

LENGTH-FREQUENCY AND SEX COMPOSITION DATA FOR
PINK SHRIMP LANDED IN OREGON, 1951-65

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and

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INTRODUCTION

Pink shrimp (Pandalus jordani) catches from exploratory and commercial fishing have been sampled since 1951 by Fish Commission of Oregon personnel. Carapace length, sex, gravidity, and average size (shrimp per pound) have been recorded. These data were used to show age composition, timing of sex change from male to female, growth, and spawning period. This report summarizes in tabular form, by month and area of catch, these data for shrimp landed in Oregon. The data are also tabulated and graphed by quarterly period, starting on April 1, to show the sex change, growth, and age-sex composition of catches and/or landings by season and year. This date was used because larval release of the incoming year class is usually completed just prior to April 1. Shrimp of the year (0-12 months old) rarely have been obtained in samples because their small size makes them unavailable to most of the gear used. This age group is therefore missing from most length-frequency distributions.

SOURCES OF INFORMATION

Most of the data presented came from market sampling of commercial shrimp landings since 1957. Data on area of catch were collected from commercial fishermen's logs. Almost since the fishery started in Oregon, logbooks were furnished to fishermen in which to keep pertinent data. The logs have been copied, usually on a monthly schedule. Those fishermen who declined to keep written records of fishing have usually been willing and able to furnish needed information orally.

Sampling at sea by Fish Commission biologists aboard commercial trawlers has contributed a limited amount of data at irregular periods. Another source of information was exploratory fishing by the Fish Commission of Oregon and the

U. S. Bureau of Commercial Fisheries from 1951 to 1960. Magill and Erho (1963) presented a summary of exploratory activities off Oregon since 1951. The Oregon Fish Commission made exploratory cruises in 1951-52 and 1957 and the Bureau of Commercial Fisheries in 1958 and 1960 (Ronholt and Magill, 1961).

Although a small fishery developed at Garibaldi (Tillamook Bay) in 1955, sustained commercial effort in Oregon began in 1957 at Warrenton. Sampling was curtailed at ports south of the Columbia River until 1963 because of small landings. Since then, expanding fisheries at Brookings and Coos Bay have required intensified sampling.

In 1961, the Pacific Marine Fisheries Commission employed a port sampler who collected data on shrimp landed at Brookings, Oregon, and Crescent City, California. In years since then, work has been accomplished through the cooperation of Fish Commission salmon samplers who doubled as shrimp samplers as time permitted. When funds were available, personnel were placed at southern ports during the shrimp season.

METHODS

Shrimp samples have been drawn and recorded in essentially the same manner since 1951. Between 100 and 200 shrimp are taken randomly from a shrimp catch or landing and are sexed, weighed, and measured for length. Shrimp carapace length in millimeters is measured with a Vernier caliper from the posterior margin of the eye socket to the dorsal posterior margin of the carapace. This measurement is used because the carapace is durable and usually intact. The carapace length (C) and the eyestalk to telson length (E) were found to be linearly related (Magill and Erho, 1963). In 1951, 1955, and 1957 the eyestalk to telson length was measured by means of a measuring board (Pruter and Harry, 1952). These measurements were converted to carapace length for this report using the formula $C=0.258E-1.16$ (correlation coefficient $r=0.986$). All

measurements have been recorded in 0.2 millimeter increments and were smoothed to 0.5 millimeter intervals for graphing.

Sex was determined by close examination of the inner ramus of the first pleopod (Tegelberg and Smith, 1957). The shape of the ramus determines whether the animal is male (M), transitional (T), or female (F). A triple-beam balance was used for weighing samples to the nearest gram.

AGE AND SEX COMPOSITION

Pink shrimp off Oregon are born between February and April. Few gravid females are seen after April 15. Shrimp mature first as males between their first and second years of life (0 and 1+ age groups) then transform to females during their third year of life (2+ age group). Almost all shrimp older than 36 months (3+ age group) are females. Exceptions to this timing of sex change will be dealt with later in this section. Females begin to show "head roe" (maturing ovaries) in late August. By December 1, most of them have spawned and carry the eggs attached to their abdomens through the winter until hatching occurs from February to April.

Shrimp caught south of Cape Blanco usually are composed of three age groups --1+, 2+, and 3+--while north of that point the 4+ age group is added. Shrimp 4 years old have generally been a small part of the catch. The 1+, 2+, and 3+ age groups are usually strong in catches north of Cape Blanco, while the 1+ and 2+ groups dominate catches south of there, particularly in areas 6 and 7. The 3+ group usually is not abundant in catches south of Cape Blanco. This difference in age composition as well as in size is compared in Figures 2-5 and 6-8.

Sex composition has usually been dependent on the strength of age groups. The 2+ age group typically is male in April and changes sex to female by October each year. The strength of 1+ and 3+ age groups also has an influence on overall

sex composition since 1+ shrimp generally remain male and 3+ shrimp generally are female. Transitional males are evident in increasing numbers after April and peak usually in June and July each year. By October, few transitionals remain. By November, nearly 100% of female shrimp are either gravid or have ripe ovaries.

There have been exceptions to shrimp changing sex at age 2+, most notably in areas 6 and 7. The faster growth of shrimp there has been paralleled by earlier change from male to female. A portion of the 1+ group typically changes sex, one year sooner than northern shrimp. Other exceptions have been noted, especially north of Cape Blanco in 1964 and 1965. In 1964 an abnormally small part of the 2+ age group (male) changed sex to female in northern Oregon. Normally almost all of this group changes to female. A dominant 3+ age group, as usual all females, was present with comparatively few males (1+ and 2+ age groups). In 1965 an unusually large part of a dominant 1+ age group changed sex to female. Normally this age group remains male. Females were comparatively scarce. The very weak 2+ age group also changed sex, as is normal. The unbalanced sex ratios those two years, along with the aberrations in timing of sex reversal suggest a possible connection of sex reversal with sex ratio.

LENGTH-FREQUENCY DISTRIBUTIONS BY AREA

Areas of catch are shown in Figure 1. They have remained fairly constant after 1961, but some have been more important than others in catch and amount of effort expended. Effort has shifted from one area to another from month to month and year to year. Table 1 gives carapace length-frequency data by month and area from 1951-65.

Area 1, between Cape Elizabeth and the Columbia River, was fished extensively in 1957, 1958, and 1959. Shrimp populations off Grays Harbor and Willapa Bay were the major contributors to the catch. Figure 2 and Table 2 show length-frequency data from this area. In all figures, dotted lines indicate

male, solid lines female, and dashed lines transitional male (changing to female) carapace lengths.

Area 2, between the Columbia River and Cape Perpetua, includes shrimp beds centered off Tillamook Head and Cape Meares. Some shrimp were also taken directly off the Columbia River. Populations off Washington and in area 2 appear to be similar in age composition, sex change, and growth. Figure 3 and Table 3 show Area 2 sampling data.

Area 3, between Cape Perpetua and Coos Bay, includes a large population northwest of Coos Bay. Shrimp have also been taken in shallow water (50 to 60 fathoms) off the Umpqua River and in deeper water in the southeast bight of Heceta Bank. Figure 4 and Table 4 illustrate sex, age, and growth of these populations. Age groups are separated by analysis of the polymodal distribution of shrimp sampled during the period shown. For example, in Figure 4, January-March 1963, three age groups appear: one-year-olds (1+) as males with a mode of 13 mm; two-year-old males, transitionals, and females (2+) with a mode of 17-18 mm; and three-year-old females (3+) with a mode of approximately 21 mm. Growth of these age groups is seen by following each through the succeeding periods of April-June and July-September. By July-September, the respective modes have reached 16 mm, 18-20 mm, and 22 mm. Sex change of the 2+ group has been nearly completed, with few males and many females present compared to the opposite ratio among 2+ shrimp in January-March.

Area 4, between Coos Bay and Cape Blanco, includes a large population off Coquille Point which may be part of the population northwest of Coos Bay. Size, growth, and sex change timing and degree are usually similar. Figure 5 and Table 5 show data from this area.

Area 5, between Cape Blanco and the Rogue River, includes a population off Island Rock. It is a small area on which considerable numbers of shrimp are

concentrated. It has been fished since 1962, mostly by Port Orford vessels, but increasingly by Brookings vessels. Figure 6 and Table 6 show sampling data from this area. Size and growth is usually midway between the populations of smaller shrimp in area 4 and larger shrimp in area 6.

Area 6, between the Rogue River and St. George Reef, just south of the California-Oregon border, includes a population off Brookings whose range extends into northern California and north to Cape Sebastian (Figure 7 and Table 7). This area has been fished by Brookings boats and occasionally by Crescent City, California vessels. The area appears to contain a transitory population, shrimp being present in good quantities at some times of the year and practically unavailable at others.

Area 7, between St. George Reef and Cape Mendocino, includes a large population off the Klamath River and Redding Rock in California. This population is fished upon by Brookings-based boats as well as California vessels. Figure 8 and Table 8 show sampling data for this area.

ACKNOWLEDGMENTS

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Special thanks are due the Pacific Marine Fisheries Commission for making possible 1961 data from south of Cape Blanco, to James M. Meehan for suggestions and technical assistance, and to the many Fish Commission and Bureau of Commercial Fisheries personnel who collected data through the years.

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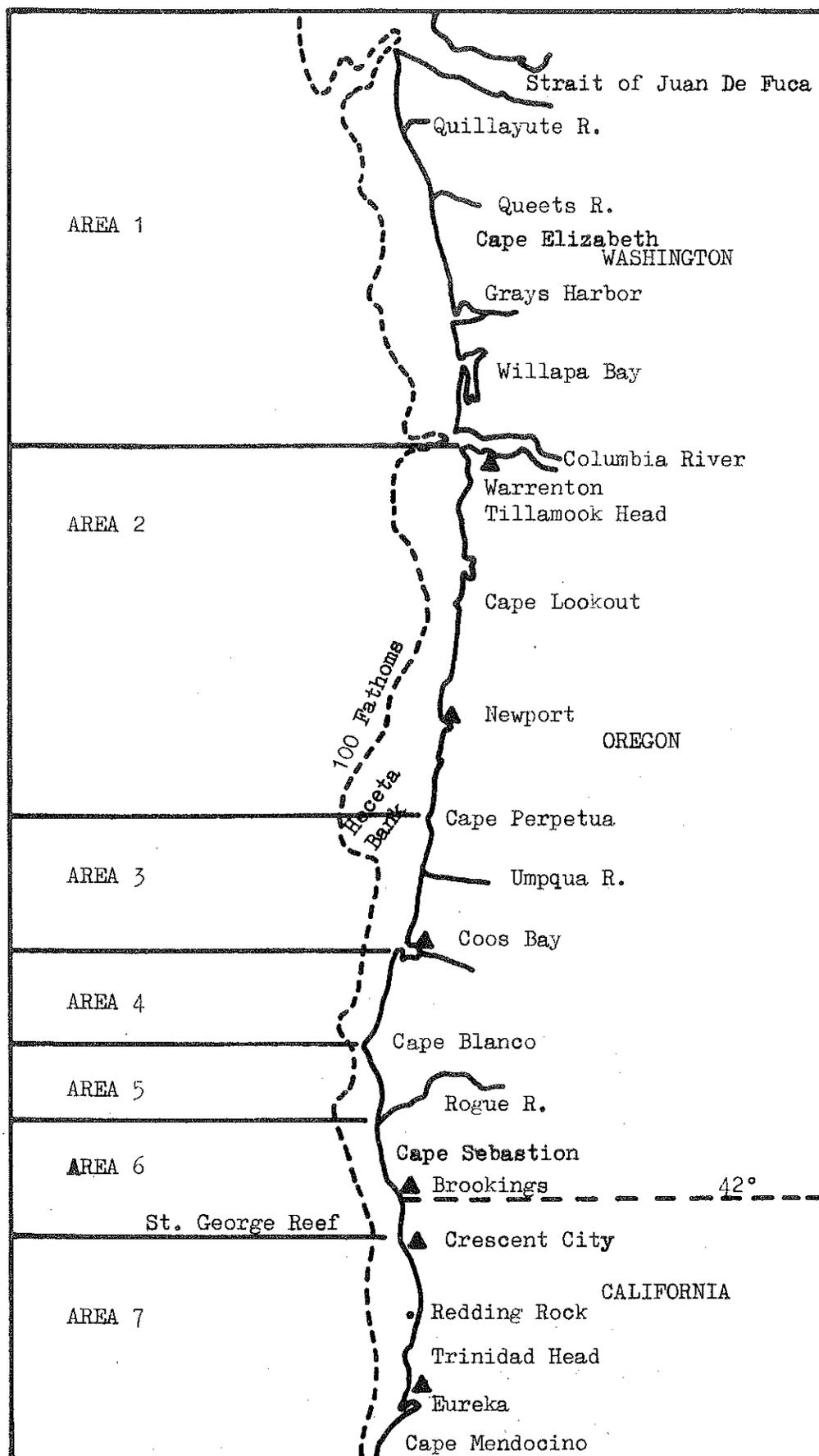


Figure 1. Area designations for shrimp caught off or landed in Oregon.

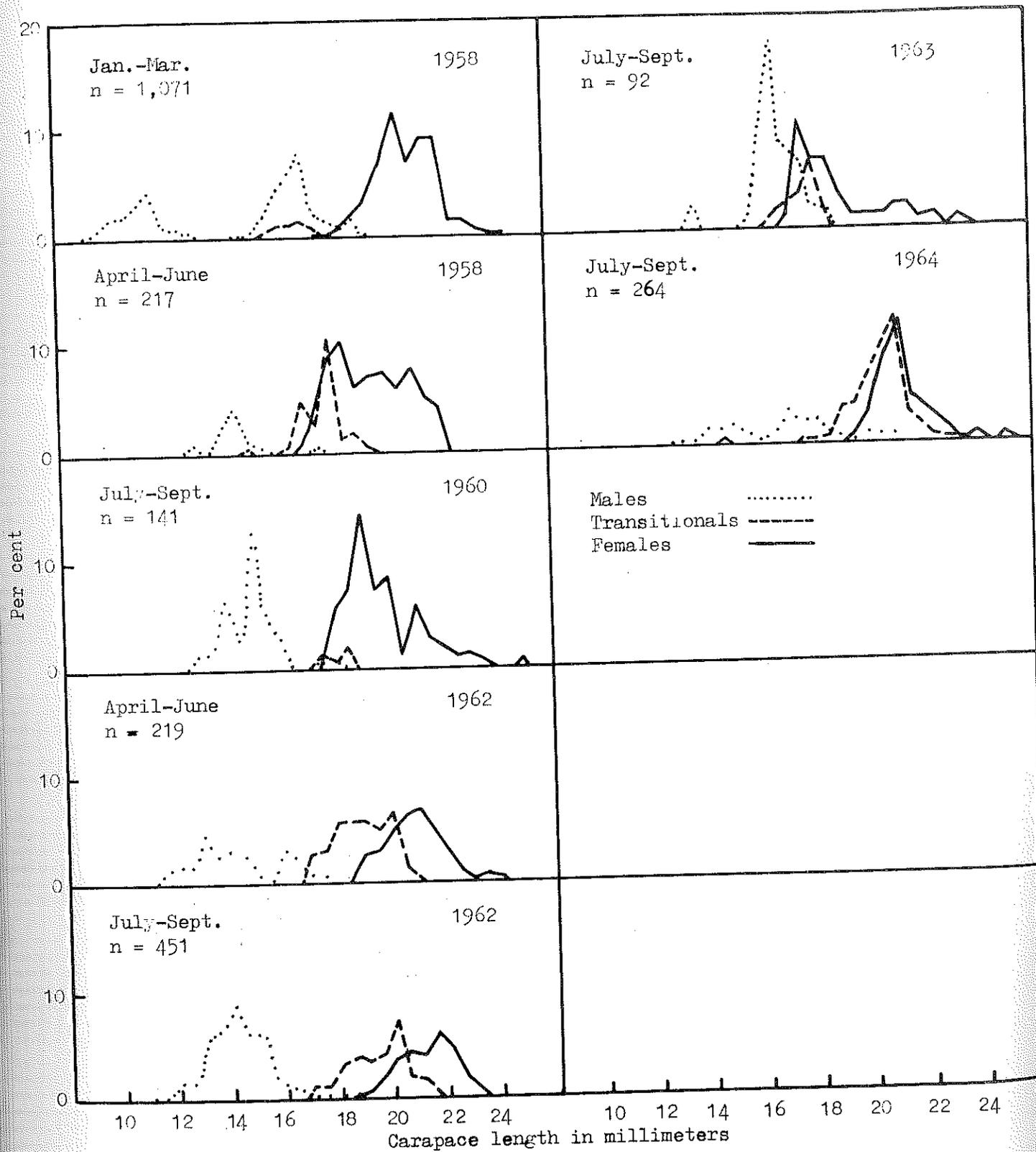


Figure 2. Area 1 length-frequency distributions, 1958-64.

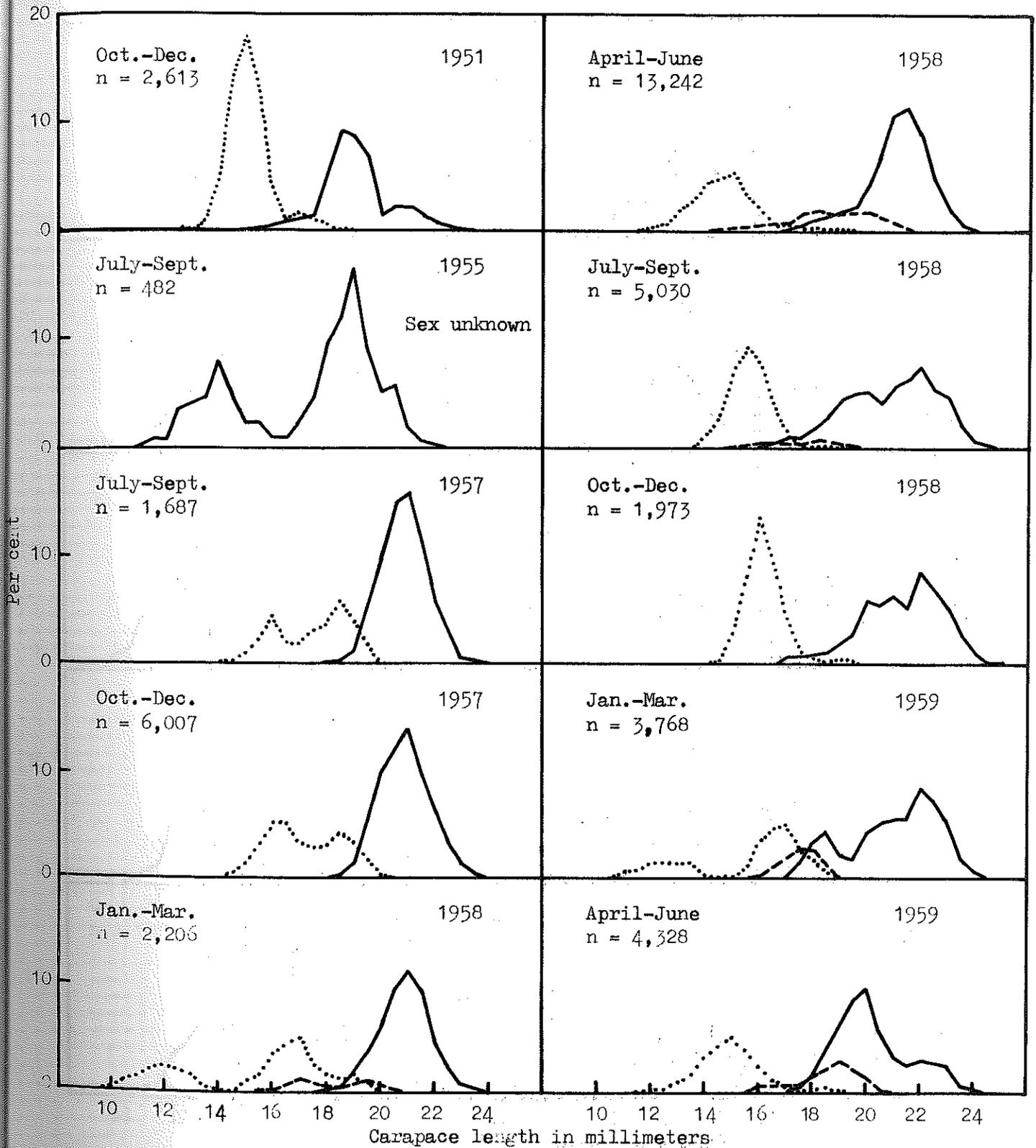


Figure 3. Area 2 length-frequency distributions, 1951-65.

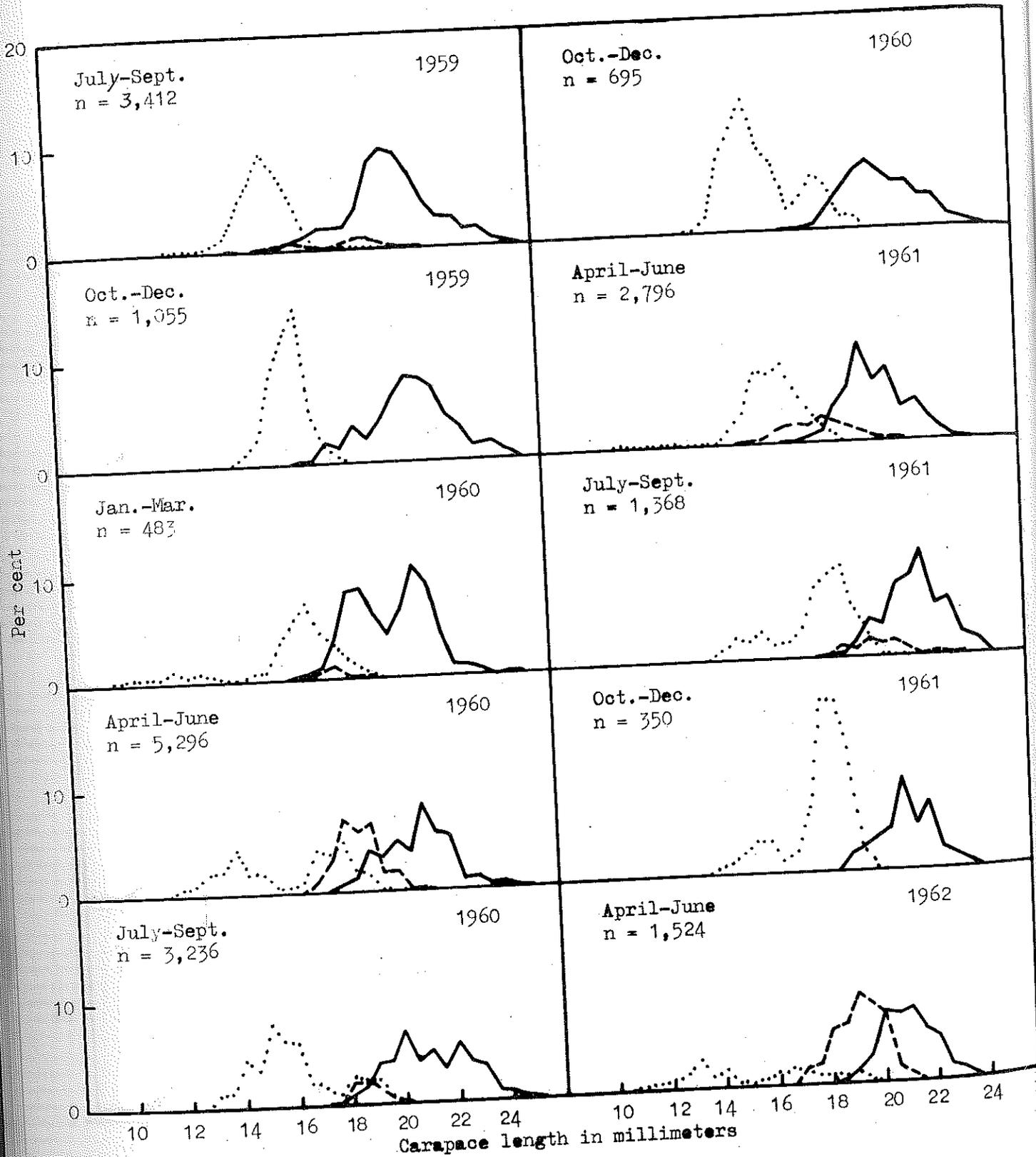


Figure 3 (Continued).

