

FRENCH FRIGATE SHOALS

EXPEDITION 84

1980

6 JUNE - 1 JULY

G.H. BALAZS

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75-48  
|||

BALAZS



MONK SEAL CENSUS . . . . . page 102

MONK SEAL TAG RECOVERIES . . . . . page 106

TAG SUMMARY - LOCATOR - . . . . . page 110

Individual logs on transmitter-equipped turtles . . . . . pages 84-98  
 (Case Histories)  
 Turtle Observations by Schulmeister et al. . . . . pages 66-73  
 Turtle Observations by Jim Parrish Project . . . . . pages 76-77

Summary of interesting intervals . . . . . page 75

Summary of numbers tagged . . . . . page 79

Summary of longer-term recoveries . . . . . pages 78, 80, 81

Summary of 1980 carapace measurements . . . . . page 115-116

Summary of 1980 growth measurements for TC's . . . . . page 117-118

Flap knots, scars or other abnormalities . . . . . page 119  
 (indicative of tag loss)

Tag loss on RECOVERED TURTLES . . . . . page 115-116

DOCUMENTATION OF LONG-DISTANCE TAG RECOVERIES (MOVEMENTS) . . . . . page 82

BASIC DATA STRATEGIES - SOME TENTATIVE CONCLUSIONS . . . . . page 100-101

BASKING INCIDENCE . . . . . page 64

Areas of successful nesting . . . . . page 65



**COMPOSITION BOOK**

9 3/4 IN. x 7 1/2 IN. (24.8 cm x 19 cm)  
KANEHOE BAY LEATHERBACK SIGHTING/RECOVERY - page 120

- AVAILABLE AS:
- No. 09-9130 (1130) 60 SHEETS COLLEGE RULED & MARGIN
  - No. 09-9132 (1130-P) 60 SHEETS COLLEGE RULED & MARGIN
  - No. 09-9134 (1143-X) 100 SHEETS COLLEGE RULED & MARGIN
  - No. 09-9132 (1130-P) NUMBERED PAGES

BUREAU WILDLIFE T-series NO RECOVERIES Made in U.S.A.

TAGS USED

3551-3678  
 3751-3775

VERNON McMILLAN, Inc., ELIZABETH, N.J. 07208

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 GEORGE H. BALAZS  
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TAGS - ~~2652 RFL~~

- RECOVERY -

~~3772 LFL~~

~~3653L 3rd scale~~

~~TC- 1~~

04 NOV 2002

S-90.5 x 67.9 C-

Date/Time	AREA	ACTIVITY	Remarks
<del>6/10-6/11/80</del>	<del>6</del>	<del>Nest-Lay</del>	<del>Cut ground wire - flat along central - eggs near cent off pole</del>
<del>6/11 6PM</del>	<del>SEP</del>	<del>BASK</del>	
<del>6/13 5:45</del>	<del>SEP</del>	<del>BASK</del>	
<del>6/15 5:45</del>	<del>SEP</del>	<del>BASK</del>	
<del>6/17 3PM</del>	<del>SEP</del>	<del>BASK</del>	
<del>6/23 11:30AM</del>	<del>7</del>	<del>Nest</del>	<del>TC1 not readable</del>
<del>6/24 4AM</del>	<del>12</del>	<del>Nest-Lay</del>	<del>3653 applied to 3rd scale, left front</del>
<del>6/24 7AM</del>	<del>SEP</del>	<del>BASK</del>	
<del>6/27 1PM</del>	<del>SEP</del>	<del>BASK</del>	
<del>6/28 2:30AM</del>	<del>SEP</del>	<del>BASK</del>	

