

DATA ON THE HAWAIIAN GREEN TURTLE  
COLONY AT FRENCH FRIGATE SHOALS

by

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HIMB  
1974 - 1975

DATA ON THE HAWAIIAN GREEN TURTLE  
COLONY AT FRENCH FRIGATE SHOALS

collected, compiled and analyzed  
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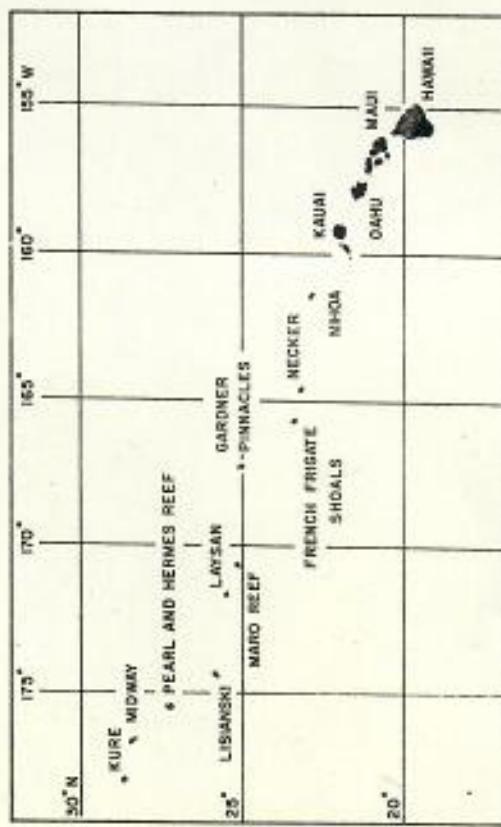
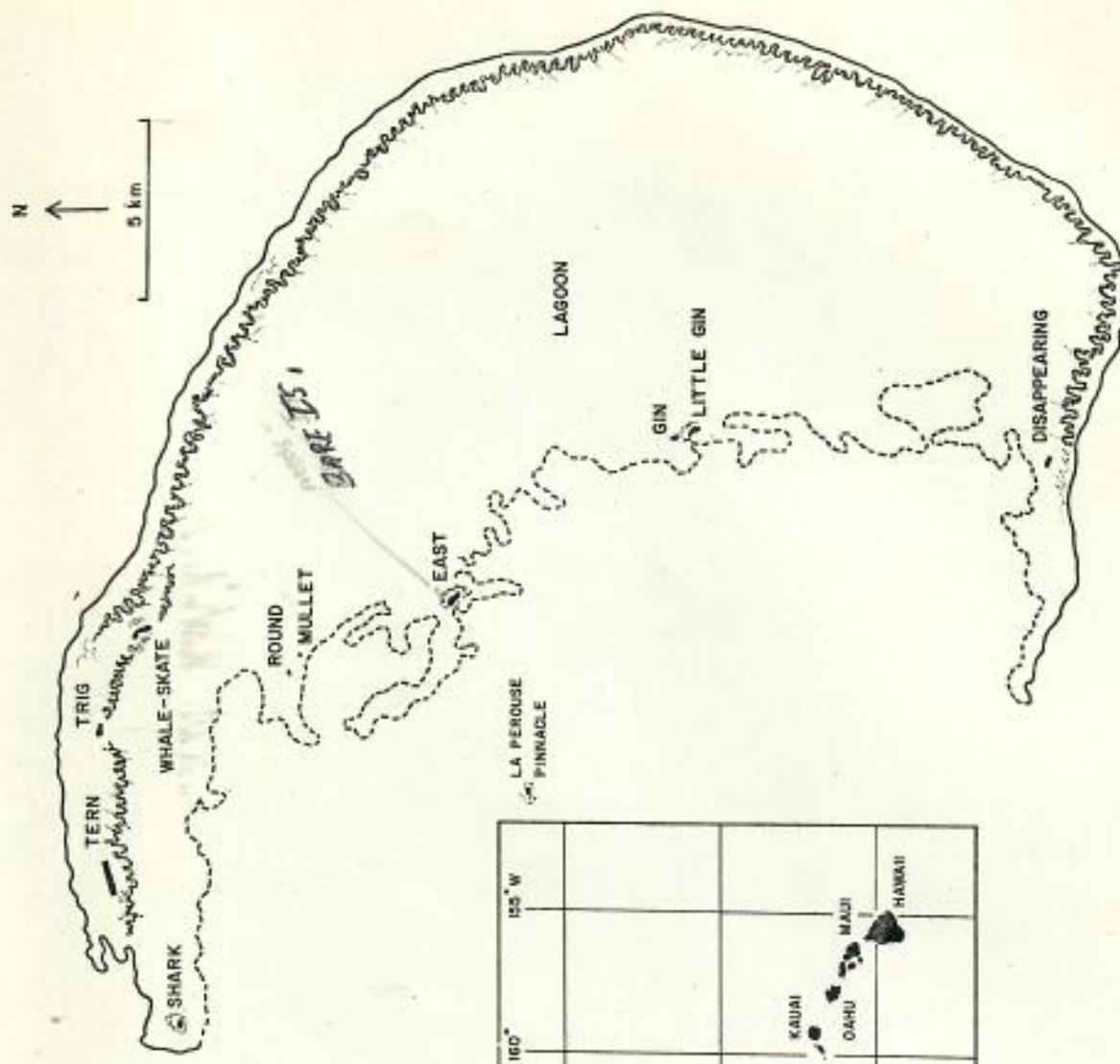
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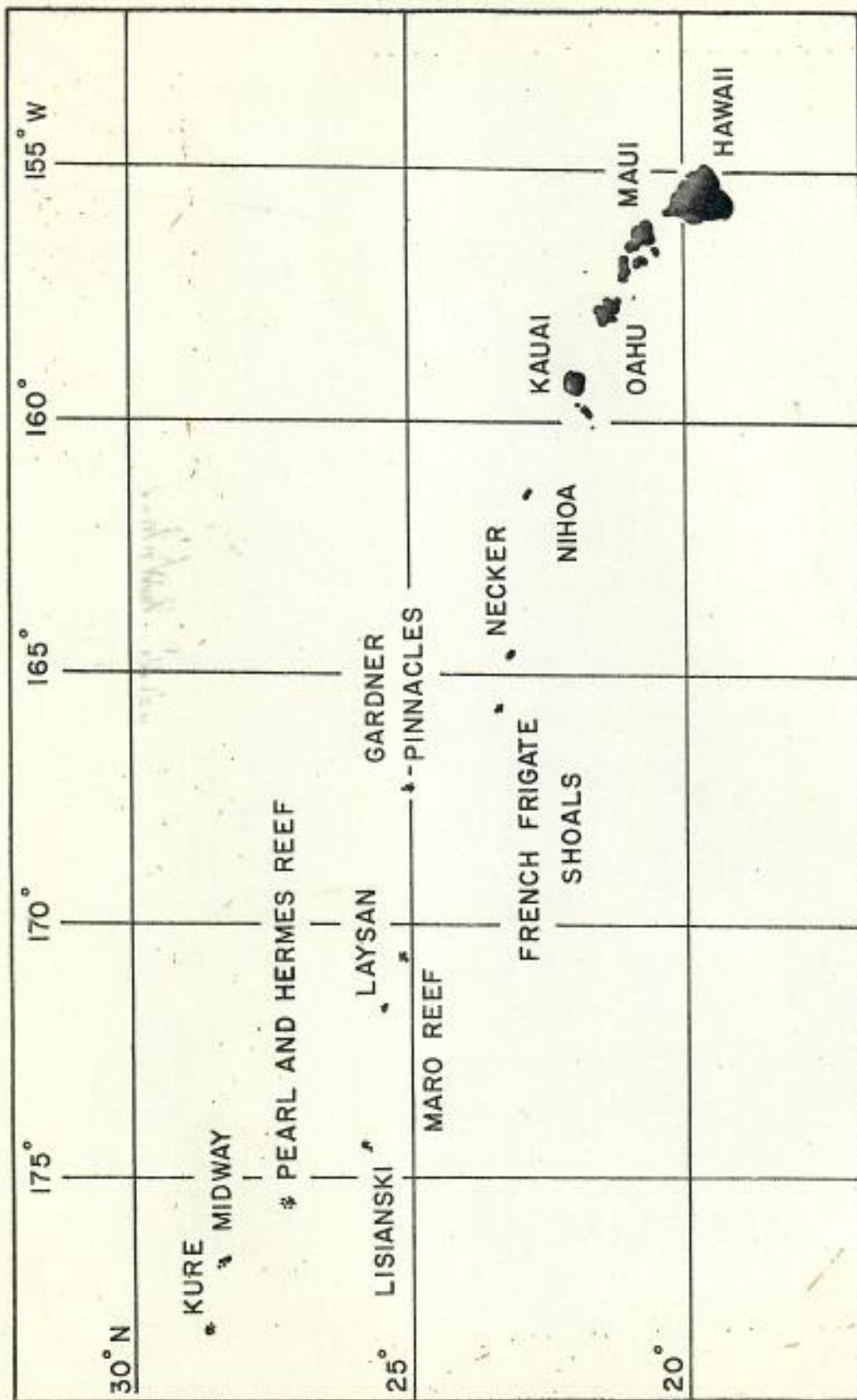
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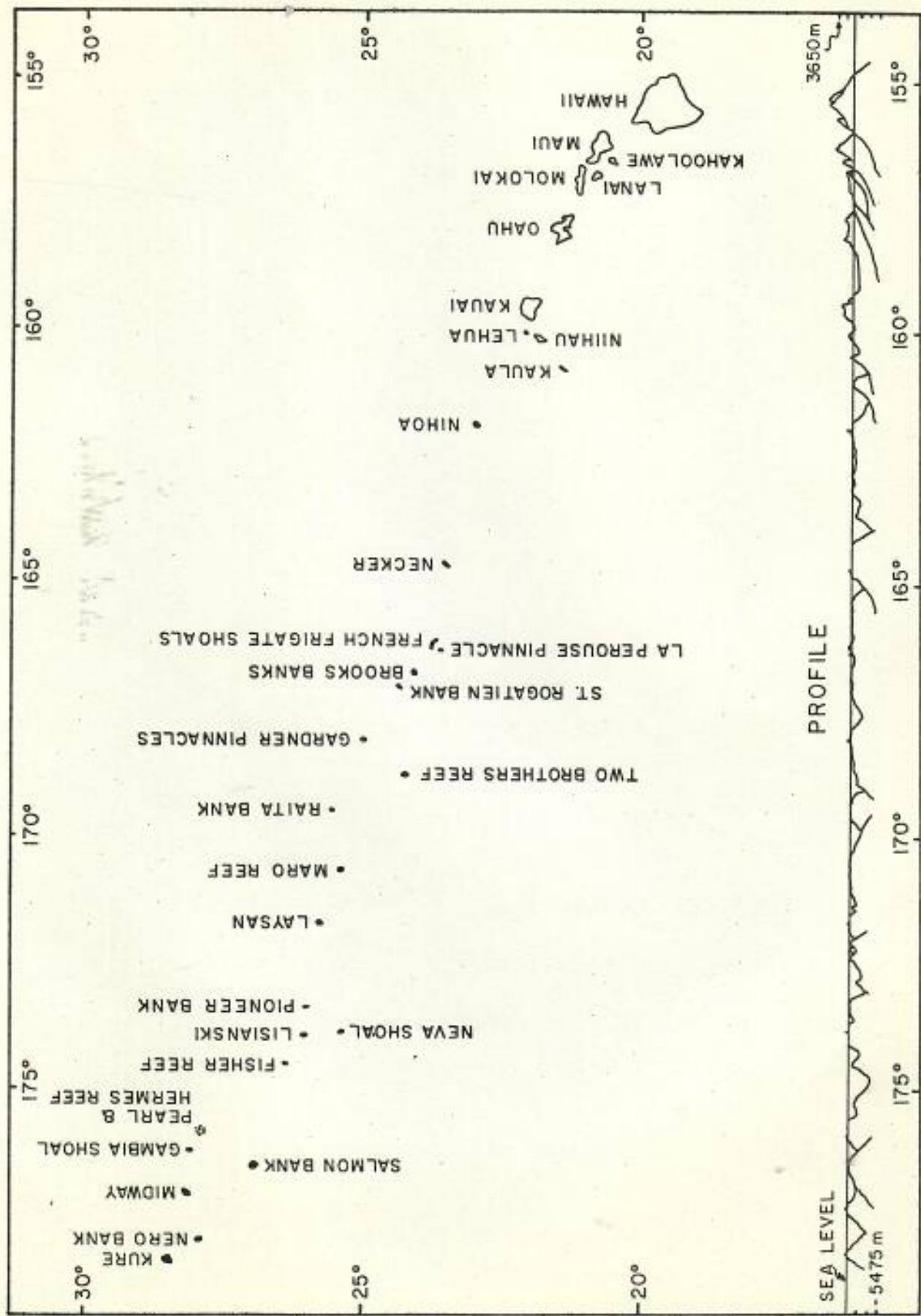
HAWAIIAN ARCHIPELAGO  
NORTH PACIFIC OCEAN