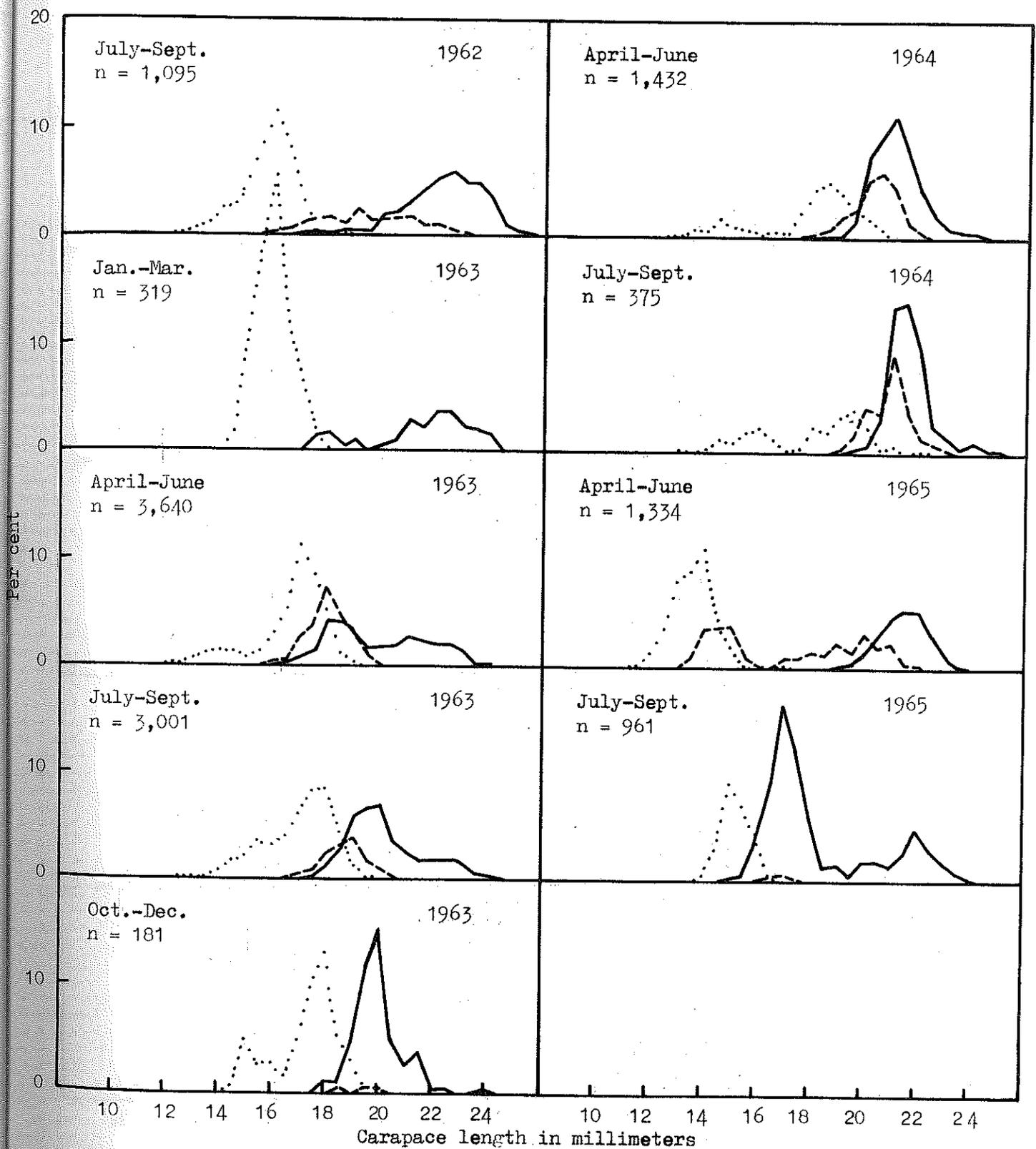


Figure 3. (Continued).

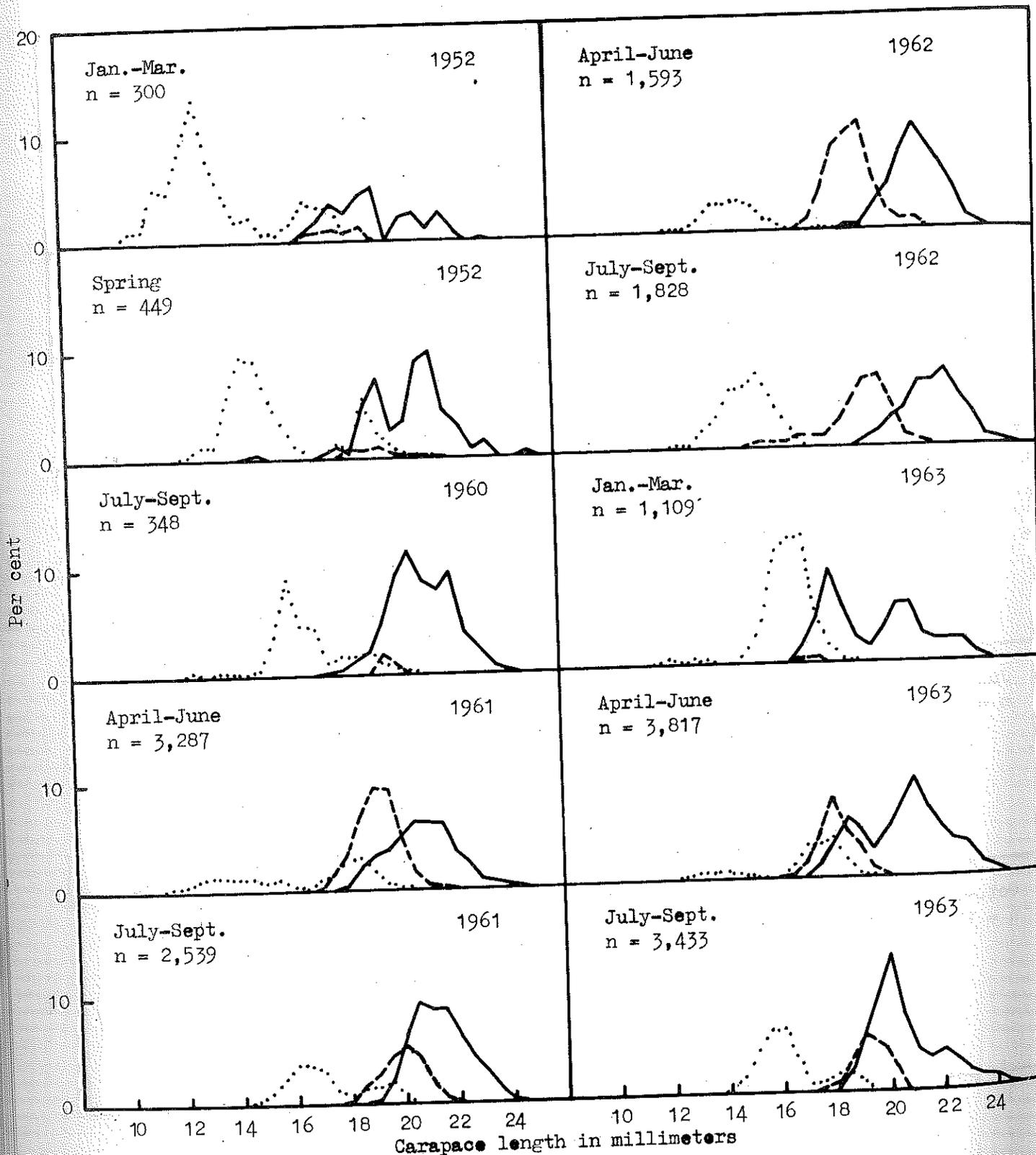


Figure 4. Area 3 length-frequency distributions, 1952-65.

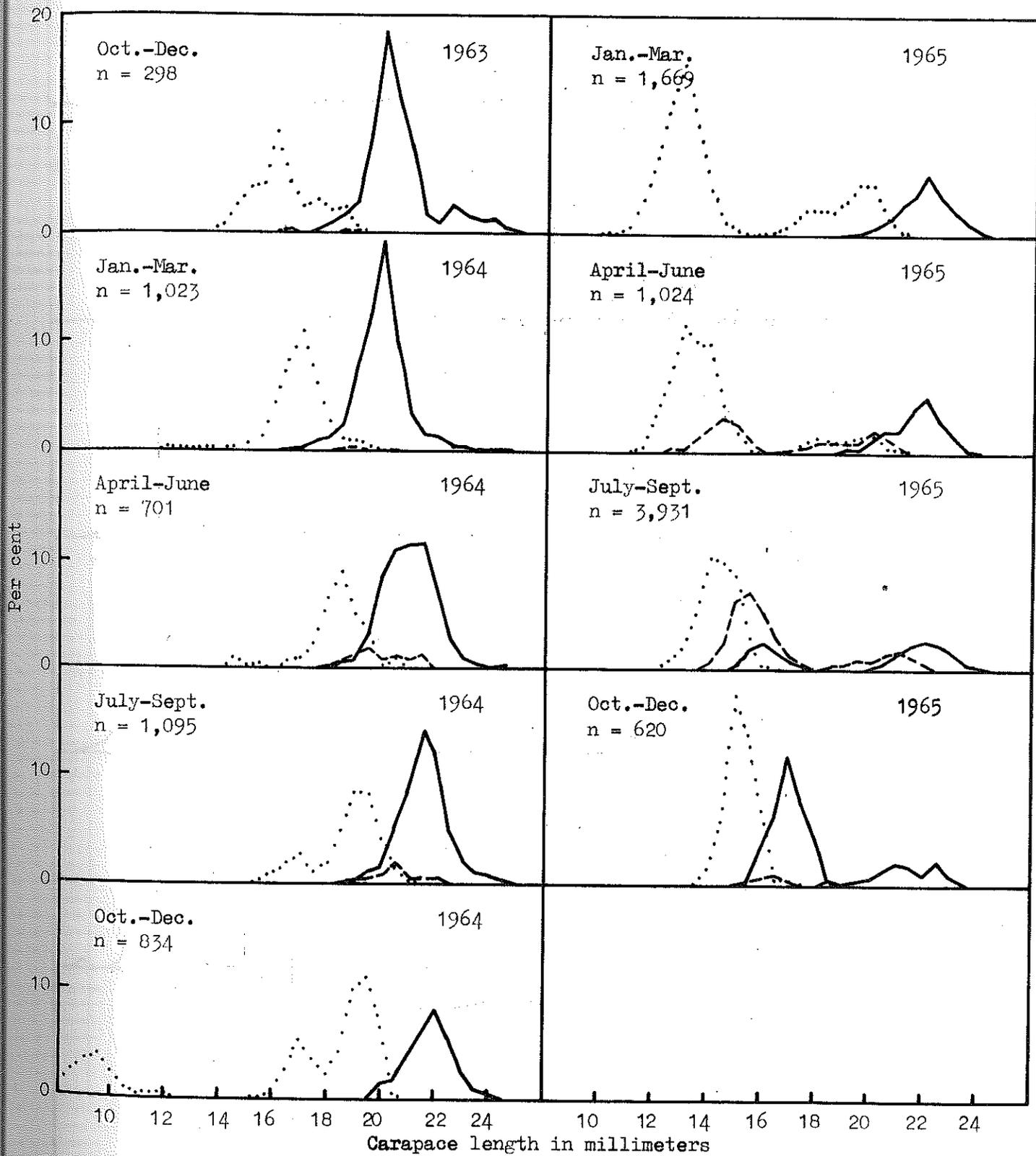


Figure 4 (Continued).

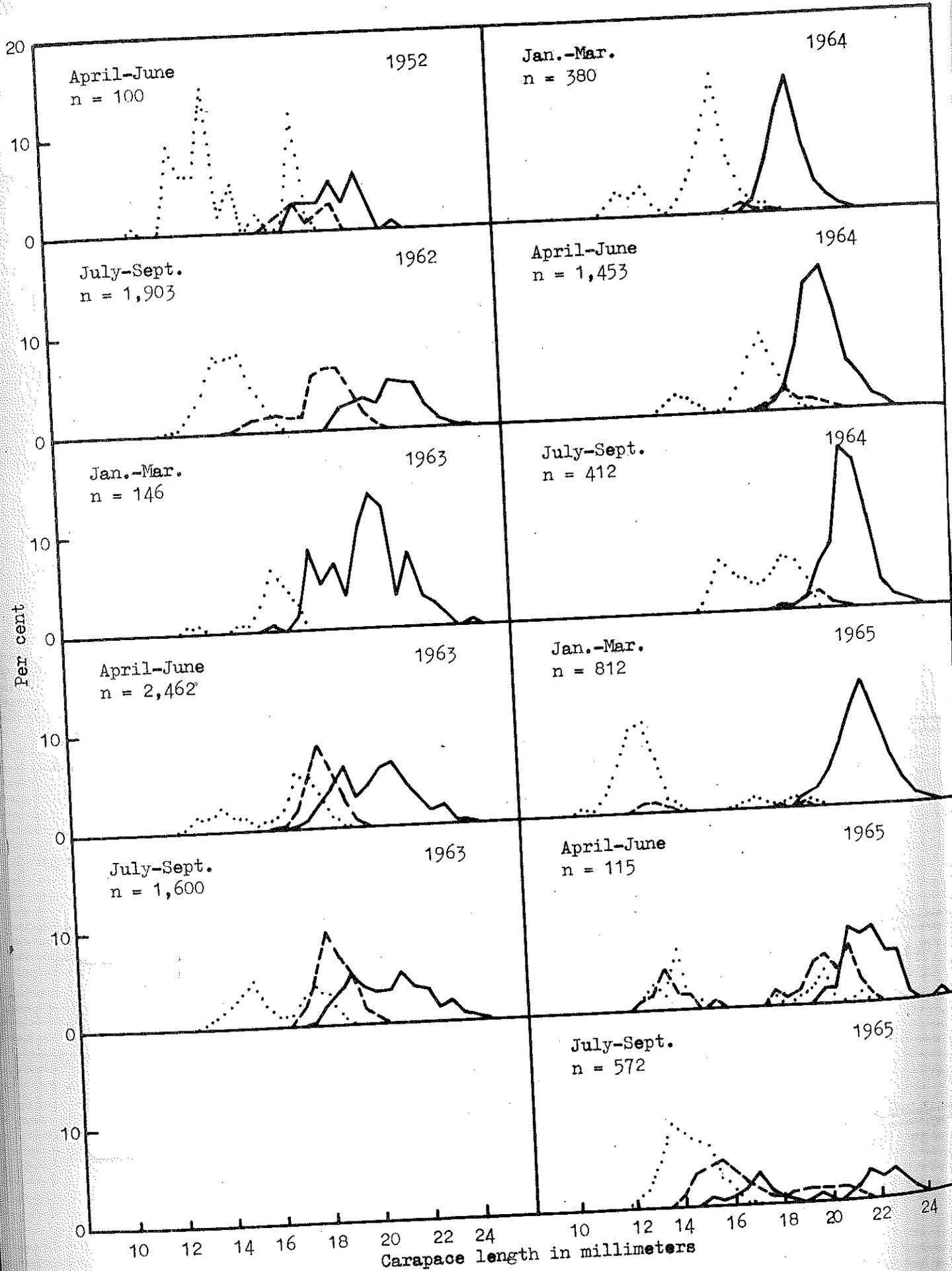


Figure 5. Area 4 length-frequency distributions, 1952-65.

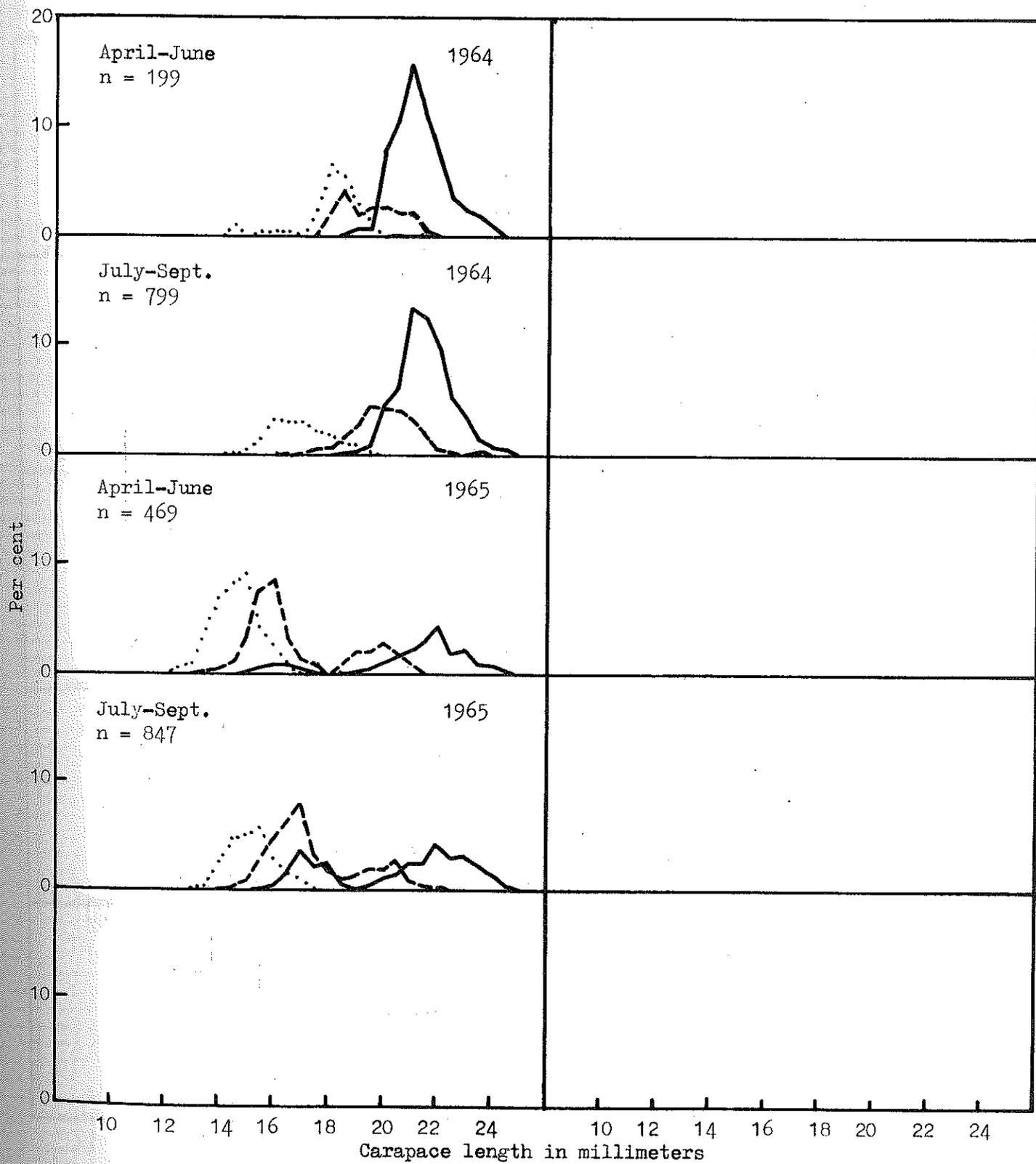


Figure 6. Area 5 length-frequency distributions, 1964-65.

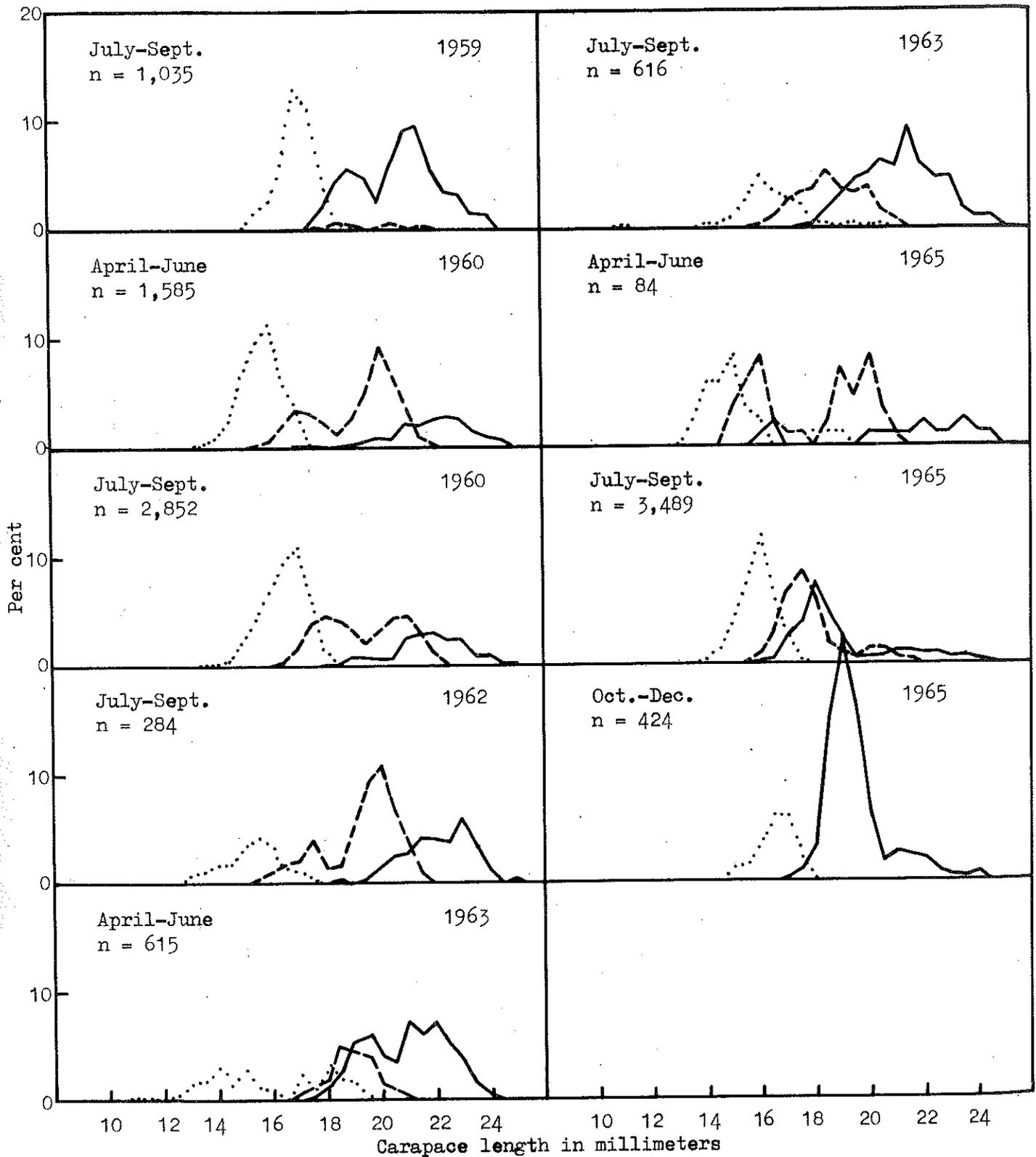


Figure 7. Area 6 length-frequency distributions, 1959-65.