13 day interval

~~6/13/78~~

~~3 Nest - EAST TC 56~~

~~S-35 3/4 x 27~~

~~C-37 1/2 x 34 3/4~~

~~90.8 x 68.6~~

~~95.3 x 88.3~~



2 -TC ✓

04 NOV 2002

FWS OFF - RECOVERY -  
-956 ✓

TAGS -  
3773 RFL ✓  
3774 LFLipper ✓  
in 3rd scale

S-96.1 x 70.6 ✓

C-102.3 x 95.5 ✓

DATE/TIME	AREA	ACTIVITY	REMARK	DATE/TIME
6/11/80 1:18 AM	13 ✓	Nest-Lay	Noted delicate movements for covering eggs so they don't get broken. However, nest was shallow and a few eggs got mixed in cover soil.	6/11/80
1:55		(37 minutes to lay eggs)		6/14 ✓
Large TMRS on left shoulder & right neck -				6/17 ✓
6/11 6 PM	SEP ✓	Bask ↑ Healed		6/18 ✓
6/12 11 AM	SEP ✓	Bask		6/22 ✓
6/13 545	SEP ✓	Bask		6/23 ✓
6/25 4:30 AM	17 ✓	Nest-LAY		6/27 ✓
			13 day interval	6/28 ✓
6/25 12:30 PM	SEP ✓			
6/25 6:30 PM	SEP ✓			
5/16/71	East - B ✓	S (94.5 x 70.4)		
		S-37.2 x 27.7		
		C-40 x 37.5		
		C (101.6 x 95.3)		



TAGS - 3576 ✓  
3577 ✓

FC - 3

04 NOV 2002

S = 96.9 x 73.3 C = 8P - 2

DATE/TIME	AREA	ACTIVITY	REMARKS
6/11/PO 11:20 AM	2-3 ✓	Nest-Lay ✓	white coralline patches
6/14 ✓	SEP ✓	Bask ✓	particulates on carapace.
6/17 ✓	NEP ✓	Bask ✓	
6/18 ✓	NEP ✓	Bask ✓	
6/22 ✓	NEP ✓	Bask ✓	
6/23 ✓	NEP ✓	Bask ✓	
6/23 11:15 PM	I ✓	Nest ✓	
6/27 1 PM	NEP ✓	Bask ✓	
6/28 2:30 PM	NEP ✓	Bask ✓	photos toward end of Roll 8

13 DAY interval



4-TC ✓

04 NOV 2002

TAGS ~~3649LFL~~

~~3657RFL~~  
3657RFL

S-93.3 x 69.2 C-

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/11/80	1	Nest		6/11/80
6/23 11:30am	1	Nest	TC4 barely readable tagged 3649LFL	6/11 wed
6/24 5:45am	1	Nest-Lay	Photos by monk seals Roll 6	6/18
6/25 3am	1	Nest Lay?		
6/28 2:30am	SEP	back		

TC9 ✓  
6/10/83 3657RFL; 7177LFL new S-93.6

6/24  
6/25  
6/26



TAGS- <sup>HIMB</sup> ~~1063 RFL~~ - RECOVERY -  
 3663 LFL  
 3664

~~TC-5~~  
 05 NOV 2002

S- 93.5 x 73 C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/11/80 1300pm	14-15	Nest-Lay	Rain - no new tag applied - missed
6/11 wed 8:15 AM	14	OFFshore	1063 between (in) large scale
6/18 3 PM	Whale-Shale	Bask	caught on reef flat by low tide. observed by Beth Stutz and Schulmeister and John Gearing
6/24 11 PM	1 (by tent)	Nest	applied 3663 (RFL)
6/25 11:30 PM	15	Nest	applied 3664 RFL
6/26 4 AM	15	Nest-LAY	REL

14 day interval

LFL

REL

← 1063

6/16/75 EMOF-Nest TC 73  
 6/15/78 WSB Bask C-98.9 x 100.3  
 892.7 x 72.7



6-TC ✓

05 NOV 2002

-RECOVERY-

TAGS-

2219 LFL

+ 2218

S-

C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/10 10:30am	7	Nest	left front flipper 1/2 off but healed - NOTE sprayed
6/11 11:45	7	Nest	
6/13 3am	8	Nest	
6/14 11:30am	7-8	Nest	TC sprayed → RFL
6/18 5am	SEP	BASK	RFL
6/19 6pm	SEP	BASK	
6/20 2pm	SEP	BASK	
6/23 6:45am	SEP	BASK	
6/24 7am	SEP	BASK	
6/27 6:45am	SEP	BASK (TC6?)	