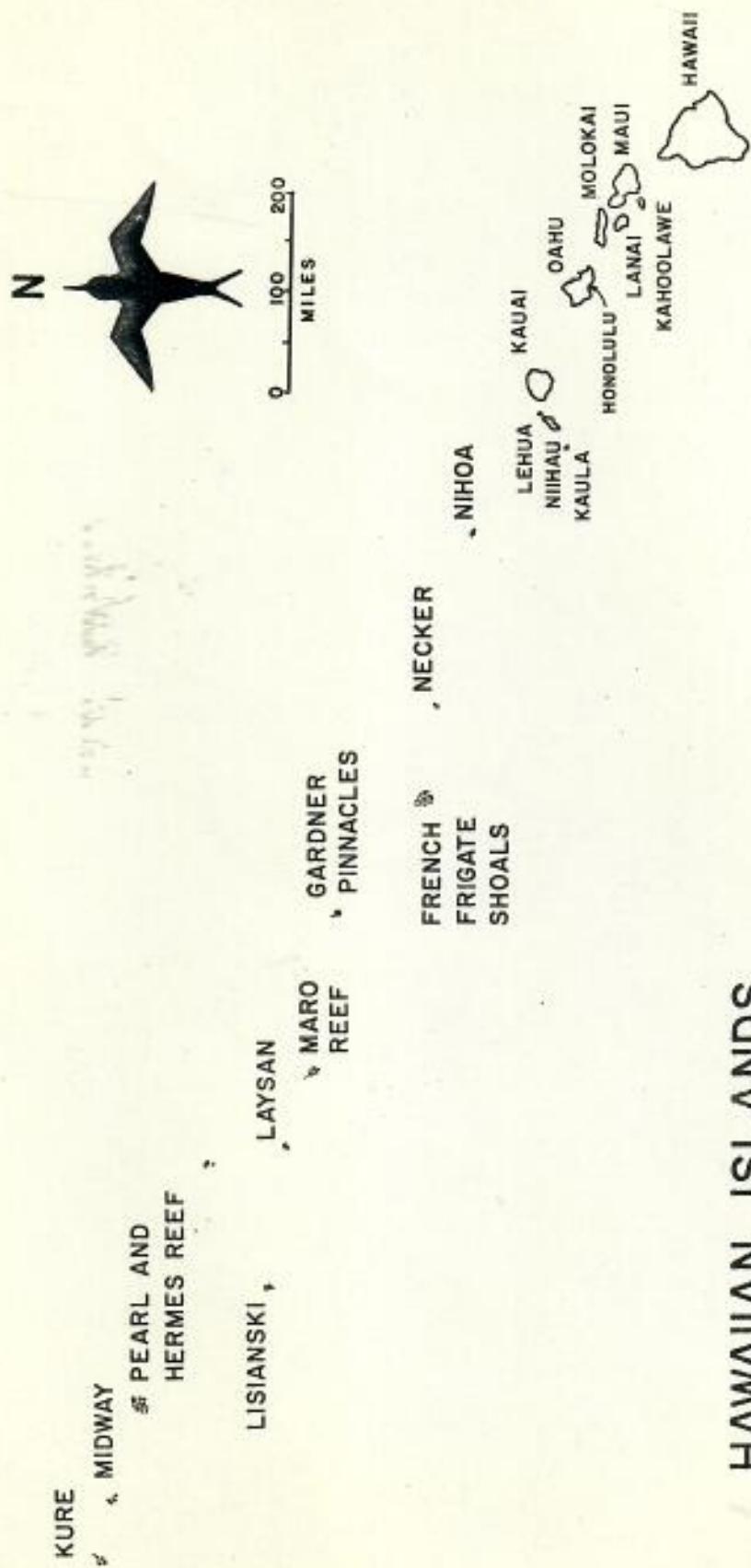
FRENCH FRIGATE SHOALS



HAWAIIAN ARCHIPELAGO

NORTH PACIFIC OCEAN





# HAWAIIAN ISLANDS

# NORTH PACIFIC OCEAN

## SEA SURFACE TEMPERATURE AT FRENCH FRIGATE SHOALS, June, 1974 - December, 1976

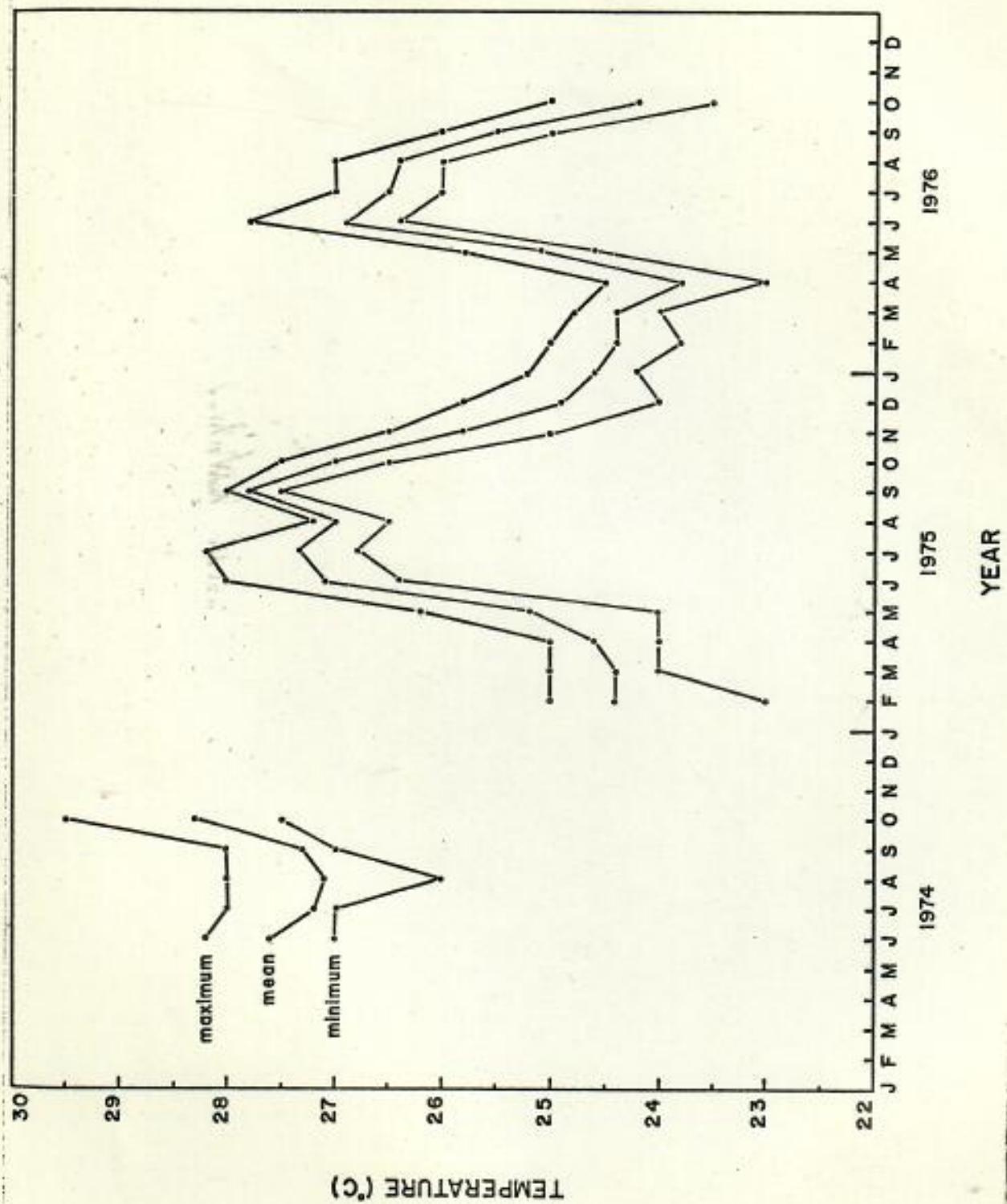
Year and month	°C Mean	°C Minimum	°C Maximum	Number of recordings
1974				
June	27.6	27.0	28.2	7
July	27.2	27.0	28.0	11
August	27.1	26.0	28.0	8
September	27.3	27.0	28.0	3
October	28.3	27.5	29.5	5
November	-	-	-	-
December	-	-	-	-
1975				
January	-	-	-	-
February	24.4	23.0	25.0	7
March	24.4	24.0	25.0	9
April	24.6	24.0	25.0	8
May	25.2	24.0	26.2	7
June	27.1	26.4	28.0	10
July	27.3	26.8	28.2	4

## SEA SURFACE TEMPERATURE AT FRENCH FRIGATE SHOALS, June, 1974 - December, 1976 (continued)

Year and month	°C Mean	°C Minimum	°C Maximum	Number of recordings
August	27.0	26.5	27.2	6
September	27.8	27.5	28.0	5
October	27.0	26.5	27.5	4
November	25.8	25.0	26.5	3
December	24.9	24.0	25.8	10
1976				
January	24.6	24.2	25.2	5
February	24.4	23.8	25.0	11
March	24.4	24.0	24.8	10
April	23.8	23.0	24.5	8
May	25.1	24.6	25.8	9
June	26.9	26.4	27.8	7
July	26.5	26.0	27.0	13
August	26.4	26.0	27.0	7
September	25.5	25.0	26.0	5

## SEA SURFACE TEMPERATURE AT FRENCH FRIGATE SHOALS, June, 1974 - December, 1976 (continued)

<u>Year and month</u>	<u>°C Mean</u>	<u>°C Minimum</u>	<u>°C Maximum</u>	<u>Number of recordings</u>
October	24.2	23.5	25.0	7
November				
December				



## NUMBER OF ADULT GREEN TURTLES TAGGED AT FRENCH FRIGATE SHOALS

Expedition no. and time period	Basking				Nesting				Total $\frac{M}{M+F}$
	Trig	W-S	Mullet	East	Gtn	Trig	W-S	East	
	M	F	M	F	M	F	M	F	
1 June - 19 July 1973				3			37		3 37
2 11-17 Oct. 1973			1					1 0	
3 30 May - 20 June 1974				3		1	53		3 54
4 27 June - 18 July 1974				1		7	19	1	26
5 26 July - 15 Aug. 1974						11		0	11
6 19 Sept. - 10 Oct. 1974								0	0
7 13-20 Feb. 1975			2	9	9	2	1		12 11
8 16-22 May 1975	2	1	4	1			2		3 8 5 13.

## NUMBER OF ADULT GREEN TURTLES TAGGED AT FRENCH FRIGATE SHOALS (continued)

Expedition no. and time period	Basking						Nesting				Total M F
	Trig M F	W-S M F	Mullet M F	East M F	Gin M F	Trig	W-S	East			
9 6-26 June 1975	4			4	1		3		89	8 93	
10 18 July - 7 Aug. 1975				4	1		1			4 36	
11 26-28 Aug. 1975							1	24	9		
12 1-4 Dec. 1975							1	1	1	0 2	
13 15-22 Jan. 1976				2	1		1	1		3 2	
14 8-19 April 1976				6	18	3 4	3	1	1	13 23	
15 7-13 May 1976				3	1	1	1	2	1	3 6	
16 28 June - 12 July 1976				2			3		1	19 3 22	
Total	20	36	22	9	2	2	20	4	1	4 33 65 330	

## NUMBER OF TAGGED ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS

Expedition no. and time period	Basking			Nesting			$\frac{\text{Total}}{\text{M F}}$
	Shark $\frac{\text{M}}{\text{F}}$	Tern $\frac{\text{M}}{\text{F}}$	Trig $\frac{\text{M}}{\text{F}}$	W-S $\frac{\text{M}}{\text{F}}$	East $\frac{\text{M}}{\text{F}}$	East $\frac{\text{M}}{\text{F}}$	
1 June - 19 July 1973				5		5	0 5
11-17 Oct. 1973	2		1			1	1 1
30 May - 20 June 1974	3			7	0	7	
27 June - 18 July 1974	4			2	0	2	
26 July - 15 Aug. 1974	5				0	0	
19 Sept. - 10 Oct. 1974	6				0	0	
13-20 Feb. 1975	7			2	2		2 2
16-22 May 1975	8				2	1	2 1

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## NUMBER OF TAGGED ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS (continued)

Expedition no. and time period	Shark M F	Tern M F	Basking			Nesting			Total M F
			Trig M F	W-S M F	East M F	East M F	East M F	East M F	
9 6-26 June 1975			1	3	3	1	2	4	6
10 18 July - 7 Aug. 1975			2	5		1	7	1	
11 26-28 Aug. 1975							0	0	
12 1-4 Dec. 1975			1	1			1	1	
13 15-22 Jan. 1976			1	1	1			1	2
14 8-19 April 1976			5	6	5	1		11	7
15 7-13 May 1976			2	3	1	1			3 4
16 28-June - 12 July 1976			3*	2	1	2	1	5	5 9
Total	1	0	3	0	13	18	19	8	1 0
*underwater							22	37	48

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NUMBER OF NESTING GREEN TURTLES TAGGED AND SUBSEQUENTLY RECOVERED  
 AT FRENCH FRIGATE SHOALS IN THE YEARS 1973-1976

Year	total no. of tagged nesting turtles	no. of recoveries of tagged nesting turtles observed in the year:			% recovered to date
		1973	1974	1975	
1973	42	-	-	-	4.8
1974	100	0	-	-	1.0
1975	130	1	0	-	0.8
1976	24	1	1	1	-

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS

Tag no.*	Date tagged/ expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
253FW	26 April 1973	East, FFS-BF	East, FFS-N	0-1	8 June 1973
254FW	26 April 1973	East, FFS-BF	East, FFS-N	0-1	14 June 1973
699FW	11 June 1968	Whale-Skate, FFS-BF	East, FFS-N	5-0	10 June 1973 1
372FW	10 July 1970	East, FFS-BF	East, FFS-N	2-11	10 June 1973 1
648	10 July 1970	East, FFS-BF	East, FFS-N	2-11	17 June 1973 1
648			Kailua Bay, Oahu	0-3	12 September 1973
464FW	16 March 1967	Trig, FFS-BF	Whale-Skate, FFS-B	6-7	16 October 1973 2
391FW	13 July 1970	East, FFS-BF	East, FFS-N	3-11	2 June 1974 3
60FW	7 May 1972	East, FFS-BF	East, FFS-N	2-1	3 June 1974 3

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

<u>Tag no.*</u>	<u>Date tagged/ expedition no.</u>	<u>Location tagged and status**</u>	<u>Location recovered and status</u>	<u>Interval years/months</u>	<u>Date recovered/ expedition no.</u>
976FW	18 May 1971	Gin, FFS-BF	East, FFS-N	3-1	11 June 1974 <u>3</u>
655FW	20 March 1968	Lisianski-BF	East, FFS-N	6-3	4 June 1974 <u>3</u>
1048FG	13 March 1964	Pearl and Hermes-BF	East, FFS-N	10-3	2 June 1974 <u>3</u>
167FW	26 September 1966	Pearl and Hermes-BF	East, FFS-N	7-9	30 June 1974 <u>4</u>
370FW	10 July 1970	East, FFS-N	East, FFS-N	4-0	5 July 1974 <u>4</u>
440FW	21 March 1967	Pearl and Hermes-BF	Pearl and Hermes-B	4-1	27 April 1971
440FW			East, FFS-N	3-2	30 June 1974 <u>3</u>
216FW	24 March 1973	Niihau-RC	East, FFS-N	1-2	3 June 1974 <u>3</u>
672	9 July 1973 <u>1</u>	East, FF-N	Maalaea Bay, Maui-0	1-1	31 July 1974

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

Tag no.*	Date tagged/ expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
853	15 July 1974 4	Whale-Skate, FFS-N	Princeville, Kauai-0	0-1	15 August 1974
74FW	29 August 1965	Trig, FFS-BF	Trig, FFS-BM	9-6	14 February 1975 7
473FW	14 March 1967	Trig, FFS-BF	Trig, FFS-B	7-11	19 February 1975 7
22FW	5 May 1972	Trig, FFS-BF	Trig, FF-B	2-9	19 February 1975 7
937	17 February 1975 7	Whale-Skate, FFS-BM	Whale-Skate, FFS-B	0-3	19 May 1975 8
951	18 February 1975 7	Trig, FFS-BF	Trig, FFS-B	0-3	20 May 1975 8
951FW	15 May 1971	Trig, FFS	Trig, FFS-BF	4-1	6 June 1975 9
959FW	16 May 1971	Last, FFS	Last, FFS-NF	4-1	10 June 1975 9

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

Tag no.*	Date tagged/ expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
650	4 June 1973 1	East, FFS-NF	East, FFS-NF	2-0	18 June 1975 9
957	19 February 1975 7	Whale-Skate, FFS-BM	Whale-Skate, FFS-B	0-4	21 June 1975 9
942FW	May 1971	Trig, FFS	Trig, FFS-BF	4-1	25 June 1975 9
933	14 February 1975 7	Whale-Skate, FFS-BM	Whale-Skate, FFS-B	0-4	18 June 1975 9
933			Whale-Skate, FFS-B	0-1	20 July 1975 10
964	19 February 1975 7	Trig, FFS-BF	East, FFS-N	0-5	26 July 1975 10
953	18 February 1975 7	Whale-Skate, FFS-BM	Whale-Skate, FFS-B	0-4	9 June 1975 9
953			Whale-Skate, FFS-O	0-2	1 August 1975 10
974	12 June 1975 9	Trig, FFS-BM	Trig, FFS-B	0-2	6 August 1975 10

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## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

Tag no.*	Date tagged/ expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
943	17 February 1975 7	Trig, FFS-BF	Trig, FFS-B	0-11	21 January 1976 13
1196	2 December 1975 12	Trig, FFS-BF	Trig, FFS-B	0-4	12 April 1976 14
1160	31 July 1975 10	Whale-Skate, FFS-BM	Whale-Skate, FFS-B	0-9	12 April 1976 14
1200	17 January 1976 13	Mullet, FFS-BM	Shark, FFS-B	0-3	13 April 1976 14
702	6 December 1973	Makapuu, Oahu-RC	Whale-Skate, FFS-B	2-1	16 January 1976 13
			Whale-Skate, FFS-B	0-3	10 April 1976 14
747FW	14 June 1968	East, FFS	Trig, FFS-BM	5-4	15 October 1973 2
747FW			Trig, FFS-B	1-4	14 February 1975 7
747FW			Trig, FFS-B	0-4	12 June 1975 9
747FW			Trig, FFS-B	0-1	18 July 1975 10
747FW			Trig, FFS-B	0-9	11 April 1976 14
1131	21 June 1975 9	East, FFS-NF	Trig, FFS-BF	0-9	12 April 1976 14

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

Tag no.*	Date tagged/ expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
940	17 February 1975 7	Whale-Skate, FFS-BF	Whale-Skate, FFS-B	0-4	11 June 1975 9
940			Whale-Skate, FFS-B	0-2	31 July 1975 10
940			Whale-Skate, FFS-B	0-8	11 April 1976 14
948	18 February 1975 7	Trig, FFS-BM	Trig, FFS-B	0-3	21 May 1975 8
948			Whale-Skate, FFS-B	0-2	19 July 1975 10
948			Whale-Skate, FFS-B	0-9	12 April 1976 14
469FW	14 March 1967	Trig, FFS-BF	Trig, FFS-BM	9-1	12 April 1976 14
456FW	13 March 1967	Whale-Skate, FFS-BF	Whale-Skate, FFS-BM	9-1	12 April 1976 14
962	19 February 1975 7	Trig, FFS-BF	Trig, FFS-B	1-2	13 April 1976 14
632	4 June 1973 1	East, FFS-NF	Trig, FFS-B	2-9	13 April 1976 14

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

Tag no.*	Date tagged expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
930	15 February 1975 7	Trig, FFS-BM	Whale-Skate, FFS-B	0-10	3 December 1975 12
930			Whale Skate, FFS-B	0-2	20 January 1976 13
930			Whale Skate, FFS-B	0-3	18 April 1976 14
1243	14 April 1976 14	Trig, FFS-BM	Whale-Skate, FFS-B	0-1	10 May 1976 15
1226	13 April 1976 14	Trig, FFS-BF	Trig, FFS-B	0-1	10 May 1976 15
1230	13 April 1976 14	Trig, FFS-BM	Trig, FFS-B	0-1	10 May 1976 15
1215	11 April 1976 14	Trig, FFS-BM	Trig, FFS-B	0-1	10 May 1976 15
985FW	18 May 1971	Little Gin, FFS-BF	Whale-Skate, FFS-B	5-0	10 May 1976 15
96FW	22 March 1966	Trig, FFS	Trig, FFS	0-3	10 June 1966
96FW			Trig, FFS-BF	9-0	26 June 1975 9