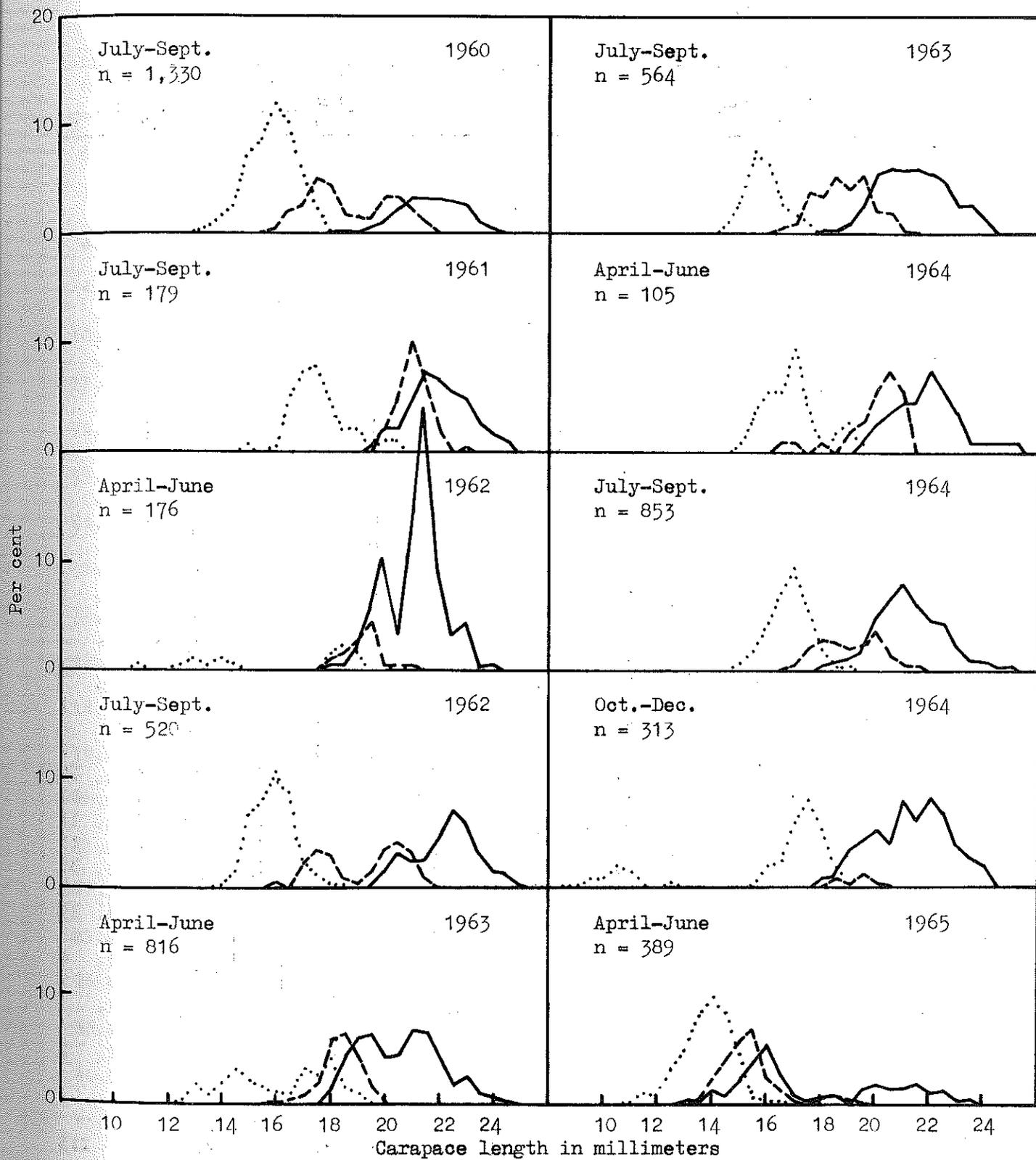


Figure 8. Area 7 length-frequency distributions, 1960-65.

Table 1. Pink shrimp carapace length-frequency distributions, by area and month.

Length (mm)	Oct. 1951			Mar. 1952			Apr. 1952			May 1952			
	Area 2			Area 3			Area 4			Area 3			
	M	T	F	M	T	F	M	T	F	M	T	F	
6.0													
.5													
7.0													
.5													
8.0													
.5													
9.0													
.5													
10.0					3								
.5					4								
11.0					15			1					
.5					14								
12.0					28						2		
.5					40			9			6		
13.0	2				23			6			6		
.5	26				13			6			26		
14.0	132				6			15			42		
.5	369				7			2			41	2	
15.0	466		1		7			5			24		
.5	332		5		2						15		
16.0	95		7		2						5		
.5	29		17		5			2					
17.0	41		28		11	2	3		1		1	1	
.5	27		29		10	2	6		2		6	4	
18.0	15		135		10	3	11	12	3	3	3	2	
.5	2		241		3	2	8	2	1	3	24	3	
19.0			222		3	4	13		2	5	10	4	
.5			180				15		3	5	6	2	
20.0			43				1			3	2	1	
.5			57				7			6		1	
21.0			51				8			3		1	
.5			32				4					1	
22.0			16				8			1		19	
.5			9				3					13	
23.0			2									4	
.5			2									7	
24.0			2					1					
.5												2	
25.0													
.5													
26.0													
Total	1,536		1,077		199	13	88	61	12	27	219	15	215
No. samples		6				3			1			5	
Shrimp/lb.		Not available			Not available		Not available		Not available		Not available		

Table 1 (Continued)

Length (mm)	July 1955	Sept. 1957			Oct. 1957			Nov. 1957		
	Area 2	Area 2			Area 2			Area 2		
	Sex unknown	M	T	F	M	T	F	M	T	F
6.0										
.5										
7.0										
.5										
8.0										
.5										
9.0										
.5										
10.0										
.5										
11.0										
.5	3									
12.0	3									
.5	16									
13.0	19									
.5	21									
14.0	39	3			2					
.5	23	5			31			1		
15.0	11	17			95			3		
.5	11	40			192			9		
16.0	5	75			306			13		
.5	5	35			283			24		
17.0	12	34			193	2		20		
.5	22	54			163	1		14		
18.0	46	63	1		179	1		9		
.5	58	99	4		249	14		4		
19.0	79	67	21		200	90		6		3
.5	44	28	94		102	311		5		5
20.0	25	4	159		26	558		1		20
.5	27	1	249		12	663				39
21.0	9		269		1	776				72
.5	3		194			517				71
22.0	1		100			311				77
.5			51			134				69
23.0			13			63				30
.5			6			16				15
24.0			1			4				2
.5										
25.0										
.5										
26.0										
Total	482	525	1,162	2,034	3,461	109		403		
No. samples	2	6			17			2		
Shrimp/lb.	Not available	88.8			93.9			74.2		

Table 1. (Continued)

Length (mm)	Feb. 1958			Mar. 1958			Apr. 1958			May 1958		
	Area 1			Area 2			Area 2			Area 1		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0				1								
.5												
9.0	4			3								
.5	8											
10.0	20			9								
.5	22			25								
11.0	33			32			3					
.5	45			51			2					
12.0	12			57			16					
.5	10			44			19					
13.0	5			35			61			2		
.5				14			63					
14.0				9			53			5		
.5	2	1		2			33	1		9		
15.0	2			26	1		18			3	1	
.5	16	1		39	4		7	1		1		
16.0	41	7		84	6		5	2	1			
.5	55	11		103	20	1	13	6			1	
17.0	79	16		117	33	1	31	25	4		10	2
.5	41	10	1	61	20	2	34	71	6	1	6	8
18.0	16	4	2	42	15	8	29	113	25		22	19
.5	11	2	8	31	14	16	8	81	26		3	22
19.0	17		24	37	19	44	8	89	44		4	13
.5	1		35	23	24	82	8	84	75		1	15
20.0		2	70	5	15	135	3	103	199			16
.5			122		7	217	1	59	354			13
21.0			76		1	254		32	576			17
.5			97			213		3	530			11
22.0			99			112		1	349			9
.5			18			57			123			
23.0			16			22			42			
.5			6			12			16			
24.0			1			1			2			
.5			2									
25.0												
.5												
26.0												
Total	440	54	577	850	179	1,177	415	671	2,372	21	48	145
No. samples		3			6			11			1	
Shrimp/lb.		96.5			103.1			88.7			112.6	

Table 1 (Continued)

Length (mm)	May 1958 Area 2			June 1958 Area 2			July 1958 Area 2			Aug. 1958 Area 2			
	M	T	F	M	T	F	M	T	F	M	T	F	
6.0													
6.5													
7.0													
7.5													
8.0													
8.5													
9.0													
9.5													
10.0													
10.5													
11.0	1												
11.5	4												
12.0	17			2									
12.5	36			8									
13.0	151			30	1		1						
13.5	227			74			5			7			
14.0	361			169	1		22			33			
14.5	369	5		235	3		44			83			
15.0	369	17	1	303	8		70	5		223	2		
15.5	226	25		193	7	1	73	10		291	1		
16.0	106	36	1	136	29	5	56	13	2	248	12	1	
16.5	47	33	4	43	22	8	16	19	19	139	5	5	
17.0	24	41	10	20	19	6	12	8	19	43	10	22	
17.5	27	99	46	5	13	15	7	12	16	10	6	20	
18.0	28	100	82	15	22	39	4	21	45	8	13	36	
18.5	13	84	90	12	35	70		13	59	9	15	71	
19.0	12	91	80	11	50	112		10	73	8	11	123	
19.5	4	84	110	3	25	112		6	62	3	3	154	
20.0	5	73	197	6	36	176		8	81		1	134	
20.5	2	50	343		32	218		15	55		2	133	
21.0	1	35	488		17	353		5	76	1	4	181	
21.5	2	10	507		11	482		6	85			197	
22.0	1	5	369		3	485		4	69			263	
22.5			175			376		2	47			185	
23.0			71			210			25			176	
23.5			32			60			16			80	
24.0			7			20			3			31	
24.5			1			2			3			4	
25.0									2				
25.5													
26.0													
145	Total	2,033	788	2,614	1,265	334	2,750	310	157	757	1,106	85	1,816
	No. samples		16			17			5			16	
	Shrimp/lb.		111.4			102.1			101.8			102.3	

Table 1 (Continued)

Length (mm)	Sept. 1958			Oct. 1958			Nov. 1958			Dec. 1958		
	Area 2			Area 2			Area 2			Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5											1	
12.0												
.5												
13.0	1											
.5												
14.0	11			3								
.5	33			8								
15.0	74			52			1				6	
.5	100			121			10				26	
16.0	99	1		181		1	25				62	
.5	57			124			18				44	
17.0	17	1	2	46		13	13				31	
.5	8		8	11		12	8				9	
18.0	3		7	9		12	2		3		2	
.5	1	1	10	2		16	1		1		2	
19.0		1	18	8		27	3		7		1	
.5			34	5		49	2		4		1	
20.0			47	1		82			15		1	
.5	1		24			77			12			
21.0			28			72	1		25			
.5			38			59			20			
22.0			49			93			31			
.5			49			72			24			
23.0			44			66			17			
.5			23			39			8			
24.0			7			15			2			
.5			2			2						
25.0									1			
.5												
26.0												
Total	405	4	390	571		707	84		170		186	
No. samples		4			5			1				2
Shrimp/lb.		115.0		105.3			89.6				98.2	

Table 1 (Continued)

Length (mm)	Jan. 1959 Area 2			Feb. 1959 Area 2			Mar. 1959 Area 2			Apr. 1959 Area 2			
	M	T	F	M	T	F	M	T	F	M	T	F	
6.0													
6.5													
7.0													
7.5													
8.0													
8.5													
9.0					2								
9.5	1												
10.0								2					
10.5	1				8			3					
11.0	3				21			4					
11.5	2				19			14			3		
12.0					18			41			3		
12.5					10			49			5		
13.0					8			55			13		
13.5	1				4			46			13		
14.0					3	1		21			12		
14.5					1			11			6		
15.0	4				4			3			11		
15.5	17				16	1		3	1		5		
16.0	43				63	6		25	9		2		
16.5	73				75	13	1	35	30	3			
17.0	54		1		74	8	5	73	66	3	5	1	
17.5	12		11		36	10	30	66	91	17	5	12	8
18.0	3		22		18	11	59	50	88	43	12	26	20
18.5	2		26		4	4	75	23	48	65	14	33	40
19.0	3		15		1	1	48	6	12	28	3	30	45
19.5			21		2	1	34	2	2	19	2	14	26
20.0	2		47				85		3	31		2	22
20.5			61		1		101			33		1	26
21.0			62				94			56			19
21.5			60				115			36			27
22.0			103				159			59			31
22.5			103				131			49			20
23.0			73				102			37			15
23.5			30				28			10			4
24.0			10				12			4			1
24.5							3			1			
25.0													
25.5													
26.0													
255	Total	221	645	388	56	1,082	532	350	494	114	118	305	
	No. samples	4		8			7			3			
	Shrimp/lb.	80.6		85.8			116.7			100.0			

Table 1 (Continued)

Length (mm)	May 1959 Area 2			June 1959 Area 2			July 1959 Area 2			Aug. 1959 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5	1											
10.0	2											
.5	1											
11.0	4											
.5	4											
12.0	9			1								
.5	17			1			1					
13.0	32			5			3					
.5	54			15								
14.0	94			52			8					
.5	92	2		96	1		31					
15.0	99	1		114	4		79	3				
.5	79	6		91	8		100			2		1
16.0	43	13	3	76	20	3	116	8		2		1
.5	21	15	3	41	21	5	76	11		7		2
17.0	13	16	6	19	21	11	34	21	12	12		2
.5	4	17	19	5	16	3	4	11	16	16		2
18.0	8	45	60	1	13	8	2	4	21	21	4	2
.5	6	63	113	7	7	25	3	2	20	20	2	3
19.0	7	75	161	6	30	70	3	12	28	28	1	2
.5		42	200	6	44	154	3	32	84	84		
20.0	1	30	199	3	42	212	4	28	183	183	1	1
.5		7	96		19	139		8	194	194		1
21.0		1	61		7	75		3	98	98		
.5		1	54			38		2	56	56		
22.0			50			47			34	34		
.5			52			49			44	44		
23.0			45			53			49	49		
.5			16			18			23	23		
24.0			8			12			20	20		
.5			1			5			10	10		
25.0									4	4		
.5												
26.0												
Total	591	334	1,147	539	253	927	467	145	905	471	17	
No. Samples		9			23			16			6	
Shrimp/lb.		111.1			103.0			98.4			103.0	

Table 1 (Continued)

Length (mm)	Aug. 1959 Area 6			Sept. 1959 Area 2			Sept. 1959 Area 6			Oct. 1959 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0												
.5												
14.0					1							
.5					3							
15.0					15						5	
.5	4				38			12			15	
16.0	5				68			23			59	
.5	28				62	1	2	36			73	
17.0	53				51		6	79			97	1
.5	44	2	3		28	2	8	67			28	2
18.0	16	1	18		4	1	13	33		3	8	8
.5	3	5	30		1		24	5		13	4	7
19.0	1	3	22				17	3	1	34		18
.5	1		14		1		24			36		10
20.0		1	7			1	33		1	19	1	17
.5		4	29			1	49		1	30		28
21.0			42			1	72		1	50		48
.5		2	29				95			69		52
22.0			21				57			36		50
.5			11				25			24		28
23.0			10				22			22		24
.5			6				10			8		10
24.0			3				16			10		12
.5							4					7
25.0			1				4					5
.5												
26.0												
Total	155	18	246	272	7	481	258	4	354	290		327
No. samples		8			4			6			4	
Shrimp/lb.		92.1			95.2			84.3			94.6	

Table 1 (Continued)

Length (mm)	Nov. 1959 Area 2			Mar. 1960 Area 2			Apr. 1960 Area 2			May 1960 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0				1								
.5				2				1				
11.0				2								
.5	1			5				2				
12.0				3				6				
.5				4				4				
13.0				2				18				
.5				1				12				
14.0	1							9				
.5	1							5				
15.0	6			3				2				
.5	11			4				10	2			
16.0	28			17			1	19	2			
.5	55		2	27		2	3	49	10			
17.0	57		2	34		2	6	43	22			
.5	18		2	21		3	6	44	45	7		
18.0	7		12	15		6	18	44	25	20		
.5	2		9	8		2	39	22	22	26		
19.0			18			1	41	13	22	31		
.5			14	1		2	28	2	15	50		
20.0			23				20		4	52		
.5			36				31			97		
21.0			35				50		3	77		
.5			30				43		1	58		
22.0			25				19			17		
.5			18				6			19		
23.0			11				5			3		
.5			6				3			8		
24.0			6					1		4		
.5			4					1		3		
25.0												
.5												
26.0												
Total	187		251	152	16	315	261	151	472	863	717	
No. samples		3			3			4			12	
Shrimp/lb.		96.2			108.7			107.7			110.2	

Table 1 (Continued)

Length (mm)	June 1960 Area 2			June 1960 Area 6			July 1960 Area 2			July 1960 Area 3		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
6.5												
7.0												
7.5												
8.0												
8.5												
9.0												
9.5												
10.0												
10.5												
11.0								2				
11.5	2											
12.0	13							3				
12.5	23							4			1	
13.0	47			2				33				
13.5	48			4				26				
14.0	109			14				44			1	
14.5	39			37				13				
15.0	41			103				16			1	
15.5	15			153	3			4			6	
16.0	7			181	10			5	1		4	
16.5	17	5		97	32			2	1			
17.0	79	31		54	52	2		11	5		1	1
17.5	65	64	1	4	47	2		9	6			
18.0	65	172	17	2	36	1		18	40	7	2	
18.5	20	163	26		20	1		4	54	7	2	1
19.0	12	110	95		42	3		4	35	26	3	1
19.5	1	26	68		78	7			7	11	7	10
20.0	1	15	77		142	15			5	24	3	11
20.5			57		107	13			1	14		12
21.0			136		60	32				26		6
21.5			80		16	30				22		10
22.0		1	74		6	38				22		11
22.5			17			45				9		2
23.0			16			41				4		2
23.5			8			24				3		2
24.0			9			15				3		
24.5			4			13				1		
25.0						1				1		
26.0												
Total	604	587	685	651	651	283	198	155	180	21	12	72
No. samples		13			18			4			1	
Shrimp/lb.		114.7			123.6			113.1			90.2	

Table 1 (Continued)

Length (mm)	July 1960			July 1960			Aug. 1960			Aug. 1960		
	Area 6			Area 7			Area 1			Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0				1			2				11	
.5	2			5			2				18	
14.0	7			18			9				84	
.5	11			31			4				66	
15.0	53			75			18				121	
.5	94			78			7				93	
16.0	117	2		68	5		4				89	
.5	134	11		37	17						30	
17.0	102	42	1	15	17						18	4
.5	27	76		5	29		2	2	1		8	4
18.0	3	66			12		1	1	8		34	24
.5		39			4			3	11		34	14
19.0		30	1		6	1			20		39	17
.5		41	3		14	5			11		13	13
20.0		69	4		24	7			12		6	8
.5		96	6		14	16			2		2	6
21.0		80	21		10	17			8			2
.5		43	38		3	14			4			
22.0		8	40			14			3			1
.5		1	44			10			2			
23.0			49			7			2			
.5			13			4			1			
24.0			20			2						
.5			2									
25.0			8						1			
.5												
26.0												
Total	550	604	250	333	155	97	49	6	86	666	93	688
No. samples		26			10			1			8	
Shrimp/lb.		112.2			119.3			117.2			107.0	

Table 1 (Continued)

Length (mm)	Aug. 1960 Area 6			Aug. 1960 Area 7			Sept. 1960 Area 2			Sept. 1960 Area 3		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
6.5												
7.0												
7.5												
8.0												
8.5												
9.0												
9.5												
10.0												
10.5												
11.0												
11.5												
12.0												
12.5												
13.0												
13.5									4			1
14.0				2				22				
14.5	4			3				41				
15.0	10			19				118				1
15.5	30			34	1			110				7
16.0	73			74				102				27
16.5	137	1		70	8			45				16
17.0	196	5	1	36	15			28				14
17.5	153	33		14	39			19		1		4
18.0	41	64	4	2	36			32	1	3		4
18.5	5	76	14		13			47	3	14		3
19.0	1	57	21		5			35	5	30		5
19.5		21	17		4			17	6	45		4
20.0		24	10		14	3		2	3	78		2
20.5		29	15		20	7		1		54		1
21.0		52	39		10	13				66		
21.5		42	40		8	8				44		
22.0		23	46		2	13				89		
22.5		2	18			14				72		
23.0			17			9				66		
23.5			13			2				22		
24.0			9			3				17		
24.5			4							9		
25.0										5		
25.5												
26.0			1									
Total	650	429	269	254	175	72	623	18	615	90		153
No. samples		27			10			9				2
Shrimp/lb.		114.6			133.2			99.9				88.4

Table 1 (Continued)

Length (mm)	Sept. 1960 Area 6			Sept. 1960 Area 7			Oct. 1960 Area 2			Nov. 1960 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0												
.5												
14.0								1			1	
.5				1				4			5	
15.0				1				35			12	
.5				2				47			20	
16.0	1			13				52			33	
.5	4			26	1			36			17	
17.0	4			22	1			38			4	
.5	10			15				12			1	
18.0	10	1		15				12			9	
.5	7	2		2	8			12			12	
19.0		4	1		7	2		23		2	4	
.5		6	2		7			24		4	4	
20.0		1			2	2		8		17		
.5		1	2		6	4		7		28		
21.0		3			10	6				36		
.5		3	10		9	12				31		
22.0		5	4		5	19				27		
.5		2	3		1	14				28		
23.0			6			14				21		
.5			2			18				17		
24.0			4			9				7		
.5			2			2				4		
25.0						3				2		
.5												
26.0												
Total	36	28	36	82	57	105	299		224		118	
No. samples		2			5			4			1	
Shrimp/lb.		103.0			99.5			101.4			119.4	

Table 1 (Continued)

