE ABUNDANCE OF MARINE MOLLUSC SHELLS IN PIT 120 (MOORCATE 86)

	MOQ 86 c.51 general	MOQ 86 c.51 south side	MOQ 86 c.51 all samples	MOQ 86 c.65 all samples	PIT 120 c.51 + c.65
Common whelks	55.52	21.52	53.44	48.59	51.07
Edible mussels	36.33	0	34.12	34.11	34.11
Oysters	5.77	78.48	10.21	9.33	9.78
Common cockles	1.48	0	1.39	5.31	3.31
Tellins	0.41	0	0.39	1.61	0.99
Winkles and periwinkles	0	0	0	0.89	0.43
Natted whelks	0.5	0	0.5	0	0.24
Dog whelks	0	0	0	0.16	0.08
No. individual molluscs	1214	79	1293	1243	2536

TABLE 7.31

PERCENTAGE FREQUENCY OF DIFFERENT SPECIES OF MARINE MOLLUSC SHELL IN MOQ 86 PIT 120 (MOORCATE)

FIGURE 7.28a

Figure 7.28a MOQ 86 C.51 GENERAL SIZE FREQUENCY OF OYSTER SHELLS RVMW n = 70

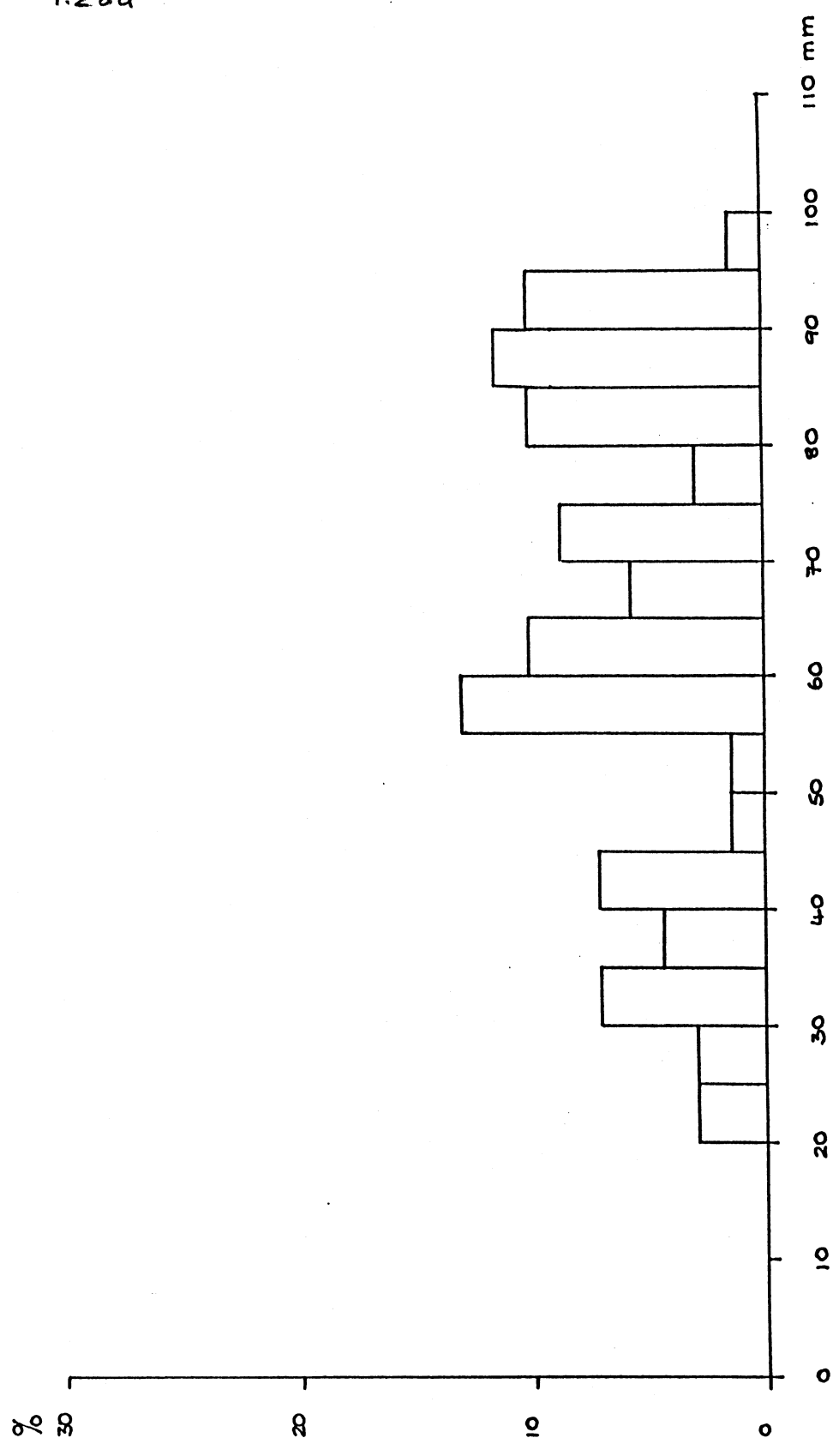


FIGURE 7.28b

Figure 7.28b MOQ 86 C.51 GENERAL SIZE FREQUENCY OF OYSTER SHELLS RYML n = 70

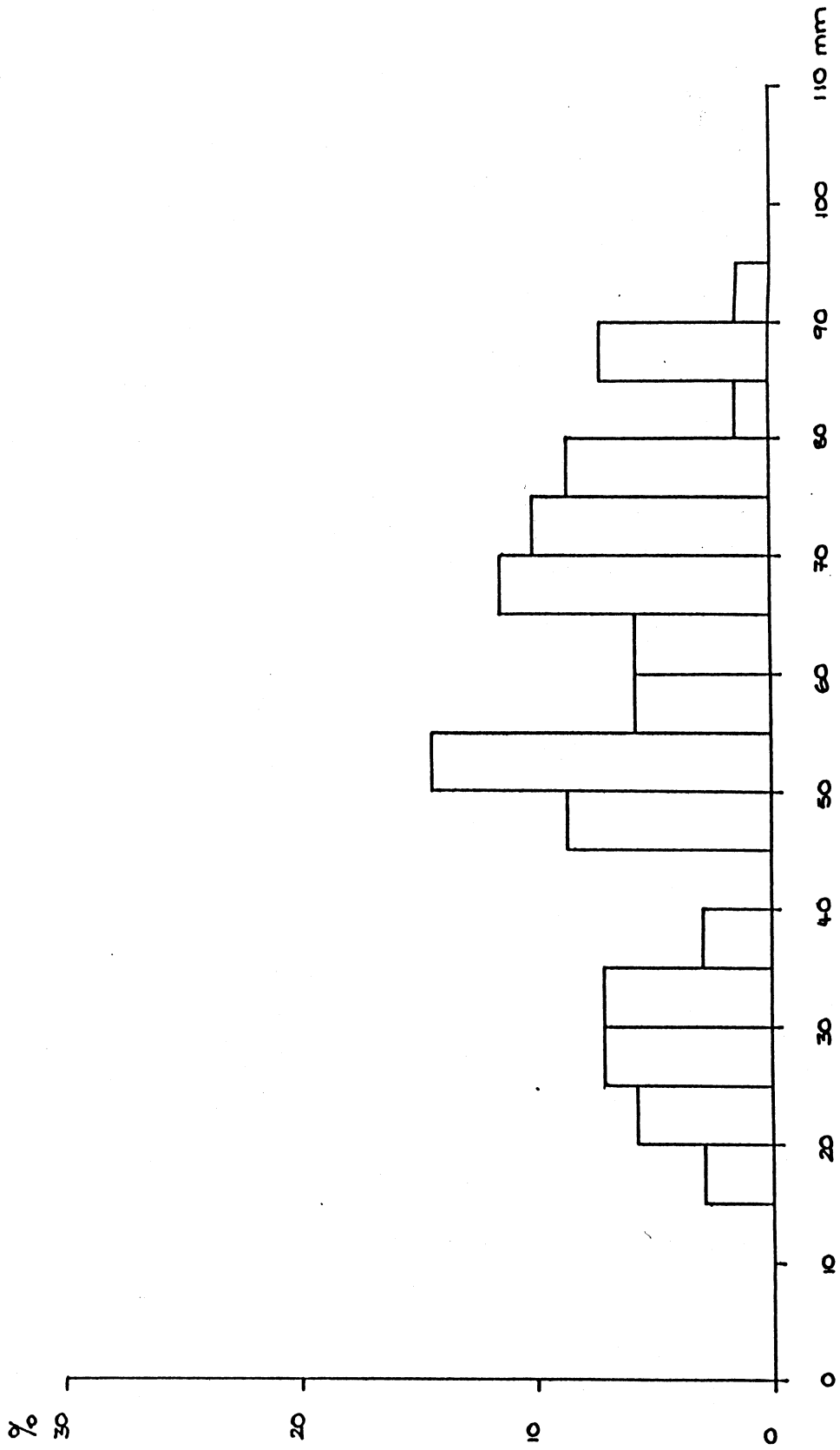


FIGURE 7.28c

Figure 7.28c. MOG 86 c.51 GENERAL SIZE FREQUENCY DISTRIBUTION OF OYSTER SHELLS LVMW n = 52

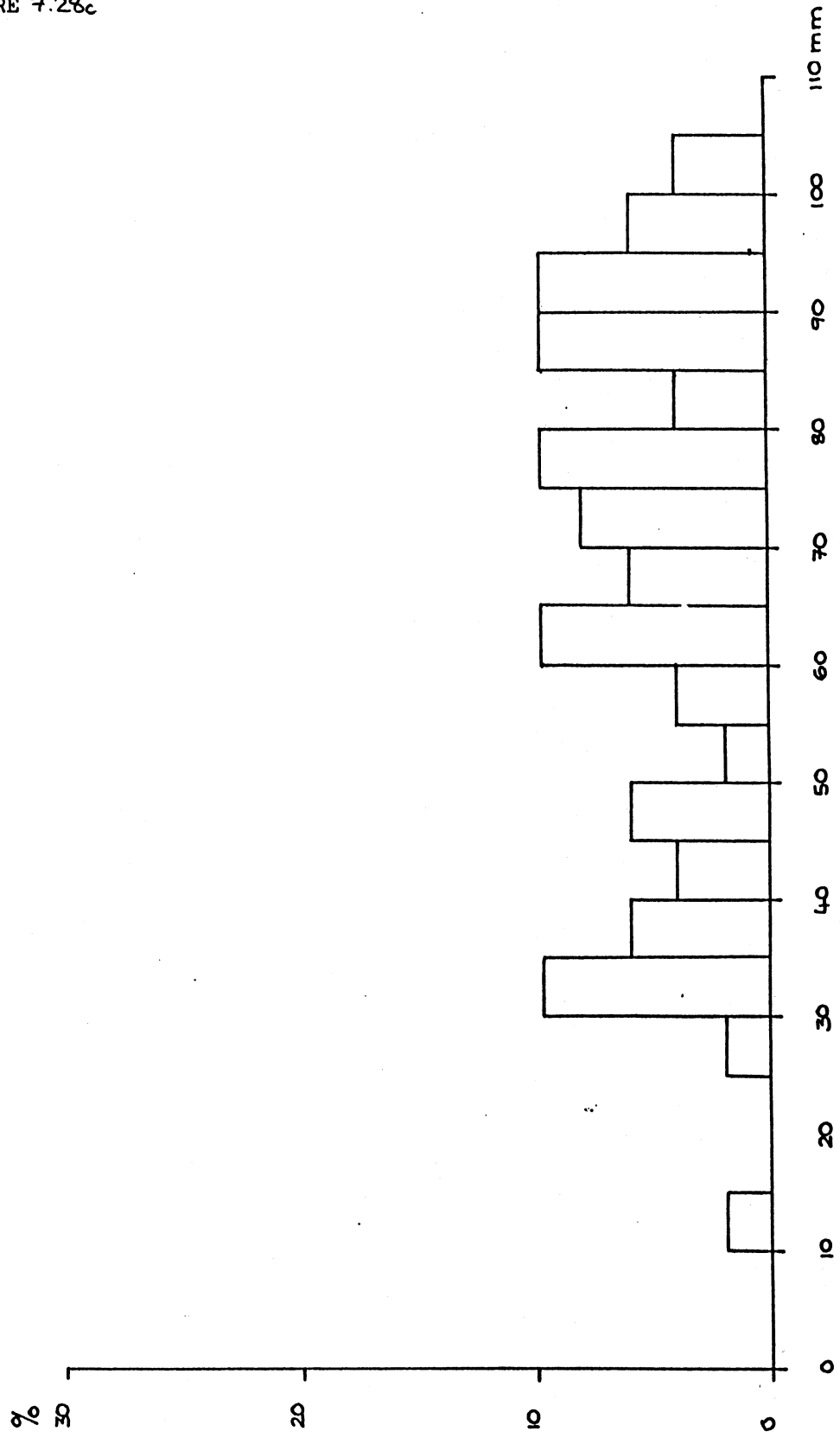


FIGURE 7.28d

Figure 7.28d MOC 86 c.51 GENERAL SIZE FREQUENCY OF OYSTER SHELLS LVML n= 52

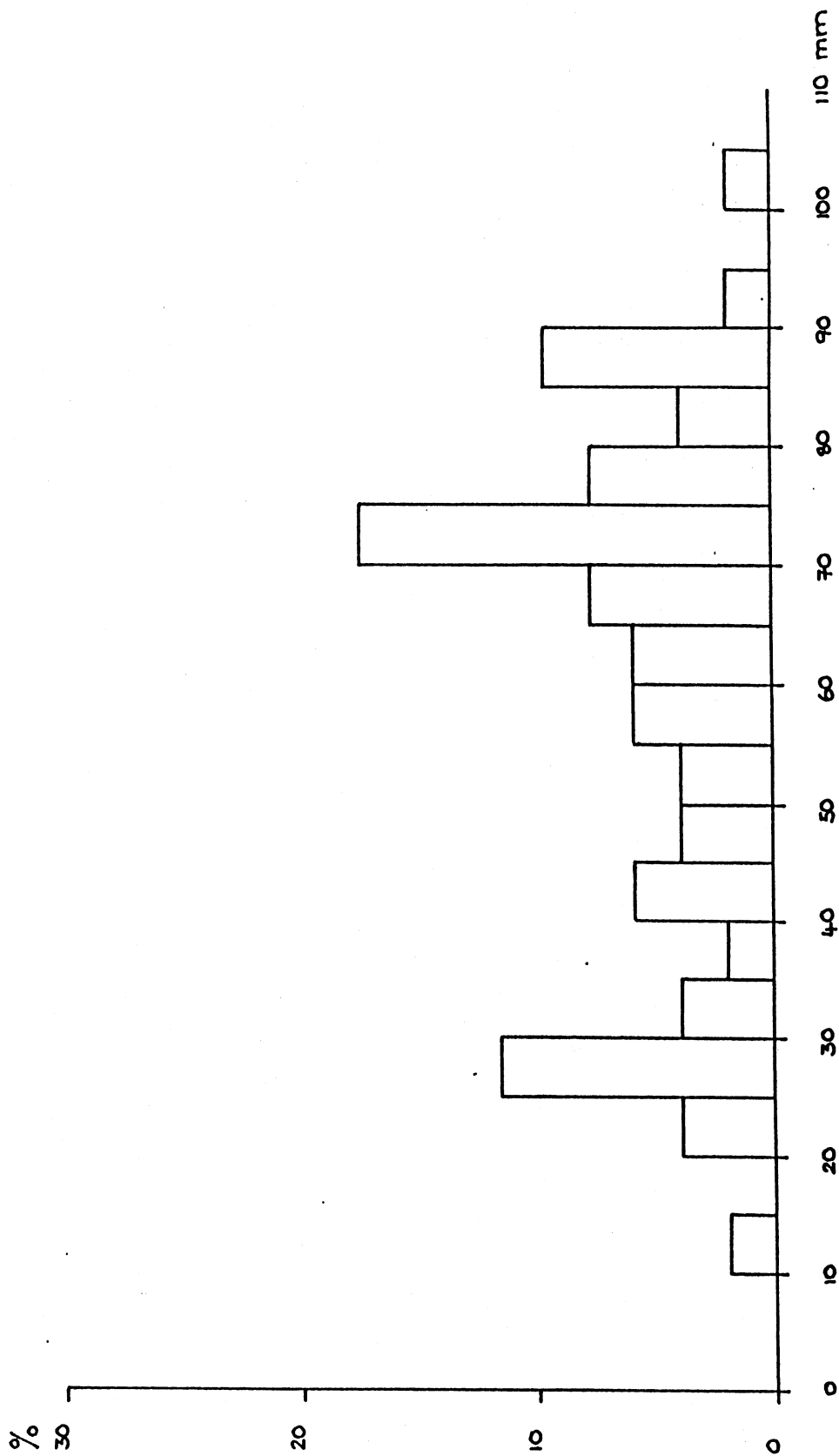


FIGURE 7.29a

Figure 7.29a MOORGATE 86 C.S1 SIZE FREQUENCY OF OYSTER SHELLS SOUTH SIDE OF PIT RYMW N=62

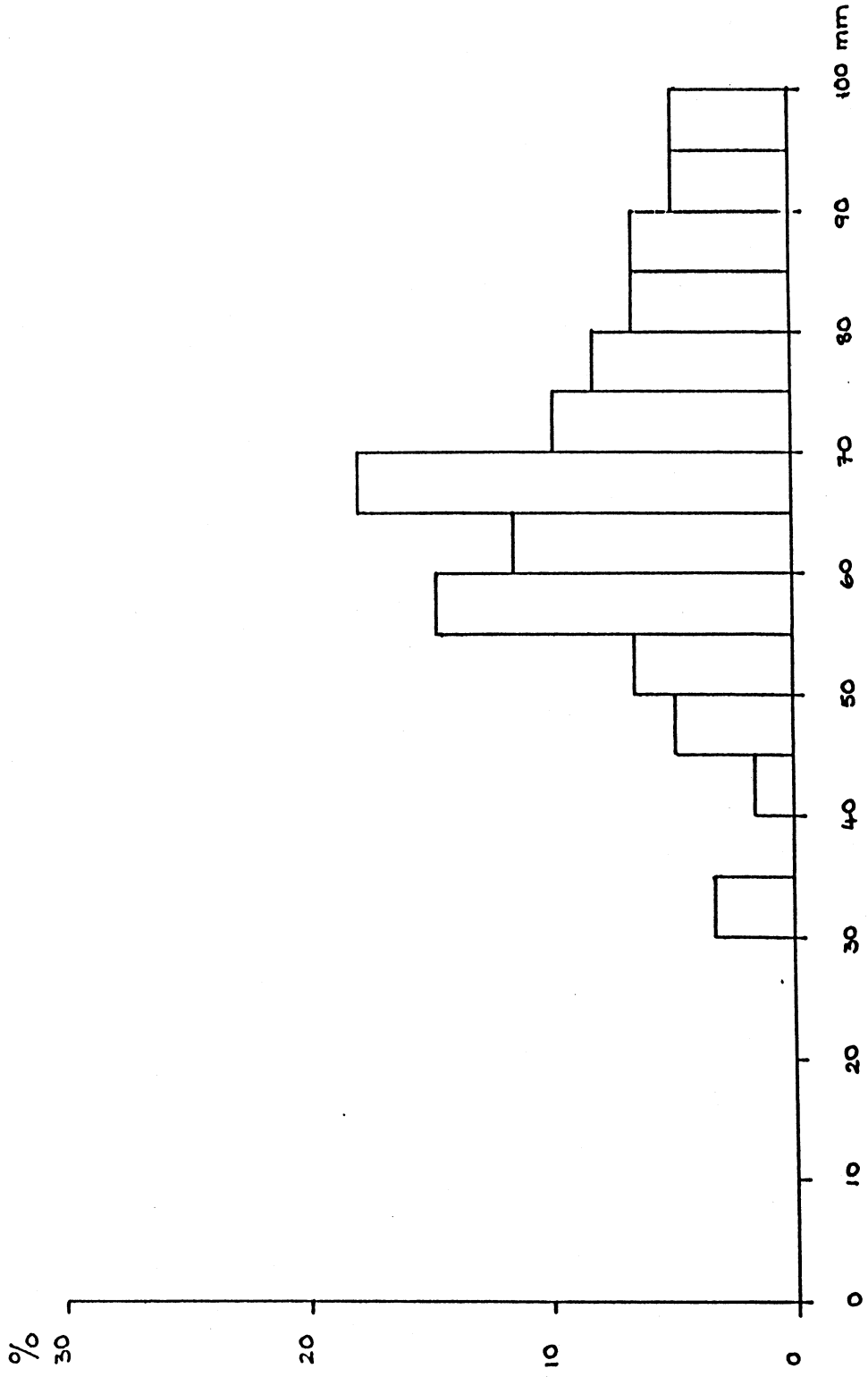


FIGURE 7.29b

Figure 7.29b MOG 86 C.51 SOUTH SIDE OF PIT SIZE FREQUENCY OF OYSTER SHELLS RVML n=62