DATE/TIME
6/10/8
6/11/80
6/12
6/15
6/16
6/24
6/25

26 June -

2 July 1977

TC 12 East-N (stuck in distiller)

Never documented laying eggs 2218, 2219

S - 36 7/8 x 29 1/2 C - 38 1/4 x 37

S 93.7 x 74.9 C 97.2 x 94.0



TAGS- 3579 LFL  
3580 RFL

TC-7  
23 DEC 2002

ENTERED NO. 156

S-91.3 x 74  
6/25-91.5 cm

C-98 x 91.5

DATE/TIME	AREA	ACTIVITY	REMARKS
6/10/80	SP	Nest	notch cuts in both 11th marginals - healed
6/11/80 (11:45)	4-5	Nest	mud-dirt covering turtle due to rain
6/12	0230	Nest - Lay	SEP
6/15	0900	BASK	SEP
6/16	~0900	Bask	SEP
6/24	10:45 4	Nest	ALL limb missing but healed; many deep cracks in scapace - underlying cartilage exposed - fluid draining? YES
6/20	SP	Bask (with male)	
6/25	11:30pm 5	Nest - Lay	13 day interval

Seen by A.K. at Laysan 3/20/82 basking -  
Also, earlier photos of same turtle taken  
on Laysan by Johnson's



8-TC

23 DEC 2002

TAGS-

3581 RFL

3583 LFL

S-90.1 x 69.8 C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/12/80	SP by tent	Nest	tagged while repairing
6/12/80 3:45			film side of tent.
6/13/80 12:10 AM	Area 2	Nest-Lay	deposited egg by
6/15 5:45	SEP	bash	corrugated metal J-applied 3583
6/17 3 PM	NEP	bash	
6/18 1:30 AM	SEP?	bash	reported by Sue Schulmeister
6/18 5 PM	SEP	bash	
6/19 5 PM	SEP	bash	
6/20 2 PM	SEP	bash	
6/20 6 PM	SEP	bash	
6/22 5 PM	SEP	bash	
6/24 10:45 PM	2	Nest	
6/25 3 AM	17	Nest-Lay	13 day interval
6/25 12:30 PM	SEP	bash	
6/26 7 PM	SEP	bash	
6/28 6 PM	SEP	bash	

6/20/83 TC 3 S-88.5! 3581, 3583  
SP

DATE/TIME

6/12/80

6/13/80

6/14/80

6/15/80

6/16/80

6/17/80

6/18/80

6/19/80

6/22/80

6/23/80

6/25/80

6/26/80

6/27/80

6/27/80

6/27/80

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6/27/80

6/27/80

6/27/80

6/27/80

6/27/80

6/27/80

6/27/80

6/27/80

NO. 185



TAGS- 3587 LFL  
 3597 RFL

TC-9  
 23 DEC 2002

showed  
 6/17/07  
 Recheck CB  
 Needet

S-92 x 68

C- P. 29-2

DATE/TIME	AREA	ACTIVITY	REMARKS
6/12/80 11PM	6-7	Nesting	sprayed only on right side - "wild"
6/13 3AM	5	Nest	did not lay
6/14-6/15 245AM	5	Nest-Lay	wild!
6/13 5:45 AM SEP		<del>Nest</del>	
6/14 3:15 AM SEP		<del>Nest</del>	
6/19 6PM	SEP	<del>Nest</del>	
6/22 5PM	NEP	<del>Nest</del>	
6/23 11AM	NEP	<del>Nest</del>	
6/24 3AM	17	Nest	
6/25 2:30 AM - 6AM	5	Nest-Lay?	very alert - Faded TC only on one side
6/26 1130AM	7	Nest	Wandering
6/27 4AM	6	Nest-Lay	Resprayed TC9
6/27 6:45AM	SEP	<del>Nest</del>	left side of carapace

NO.185 6/82 East-N TC 44 Same "wild" nature noted!