1960 2 F	Length (mm)	Apr. 1961 Area 2			April 1961 Area 3			May 1961 Area 2			May 1961 Area 3		
		M	T	F	M	T	F	M	T	F	M	T	F
	6.0												
	.5												
	7.0												
	.5												
	8.0												
	.5												
	9.0												
	.5												
	10.0												
	.5	2						1					
	11.0	9			2			2					
	.5	6			10			1					
	12.0	5			16			2					
	.5	3			32			5					
	13.0	2			41			7			1		
	.5	1			37			3			2		
	14.0	3			21			2			3		
	.5	4			16			3			4		
	15.0	39			8						5		
	.5	80	5		2			6			2		
	16.0	160	10		2			25	1		1		
	.5	129	23	4	7	1		36	2				
	17.0	99	43	7	32	9	1	53	8	1	1		
	.5	33	37	6	32	39		63	16	3	9	8	
	18.0	13	17	11	40	70	13	44	22	6	17	25	3
	.5	3	18	21	22	54	42	18	26	11	30	70	12
	19.0	1	10	59	7	36	35	8	22	28	20	114	27
	.5		9	83		10	28	1	12	43	8	113	36
	20.0	1	4	100		1	45		8	93	2	56	60
	.5		2	62		2	21		6	54		27	116
	21.0		1	68			30		5	64		10	109
	.5			41		1	13		1	27		6	106
	22.0			29			9			35		1	64
	.5			28			5			26			44
	23.0			9						18			19
	.5			4						1			7
	24.0			2						1			1
	.5												
	25.0												
	.5												
	26.0												
54	Total	593	179	534	327	223	242	280	129	411	105	430	604
	No. samples		9			6			6			8	
0.4	Shrimp/lb.		120.5			121.1			103.5			83.3	

Table 1 (Continued)

Length (mm)	June 1961 Area 2			June 1961 Area 3			July 1961 Area 2			July 1961 Area 3		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0	1											
.5	2						2					
13.0	2			1						2		
.5	2			5						7		
14.0	4			13						11		
.5				20			1			22		
15.0	1			14			1			20		
.5	1			30			1			23		
16.0	14			10						16		
.5	22									8		
17.0	56						7			5	1	
.5	47	4		12	5	1	11			9	4	
18.0	36	12	2	34	19	2	20	2		22	22	
.5	25	26	1	45	109	13	19	3		22	47	
19.0	14	26	9	26	166	43	10	8		24	67	
.5	2	20	18	9	188	57	7	6		5	76	
20.0		17	62	1	97	70		6			37	
.5		9	48		28	72		4		13	21	
21.0		4	67		7	68		9		19	11	
.5		2	31		4	85		1		22	11	
22.0		2	49		1	46				24	4	
.5			19		1	29				11		
23.0			8			11				6		
.5			4			8				3		
24.0			1			6				2		
.5												
25.0												
.5												
26.0												
Total	229	122	319	220	625	511	79	39	108	198	290	
No. samples		6			10			2			8	
Shrimp/lb.		99.3			87.6			85.6			78.3	

Table 1 (Continued)

1961 3 F	Length (mm)	Aug. 1961 Area 2			Aug. 1961 Area 3			Aug. 1961 Area 7			Sept. 1961 Area 2		
		M	T	F	M	T	F	M	T	F	M	T	F
	6.0												
	.5												
	7.0												
	.5												
	8.0												
	.5												
	9.0												
	.5												
	10.0												
	.5												
	11.0												
	.5												
	12.0												
	.5												
	13.0												
	.5												
	14.0	4											
	.5	9			3						2		
	15.0	22			12			1			5		
	.5	15			42						10		
	16.0	25			67			1			10		
	.5	15			65			9			6		
	17.0	14			45	2		13			4		
	.5	23			22	6		14			8		
	18.0	36			12	8		9			35		
	.5	51	1	1	16	26		4			38		2
2	19.0	56	6	4	19	29	6	4			51	1	2
8	.5	25	4	12	24	48	36	1	1		31	1	8
23	20.0	13	14	25	4	65	101	2	4	5	14	5	19
57	.5	3	11	12	2	79	143	2	9	4	1	2	17
86	21.0	1	9	35		27	118		18	8		2	35
89	.5		4	44		7	101		11	13		4	34
113	22.0		1	62			70		4	12		1	47
90	.5		4	29		1	50			10			28
60	23.0		2	38			36		1	9			30
36	.5		1	18			13			5			9
19	24.0			14			6			3			5
4	.5			1			4			2			1
1	25.0						2						
	.5												
	26.0												
588	Total	312	57	295	333	298	686	60	48	71	215	16	237
	No. samples		3			10			2			3	
	Shrimp/lb.		89.8			80.9			85.5			88.0	

Table 1 (Continued)

Length (mm)	Sept. 1961 Area 3			Nov. 1961 Area 2			Apr. 1962 Area 2			Apr. 1962 Area 4		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0								1				
.5								1				
11.0								2				
.5								2				
12.0								5			1	
.5								4			5	
13.0								2			1	
.5								1				
14.0				2				1			1	
.5				4				3				
15.0				7				8				
.5	2			11				16				
16.0	10			10				12			1	
.5	14			4				9	7		8	5
17.0	25			7				9	5		9	5
.5	10			22				13	13		8	13
18.0	6	1		57				12	30	2	2	7
.5	3	1		56		1		16	36	6		4
19.0	2			40				6	32	9		
.5	2	1	1	8				3	22	23		1
20.0	3	1	4	1					2	19		1
.5		2	9							28		
21.0		2	14						1	22		
.5			9							22		
22.0		1	7							22		
.5			4							11		
23.0			6							6		
.5			3							2		
24.0			3							1		
.5												
25.0												
.5												
26.0												
Total	77	9	60	229		121	126	148	151	36	36	
No. samples		1				1		4			1	
Shrimp/lb.		103.0		105.4			111.5				102.6	

Table 1 (Continued)

Length (mm)	Apr. 1962			May 1962			May 1962			June 1962		
	Area 7			Area 2			Area 3			Area 1		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
6.5												
7.0												
7.5												
8.0												
8.5												
9.0												
9.5												
10.0												
10.5				3								
11.0	1			2								
11.5				5						2		
12.0				7						4		
12.5	1			10			2			4		
13.0	2			22			2			10		
13.5	1			8			4			6		
14.0	2			14			7			7		
14.5	1			4			1			6		
15.0				1						2		
15.5				1			1			1		
16.0				1						7		
16.5				7						5		
17.0				8	9		1	1		2	6	
17.5				7	14			12		1	7	
18.0	3	2	1	3	42		2	34	1	13		
18.5	4	3	1	1	35	2		42	2	13	1	
19.0	3	5	4		60	10	2	47	7	13	6	
19.5		8	10		51	16	2	37	3	11	7	
20.0		1	18	1	49	49		26	20	15	11	
20.5	1	1	6		15	51		10	28	4	14	
21.0		1	22		8	52	1	4	56	1	15	
21.5			42		2	41		6	65		11	
22.0			16			35			46		7	
22.5			6			13			38		3	
23.0			8			10			26		1	
23.5			1			3			6		2	
24.0			1			1			2		1	
24.5												
25.0												
25.5												
26.0												
Total	19	21	136	105	285	283	25	219	300	57	83	79
No. samples		1			6			3			3	
Shrimp/lb.		75.5			103.5			82.4			114.7	

Table 1 (Continued)

Length (mm)	June 1962 Area 2			June 1962 Area 3			July 1962 Area 1			July 1962 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0	4						1					
.5	3						1					
12.0	6						7					
.5	10			2			7			2		
13.0	16			3			26			6		
.5	11			13			31			10		
14.0	11			34			40			22		
.5	4			40			27			15		
15.0	5			47			29			11		
.5	2			37			10			5		
16.0	5			22	1		6			4		
.5	7	1		9	1		3					
17.0	5	8			1			6			1	
.5		12	1	1	5		1	5				
18.0		22	1	1	22		2	14			4	
.5		23	5		82	1	1	17	1		3	
19.0		35	8	1	98	1		15	3		8	
.5		33	17		122	7		17	9		7	
20.0		33	33		53	19		33	17		8	
.5		9	30		20	35		11	20		10	
21.0		5	28		10	60		8	18		9	
.5		1	15		8	91		1	28			
22.0		1	8		1	81		2	21		1	
.5			4			62			9			
23.0			3			37			4			
.5			1			14						
24.0						7						
.5												
25.0												
.5												
26.0												
Total	89	183	154	210	424	415	192	129	130	75	51	18
No. samples		4			8			4			1	
Shrimp/lb.		107.0			91.0			131.6			138.5	

Table 1 (Continued)

1962 a 2 F	Length (mm)	July 1962 Area 3			July 1962 Area 4			July 1962 Area 6			Aug. 1962 Area 2		
		M	T	F	M	T	F	M	T	F	M	T	F
	6.0												
	.5												
	7.0												
	.5												
	8.0												
	.5												
	9.0												
	.5												
	10.0												
	.5												
	11.0												
	.5				1								
	12.0												
	.5	3			4								
	13.0	8			12			2			1		
	.5	30			38			3			2		
	14.0	48			71			5			4		
	.5	76			121			5			13		
	15.0	71			108	4		10			27		
	.5	60	9		104	10		12	1		25		
	16.0	31	7		58	22		10	3		28	1	
	.5	13	3		25	24		4	5		22	6	
	17.0	2	2		4	13		3	6		9	4	
	.5		3			14		1	11		1	6	1
	18.0		13			25			4		1	5	1
	.5		30		1	99	1		5	1	2	4	
	19.0		53			101	4		15			14	1
	.5		72	5		95	25		26	1		7	3
	20.0		54	9		54	24		31	4		9	11
	.5		30	21		14	27		20	7		7	14
	21.0		10	31		2	27		11	8		8	21
	.5		5	70		1	63		3	12		8	31
	22.0		1	59			54			12		9	27
	.5		1	63			43			11		4	39
	23.0			48			15			17		2	20
	.5			30			6			10			20
	24.0			10			3			4			16
	.5			1			2						7
	25.0									1			3
	.5												1
	26.0												
	Total	342	293	347	547	478	294	55	141	88	135	94	216
	No. samples		9			11		3				4	
	Shrimp/lb.		99.4			116.1		96.6				94.5	

Table 1 (Continued)

Length (mm)	Aug. 1962			Aug. 1962			Aug. 1962			Sept. 1962		
	Area 3			Area 4			Area 7			Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0				1								
.5				1								
13.0				1								
.5	2			5			1				1	
14.0	6			11			7				4	
.5	20			16			35				22	
15.0	28	1		24			39				63	
.5	51	1		13			50	3			93	
16.0	38	2		17			41				67	
.5	27	6		6	10		14	11			25	6
17.0	10	13		1	4		7	15			3	
.5		10			1			14				8
18.0		1			4			4				7
.5	1	8			12			2		1		3
19.0		23			19	6		7		1		1
.5		40	3		15	8		18		9		3
20.0		61	7		10	8		18		16		2
.5		39	16		5	7		13		10		4
21.0		12	19			6		5		13		4
.5		8	31			12				19		1
22.0		2	38			14				32		1
.5			43			5				26		
23.0			26			5				9		
.5			15			1				8		
24.0			5			2				5		
.5			2							2		
25.0												
.5												
26.0												
Total	183	227	205	96	80	74	194	110	152	278	43	
No. samples		7			3			4			4	
Shrimp/lb.		96.9			105.1			99.3			105.2	

Table 1. (Continued)

1962 2	Length (mm)	Sept. 1962 Area 3			Sept. 1962 Area 4			Sept. 1962 Area 7			Jan. 1963 Area 2		
		M	T	F	M	T	F	M	T	F	M	T	F
	6.0												
	.5												
	7.0												
	.5												
	8.0												
	.5												
	9.0												
	.5												
	10.0												
	.5												
	11.0												
	.5												
	12.0												
	.5												
	13.0												
	.5					1							
	14.0					4							
	.5	2			16			1			5		
	15.0	5			21						35		
	.5	15			26			3			63		
	16.0	18			20	2		5			81		
	.5	9	1		12	3		5			36		
	17.0	7	5		6	10			1		20		
	.5		3		1	9			3		6		4
	18.0		5			1		2	2				5
	.5		3	1		3			1				1
	19.0		2	1		6	1						3
	.5		1	8		6	9		1				
	20.0		5	11		8	16						2
	.5		4	14		8	22		3	1			3
	21.0		2	15		2	14		4	3			9
	.5			9			22			1			6
	22.0			15			21			5			11
	.5			24			26			6			11
	23.0			17			22			5			7
	.5			16			7			8			6
	24.0			4			6			1			5
	.5			8			2			2			
	25.0			1									
	.5						1						
	26.0												
185	Total	56	31	144	107	58	169	16	15	33	246		73
	No. samples		2			3			1				2
5.2	Shrimp/lb.		81.6			86.1			84.7				142

Table 1 (Continued)

Length (mm)	Jan. 1963 Area 3			Feb. 1963 Area 3			Feb. 1963 Area 4			Mar. 1963 Area 3		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0											1	
.5												
11.0	1										3	
.5											5	
12.0											3	
.5											6	
13.0								1			6	
.5								1			2	
14.0											1	
.5											6	
15.0	11							1			13	
.5	30							1			71	
16.0	43			1				4			94	2
.5	37							9		1	115	5
17.0	16			1				7			52	7
.5								4			19	1
18.0											5	1
.5											7	
19.0											10	
.5											5	
20.0								1			15	
.5								1			20	
21.0								3			18	
.5								5			5	
22.0								3			11	
.5								4			5	
23.0								6			4	
.5								6			2	
24.0								4				
.5								1				
25.0											1	
.5												
26.0												
Total	138		237	2		34	28		118	402	16	
No. samples		3			1			2			4	
Shrimp/lb.		105.4			75		80.1				124.2	

Table 1 (Continued)

Length (mm)	Apr. 1963 Area 2			Apr. 1963 Area 3			Apr. 1963 Area 7			May 1963 Area 2			
	M	T	F	M	T	F	M	T	F	M	T	F	
6.0													
.5													
7.0													
.5													
8.0													
.5													
9.0													
.5													
10.0													
.5													
11.0											1		
.5											1		
12.0				2							6		
.5				3				3			11		
13.0				12				10			22		
.5	2			11				2			24		
14.0	1			15				3			29	1	
.5				12				8			22	2	
15.0				2	1			7			13		
.5	9			4	1			2			22	1	
16.0	14		1	7	6			3	2		59	7	1
.5	15	8	5	39	11			6	1		114	9	3
17.0	37	19	4	87	42	9		25	4	1	213	48	26
.5	30	10	6	97	99	43		21	5		185	80	41
18.0	15	11	2	91	176	90		32	22	11	117	160	102
.5	3	4	2	33	77	118		9	12	22	30	85	73
19.0	1		2	5	39	94		8	6	37	14	64	54
.5			3		11	50		1	2	24		20	34
20.0			2	1	2	111		1		13	1	4	45
.5			7			159				15		1	41
21.0			6		1	174				19			57
.5			8			108				14			53
22.0			5			65				9			41
.5			4			59				6			39
23.0			7			56				6			25
.5			1			21							3
24.0			5			9							2
.5						4							1
25.0						2							1
.5						1							
26.0													
Total	127	52	70	421	466	1,173	141	54	177	884	482	642	
No. samples		2			25			3			13		
Shrimp/lb.		122.6			101.3			118.0			125.6		

Table 1 (Continued)

Length (mm)	May 1963 Area 3			May 1963 Area 4			May 1963 Area 6			June 1963 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0				1					1			
.5									1			
12.0									1		1	
.5									3		2	
13.0	2			3					10		6	
.5	5			9					11		21	
14.0	1			7					19		25	
.5	3			13					10		30	
15.0	1			2					16		22	
.5	3			3					7	1	24	2
16.0				4					5		42	6
.5	2			13	1				1		70	9
17.0	7	2		21	3				13	4	160	26
.5	16	12	7	59	27	3			7	9	102	48
18.0	16	41	12	57	52	13			21	23	61	93
.5	30	75	41	41	88	30			11	16	14	87
19.0	23	63	83	14	49	38			11	18	5	56
.5	16	47	66	4	32	70			3	2	19	19
20.0	6	10	42		5	28				2	19	2
.5		1	59		1	52				2	12	
21.0			98			75					36	
.5			166			94					23	
22.0		1	129			42					32	
.5			106			35					15	
23.0			64			21					16	
.5			60			30					6	
24.0			31			3					2	
.5			24			6						
25.0			5									
.5			1									
26.0												
Total	131	252	994	251	258	540	151	75	232	585	348	450
No. samples		16			10			4			13	
Shrimp/lb.		88.3			104.8			106.8			118.9	

Table 1 (Continued)

Length (mm)	May 1963 Area 3			May 1963 Area 4			May 1963 Area 6			June 1963 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
6.5												
7.0												
7.5												
8.0												
8.5												
9.0												
9.5												
10.0												
10.5												
11.0				1			1					
11.5				1			1					
12.0							1			1		
12.5	2			3			3			2		
13.0	5			9			10			6		
13.5	1			7			11			21		
14.0	3			13			19			25		
14.5	1			2			10			30		
15.0	3			3			16			22		1
15.5				4			7	1		24	2	
16.0	2			13	1		5			42	6	2
16.5	7	2		21	3		1			70	9	3
17.0	16	12	7	59	27	3	13	4		160	26	8
17.5	16	41	12	57	52	13	7	9	2	102	48	14
18.0	30	75	41	41	88	30	21	23	8	61	93	48
18.5	23	63	83	14	49	38	11	16	14	14	87	76
19.0	16	47	66	4	32	70	11	18	28	5	56	69
19.5	6	10	42		5	28	3	2	19		19	29
20.0		1	59		1	52		2	19		2	21
20.5			98			75			12			24
21.0			166			94			36			35
21.5		1	129			42			23			25
22.0			106			35			32			29
22.5			64			21			15			28
23.0			60			30			16			26
23.5			31			3			6			8
24.0			24			6			2			4
24.5			5									
25.0			1									
25.5												
26.0												
Total	131	252	994	251	258	540	151	75	232	585	348	450
No. samples		16			10			4			13	
Shrimp/lb.		88.3			104.8			106.8			118.9	

Table 1 (Continued)

Length (mm)	June 1963 Area 3			June 1963 Area 4			June 1963 Area 6			June 1963 Area 7	
	M	T	F	M	T	F	M	T	F	M	T
	6.0										
6.5											
7.0											
7.5											
8.0											
8.5											
9.0											
9.5											
10.0											
10.5											
11.0											
11.5											
12.0	1			1							
12.5	3			5							
13.0	5			26							5
13.5	13			28							13
14.0	9			43							18
14.5	6			33							12
15.0	10			28	2			1			11
15.5				13				1			6
16.0				11	1						3
16.5	4			25	5			1			2
17.0	16	4		78	22	2		1			2
17.5	14	15	2	68	75	9		1	3		2
18.0	20	34	10	47	123	37			8		2
18.5	9	32	18	18	96	66	2	12		3	4
19.0	2	23	21	3	45	88		6		5	
19.5		13	13		13	50		8		18	
20.0		1	7		1	53		4		7	
20.5			13			73		1		10	
21.0			18			67				9	
21.5			19			63				15	
22.0			10			38				12	
22.5			8			19				17	
23.0			4			21				7	
23.5			2			12				4	
24.0			1			5				1	
24.5											
25.0											
25.5											
26.0											
Total	112	122	146	427	383	603	7	42	108	83	125
No. samples		4			14			2			5
Shrimp/lb.		111.1			113.0			76.6			108.9

Table 1 (Continued)

1963 7	Length (mm)	July 1963 Area 1			July 1963 Area 2			July 1963 Area 3			July 1963 Area 4			
		M	T	F	M	T	F	M	T	F	M	T	F	
	6.0													
	6.5													
	7.0													
	7.5													
	8.0													
	8.5													
	9.0													
	9.5													
	10.0													
	10.5													
	11.0													
	11.5													
	12.0													
	12.5					4						2		
	13.0					1						10		
	13.5		2			7			5			19		
	14.0					21			8			39		
	14.5					33			13			58		
	15.0					24			28			77		
	15.5		1			32			15			37		
	16.0		8			31	1		8			17	1	
	16.5		16	1		65	2		10	1		22	3	
	17.0		7	2	1	111	12		4	1	1	48	28	1
	17.5		6	3	9	118	28	5	9	10		62	69	6
	18.0		2	6	6	94	68	29	7	22	3	50	152	36
	18.5		2	1	6	34	75	62	12	56	14	18	111	56
	19.0				3	8	60	86	4	75	34	3	84	87
	19.5				1	2	17	67	2	55	52	1	28	60
	20.0				1		8	65		27	47		15	52
	20.5				1		1	28	28	5	22			55
	21.0				2			38			17		1	85
	21.5				2			32			33			61
	22.0				1			26			40			56
	22.5				1			24			22			26
	23.0							18			16			37
	23.5				1			5			5			16
	24.0							3			5			9
	24.5										6			2
	25.0													
	25.5													
	26.0													
236	Total	44	13	35	585	272	488	125	252	317	463	492	645	
	No. samples		1			14			9			18		
8.9	Shrimp/lb.		131.4			115.2			96.4			110.2		

Table 1 (Continued)

Length (mm)	July 1963 Area 6			July 1963 Area 7			Aug. 1963 Area 2			Aug. 1963 Area 3		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0							1				1	
.5												
14.0	2						3				9	
.5	1			1			15				26	
15.0	1			2			29				54	
.5	5			3			46				49	
16.0	4			1			39	1			50	
.5	2			1			39	1			28	1
17.0	2						58	3	1		9	2
.5		4			3		99	3	1		15	2
18.0		8	1		9		112	8	9		30	11
.5	1	23	8		9	1	75	19	22		28	44
19.0		15	12		3	4	27	53	61		16	74
.5	1	7	11		6	4	3	34	83		4	70
20.0		7	11			4		17	81		1	46
.5		1	12			1		2	30			10
21.0			9			3			27			3
.5			23			8			17			
22.0			16			3			19		1	
.5			12			3			21			
23.0			13						22			
.5			6			2			13			
24.0			4						11			
.5			1						3			
25.0												
.5												
26.0												
Total	19	65	139	8	30	33	546	141	421	320	264	804
No. samples		3			1			8			18	
Shrimp/lb.		76.6			Not available			108.8			90.7	

Table 1 (Continued)

1963 3 F	Length (mm)	Aug. 1963 Area 6			Aug. 1963 Area 7			Sept. 1963 Area 2			Sept. 1963 Area 3			
		M	T	F	M	T	F	M	T	F	M	T	F	
	6.0													
	.5													
	7.0													
	.5													
	8.0													
	.5													
	9.0													
	.5													
	10.0													
	.5													
	11.0													
	.5													
	12.0													
	.5													
	13.0													
	.5													
	14.0							1				4		
	.5	1			6			2				20		
	15.0	3			15			13				62		
	.5	7			36			34				140		
	16.0	10	1		28	1		28				144		
	.5	4	2		14	4		18				73		
	17.0	3	4		10	6		22	2			18	2	
	.5	1	5		5	14		39				15	1	4
	18.0		4			9	2	53				20	3	3
	.5		1		1	20	2	27	2	6		17	9	30
	19.0		1	4		18	2	8	11	31		14	22	55
	.5		3	8		25	8	1	8	51		3	18	131
	20.0		4	3	1	12	23	1	4	65		10	198	
	.5		7	5		11	26		3	49		6	131	
	21.0		4	4		2	29			16			76	
	.5			6		1	23			7			28	
	22.0			3			19			12			31	
	.5			1			20			14			28	
	23.0						13			14			16	
	.5			1			6			5			4	
	24.0						4						10	
	.5			1			1			1			4	
	25.0												1	
	.5													
	26.0													
804	Total	29	36	36	116	123	178	247	30	271	530	71	750	
	No. samples		1			5			5			12		
	Shrimp/lb.		91.8			91.5			108.3			103.4		