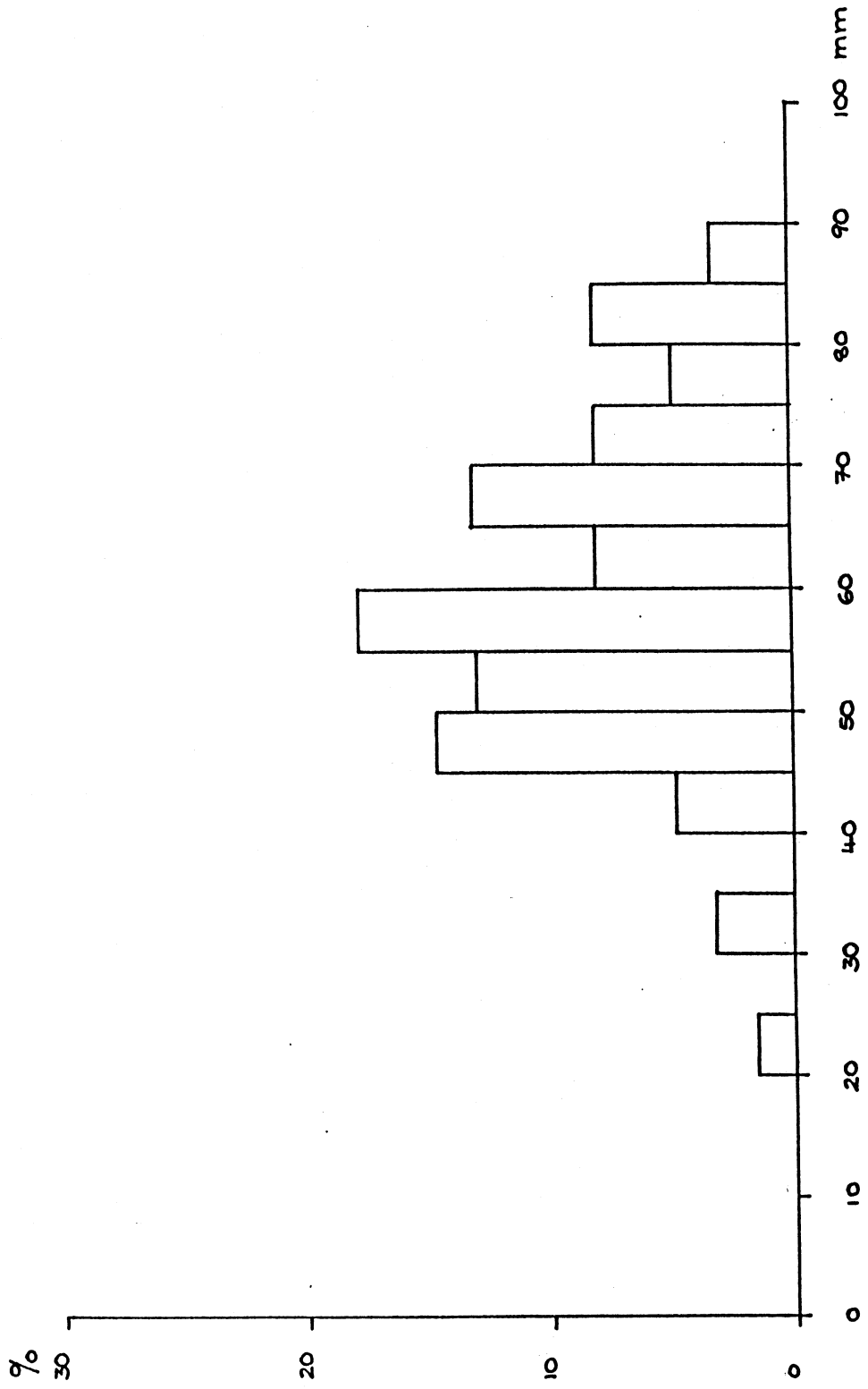




FIGURE 7.29c

Figure 7.29c MOC 86 c.51 SOUTH SIDE OF PIT SIZE FREQUENCY OF OYSTER SHELLS LVMW n = 56

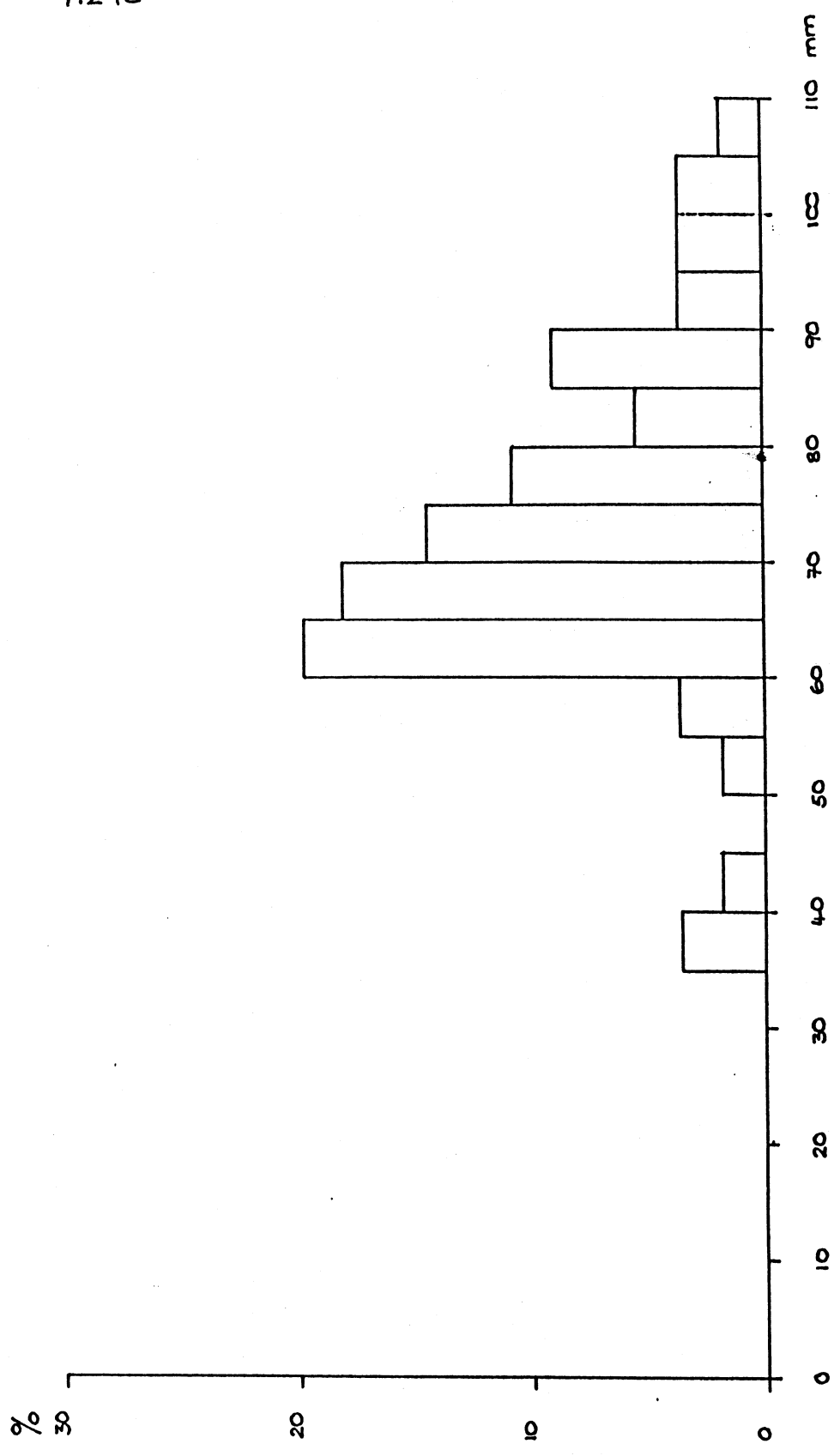


FIGURE 7.29d

Figure 7.29d MOC 86 c.51 SOUTH SIDE OF PIT SIZE FREQUENCY OF OYSTER SHELLS LVML n=56

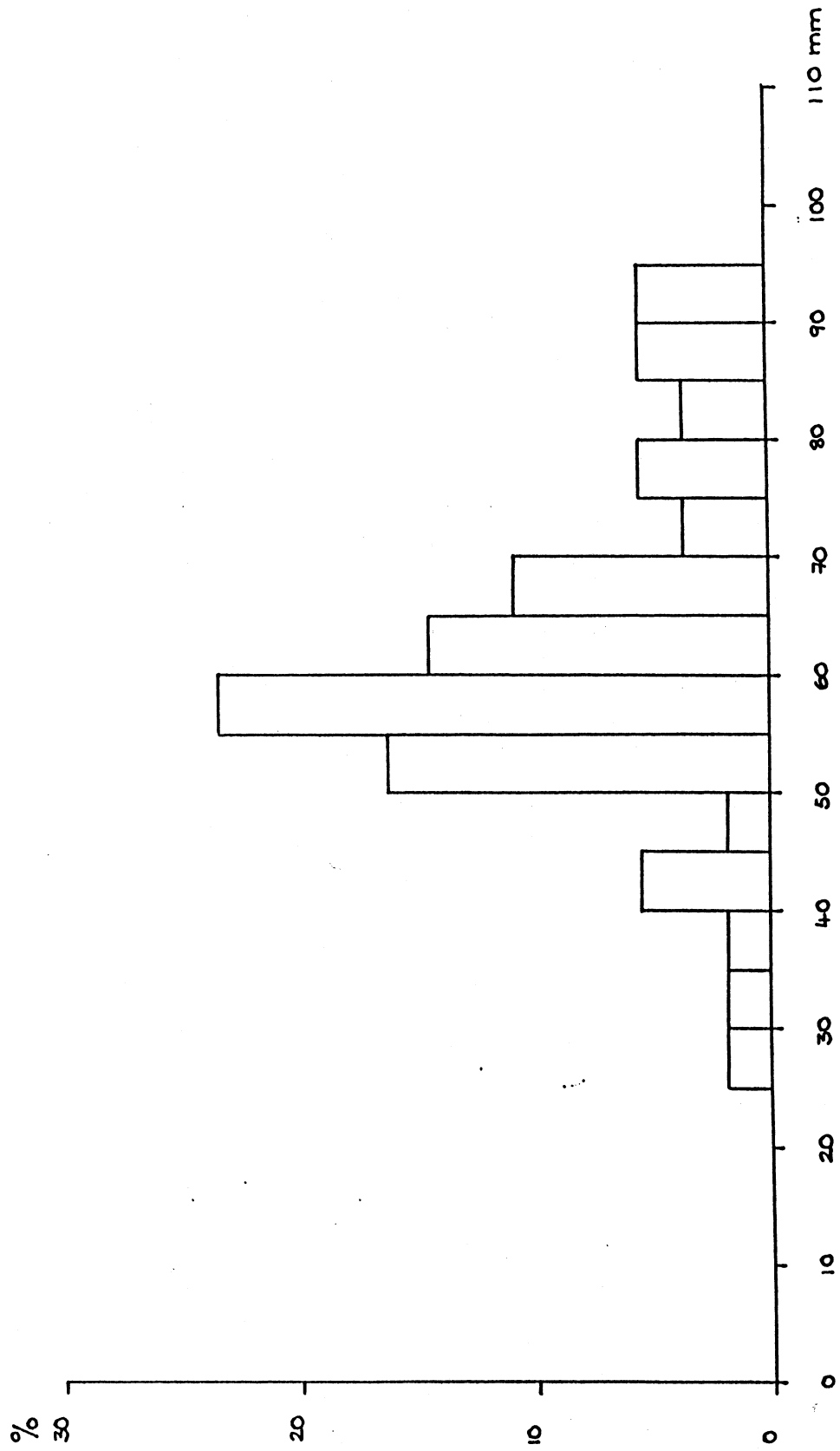


FIGURE 7.30a

FIGURE 7.30a MOG 66 C.51 GENERAL AND SOUTH SIDE OF PIT SIZE FREQUENCY OF OYSTER SHELLS RVMW N = 132

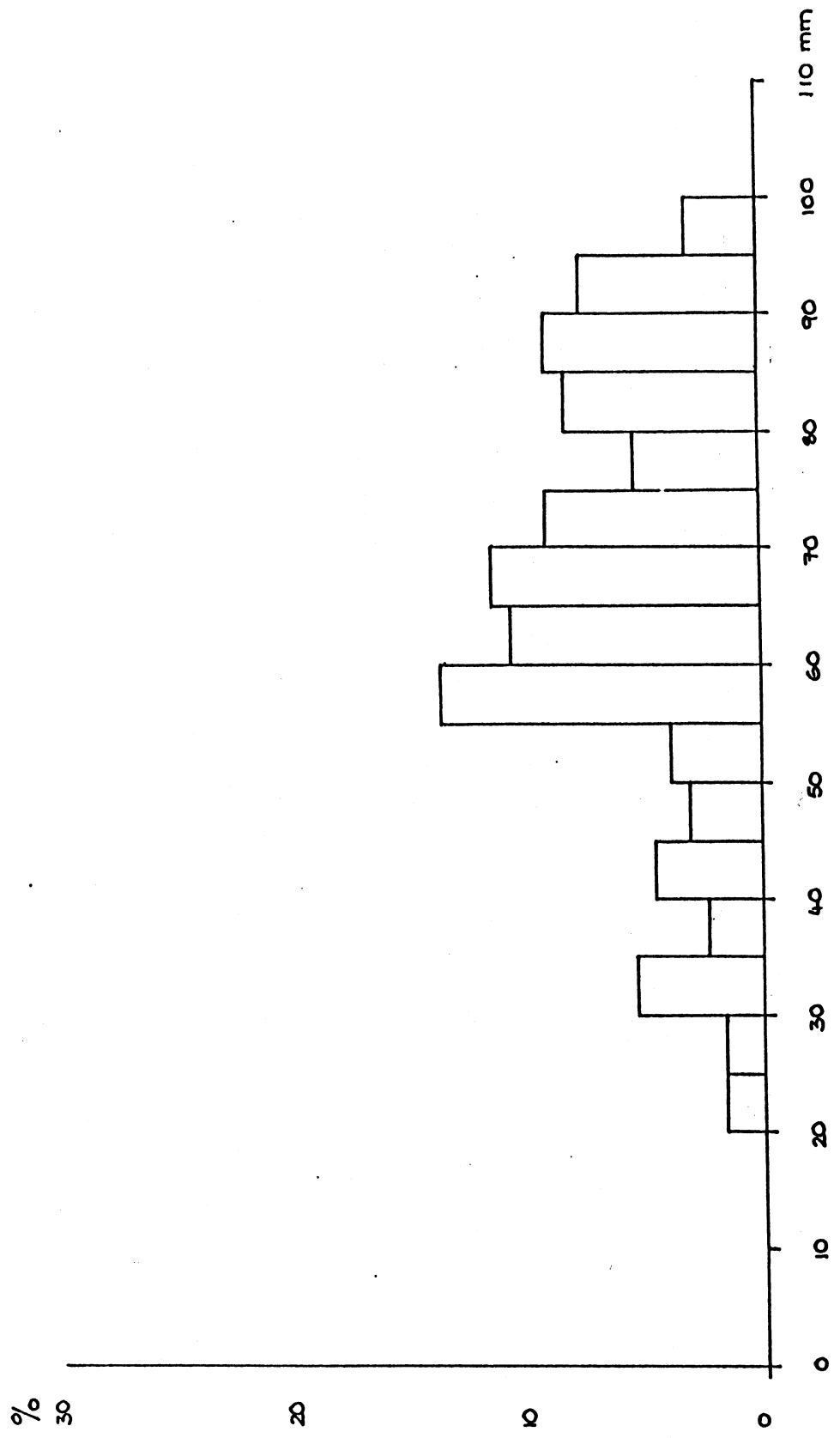


FIGURE 7.30b

Figure 7.30b MOQ. 86 C.51 GENERAL AND SOUTHSIDE OF PIT SIZE FREQUENCY OF OYSTER SHELLS RYML n = 132

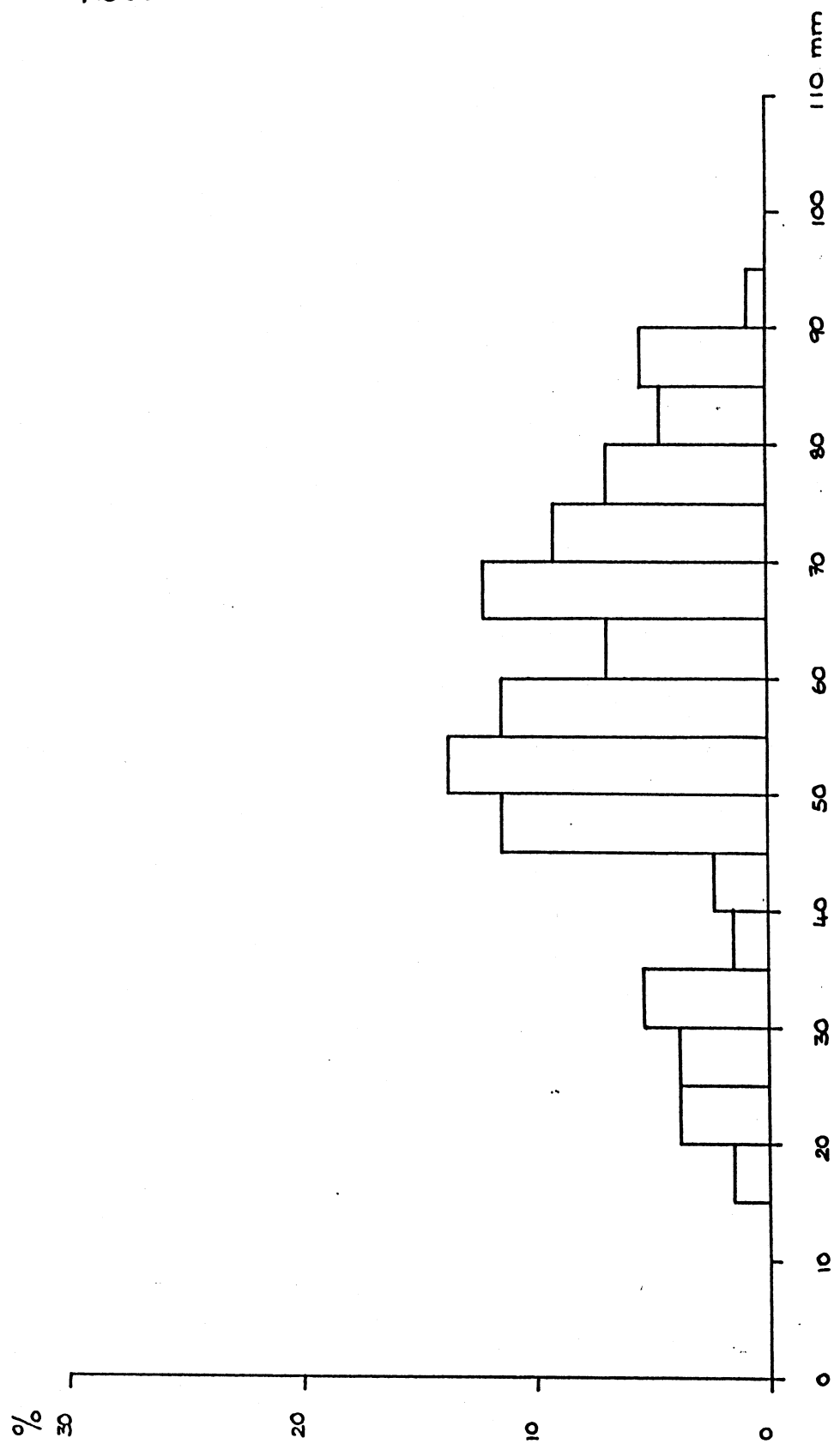


FIGURE 7.30c

Figure 7.30c MOG 86 C.51 GENERAL AND SOUTHSIDE OF PT SIZE FREQUENCY OF OYSTER SHELLS LVMW n = 108

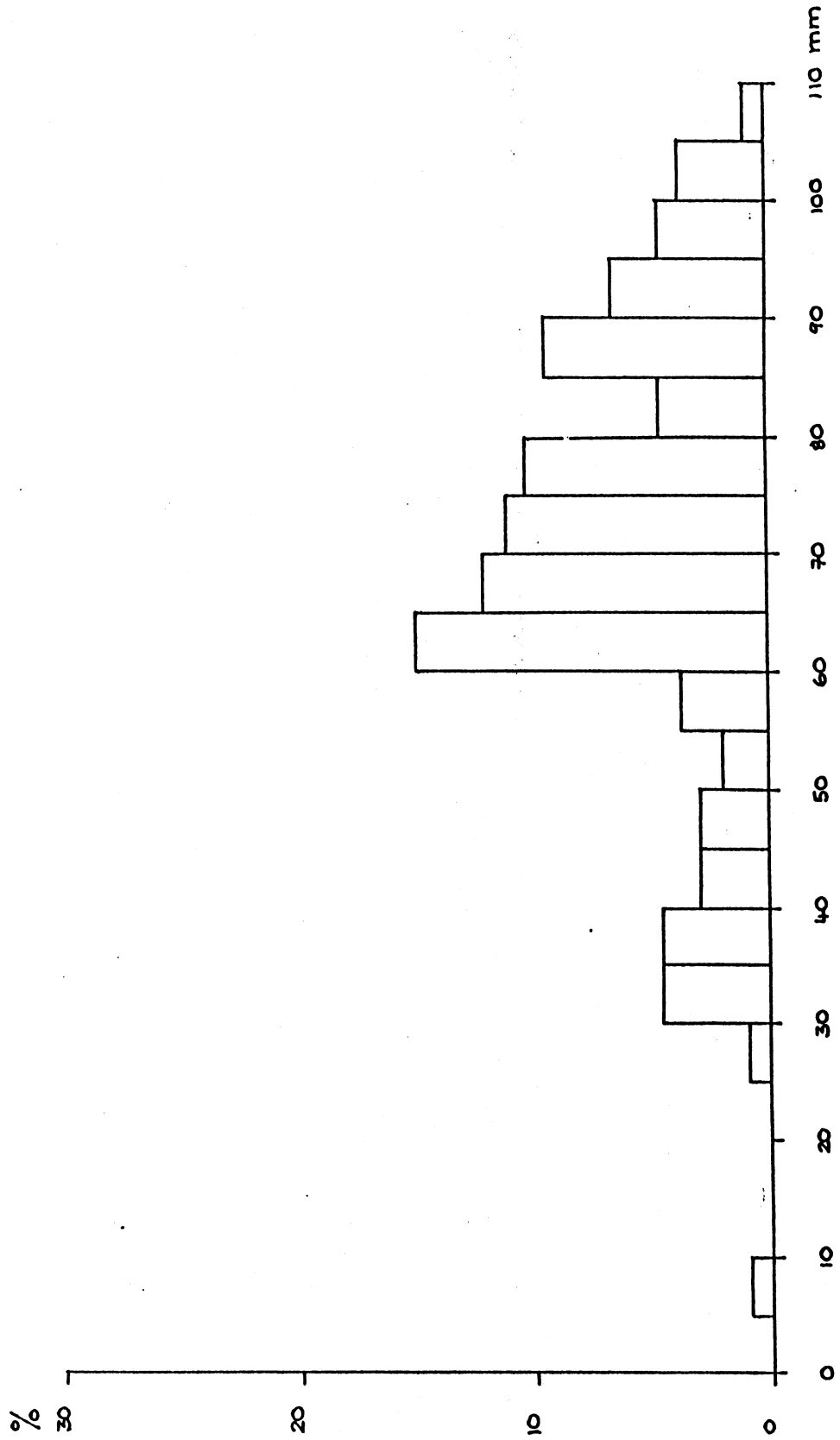


FIGURE 7.30d

FIGURE 7.30d MOG 86 c. 51 GENERAL AND SOUTH SIDE OF PIT LYML SIZE FREQUENCY OF OYSTER SHELLS n = 108

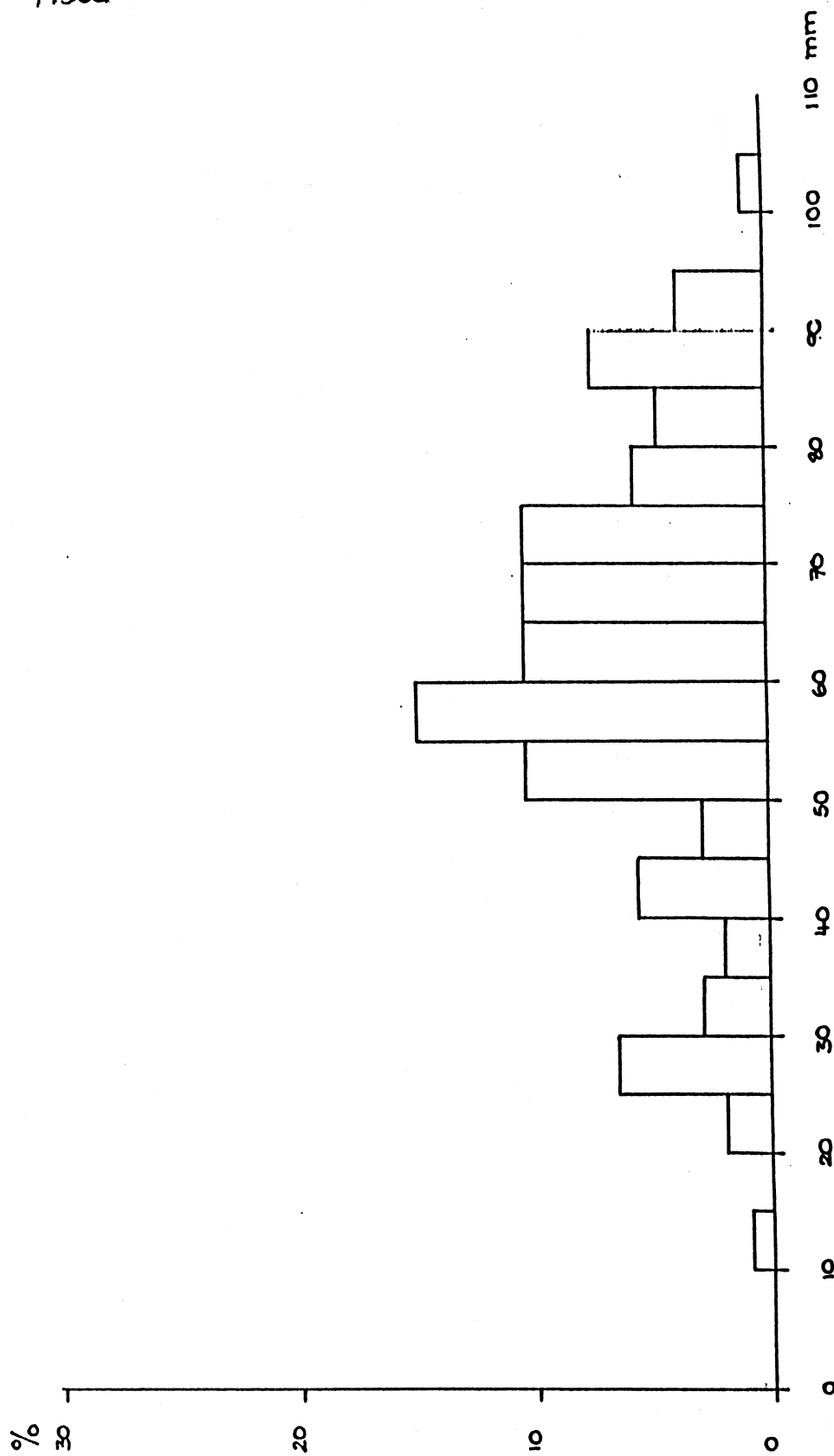


FIGURE 7.31 a

Figure 7.31a MOC 86 C65 SIZE FREQUENCY OF OYSTER SHELLS RYMW n = 116

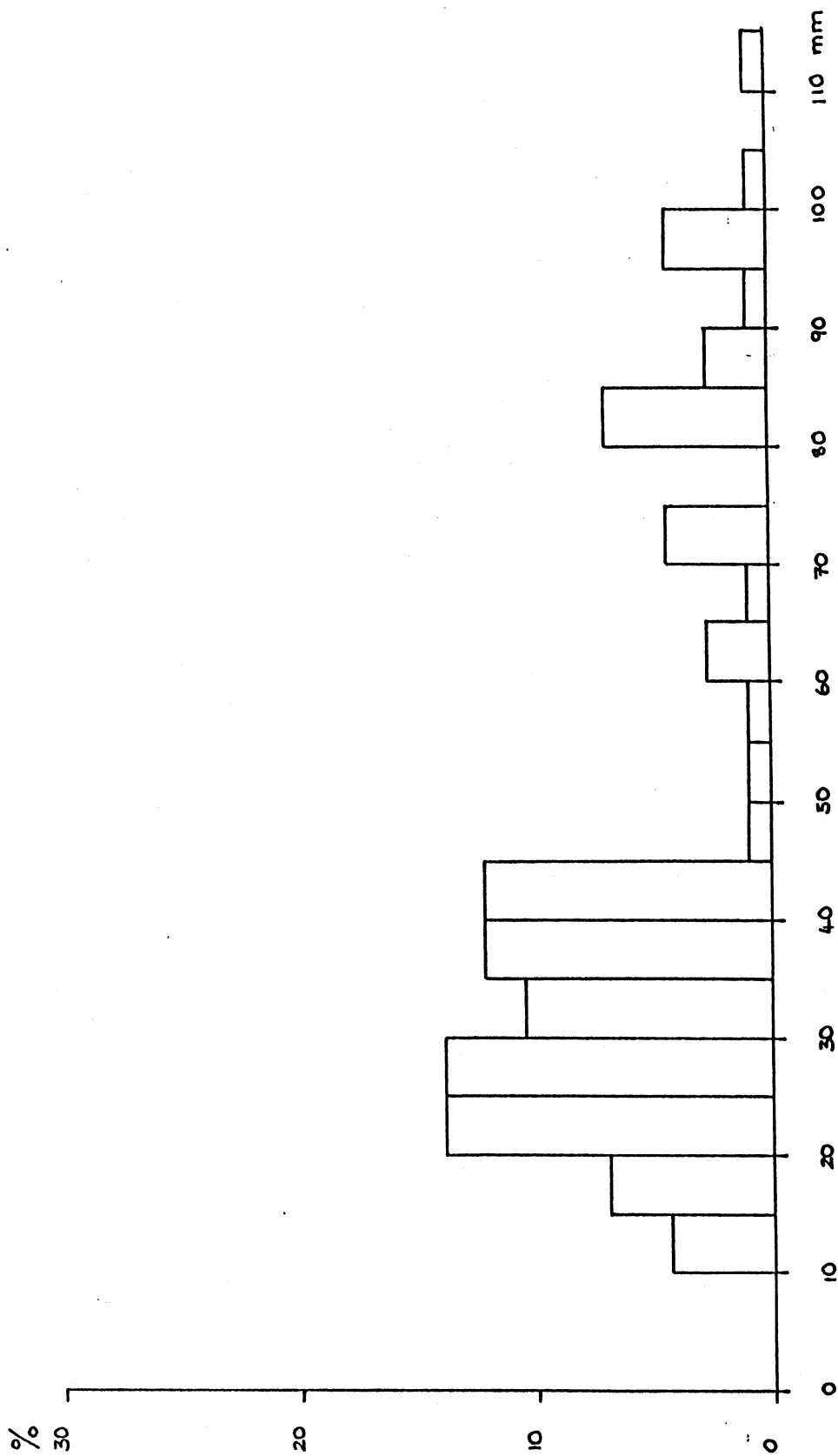


FIGURE 7.31b

Fig. 7.31b MOG 86 C.65 SIZE FREQUENCY OF OYSTER SHELLS RYML n = 116

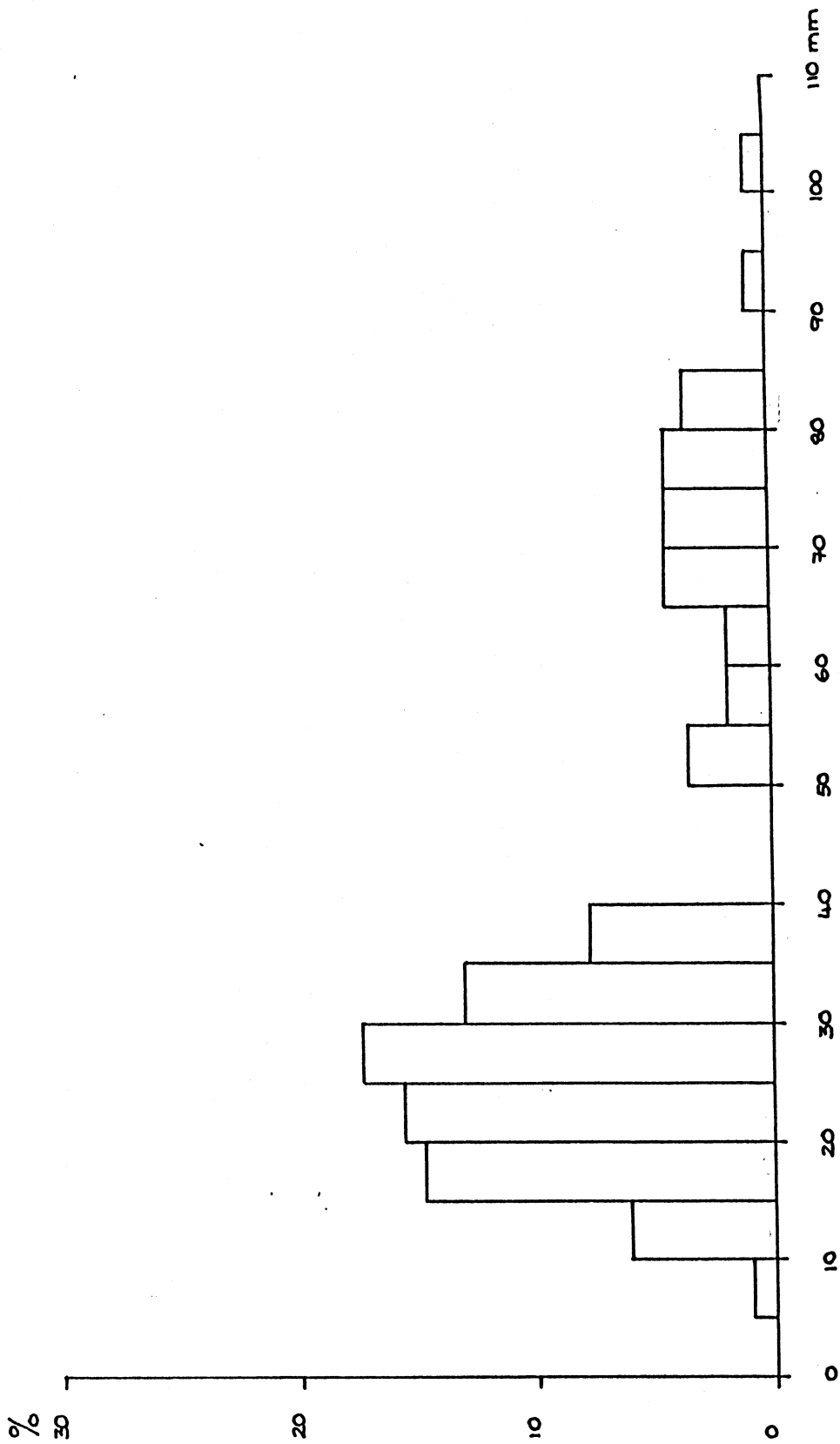




FIGURE 7.31c

Figure 7.31c MOG 86 C-65 SIZE FREQUENCY OF OYSTER SHELLS LVMW  $n = 65$

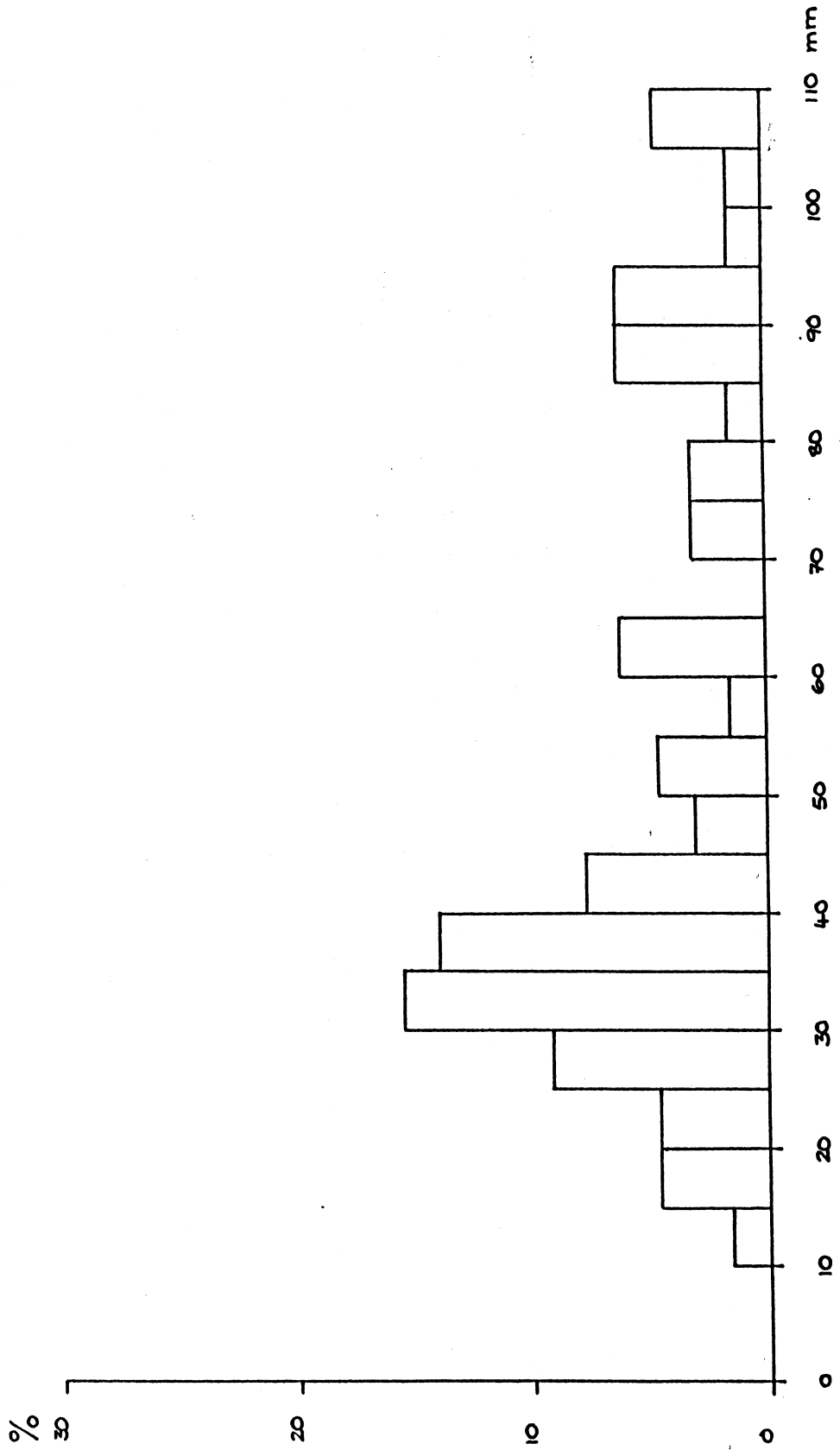