10-TC

- RECOVERY -

TAGS - 2257 LFL

3584 RFL

23 DEC 2002

S-96.9 x 76.3 C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/13/80 12:15 - 2:30am	17	Nest-Lay	dug several pits by test - no tag on the right
6/17 ~ 7PM	SNEP area	Bask	HEALED → 6 Barnacles (collected) (Left Hind & Healed)
6/18 5PM	SEP	Bask	
6/19 6PM	SEP	Bask	
6/20 6PM	SEP	Bask	
6/22 5PM	SEP	Bask	
6/25 4:30am	3	Nest-Lay	12 day interval LHL 1/2 mis-healed
6/25 12:30pm	SEP	Bask	

DATE/TIME

6/13/80  
6/17 3P  
6/18 5P  
6/19 6  
6/23  
6/26  
6/27 11

3/2  
5/1  
7/1  
6/2

7/2/77 17 East

2257 LFL 2258 RFL

S-38 1/4 x 28 7/8

97.2 x 73.3

C-40 1/2 x 36 1/2

1029 x 927



TAGS - Humb 1299<sup>LF</sup> / 1298<sup>RFL</sup> - RECOVERY -  
3585 LFL (new)

TC-11

TC-46

23 DEC 2002

S-103.6 x 79.3 C  
6/26 103.6 x 79.4 !

DATE/TIME	AREA	Activity	REMARKS
6/13/80	3	Nest-Lay	Wet and muddy from rain showers - not sprayed
6/17 3PM	11	Bask	
6/18 5PM	Area 8	Bask	lots of honey gold color in shell - 1298 & 1298 not noted - only 3585
6/19 6PM	SEP	Bask	yes 1299 also + 1298
6/23 6:45PM	SEP	Bask	
6/26 11:30AM	5 - leaving 4AM	Nest-Lay	13 day interval Resprayed TC46
6/27 1PM	SEP	Bask	

3/20/68 LIST-Bask

5/16/71 East

7/9/76 East-N S-103.5 x 78.1 C-109.9 x 102.9

6/27/80 East-N



12 -TC

- RECOVERY -

23 DEC 2002

TAGS - <sup>Himb</sup> 758 LFL  
~~3586 RFL~~  
<sup>Himb</sup> ~~828 RF~~

S- 92<sub>cm</sub>

C-

DATE/Time	AREA	ACTIVITY	REMARKS
6/13/80 3:40 AM	11	Nest - possible Lay?	rain showers - not sprayed
6/22 10 PM	SP	Nest	
6/28 2:30 AM	SP-17	Nest-Lay. 15 day interval	not sprayed

3/20/68 LISI - Bask

6/3/74 East - N

S-92.7 x 69.2

C-96.5 x 82.6

DATE/Time

6/14/80

6/18/80

6/20/80

6/23/80

6/23/80

6/26/80

6/15/79



TAGS-2690 ~~LFL~~ - RECOVERY -

TC-13

3590 ~~RFL~~

23 DEC 2002

3669L ~~3rd scale~~

S-97 x 81.4

C-106 x 106 1/2

DATE/TIME	AREA	ACTIVITY	REMARKS
6/14/80	2	Nest-Lay	pieces of right flap missing, top 2690 close to edge. Hole checked well. <sup>lost 2691</sup>
6/18-1:30pm	SEP? NEP?	Bask	Reported by Sue Schulmeister LHP Pippet Healed
6/20 2pm	SEP	Bask	
6/23 11am	NEP	Bask	
6/23 6:45 pm	NEP	Bask	
6/26 11:30am	3? <sup>12 day interval</sup>	Nest-Lay	tag 3669L 3rd scale applied - appear to have locked properly.
6/15/78	17 EAST	TC 25	
	S-38 1/4 x 97.2	32 1/8 x 81.6	C. 41 x 42 104.1 x 106.7



14 - TC /  
28 DEC 2002

- RECOVERY -

HIMB 677 OFF  
TAGS - 3592  
3593

S-96 x 71.8 C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/14/80 11:20pm	12	Nest	Himb 677 removed - not sprayed - embedded and couldn't get - returned to the water & did not lay
6/16-6/17	13	Lay 2:30am	

DATE/TIME  
6/14-6/15  
6/30/4  
6/30/7

13 JULY 1943 TC 59  
East N / A10 & A14  
FWT323 & "CI" 664 & "CI" 677 applied  
S-95.9 x 74.3 C 102.9 x 94.0



TAGS - 2249 LFL  
3594 RFL

- RECOVERY -

TC - 15

23 DEC 2002

S- 100.3

C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/14-15	6-7	Nest Lay 5:30 AM	TC sprayed on left only;
6/30 4:30 AM	5P	Nest (Lay?)	LH flipper heated