Table 1 (Continued)

Length (mm)	Sept. 1963 Area 6			Sept. 1963 Area 7			Oct. 1963 Area 2			Oct. 1963 Area 3		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0	1											
.5												
12.0												
.5												
13.0												
.5												
14.0											2	
.5											7	
15.0	1			3			9				12	
.5	3			4			5				13	
16.0	14	1		7			5				27	
.5	15	4		1			3				13	1
17.0	11	10					9				7	
.5	12	10			5		19				9	
18.0	3	9	1		2		24		2		6	
.5	1	6	2		1		10	1	2		7	1
19.0	1	6	1		3		6		9		1	1
.5	1	10	7			3		1	22			
20.0		12	16		1	4		1	28			
.5	1	2	20		1	7			9			
21.0		1	21		1	1			5			
.5			27			3			7			
22.0			17			9			1			
.5			15			4			1			
23.0			16			3						
.5			5			8						
24.0			3			5			1			
.5			5									
25.0			1									
.5												
26.0												
Total	64	71	157	15	14	47	91	3	87	104	3	191
No. samples		3			1			1			3	
Shrimp/lb.		84.4			Not available			117.5			101.0	

Table 1 (Continued)

1963 3 F	Length (mm)	Feb. 1964 Area 3			Feb. 1964 Area 4			Mar. 1964 Area 3			Mar. 1964 Area 4		
		M	T	F	M	T	F	M	T	F	M	T	F
	6.0												
	.5												
	7.0												
	.5												
	8.0												
	.5												
	9.0												
	.5												
	10.0												
	.5												
	11.0												
	.5												
	12.0	1						1					
	.5							2				5	
	13.0							2				10	
	.5				1			3				7	
	14.0							1				12	
	.5							3				4	
	15.0											1	
	.5	10			2			3				5	
	16.0	27			4			18				14	
	.5	53		1	8			32				25	
	17.0	68		1	13			43	2	1		41	
	.5	37		4	2		1	25		4		20	2
1	18.0	14		10			1	15		2		9	4
3	.5	7		18	1		5	4	2	7		4	3
5	19.0	5		49	1		9	4	3	27		3	3
9	.5	2		100			19	2		28		2	12
29	20.0			149			23		1	47			20
55	.5			83			5			18			29
36	21.0			27			3			10			22
23	.5			13			1			3			9
5	22.0			5						8			6
3	.5			6			2						3
0	23.0			4						2			
5	.5			2									
4	24.0			2			1						
4	.5			2			2						
1	25.0												
	.5												
	26.0												
191	Total	224		476	32		72	158	8	157	160	14	102
	No. samples		8			1			3			2	
	Shrimp/lb.		95.8			94.5			112.5			111.7	

Table 1 (Continued)

Length (mm)	Apr. 1964 Area 2			Apr. 1964 Area 3			Apr. 1964 Area 4			May 1964 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0											1	
.5	1										1	
13.0	1			1							4	
.5											3	
14.0	2							1			12	
.5				5							6	
15.0				1							5	
.5											4	
16.0				2							2	
.5	3			4							4	
17.0	3			12			3				14	
.5	8			23	2		4	1			25	
18.0	19	3	1	19	4	2	6	1	2		24	4
.5	23	3	1	9	7	6	5	2	5		23	11
19.0	16	8	2	3	3	16	2	1	2		21	11
.5	11	11	7	1	3	41		3	11		6	19
20.0	5	29	41	1	2	33		1	13		1	26
.5	6	23	37	1	2	24		1	11			26
21.0	2	12	40		2	10			9			9
.5	1	2	13			5			5			3
22.0			9			6			6			1
.5			8			1			3			
23.0			1						1			
.5			2									
24.0			3									
.5			1									
25.0												
.5												
26.0												
Total	101	91	166	81	25	144	21	10	68	156	110	313
No. samples		3			5			2			5	
Shrimp/lb.		86.1			97.3			82.6			93.2	

Table 1 (Continued)

Length (mm)	May 1964 Area 3			May 1964 Area 4			June 1964 Area 2			June 1964 Area 3		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5								1				
13.0								1				
.5				2				6				
14.0								5				
.5				13				12			1	
15.0				25				9			3	
.5				21				5			2	
16.0				10				2				
.5	2			2				3			1	
17.0				5		1		2			3	
.5				28				13			5	
18.0	8	1		60	2		21	1		16		
.5	4	1	1	85	4	4	27	4		40		2
19.0	4			49	16	8	20	8	2	23	2	
.5	2	2	1	26	19	33	8	16	6	19	9	5
20.0		2	5	6	9	72	13	28	18	2	2	14
.5	1	2	15	4	10	130	6	38	29	4	5	29
21.0		1	13		7	144		31	48		3	43
.5		3	12		4	111		13	45	1	5	60
22.0			9			45		6	23			37
.5			6			25			7			8
23.0			2			12			9			5
.5			1			11			6			2
24.0						1			3			
.5			2									
25.0												
.5												
26.0												
Total	21	12	67	336	71	597	154	145	196	120	26	205
No. samples		2			20			3			7	
Shrimp/lb.		86.2			97.4			94.5			91.6	

Table 1 (Continued)

Length (mm)	June 1964 Area 4			June 1964 Area 5			June 1964 Area 7			July 1964 Area 1		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
6.5												
7.0												
7.5												
8.0												
8.5												
9.0												
9.5												
10.0												
10.5												
11.0												
11.5												
12.0												
12.5												
13.0											1	
13.5											1	
14.0											2	
14.5											3	
15.0	4			2							4	1
15.5	7										1	
16.0	4			1							2	
16.5	3			1							1	
17.0	3			1							2	
17.5	3										9	
18.0	7			5							6	
18.5	18	2	1	13	4						5	1
19.0	25	3		11	8						2	1
19.5	16	2	3	6	4	1					1	8
20.0	11	12	9	2	5	15					3	1
20.5	2	5	16		5	21					6	3
21.0		6	44		4	31					8	4
21.5		4	53		4	21					6	5
22.0		2	33		1	14					5	8
22.5			21			7					4	6
23.0			21			5					4	8
23.5			8			5					1	4
24.0			2			2					1	1
24.5											1	1
25.0											1	1
25.5											1	1
26.0											1	1
Total	103	36	211	42	35	122	36	28	41	45	80	
No. samples		7			5			1			1	
Shrimp/lb.		90.7			86.5			105.0			94.5	

Table 1 (Continued)

1964 1 F	Length (mm)	July 1964 Area 2			July 1964 Area 3			July 1964 Area 4			July 1964 Area 5		
		M	T	F	M	T	F	M	T	F	M	T	F
	6.0												
	.5												
	7.0												
	.5												
	8.0												
	.5												
	9.0												
	.5												
	10.0												
	.5												
	11.0												
	.5												
	12.0												
	.5												
	13.0	1											
	.5												
	14.0	2											
	.5	5									1		
	15.0	4									3		
	.5	7									12		
	16.0	9			1			6			26		
	.5	5			3			5			24	1	
	17.0	1			4			4			24	1	
	.5	2			4			2			18	3	
	18.0	9			9			1			15	5	
	.5	7			14			4	1		9	10	1
	19.0	13	2		18	2		3	1	2	7	19	2
2	.5	15	6	1	10	3	3	4	1	1	2	33	6
4	20.0	9	16	3	5	4	7	1	1	2		31	35
11	.5	2	14	12	2	6	17		3	8		31	48
9	21.0	3	34	51		1	27			8		27	106
4	.5		15	53			43			18		18	101
1	22.0	1	6	37		2	24			10		4	80
1	.5		4	10		1	4			7		1	42
1	23.0		2	6			1			6			29
	.5			2			1			2		2	11
	24.0			4			1						6
	.5			1			1						4
2	25.0			1									1
	.5												
	26.0												
33	Total	95	99	181	70	19	129	30	7	64	141	186	472
	No. samples		2			4			2			15	
4.5	Shrimp/lb.		89.1			84.8			87.0			84.1	

Table 1 (Continued)

Length (mm)	July 1964			Aug. 1964			Aug. 1964			Aug. 1964		
	Area 7			Area 1			Area 3			Area 4		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0								1				
.5								2				
9.0												
.5								2				
10.0								1				
.5												
11.0												
.5												
12.0												
.5												
13.0												
.5												
14.0					2							
.5	1			1								
15.0	5			1								
.5	12			1				3				
16.0	16							8				
.5	16			1				10			3	
17.0	12	1						8			2	
.5	4	4				1		2			1	
18.0	1	4	1	1				8			1	
.5		6	1	1	1			19	2	1	2	
19.0	1	9	2	1	1			34	2	4	7	
.5		13	4		2			35	4	8	4	1
20.0		14	9	2	4	4		14	7	10	4	1
.5		5	7		8	11		6	14	26		1
21.0		3	13		8	21		3	6	41		1
.5		2	5		3	9			6	71		
22.0			8		2	8			2	54		1
.5		1	8			5			1	20		
23.0		2	5			3				10		
.5			3							6		
24.0			2			2				4		
.5										1		
25.0			1							1		
.5												
26.0												
Total	68	64	69	11	30	63	156	44	257	24	5	
No. samples		5			1			5			1	
Shrimp/lb.		99.2			86.7			91.4			82.4	

Table 1 (Continued)

Length (mm)	Aug. 1964 Area 7			Sept. 1964 Area 3			Sept. 1964 Area 4			Sept. 1964 Area 7		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
6.5												
7.0												
7.5												
8.0				1								
8.5				3						1		
9.0				7			1			2		
9.5				5						1		
10.0				2						1		
10.5				1						1		
11.0												
11.5												
12.0												
12.5												
13.0												
13.5												
14.0												
14.5												
15.0	3											
15.5	6											
16.0	22			2			3			1		
16.5	41	1		9			14			6		
17.0	62	5		16			10			10		
17.5	38	14		6			11			7		
18.0	7	21	4	5			9			10		
18.5	4	18	6	22			9			1		1
19.0	3	10	9	43		2	13	2		1	1	
19.5		6	9	47		1	12			3		3
20.0		16	29	28		1	8	4	4	2		3
20.5		7	46	8	3	14	1	4	10	2		3
21.0		3	51			26		2	19	1		6
21.5			35		1	45			36	1		12
22.0			27	1	2	56			38			6
22.5			25			32			26			5
23.0			12			16			5			3
23.5			6			6			1			
24.0			3			5			2			3
24.5			3			2						1
25.0						1						2
25.5						1						
26.0												
Total	186	101	265	206	6	208	91	12	141	42	10	48
No. samples		11			2			3			1	
Shrimp/lb.		93.4			86.6			91.1			86.2	

Table 1 (Continued)

Length (mm)	June 1965 Area 2			June 1965 Area 3			June 1965 Area 5			June 1965 Area 6			
	M	T	F	M	T	F	M	T	F	M	T	F	
	6.0												
.5													
7.0													
.5													
8.0													
.5													
9.0													
.5													
10.0													
.5													
11.0													
.5													
12.0				4					3				
.5	3			10				4					
13.0	4	1		25				20	1			2	
.5	2	1		23	1			33	2			5	
14.0	2	2		32	7			39	6			5	
.5	2	1		19	16			43	16		1	7	
15.0	6	1		11	20			20	35		3	3	
.5		1		2	6			13	40		4	2	
16.0								4	16		6		
.5	1					1		1	7		3		
17.0	1	2							4				
.5		5		1				1				1	
18.0		3		2					4		1		
.5		3		1					10		1		
19.0		8	2		1		2		10		2		
.5		2					4		13		4		
20.0	1	4		3	2		5		9		7		
.5				5			10					1	
21.0		1		7			6		5		10		
.5				3			1		15		14		
22.0				4					14		21		
.5				2					8		9		
23.0				1					5		11		
.5									1		5		
24.0											4		
.5											2		
25.0													
.5													
26.0													
Total	20	35		27	132	80		71	181	180	108	27	42
No. samples		1				2				3			1
Shrimp/lb.		128.0				159.9				144.4			133.3

Table 1 (Continued)

Length (mm)	June 1965 Area 7			July 1965 Area 3			July 1965 Area 4			July 1965 Area 5		
	M	T	F	M	T	F	M	T	F	M	T	F
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0	1											
.5	4											
12.0	4			4			6					
.5	13			28			11					
13.0	20	1		49	1		28			2		
.5	32	1	1	81	5		48	2		3		
14.0	38	9	5	125	20		41	8		20	1	
.5	33	16	3	79	61	2	35	20		27	2	
15.0	18	22	8	53	90	3	26	24	6	25	6	1
.5	2	27	15	12	72	11	10	26	4	32	22	1
16.0	1	10	21	2	37	6	2	19	2	15	28	3
.5	1	5	11	1	13	1		8	3	12	29	4
17.0		2	4		1			3		9	45	15
.5			2		3			1		2	20	4
18.0		3	3		4			3		1	15	11
.5		4	3		8	1		7	1		8	5
19.0		2			14			9		1	11	2
.5		1	5		24	2		8	3		15	3
20.0			7		21	2		9	1		16	6
.5			6		26	11		9			19	13
21.0			6		40	29		6	7		8	19
.5			7		23	44		1	15		4	18
22.0			4		8	57		1	11		3	34
.5			5			54			15			23
23.0			1		1	33			8			23
.5			2			11			3			16
24.0						5						12
.5						2			1			3
25.0												2
.5												1
26.0												
Total	167	103	119	434	472	274	207	164	80	149	252	219
No. samples		3			7			3			7	
Shrimp/lb.		169.1			143.6			165.2			115.3	

Table 1 (Continued)

Length (mm)	Aug. 1965 Area 3			Aug. 1965 Area 5			Aug. 1965 Area 6			Sept. 1965 Area 2		
	M	T	F	M	T	F	M	T	F	M	T	F
	6.0											
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5	8							1				
13.0	29							3				
.5	116			1				20				
14.0	252	9		2				48				
.5	276	37		9				135	1			
15.0	249	155	3	9	2			231	6			
.5	86	195	20	7	1			305	38			
16.0	12	162	55	6	10			130	106	7		
.5	7	97	76	1	13		3	56	226	86		
17.0	1	47	50		14		2	5	266	106		
.5		24	33		5		3	4	173	186		
18.0			6		2				46	93		
.5			4		1				28	37		
19.0		9							21	6		
.5		8	3					1	47	15		
20.0		13	10						47	21		
.5		16	9						47	37		
21.0		31	12		2				25	38		
.5		39	22						13	27		
22.0		24	34							25		
.5		15	43							23		
23.0		1	38							23		
.5		2	32							12		
24.0		1	15							8		
.5			2							1		
25.0			2									
.5			2									
26.0												
Total	1,036	885	471	35	51		21	938	1,044	771	241	24
No. samples		12			1				32			3
Shrimp/lb.		166.9			142.7				127.6			137.1

Table 1 (Continued)

1965 2 F	Length (mm)	Sept. 1965 Area 3			Sept. 1965 Area 4			Sept. 1965 Area 5			Sept. 1965 Area 6		
		M	T	F	M	T	F	M	T	F	M	T	F
	6.0												
	.5												
	7.0											1	
	.5												
	8.0	1											
	.5												
	9.0												
	.5												
	10.0												
	.5												
	11.0												
	.5												
	12.0												
	.5	1											
	13.0	1											
	.5	5											
	14.0	32			2			1			1		
1	.5	43	2		5			5			4		
2	15.0	42	5	1	10			11			9		
6	.5	17	12	14	7	1		11	1	1	43		
34	16.0	6	19	21	8	2	4	4		2	111		2
85	.5	1	19	18	2	6	7	1	9	7	77	2	2
161	17.0		7	12	1	7	19		9	14	35	8	2
119	.5		2	11		4	8		4	12	8	30	25
58	18.0			2		1	4		1	11	1	45	72
15	.5			1			1					24	70
17	19.0		1	3			1					12	53
7	.5		1	1		1	2					1	16
19	20.0			2			2			3		4	9
19	.5		1	5			2		2			4	7
16	21.0			7			2					4	9
27	.5		2	11			2			1		3	8
47	22.0		3	12			3			1			12
31	.5			8			2			3			10
18	23.0			4			3			2			4
10	.5			2			1			2			4
4	24.0									1			2
	.5			1			1			1			1
	25.0												1
	.5												
	26.0												
696	Total	149	74	136	35	22	64	33	26	61	290	137	309
	No. samples		4			1			1			8	
	Shrimp/lb.		149.6			134.4			137.9			120.6	

Table 1 (Continued)

Length (mm)	Oct. 1965 Area 3			Oct. 1965 Area 6		
	M	T	F	M	T	F
	6.0					
6.5						
7.0						
7.5						
8.0						
8.5				1		
9.0	1					
9.5				1		
10.0						
10.5						
11.0						
11.5						
12.0						
12.5						
13.0	1					
13.5	2					
14.0	9					
14.5	37					
15.0	110		1	5		
15.5	88	2	4	7		
16.0	45	5	21	16		
16.5	4	7	40	26		
17.0	4	3	75	25		2
17.5		2	47	10		5
18.0			29	1	1	15
18.5		3	5			64
19.0			2			94
19.5			3			70
20.0			5			27
20.5			9			8
21.0			14			12
21.5			12			10
22.0			7			9
22.5			15			5
23.0			6			3
23.5			2			2
24.0						4
24.5						1
25.0						
25.5						
26.0						
Total	301	22	297	92	1	331
No. samples		3			3	
Shrimp/lb.		147.6		100.7		

Table 2. Summary by season of pink shrimp carapace length-frequency distributions for Area 1.

Length (mm)	January-March 1958						April-June 1958					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0	4	0.4										
.5	8	0.7										
10.0	20	1.9										
.5	22	2.1										
11.0	33	3.1										
.5	45	4.2										
12.0	12	1.1										
.5	10	0.9										
13.0	5	0.5					2	0.9				
.5												
14.0							5	2.3				
.5	2	0.2	1	0.1			9	4.2				
15.0	2	0.2					3	1.4	1	0.5		
.5	16	1.5	1	0.1			1	0.5				
16.0	41	3.8	7	0.7								
.5	55	5.1	11	1.0					1	0.5		
17.0	79	7.4	16	1.5					10	4.7	2	0.9
.5	41	3.8	10	0.9	1	0.1	1	0.5	6	2.8	8	3.7
18.0	16	1.5	4	0.4	2	0.2			22	10.3	19	8.9
.5	11	1.0	2	0.2	8	0.7			3	1.4	22	10.3
19.0	17	1.6			24	2.2			4	1.9	13	6.1
.5	1	0.1			35	3.3			1	0.5	15	7.0
20.0			2	0.2	70	6.5					16	7.5
.5					122	11.4					13	6.1
21.0					76	7.1					17	7.9
.5					97	9.1					11	5.1
22.0					99	9.2					9	4.2
.5					18	1.7						
23.0					16	1.5						
.5					6	0.6						
24.0					1	0.1						
.5					2	0.2						
25.0												
.5												
26.0												
.5												
TOTAL	440		54		577		21		48		145	

Table 2 (Continued)

Length (mm)	July-September 1960				F	%
	M	%	T	%		
6.0						
.5						
7.0						
.5						
8.0						
.5						
9.0						
.5						
10.0						
.5						
11.0						
.5						
12.0						
.5						
13.0	2	1.4				
.5	2	1.4				
14.0	9	6.4				
.5	4	2.8				
15.0	18	12.8				
.5	7	5.0				
16.0	4	2.8				
.5						
17.0			2	1.4	1	0.7
.5	2	1.4			8	5.7
18.0	1	0.7	1	0.7	11	7.8
.5			3	2.1	20	14.2
19.0					11	7.8
.5					12	8.5
20.0					2	1.4
.5					8	5.7
21.0					4	2.8
.5					3	2.1
22.0					2	1.4
.5					2	1.4
23.0					1	0.7
.5						
24.0						
.5					1	0.7
25.0						
.5						
26.0						
.5						
TOTAL	49		6		86	

Table 2 (Continued)

Length (mm)	April-June 1962						July-September 1962					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0							1	0.2				
.5	2	0.9					1	0.2				
12.0	4	1.8					7	1.6				
.5	4	1.8					7	1.6				
13.0	10	4.6					26	5.8				
.5	6	2.7					31	6.9				
14.0	7	3.2					40	8.9				
.5	6	2.7					27	6.0				
15.0	2	0.9					29	6.4				
.5	1	0.5					10	2.2				
16.0	7	3.2					6	1.3				
.5	5	2.3					3	0.7				
17.0	2	0.9	6	2.7					6	1.3		
.5	1	0.5	7	3.2			1	0.2	5	1.1		
18.0			13	5.9			2	0.4	14	3.1		
.5			13	5.9	1	0.5	1	0.2	17	3.8	1	0.2
19.0			13	5.9	6	2.7			15	3.3	3	0.7
.5			11	5.0	7	3.2			17	3.8	9	2.0
20.0			15	6.8	11	5.0			33	7.3	17	3.8
.5			4	1.8	14	6.4			11	2.4	20	4.4
21.0			1	0.5	15	6.8			8	1.8	18	4.0
.5					11	5.0			1	0.2	28	6.2
22.0					7	3.2			2	0.4	21	4.7
.5					3	1.4					9	2.0
23.0					1	0.5					4	0.9
.5					2	0.9						
24.0					1	0.5						
.5												
25.0												
.5												
26.0												
.5												
TOTAL	57		83		79		192		129		130	

Table 2 (Continued)

Length (mm)	July-September 1963					July-September 1964						
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0							1	0.4				
.5							1	0.4				
13.0							4	1.5				
.5	2	2.2					4	1.5	1	0.4		
14.0							5	1.9				
.5							3	1.1				
15.0							1	0.4				
.5	1	1.1					3	1.1				
16.0	8	8.7					9	3.4				
.5	16	17.4	1	1.1		1	1.1					
17.0	7	7.6	2	2.2		9	9.8		1	0.4		
.5	6	6.5	3	3.3		6	6.5		1	0.4		
18.0	2	2.2	6	6.5		6	6.5		2	0.8		
.5	2	2.2	6	6.5		3	1.1		9	3.4		
19.0			1	1.1		6	6.5		2	0.8		
.5			3	3.3		3	3.3		10	3.8	2	0.8
20.0			1	1.1		1	1.1		1	0.4	8	3.0
.5			1	1.1		1	1.1		17	6.4	22	8.3
21.0			1	1.1		1	1.1		3	1.1	26	9.8
.5			2	2.2		2	2.2		2	0.8	28	10.6
22.0			2	2.2		2	2.2		2	0.8	8	3.0
.5			2	2.2		2	2.2		8	3.0	13	4.9
23.0			1	1.1		1	1.1		4	1.5	9	3.4
.5			1	1.1		1	1.1		1	0.4	6	2.3
24.0			1	1.1		1	1.1		1	0.4	4	1.5
.5									1	0.4		
25.0												
.5												
26.0												
.5												
TOTAL	44		13		35		56		110		98	

Table 3. Summary by season of pink shrimp carapace length-frequency distributions for Area 2.