FIGURE 7.31d

Figure 7.31d MOQ 86 C. 65 SIZE FREQUENCY OF OYSTER SHELLS LYML n = 65

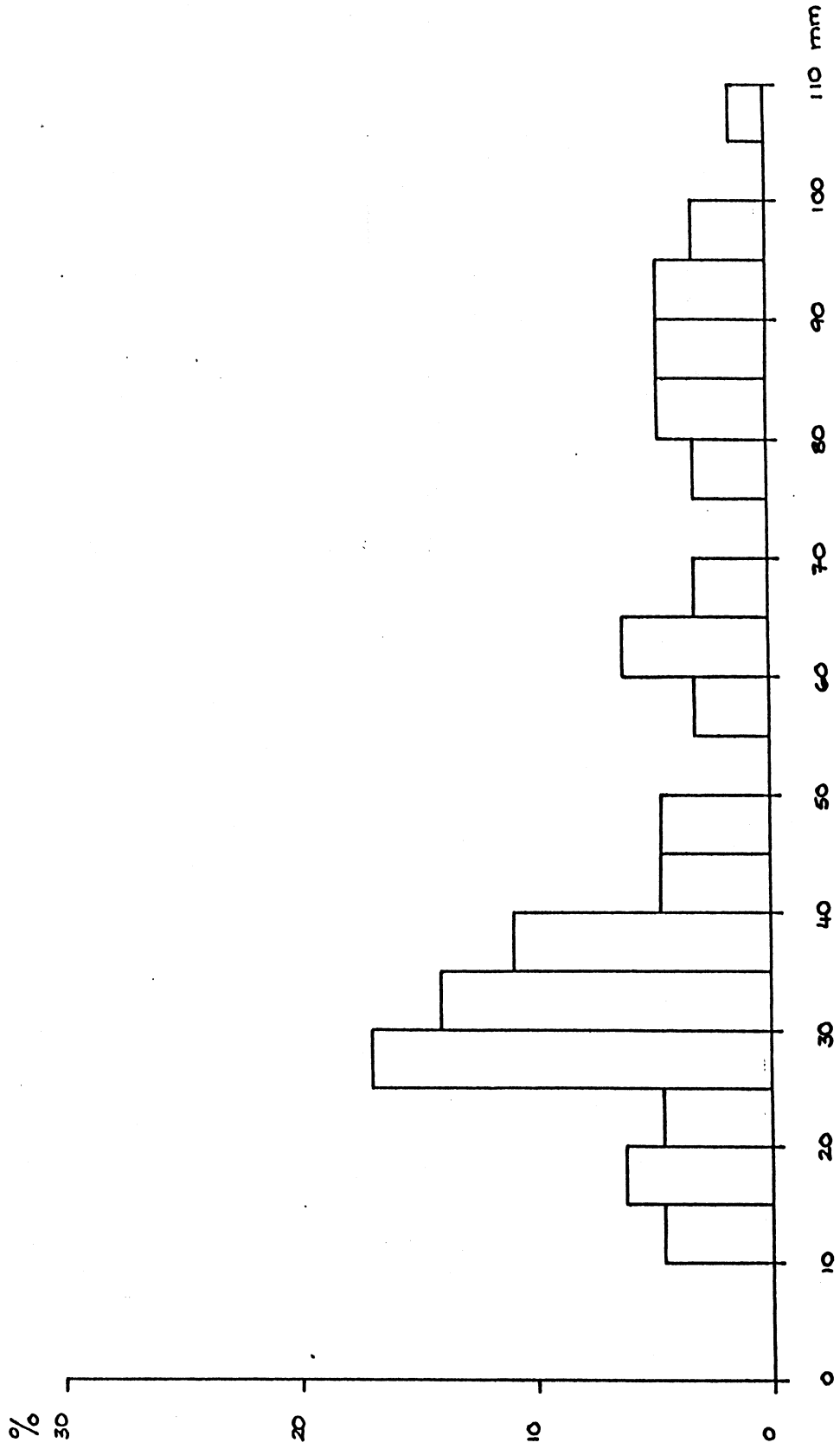


FIGURE 7.32  
SIZE FREQUENCY OF RIGHT VALVE MAXIMUM WIDTH MEASUREMENTS (RYMW) FROM OYSTER SHELLS MOG 86

FIGURE 7.32

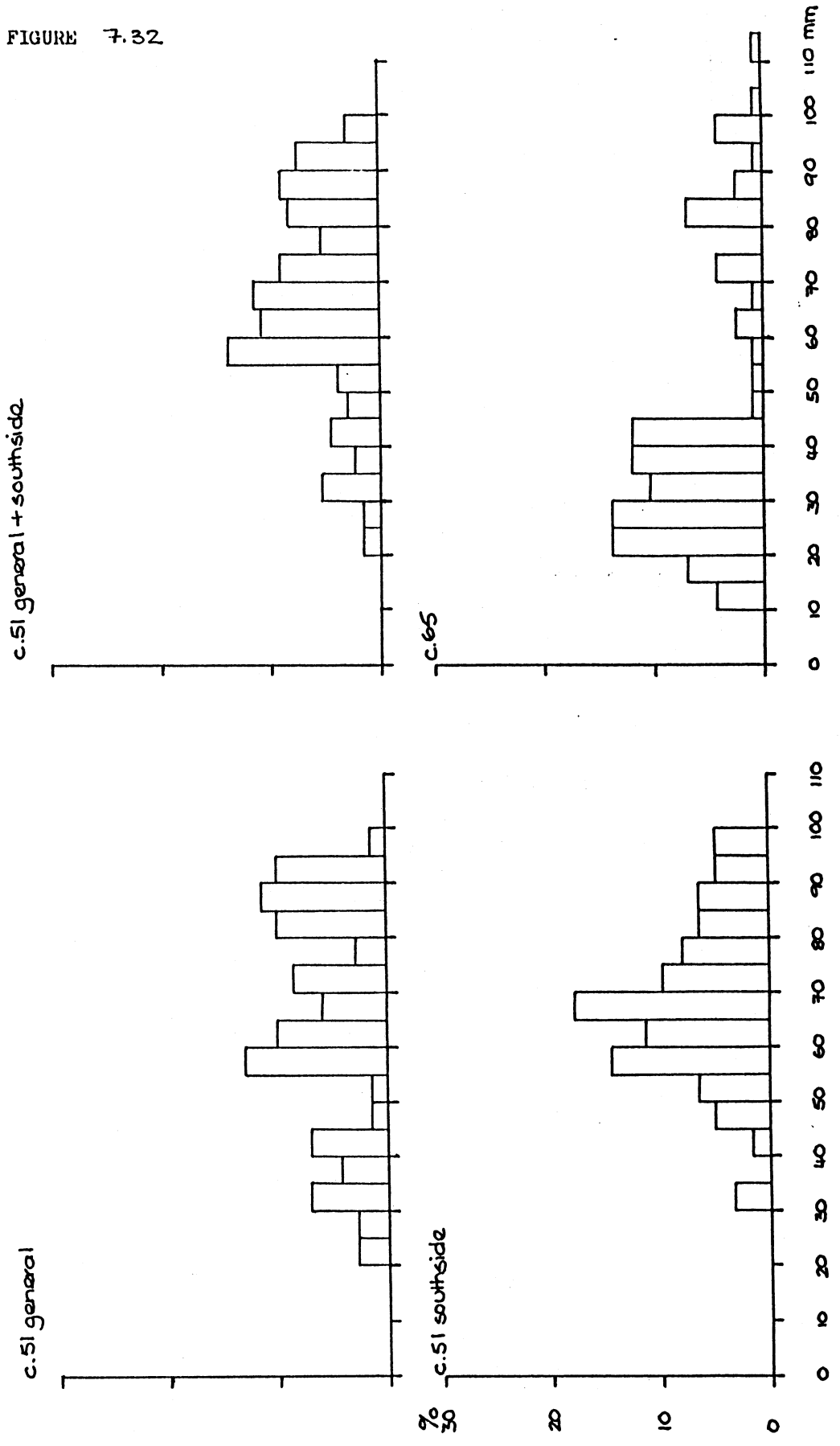


FIGURE 7.33

+ significant difference  
 - no significant difference

	GDH 409	GDH 309	MOG 65	MOG 51 GENERAL	MOG 51 SOUTHSIDE	MOG 51 TOTAL
GDH 409		-	+	-	-	-
GDH 309			+	-	-	-
MOG 65				+	+	+
MOG 51 GENERAL					-	-
MOG 51 SOUTHSIDE						-
MOG 51 TOTAL						

FIGURE 7.34

Actual T values

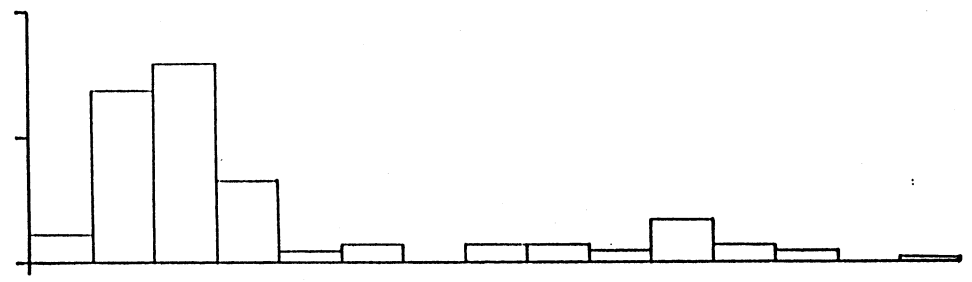
	GDH 409	GDH 309	MOG 65	MOG 51 GENERAL	MOG 51 SOUTHSIDE	MOG 51 TOTAL
GDH 409		1.34	10.25	1.38	-0.05	1.08
GDH 309			9.28	0.79	-0.72	0.22
MOG 65				-6.20	-8.21	-8.08
MOG 51 GENERAL					-1.6	-0.58
MOG 51 SOUTHSIDE						1.77
MOG 51 TOTAL						

RESULTS OF TWO SAMPLE T-TESTS RIGHT VALVES MAX. WIDTH  
 (MOORGATE)

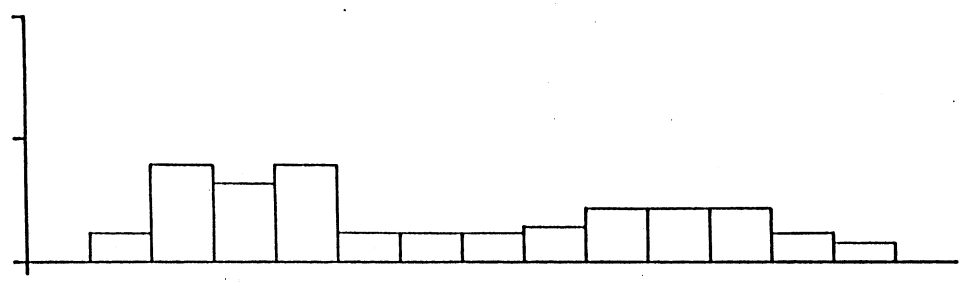


DISTRIBUTION OF AGE GROUPS IN OYSTER SHELLS (MOORCATE) FIGURE 7.36

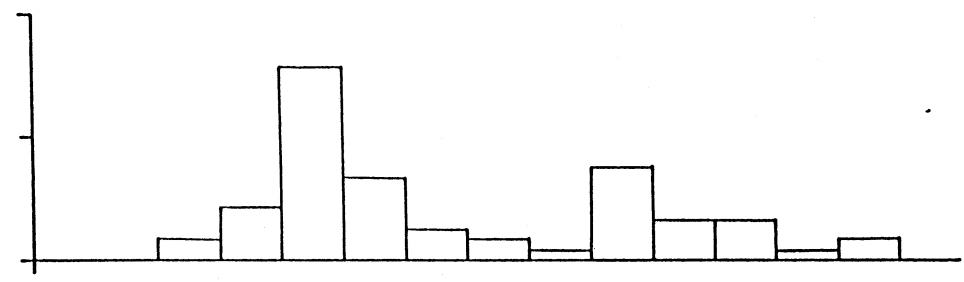
MOQ 86 c.65



MOQ 86 c.51 GENERAL



MOQ 86 c.51 SOUTH SIDE



% MOQ 86 c.51 GENERAL AND SOUTH SIDE

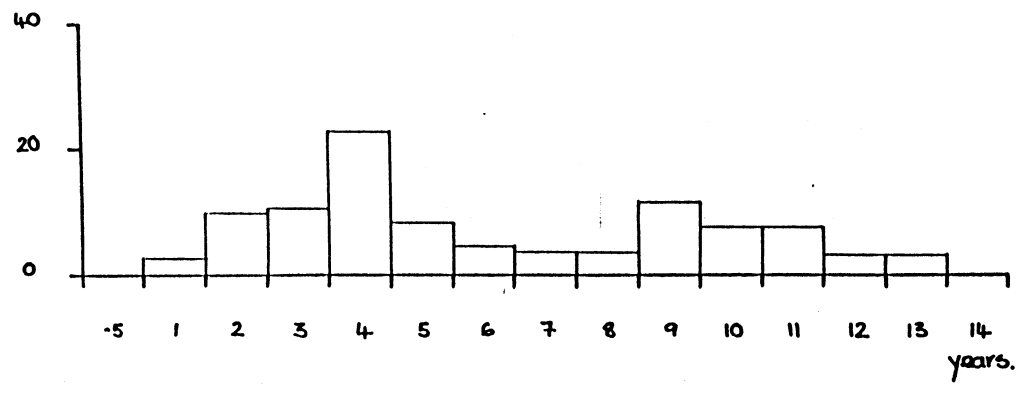
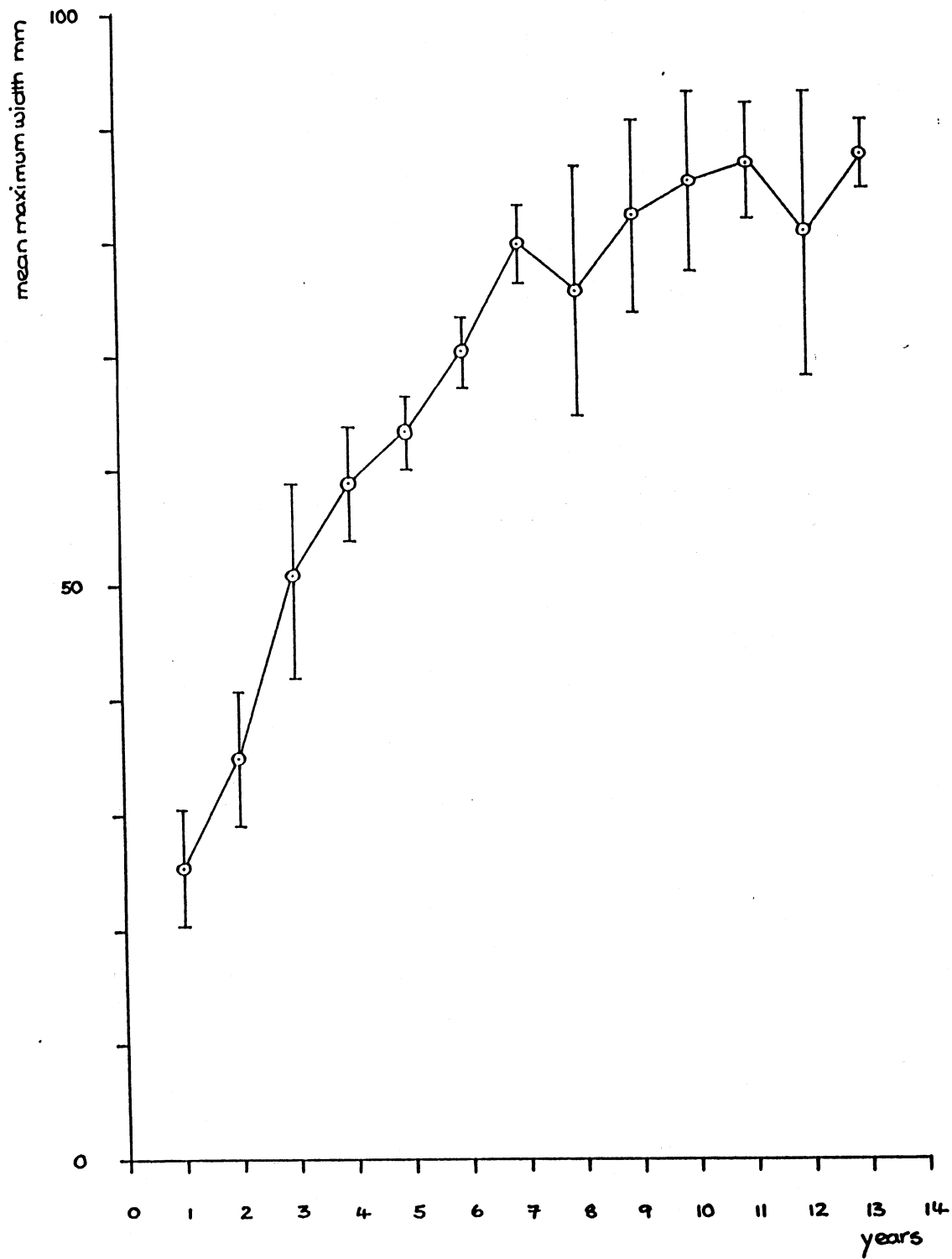
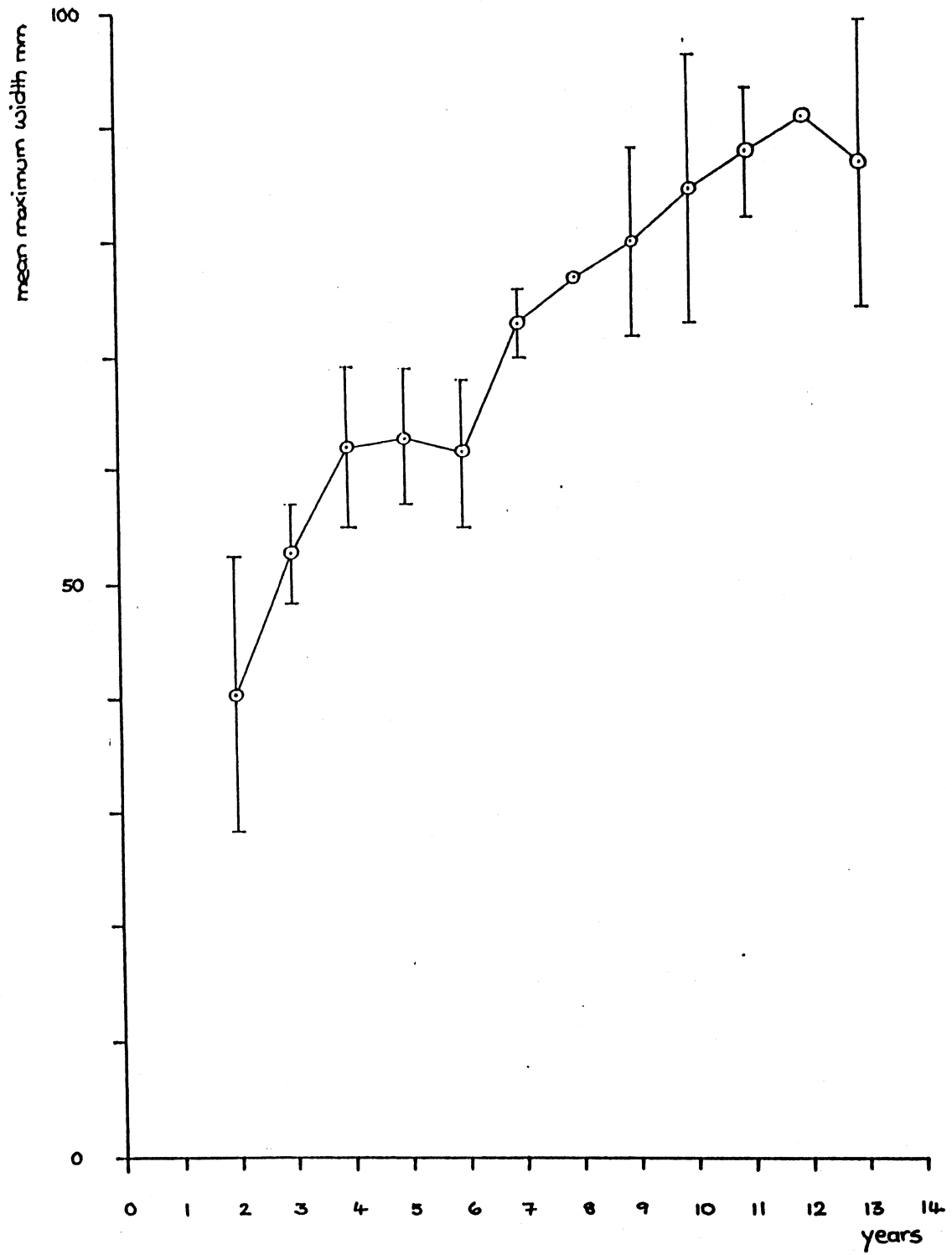


FIGURE 7.37



GROWTH RATE OF OYSTERS MOC, BG C51 GENERAL n=70 (MOORCATE)