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

Tag no.*	Date tagged expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
96FW			Trig, FFS-B	0-5	3 December 1975
96FW			Trig, FFS-B	0-5	10 May 1976
				12	
				15	
945	17 February 1975	Trig, FFS-BF	Trig, FFS-B	1-2	10 April 1976
945			Trig, FFS-B	0-1	10 May 1976
				14	
				15	
1219	12 April 1976	East, FFS-BF	East, FFS-N	0-3	6 July 1976
	14			16	
1241	14 April 1976	Trig, FFS-BM	Tern, FFS-0	0-3	11 July 1976
	14			16	
2002	3 December 1975	Trig, FFS-BM	Trig, FFS-B	0-4	14 April 1976
2002	12		Tern, FFS-0	0-3	10 July 1976
				14	
				16	
2004	3 December 1975	Trig, FFS-BM	Trig, FFS-B	0-4	14 April 1976
2004	12		Tern, FFS-0	0-3	10 July 1976
				14	
				16	

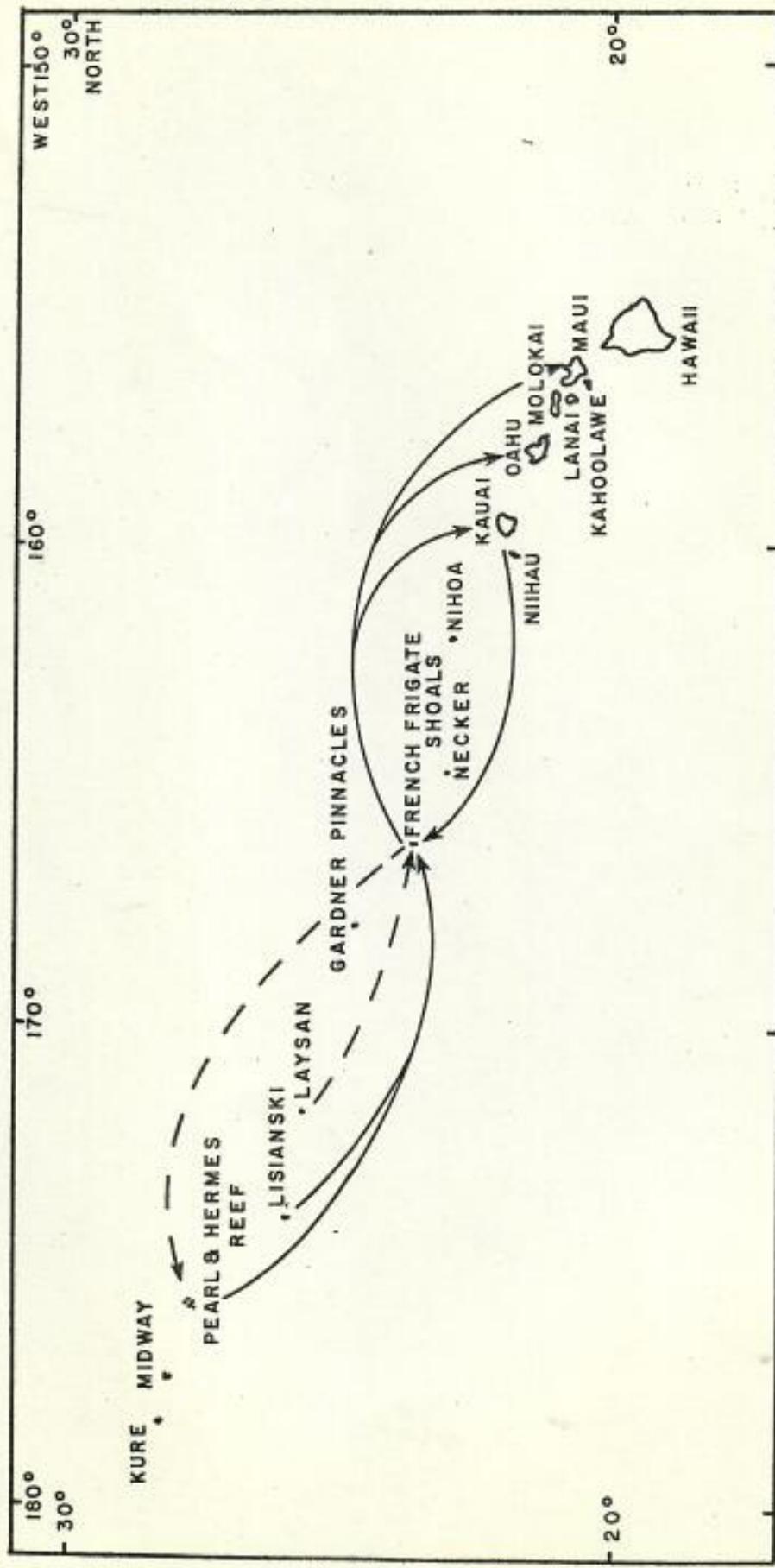
## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

Tag no.*	Date tagged expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
1039	13 June 1975 9	East, FFS	Trig, FFS-BF	0-10	13 April 1976 14
			Trig, FFS-BF	0-2	30 June 1976 16
883 FW	April 1969	Pearl and Hermes-B	East, FFS-NF	7-3	7 July 1976 16
719	2 June 1974	East, FFS-NF	East, FFS-N	2-1	8 July 1976 16
660FW	20 March 1968	Lisianski-B	East, FFS	3-2	16 May 1971
660FW			East, FFS-NF	5-2	9 July 1976 16
1060FG	16 September 1964	Pearl and Hermes-B	East, FFS-BM	11-10	4 July 1976 16
985FW	18 May 1971	Little Gin, FFS-B	Whale-Skate, FFS-BF	5-2	6 July 1976 16
132FW	20 September 1966	Pearl and Hermes-BF	Trig, FFS-BF	9-10	9 July 1976 16

## RECOVERY DATA FOR ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS (continued)

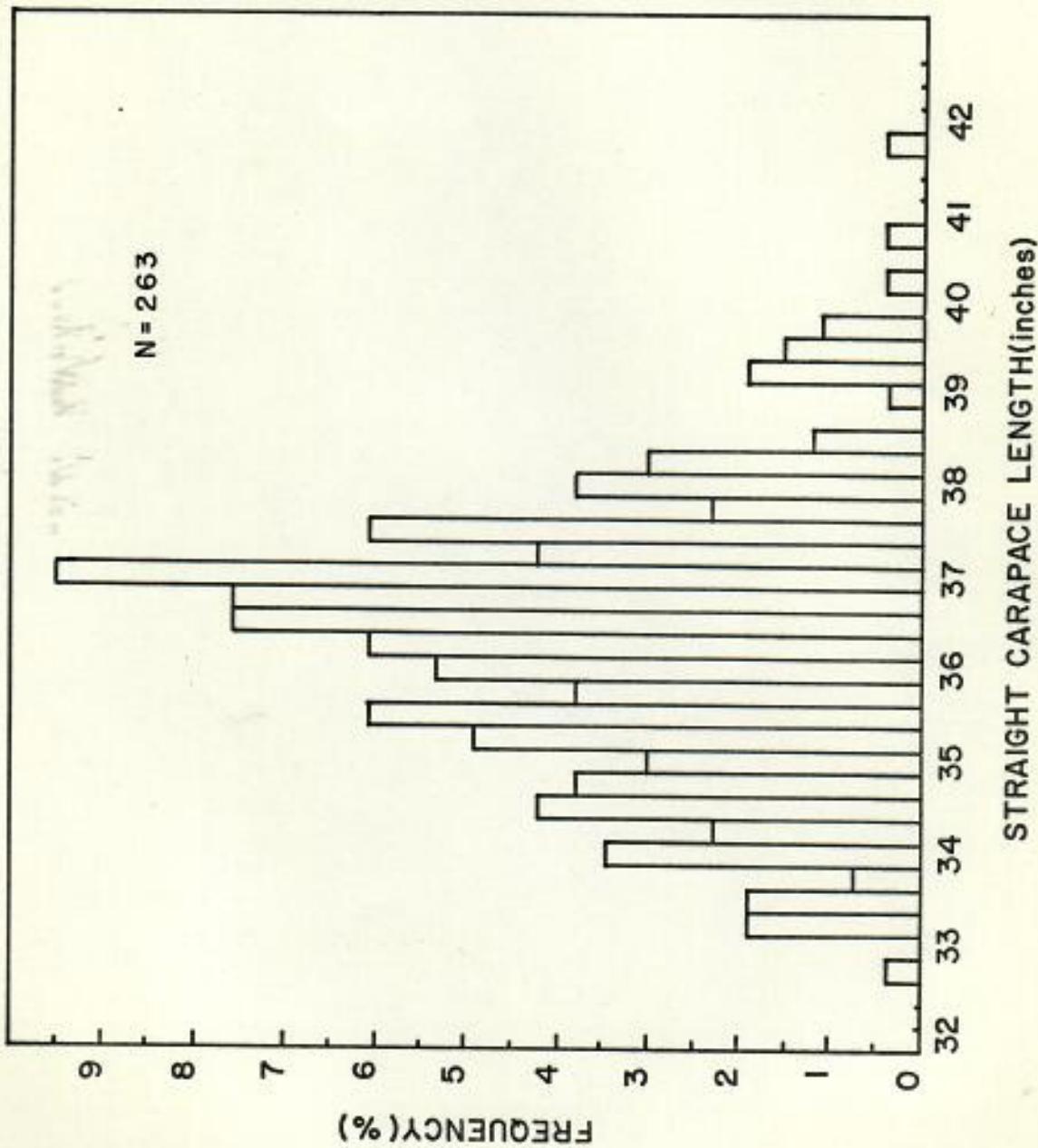
Tag no.*	Date tagged expedition no.	Location tagged and status**	Location recovered and status	Interval years/months	Date recovered/ expedition no.
995FW	27 April 1971	Pearl and Hermes-B	Whale-Skate, FFS-BF	5-3	10 July 1976 16
959	19 February 1975 7	Whale-Skate, FFS-BM	Whale-Skate, FFS-B	0-5	2 August 1975 10
959			Whale-Skate, FFS-B	0-11	10 July 1976 16
209FW	23 September 1966	Pearl and Hermes-B	Pearl and Hermes-B	6-0	September 1972
209FW			East, FFS-NF	3-10	12 July 1976 16

\*FW - U.S. Fish and Wildlife Service tag number  
 FG - Hawaii State Division of Fish and Game tag number  
 \*\*F/M - female/male  
 B - basking  
 N - nesting  
 O - offshore  
 FFS - French Frigate Shoals



## STRAIGHT CARAPACE LENGTH OF ADULT GREEN TURTLES AT FRENCH FRIGATE SHOALS

	Female				Male			
	mean (inches)	S.D.	range	N	mean (inches)	S.D.	range	N
1973	36.43	1.90	32.75-40.75	52	32.19	3.55	74.9 - 94.0	4
1974	36.52	1.29	33.5-41.75	91	34.06	1.01	33.25-35.5	4
1975	36.08	1.44	33.25-40.25	113	34.50	1.41	33.5-35.5	2
1976	36.57	1.54	34.5-39.25	7	-	-	-	0
Overall	36.31	-	32.75-41.75	263	33.40	-	74.9 - 94.0	10
							29.5-37	10