Length (mm)	Oct.-Dec. 1951				July-Sept. 1955	
	M	%	F	%	Sex unknown	%
6.0						
.5						
7.0						
.5						
8.0						
.5						
9.0						
.5						
10.0						
.5						
11.0						
.5					3	0.6
12.0					3	0.6
.5					16	3.3
13.0	2	0.1			19	3.9
.5	26	1.0			21	4.4
14.0	132	5.1			39	8.1
.5	369	14.1			23	4.8
15.0	466	17.8	1	0.0	11	2.3
.5	332	12.7	5	0.2	11	2.3
16.0	95	3.6	7	0.3	5	1.0
.5	29	1.1	17	0.7	5	1.0
17.0	41	1.6	28	1.1	12	2.5
.5	27	1.0	29	1.1	22	4.6
18.0	15	0.6	135	5.2	46	9.5
.5	2	0.1	241	9.2	58	12.0
19.0			222	8.5	79	16.4
.5			180	6.9	44	9.1
20.0			43	1.6	25	5.2
.5			57	2.2	27	5.6
21.0			51	2.0	9	1.9
.5			32	1.2	3	0.6
22.0			16	0.6	1	0.2
.5			9	0.3		
23.0			2	0.1		
.5			2	0.1		
24.0						
.5						
25.0						
.5						
26.0						
.5						
Total	1,536		1,077		482	

Table 3 (Continued)

Length (mm)	July-Sept. 1957				Oct.-Dec. 1957			
	M	%	F	%	M	%	F	%
6.0								
.5								
7.0								
.5								
8.0								
.5								
9.0								
.5								
10.0								
.5								
11.0								
.5								
12.0								
.5								
13.0					2	0.0		
.5	3	0.2			32	0.5		
14.0	5	0.3			98	1.6		
.5	17	1.0			201	3.3		
15.0	40	2.4			319	5.3		
.5	75	4.4			307	5.1		
16.0	35	2.1			213	3.5	2	0.0
.5	34	2.0			177	2.9	1	0.0
17.0	54	3.2			188	3.1	1	0.0
.5	63	3.7	1	0.1	253	4.2	14	0.2
18.0	99	5.9	4	0.2	206	3.4	93	1.5
.5	67	4.0	21	1.2	107	1.8	316	5.3
19.0	28	1.7	94	5.6	27	0.4	578	9.6
.5	4	0.2	159	9.4	12	0.2	702	11.7
20.0	1	0.1	249	14.8	1	0.0	848	14.1
.5			269	15.9			588	9.8
21.0			194	11.5			388	6.5
.5			100	5.9			203	3.4
22.0			51	3.0			93	1.5
.5			13	0.8			31	0.5
23.0			6	0.4			6	0.1
.5			1	0.1				
24.0								
.5								
25.0								
.5								
26.0								
.5								
Total	525		1,162		2,143		3,864	

Table 3 (Continued)

Length (mm)	Jan.-March 1958						April-June 1958					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0	1	0.0										
.5												
9.0	3	0.1										
.5												
10.0	9	0.4										
.5	25	1.1										
11.0	32	1.5					4	0.0				
.5	51	2.3					6	0.0				
12.0	57	2.6					35	0.3				
.5	44	2.0					63	0.5				
13.0	35	1.6					242	1.8	1	0.0		
.5	14	0.6					364	2.7				
14.0	9	0.4					583	4.4	1	0.0		
.5	2	0.1					637	4.8	9	0.1		
15.0	26	1.2	1	0.0			690	5.2	25	0.2	1	0.0
.5	39	1.8	4	0.2			426	3.2	33	0.2	1	0.0
16.0	84	3.8	6	0.3			247	1.9	67	0.5	7	0.1
.5	103	4.7	20	0.9	1	0.0	103	0.8	61	0.5	12	0.1
17.0	117	5.3	33	1.5	1	0.0	75	0.6	85	0.6	20	0.2
.5	61	2.8	20	0.9	2	0.1	66	0.5	183	1.4	67	0.5
18.0	42	1.9	15	0.7	8	0.4	72	0.5	235	1.8	146	1.1
.5	31	1.4	14	0.6	16	0.7	33	0.2	200	1.5	186	1.4
19.0	37	1.7	19	0.9	44	2.0	31	0.2	230	1.7	236	1.8
.5	23	1.0	24	1.1	82	3.7	15	0.1	193	1.5	297	2.2
20.0	5	0.2	15	0.7	135	6.1	14	0.1	212	1.6	572	4.3
.5			7	0.3	217	9.8	3	0.0	141	1.1	915	6.9
21.0			1	0.0	254	11.5	1	0.0	84	0.6	1,417	10.7
.5					213	9.7	2	0.0	24	0.2	1,519	11.5
22.0					112	5.1	1	0.0	9	0.1	1,203	9.1
.5					57	2.6					674	5.1
23.0					22	1.0					323	2.4
.5					12	0.5					108	0.8
24.0					1	0.0					29	0.2
.5											3	0.0
25.0												
.5												
26.0												
.5												
Total	850		179		1,177		3,713		1,793		7,736	

Table 3 (Continued)

Length (mm)	July-Sept. 1958						Oct.-Dec. 1958			
	M	%	T	%	F	%	M	%	F	%
6.0										
.5										
7.0										
.5										
8.0										
.5										
9.0										
.5										
10.0										
.5										
11.0										
.5										
12.0							1	0.1		
.5								0.1		
13.0	2	0.0								
.5	12	0.2								
14.0	66	1.3					3	0.2		
.5	160	3.2					8	0.4		
15.0	367	7.3	7	0.1			59	3.0		
.5	464	9.2	11	0.2			157	8.0		
16.0	403	8.0	26	0.5	3	0.1	268	13.6	1	0.1
.5	212	4.2	24	0.5	24	0.5	186	9.4		
17.0	72	1.4	19	0.4	43	0.9	90	4.6	13	0.7
.5	25	0.5	18	0.4	44	0.9	28	1.4	13	0.7
18.0	15	0.3	34	0.7	88	1.7	13	0.7	19	1.0
.5	10	0.2	29	0.6	140	2.8	5	0.3	23	1.2
19.0	8	0.2	22	0.4	214	4.3	12	0.6	41	2.1
.5	3	0.1	9	0.2	250	5.0	8	0.4	62	3.1
20.0			9	0.2	262	5.2	2	0.1	119	6.0
.5	1	0.0	17	0.3	212	4.2			110	5.6
21.0	1	0.0	9	0.2	285	5.7	1	0.1	126	6.4
.5			6	0.1	320	6.4			103	5.2
22.0			4	0.1	381	7.6			172	8.7
.5			2	0.0	281	5.6			139	7.0
23.0					245	4.9			109	5.5
.5					119	2.4			58	2.9
24.0					41	0.8			21	1.1
.5					9	0.2			2	0.1
25.0					2	0.0			1	0.1
.5										
26.0										
.5										
Total	1,821		246		2,963		841		1,132	

Table 3 (Continued)

Length (mm)	Jan.-March 1959						April-June 1959					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0	2	0.1										
.5	1	0.0					1	0.0				
10.0	2	0.1					2	0.0				
.5	12	0.3					1	0.0				
11.0	28	0.7					4	0.1				
.5	35	0.9					7	0.2				
12.0	59	1.6					13	0.3				
.5	59	1.6					23	0.5				
13.0	63	1.7					50	1.2				
.5	51	1.4					82	1.9				
14.0	24	0.6	1	0.0			158	3.7				
.5	12	0.3					194	4.5	3	0.1		
15.0	11	0.3					224	5.2	5	0.1		
.5	36	1.0	2	0.1			175	4.0	14	0.3		
16.0	131	3.5	15	0.4			121	2.8	33	0.8	6	0.1
.5	183	4.9	43	1.1	4	0.1	62	1.4	36	0.8	8	0.2
17.0	201	5.3	74	2.0	9	0.2	37	0.9	37	0.9	18	0.4
.5	114	3.0	101	2.7	58	1.5	14	0.3	45	1.0	30	0.7
18.0	71	1.9	99	2.6	124	3.3	21	0.5	84	1.9	88	2.0
.5	29	0.8	52	1.4	166	4.4	27	0.6	103	2.4	178	4.1
19.0	10	0.3	13	0.3	91	2.4	16	0.4	135	3.1	276	6.4
.5	4	0.1	3	0.1	74	2.0	8	0.2	100	2.3	380	8.8
20.0	2	0.1	3	0.1	163	4.3	4	0.1	74	1.7	433	10.0
.5	1	0.0			195	5.2			27	0.6	261	6.0
21.0					212	5.6			8	0.2	155	3.6
.5					211	5.6			1	0.0	119	2.8
22.0					321	8.5					128	3.0
.5					283	7.5					121	2.8
23.0					212	5.6					113	2.6
.5					68	1.8					38	0.9
24.0					26	0.7					21	0.5
.5					4	0.1					6	0.1
25.0												
.5												
26.0												
.5												
Total	1,141		406		2,221		1,244		705		2,379	

Table 3 (Continued)

Length (mm)	July-Sept. 1959						Oct.-Dec. 1959			
	M	%	T	%	F	%	M	%	F	%
6.0										
.5										
7.0										
.5										
8.0										
.5										
9.0										
.5										
10.0										
.5										
11.0							1	0.1		
.5										
12.0										
.5	2	0.1								
13.0	4	0.1								
.5	4	0.1					1	0.1		
14.0	16	0.5					1	0.1		
.5	41	1.2					11	1.0		
15.0	131	3.8	3	0.1			26	2.5		
.5	212	6.2					87	8.2		
16.0	307	9.0	9	0.3	5	0.1	128	12.1		
.5	241	7.1	14	0.4	15	0.4	154	14.6	3	0.3
17.0	163	4.8	23	0.7	25	0.7	46	4.4	4	0.4
.5	60	1.8	15	0.4	45	1.3	15	1.4	20	1.9
18.0	10	0.3	7	0.2	64	1.9	6	0.6	16	1.5
.5	6	0.2	5	0.1	69	2.0			36	3.4
19.0	4	0.1	14	0.4	67	2.0			24	2.3
.5	4	0.1	32	0.9	130	3.8			40	3.8
20.0	5	0.1	30	0.9	263	7.7	1	0.1	64	6.1
.5			10	0.3	320	9.4			83	7.9
21.0			5	0.1	302	8.9			82	7.8
.5			2	0.1	235	6.9			75	7.1
22.0					154	4.5			46	4.4
.5					96	2.8			35	3.3
23.0					94	2.8			16	1.5
.5					54	1.6			18	1.7
24.0					59	1.7			11	1.0
.5					24	0.7			5	0.5
25.0					11	0.3				
.5							1	0.0		
26.0										
.5										
Total	1,210		169		2,033		477		578	

Table 3 (Continued)

Length (mm)	Jan.-March 1960						April-June 1960					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0	1	0.2										
.5	2	0.4										
11.0	2	0.4					2	0.0				
.5	2	0.4					7	0.1				
12.0	5	1.0					33	0.6				
.5	3	0.6					60	1.1				
13.0	4	0.8					106	2.0				
.5	2	0.4					122	2.3				
14.0	1	0.2					222	4.2				
.5							101	1.9				
15.0	3	0.6					101	1.9				
.5	4	0.8					36	0.7				
16.0	17	3.5					29	0.5	2	0.0		
.5	27	5.6			1	0.2	57	1.1	13	0.2		
17.0	34	7.0	2	0.4	3	0.6	219	4.1	57	1.1		
.5	21	4.3	3	0.6	6	1.2	190	3.6	136	2.6	4	0.1
18.0	15	3.1	6	1.2	18	3.7	246	4.6	365	6.9	38	0.7
.5	8	1.7	2	0.4	39	8.1	109	2.1	315	5.9	73	1.4
19.0			1	0.2	41	8.5	75	1.4	343	6.5	206	3.9
.5	1	0.2	2	0.4	28	5.8	8	0.2	98	1.9	173	3.3
20.0					20	4.1	5	0.1	100	1.9	247	4.7
.5					31	6.4			9	0.2	194	3.7
21.0					50	10.4			14	0.3	428	8.1
.5					43	8.9			2	0.0	284	5.4
22.0					19	3.9			1	0.0	271	5.1
.5					6	1.2					51	1.0
23.0					5	1.0					65	1.2
.5					3	0.6					26	0.5
24.0											34	0.6
.5					1	0.2					12	0.2
25.0					1	0.2					7	0.1
.5												
26.0												
.5												
Total	152		16		315		1,728		1,455		2,113	

Table 3 (Continued)

Length (mm)	July-Sept. 1960				Oct.-Dec. 1960					
	M	%	T	%	F	%	M	%	F	%
6.0										
.5										
7.0										
.5										
8.0										
.5										
9.0										
.5										
10.0										
.5										
11.0	2	0.1								
.5										
12.0	3	0.1								
.5	4	0.1								
13.0	44	1.4								
.5	48	1.5					2	0.3		
14.0	150	4.6					9	1.3		
.5	120	3.7					47	6.8		
15.0	255	7.9					67	9.6		
.5	207	6.4					85	12.2		
16.0	196	6.1	1	0.0			53	7.6		
.5	77	2.4	1	0.0			42	6.0		
17.0	57	1.8	9	0.3	1.	0.0	13	1.9	1	0.1
.5	36	1.1	10	0.3	5	0.2	21	3.0	1	0.1
18.0	84	2.6	65	2.0	31	1.0	35	5.0	3	0.4
.5	85	2.6	71	2.2	59	1.8	28	4.0	14	2.0
19.0	78	2.4	57	1.8	127	3.9	8	1.2	25	3.6
.5	30	0.9	26	0.8	131	4.0	7	1.0	37	5.3
20.0	8	0.2	16	0.5	217	6.7			43	6.2
.5	3	0.1	7	0.2	131	4.0			37	5.3
21.0			2	0.1	166	5.1			30	4.3
.5					111	3.4			30	4.3
22.0			1	0.0	184	5.7			21	3.0
.5					125	3.9			20	2.9
23.0					109	3.4			9	1.3
.5					34	1.1			5	0.7
24.0					30	0.9			2	0.3
.5					15	0.5				
25.0					7	0.2				
.5										
26.0										
.5										
Total	1,487		266		1,483		417		278	

Table 3 (Continued)

Length (mm)	April-June 1961						July-Sept. 1961						
	M	%	T	%	F	%	M	%	T	%	F	%	
6.0													
.5													
7.0													
.5													
8.0													
.5													
9.0													
.5													
10.0													
.5	3	0.1											
11.0	11	0.4											
.5	7	0.3											
12.0	8	0.3											
.5	10	0.4											
13.0	11	0.4					2	0.1					
.5	6	0.2											
14.0	9	0.3					4	0.3					
.5	7	0.3					12	0.9					
15.0	40	1.4					28	2.1					
.5	87	3.1	5	0.2			26	1.9					
16.0	199	7.1	11	0.4			35	2.6					
.5	187	6.7	25	0.9	4	0.1	21	1.5					
17.0	208	7.4	51	1.8	8	0.3	25	1.8					
.5	143	5.1	57	2.0	9	0.3	42	3.1					
18.0	93	3.3	51	1.8	19	0.7	91	6.7	2	0.1			
.5	46	1.6	70	2.5	33	1.2	108	8.0	4	0.3	3	0.2	
19.0	23	0.8	58	2.1	96	3.4	117	8.6	15	1.1	7	0.5	
.5	3	0.1	41	1.5	144	5.2	63	4.6	11	0.8	22	1.6	
20.0	1	0.0	29	1.0	255	9.1	27	2.0	25	1.8	49	3.6	
.5			17	0.6	164	5.9	4	0.3	17	1.3	42	3.1	
21.0			10	0.4	199	7.1	1	0.1	20	1.5	89	6.7	
.5			3	0.1	99	3.5			9	0.7	100	7.4	
22.0			2	0.1	113	4.0			2	0.1	133	9.8	
.5					73	2.6			4	0.3	68	5.0	
23.0					35	1.3			2	0.1	74	5.4	
.5					9	0.3			1	0.1	30	2.2	
24.0					4	0.1					21	1.5	
.5											2	0.1	
25.0													
.5													
26.0													
.5													
Total	1,102		430		1,264		606		112		640		

Table 3 (Continued)

Length (mm)	Oct.-Dec. 1961			
	M	%	F	%
6.0				
.5				
7.0				
.5				
8.0				
.5				
9.0				
.5				
10.0				
.5				
11.0				
.5				
12.0				
.5				
13.0				
.5				
14.0	2	0.6		
.5	4	1.1		
15.0	7	2.0		
.5	11	3.1		
16.0	10	2.9		
.5	4	1.1		
17.0	7	2.0		
.5	22	6.3		
18.0	57	16.3		
.5	56	16.0	1	0.3
19.0	40	11.4	6	1.7
.5	8	2.3	8	2.3
20.0	1	0.3	11	3.1
.5			14	4.0
21.0			30	8.6
.5			15	4.3
22.0			22	6.3
.5			7	2.0
23.0			5	1.4
.5			2	0.6
24.0				
.5				
25.0				
.5				
26.0				
.5				
Total	229		121	

Table 3 (Continued)

Length (mm)	April-June 1962						July-Sept. 1962					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5	4	0.3										
11.0	7	0.5										
.5	10	0.7										
12.0	15	1.0										
.5	25	1.6					2	0.2				
13.0	42	2.8					7	0.6				
.5	21	1.4					12	1.1				
14.0	26	1.7					27	2.5				
.5	9	0.6					32	2.9				
15.0	9	0.6					60	5.5				
.5	11	0.7					93	8.5				
16.0	22	1.4					125	11.4	1	0.1		
.5	26	1.7	1	0.1			89	8.1	6	0.5		
17.0	22	1.4	24	1.6			34	3.1	11	1.0	2	0.2
.5	16	1.0	31	2.0	1	0.1	4	0.4	14	1.3	2	0.2
18.0	16	1.0	77	5.1	1	0.1	1	0.1	16	1.5	1	0.1
.5	13	0.9	88	5.8	9	0.6	2	0.2	10	0.9	3	0.3
19.0	16	1.0	131	8.6	24	1.6			25	2.3	3	0.3
.5	6	0.4	116	7.6	42	2.8			15	1.4	3	0.3
20.0	4	0.3	104	6.8	105	6.9			20	1.8	19	1.7
.5			26	1.7	100	6.6			19	1.7	23	2.1
21.0			14	0.9	108	7.1			21	1.9	33	3.0
.5			3	0.2	78	5.1			12	1.1	46	4.2
22.0			1	0.1	65	4.3			11	1.0	58	5.3
.5					28	1.8			5	0.5	63	5.8
23.0					19	1.2			2	0.2	54	4.9
.5					6	0.4					53	4.8
24.0					2	0.1					39	3.6
.5											12	1.1
25.0											4	0.4
.5											1	0.1
26.0												
.5												
Total	320		616		588		488		188		419	

Table 3 (Continued)

Length (mm)	Jan.-March 1963				April-June 1963					
	M	%	F	%	M	%	T	%	F	%
6.0										
.5										
7.0										
.5										
8.0										
.5										
9.0										
.5										
10.0										
.5					1	0.0				
11.0					1	0.0				
.5					7	0.2				
12.0					13	0.4				
.5					28	0.8				
13.0					47	1.3				
.5					55	1.5	1	0.0		
14.0					52	1.4	2	0.1		
.5					35	1.0			1	0.0
15.0	5	1.6			55	1.5	3	0.1		
.5	35	11.0			115	3.2	13	0.4	4	0.1
16.0	63	19.8			199	5.5	26	0.7	11	0.3
.5	81	25.4			410	11.3	93	2.6	38	1.0
17.0	36	11.3			317	8.7	138	3.8	61	1.7
.5	20	6.3	4	1.3	193	5.3	264	7.3	152	4.2
18.0	6	1.9	5	1.6	47	1.3	176	4.8	151	4.1
.5			1	0.3	20	0.5	39	1.1	125	3.4
19.0			3	0.9			6	0.2	66	1.8
.5							1	0.0	68	1.9
20.0			2	0.6	1	0.0			72	2.0
.5			3	0.9					98	2.7
21.0			9	2.8					86	2.4
.5			6	1.9					75	2.1
22.0			11	3.4					71	2.0
.5			11	3.4					58	1.6
23.0			7	2.2					12	0.3
.5			6	1.9					11	0.3
24.0			5	1.6					1	0.0
.5									1	0.0
25.0										
.5										
26.0										
.5										
Total	246		73		1,596		882		1,162	

Table 3 (Continued)

Length (mm)	Jan.-March 1963				April-June 1963					
	M	%	F	%	M	%	T	%	F	%
6.0										
.5										
7.0										
.5										
8.0										
.5										
9.0										
.5										
10.0										
.5										
11.0					1	0.0				
.5					1	0.0				
12.0					7	0.2				
.5					13	0.4				
13.0					28	0.8				
.5					47	1.3				
14.0					55	1.5	1	0.0		
.5					52	1.4	2	0.1		
15.0	5	1.6			35	1.0			1	0.0
.5	35	11.0			55	1.5	3	0.1		
16.0	63	19.8			115	3.2	13	0.4	4	0.1
.5	81	25.4			199	5.5	26	0.7	11	0.3
17.0	36	11.3			410	11.3	93	2.6	38	1.0
.5	20	6.3			317	8.7	138	3.8	61	1.7
18.0	6	1.9	4	1.3	193	5.3	264	7.3	152	4.2
.5			5	1.6	47	1.3	176	4.8	151	4.1
19.0			1	0.3	20	0.5	120	3.3	125	3.4
.5			3	0.9			39	1.1	66	1.8
20.0			2	0.6	1	0.0	6	0.2	68	1.9
.5			3	0.9			1	0.0	72	2.0
21.0			9	2.8					98	2.7
.5			6	1.9					86	2.4
22.0			11	3.4					75	2.1
.5			11	3.4					71	2.0
23.0			7	2.2					58	1.6
.5			6	1.9					12	0.3
24.0			5	1.6					11	0.3
.5									1	0.0
25.0									1	0.0
.5										
26.0										
.5										
Total	246		73		1,596		882		1,162	

Table 3 (Continued)

Length (mm)	July-Sept. 1963						Oct.-Dec. 1963					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5					4	0.1						
13.0					2	0.1						
.5					7	0.2						
14.0					25	0.8						
.5					50	1.7						
15.0					66	2.2			1	0.6		
.5					112	3.7			9	5.0		
16.0					98	3.3	2	0.1	5	2.8		
.5					122	4.1	3	0.1	5	2.8		
17.0					191	6.4	17	0.6	3	1.7		
.5					256	8.5	31	1.0	9	5.0		
18.0					259	8.6	76	2.5	19	10.5		
.5					136	4.5	96	3.2	3	1.7		
19.0					43	1.4	124	4.1	9	5.0		
.5					6	0.2	59	2.0	6	3.3		
20.0					1	0.0	29	1.0	1	0.6	2	1.1
.5							6	0.2	1	0.6	2	1.1
21.0							6	0.2	1	0.6	9	5.0
.5									1	0.6	22	12.2
22.0									1	0.6	28	15.5
.5											9	5.0
23.0											5	2.8
.5											7	3.9
24.0											1	0.6
.5											1	0.6
25.0												
.5												
26.0												
.5												
Total	1,378		443		1,180		91		3		87	

Table 3 (Continued)

Length (mm)	April-June 1964				July-Sept. 1964							
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5	3	0.2					1	0.3				
13.0	3	0.2										
.5	10	0.7					2	0.5				
14.0	10	0.7					5	1.3				
.5	24	1.7					4	1.1				
15.0	15	1.0					7	1.9				
.5	10	0.7					9	2.4				
16.0	6	0.4					5	1.3				
.5	8	0.6					1	0.3				
17.0	9	0.6					2	0.5				
.5	35	2.4					9	2.4				
18.0	65	4.5	4	0.3	1	0.1	7	1.9				
.5	74	5.2	11	0.8	3	0.2	13	3.5	2	0.5		
19.0	59	4.1	27	1.9	5	0.3	15	4.0	6	1.6	1	0.3
.5	40	2.8	38	2.7	21	1.5	9	2.4	16	4.3	3	0.8
20.0	24	1.7	76	5.3	106	7.4	2	0.5	14	3.7	12	3.2
.5	13	0.9	87	6.1	134	9.4	3	0.8	34	9.1	51	13.6
21.0	2	0.1	69	4.8	162	11.3			15	4.0	53	14.1
.5	1	0.1	24	1.7	113	7.9	1	0.3	6	1.6	37	9.9
22.0			9	0.6	63	4.4			4	1.1	10	2.7
.5			1	0.1	30	2.1			2	0.5	6	1.6
23.0					15	1.0					2	0.5
.5					12	0.8					4	1.1
24.0					9	0.6					1	0.3
.5					1	0.1					1	0.3
25.0												
.5												
26.0												
.5												
Total	411		346		675		95		99		181	

Table 3 (Continued)

Length (mm)	April-June 1965						July-Sept. 1965					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5	1	0.1										
11.0	1	0.1										
.5	4	0.3										
12.0	19	1.4										
.5	49	3.7										
13.0	109	8.2	2	0.1								
.5	120	9.0	14	1.0			1	0.1				
14.0	148	11.1	48	3.6			6	0.6				
.5	61	4.6	51	3.8	1	0.1	29	3.0			1	0.1
15.0	27	2.0	54	4.0	1	0.1	88	9.2	1	0.1	2	0.2
.5	4	0.3	17	1.3	1	0.1	68	7.1	2	0.2	6	0.6
16.0	2	0.1	5	0.4	1	0.1	43	4.5	1	0.1	34	3.5
.5	3	0.2	2	0.1			5	0.5	6	0.6	85	8.8
17.0	6	0.4	14	1.0			1	0.1	8	0.8	161	16.8
.5			15	1.1					4	0.4	119	12.4
18.0			20	1.5					2	0.2	58	6.0
.5			18	1.3	1	0.1					15	1.6
19.0			29	2.2	4	0.3					17	1.8
.5			21	1.6	8	0.6					7	0.7
20.0	1	0.1	44	3.3	20	1.5					19	2.0
.5			27	2.0	41	3.1					19	2.0
21.0			32	2.4	63	4.7					16	1.7
.5			9	0.7	74	5.5					27	2.8
22.0			7	0.5	72	5.4					47	4.9
.5					40	3.0					31	3.2
23.0					16	1.2					18	1.9
.5					4	0.3					10	1.0
24.0					2	0.1					4	0.4
.5					1	0.1						
25.0												
.5												
26.0												
.5												
Total	555		429		350		241		24		696	

Table 4. Summary by season of pink shrimp carapace length-frequency distributions for Area 3.