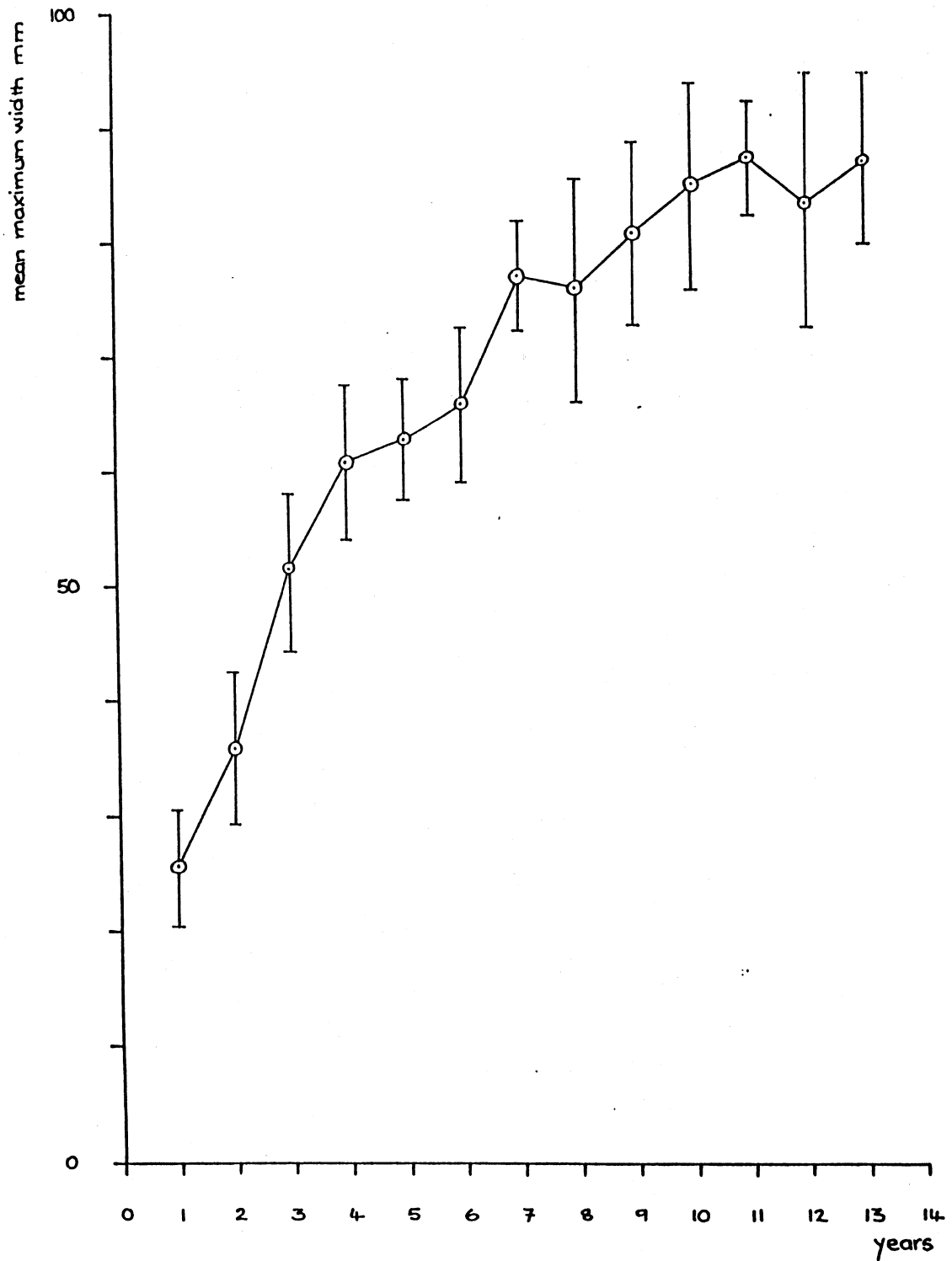
FIGURE 7.38



GROWTH RATE OF OYSTERS MOG 86 c.51 SOUTH SIDE n=60 (MOORCATE)

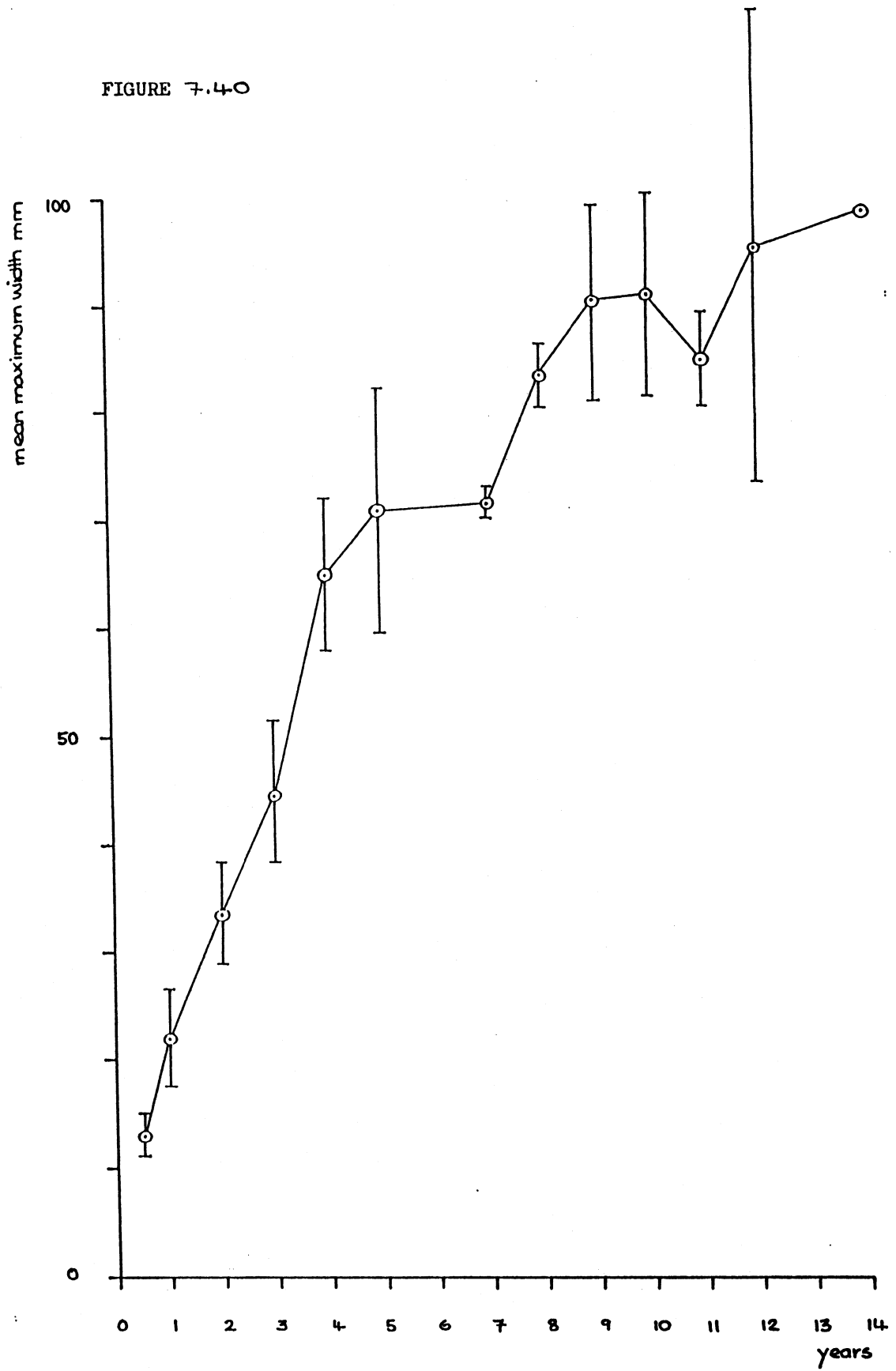


FIGURE 7.39



GROWTH RATE OF OYSTERS MOQ 86 C.51 GENERAL AND SOUTHSIDE n=130  
(MOORCATE)

FIGURE 7.40



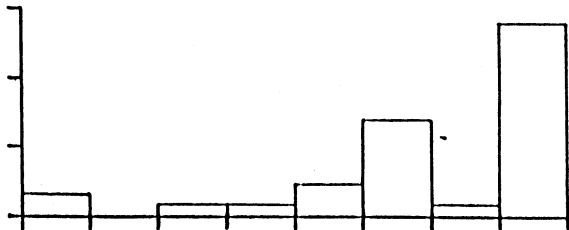
GROWTH RATE OF OYSTERS MOQ 86 c.65 n=116 (MOORGATE)

FREQUENCY OF INFESTATION CHARACTERS IN OYSTER SHELLS (MOORGATE) FIGURE 7.41

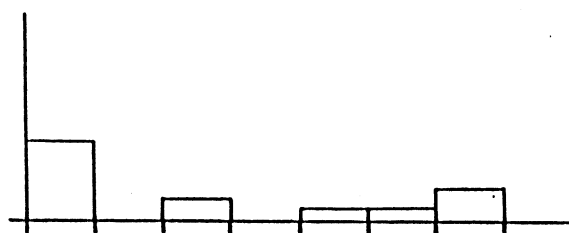
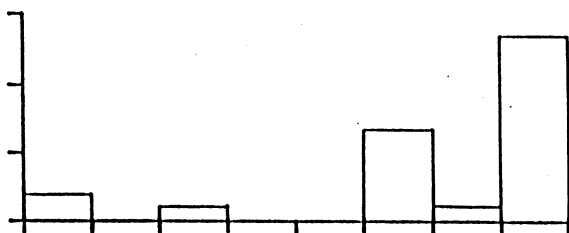
LEFT VALVES

RIGHT VALVES

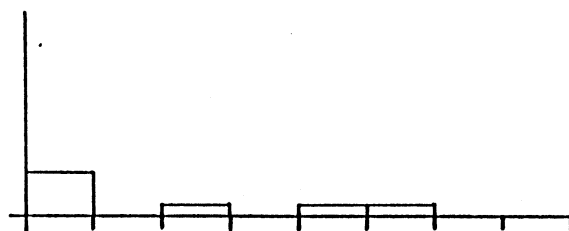
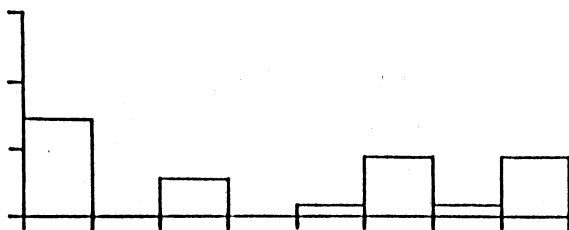
MOQ 86 c.65



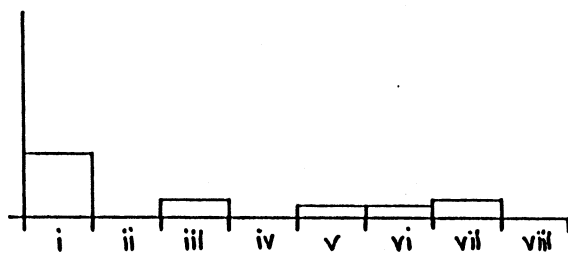
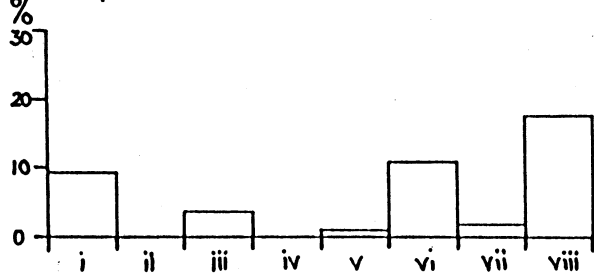
MOQ 86 c.51 GENERAL



MOQ 86 c.51 SOUTHSIDE



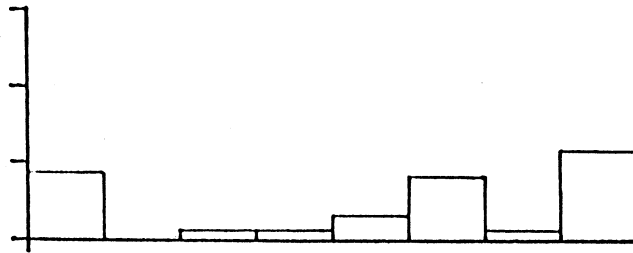
MOQ 86 c.51 GENERAL AND SOUTHSIDE



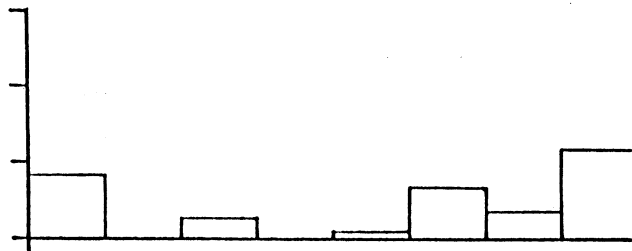
- Polydora ciliata
- Polydora hoplura
- Cirion calata
- Calcareous tubes
- Barnacles
- Polyzoa
- Boreholes
- Sand tubes

FIGURE 7.42 FREQUENCY OF INFESTATION CHARACTERS IN OYSTER SHELLS (LEFT AND RIGHT VALVES) MOORGATE

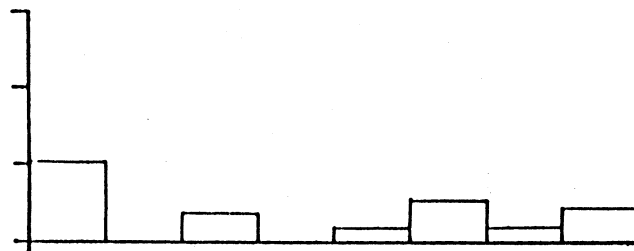
MOG 86 c.65



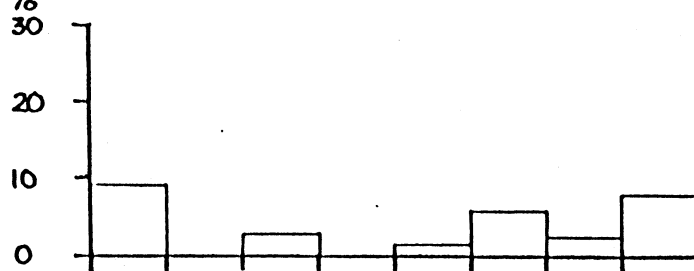
MOG 86 c.51 GENERAL



MOG 86 c.51 SOUTHSIDE



% MOG 86 c.51 GENERAL AND SOUTHSIDE



i

ii

iii

iv

v

vi

vii

viii

*Polydora ciliata*

*Polydora hoplura*

*Cirion celata*

Calcareous tubes

Barnacles

Polyspa

Bore holes

Sand tubes

	Number in sample		Thick		Chambered		Chalky deposit		Thin		Distortion		Cuts and notches		Cutch type		Grouping		Spot attached		Ligament preserved		Nutation	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MOG 51 general LV RV All valves	52		17	32.65	4	7.69	0	0	7	13.46	3	5.77	1	1.92	M 1		3		7	13.46	5	9.62		
	70		25	36.71	0	0	0	0	39	55.71	6	8.57	0	0	0		1		1	1.43	9	12.86	2	
	122		42	34.43	4	3.28	0	0	46	37.7	6	7.38	1	0.82	0		3	2.46	8	6.56	14	11.45	2	1.64
MOG 51 southside LV RV All valves	56		11	19.44	1	1.79	1	1.79	2	3.57	3	5.36	3	5.36	O valves		2	3.57	2	3.57	5	8.93	0	
	62		16	25.81	0	0	0	0	38	61.29	5	8.07	0	0			0	0	1		5	8.07	0	
	118		27	22.98	1	0.85	1	0.85	40	33.9	8	6.78	3	2.54			2	1.69	3	2.54	10	8.48	0	
MOG 51 all. LV RV All valves	108		28	25.93	5	4.63	1	0.93	9	8.33	6	5.56	4	3.70			5	4.63	9	8.33	10	9.26	2	1.85
	132		41	31.06	0	0	0	0	77	58.33	11	8.33	0	0			0	0	2	1.52	14	10.61	2	0.83
	240		69	28.75	5	2.08	1	0.42	86	35.83	17	7.08	4	1.67			5	2.08	11	4.58	24	10.0	2	
MOG 65 LV RV All valves	65		14	21.54	4	6.15	0	0	0	0	20	30.77	2	3.08			2	1.11	7	10.77	6	9.23	7	10.77
	116		19	16.38	1	0.86	0	0	85	73.22	5	4.31	1	0.86			2	1.11	3	2.59	6	5.17	7	6.03
	181		33	18.23	5	2.76	0	0	85	46.96	25	13.81	3	1.66			2	1.11	10	5.52	12	6.63	14	7.73