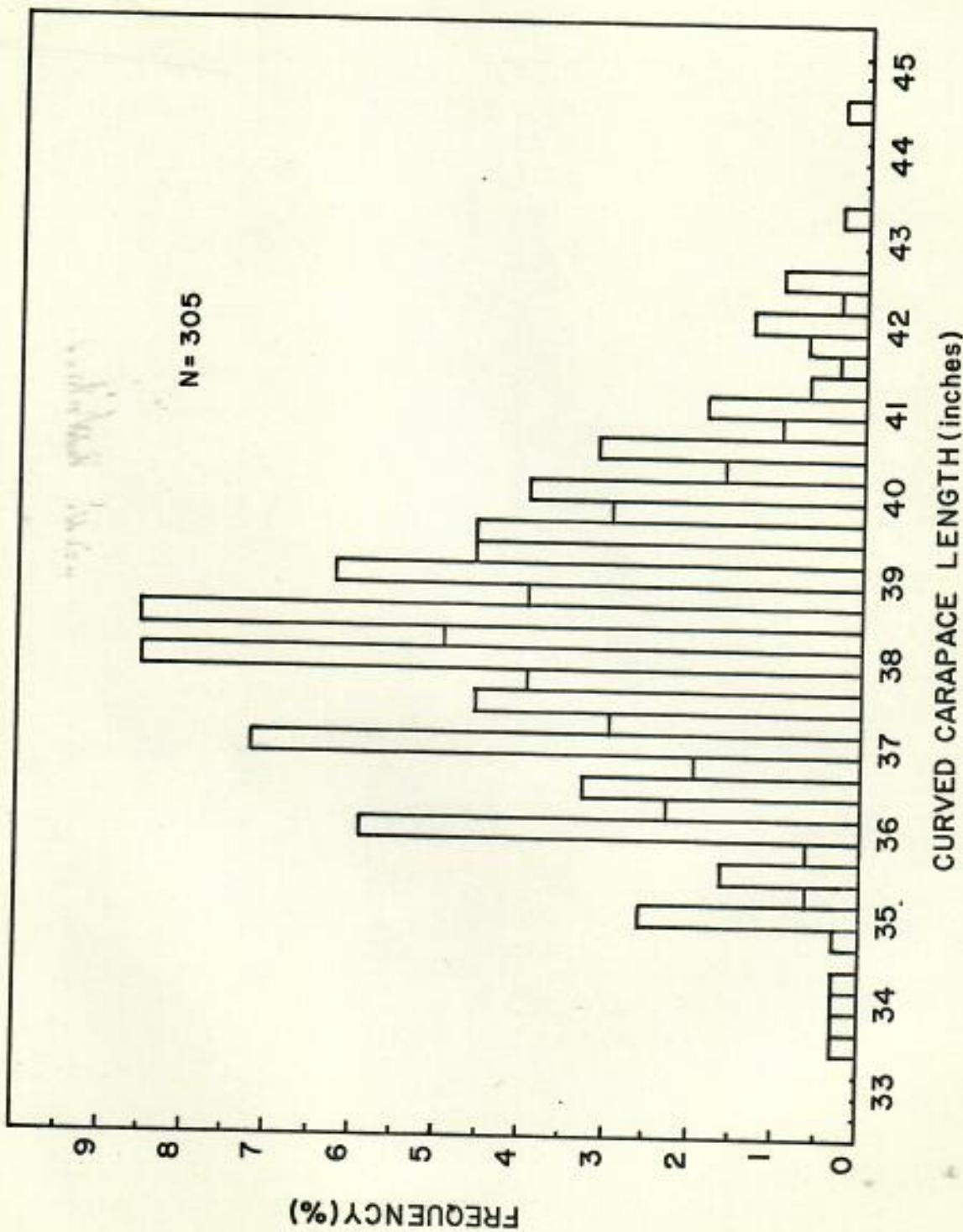


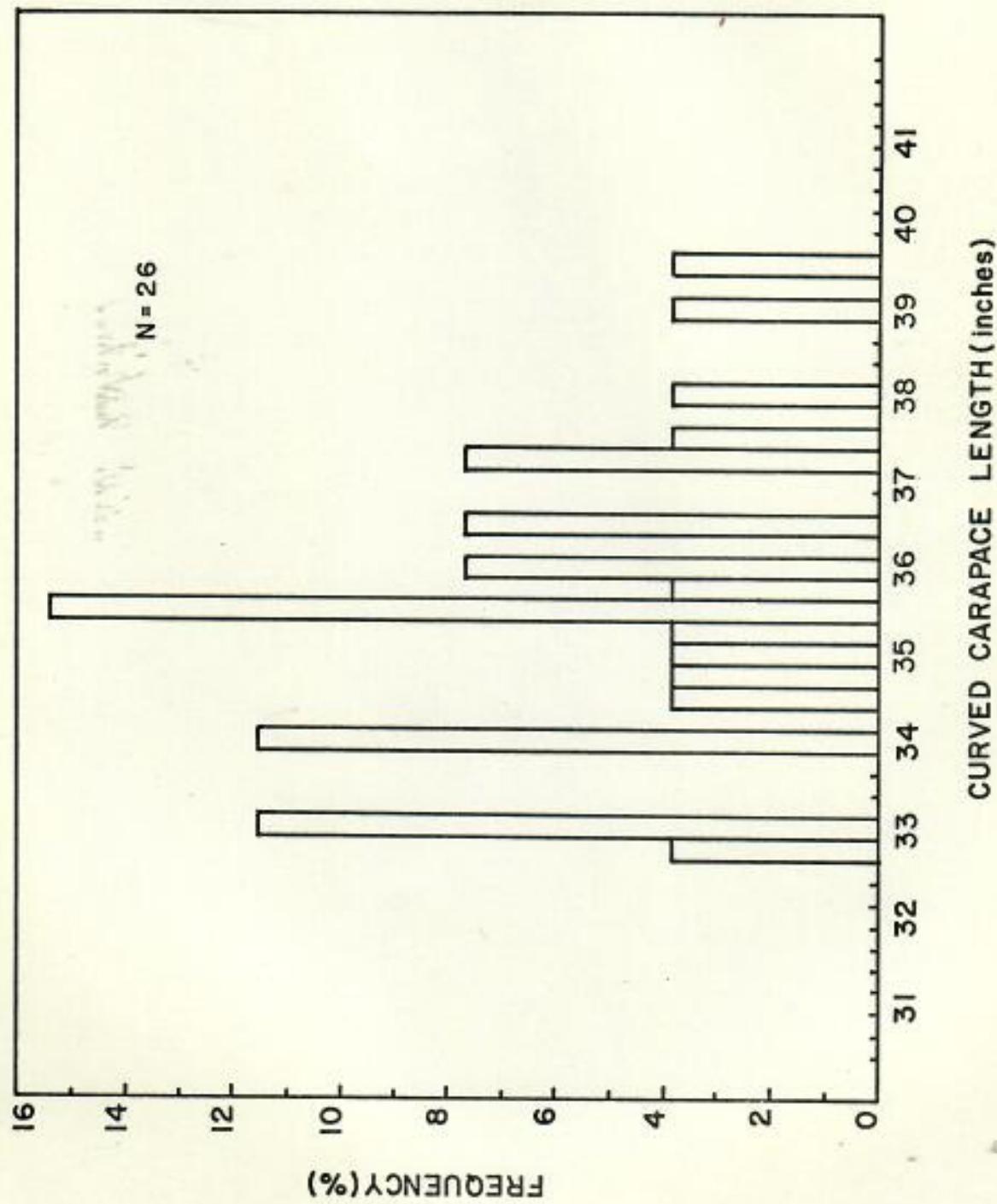
## STRAIGHT CARAPACE WIDTH OF ADULT GREEN TURTLES AT FRENCH FRIGATE SHOALS

	Female				Male			
	mean (inches)	S.D.	range	N	mean (inches)	S.D.	range	N
1973	28.40	1.73	24.5-34	51	67.9	0.35	67.3-68.6	2
1974	28.40	1.36	25-33.75	93	67.3	0.61	66.0-69.2	4
1975	27.92	1.18	25.25-31	115	66.7	0	26-27.25	2
1976	27.92	0.96	27-29.25	6	-	-	-	0
Overall	28.18	-	24.5-34	265	67.3	-	66.9-69.2	8
					26.50	-	26-27.5	

## CURVED CARAPACE LENGTH OF ADULT GREEN TURTLES AT FRENCH FRIGATE SHOALS

	Female				Male			
	mean (inches)	S.D.	range	N	mean (inches)	S.D.	range	N
1973	38.30	2.06	34.75-42.50	44	-	-	-	0
1974	38.47	1.47	35.5-44.5	108	36.35	1.36	34-39	12
1975	37.90	1.90	33.5-42.5	135	34.88	1.91	32.75-39.5	14
1976	38.42	1.55	36.75-43.25	18	-	-	-	0
Overall	38.19	-	33.5-44.5	305	35.56	-	32.75-39.5	26





## CURVED CARAPACE WIDTH OF ADULT GREEN TURTLES AT FRENCH FRIGATE SHOALS

35.

	Female					Male				
	mean (inches)	S.D.	range	N	mean (inches)	S.D.	range	N		
1973	35.69	1.70	31.5-40.25	44	-	-	-	0		
1974	36.22	1.70	32.5-41.5	108	33.50	1.25	31.5-35.25	11		
1975	35.77	1.87	31.5-40.25	135	31.73	1.38	28.5-33.5	14		
1976	35.39	2.10	32-40.25	18	-	-	-	0		
Overall	35.89	-	31.5-41.5	305	32.51	-	28.5-35.25	25		

## CARAPACE MEASUREMENT DATA FOR ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS

Tag no. and sex*	Initial measurements** (inches)	Interval years/months	Recovery measurements (inches)		Difference
253FW F	S 34 3/4 x 26 1/2	0 - 1	S 35 1/8 x 26 3/4	S 3/8 x 1 1/4	
254FW F	S 35 3/4 x 27	0 - 1	S 36 x 27 3/4	S 1/4 x 3/4	
699FW F	C 39 3/8 x 36 1/8 S 37 3/8 x 29 1/4	5 - 0	C 39 1/2 x 36 S 37 1/2 x 29	C 1/8 x -1/8 S 1/8 x -1/4	
372FW F	C 37 3/4 x 33 5/8 S 35 1/4 x 26 3/4	2 - 11	C 36 3/4 x 33 1/2 S 35 1/2 x 27 5/8	C -1 x -1/8 S 1/4 x -1/8	
648	C 39 1/2 x 35 1/4 S 36 1/4 x 27 1/2	2 - 11	C 39 1/2 x 36 S 37 1/2 x 29	C 0 x 3/4 S 1 1/4 x 1 1/2	
464FW F	C 34 1/2 x 31 3/4	6 - 7	C - x 34 1/2	C - x 2 3/4	
391FW F	C 40 1/2 x 36 S 37 1/4 x 29 1/8	3 - 11	C 40 x 36 S 38 1/2 x 30	C -1/2 x 0 S 1 1/4 x 7/8	
60FW F	C 38 x 36 S 34 3/4 x 27 1/4	2 - 1	C 37 3/4 x 35 1/2 S 36 x 27 3/4	C -1/8 x -1/2 S 1 1/4 x 1/2	

## CARAPACE MEASUREMENT DATA FOR ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS (continued)

Tag no. and sex*	Initial measurements** (inches)	Interval years/months	Recovery measurements (inches)		Difference
			C	S	
976FW F	C 40 x 36 1/4 S 37 1/4 x 27 1/2	3 - 1	C 39 3/4 x 36 S 38 x 29 1/4	C -1/4 x -1/4 S 3/4 x 1 3/4	
655FW F	S 35 1/2 x 26 5/8	6 - 3	S 36 1/2 x 27 1/4	C 1 x 5/8	
1048FG F	C 39 x 40	10 - 3	C 38 1/4 x 37 1/2	C -3/4 x -2 1/2	
167FW F	C 39 x 36	7 - 9	C 38 3/4 x 36 3/4	C -1/4 x 3/4	
440FW F	C 38 x 33	4 - 1	C 37 1/4 x 30 5/8	C -3/4 x -2 3/8	
440FW		3 - 2	C 37 1/4 x 34 1/4	C 0 x 3 5/8	
473FW F	C 34 x 32 3/4	7 - 11	C 36 x 35 1/4	C 2 x 2 1/2	
22FW F	C 38 1/2 x 40 1/4	2 - 9	C 38 x 39 3/4	C -1/2 x -1/2	
959FW F	C 40 x 39 1/2 S 37 1/2 x 30 3/4	4 - 1	C 39 3/4 x 37 S 37 x 28 3/4	C -1/4 x -2 1/2 S - 1/2 x -2	

## CARAPACE MEASUREMENT DATA FOR ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS (continued)

Tag no. and sex*	Initial measurements** (inches)	Interval years/months	Recovery measurements (inches)		Difference
			C	S	
650 F	C 40 x 37 3/4 S 37 1/2 x 30 3/4	2 - 0	C 39 3/4 x 37 S 37 x 28 3/4	C -1/4 x -3/4 S -1/2 x -2	
747FW M	C 34 1/4 x 34 S 32 x 27	5 - 4	C 34 1/2 x 34 S 32 1/2 x 26	C -1/4 x 0 S -1/2 x -1	
747FW		1 - 4	C 34 x 34	C -1/2 x 0	
1039 F	C 29 1/2 x 28	1 - 0	C 30 x 28	C 1/2 x 0	
719 F	C 38 1/2 x 35	2 - 1	C 39 x 35 1/2	C 1/2 x 1/2	
660FW F	PL 32; 325 lb	3 - 2	PL 31 3/4; 330 lb	PL -1/4; 5 lb	
1060FG M	C 34 x 31 1/2	11 - 10	S 32 1/2 x 27 3/4		
985FW F	C 40 1/2 x 37	5 - 2	C 40 1/2 x -	C 0 x -	

CARAPACE MEASUREMENT DATA FOR ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS (continued)

Tag no. and sex*	Initial measurements** (inches)	Interval years/months	Recovery measurements (inches)		Difference
			C	S	
209FW F	C 36 x 35	6 - 0	C 38 1/4 x 37	C 2 1/4 x 2	
Recovery of turtles released after extended periods in captivity					
216FW F	C 40 1/4 x 37 S 38 1/2 x 29 3/4	1 - 2	C 40 1/2 x 37 1/2 S 38 1/2 x 30 1/4	C 1/4 x 1/2 S 0 x 1/4	
702 F	C 28 1/2 x 24 S 26 3/4 x 20	2 - 4	C 30 1/2 x - S 28 3/4 x 22 3/4	C 2 x - S 2 x 2 3/4	

\*FW - U. S. Fish and Wildlife Service tag number  
 FG - Hawaii State Division of Fish and Game tag number  
 F/M - female/male

\*\*S/C - straight/curved  
 length x width  
 PL - plastron length

## AVERAGE YEARLY CHANGE IN CARAPACE MEASUREMENTS OF ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS

Tag no. and sex*	Curved				Straight			
	length (mm) +	length (mm) -	width (mm) +	width (mm) -	length (mm) +	length (mm) -	width (mm) +	width (mm) -
699FW F	0.6		0.6		0.6		0.6	
372FW F					1.1		1.1	
648 F		8.7			2.2			
464FW F	0	0	6.5		10.9		13.1	
391FW F			10.6					
60FW F			3.3		8.1		5.7	
976FW F		1.5		6.1	15.2		6.1	
655FW F			2.1		2.1		6.2	14.4
1048FG F			4.1		2.5			
167FW F				1.9		6.2		
440FW F				0.8	2.5			
	4.7				14.8			

AVERAGE YEARLY CHANGE IN CARAPACE MEASUREMENTS OF ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS (cont'd.)

Tag no. and sex*	Curved length (mm)			Straight length (mm)			width (mm) + - + - + - + -
	+	-	+ -	+ -	+ -	+ -	
440FW F	0	0	29.1				
473FW F	6.4		8.0				
22FW F		4.6		4.6			
959FW F		1.6		15.6			3.1
650 F		3.2		9.5			6.3
747FW M		1.2	0	0			2.4
747FW N			9.5	0	0		
1039 F		12.7		0	0		4.8
719 F		6.1					
985FW F	0	0					
209FW F		9.5					8.5

\*FW - U.S. Fish and Wildlife Service tag number

FG - Hawaii State Division of Fish and Game tag number

F/M- female/male

SUMMARY OF DATA FOR CHANGE IN CARAPACE MEASUREMENTS  
OF ADULT GREEN TURTLES RECOVERED AT FRENCH FRIGATE SHOALS

Number of observations	Curved		Straight		width
	length	width	length	width	
21	20	9	9	9	
% showing increase					
yearly mean, mm	28.6	40.0	66.7	44.4	
range, mm	6.6	9.2	7.2	9.8	
Interval in years	0.6 - 12.7	2.5 - 29.1	0.6 - 15.2	5.7 - 14.4	
mean	4.7	5.3	3.3	3.0	
range	1.0 - 7.9	2.1 - 7.9	2.1 - 5.0	2.1 - 3.9	
% showing no change					
Interval in years	14.3	15.0	0	0	
mean	3.7	2.6	0	0	
range	2.9 - 5.2	1.0 - 5.3			
% showing decrease					
yearly mean, mm	57.1	45.0	33.3	55.6	
range, mm	- 3.6	- 6.7	- 3.9	- 9.0	
Interval in years	0.8 - 9.5	0.6 - 15.6	2.4 - 6.3	1.1 - 25.4	
mean	4.1	4.0	3.8	3.9	
range	1.3 - 10.2	2.0 - 10.2	2.0 - 5.3	2.0 - 5.3	

CONSISTENCY OF CHANGE IN CARAPACE MEASUREMENTS OF ADULT GREEN TURTLES

RECOVERED AT FRENCH FRIGATE SHOALS

Measurement	Number of observations	Consistent number	%	Inconsistent number	%
Curved length/width	19	13	68.4	6	31.6
Straight length/width	9	7	77.8	2	22.2
Length curved/width	9	4	44.4	5	55.6
Width curved/width	8	5	62.5	3	37.5

## INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND

Expedition no. and date*	total no. ashore	Nesting turtles		no. newly observed
		no. successful	% successful	
1				
3 June 1973	5	0	0	5
4	6	1	16.7	3
5	3	3	100	2
6	0	-	-	0
7	3	2	66.7	3
8	2	1	50.0	2
9	2	1	50.0	2
10	3	1	33.3	1
11	4	2	50.0	4
12	2	0	0	0
13	2	0	0	1
14	3	0	0	2
15	5	2	40.0	4
16	7	1	14.3	5
17	9	2	22.2	4
18	8	1	12.5	6
19	8	1	12.5	3
20	8	0	0	2
21	5	1	20.0	0
22	5	1	20.0	2
23	6	0	0	0
24	1	1	100	0

INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND  
(continued)

Expedition no. and date*	total no. ashore	Nesting turtles no. successful	% successful	no. newly observed
25 June 1973	3	1	33.3	1
26	5	1	20.0	0
27	4	0	0	3
28	2	0	0	1
29	4	1	25.0	0
30	3	2	66.7	1
1 July 1973	5	2	40.0	2
2	4	0	0	0
3	7	2	28.6	1
4	10	3	30.0	2
5	5	1	20.0	0
6	7	1	14.3	0
7	6	2	33.3	1
8	5	3	60.0	1
9	5	2	40.0	1
10	5	1	20.0	0
11	4	3	75.0	0
12	3	2	66.7	0
13	5	1	20.0	1
14	6	1	16.7	2
15	3	1	33.3	0

INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND  
(continued)

Expedition no. and date*	total no. ashore	Nesting turtles		no. newly observed
		no. successful	% successful	
3				
1 June 1974	3	2	66.7	3
2	6	4	66.7	6
3	6	1	16.7	5
4	10	8	80.0	6
5	6	1	16.7	3
6	9	5	55.5	5
7	3	1	33.3	1
8	8	4	50.0	8
9	6	1	16.7	4
10	6	3	50.0	6
11	9	2	22.2	5
12	9	5	55.5	5
13	9	3	33.3	4
14	8	4	50.0	2
15	8	2	25.0	1
16	11	8	72.7	2
17	5	3	60.0	1
18	6	3	50.0	1
19	7	4	57.1	1
4				
27 June 1974	6	2	33.3	0

INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND  
(continued)

Expedition no. and date*	total no. ashore	Nesting turtles no. successful	% successful	no. newly observed
28 June 1974	9	5	55.5	2
29	9	2	22.2	2
30	12	8	66.7	4
1 July 1974	9	4	44.4	2
2	20	12	60.0	3
3	10	6	60.0	1
4	9	5	55.5	0
5	6	2	33.3	2
6	9	7	77.8	0
7	7	4	57.1	1
8	10	5	50.0	2
9	8	4	50.0	1
10	9	6	66.7	0
11	8	6	75.0	2
12	8	2	25.0	0
13	12	8	66.7	0
14	11	7	63.6	2
15	9	7	77.8	0
16	4	2	50.0	0
17	5	2	40.0	0

INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND  
(continued)

Expedition no. and date*	total no. ashore	Nesting turtles		no. newly observed
		no. successful	% successful	
5				
28 July 1974	6	3	50.0	1
29	10	7	70.0	1
30	7	3	42.9	0
31	8	5	65.5	2
1 August 1974	5	5	100	0
2	3	3	100	1
3	3	2	66.7	1
4	4	2	50.0	1
5	2	1	50.0	0
6	7	6	85.7	2
7	8	2	25.0	0
8	3	3	100	0
9	1	1	100	1
10	4	2	50.0	0
11	9	7	77.8	1
12	7	5	71.4	0
13	2	0	0	0
14	4	2	50.0	0
8				
21 May 1975	3	1	33.3	3

INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND  
(continued)