Length (mm)	January-March 1952						April-June 1952					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5	3	1.0										
11.0	4	1.3										
.5	15	5.0										
12.0	14	4.7					2	0.4				
.5	28	9.3					6	1.3				
13.0	40	13.3					6	1.3				
.5	23	7.7					26	5.8				
14.0	13	4.3					42	9.4			2	0.4
.5	6	2.0					41	9.1				
15.0	7	2.3					24	5.3				
.5	2	0.7					15	3.3				
16.0	2	0.7					5	1.1				
.5	5	1.7										
17.0	11	3.7	2	0.7	3	1.0	1	0.2			1	0.2
.5	10	3.3	2	0.7	6	2.0	6	1.3			4	0.9
18.0	10	3.3	3	1.0	11	3.7	3	0.7	3	0.7	2	0.4
.5	3	1.0	2	0.7	8	2.7	3	0.7	3	0.7	20	4.5
19.0	3	1.0	4	1.3	13	4.3	24	5.3	3	0.9	33	7.3
.5					15	5.0	10	2.2	4	0.4	11	2.4
20.0					1	0.3	6	1.3	2	0.2	15	3.3
.5					7	2.3	2	0.4	1	0.2	39	8.7
21.0					8	2.7			1	0.2	43	9.6
.5					4	1.3			1	0.2	19	4.2
22.0					8	2.7					13	2.9
.5					3	1.0					4	0.9
23.0											7,	1.6
.5					1	0.3						
24.0											2	0.4
.5												
25.0												
.5												
26.0												
.5												
TOTAL	199		13		88		219		15		215	

Table 4 (Continued)

Length (mm)	July-September 1960					
	M	%	T	%	F	%
6.0						
.5						
7.0						
.5						
8.0						
.5						
9.0						
.5						
10.0						
.5						
11.0						
.5						
12.0						
.5	1	0.3				
13.0						
.5	1	0.3				
14.0	1	0.3				
.5	1	0.3				
15.0	2	0.6				
.5	13	3.7				
16.0	31	8.9				
.5	16	4.6				
17.0	15	4.3	1	0.3		
.5	4	1.1			1	0.3
18.0	6	1.7			2	0.6
.5	5	1.4			6	1.7
19.0	8	2.3	1	0.3	8	2.3
.5	4	1.1	7	2.0	17	4.9
20.0	2	0.6	3	0.9	32	9.2
.5	1	0.3			40	11.5
21.0					31	8.9
.5					27	7.8
22.0					33	9.5
.5					14	4.0
23.0					9	2.6
.5					4	1.1
24.0					1	0.3
.5						
25.0						
.5						
26.0						
.5						
TOTAL	111		12		225	

Table 4 (Continued)

Length (mm)	April-June 1961						July-September 1961					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0	2	0.1										
.5	10	0.3										
12.0	16	0.5										
.5	32	1.0										
13.0	43	1.3					2	0.1				
.5	44	1.3					7	0.3				
14.0	37	1.1					14	0.6				
.5	40	1.2					34	1.3				
15.0	27	0.8					64	2.5				
.5	34	1.0					100	3.9				
16.0	13	0.4					95	3.7				
.5	7	0.2	1	0.0			78	3.1	2	0.1		
17.0	33	1.0	9	0.3	1	0.0	37	1.5	7	0.3		
.5	53	1.6	52	1.6	1	0.0	27	1.1	13	0.5		
18.0	91	2.8	114	3.5	18	0.5	41	1.6	49	1.9	2	0.1
.5	97	3.0	233	7.1	67	2.0	43	1.7	76	3.0	14	0.6
19.0	53	1.6	316	9.6	105	3.2	50	2.0	116	4.6	60	2.4
.5	17	0.5	311	9.5	121	3.7	14	0.6	142	5.6	162	6.4
20.0	3	0.1	154	4.7	175	5.3	2	0.1	118	4.6	238	9.4
.5			57	1.7	209	6.4			50	2.0	221	8.7
21.0			17	0.5	207	6.3			18	0.7	223	8.8
.5			11	0.3	204	6.2			5	0.2	167	6.6
22.0			2	0.1	119	3.6			1	0.0	114	4.5
.5			1	0.0	78	2.4					78	3.1
23.0					30	0.9					35	1.4
.5					15	0.5					13	0.5
24.0					7	0.2					5	0.2
.5											2	0.1
25.0												
.5												
26.0												
.5												
TOTAL	652		1,278		1,357		608		597		1,334	

Table 4 (Continued)

Length (mm)	April-June 1962						July-September 1962					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5	4	0.3					3	0.2				
13.0	5	0.3					8	0.4				
.5	17	1.1					32	1.8				
14.0	41	2.6					54	3.0				
.5	41	2.6					98	5.4				
15.0	47	3.0					104	5.7	1	0.1		
.5	38	2.4					126	6.9	10	0.5		
16.0	22	1.4	1	0.1			87	4.8	9	0.5		
.5	9	0.6	1	0.1			49	2.7	10	0.5		
17.0	1	0.1	2	0.1			19	1.0	20	1.1		
.5	1	0.1	17	1.1					16	0.9		
18.0	3	0.2	56	3.5	1	0.1			19	1.0		
.5			124	7.8	3	0.2	1	0.1	41	2.2	1	0.1
19.0	3	0.2	145	9.1	8	0.5			78	4.3	1	0.1
.5	2	0.1	159	10.0	10	0.6			113	6.2	16	0.9
20.0			79	5.0	39	2.4			120	6.6	27	1.5
.5			30	1.9	63	4.0			73	4.0	51	2.8
21.0	1	0.1	14	0.9	116	7.3			24	1.3	65	3.6
.5			14	0.9	156	9.8			13	0.7	110	6.0
22.0			1	0.1	127	8.0			3	0.2	112	6.1
.5					100	6.3			1	0.1	130	7.1
23.0					63	4.0					91	5.0
.5					20	1.3					61	3.3
24.0					9	0.6					19	1.0
.5											11	0.6
25.0											1	0.1
.5												
26.0												
.5												
TOTAL	235		643		715		581		551		696	

Table 4 (Continued)

Length (mm)	January-March 1963				April-June 1963							
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5	1	0.1										
11.0	1	0.1										
.5	3	0.3					3	0.1				
12.0	5	0.5					8	0.2				
.5	3	0.3					22	0.6				
13.0	6	0.5					25	0.7				
.5	6	0.5					27	0.7				
14.0	2	0.2					19	0.5				
.5	1	0.1					15	0.4	1	0.0		
15.0	17	1.5					4	0.1	1	0.0		
.5	43	3.9					9	0.2	6	0.2		
16.0	115	10.4					50	1.3	13	0.3		
.5	131	11.8					119	3.1	58	1.5	16	0.4
17.0	132	11.9	2	0.2	3	0.3	127	3.3	155	4.1	57	1.5
.5	52	4.7	7	0.6	47	4.2	141	3.7	285	7.5	141	3.7
18.0	19	1.7	1	0.1	96	8.7	65	1.7	172	4.5	219	5.7
.5	5	0.5	1	0.1	59	5.3	23	0.6	109	2.9	181	4.7
19.0					28	2.5	6	0.2	34	0.9	105	2.8
.5					18	1.6	1	0.0	4	0.1	177	4.6
20.0					35	3.2					270	7.1
.5					61	5.5					358	9.4
21.0					63	5.7			1	0.0	256	6.7
.5					30	2.7			1	0.0	181	4.7
22.0					25	2.3					131	3.4
.5					26	2.3					120	3.1
23.0					25	2.3					54	1.4
.5					10	0.9					34	0.9
24.0					3	0.3					9	0.2
.5					1	0.1					3	0.1
25.0											1	0.0
.5					1	0.1						
26.0												
.5												
TOTAL	542		16		551		664		840		2,313	

Table 4 (Continued)

Length (mm)	July-September 1963						October-December 1963					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0	1	0.0										
.5	5	0.1										
14.0	21	0.6					2	0.7				
.5	59	1.7					7	2.3				
15.0	144	4.2					12	4.0				
.5	204	5.9					13	4.4				
16.0	202	5.9					27	9.1				
.5	111	3.2	2	0.1			13	4.4	1	0.3		
17.0	31	0.9	5	0.1	1	0.0	7	2.3				
.5	39	1.1	13	0.4	6	0.2	9	3.0			1	0.3
18.0	57	1.7	36	1.0	9	0.3	6	2.0			3	1.0
.5	57	1.7	109	3.2	73	2.1	7	2.3	1	0.3	5	1.7
19.0	34	1.0	171	5.0	161	4.7	1	0.3	1	0.3	9	3.0
.5	9	0.3	143	4.2	315	9.2					29	9.7
20.0	1	0.0	83	2.4	429	12.5					55	18.5
.5			21	0.6	240	7.0					36	12.1
21.0			3	0.1	135	3.9					23	7.7
.5					105	3.1					5	1.7
22.0			1	0.0	132	3.8					3	1.0
.5					96	2.8					8	2.7
23.0					62	1.8					5	1.7
.5					40	1.2					4	1.3
24.0					38	1.1					4	1.3
.5					18	0.5					1	0.3
25.0					8	0.2						
.5					2	0.1						
26.0					1	0.0						
.5												
TOTAL	975		587		1,871		104		3		191	

Table 4 (Continued)

Length (mm)	January-March 1964					April-June 1964						
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0	2	0.2										
.5	2	0.2					1	0.1				
13.0	2	0.2										
.5	3	0.3										
14.0	1	0.1					6	0.9				
.5	3	0.3					3	0.4				
15.0							3	0.4				
.5	13	1.3										
16.0	45	4.4			1	0.1	5	0.7				
.5	85	8.3			2	0.2	7	1.0				
17.0	111	10.9	2	0.2	8	0.8	17	2.4				
.5	62	6.1			12	1.2	47	6.7	3	0.4		
18.0	29	2.8			25	2.4	63	9.0	5	0.7	5	0.7
.5	11	1.1	2	0.2	76	7.4	36	5.1	9	1.3	6	0.9
19.0	9	0.9	3	0.3	128	12.5	24	3.4	14	2.0	22	3.1
.5	4	0.4			196	19.2	3	0.4	7	1.0	60	8.6
20.0			1	0.1	101	9.9	6	0.9	9	1.3	77	11.0
.5					37	3.6			6	0.9	80	11.4
21.0					16	1.6	1	0.1	10	1.4	82	11.7
.5					13	1.3					51	7.3
22.0					6	0.6					20	2.9
.5					6	0.6					8	1.1
23.0					2	0.2					3	0.4
.5					2	0.2						
24.0					2	0.2					2	0.3
.5												
25.0												
.5												
26.0												
.5												
TOTAL	382		8		633		222		63		416	

Table 4 (Continued)

Length (mm)	July-September 1964						October-December 1964					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0							1	0.1				
.5							2	0.2				
8.0	2	0.2					8	1.0				
.5	5	0.5					20	2.4				
9.0	7	0.6					29	3.5				
.5	7	0.6					33	4.0				
10.0	3	0.3					21	2.5				
.5	1	0.1					8	1.0				
11.0							4	0.5				
.5							4	0.5				
12.0							4	0.5				
.5												
13.0												
.5												
14.0												
.5												
15.0												
.5	3	0.3					2	0.2				
16.0	11	1.0					5	0.6				
.5	22	2.0					24	2.9				
17.0	28	2.6					47	5.6				
.5	12	1.1					32	3.8				
18.0	22	2.0					22	2.6				
.5	55	5.0	2	0.2	1	0.1	39	4.7				
19.0	95	8.7	4	0.4	6	0.5	85	10.2				
.5	92	8.4	7	0.6	12	1.1	95	11.4	2	0.2	2	0.2
20.0	47	4.3	11	1.0	18	1.6	57	6.8	1	0.1	13	1.6
.5	16	1.5	23	2.1	57	5.2	7	0.8	1	0.1	16	1.9
21.0	3	0.3	7	0.6	94	8.6					35	4.2
.5			7	0.6	159	14.5	1	0.1	1	0.1	52	6.2
22.0	1	0.1	6	0.5	134	12.2					71	8.5
.5			2	0.2	56	5.1					49	5.9
23.0					27	2.5					23	2.8
.5					13	1.2					10	1.2
24.0					10	0.9					6	0.7
.5					4	0.4					1	0.1
25.0					2	0.2					1	0.1
.5					1	0.1						
26.0												
.5												
TOTAL	432		69		594		550		5		279	

Table 4 (Continued)

Length (mm)	January-March 1965					April-June 1965						
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0	2	0.1					1	0.1				
.5	4	0.2					5	0.5				
11.0	14	0.8					36	3.5				
.5	54	3.2					68	6.6	4	0.4		
12.0	115	6.9					121	11.8	5	0.5		
.5	204	12.2					105	10.3	12	1.2		
13.0	263	15.8					101	9.9	25	2.4	2	0.2
.5	163	9.8					43	4.2	33	3.2	2	0.2
14.0	70	4.2					18	1.8	26	2.5		
.5	17	1.0					2	0.2	10	1.0		
15.0	9	0.5										
.5									1	0.1		
16.0	2	0.1							3	0.3		
.5	6	0.4					10	1.0	4	0.4		
17.0	22	1.3					13	1.3	9	0.9		
.5	38	2.3					10	1.0	11	1.1		
18.0	40	2.4					12	1.2	10	1.0	4	0.4
.5	37	2.2	2	0.1	1	0.1	14	1.4	12	1.2	4	0.4
19.0	53	3.2	2	0.1	4	0.2	16	1.6	23	2.2	13	1.3
.5	77	4.6	2	0.1	11	0.7	5	0.5	17	1.7	21	2.1
20.0	74	4.4	1	0.1	24	1.4	3	0.3	9	0.9	21	2.1
.5	28	1.7			43	2.6			2	0.2	42	4.1
21.0	7	0.4			58	3.5					54	5.3
.5	1	0.1			91	5.5					33	3.2
22.0					61	3.7					18	1.8
.5					36	2.2					5	0.5
23.0					20	1.2					2	0.2
.5					8	0.5					1	0.1
24.0					3	0.2						
.5					2	0.1						
25.0												
.5												
26.0												
.5												
TOTAL	1,300		7		362		586		216		222	

Table 4. (Continued)

Length (mm)	July-September 1965						October-December 1965					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0	1	0.0										
.5												
9.0							1	0.2				
.5												
10.0												
.5												
11.0												
.5												
12.0	4	0.1										
.5	37	0.9										
13.0	79	2.0	1	0.0			1	0.2				
.5	202	5.1	5	0.1			2	0.3				
14.0	409	10.4	29	0.7			9	1.5				
.5	398	10.1	100	2.5	5	0.1	37	6.0				
15.0	344	8.8	250	6.4	24	0.6	110	17.7			1	0.2
.5	115	2.9	279	7.1	80	2.0	88	14.2	2	0.3	4	0.6
16.0	20	0.5	218	5.5	103	2.6	45	7.3	5	0.8	21	3.4
.5	9	0.2	129	3.3	69	1.8	4	0.6	7	1.1	40	6.5
17.0	1	0.0	55	1.4	45	1.1	4	0.6	3	0.5	75	12.1
.5			29	0.7	17	0.4			2	0.3	47	7.6
18.0			4	0.1	6	0.2					29	4.7
.5			17	0.4	2	0.1			3	0.5	5	0.8
19.0			23	0.6	6	0.2					2	0.3
.5			38	1.0	13	0.3					3	0.5
20.0			37	0.9	13	0.3					5	0.8
.5			58	1.5	28	0.7					9	1.5
21.0			79	2.0	58	1.5					14	2.3
.5			49	1.2	89	2.3					12	1.9
22.0			26	0.7	112	2.8					7	1.1
.5			1	0.0	100	2.5					15	2.4
23.0			3	0.1	69	1.8					6	1.0
.5			1	0.0	28	0.7					2	0.3
24.0					7	0.2						
.5					5	0.1						
25.0					2	0.1						
.5												
26.0												
.5												
TOTAL	1,619		1,431		881		301		22		297	

Table 5. Summary by season of pink shrimp carapace length-frequency distributions for Area 4.

Length (mm)	April-June 1952					July-Sept. 1962						
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5	1	1.0					1	0.1				
12.0							1	0.1				
.5							5	0.3				
13.0	9	9.0					12	0.6				
.5	6	6.0					40	2.1				
14.0	6	6.0					80	4.2				
.5	15	15.0					148	7.8				
15.0	2	2.0					145	7.6	4	0.2		
.5	5	5.0					154	8.1	10	0.5		
16.0							91	4.8	24	1.3		
.5	2	2.0					54	2.8	27	1.4		
17.0			1	1.0			16	0.8	33	1.7		
.5	1	1.0	2	2.0			2	0.1	27	1.4		
18.0	12	12.0	3	3.0	3	3.0			27	1.4		
.5	2	2.0	1	1.0	3	3.0	1	0.1	106	5.6	1	0.1
19.0			2	2.0	3	3.0			119	6.3	5	0.3
.5			3	3.0	5	5.0			120	6.3	40	2.1
20.0					3	3.0			77	4.0	48	2.5
.5					6	6.0			32	1.7	57	3.0
21.0					3	3.0			9	0.5	48	2.5
.5									1	0.1	91	4.8
22.0					1	1.0					87	4.6
.5											83	4.4
23.0											42	2.2
.5											18	0.9
24.0											10	0.5
.5											6	0.3
25.0												
.5											1	0.1
26.0												
.5												
Total	61		12		27		750		616		537	

Table 5 (Continued)

Length (mm)	Jan.-March 1963				April-June 1963						July-Sept. 1963					
	M	%	F	%	M	%	T	%	F	%	M	%	T	%	F	%
6.0																
.5																
7.0																
.5																
8.0																
.5																
9.0																
.5																
10.0																
.5																
11.0					1	0.0										
.5																
12.0					1	0.0					2	0.1				
.5					8	0.3					10	0.6				
13.0	1	0.7			35	1.4					19	1.2				
.5	1	0.7			35	1.4					39	2.4				
14.0					56	2.3					58	3.6				
.5					35	1.4					77	4.8				
15.0	1	0.7			31	1.3	2	0.1			37	2.3				
.5	1	0.7			17	0.7					17	1.1	1	0.1		
16.0	4	2.7			24	1.0	2	0.1			22	1.4	3	0.2		
.5	9	6.2	1	0.7	46	1.9	8	0.3			48	3.0	28	1.8	1	0.1
17.0	7	4.8			137	5.6	49	2.0	5	0.2	62	3.9	69	4.3	6	0.4
.5	4	2.7			125	5.1	127	5.2	22	0.9	50	3.1	152	9.5	36	2.3
18.0			2	1.4	88	3.6	211	8.6	67	2.7	18	1.1	111	6.9	56	3.5
.5			7	4.8	32	1.3	145	5.9	104	4.2	3	0.2	84	5.3	87	5.4
19.0			10	6.8	7	0.3	77	3.1	158	6.4	1	0.1	28	1.8	60	3.8
.5			5	3.4			18	0.7	78	3.2			15	0.9	52	3.3
20.0			15	10.3			2	0.1	105	4.3					55	3.4
.5			20	13.7					148	6.0					85	5.3
21.0			18	12.3					161	6.5			1	0.1	61	3.8
.5			5	3.4					105	4.3					56	3.5
22.0			11	7.5					73	3.0					26	1.6
.5			5	3.4					40	1.6					37	2.3
23.0			4	2.7					51	2.1					16	1.0
.5			2	1.4					15	0.6					9	0.6
24.0									11	0.4					2	0.1
.5			1	0.7												
25.0																
.5																
26.0																
.5																
Total	28		118		678		641		1,143		463		492		645	

Table 5 (Continued)