TABLE 7.32 SUMMARY OF ADDITIONAL CHARACTERS OF OYSTER SHELLS - MOORGATE

Figure 7.43a GPH 85 C 309 SIZE FREQUENCY OF OYSTER SHELLS RYMW N= 156

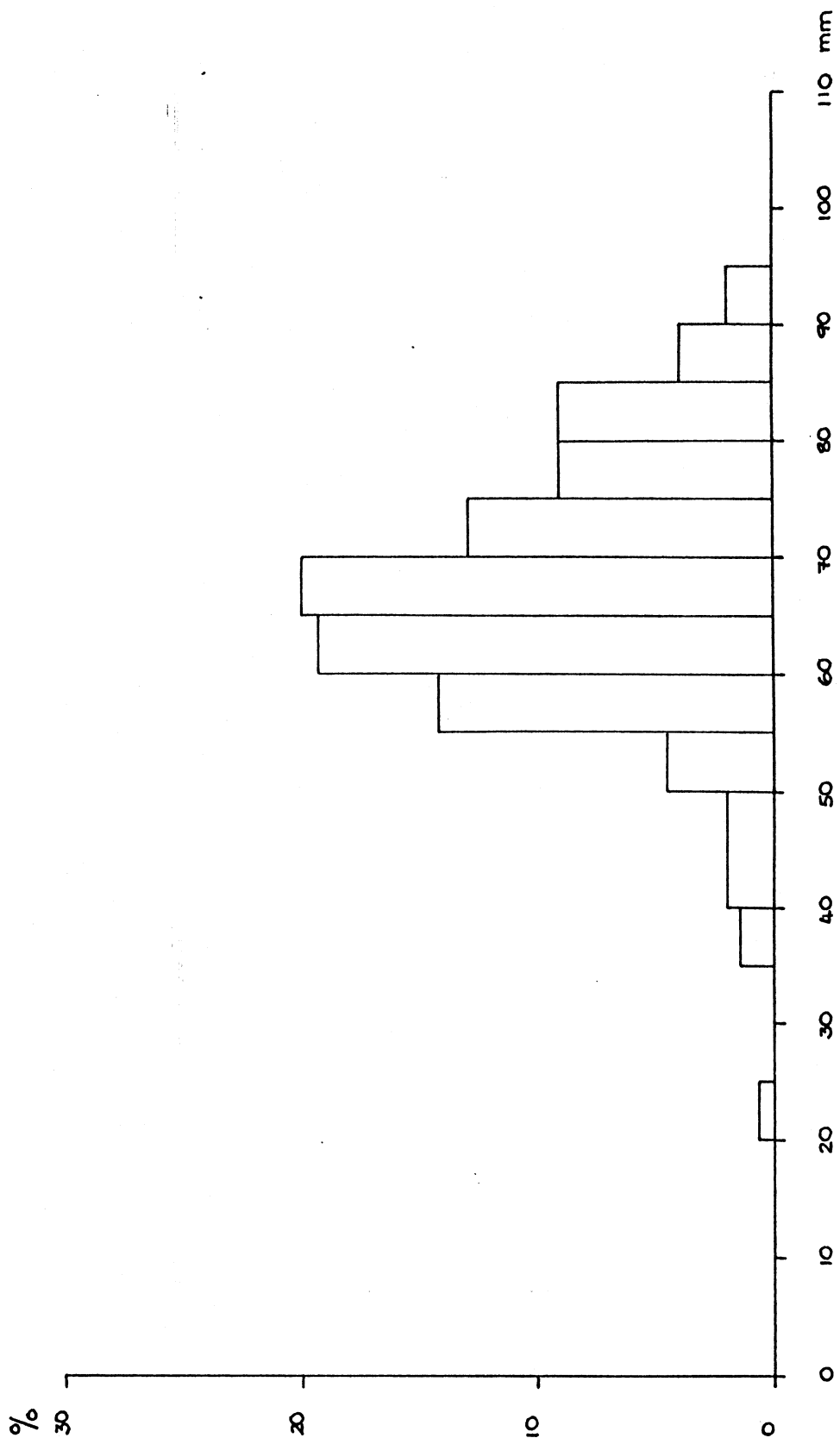


FIGURE 7.43b

Figure 7.43b CDH 85 c 309 SIZE FREQUENCY OF OYSTER SHELLS RYML n=156

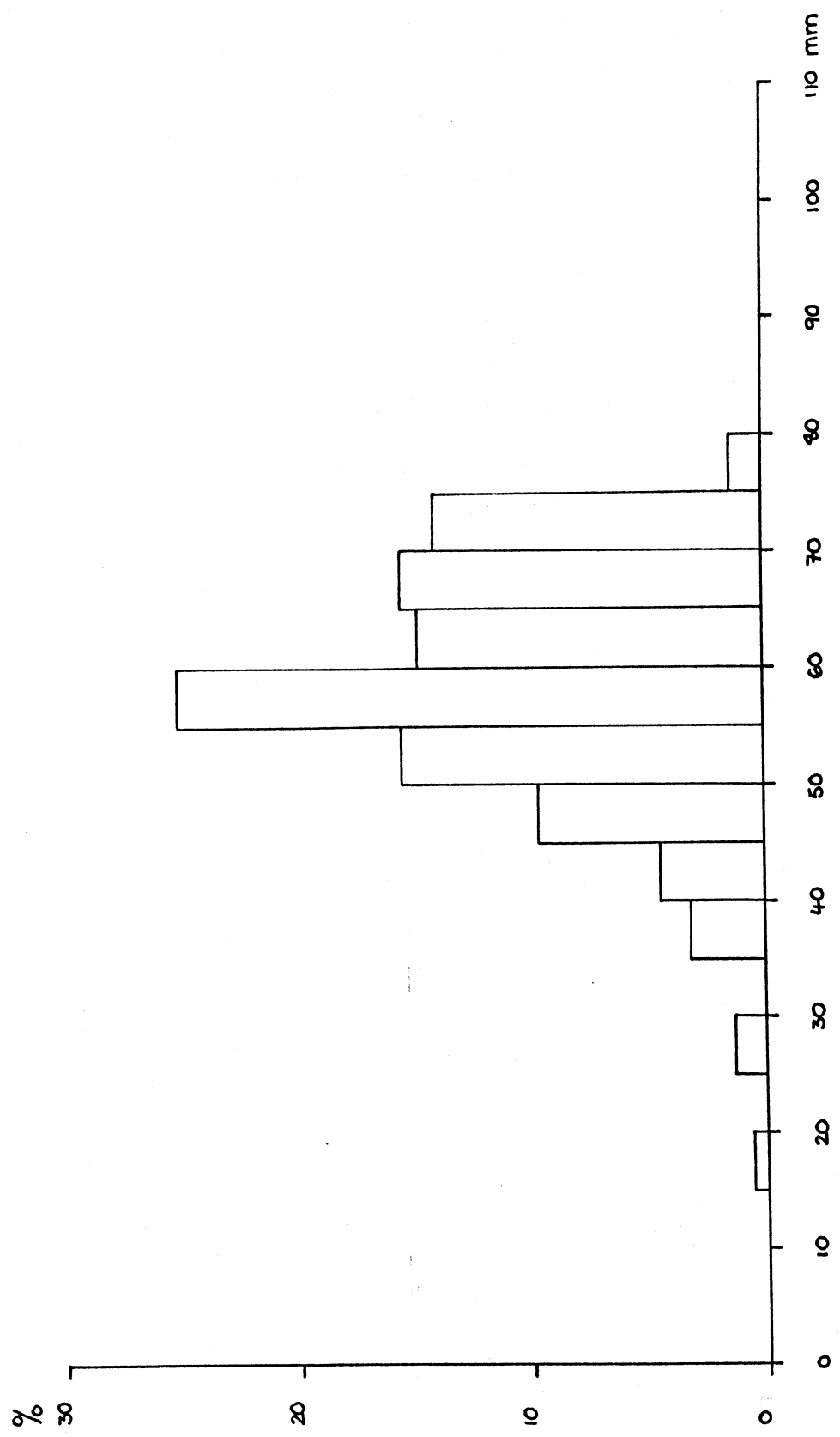


FIGURE 7.43C

Figure 7.43c C.D.H 85 C 309 SIZE FREQUENCY OF OYSTER SHELLS L.V.M.W n = 153

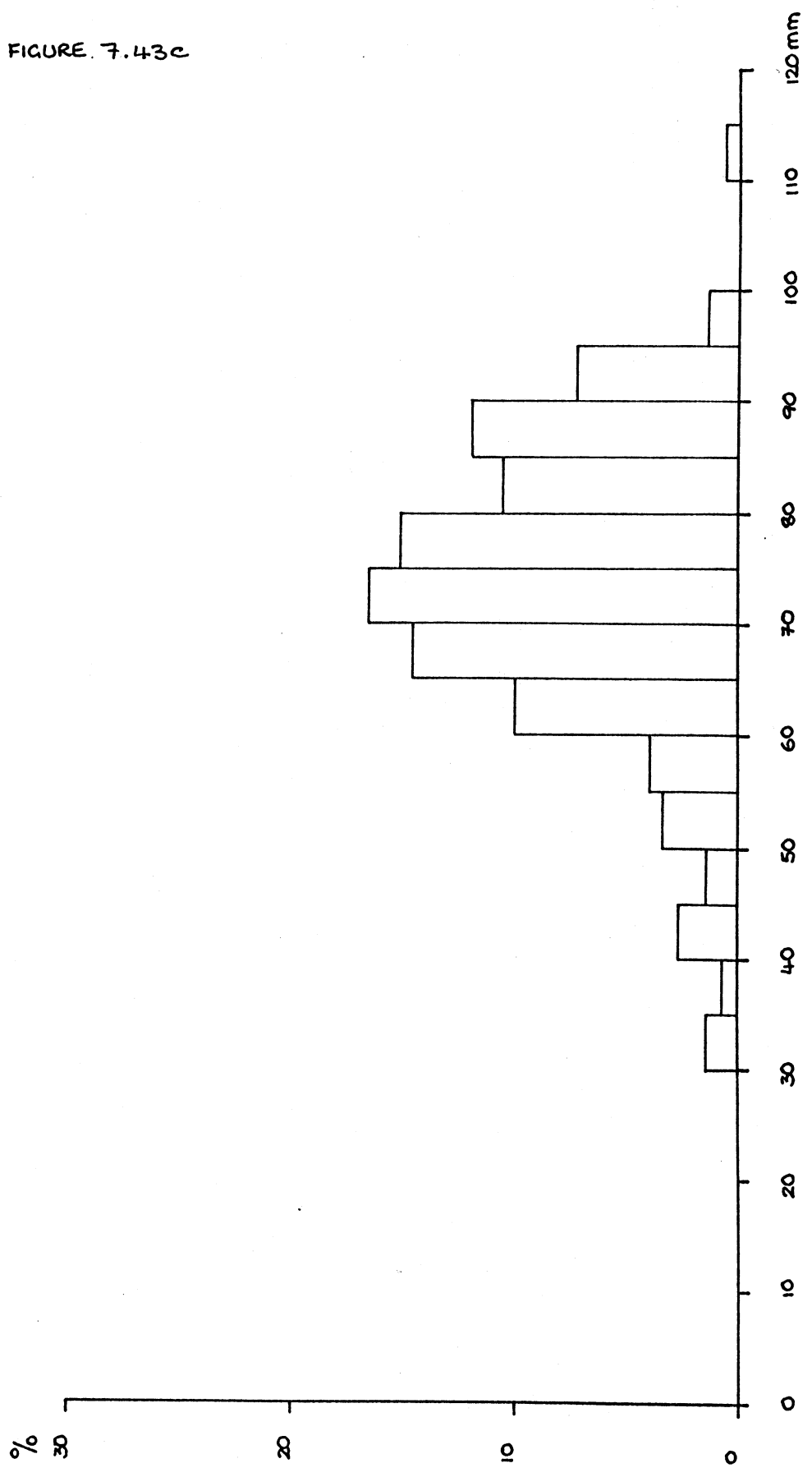




FIGURE 7.43d

Figure 7.43d GPH 85 c 309 SIZE FREQUENCY OF OYSTER SHELLS LVML n = 153

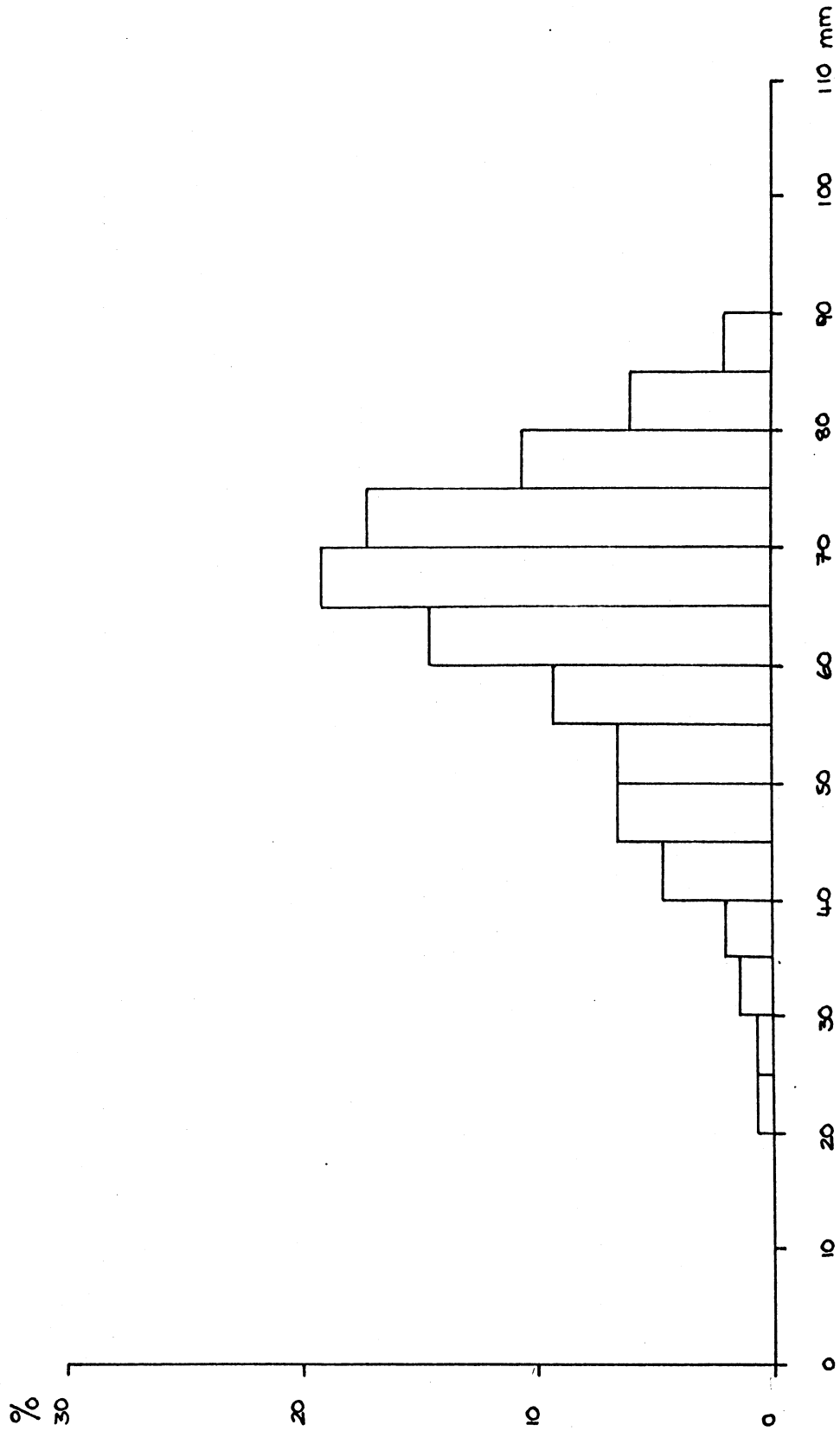


FIGURE 7.44a

Figure 7.44a GDH 86 c 409 SIZE FREQUENCY OF OYSTER SHELLS RYMW n = 365

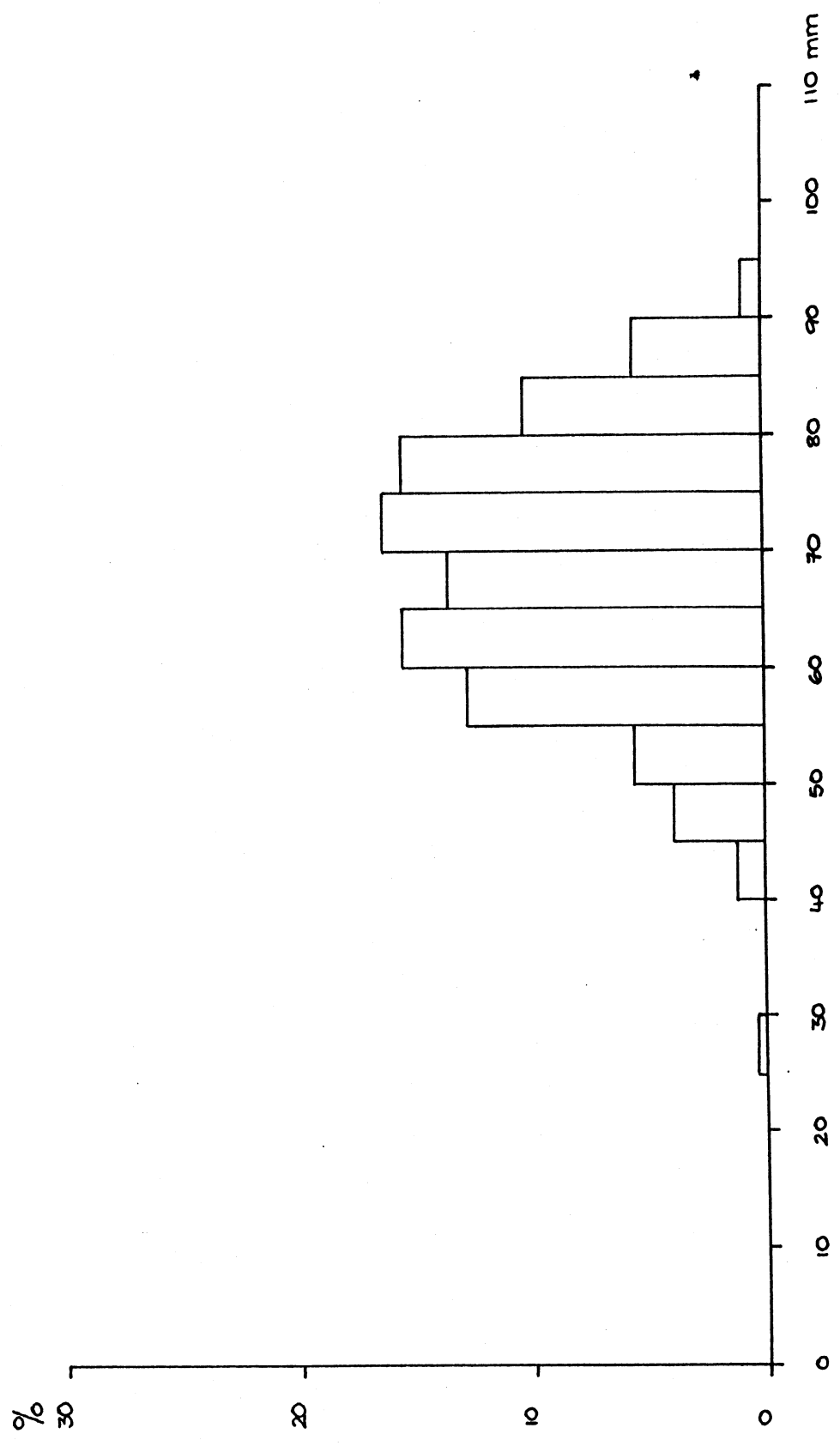


Figure 7.44b CDH 85 C 409 SIZE FREQUENCY OF OYSTER SHELLS RYML N=365

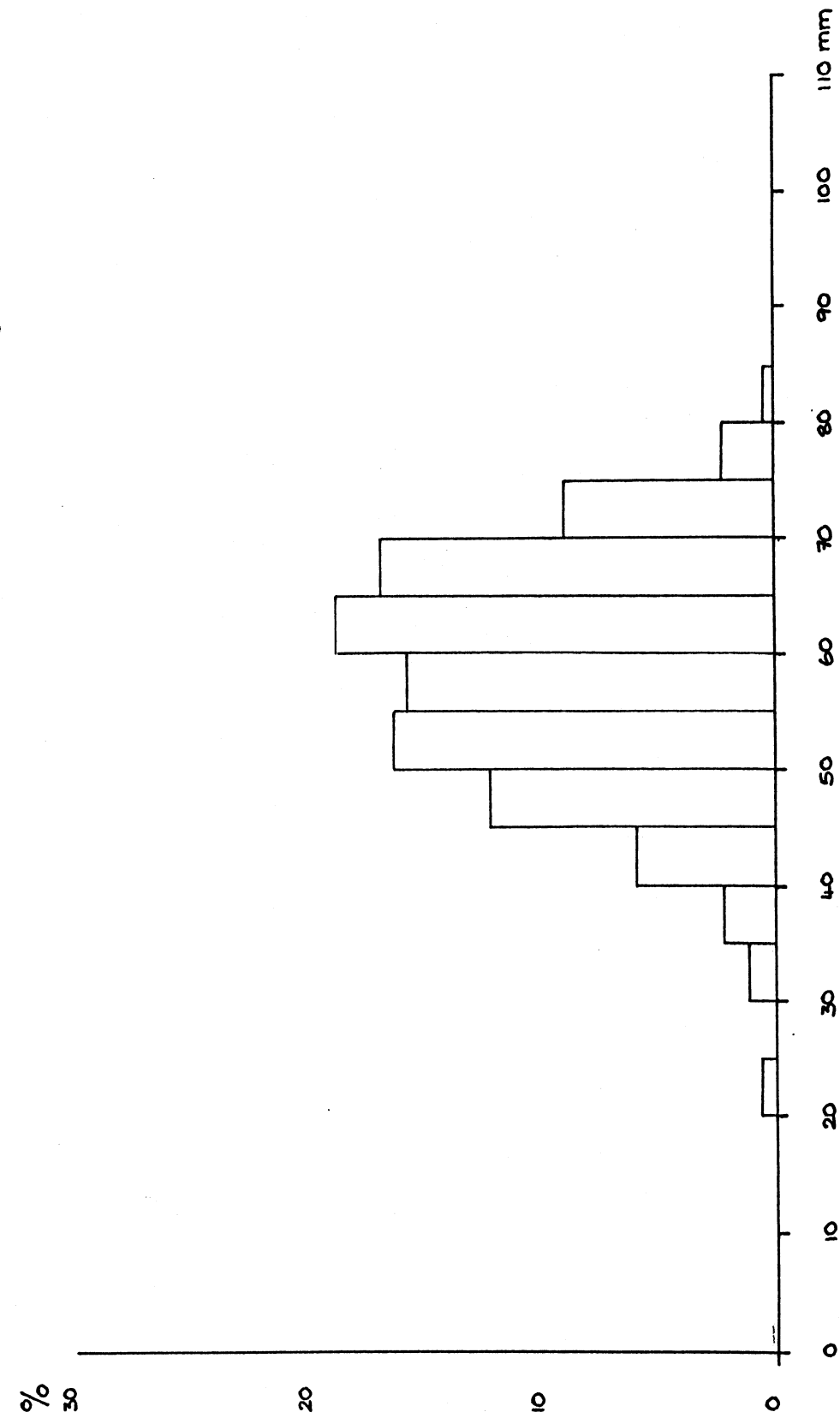


FIGURE 7.44b

FIGURE 7.44C

FIGURE 7.44C GDH 85 C 409 SIZE FREQUENCY OF OYSTER SHELLS LYMW N=358

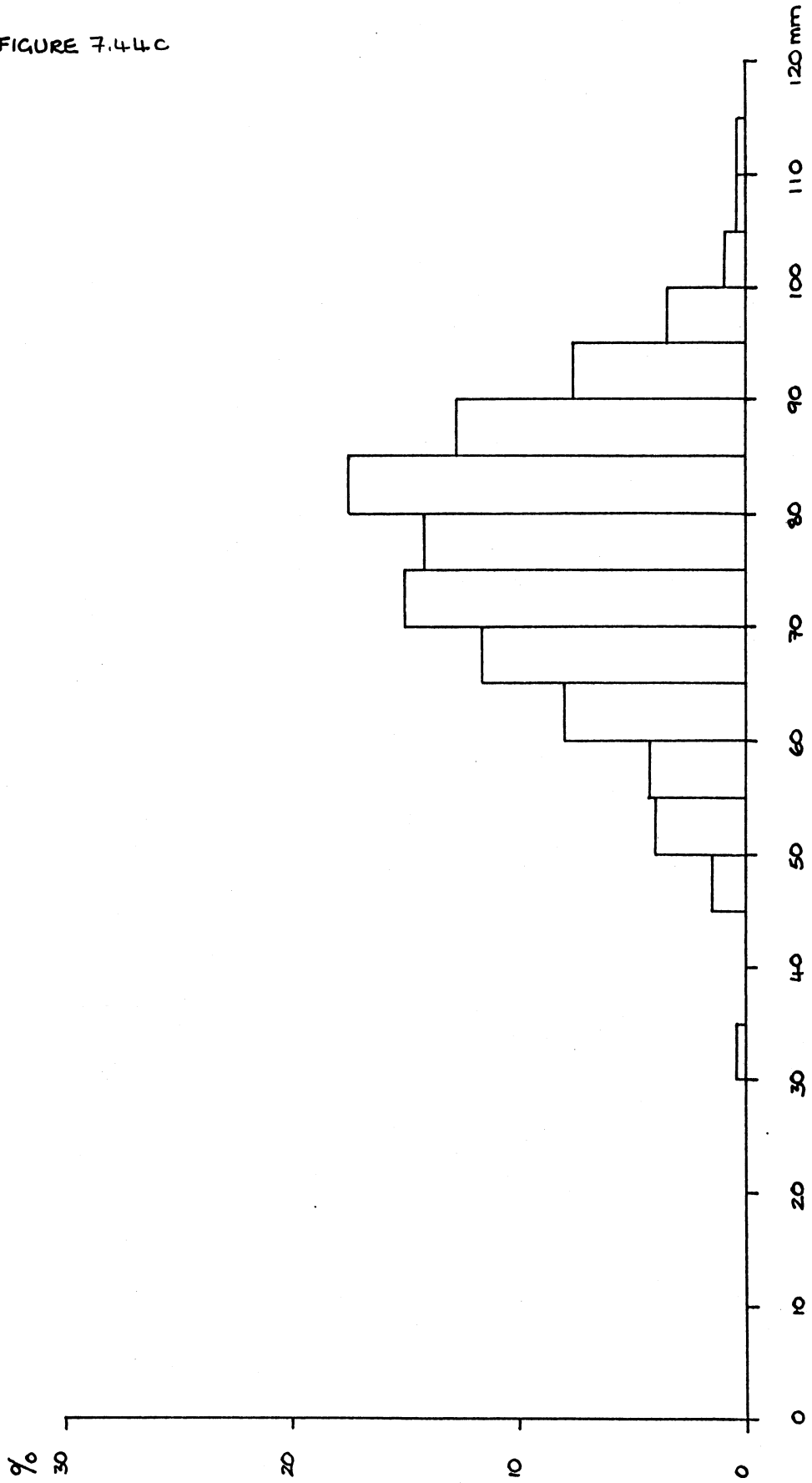
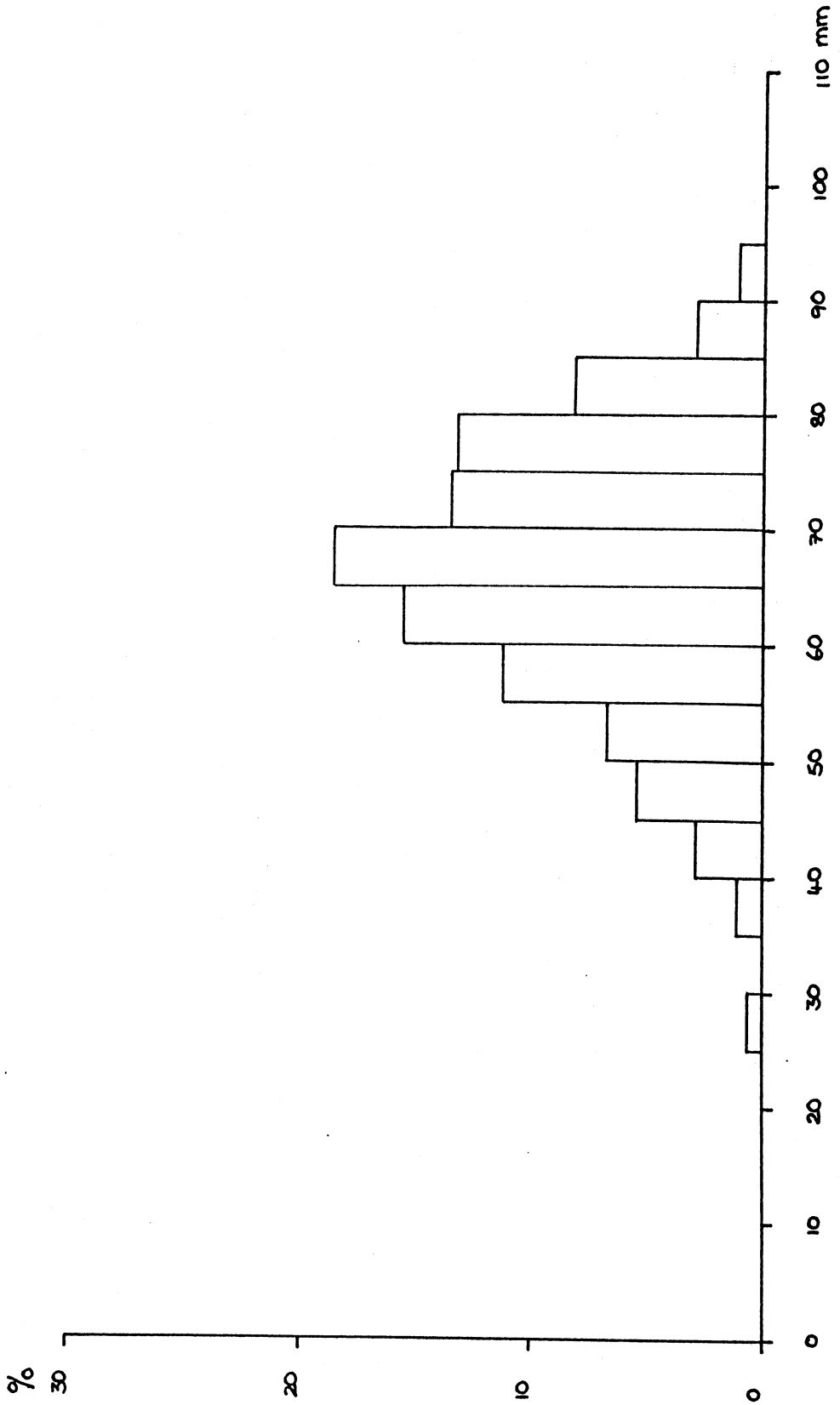


FIGURE 7.44d

Figure 7.44d CDM 85 c 409 SIZE FREQUENCY OF OYSTER SHELLS LVML n = 358



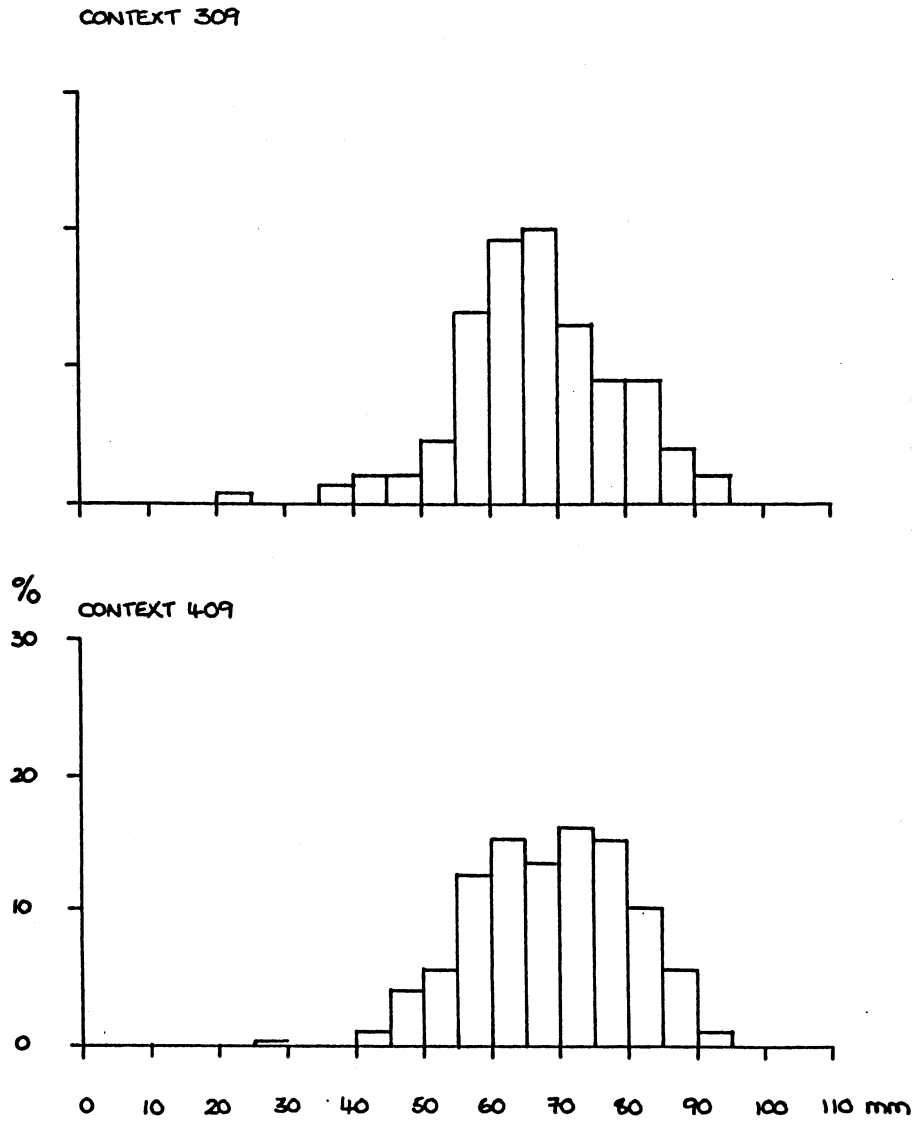


Figure 7.45  
SIZE FREQUENCY OF OYSTER SHELLS RVMW GDH CONTEXTS 309 & 409  
GUILDHALL

FIGURE 7.46

+ significant difference.  
 - no significant difference

	GDH 409	GDH 309	MOG 65	MOG 51 GENERAL	MOG 51 SOUTHSIDE	MOG 51 TOTAL
GDH 409		-	+	-	-	-
GDH 309			+	-	-	-
MOG 65				+	+	+
MOG 51 GENERAL					-	-
MOG 51 SOUTHSIDE						-
MOG 51 TOTAL						

FIGURE 7.47

Actual T values

	GDH 409	GDH 309	MOG 65	MOG 51 GENERAL	MOG 51 SOUTHSIDE	MOG 51 TOTAL
GDH 409		1.34	0.25	1.38	-0.05	1.08
GDH 309			9.28	0.79	-0.72	0.22
MOG 65				-6.20	-8.21	-8.08
MOG 51 GENERAL					-1.6	-0.58
MOG 51 SOUTHSIDE						0.77
MOG 51 TOTAL						

RESULTS OF TWO SAMPLE T-TESTS RIGHT VALVES MAX. WIDTH (GUILDHALL)

FIGURE 7.48

ANALYSIS OF VARIANCE

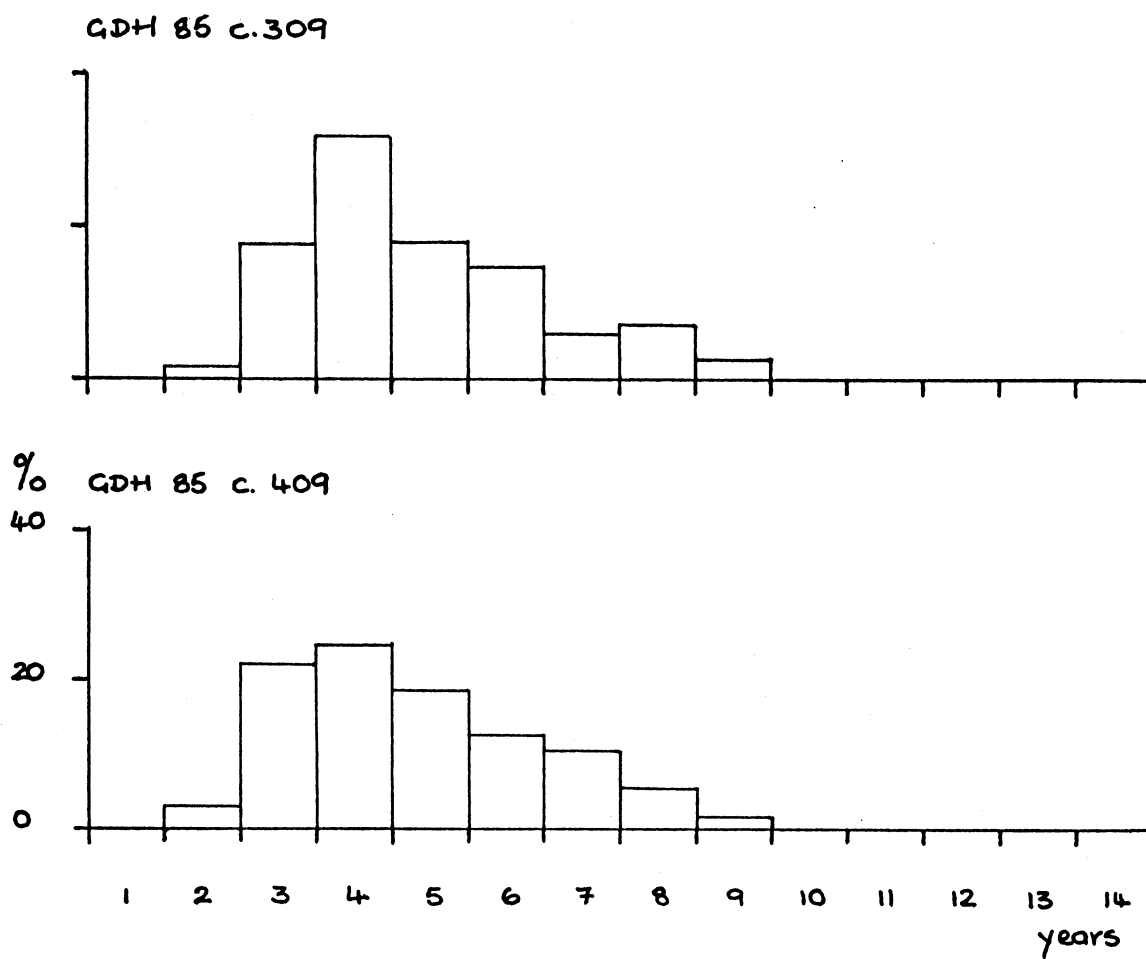
LEVEL	N	MEAN	STDEV	INDIVIDUAL 95 PCT CI'S FOR MEAN BASED ON POOLED STDEV
GDH409	364	67.42	10.93	(*)
GDH309	156	65.99	11.24	(-*--)
MOG65	116	42.75	25.18	(-*--)
MOG51.G	70	63.90	20.76	(-*--)
MOG51.S	62	67.52	15.00	(-*--)
MOG51.T	132	65.60	18.30	(*)
POOLED STDEV = 12.42				48 60 72