6/30/77

5 - East

2249 LFL, 2250 RFL applied (part of RFL missing)

S-39 1/2 x 29 1/2

C-42 x 38

100.3 x 74.9

106.7 x 96.5



16-TC

24 DEC 2002

TAGS-

3589 RFL

S-

C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/14 11:30 AM	9	Nest	TC sprayed
6/15 11:30	5-6	Nest	
6/16 3 AM	12	"	
6/22 5 PM	SEP	Back	

DATE/TIME

6/15/8

6/16

6/18

6/20

6/24

6/26

6/27

6/28

NO. 184



TAGS - 3595 LFL  
 3596 - through 3rd large scale

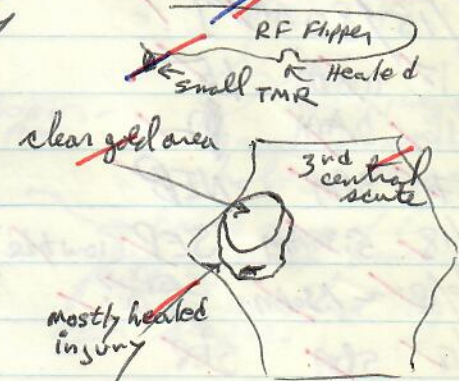
6094

6094

TC-17  
 24 DEC 2002

S- 92 x 70.5 C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/15/80 2:30 AM	6	Nest-Lay	RF Flipper small TMR Healed
6/16 ~ 9 AM	SEP	Bask	clear gold area
6/18 5 PM	NEP	Bask	
6/20 2 PM	SEP	Bask	
6/24 7 PM	SEP	Bask	
6/26 7 PM	SEP	Bask	mostly healed injury
6/27 11 PM	5-6	Nest	
6/28 2:30 AM	5-6	Nest-Lay	was the "clear" area somehow caused by the injury?



NO. 184 6/82 East, N - TC 37



18-TC  
(47 6/29/80) 24 DEC 2002

TAGS-  
~~3770~~  
~~3771a~~

S-93.3 x 69  
6/29 93.6 x 69.5

C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/15 8:00 AM	1	Nest	Sprayed TC18
6/15 11:15 AM	15	Nest	
6/16 3 AM	17	" / LAY	still covering at ~ 8 AM photos - Blue & red 5-6
6/17 3 PM	NEB	Bask	
6/18 5:30 AM	SEP (low tide)	Bask (water edge)	
6/18 ~ 1:30 PM	SEP? NEP?	Bask	reported by Sue Schulmeister
6/18 5 PM	SEP	Bask	
6/19 6 PM	NEP	Bask	
6/28 4:45 AM	SP	Nest	
6/29 2:30 AM - 5 AM	SP	Nest - Lay (?)	Spray TC47

~~13 DAY INTERVAL~~ ST1

DATE/TIME

6/14/80

6/15

6/29

NO. 18



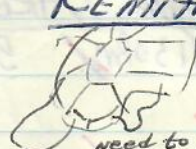
TAGS-3606 LFL

TC-19

24 DEC 2002 ~~Not~~ sprayed

S-92.5 x 72.5

C-97.4 x 90.5

DATE/TIME	AREA	ACTIVITY	REMARKS
6/14/82 11:15 AM	16	Nest	 <p>need to photograph and measure but not tag photos - tagged</p>
6/15-6/16	16-17	" Lay completed eggs off 7:30 AM - back into water ~ 9 AM	
6/29 3 AM 4:30 AM	3 <sup>14 DAY INTERVAL</sup>	Nest-Lay	<p>Broke some of her eggs with missing flipper - nested by <u>iron stake</u>.</p>

NO. 188 6/17/82 W-S - basking



29a / TC /

TAGS - 3600 LFL  
3601 RFL

S - 95.5 x 72.6

C -

DATE/TIME	AREA	ACTIVITY	REMARKS
6/15/80 11:30 AM	5-6	Nest-Lay	Part of right leg missing Barn on 2nd lateral left collected
6/18 ~ 11 AM	SP	Book	hauled out for ~ 5 minutes then went back in
<del>6/29 1 AM</del>	<del>6-7</del> 13 DAY INTERVAL	<del>Nest-Lay</del>	
NO. 195	6/23/82	East-N	TC 113