Expedition no. and date*	total no. ashore	Nesting turtles		no. newly observed
		no. successful	% successful	
9				
6 June 1975	11	3	27.3	11
7	15	5	75.0	13
8	17	10	58.8	8
9	10	5	50.0	4
10	8	2	25.0	2
11	11	4	36.4	6
12	12	5	41.7	6
13	13	4	30.8	7
14	8	6	75.0	4
15	17	9	52.9	9
16	14	4	28.6	5
17	11	7	63.6	5
18	10	4	40.0	3
19	17	4	23.5	2
20	10	4	40.0	1
21	17	11	64.7	5
22	16	7	43.7	3
23	10	1	10.0	2
24	12	8	66.7	0

INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND  
(continued)

Expedition no. and date*	total no. ashore	Nesting turtles no. successful	% successful	no. newly observed
	10			
19 July 1975	11	6	54.5	1
20	6	3	50.0	0
21	13	7	53.8	3
22	6	3	50.0	2
23	12	7	58.3	2
24	9	3	33.3	0
25	8	3	37.5	0
26	8	5	62.5	1
27	8	5	62.5	1
	11			
26 August 1975	6	3	50.0	1
	16			
28 June 1976	4	3	75.0	4
29	2	1	50.0	1
30	1	0	0	1
1 July 1976	5	2	40.0	2
3	3	1	33.3	1
4	5	4	80.0	5
5	3	1	33.3	1
6	5	3	60.0	4

INTENSITY OF GREEN TURTLE NESTING ON EAST ISLAND  
(continued)

Expedition no. and date*	total no. ashore	Nesting turtles no. successful	% successful	no. newly observed
7 July 1976	6	4	66.7	3
8	4	3	75.0	3
9	1	0	0	0
11	4	3	75.0	1

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\*represents observations made from 1900h of the date listed to 0800h of the following day

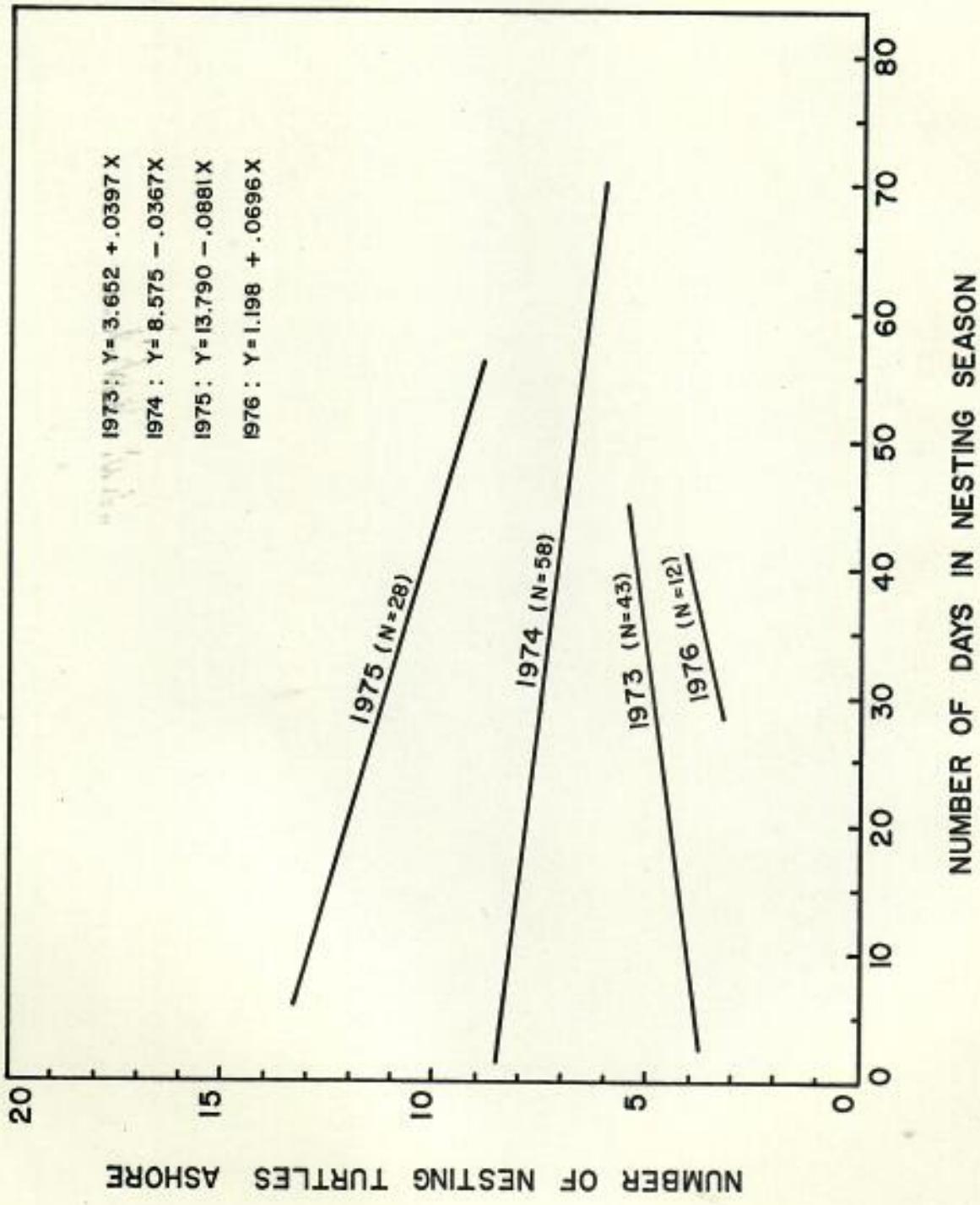
## RESULTS OF REGRESSION ANALYSIS OF GREEN TURTLES NESTING AT EAST ISLAND ON TIME WITHIN SEASON

Year, expedition nos. and item	Dependent variable (y)		
	total no. turtles ashore each night	% successful in nesting each night	no. newly observed each night
<b>1973</b>			
(1)			
Mean	4.6	29.1	1.6
S.D.	2.2	26.5	1.6
range	0 - 10	0 - 100	0 - 5
Time within season (independent variable x)			
regression coefficient b	0.040	0.152	-0.063
t - ratio	1.502	0.464	-3.608***
d.f.	41	41	41
<b>1974</b>			
(3,4&5)			
Mean	7.2	54.5	1.8
S.D.	3.1	22.3	2.0
range	1 - 20	0 - 100	0 - 8
Time within season (independent variable x)			
regression coefficient b	-0.037	0.304	-0.057
t - ratio	-2.127*	2.518*	-7.019***
d.f.	56	56	56

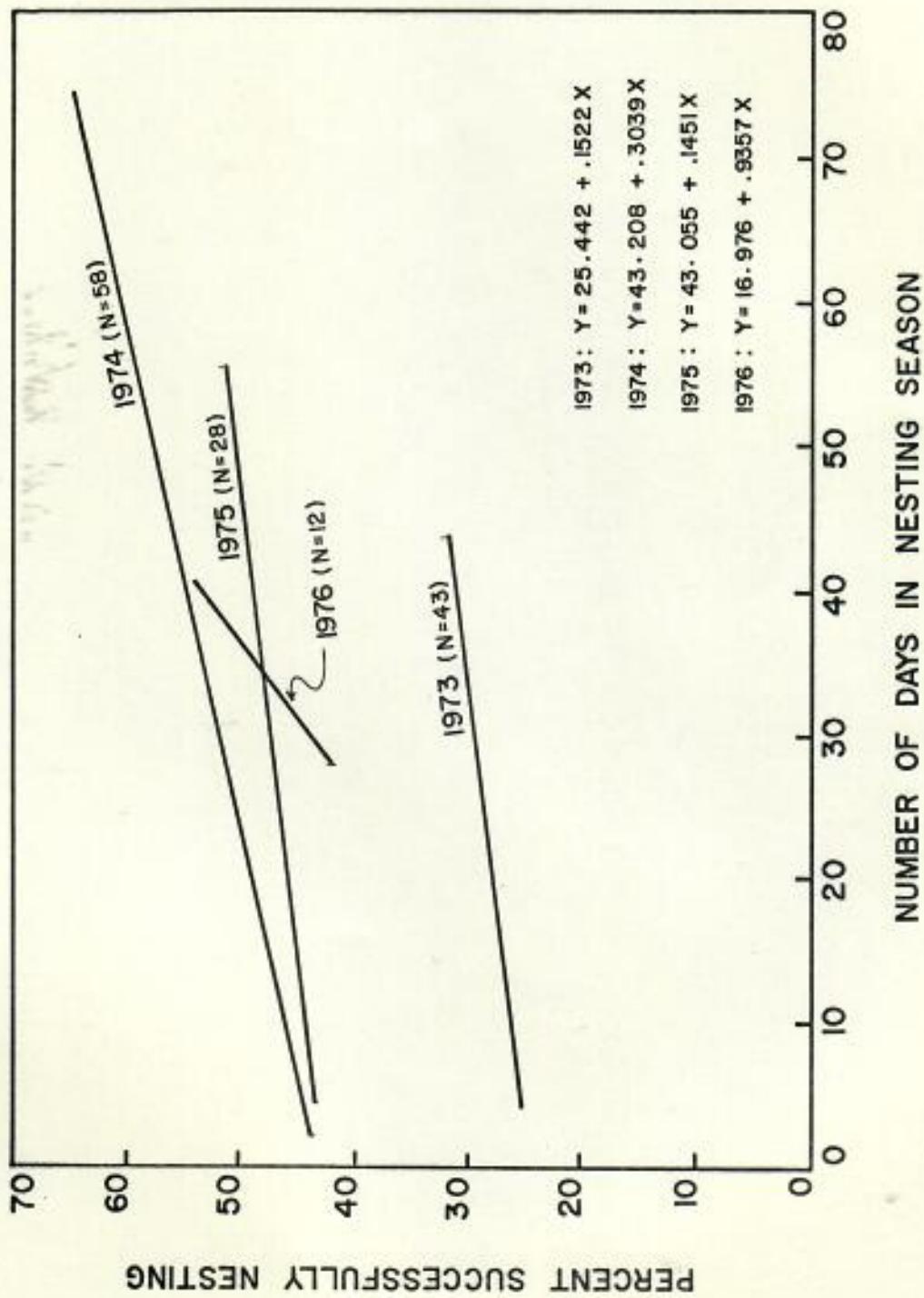
RESULTS OF REGRESSION ANALYSIS OF GREEN TURTLES NESTING AT EAST ISLAND ON TIME WITHIN SEASON

Year, expedition nos. and item	% successful total no. turtles ashore each night	no. newly observed in nesting each night	no. newly observed each night
<hr/>			
1975 (9&10)			
Mean	11.4	47.0	3.7
S.D.	3.3	16.5	3.4
range	6 - 17	10.0 - 75.0	0 - 13
Time within season (independent variable x) regression			
coefficient b	-0.081	0.145	0.012
t - ratio	-2.779**	0.849	-4.728***
d.f.	26	26	26
1976 (16)			
Mean	3.6	49.0	2.2
S.D.	1.6	28.3	1.6
range	1 - 6	0 - 75.0	0 - 5
Time within season (independent variable x) regression			
coefficient b	0.070	0.936	-0.050
t - ratio	0.574	0.439	-0.418
d.f.	10	10	10

\*P<0.05  
\*\*P<0.01  
\*\*\*P<0.001

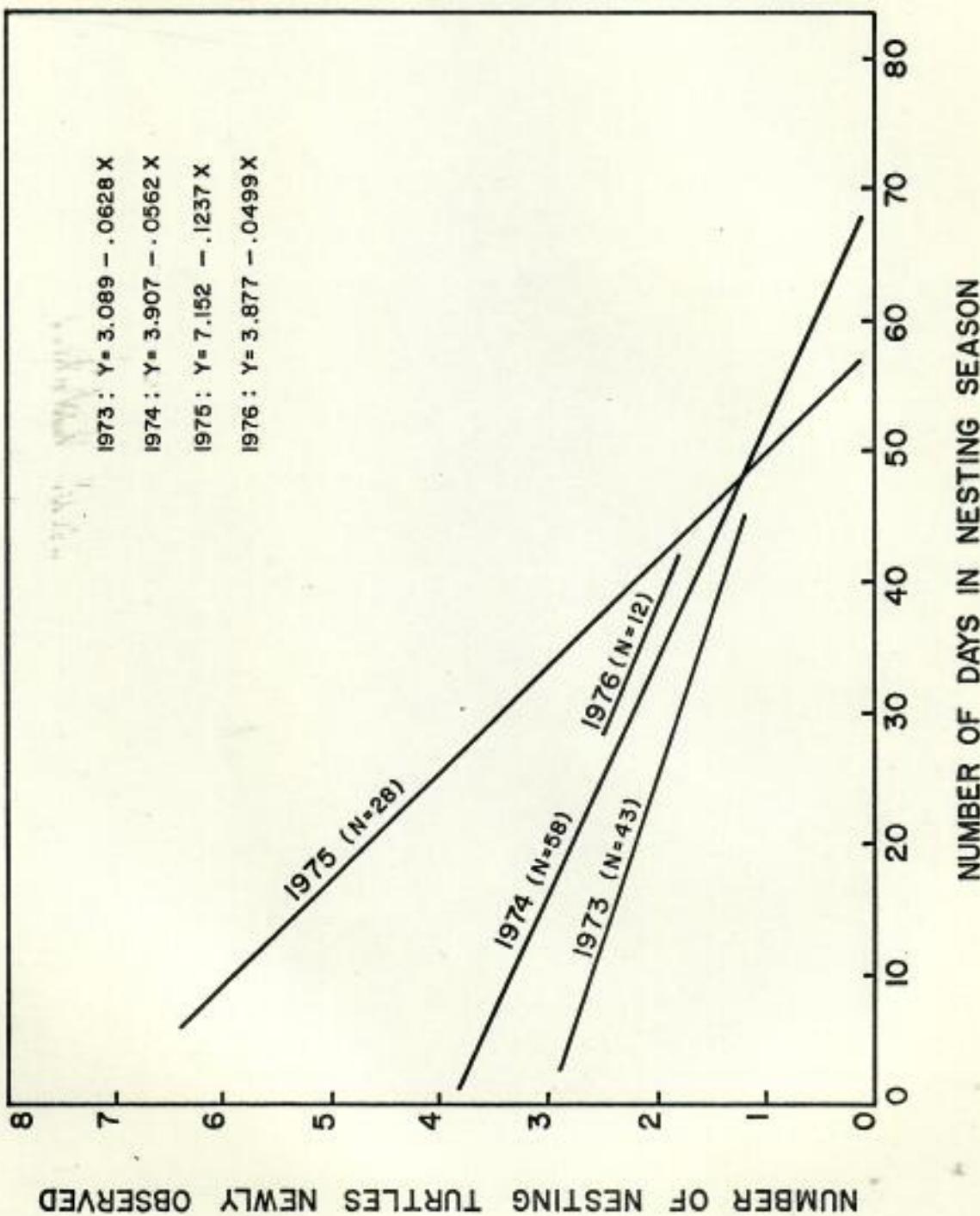


Good



Good

see Hughes



DURATION OF CONTACT WITH INDIVIDUAL GREEN TURTLES NESTING ON EAST ISLAND

Duration (months)	1973			1974			1975		
	no. turtles observed	%	no. turtles observed	%	no. turtles observed	%	no. turtles observed	%	
June	22	32.8	14	13.0	43	43.0			
June - July	34	50.8	35	32.4	40	40.0			
June - July - Aug.	-	-	30	27.8	6	6.0			
July	11	16.4	9	8.3	9	9.0			
July - August	-	-	9	8.3	1	1.0			
August	-	-	11	10.2	1	1.0			

## INTENSITY OF GREEN TURTLE NESTING ON TRIG AND WHALE-SKATE ISLAND

Island, expedition no. and date	total no. ashore	Nesting turtles no. successful	% successful	Nesting turtles no. newly observed	no. observed
<b>Trig</b>					
9 25 June 1975	3	2	66.7	3	
10 18 July 1975	2	1	50.0	2	
16 2 July 1976	1	0	0	1	
<b>Whale-Skate</b>					
10 28 July 1975	4	3	75.0	4	
29	5	4	80.0	3	
30	4	2	50.0	3	
31	4	3	75.0	3	
1 August 1975	5	2	40.0	4	
2	7	2	28.6	5	
3	4	3	75.0	2	
4	4	3	75.0	2	
5	4	2	50.0	2	
11 27 August 1975	3	0	0	1	

58.