Figure 7.48 Guildhall House: Analysis of variance of size of Guildhall and Moorgate samples of oyster shells



FIGURE 7.49

DISTRIBUTION OF AGE GROUPS IN OYSTER SHELLS (GUILDHALL)



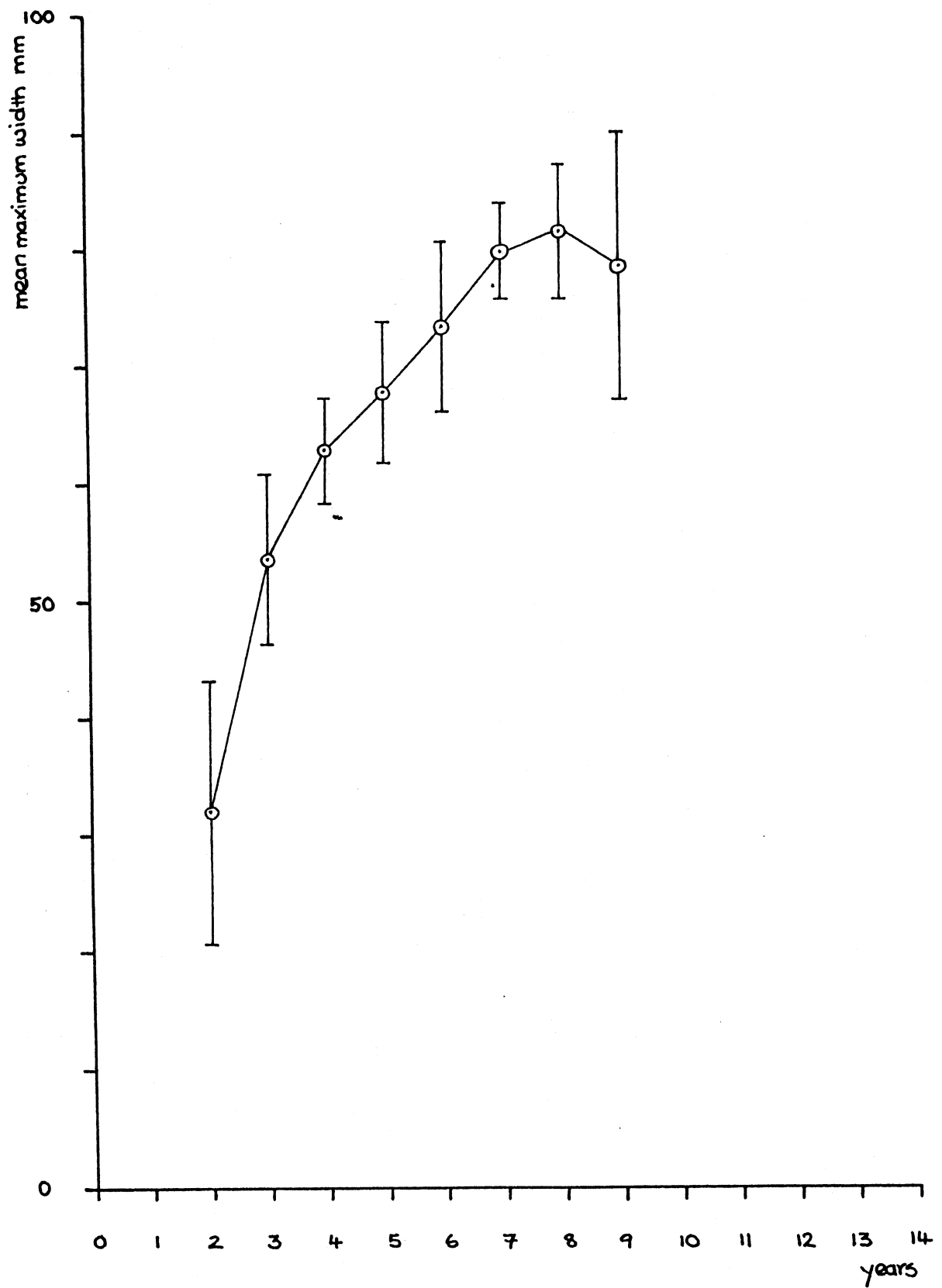


FIGURE 7.50

GROWTH RATE OF OYSTERS GDH 85 c.309 n=153 (QUILDHALL)

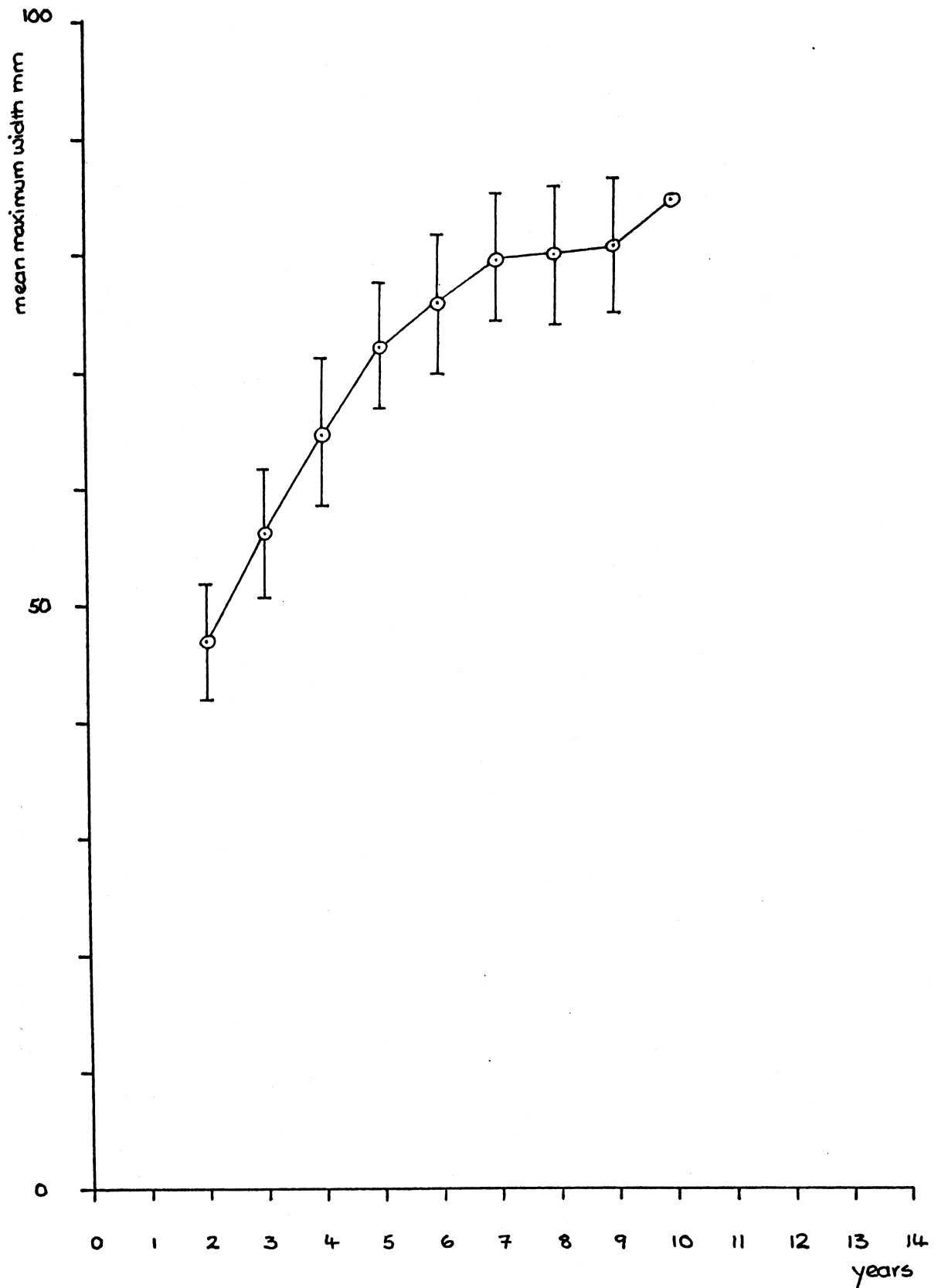


FIGURE 7.51

GROWTH RATE OF OYSTERS GDH 85 c.409 n=320 (GUILDHALL)

FREQUENCY OF INFESTATION CHARACTERS IN OYSTER SHELLS (GUILDHALL)

FIGURE 7.52

FIGURE 7.52

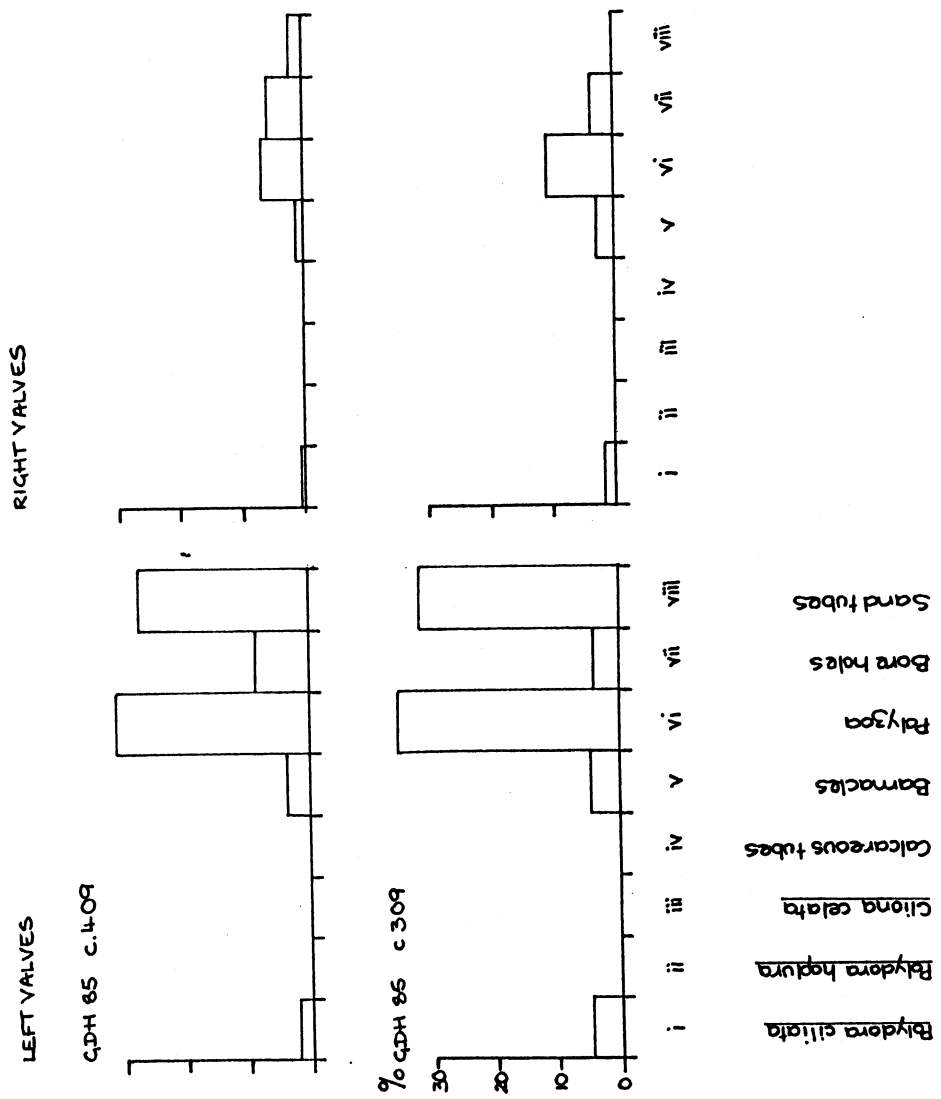
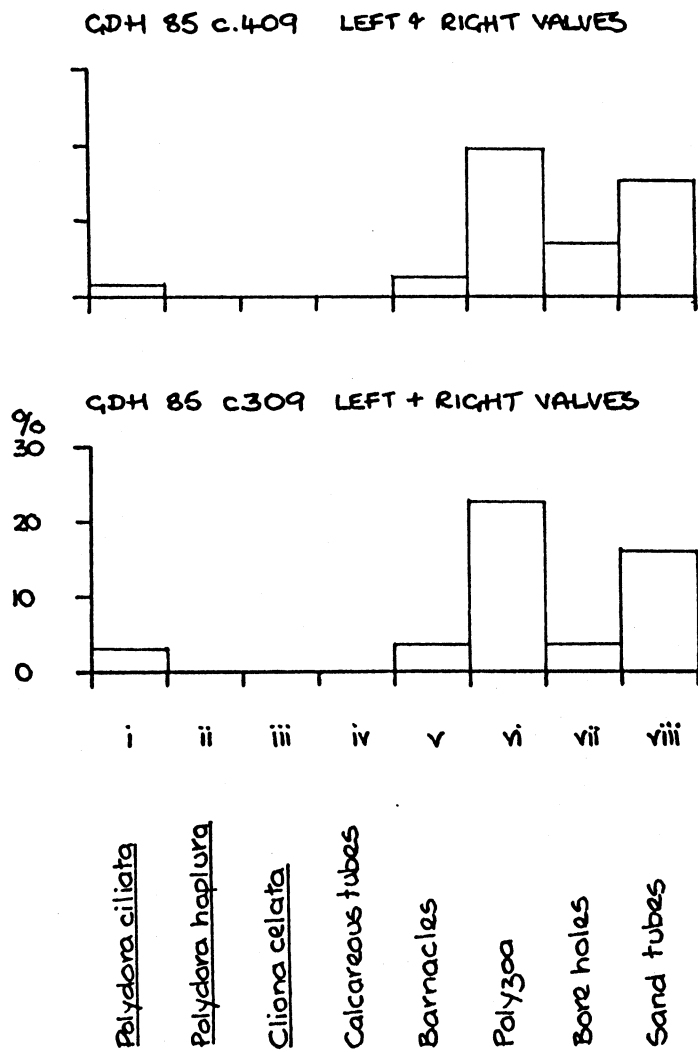


FIGURE 7.53

FREQUENCY OF INFESTATION CHARACTERS IN OYSTER SHELLS  
(GUILDHALL)



	Number in sample		Thick		Chambered		Chalky deposit		Thin		Distortion		Cuts and notches		Culch type		Grouping		Spat attached		Ligament preserved		Not eaten	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GDH c 309	153		31	20.26	12	7.84	11	7.19	23	15.03	15	9.80	5	3.27			6	1.94	25	16.34	6	3.92	11	3.56
Left valves			30	14.23	0	0	2	1.28	4	2.56	4	2.56	2	1.28	Mussel 5				2	1.28	1	0.64		
Right valves	156		61	19.74	12	3.88	13	4.21	27	8.74	19	6.15	7	2.27	Opyster 1		6	1.94	27	8.74	7	2.27	11	3.56
All valves	309																							
GDH c 409	358		27	7.54	10	2.79	17	4.75	42	11.73	21	5.87	32	8.94	M 10 2.79		16	4.47	75	20.95	32	8.94	4	1.1
Left valves			54	14.80	0	0	0	0	260	71.23	9	2.47	4	1.1	0 4 1.12				13	3.56	5	1.37	3	0.88
Right valves	365		81	11.20	10	1.38	17	2.35	302	41.94	30	4.15	36	4.98	0 0.28		2	0.55	88	21.7	37	5.12	7	0.97
All valves	723														0 debris 4.19		18	2.49						

TABLE 3.33: ADDITIONAL CHARACTERISTICS OF OYSTER SHELLS (GUILDHALL)

TABLE 7.34. DAMAGE IN OYSTER SHELLS FROM PUDDING LANE

SAMPLE NUMBER		3218	1714	1728	1470
RV	TOTAL NUMBER	1745	318	111	784
LV		1474	135	99	674
RV	NO. MEASUREABLE SHELLS	1313	257	110	586
LV		739	106	93	370
RV	% MEASURABLE SHELLS	75.24	80.82	99.10	74.74
LV		50.14	78.52	93.94	54.90
RV	NO. DAMAGED MEASUREABLE SHELLS	599	28	38	63
LV		278	12	26	53
RV	% DAMAGED MEASUREABLE SHELLS	45.62	10.89	34.55	10.75
LV		37.62	11.32	27.96	14.32
RV	NO. UNMEASUREABLE SHELLS	432	61	1	198
LV		735	29	6	304
RV	% UNMEASUREABLE SHELLS	24.76	19.18	0.90	25.26
LV		49.86	21.48	6.06	45.10

RV represents right valve

LV represents left valve

Figures corrected to 2 decimal places.

TABLE 7.35 PUDDING LANE OYSTERS - SUMMARY OF MEASUREMENTS

CONTEXT	MEASUREMENT TYPE	NUMBER IN SAMPLE	MINIMUM IN MM	MAXIMUM IN MM	MEAN	STANDARD DEVIATION	STANDARD ERROR OF MEAN
3218	LVMW	739	35	97	72.25	8.22	0.30
	LVML	729	31	97	63.03	7.07	0.26
	RVMW	1313	32	96	65.05	8.49	0.23
	RVML	1313	28	83	57.09	7.01	0.19
1714	LVMW	106	50	115	86.5	11.2	1.1
	LVML	106	40	107	76.2	9.4	0.91
	RVMW	251	42	100	75.2	10.4	0.65
	RVML	257	40	85	66.41	8.83	0.55
1728	LVMW	93	42	100	79.9	11.5	1.2
	LVML	93	37	102	73.6	11.6	1.2
	RVMW	110	42	114	73.3	11.7	1.1
	RVML	110	33	103	65.5	10.0	0.96
1470	LVMW	370	20	120	72.1	14.3	0.74
	LVML	369	18	112	62.3	13.0	0.68
	RVMW	586	13	110	62.3	13.3	0.55
	RVML	585	6	92	32.3	12.1	0.50

LVMW Left valve maximum width  
 LVML Left valve maximum length  
 RVMW Right valve maximum width  
 RVML Right valve maximum length