Length (mm)	Jan.-March 1964						April-June 1964					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5	5	1.3										
13.0	10	2.6										
.5	8	2.1					2	0.1				
14.0	12	3.2					1	0.1				
.5	4	1.1					17	1.2				
15.0	1	0.3					32	2.2				
.5	7	1.8					25	1.7				
16.0	18	4.7					13	0.9				
.5	33	8.7					5	0.3				
17.0	54	14.2					8	0.6			1	0.1
.5	22	5.8	2	0.5	1	0.3	38	2.6				
18.0	9	2.4	4	1.1	1	0.3	82	5.6	5	0.3	1	0.1
.5	5	1.3	3	0.8	6	1.6	116	8.0	8	0.6	6	0.4
19.0	4	1.1	3	0.8	21	5.5	70	4.8	20	1.4	16	1.1
.5			2	0.5	39	10.3	39	2.7	32	2.2	44	3.0
20.0					52	13.7	8	0.6	17	1.2	99	6.8
.5					27	7.1	4	0.3	17	1.2	187	12.9
21.0					12	3.2			12	0.8	208	14.3
.5					7	1.8			6	0.4	153	10.5
22.0					3	0.8					71	4.9
.5					2	0.5					52	3.6
23.0											23	1.6
.5											14	1.0
24.0					1	0.3					1	0.1
.5					2	0.5						
25.0												
.5												
26.0												
.5												
Total	192		14		174		460		117		876	

Table 5 (Continued)

Length (mm)	July-Sept. 1964					
	M	%	T	%	F	%
6.0						
.5						
7.0						
.5						
8.0						
.5						
9.0	1	0.2				
.5						
10.0						
.5						
11.0						
.5						
12.0						
.5						
13.0						
.5						
14.0						
.5						
15.0						
.5						
16.0	9	2.2				
.5	22	5.3				
17.0	16	3.9				
.5	14	3.4				
18.0	11	2.7				
.5	15	3.6	1	0.2		
19.0	23	5.6	3	0.7	2	0.5
.5	20	4.9	2	0.5	2	0.5
20.0	13	3.2	6	1.5	6	1.5
.5	1	0.2	8	1.9	19	4.6
21.0			3	0.7	28	6.8
.5					67	16.3
22.0			1	0.2	61	14.8
.5					38	9.2
23.0					12	2.9
.5					5	1.2
24.0					3	0.7
.5						
25.0						
.5						
26.0						
.5						
Total	145		24		243	

Table 5 (Continued)

Length (mm)	Jan.-March 1965						April-June 1965					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5	5	0.6										
11.0	4	0.5										
.5	17	2.1										
12.0	41	5.1	1	0.1								
.5	71	8.7	2	0.2			1	0.9	1	0.9		
13.0	75	9.2	7	0.9			3	2.6	2	1.7	1	0.9
.5	45	5.5	9	1.1			2	1.7	5	4.3	1	0.9
14.0	12	1.5	6	0.7			7	6.1	2	1.7		
.5	6	0.7	1	0.1			1	0.9	2	1.7	1	0.9
15.0							1	0.9				
.5									1	0.9		
16.0												
.5			2	0.2								
17.0	6	0.7										
.5	10	1.2										
18.0	6	0.7	1	0.1			1	0.9	2	1.7		
.5	4	0.5	3	0.4	3	0.4			1	0.9		
19.0	7	0.9			2	0.2	1	0.9	2	1.7		
.5	9	1.1	5	0.6	10	1.2	2	1.7	5	4.3		
20.0	6	0.7	2	0.2	16	2.0	4	3.5	6	5.2	2	1.7
.5					30	3.7			4	3.5	2	1.7
21.0					53	6.5			7	6.1	9	7.8
.5					80	9.9	1	0.9	3	2.6	8	7.0
22.0					102	12.6			1	0.9	9	7.8
.5					72	8.9					6	5.2
23.0					45	5.5					6	5.2
.5					22	2.7					1	0.9
24.0					8	1.0						
.5					4	0.5						
25.0					1	0.1					1	0.9
.5												
26.0					1	0.1						
.5												
Total	324		39		449		24		44		47	

Table 5 (Continued)

Length (mm)	July-Sept. 1965					
	M	%	T	%	F	%
6.0						
.5						
7.0						
.5						
8.0						
.5						
9.0						
.5						
10.0						
.5						
11.0						
.5						
12.0	6	1.0				
.5	11	1.9				
13.0	28	4.9				
.5	48	8.4	2	0.3		
14.0	43	7.5	8	1.4		
.5	40	7.0	20	3.5		
15.0	36	6.3	24	4.2	6	1.0
.5	17	3.0	27	4.7	4	0.7
16.0	10	1.7	21	3.7	6	1.0
.5	2	0.3	14	2.4	10	1.7
17.0	1	0.2	10	1.7	19	3.3
.5			5	0.9	8	1.4
18.0			4	0.7	4	0.7
.5			7	1.2	2	0.3
19.0			9	1.6	1	0.2
.5			9	1.6	5	0.9
20.0			9	1.6	3	0.5
.5			9	1.6	2	0.3
21.0			6	1.0	9	1.6
.5			1	0.2	17	3.0
22.0			1	0.2	14	2.4
.5					17	3.0
23.0					11	1.9
.5					4	0.7
24.0					2	0.3
.5						
25.0						
.5						
26.0						
.5						
Total	242		186		144	

Table 6. Summary by season of pink shrimp carapace length-frequency distributions for Area 5.

Length (mm)	April-June 1964						July-Sept. 1964					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0												
.5												
14.0												
.5	2	1.0					1	0.1				
15.0							3	0.4				
.5	1	0.5					12	1.5				
16.0	1	0.5					26	3.3				
.5	1	0.5					24	3.0	1	0.1		
17.0							24	3.0	1	0.1		
.5	5	2.5					18	2.3	3	0.4		
18.0	13	6.5	4	2.0			15	1.9	5	0.6		
.5	11	5.5	8	4.0			9	1.1	10	1.3	1	0.1
19.0	6	3.0	4	2.0	1	0.5	7	0.9	19	2.4	2	0.3
.5	2	1.0	5	2.5	1	0.5	2	0.3	33	4.1	6	0.8
20.0			5	2.5	15	7.5			31	3.9	35	4.4
.5			4	2.0	21	10.6			31	3.9	48	6.0
21.0			4	2.0	31	15.6			27	3.4	106	13.3
.5			1	0.5	21	10.6			18	2.3	101	12.6
22.0					14	7.0			4	0.5	80	10.0
.5					7	3.5			1	0.1	42	5.3
23.0					5	2.5					29	3.6
.5					4	2.0			2	0.3	11	1.4
24.0					2	1.0					6	0.8
.5											4	0.5
25.0											1	0.1
.5												
26.0												
.5												
Total	42		35		122		141		186		472	

Table 6 (Continued)

Length (mm)	April-June 1965						July-Sept. 1965					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5	3	0.6					2	0.2				
13.0	4	0.9					4	0.5				
.5	20	4.3	1	0.2			23	2.7	1	0.1		
14.0	33	7.0	2	0.4			41	4.8	2	0.2		
.5	39	8.3	6	1.3			45	5.3	8	0.9	1	0.1
15.0	43	9.2	16	3.4	1	0.2	50	5.9	24	2.8	2	0.2
.5	20	4.3	35	7.5	3	0.6	25	3.0	38	4.5	5	0.6
16.0	13	2.8	40	8.5	4	0.9	14	1.7	51	6.0	14	1.7
.5	4	0.9	16	3.4	6	1.3	9	1.1	68	8.0	31	3.7
17.0	1	0.2	7	1.5	3	0.6	2	0.2	29	3.4	19	2.2
.5			4	0.9			1	0.1	18	2.1	22	2.6
18.0	1	0.2							9	1.1	5	0.6
.5			4	0.9	1	0.2			11	1.3	2	0.2
19.0			10	2.1	1	0.2	1	0.1	16	1.9	4	0.5
.5			10	2.1	2	0.4			16	1.9	9	1.1
20.0			13	2.8	4	0.9			23	2.7	13	1.5
.5			9	1.9	7	1.5			8	0.9	21	2.5
21.0			5	1.1	10	2.1			4	0.5	22	2.6
.5			1	0.2	14	3.0			3	0.4	36	4.3
22.0			1	0.2	21	4.5					26	3.1
.5					9	1.9					27	3.2
23.0					11	2.3					20	2.4
.5					5	1.1					14	1.7
24.0					4	0.9					5	0.6
.5					2	0.4					2	0.2
25.0											1	0.1
.5												
26.0												
.5												
Total	181		180		108		217		329		301	

Table 7. Summary by season of pink shrimp carapace length-frequency distributions for Area 6.

Length (mm)	July-Sept. 1959						April-June 1960					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0							2	0.1				
.5							4	0.3				
14.0							14	0.9				
.5							37	2.3				
15.0							103	6.5				
.5	16	1.5					153	9.7	3	0.2		
16.0	28	2.7					181	11.4	10	0.6		
.5	64	6.2					97	6.1	32	2.0		
17.0	132	12.8					54	3.4	52	3.3	2	0.1
.5	111	10.7	2	0.2	3	0.3	4	0.3	47	3.0	2	0.1
18.0	49	4.7	1	0.1	21	2.0	2	0.1	36	2.3	1	0.1
.5	8	0.8	5	0.5	43	4.2			20	1.3	1	0.1
19.0	4	0.4	4	0.4	56	5.4			42	2.6	3	0.2
.5	1	0.1			50	4.8			78	4.9	7	0.4
20.0			2	0.2	26	2.5			142	9.0	15	0.9
.5			5	0.5	59	5.7			107	6.8	13	0.8
21.0			1	0.1	92	8.9			60	3.8	32	2.0
.5			2	0.2	98	9.5			16	1.0	30	1.9
22.0					57	5.5			6	0.4	38	2.4
.5					35	3.4					45	2.8
23.0					32	3.1					41	2.6
.5					14	1.4					24	1.5
24.0					13	1.3					15	0.9
.5											13	0.8
25.0					1	0.1					1	0.1
.5												
26.0												
.5												
Total	413		22		600		651		651		283	

Table 7 (Continued)

Length (mm)	July-Sept. 1960						July-Sept. 1962					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0							2	0.7				
.5	2	0.1					3	1.1				
14.0	7	0.2					5	1.8				
.5	15	0.5					5	1.8				
15.0	63	2.2					10	3.5				
.5	125	4.4					12	4.2	1	0.4		
16.0	194	6.8	2	0.1			10	3.5	3	1.1		
.5	275	9.6	12	0.4			4	1.4	5	1.8		
17.0	308	10.8	47	1.6	2	0.1	3	1.1	6	2.1		
.5	190	6.7	110	3.9			1	0.4	11	3.9		
18.0	51	1.8	132	4.6	4	0.1			4	1.4		
.5	5	0.2	119	4.2	15	0.5			5	1.8	1	0.4
19.0	1	0.0	93	3.3	24	0.8			15	5.3		
.5			63	2.2	20	0.7			26	9.2	1	0.4
20.0			94	3.3	16	0.6			31	10.9	4	1.4
.5			128	4.5	21	0.7			20	7.0	7	2.5
21.0			135	4.7	70	2.5			11	3.9	8	2.8
.5			90	3.2	82	2.9			3	1.1	12	4.2
22.0			33	1.2	89	3.1					12	4.2
.5			3	0.1	68	2.4					11	3.9
23.0					68	2.4					17	6.0
.5					30	1.1					10	3.5
24.0					31	1.1					4	1.4
.5					6	0.2						
25.0					8	0.3					1	0.4
.5					1	0.0						
26.0												
.5												
Total	1,236		1,061		555		55		141		88	

Table 7 (Continued)

Length (mm)	April-June 1963						July-Sept. 1963					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0	1	0.2					1	0.2				
.5	1	0.2										
12.0	1	0.2										
.5	3	0.5										
13.0	10	1.6										
.5	11	1.8										
14.0	19	3.1										
.5	10	1.6					2	0.3				
15.0	17	2.8					2	0.3				
.5	8	1.3	1	0.2			5	0.8				
16.0	5	0.8					15	2.4				
.5	2	0.3					28	4.6	2	0.3		
17.0	14	2.3	4	0.7			21	3.4	6	1.0		
.5	8	1.3	12	2.0	2	0.3	16	2.6	14	2.3		
18.0	21	3.4	31	5.0	8	1.3	13	2.1	19	3.1		
.5	13	2.1	28	4.6	17	2.8	3	0.5	21	3.4	2	0.3
19.0	11	1.8	24	3.9	33	5.4	2	0.3	30	4.9	10	1.6
.5	3	0.5	10	1.6	37	6.0	1	0.2	22	3.6	17	2.8
20.0			6	1.0	26	4.2	2	0.3	20	3.2	26	4.2
.5			1	0.2	22	3.6			23	3.7	30	4.9
21.0					45	7.3	1	0.2	10	1.6	37	6.0
.5					38	6.2			5	0.8	34	5.5
22.0					44	7.2					56	9.1
.5					32	5.2					36	5.8
23.0					23	3.7					28	4.5
.5					10	1.6					29	4.7
24.0					3	0.5					12	1.9
.5											7	1.1
25.0											7	1.1
.5											1	0.2
26.0												
.5												
Total	158		117		340		112		172		332	

Table 7 (Continued)

Length (mm)	April-June 1965						July-Sept. 1965					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5							1	0.0				
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5							1	0.0				
13.0							3	0.1				
.5	2	2.4					21	0.6				
14.0	5	6.0					52	1.5				
.5	5	6.0					144	4.1	1	0.0		
15.0	7	8.3	3	3.6			274	7.9	6	0.2		
.5	3	3.6	5	6.0			416	11.9	38	1.1	9	0.3
16.0	2	2.4	7	8.3	1	1.2	207	5.9	108	3.1	22	0.6
.5			2	2.4	2	2.4	91	2.6	234	6.7	88	2.5
17.0			1	1.2			13	0.4	296	8.5	131	3.8
.5			1	1.2			5	0.1	218	6.2	258	7.4
18.0	1	1.2							70	2.0	163	4.7
.5	1	1.2	2	2.4					40	1.1	90	2.6
19.0	1	1.2	6	7.1					22	0.6	22	0.6
.5			4	4.8					51	1.5	24	0.7
20.0			7	8.3	1	1.2			51	1.5	28	0.8
.5			3	3.6	1	1.2			29	0.8	46	1.3
21.0			1	1.2	1	1.2			16	0.5	46	1.3
.5					1	1.2					39	1.1
22.0					2	2.4					35	1.0
.5					1	1.2					27	0.8
23.0					1	1.2			1	0.0	27	0.8
.5					2	2.4					14	0.4
24.0					1	1.2					9	0.3
.5					1	1.2					2	0.1
25.0												
.5												
26.0												
.5												
Total	27		42		15		1,228		1,181		1,080	

Table 7 (Continued)

Length (mm)	Oct.-Dec. 1965					
	M	%	T	%	F	%
6.0						
.5						
7.0						
.5						
8.0						
.5						
9.0	1	0.2				
.5						
10.0	1	0.2				
.5						
11.0						
.5						
12.0						
.5						
13.0						
.5						
14.0						
.5						
15.0	5	1.2				
.5	7	1.7				
16.0	16	3.8				
.5	26	6.1				
17.0	25	5.9			2	0.5
.5	10	2.4			5	1.2
18.0	1	0.2	1	0.2	15	3.5
.5					64	15.1
19.0					94	22.2
.5					70	16.5
20.0					27	6.4
.5					8	1.9
21.0					12	2.8
.5					10	2.4
22.0					9	2.1
.5					5	1.2
23.0					3	0.7
.5					2	0.5
24.0					4	0.9
.5						
25.0					1	0.2
.5						
26.0						
.5						
Total	92		1		331	

Table 8. Summary by season of pink shrimp carapace length-frequency distributions for Area 7.

Length (mm)	July-Sept. 1960						July-Sept. 1961					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5												
13.0	1	0.1										
.5	5	0.4										
14.0	20	1.5										
.5	35	2.6										
15.0	95	7.1					1	0.6				
.5	114	8.6	1	0.1								
16.0	155	11.7	5	0.4			1	0.6				
.5	133	10.0	26	2.0			9	5.0				
17.0	73	5.5	33	2.5			13	7.3				
.5	34	2.6	68	5.1			14	7.8				
18.0	4	0.3	56	4.2			9	5.0				
.5			24	1.8	2	0.2	4	2.2				
19.0			18	1.4	1	0.1	4	2.2				
.5			20	1.5	7	0.5	1	0.6	1	0.6		
20.0			44	3.3	14	1.1	2	1.1	4	2.2	5	2.8
.5			44	3.3	29	2.2	2	1.1	9	5.0	4	2.2
21.0			29	2.2	42	3.2			18	10.1	8	4.5
.5			16	1.2	41	3.1			11	6.1	13	7.3
22.0			3	0.2	41	3.1			4	2.2	12	6.7
.5					38	2.9					10	5.6
23.0					34	2.6			1	0.6	9	5.0
.5					15	1.1					5	2.8
24.0					7	0.5					3	1.7
.5					3	0.2					2	1.1
25.0												
.5												
26.0												
.5												
Total	669		387		274		60		48		71	

Table 8 (Continued)

Length (mm)	April-June 1962						July-Sept. 1962					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0	1	0.6										
.5												
12.0												
.5	1	0.6										
13.0	2	1.1										
.5	1	0.6										
14.0	2	1.1					1	0.2				
.5	1	0.6					8	1.5				
15.0							35	6.7				
.5							42	8.1				
16.0							55	10.6	3	0.6		
.5							46	8.8				
17.0							14	2.7	12	2.3		
.5							7	1.3	18	3.5		
18.0	3	1.7	2	1.1	1	0.6	2	0.4	16	3.1		
.5	4	2.3	3	1.7	1	0.6			5	1.0	1	0.2
19.0	3	1.7	5	2.8	4	2.3			2	0.4	1	0.2
.5			8	4.5	10	5.7			8	1.5	1	0.2
20.0			1	0.6	18	10.2			18	3.5	9	1.7
.5	1	0.6	1	0.6	6	3.4			21	4.0	17	3.3
21.0			1	0.6	22	12.5			17	3.3	13	2.5
.5					42	23.9			5	1.0	14	2.7
22.0					16	9.1					24	4.6
.5					6	3.4					38	7.3
23.0					8	4.5					31	6.0
.5					1	0.6					17	3.3
24.0					1	0.6					9	1.7
.5											7	1.3
25.0											2	0.4
.5												
26.0												
.5												
Total	19		21		136		210		125		185	

Table 8 (Continued)

Length (mm)	April-June 1963						July-Sept. 1963					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5												
9.0												
.5												
10.0												
.5												
11.0												
.5												
12.0												
.5	3	0.4										
13.0	15	1.8										
.5	7	0.9										
14.0	16	2.0										
.5	26	3.2					7	1.2				
15.0	19	2.3	1	0.1			20	3.5				
.5	13	1.6	1	0.1			43	7.6				
16.0	9	1.1	2	0.2			36	6.4	1	0.2		
.5	9	1.1	3	0.4			16	2.8	4	0.7		
17.0	27	3.3	7	0.9	1	0.1	10	1.8	6	1.1		
.5	23	2.8	16	2.0	1	0.1	5	0.9	22	3.9		
18.0	34	4.2	48	5.9	13	1.6			20	3.5	2	0.4
.5	13	1.6	53	6.5	36	4.4	1	0.2	30	5.3	3	0.5
19.0	8	1.0	35	4.3	50	6.1			24	4.3	6	1.1
.5	1	0.1	13	1.6	52	6.4			31	5.5	15	2.7
20.0	1	0.1			35	4.3	1	0.2	13	2.3	31	5.5
.5					37	4.5			12	2.1	34	6.0
21.0					55	6.7			3	0.5	33	5.9
.5					52	6.4			1	0.2	34	6.0
22.0					33	4.0					31	5.5
.5					14	1.7					27	4.8
23.0					20	2.5					16	2.8
.5					9	1.1					16	2.8
24.0					4	0.5					9	1.6
.5					1	0.1					1	0.2
25.0												
.5												
26.0												
.5												
Total	224		179		413		139		167		258	

Table 8 (Continued)

Length (mm)	April-June 1964						July-Sept. 1964					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5							1	0.1				
9.0							2	0.2				
.5							1	0.1				
10.0							1	0.1				
.5							1	0.1				
11.0												
.5												
12.0												
.5												
13.0												
.5												
14.0												
.5							1	0.1				
15.0	1	1.0					8	0.9				
.5	4	3.8					18	2.1				
16.0	6	5.7					39	4.6				
.5	6	5.7	1	1.0			63	7.4	1	0.1		
17.0	10	9.5	1	1.0			84	9.8	6	0.7		
.5	4	3.8					49	5.7	18	2.1		
18.0			1	1.0	1	1.0	18	2.1	25	2.9	5	0.6
.5	2	1.9					5	0.6	24	2.8	8	0.9
19.0	3	2.9	2	1.9			5	0.6	20	2.3	11	1.3
.5			3	2.9	1	1.0			22	2.6	16	1.9
20.0			6	5.7	3	2.9			32	3.8	41	4.8
.5			8	7.6	4	3.8			14	1.6	56	6.6
21.0			6	5.7	5	4.8			7	0.8	70	8.2
.5					5	4.8			3	0.4	52	6.1
22.0					8	7.6					41	4.8
.5					6	5.7			1	0.1	38	4.5
23.0					4	3.8			2	0.2	20	2.3
.5					1	1.0					9	1.1
24.0					1	1.0					8	0.9
.5					1	1.0					4	0.5
25.0					1	1.0					3	0.4
.5												
26.0												
.5												
Total	36		28		41		296		175		382	

Table 8 (Continued)

Length (mm)	Oct.-Dec. 1964						April-June 1965					
	M	%	T	%	F	%	M	%	T	%	F	%
6.0												
.5												
7.0												
.5												
8.0												
.5	1	0.3										
9.0	1	0.3										
.5	3	1.0										
10.0	3	1.0										
.5	7	2.2										
11.0	5	1.6					1	0.3				
.5	1	0.3					4	1.0				
12.0	1	0.3					4	1.0				
.5	2	0.6					13	3.3				
13.0							20	5.1	1	0.3		
.5							32	8.2	1	0.3	1	0.3
14.0							38	9.8	9	2.3	5	1.3
.5							33	8.5	16	4.1	3	0.8
15.0							18	4.6	22	5.7	8	2.1
.5	1	0.3					2	0.5	27	6.9	15	3.9
16.0	7	2.2					1	0.3	10	2.6	21	5.4
.5	8	2.6					1	0.3	5	1.3	11	2.8
17.0	19	6.1							2	0.5	4	1.0
.5	26	8.3									2	0.5
18.0	17	5.4	1	0.3	3	1.0			3	0.8	3	0.8
.5	6	1.9	3	1.0	4	1.3			4	1.0	3	0.8
19.0	2	0.6	2	0.6	11	3.5			2	0.5		
.5			4	1.3	14	4.5			1	0.3	5	1.3
20.0			2	0.6	17	5.4					7	1.8
.5			1	0.3	13	4.2					6	1.5
21.0			1	0.3	26	8.3					6	1.5
.5			1	0.3	20	6.4					7	1.8
22.0					27	8.6					4	1.0
.5					22	7.0					5	1.3
23.0					13	4.2					1	0.3
.5					9	2.9					2	0.5
24.0					7	2.2						
.5					1	0.3						
25.0					1	0.3						
.5												
26.0												
.5												
Total	110		15		188		167		103		119	