ZG 119  
days =

1

AREAS ON EAST ISLAND USED FOR EGG CLUTCH DEPOSITION  
BY MULTIPLE NESTING GREEN TURTLES IN 1973

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Tag no.	Temporary carapace no.	Deposition sequence observed		
		1st	2nd	3rd
639	13	16	16	16
641	16	17	15	14
645	18	1	1	2
646	19	13	SP*	1
632	1	4	4	
650	5	4	4	
633	7	15	16	
635	8	1	3	
636	10	2	5	
638	11	6	6	
642	17	7	1	
648	33	3	1	
656	40	5	13	
655	45	2	1	
662	57	5	5	
664	59	12	15	

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\*SP - Sand point of northwest end of island

AREAS ON EAST ISLAND USED FOR EGG CLUTCH DEPOSITION BY  
MULTIPLE NESTING GREEN TURTLES OBSERVED IN 1974

Tag no.	Temporary carapace no.	1st	2nd	3rd	4th	5th	6th
738	56	6	1	6	1	6	1
743	5	5	5	9	4	6	
726	42	8	6	6	5	5	
737	49	SP*	SP	SP	SP	SP	
748	63	12	8	8	8	9	
783	85	6	5	5	5	6	←
721	2	8	9	5	5		
754	16	7	6	6	6		
776	27	17	1	3	3		
718	34	12	12	12	12	←	
723	40	11	11	9	11		
734	46	7	1	2	17		
746	54	4	5	7	3		
813	65	5	6	5	7		
760	73	5	5	5	5	←	
773	83	6	6	13	5		
781	88	16	SP	SP	17		
784	89	10	1	15	17		
768	8	15	1	16			
719	9	6	6	6			
771	17	17	16	1			
809	17-2	2	5	5			

AREAS ON EAST ISLAND USED FOR EGG CLUTCH DEPOSITION BY  
MULTIPLE NESTING GREEN TURTLES OBSERVED IN 1974 (continued)

Tag no.	Temporary carapace no.	Deposition sequence observed				
		1st	2nd	3rd	4th	5th
779	27	4	5	5		
772	22	12	12	7		
716		13	11	5		
322	23	7	13	5		
796	32-2	5	1	4		
732	33	6	5	4		
724	39	5	9	5		
725	41	1	17	16		
801	47	17	17	17		
739	48	10	17	2		
741	53	SP	6	1		
822	60	7	12	7		
756	70	5	5	6		
762	74	12	17	6		
775	84	5	6	6		
778	86	9	7	9		
793	90	SP	SP	SP		
798	95	5	5	6		
717	98	6	5	5		
807	100	17	SP	17		
835	106	11	11	11		
841	109	SP	5	SP		

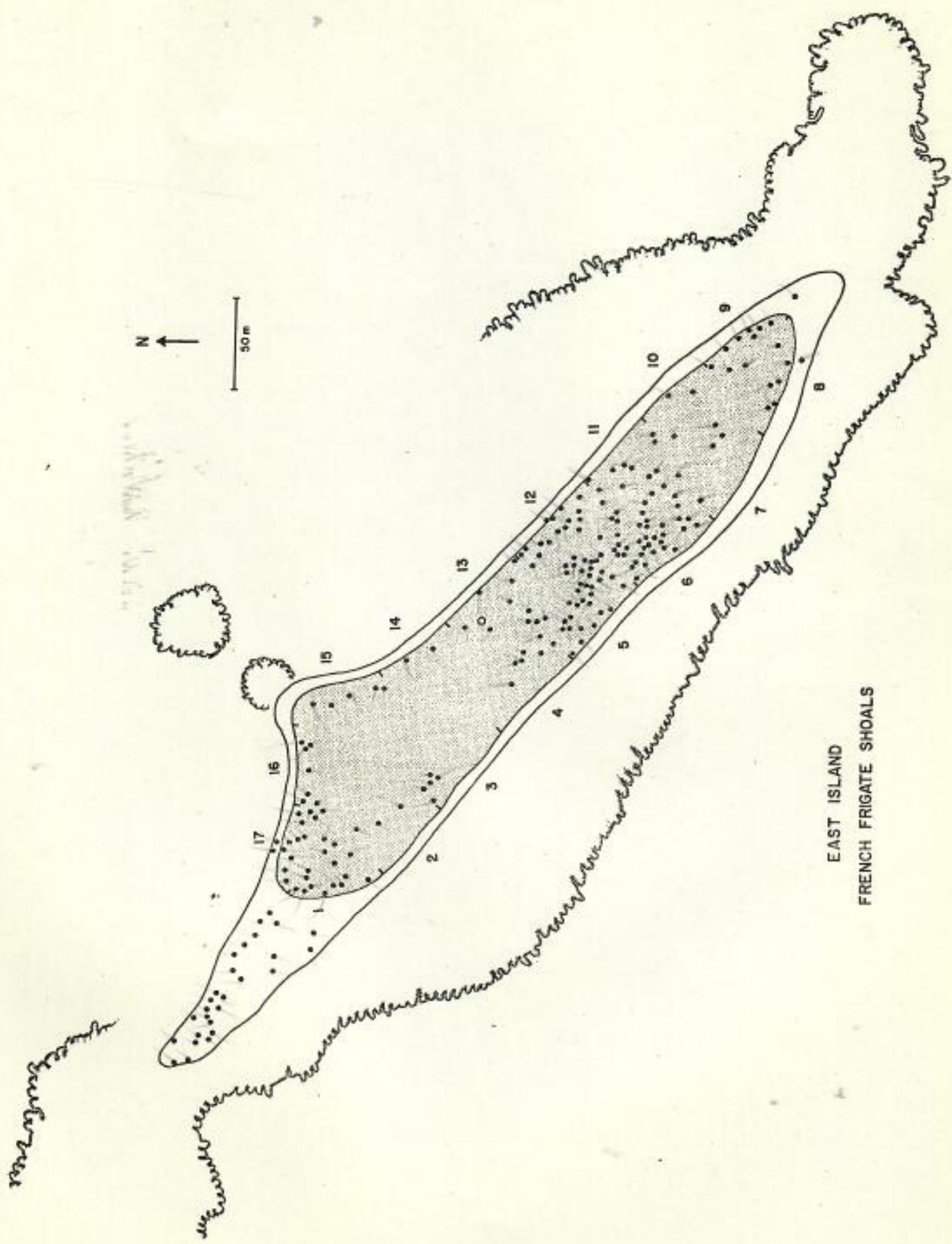
AREAS ON EAST ISLAND USED FOR EGG CLUTCH DEPOSITION BY  
MULTIPLE NESTING GREEN TURTLES OBSERVED IN 1974 (continued)

Tag no.	Temporary carapace no.	1st	Deposition sequence observed				
			2nd	3rd	4th	5th	6th
753	15	14	5				
749	25	17	16				
730	44	12	11				
745	57	5	5				
740	58	10	14				
750	64	12	12				
755	66	7	5				
757	69	2	3				
761	76	12	12				
764	78	6	6				
769	80	16	4				
770	82	5	6				
780	87	12	11				
791	92	6	5				
794	94	6	Whale-Skate				
802	97	SP	SP				
836	107	5	SP				
843	110	15	13				
844	111	12	6				
855	112	11	9				

\*SP - Sand point of northwest end of island

DISTANCES BETWEEN EGG CLUTCH DEPOSITION SITES  
OF TENACIOUS GREEN TURTLE RENESTINGS  
ON EAST ISLAND IN 1974

Tag Number	Temporary Cove/pace No.	Area(s) on East Island	Renesting Dates Involved	Distances in Meters
738	56	6	6/7, 7/4	6.1
738	56	.1	6/20, 7/17	1.4
738	56	6	6/7, 7/30	11.0
743	5	5	6/7, 6/20	14.3
726	42	6	6/20, 7/2	12.5
737	49	SP	6/5, 7/3	29.2
748	63	8	7/6, 7/18	3.4
721	2	8	6/3, 7/3	21.2
718	34	12	6/2, 6/14	3.6
718	34	12	6/14, 6/28	19.6
718	34	12	6/28, 7/10	21.4
718	34	12	6/2, 6/28	12.5
718	34	12	6/2, 7/10	16.1
718	34	12	6/14, 7/10	3.6
723	40	11	6/4, 6/16	14.3
781	88	SP	7/2, 7/15	3.5
771	17	17-16	6/17, 7/5	6.3
772	22	12	6/2, 6/15	23.0
801	47	17	6/5, 6/18	4.6
801	47	17	6/18, 7/2	2.0
801	47	17	6/5, 7/2	6.1
756	70	5	6/11, 7/6	12.5



AREAS ON EAST ISLAND USED FOR EGG CLUTCH DEPOSITION  
BY MULTIPLE NESTING GREEN TURTLES OBSERVED IN 1975

Tag no.	Temporary carapace no.	Deposition sequence observed		
		1st	2nd	3rd
987	1	16	1	3
1007	4	9	15	7
1002	10	1	17	15
1003	16	6	6	5
996	17	SP*	17	15
1042	49	5	5	5
988	3	15	16	
992	6	7	3	
994	12	17	3	
995	15	11	11	
1001	18	1	2	
1000	20	5	6	
997	24	15	1	
1013	26	5	4	
999	27	6	11	
1008	30	2	3	
1009	31	2	5	
1020	34	10	1	
1016	39	3	3	
1018	41	5	7	
1032	46	SP	1	
1027	47	1	3	
1035	52	1	1	

AREAS ON EAST ISLAND USED FOR EGG CLUTCH DEPOSITION BY  
MULTIPLE NESTING GREEN TURTLES OBSERVED IN 1975 (continued)

Tag no.	Temporary carapace no.	Deposition sequence observed		
		1st	2nd	3rd
1041	55	16	1	
1044	58	15	13	
1059	66	7	11	
1069	76	2	7	
1088	78	4	5	
1075	80	17	3	
1083	82	SP	SP	
1079	84	12	3	
1049	85	6	5	
1086	89	14	12	
1093	90	14	2	
1095	92	4	2	
1099	93	17	13	
1100	94	17	16	
1107	96	1	4	
1115	97	11	12	
1112	100	3	2	

\*SP - Sand point of northwest end of island

## AREA TENACITY OF GREEN TURTLES OBSERVED RENESTING IN 1973

	% return to same area	% return to same or adjacent area	% return to same side of island
<hr/>			
Three egg depositions			
mean	41.7	83.4	100
S.D.	50.0	19.2	0
range	0-100	66.7-100	-
N	4	4	3
Two egg depositions			
mean	41.7	58.3	91.7
S.D.	51.5	51.5	28.9
range	0-100	0-100	0-100
N	12	12	12
<hr/>			
Overall			
mean	41.7	64.6	93.3
S.D.	49.4	46.3	25.8
range	0-100	0-100	0-100
N	16	16	15

## AREA TENACITY OF GREEN TURTLES OBSERVED RENESTING ON EAST ISLAND IN 1974

	% return to same area	% return to same two areas	% return to or adjacent area	% return to same side of island
<hr/>				
Six egg depositions	50.0	100	50.0	100
mean	-	-	-	-
S.D.	-	-	-	-
range	1	1	1	1
N				
Five egg depositions	60.0	76.0	88.0	85.0
mean	24.5	26.1	11.0	19.1
S.D.				
range	40.0-100	40.0-100	80.0-100	60.0-100
N	5	5	4	4
Four egg depositions	50.0	50.0	72.9	88.6
mean	35.4	35.4	31.0	13.1
S.D.				
range	0-100	0-100	0-100	75.0-100
N	12	12	12	11
Three egg depositions	46.2	-	71.8	83.4
mean	39.0	-	34.9	17.0
S.D.				
range	0-100	0-100	0-100	66.7-100
N	26	26	26	22
Two egg depositions	25.0	-	55.0	91.2
mean	44.4	-	51.0	19.6
S.D.				
range	0-100	0-100	0-100	50.0-100
N	20	20	20	17

## AREA TENACITY OF GREEN TURTLES OBSERVED RENESTING ON EAST ISLAND IN 1974 (continued)

	% return to same area	% return to same two areas	% return to same or adjacent area	% return to same side of island
Overall	41.4	60.0	66.7	87.2
mean	39.9	34.8	39.3	17.1
S.D.	0-100	0-100	0-100	50.0-100
range	64	18	64	55
N				

## AREA TENACITY OF GREEN TURTLES OBSERVED RENESTING ON EAST ISLAND IN 1975

	% return to same area	% return to same or adjacent area	% return to same side of island
<b>Three egg depositions</b>			
mean	27.8	44.5	80.0
S.D.	44.3	50.2	18.2
range	0-100	0-100	66.7-100
N	6	6	5
<b>Two egg depositions</b>			
mean	11.8	47.1	75.0
S.D.	32.7	50.7	44.0
range	0-100	0-100	0-100
N	34	34	32
<b>Overall</b>			
mean	14.2	46.7	73.0
S.D.	34.5	50.0	42.9
range	0-100	0-100	0-100
N	40	40	37

NUMBER OF EGG CLUTCHES DEPOSITED BY INBIVIMAL GREEN TURTLES NESTING ON EAST ISLAND

## INTERNESTING INTERVALS OF GREEN TURTLES AT EAST ISLAND

Interval (days)	1974		1975		$\frac{\text{no.}}{\text{X}}$	$\frac{\text{no.}}{\text{X}}$	$\frac{\text{no.}}{\text{X}}$	$\frac{\text{no.}}{\text{X}}$
	no.	X	no.	X				
11	X		6 = 66	8.0	X 1 = //	6.7	< 7.2 = 77	7.9
12	X		17 = 204	23.0	X 4 = 48	26.7	< 21 = 252 = 25.6	
13	X		26 = 338	35.1	X 2 = 26	13.3	< 28 = 364 = 35.5	
14	X		13 = 182	17.6	X 5 = 70	33.3	< 18 = 251 = 20.2	
15	X		8 = 120	10.8	X 2 = 30	13.3	< 10 = 150 = 11.2	
16	X		2 = 32	2.7	X 1 = 16	6.7	< 3 = 48 = 3.4	
17	X		1 = 17	1.4	X 0 =	0	< 1 = 17 = 1.1	
18	X		1 = 12	1.4	X 0 =	0	< 1 = 12 = 1.1	
$\frac{13.2}{\text{days}}$		= 24	$\frac{97.4}{\text{97.4}}$		$\frac{13.4}{15}$	$\frac{201}{15}$	$\frac{13.2}{13.2}$	$\frac{89}{89} \frac{178}{178}$

## RESULTS OF SIX GREEN TURTLE NESTS TRANSPLANTED ON EAST ISLAND

Tag no.	Date clutch deposited	No. eggs in clutch	% no apparent development	% partial development		% hatched but dead	% resulting in hatchlings emerging at surface
				%	partial development		
806	2 July 1974	121	12.4	6.6	0	0	81.0
808	2 July 1974	93	17.2	21.5	0	0	61.3
830	8 July 1974	119	26.9	14.3	0	0	58.8
-	14 July 1974	94	2.1	22.3	2.1	0	73.5
-	16 July 1974	108	9.3	31.5	2.8	0	56.4
808	2 August 1974	92	0	2.2	10.9	0	86.9
Mean		104	11.3	16.4	2.6	0	69.7

## NUMBER OF GREEN TURTLES BASKING ON EAST ISLAND

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
1					
3 June 1973	4	2	0	6	66.7
4	1	0	0	1	100
5	4	0	0	4	100
6	5	8	0	13	38.5
7	6	9	0	15	40.0
8	7	8	0	15	46.7
10	9	2	3	14	-
12	<u>10</u>	<u>2</u>	0	12	83.3
13	<u>-</u>	<u>31</u>	4	4	-
15	3	-	7	10	-
16	11	1	0	12	91.7
17	5	0	0	5	100
18	9	2	0	11	81.8
19	8	1	0	9	88.9
20	2	1	0	3	66.7
22	0	2	0	2	0
24	3	2	1	6	-
25	4	3	0	7	57.1
27	0	0	0	0	
28	3	0	0	3	100
29	4	0	0	4	100
30	6	0	0	6	100

## NUMBER OF GREEN TURTLES BASKING ON EAST ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
1 July 1973	4	0	0	4	100
2	5	0	0	5	100
3	1	1	0	2	50.0
4	2	0	0	2	100
5	4	1	0	5	80.0
6	4	0	0	4	100
7	5	1	0	6	83.3
8	8	2	0	10	80.0
9	7	1	0	8	87.5
10	4	0	0	4	100
11	5	0	0	5	100
12	4	0	0	4	100
13	2	0	0	2	100
14	1	0	0	1	100
15	5	0	0	5	100
3	-	-	-	-	-
31 May 1974	-	-	30	30	-
2 June	-	-	32	32	-
3	-	-	24	24	-
4	-	-	28	28	-
5	-	-	26	26	-
7	-	-	17	17	-

## NUMBER OF GREEN TURTLES BASKING ON EAST ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
8 June 1974	-	-	14	14	-
9	-	-	10	10	-
10	-	-	29	29	-
11	-	-	12	12	-
12	-	-	17	17	-
13	-	-	16	16	-
14	-	-	4	4	-
15	-	-	4	4	-
16	-	-	6	6	-
17	-	-	6	6	-
19	-	-	5	5	-
 4					
27 June 1974	-	-	6	6	-
28	-	-	6	6	-
29	8	1	0	9	88.9
30	5	0	0	5	100
1 July	6	-	1	7	-
2	11	0	0	11	100
3	4	0	0	4	100
4	11	0	0	11	100
5	4	0	0	4	100
7	8	0	0	8	100
9	5	0	0	5	100