FIGURE 7.54a SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 739

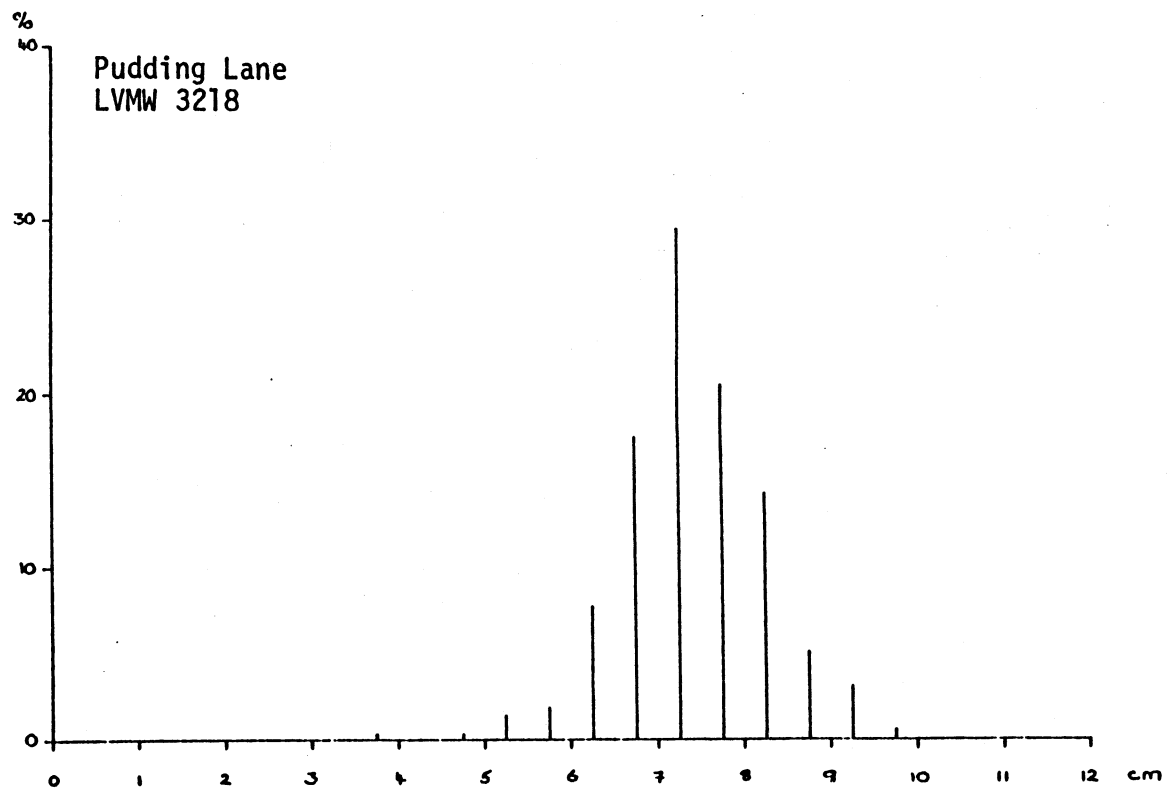


FIGURE 7.54b SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 106

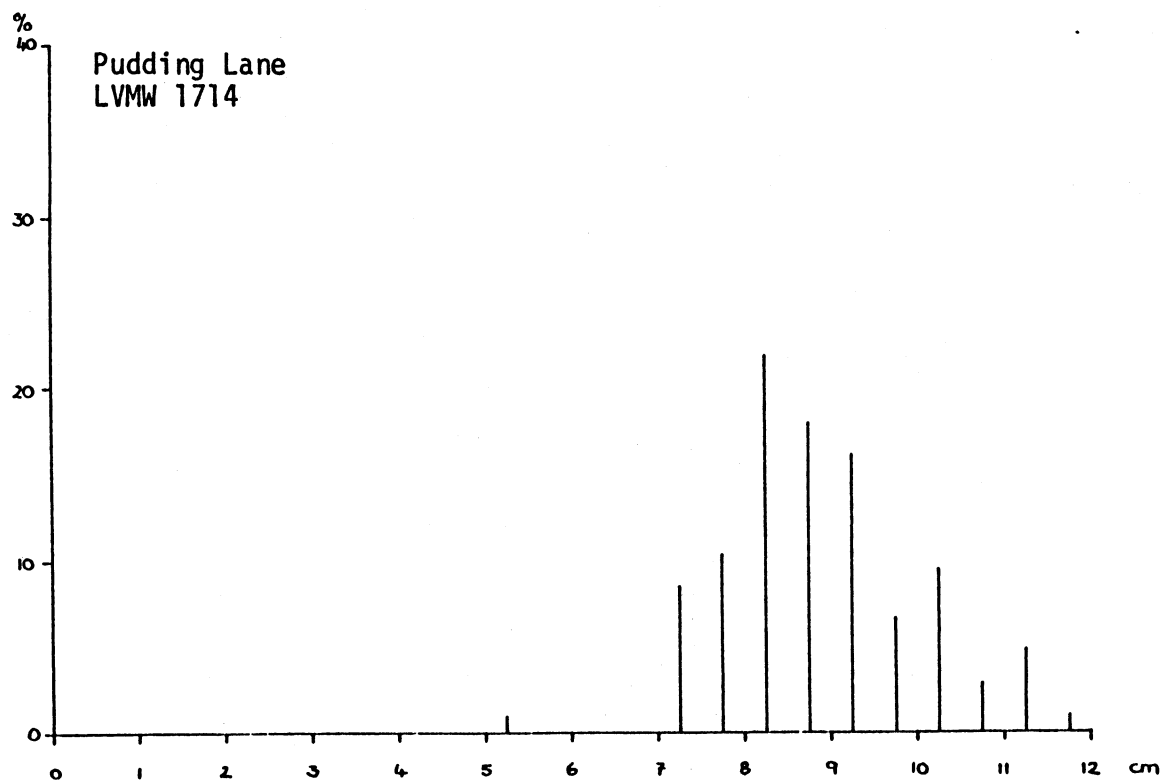


FIGURE 7.54c SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELL  
n = 93

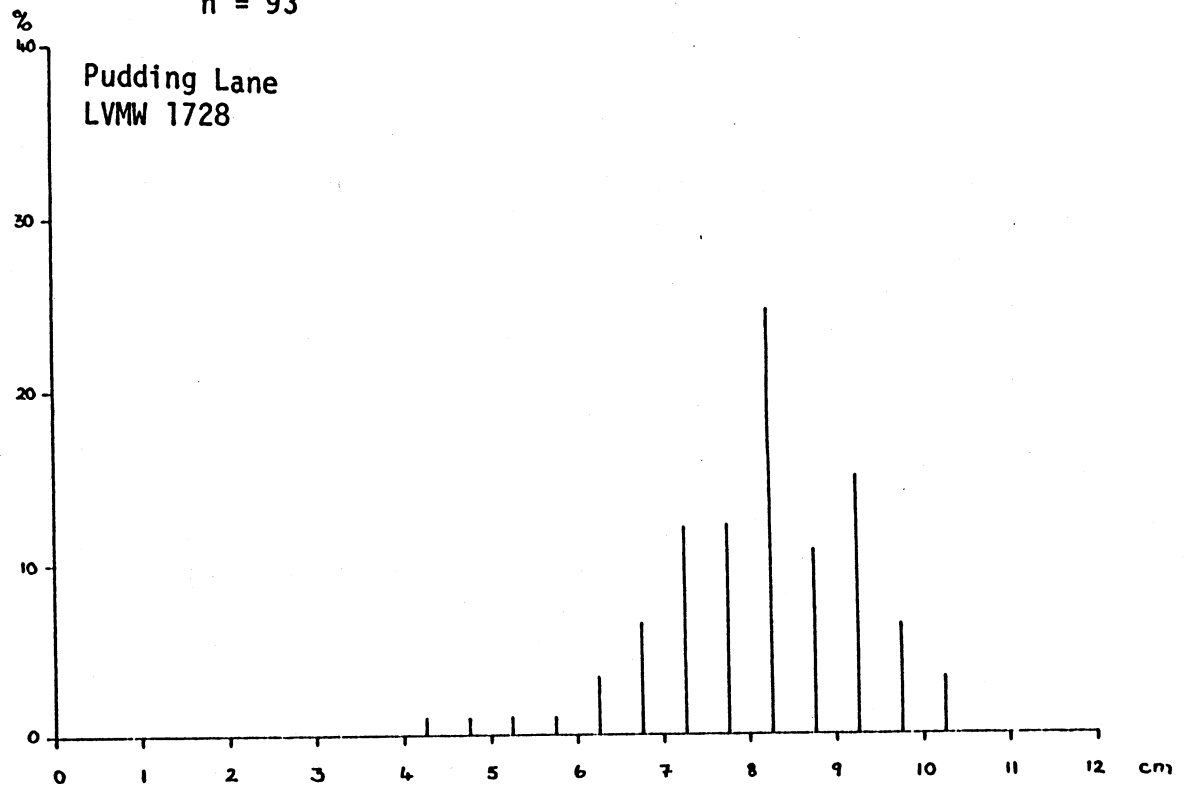


FIGURE 7.54d SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELL  
n = 370

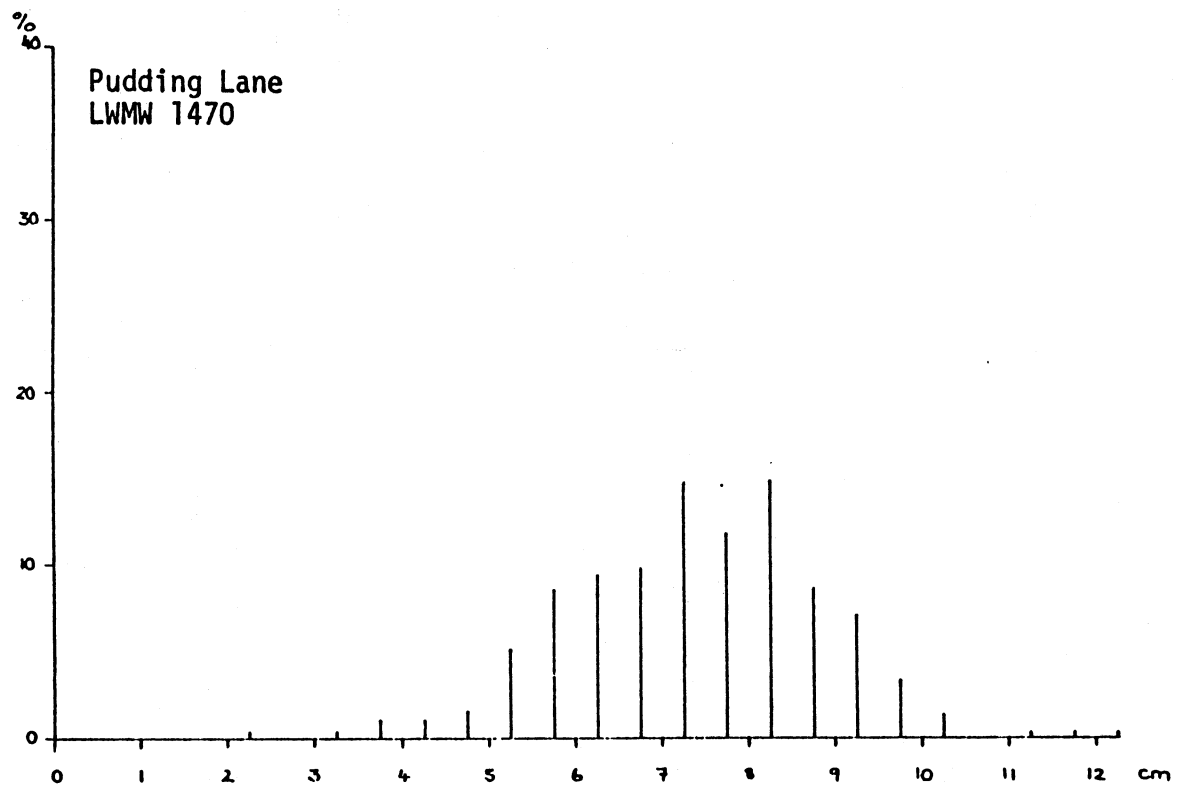


FIGURE 7.55a SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 729

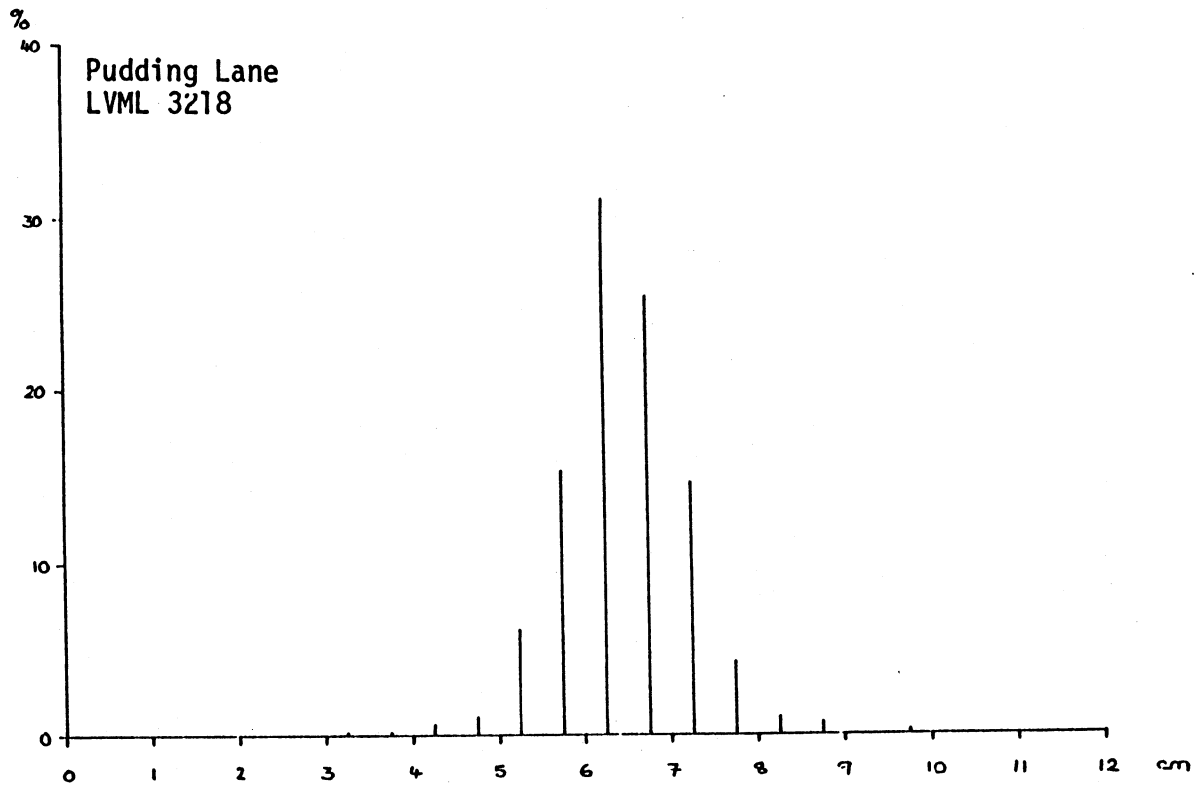


FIGURE 7.55b SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 106

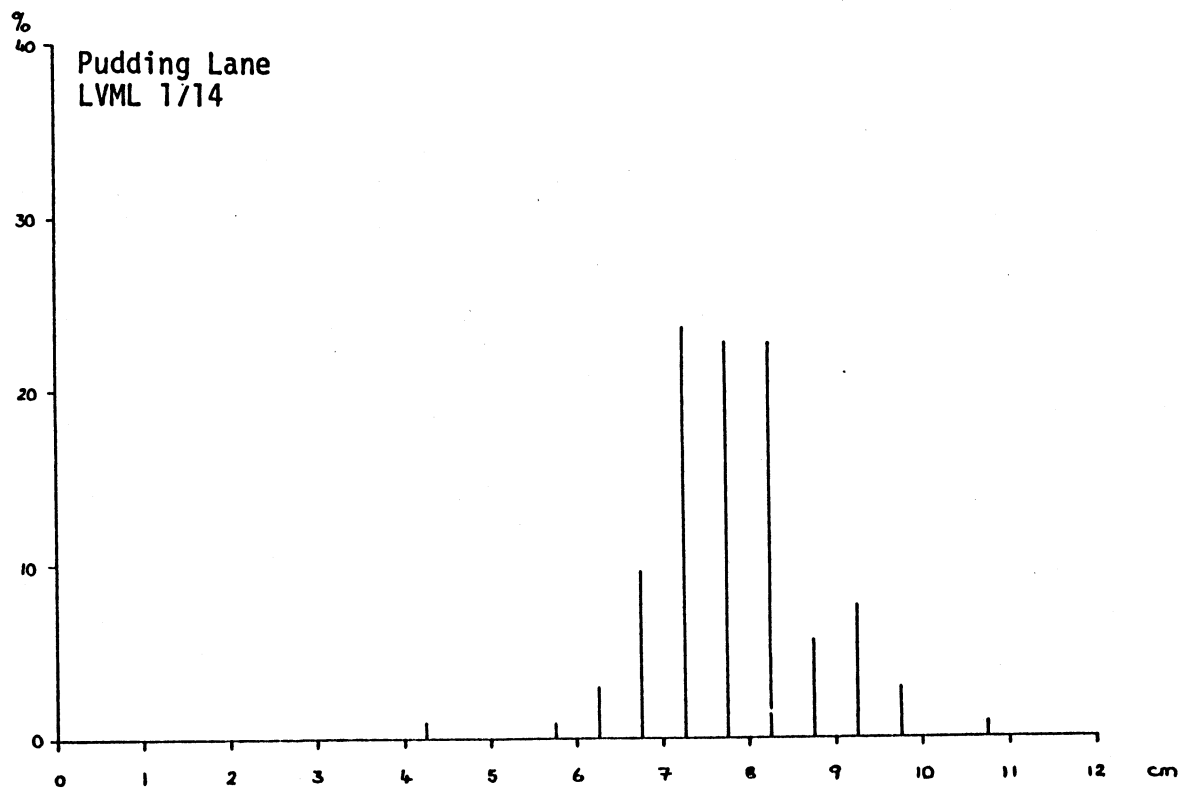


FIGURE 7.55c SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 93

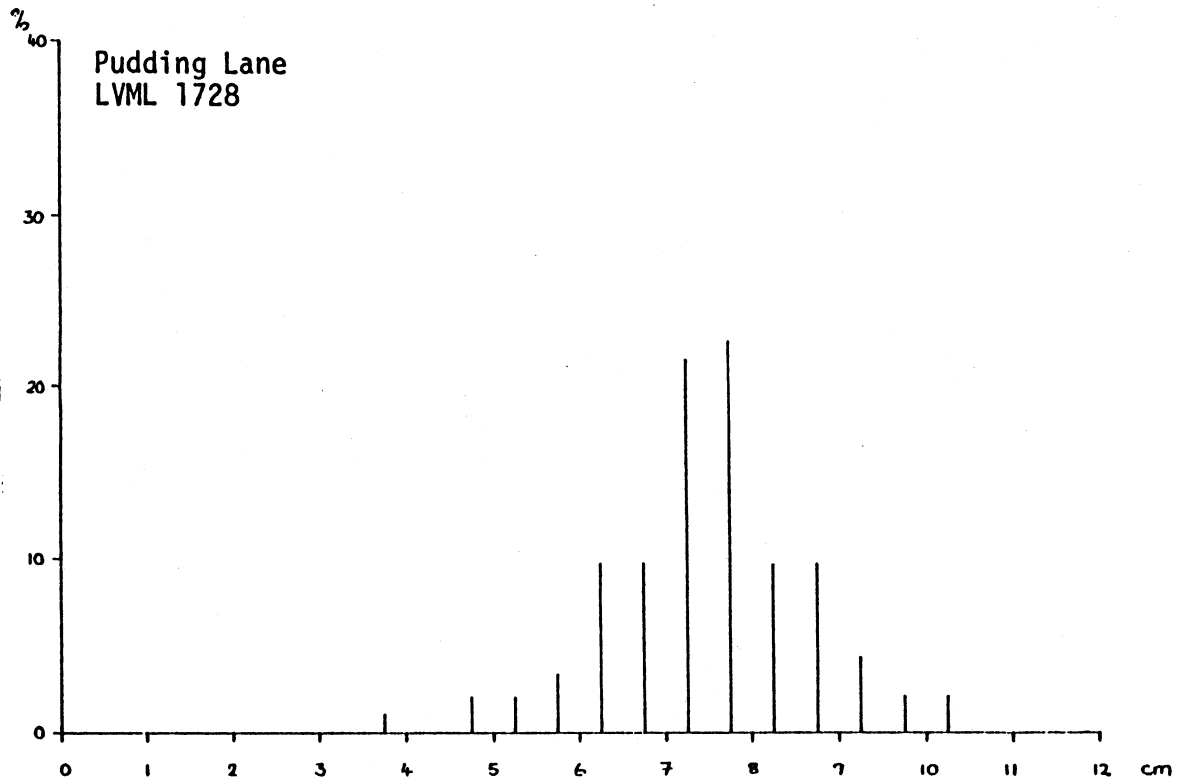


FIGURE 7.55d SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 369

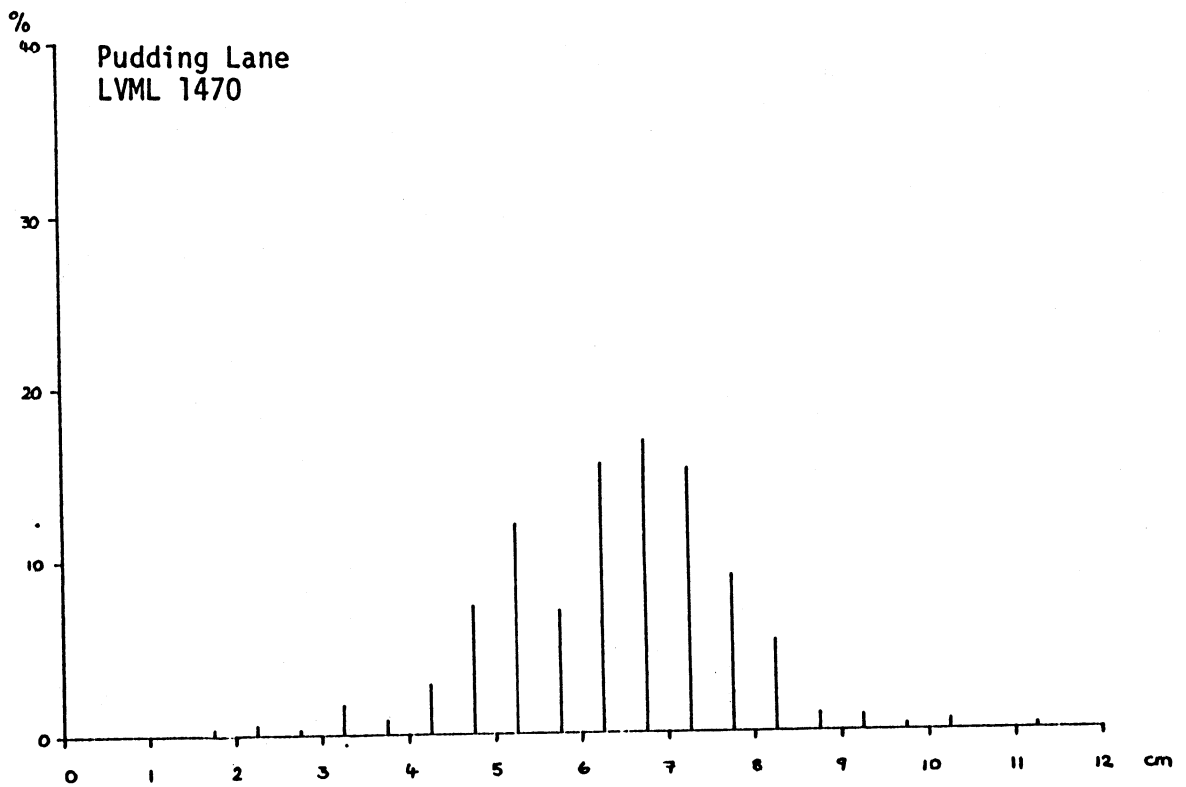


FIGURE 7.56a SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
 $n = 1313$

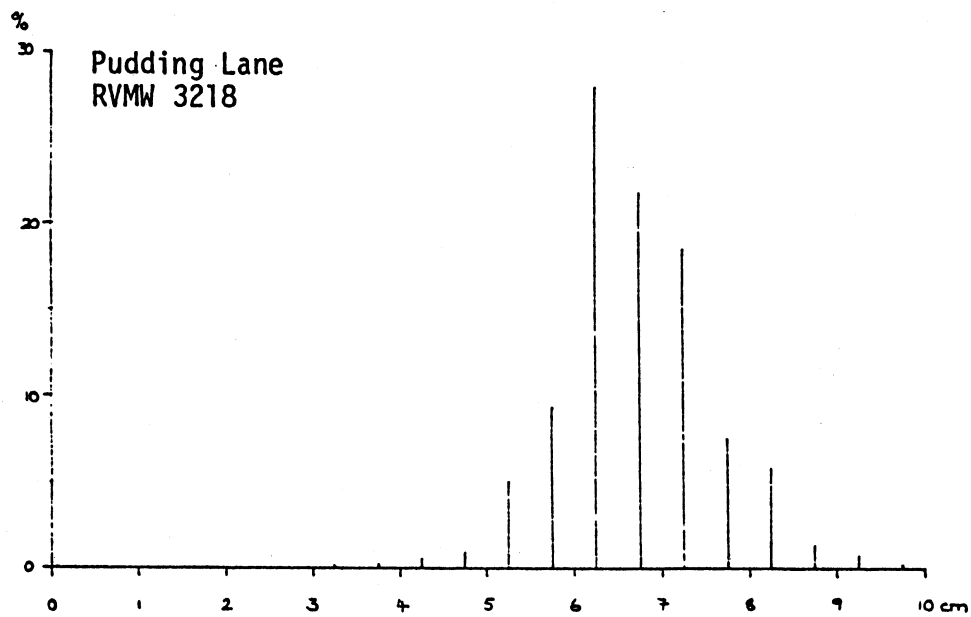


FIGURE 7.56c SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
 $n = 110$

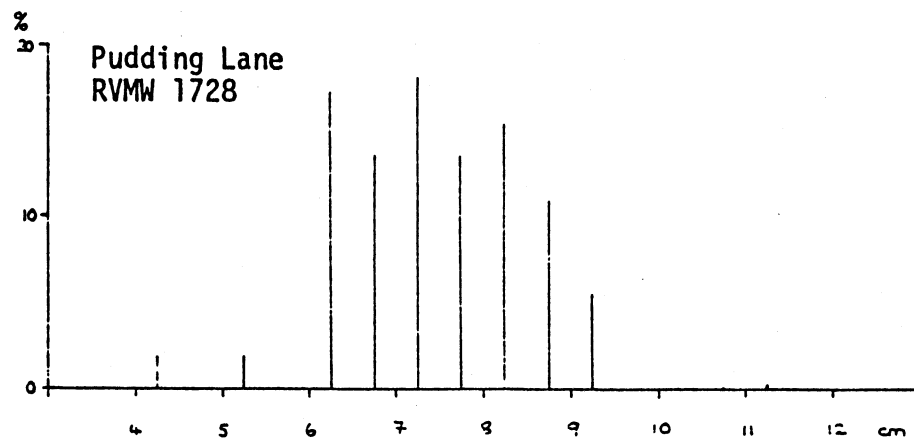


FIGURE 7.56b SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 251

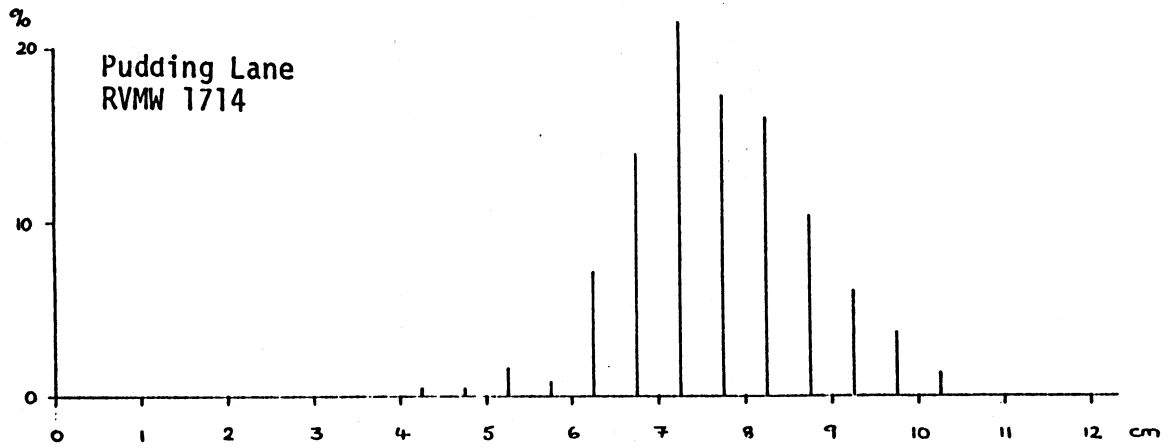


FIGURE 7.56d SIZE FREQUENCY DISTRIBUTION (AS %) OF OYSTER SHELLS  
n = 586

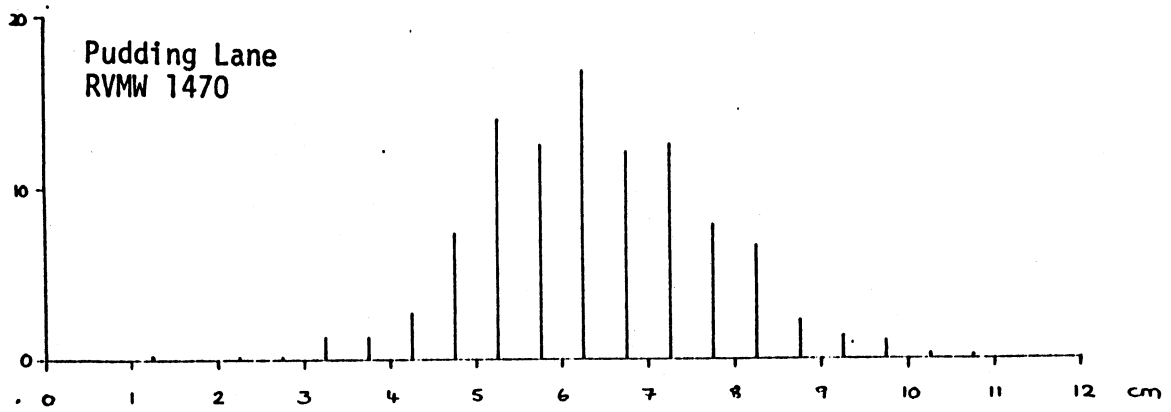


FIGURE 7.57a SIZE FREQUENCY DISTRIBUTIONS (AS %) OF OYSTER SHELLS  
n = 1313

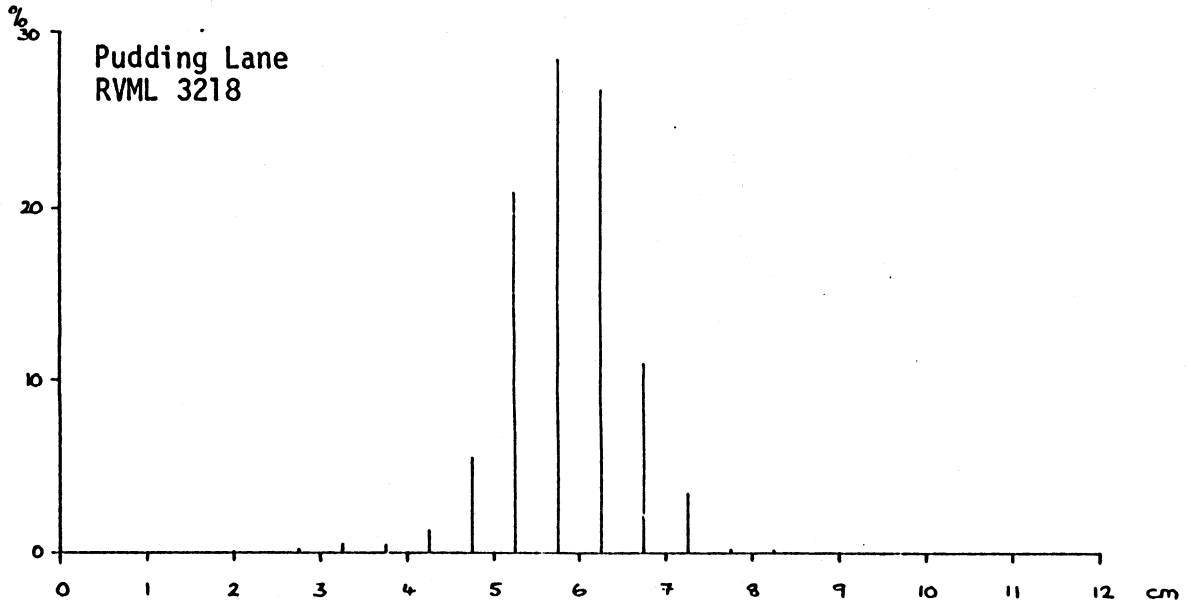


FIGURE 7.57b SIZE FREQUENCY DISTRIBUTIONS (AS %) OF OYSTER SHELLS  
n = 257

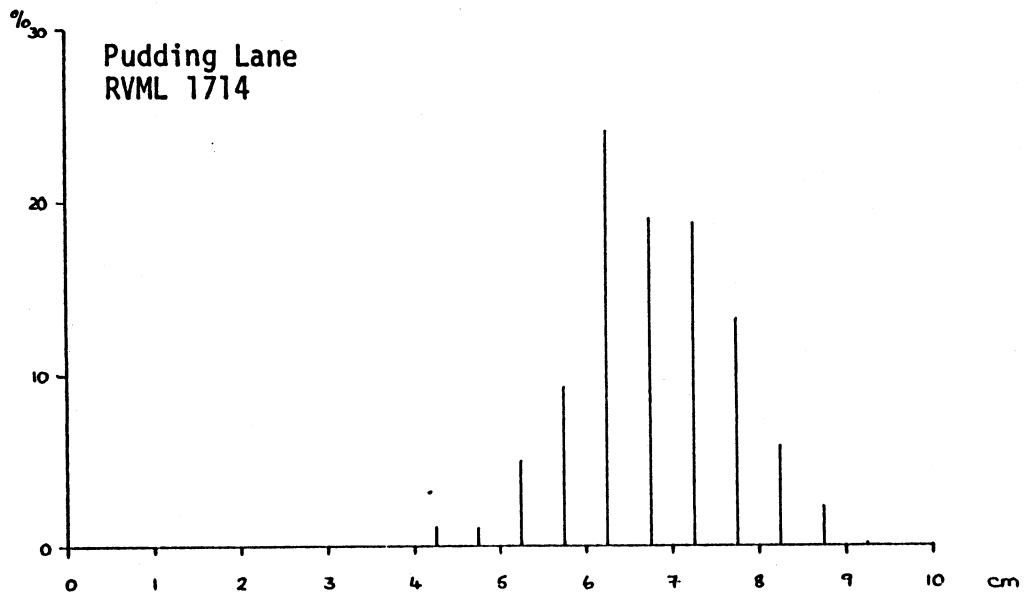


FIGURE 7.57c SIZE FREQUENCY DISTRIBUTIONS (AS %) OF OYSTER SHELLS  
 n = 110

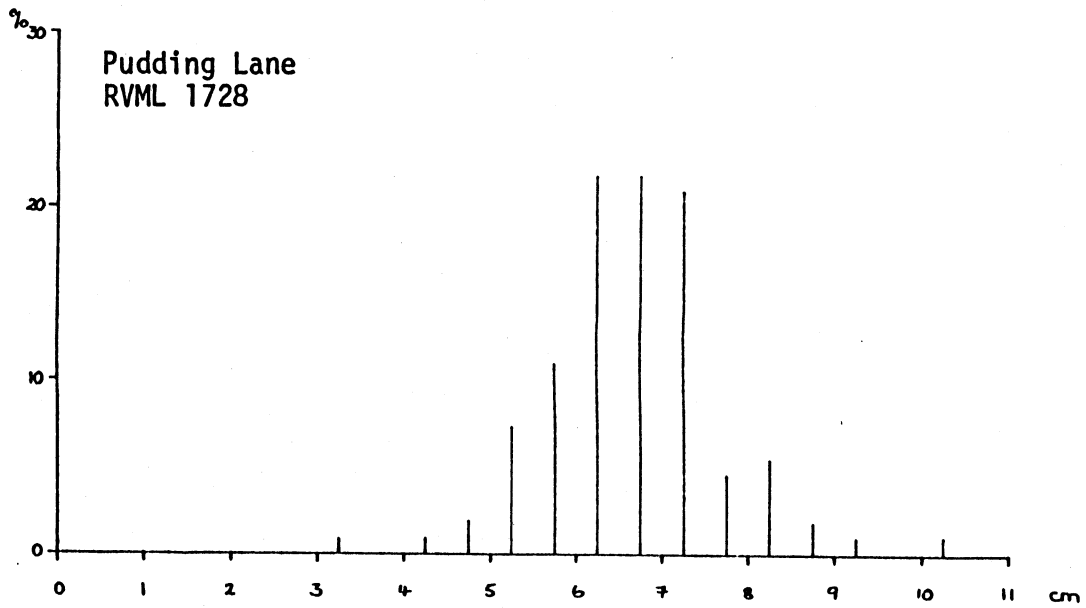


FIGURE 7.57d SIZE FREQUENCY DISTRIBUTIONS (AS %) OF OYSTER SHELLS  
 n = 585

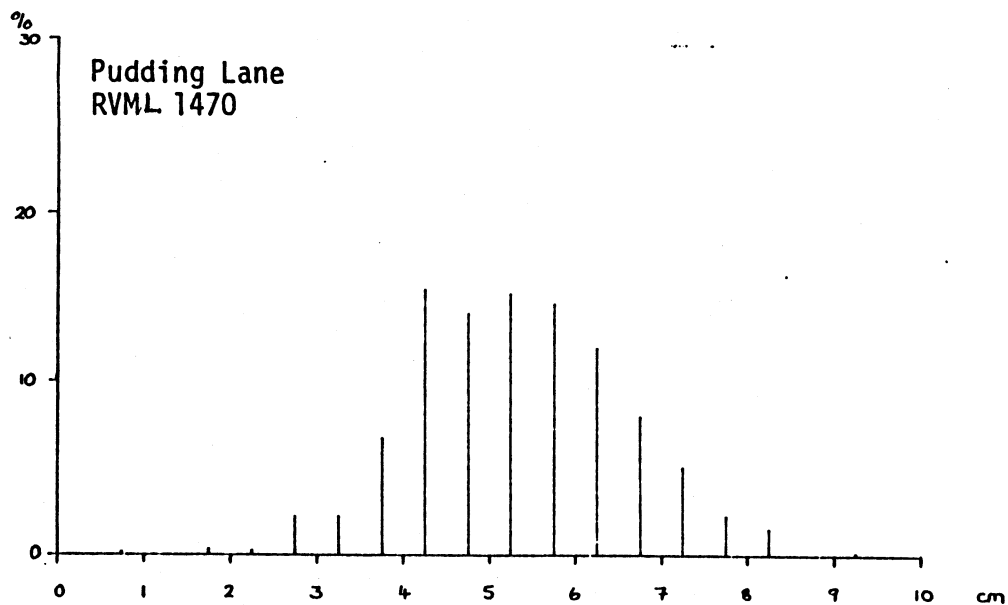




FIGURE 7.58 TWO SAMPLE T-TEST FOR SIGNIFICANT DIFFERENCE  
PUDDING LANE SAMPLES

a. LVML

	3218	1714	1728	1470
3218		+	+	-
1714			-	+
1728				+
1470				

c. RVML

	3218	1714	1728	1470
3218		+	+	+
1714			-	+
1728				+
1470				

b. L VMW

	3218	1714	1728	1470
3218		+	+	-
1714			+	+
1728				+
1470				

d. RVMW

	3218	1714	1728	1470
3218		+	+	+
1714			-	+
1728				+
1470				

+ rep. significant difference

- rep. no significant difference

TABLE 7.36a PUDDING LANE - LINEAR REGRESSION ON LENGTH/WIDTH FOR  
RIGHT VALVES OYSTER

	n	SLOPE	CORRELATION CO-EFFICIENT	y-INTERCEPT
3218	1313 1st 1000	0.5028966858 (26.7°)	0.6144599875	24.56134223
1714	257	0.8605814502 (40.71°)	0.7531381259	17.73680976
1728	110	0.8987815669 (41.95°)	0.7710634459	14.38078292
1470	586	0.9778685125 (44.36°)	0.8896504074	11.20940341

TABLE 7.36b PUDDING LANE - LINEAR REGRESSION ON LENGTH/WIDTH FOR  
LEFT VALVES OYSTER

	n	SLOPE	CORRELATION CO-EFFICIENT	y-INTERCEPT
3218	740	0.7011040542 (35.03°)	0.6126859354	28.18682193
1714	106	0.710771807 (35.40°)	0.5966790679	32.3430259
1728	93	0.670176469 (33.83°)	0.6809943409	30.6198072
1470	369	0.9423983455 (43.30°)	0.8576717687	13.30641859

FIGURE 7.59a CALCULATED WIDTHS FROM LENGTHS (USING y-INTERCEPT)  
OYSTER SHELLS

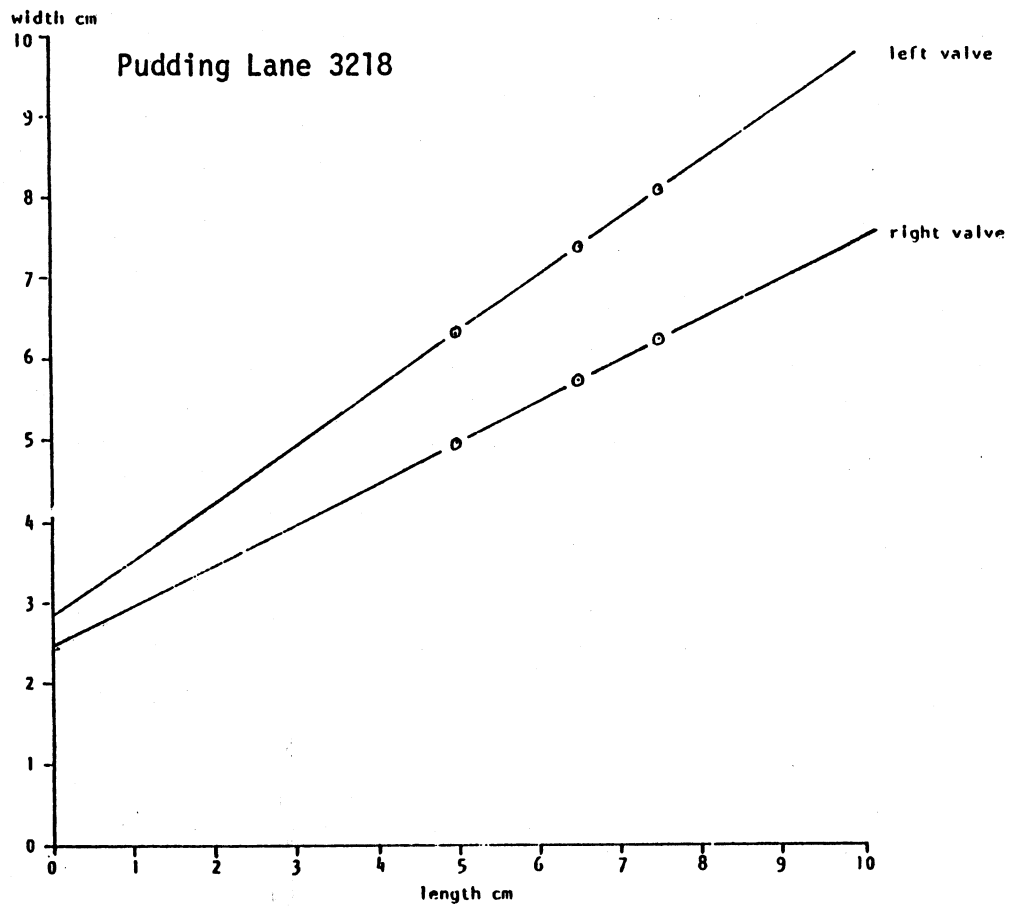


FIGURE 7.59b CALCULATED WIDTHS FROM LENGTHS (USING y-INTERCEPT)  
OYSTER SHELLS

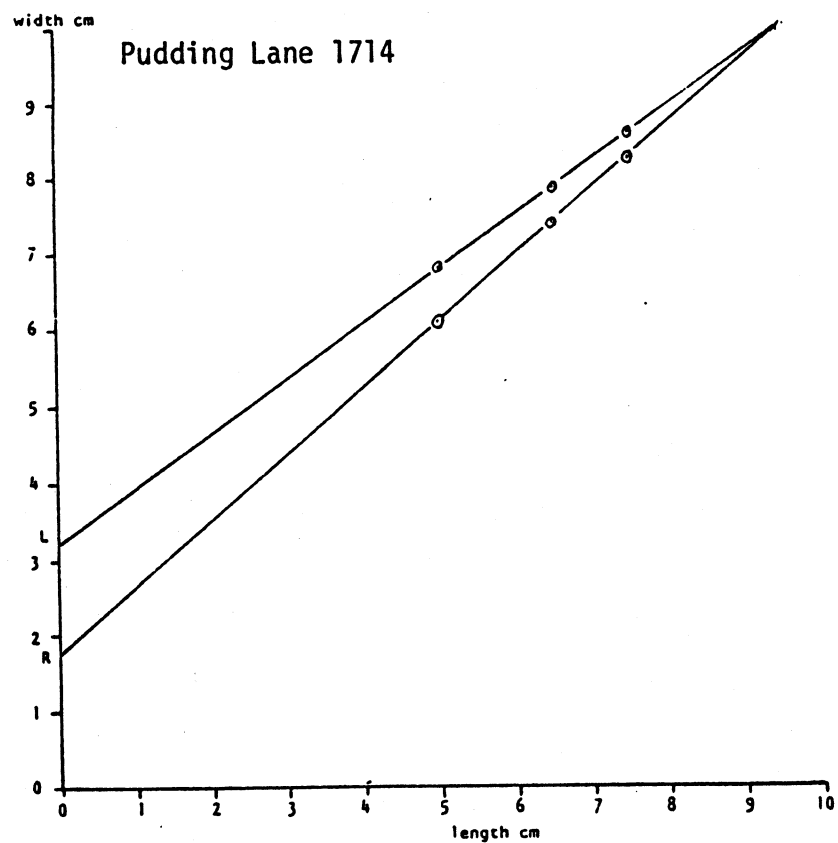


FIGURE 7.59c CALCULATED FROM WIDTHS FROM LENGTHS (USING y-INTERCEPT)  
OYSTER SHELLS

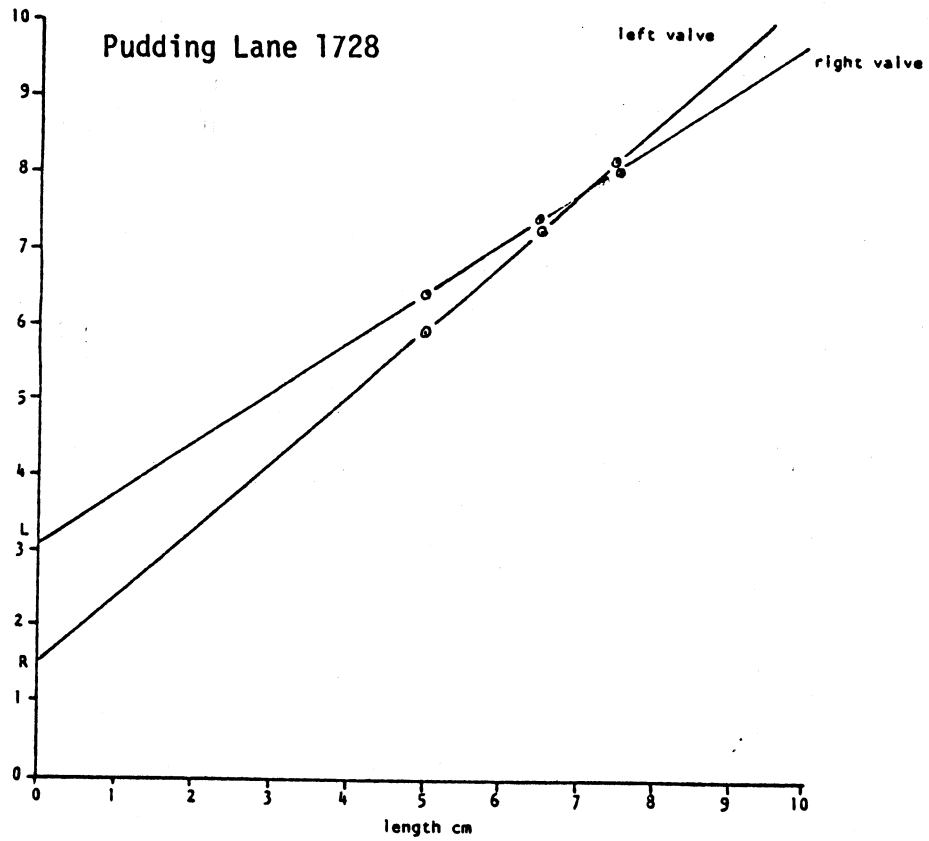


FIGURE 7.59d CALCULATED FROM WIDTHS FROM LENGTHS (USING y-INTERCEPT)  
OYSTER SHELLS

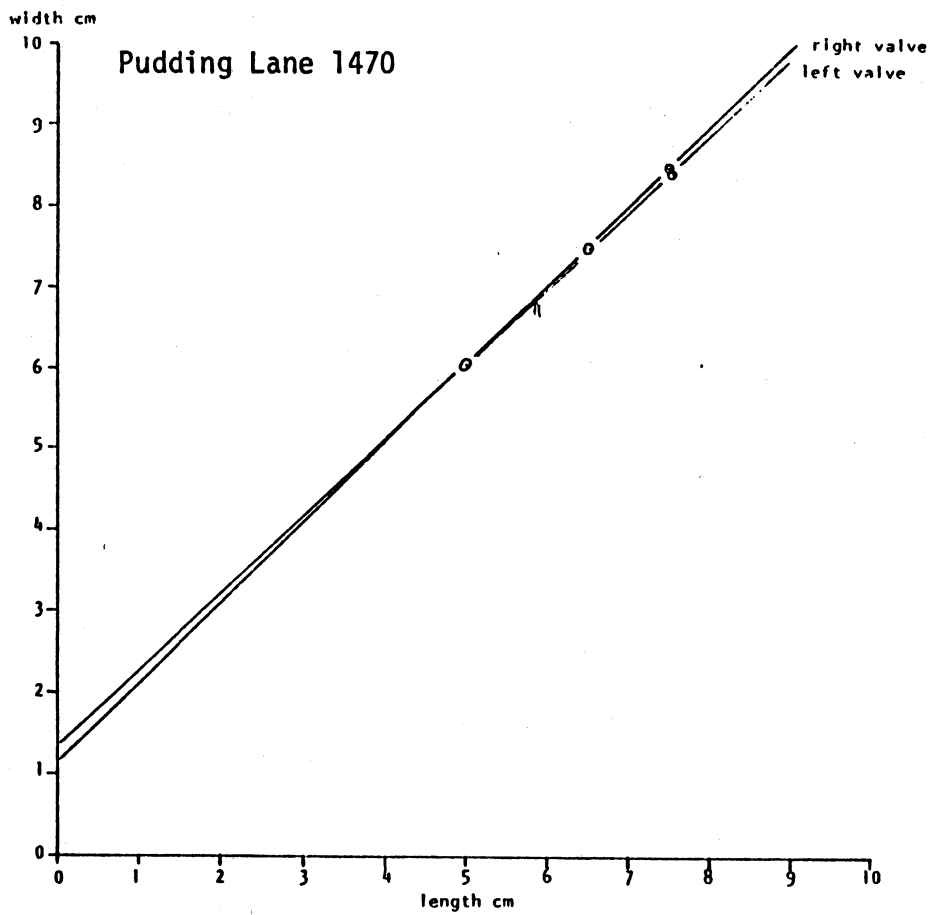


TABLE 7.37 PUDDING LANE - FREQUENCY OF INFESTATION/ENCrustATION ON OYSTERS

Context	3218		1714		1728		1470	
	RV	LV	RV	LV	RV	LV	RV	LV
Valve								
No. shells in sample	739	1313	106	257	93	110	370	586
<i>Polydora ciliata</i> No. shells affected	406	208	9	30	14	7	32	43
% shells affected	54.94	21.33	8.49	11.67	15.05	6.36	8.65	7.34
<i>Cliona celata</i> No. shells	4	2	3	0	0	2	3	3
% shells	0.54	0.15	2.83	0	0	1.8	0.81	0.5
Barnacles & scars No. shells	1	0	19	5	6	0	7	8
% shells	0.14	0	17.92	1.95	6.45	0	1.89	1.37
Polyzoa No. shells	6	2	9	2	7	0	56	28
% shells	0.81	0.15	8.49	0.78	7.53	0	15.14	4.78
Bore holes No. shells	24	16	0	0	3	2	43	30
% shells	3.25	1.22	0	0	3.23	1.82	11.62	5.12
Sand tubes No. shells	8	0	4	0	4	0	67	12
% shells	1.08	0	3.77	0	4.30	0	18.11	2.05

FIGURE 7.60a FREQUENCY OF INFESTATION TYPES IN LEFT VALVES OF OYSTER (PUDDING, LANE)

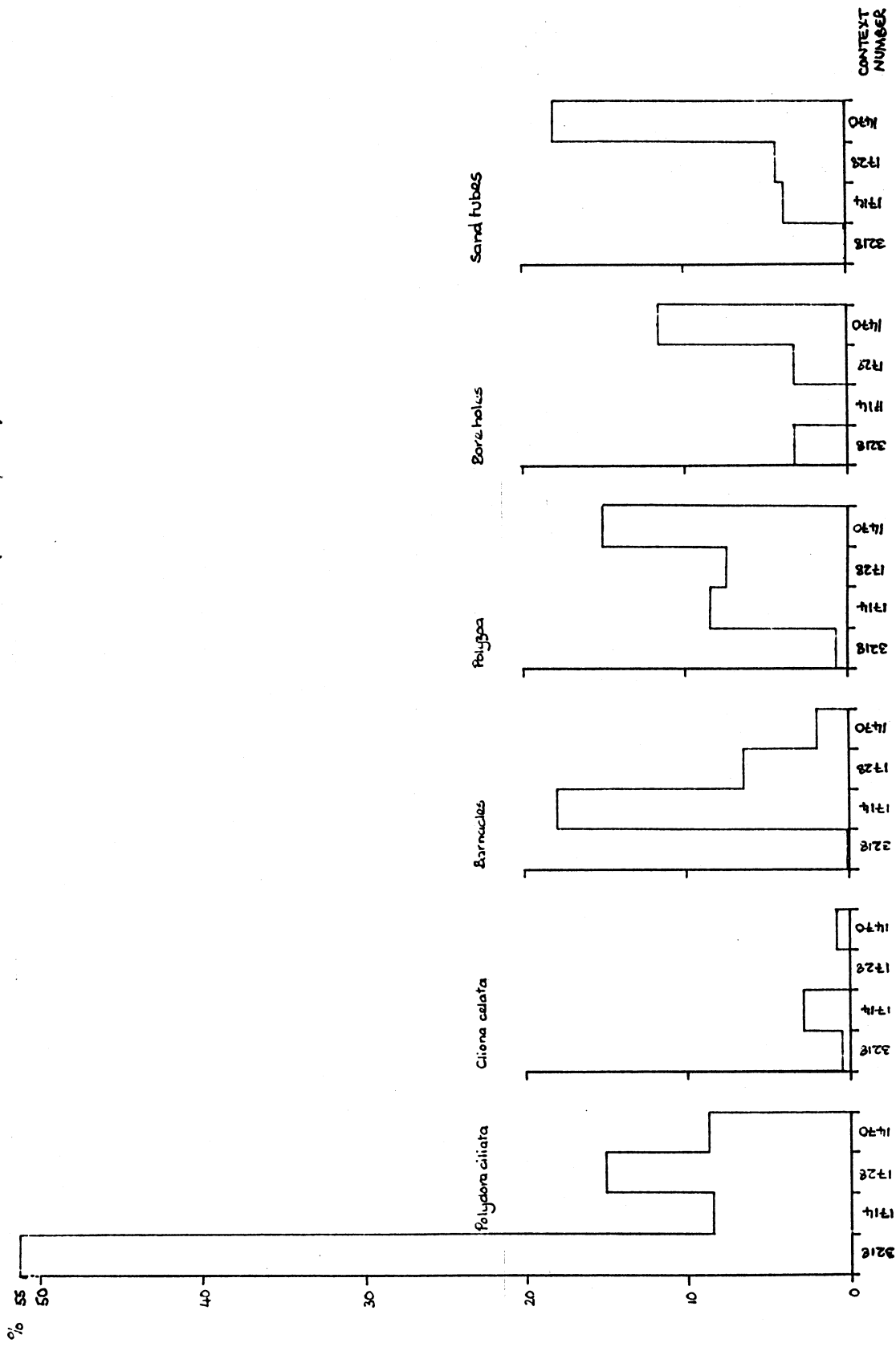


FIGURE 7.60b % FREQUENCY OF INFESTATION TYPES IN RIGHT VALVES OF OYSTER (PUDDING LANE)

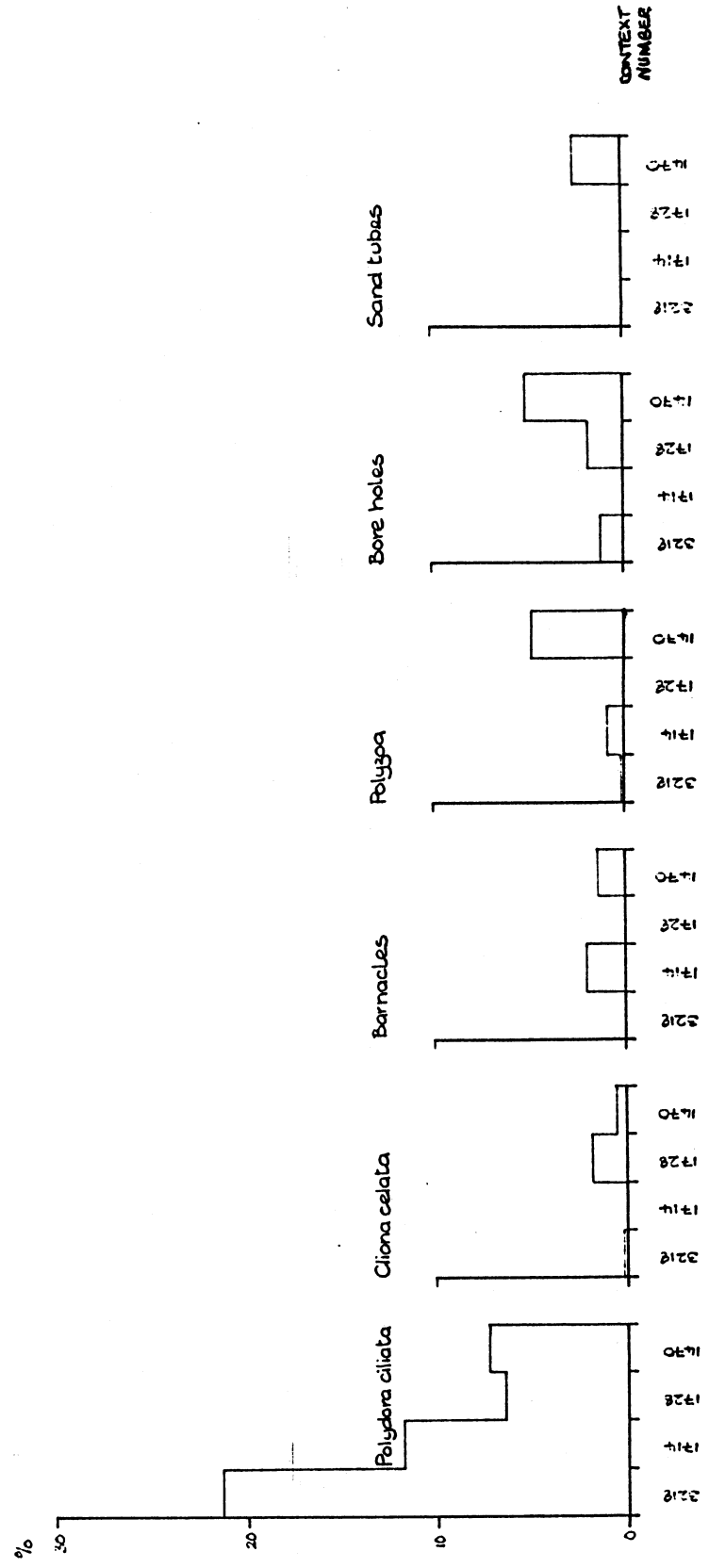


TABLE 7.38 OTHER MARINE MOLLUSC SPECIES FROM PUDDING LANE

SAMPLE NUMBER	3218	1714	1728	1470
COCKLE ( <i>Carastoderma edule</i> (L.))	0	4	11	5
LIMPET ( <i>Patella vulgata</i> L.)	0	1	0	0
MUSSEL ( <i>Mytilus edulis</i> L.) (valves)	0	27	28	96
WHELK ( <i>Buccinum undatum</i> L.)	0	3	9	0
WINKLE ( <i>Littorina littorea</i> (L.))	2	0	3	1