## NUMBER OF GREEN TURTLES BASKING ON EAST ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
11 July 1974	1	0	0	1	100
13	3	-	2	5	-
16	5	-	1	6	-
17	1	0	0	1	100
	5				
27 July 1974	0	0	0	0	-
29	0	0	0	0	-
30	0	0	0	0	-
3 August	1	0	0	1	100
4	1	0	0	1	100
12	0	0	0	0	-
14	0	0	0	0	-
15	1	0	0	1	100
	8				
18 May 1975	1	1	21	23	-
	9				
6 June 1975	-	2	21	23	-
7	-	2	14	16	-
10	4	2	16	22	-
11	5	7	6	18	-
14	16	-	2	18	-

## NUMBER OF GREEN TURTLES BASKING ON EAST ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
15 June 1975	11	2	0	13	84.6
17	16	6	0	22	72.7
18	14	0	0	14	100
19	14	1	0	15	93.3
20	13	0	0	13	100
21	16	1	0	17	94.1
22	15	1	1	17	-
24	17	1	0	18	94.4
25	9	0	0	9	100
10					
19 July 1975	-	-	21	21	-
20	16	0	0	16	100
21	6	0	0	6	100
23	3	0	3	6	100
25	4	0	0	4	100
26	6	0	0	6	100
27	8	0	0	8	100
30	6	0	0	6	100
3 August 1975	4	0	0	4	100
5	1	0	0	1	100

## NUMBER OF GREEN TURTLES BASKING ON EAST ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
<b>14</b>					
10 April 1976	0	0	0	0	-
12	1	4	0	5	20.0
16	2	0	0	2	100
18	0	0	1	1	-
<b>15</b>					
11 May 1976	3	2	0	5	-
12	-	-	8	8	-
<b>16</b>					
28 June 1976	7	0	0	7	100
29	-	-	4	4	-
30	6	1	0	7	85.7
1 July	5	1	0	6	83.3
4	7	1	0	8	87.5
5	2	-	7	9	-
7	2	1	0	3	66.7
8	6	1	0	7	85.7
9	3	0	2	5	-
10	3	0	1	4	-
11	8	2	2	12	-

\*represents observations made between 1200h and 1900h

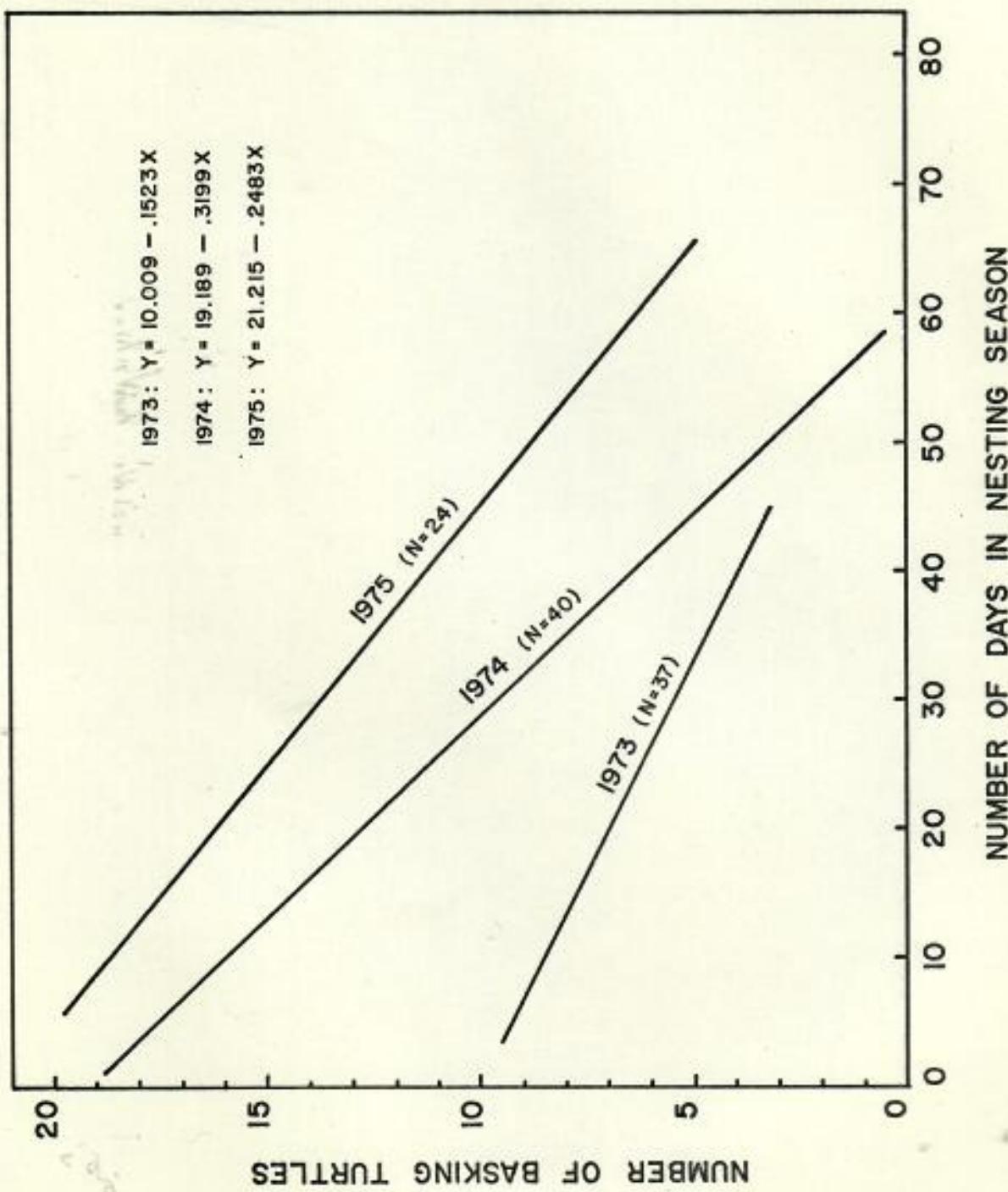
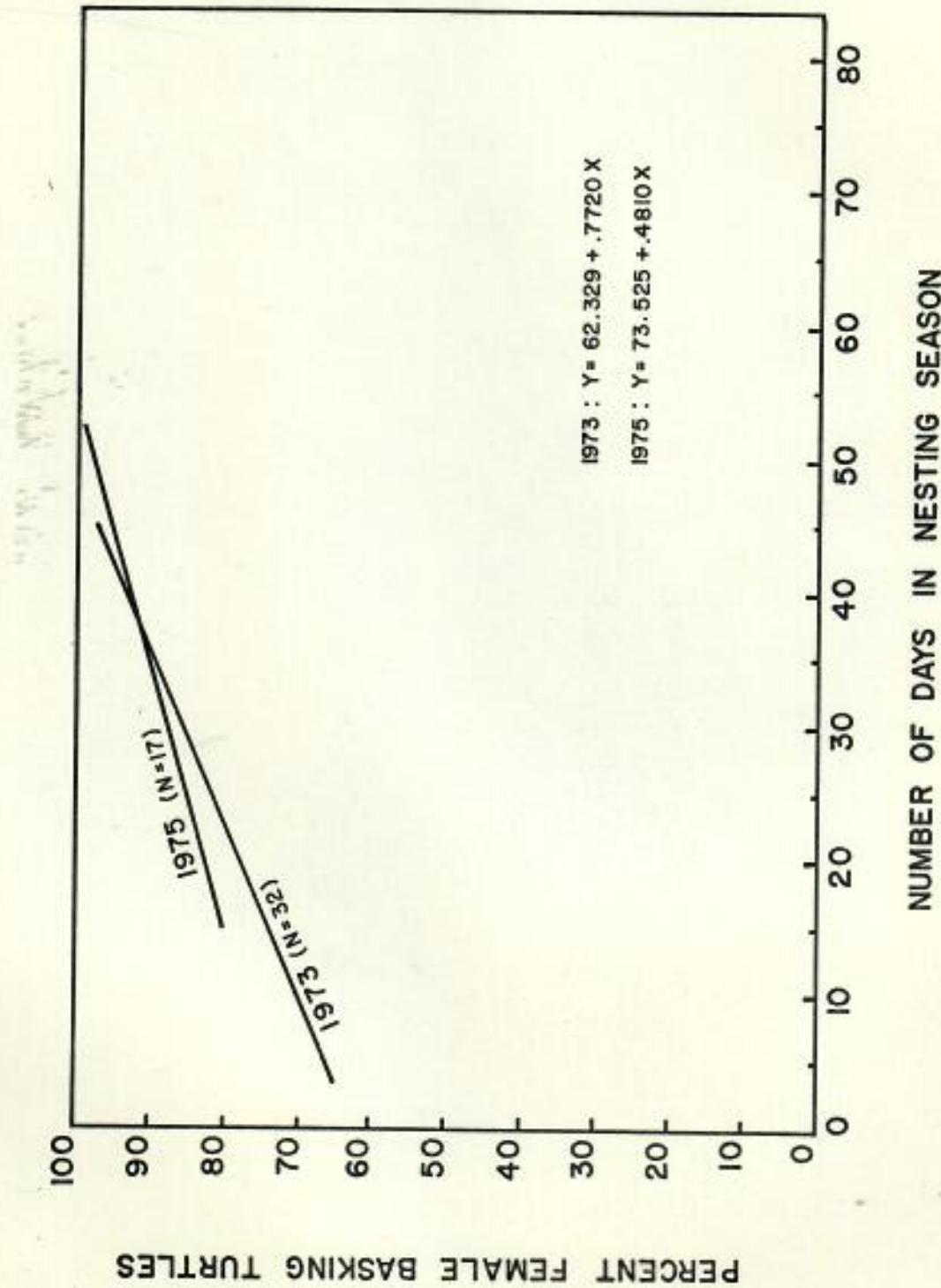


Figure 11. Incidence of baskings each day of East Island French Frigate Shoals. ( $Day 1 = 15^{\text{th}}$  June)



## NUMBER OF GREEN TURTLES BASKING ON WHALE-SKATE ISLAND

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
<b>1</b>					
5 June 1973	-	-	16	16	-
9	10	9	0	19	52.6
14	4	3	0	7	57.1
17	1 <sup>14</sup> <sub>12</sub> 53.8%	0 <sup>46.2%</sup>	0	1	100
21	-	-	10	10	-
23	1	1	0	2	50.0
24	0	0	0	0	-
26	6	2	0	8	75.0
28	7	0	0	7	100
2 July 1973	6	0	0	6	100
5	7	3	0	10	70.0
7	6	3	0	9	66.7
12	4	1	0	5	80.0
14	4	1	0	5	80.0
16	8	4	0	12	66.7
<b>2</b>					
12 October 1973	0	1	0	1	0
15	0	1	0	1	0
16	1	0	0	1	100

## NUMBER OF GREEN TURTLES BASKING ON WHALE-SKATE ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
3					
1 June 1974	4	6	9	19	-
7	-	-	15	15	-
12	-	-	14	14	-
18	8	2	0	10	80.0
4					
30 June 1974	2	1	0	3	66.7
8 July 1974	9	0	0	9	100
10	10	2	0	12	83.3
11	8	1	0	9	88.9
14	5	0	0	5	100
5					
27 July 1974	2	2	0	4	50.0
3 August 1974	6	1	0	7	85.7
9	5	0	0	5	100
14	3	1	0	4	75.0
6					
23 September 1974	1	0	0	1	100
4 October 1974	0	4	0	4	0
7					
14 February 1975	1	3	0	4	25.0

## NUMBER OF GREEN TURTLES BASKING ON WHALE-SKATE ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
15 February 1975	-	-	1	1	-
16	0	1	0	1	0
17	2	6	0	8	25.0
18	1	4	0	5	20.0
19	0	2	0	2	100
8					
18 May 1975	12	6	9	27	-
9					
6 June 1975	-	3	14	17	-
9	11	2	0	13	84.6
11	3	4	1	8	-
12	-	-	7	7	-
15	8	2	2	12	-
18	8	2	2	12	-
21	3	3	0	6	50.0
10					
19 July 1975	10	2	0	12	
22	8	0	0	8	100
28	10	0	0	10	100
29	9	1	0	10	90.0
30	12	2	0	14	85.7
31	5	3	0	8	62.5

## NUMBER OF GREEN TURTLES BASKING ON WHALE-SKATE ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
1 August 1975	4	1	0	5	80.0
2	4	2	0	6	66.7
3	2	0	0	2	100
4	2	0	0	2	100
11					
27 August 1975	0	1	0	1	0
12					
2 December 1975	0	0	0	0	-
3	-	1	1	2	-
13					
16 January 1976	1	0	0	1	100
19	0	1	0	1	0
20	0	1	0	1	0
21	0	0	0	0	-
14					
9 April 1976	1	1	0	2	50.0
10	2	0	0	2	100
12	0	2	0	2	0
13	1	1	0	2	50.0
14	2	2	2	6	-
17	0	0	0	0	-

## NUMBER OF GREEN TURTLES BASKING ON WHALE-SKATE ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
18 April 1976	-	-	10	10	-
15					
10 May 1976	2	4	0	6	33.3
12	0	0	5	5	-
16					
30 June 1976	1	0	0	1	100
6 July 1976	2	0	0	2	100
7	2	0	0	2	100
9	-	-	5	5	-
10	1	1	7	9	-
11	3	0	0	3	100

\*represents observations made between 1200 h and 1900h

## NUMBER OF GREEN TURTLES BASKING ON TRIG ISLAND

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
1					
5 June 1973	-	-	8	8	-
9	3	2	0	5	60.0
14	1	0	0	1	100
17				0	-
21				0	-
23				0	-
2 July 1973				0	-
5	1	2	0	3	33.3
7				0	-
10	3	1	0	4	75.0
14	0	1	0	1	0
2					
12 October 1973	1	0	0	1	100
15	0	2	0	2	0
16	0	3	0	3	0
3					
1 June 1974	1	2	0	3	33.3
12	0	0	0	0	0
19	3	1	0	4	75.0

## NUMBER OF GREEN TURTLES BASKING ON TRIG ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
4					
5 July 1974	2	0	0	2	100
5					
27 July 1974	1	0	0	1	100
12 August 1974	1	0	0	1	100
6					
23 September 1974	1	0	0	1	100
7					
14 February 1975	0	2	0	2	0
15	6	1	0	7	85.7
17	4	1	0	5	80.0
18	4	2	0	6	66.7
19	9	3	0	12	75.0
8					
18 May 1975	2	3	11	16	-
9					
6 June 1975	2	2	0	4	50.0
12	4	6	3	13	-
21	4	1	0	5	80.0
26	3	2	0	5	60.0

## NUMBER OF GREEN TURTLES BASKING ON TRIG ISLAND (continued)

Expedition no. and date*	Female	Male	Sex not determined	Total	% female
10					
18 July 1975	2	2	0	4	50.0
11					
27 August 1975	0	1	0	1	0
12					
2 December 1975	1	0	0	1	100
3	2	1	1	4	-
13					
15 January 1976	-	-	1	1	-
16	0	0	0	0	-
17	1	0	0	1	100
21	1	2	0	3	33.3
14					
8 April 1976	-	-	7	7	-
10	4	2	0	6	66.7
11	0	2	0	2	0
12	5	5	1	11	-
13	19	3	1	23	-
14	0	3	0	3	0
16	1	1	0	2	50.0

## NUMBER OF GREEN TURTLES BASKING ON TRIG ISLAND (continued)

<u>Expedition no. and date*</u>	<u>Female</u>	<u>Male</u>	<u>Sex not determined</u>	<u>Total</u>	<u>% female</u>
17 April 1976	1	1	0	2	50.0
18	-	-	8	8	-
15					
10 May 1976	5	2	1	8	-
11	-	-	6	6	-
12	-	-	9	9	-
16					
30 June 1976	-	-	6	6	-
2 July 1976	-	-	6	6	-
6	5	0	0	5	100
9	6	2	0	8	75.0

\*represents observations made between 1200h and 1900h

NUMBER OF GREEN TURTLES BASKING ON GIN, LITTLE GIN,  
MULLET, SHARK AND TERN ISLAND

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<u>Island, expedition no. and date*</u>	<u>Female</u>	<u>Male</u>	<u>Sex not determined</u>	<u>Total</u>	<u>% female</u>
Gin					
1					
4 June 1973	2	2	0	4	50.0
3					
10 June 1974	0	2	0	2	0
4					
6 July 1974	-	-	2	2	-
8					
18 May 1975	4	3	0	7	57.1
9					
8 June 1975	3	0	0	3	100
14					
17 April 1976	0	1	0	1	0
16					
29 June 1976	1	0	0	1	100
Little Gin					
1					
4 June 1973	-	-	1	1	-
10	0	1	0	1	0

## NUMBER OF GREEN TURTLES BASKING ON GIN, LITTLE GIN, MULLET, SHARK AND TERN ISLAND (cont'd.)

<u>Island, expedition no. and date*</u>	<u>Female</u>	<u>Male</u>	<u>Sex not determined</u>	<u>Total</u>	<u>% female</u>
8					
18 May 1974	0	1	0	1	0
9					
8 June 1974	0	1	0	1	0
<b>Mullet</b>					
3					
31 May 1974	0	3	0	3	0
4					
13 July 1974	0	1	0	1	0
7					
14 February 1975	0	2	0	2	0
16	0	2	0	2	0
13					
17 January 1976	0	1	0	1	0
20	1	0	0	1	100
15					
11 May 1976	1	1	0	2	50.0
<b>Shark</b>					
8					
19 May 1975	2	0	0	2	100

## NUMBER OF GREEN TURTLES BASKING ON GIN, LITTLE, GIN, MULLET, SHARK AND TERN ISLAND (cont'd.)

<u>Island, expedition no. and date*</u>	<u>Female</u>	<u>Male</u>	<u>Sex not determined</u>	<u>Total</u>	<u>% female</u>
14					
13 April 1976	0	1	0	1	0
Tern					
1					
8 June 1973	1	0	0	1	100

\*represents observations made from 1200h to 1900h.

## RESULTS OF REGRESSION ANALYSIS OF GREEN TURTLES

## BASKING AT EAST ISLAND ON TIME WITHIN SEASON

Year, expedition nos. and item	Dependent variable (Y)		
	no. basking turtles observed	% female	
1973 (1)			
Mean	6.2	82.6	
S.D.	4.1	24.8	
range	0-15	0-100	
Time within season (independent variable x)			
regression			
coefficient b	-0.152	0.772	
t-ratio	-3.215	2.507	
d.f.	35	30	
1974 (3,4&5)			
Mean	9.4	98.9	
S.D.	9.3	3.5	
range	0-32	88.9-100	
Time within season (independent variable x)			
regression			
coefficient b	-0.320	0.275	
t-ratio	-7.369	1.346	
d.f.	38	8	
1975 (9&10)			
Mean	13.0	92.5	
S.D.	6.6	20.3	
range	1-23	18.2-100	
Time within season (independent variable x)			
regression			
coefficient b	-0.248	0.481	
t-ratio	-5.952	2.027	
d.f.	22	15	

RESULTS OF REGRESSION ANALYSIS OF GREEN TURTLES BASKING AT EAST ISLAND ON  
TIME WITHIN SEASON (continued)

Year, expedition nos. and item	no. basking turtles observed	% female
1976		
(16)		
Mean	6.5	84.8
S.D.	2.6	10.7
range	3-12	66.7-100
Time within season (independent variable x)		
regression		
coefficient b	-1.761	0.086
t-ratio	-1.757	0.471
d.f.	4	9

## INTERNESTING INTERVAL OF GREEN TURTLES OBSERVED BASKING ON EAST ISLAND IN 1974

Tag no.	Temporary carapace no.	Interval in days
721	2	14, 14
743	5	13, 12, 12
768	8	13
779	21	16
716	23	13
776	27	14, 14, 15
732	33	13, 12
718	34	11, 12
724	39	12, 12, 13
723	40	12, 12
726	42	14, 13, 13, 13
746	54	11, 11, 12
738	56	13, 14, 13, 13, 12
813	65	12, 13, 13
783	85	15, 13, 14, 13
780	87	17
793	90	13
794	94	12

Some - 2.  
shorter - 5  
longer - 4

INTERNESTING INTERVAL OF GREEN TURTLES NOT OBSERVED BASKING ON EAST ISLAND IN  
1974

<u>Tag no.</u>	<u>Temporary carapace no.</u>	<u>Interval in days</u>
772	22	13
796	32-2	13
734	46	12
801	47	13, 15
737	49	12, 14, 13
810	62	11
748	63	12, 13, 12
760	73	13, 13
775	84	15, 13
781	88	15, 13
784	89	14, 11
791	92	13
798	95	14
802	97	15
717	98	14, 15
807	100	14, 16
835	106	11
841	109	18, 14
843	110	15
855	112	12

## INTERNESTING INTERVAL OF GREEN TURTLES OBSERVED BASKING ON EAST ISLAND IN 1975

Tag no.	Temporary carapace no.	Interval in days
987	1	12
1007	4	16
992	6	15
1002	10	14
995	15	14
1003	16	12
996	17	14
1001	18	12
1006	22	14
1018	41	15
1042	49	11

INTERESTING INTERVAL OF GREEN TURTLES NOT OBSERVED BASKING  
ON EAST ISLAND IN 1975

Tag no.	Temporary carapace no.	Interval in days
94	12	13
1013	26	13
1009	31	14
1016	39	12

## SUMMARY OF DATA ON INTERNESTING INTERVALS OF BASKING AND NONBASKING GREEN TURTLES ON EAST ISLAND

100.

	no.	%	no. with observed intervals	Internesting interval in days		
				mean	S.D.	range
<b>Female turtles</b>						
1973						
observed basking	26	38.8	-	-	-	-
not observed basking	41	61.2	-	-	-	-
1974						
observed basking	53	49.1	18	13.0	1.2	11-17
not observed basking	55	50.9	20	13.5	1.5	11-18
1975						
observed basking	55	55.6	11	13.5	1.6	11-16
not observed basking	44	44.4	4	13.0	0.8	12-14

## SUMMARY OF DATA ON SHARK SAMPLING AT FRENCH FRIGATE SHOALS

Species and date of capture	Sex	Fork length (inches)	Stomach contents	Other observations
<i>Galeocerdo cuvier</i> (tiger shark)				
4 August 1974	F	102	1 slipper lobster ( <i>Scyllaridae</i> ); 1 bird feather	-
6 August 1974	F	132	1 slipper lobster ( <i>Scyllaridae</i> ); 1 plastral lamina of subadult turtle; distal portion of front limb of juvenile turtle	28 embryos (advanced development)
11 August 1974	F	62	1 puffer fish ( <i>Diodontidae</i> or <i>Tetraodontidae</i> ); 1 bird feather	2 parasites ( <i>Rhynobdella</i> ) attached to gill slits
24 September 1974	F	114	1 lobster ( <i>Scyllaridae</i> ); 1 plastral lamina of adult turtle; turtle skin and plastral bones	-
11 March 1976	F	120	1 - 30 lb. juvenile green turtle	-
<i>Carcharhinus amblyrhynchos</i> (Gray reef shark)				
10 July 1974	F	66	empty	numerous 6" embryos

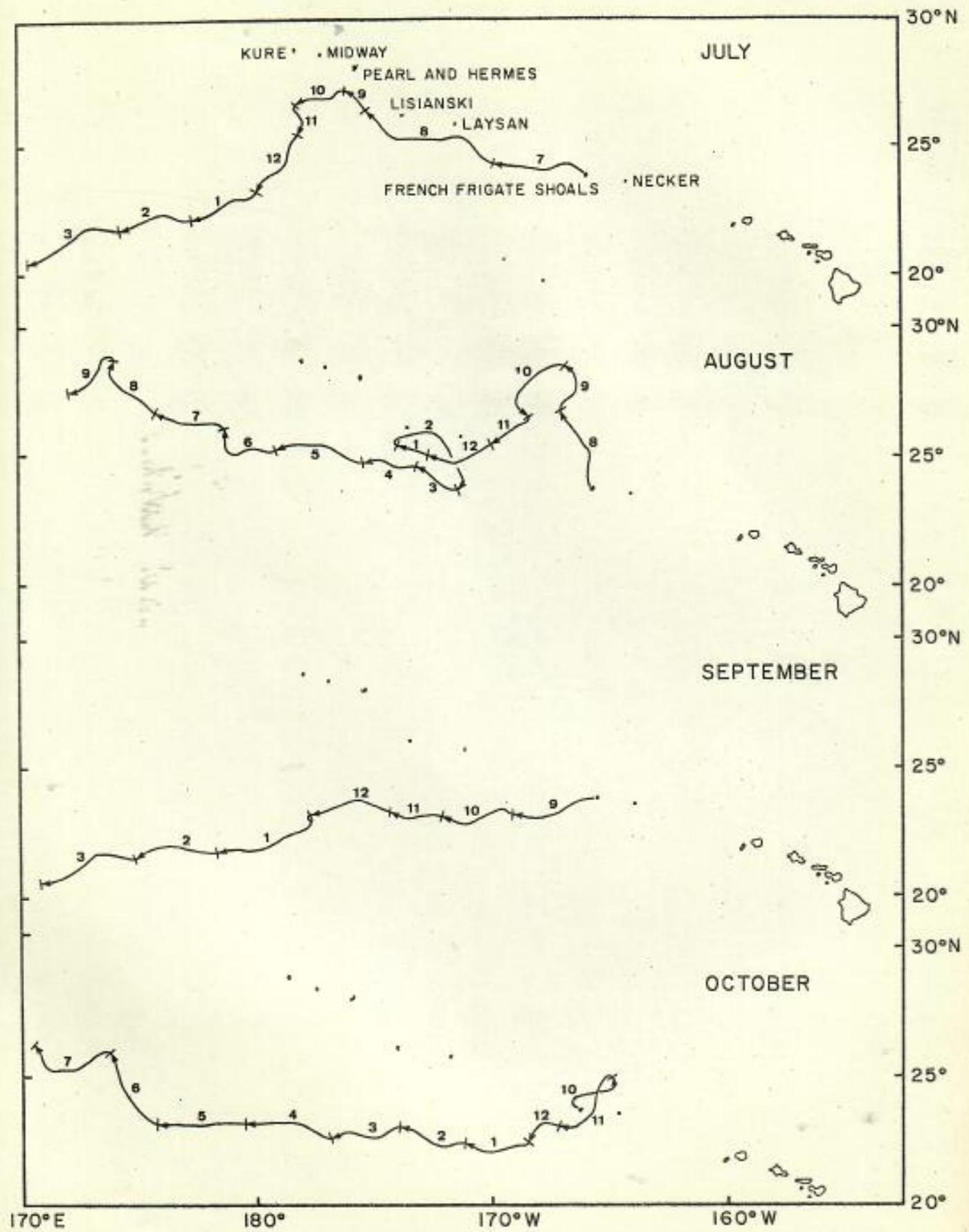
## SUMMARY OF DATA ON SHARK SAMPLING AT FRENCH FRIGATE SHOALS (continued)

Species and date of capture	Sex	Fork length (inches)	Stomach contents	Other observations
13 July 1974	F	50	empty	-
1 August 1974	F	51	unidentified fish parts	6-12" embryos
5 August 1974	F	51	unidentified fish bones	-
9 August 1974	F	55	empty	2-21" embryos (1 male, 1 female)
14 August 1974	F	48	empty	-
26 September 1974	M	50	4 cephalopod beaks	-
27 September 1974	M	49	2 file fish ( <i>Pervagor spilosoma</i> )	-
29 September 1974	F	50	empty	-
29 September 1974	M	50	empty	-
1 October 1974	M	50	empty	-
5 October 1974	M	50	1-12" unidentified eel	-
7 October 1974	F	55	8 file fish ( <i>Pervagor spilosoma</i> ); 1 - 7" squirrel fish ( <i>Holocentridae</i> )	4-14" embryos (all female)

## SUMMARY OF DATA ON BONY FISH SAMPLING AT FRENCH FRIGATE SHOALS,

JULY - OCTOBER, 1974

	<i>Carangoides</i> <i>ajax</i> (ulua)	<i>Caranx</i> <i>melampygus</i> (ulua)	<i>Sphyraenidae</i> (barracuda)
Total no. captured	76	25	4
Mean fork length, inches	29 1/4 range 34.3 - 124.0	74.3 cm 24 1/4 51.4 - 73.7	61.6 cm 23 45.7 - 71.8
58.4 cm			
Stomach contents			
no. containing file fish ( <i>Pervagor spilosoma</i> )	25	22	0
% of total	32.9	88.0	0
no. containing file fish ( <i>Pervagor spilosoma</i> ) and cephalopod parts	3	0	0
% of total	3.9	0	0
no. containing unidentified fish parts	6	2	1
% of total	7.9	8.0	25.0
no. containing unidentified crab parts	1	0	0
% of total	1.3	0	0
no. with empty stomachs	41	1	3
% of total	54.0	4.0	75.0



NESTING P.T CENSUS  
DATA (Accumulative) <sup>Not</sup>

1975

<u>DATE/TIME</u>	<u>ISLAND</u>	<u>PITS, APPARENT</u>
		<u>GOOD</u>
5/18/1975	EAST	0 2
"	LGIN	0 0
"	GIN	0 0
"	W-S	2 0
"	TRIG	1 2
5/17+	TERN	4 1
5/19	ROUND	2 -
5/19	EAST	+ +2?
5/19	W-S	- +1
5/20	TRIG	- +2
5/21/75	EAST	AT-2 A13-1 A19-1 AT-A12-1 6 TOTAL 8 TOTAL A3-1 A17-1 A12-2 A5-1 A16-1 A13-1 A9-1
6/6/75	TERN	TOTAL 4 OF THOSE-GOOD 1
6/6	TRIG	6 1
6/6	W-S	1? 1?
6/6	EAST	sight-15 3? ~7 crowded green but landing
6/8	LGIN	4? ~8 not many pits (S.P.?)
6/8	GIN	3 ? Sand-
6/9	W-S	1? difficult to determine
6/12	TRIG	10? 2? few apparent
6/16	W-S	13 4
6/21	W-S	10? 5? Not many new turtle tracks coming ashore
6/21	TRIG	some new pits apparent - appears to be low level
6/18	TRIG	Some tracks going ashore along N
6/19	W-S	Pits apparent on high sections of island
6/19	EAST	not that many pits apparent
		pits - but few new in A12
		— DISCONTINUED CENSUS —

# Pit Counts

2 (good)

DATE	IS EAST
5/11	
6/28/76 (05)	EAST
6/29	L. GIN
6/29	GIN
6/30	W-S
6/30	Thy
7/9 Friday	TR/G

mostly s shore of sp nearly all  
 maximum observable - very intact  
 4-5 along W bank - none in center of IS,  
 none observable  
 73 (26 on whale end)  
 20  
 very few new pits present

4 x  $\frac{1}{2}$  turtles

6/24/1977 Island P.t Counts

FRIDAY TRIG - 4  
W-S - 81 (Many appear "not good")  
LGN - 10  
G/N - Not Landed

EAST (AREAS)

SANDPOINT	- 28-
1	- 18-
5-6	- 40-
8	- 10-
9	- 6
11	- 3
12	- 3
13	- 3
14	- 2
15	- 2
16	- 3
17	- 11
TOTAL	- 129

6/29 A few turtle tracks noted on Trig

WED

9/23 W-S nothing recent - no tracks showing - does not appear all  
old pits in center - SW end and some at NW end.

9/24 TRIG Little evidence of old pits, except at NE "HIGH" end.  
possibly one set tracks still visible - 2-3 wks old.

9/24 TERN 2 by faint locker; 27 from Sears to East; 11 from Sears

$40 \div 2 = 20 \div 2$  to West; 2 by N beach - 1 set old tracks by SE end.

9/26 EAST - hard rain last night - but fresh tracks on Sand Point,  
a "good" nest in A17; rest of island showed no activity.

12/4 EAST/W-S/TRIG/TERN → no indication of any recent nestings.

NO. DAYS	NIGHT PM; DATE
1	6/24-6/
2	6/25-6/
3	6/26-6/
4	6/27-6/
5	6/28-6/
6	6/29-6/
7	6/30-7/
8	7/1-7/
9	7/2-7/
10	7/3-7/

ISLAND PIT COUNTS

	Night DAI
6/8/78 TERN -	14 all on South side
6/9 TERN - night - tracks - ge pit - on "boat hist" beach.	6/9 -
6/9 Friday EAST - heavy rains have obscured old pits - There are many pits on Sand Point - most are along ridge of North shore - which is always higher. Quite a few pits in 15-6	6/10 -
6/12 Monday Tern - report that turtle was up digging at 7 AM Sat (6/10) morning by fuel tanks, track noted on beach from last night.	6/11 - 6/12
6/12 Monday TRIG - 5 obvious along South Shore ~10 "in high" NE	6/13 -
6/12 Monday 1630 W-S - 46 total - notably central. Northern/South extremes - South is same sandy area used other years.	6/14 - 6/15
6/18 SUN 1300h GIN - 10-15 pits on elevated "rim" of northerly section of island.	6/15 - 6/16
6/18 SUN 1400h Little GIN - EAST side rim - 6      South and West rim - 43	6/17 - 6/18
	6/19 - 6/20