DATE/TIME

6/15/80

6/18

6/19

6/20

6/27

6/29/80

NO. 187



TAGS - 3602 LFL  
3603 RFL

TC - 20

24 DEC 2002

S - 92.3 x 89

C -

<u>DATE/TIME</u>	<u>AREA</u>	<u>ACTIVITY</u>	<u>REMARKS</u>
<del>6/15/15<sup>30</sup>PM</del>	<del>I</del>	<del>Nest-Lay</del>	
<del>6/18</del>	<del>SEP</del>	<del>Bask</del>	
<del>6/19</del>	<del>NEP</del>	<del>Bask</del>	
<del>6/20 2PM</del>	<del>SEP</del>	<del>Bask</del>	
<del>6/27 6:45PM</del>	<del>SEP</del>	<del>Bask</del>	
<del>6/29 1AM - 430AM</del>	<del>3 - (4)</del>	<del>Nest-Lay</del>	<del>13 DAY INTERVAL</del>
NO. 187	6/82	East - N	TC 92



921a TC  
2ms9

24 DEC 2002

TAGS-

3607LFL  
3608RFL

S- 91.8 x 68.8

C-

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/16	17	Nest	by tent	6/16/80
6/17 11 PM still cover at 3 AM	16	Nest-Lay	knobs in left and right flaps LHF healed slit showed to AI- white coralline on carapace	6/17 AI Je 6/17 7 AM
				6/19
				6/20
				6/22
				6/23
				6/24
				6/25
				6/25
				6/27
				6/29
				6/27/7



TAGS - ~~2227 RFL~~

- RECOVERY -

TC - 23

24 DEC 2002

+  
~~2228~~ 360<sup>93rd</sup> ~~single~~  
left

S - 94 cm

C -

DATE/TIME	AREA	ACTIVITY	REMARKS
6/16/80 2:45 AM	10	Nest	
6/17 2:15 AM	13	Nest-hay	
6/17 7 AM AI Jernison	SNEP area	Bask	Did not lay attached tag on right is attached on a random piece of flesh - flesh red - apparently injury during nesting.
6/19 6 PM	SEP	Bask	
6/20 6 PM	SEP	Bask	
6/22 5 PM	SEP	Bask	
6/23 6:45 PM	SEP	Bask	
6/24 7 PM	SEP	Bask	
6/25 12:30 PM	SEP	Bask	
6/25 6:30 PM	SEP	Bask	
6/27 1 PM	SEP	Bask	
6/29 1:30 AM	14	Nest	

6/27/77

15 East

2227 RFL, 2228 RFL

S - 36<sup>7/8</sup> x 29<sup>3/4</sup>

C - 39<sup>3/4</sup> x 36<sup>3/4</sup>

93.7 x 75.6

101 x 93.3



24-TC //

24 DEC 2002

TAGS - ~~3604 KFL~~

~~3671 RFL~~ ~~3605 RF~~  
through 3rd  
Scale

S- 90.8 x 72.5

C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/16/80 3 AM	12	Nest-Lay	
6/20 2 PM	AREA 9		
6/22 5 PM	N 12	Bask	
6/29 1-2:30 PM	5	Nest-Lay	13 DAY INTERVAL applied <del>3671 RFL</del>



7/2/82 observed basking by Ak at  
SE, Pearl & Hermes 3671 tag  
seen - S-91.2 x 73.5

DATE/TIME

6/17 Tues

6/18 WE

6/19 11

6/20 4

6/20 2

6/20 6

6/22 5

6/24 7

6/25 6

6/27 6

6/28 2

6/28 6



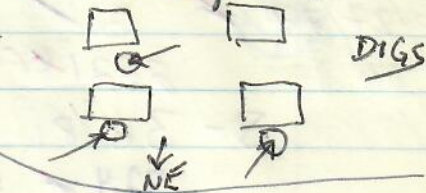
TAGS - 3611 IFL  
 3625 R 3<sup>rd</sup> through large scale  
 3626 RFL

TC-25  
 24 DEC 2002

S-93.3 x 71.8

C-

DATE/TIME	AREA	ACTIVITY	REMARKS
6/17 Tuesday 11PM	13-14	Nest	Nest for concrete transmitter/generator foundation - photos w/ birds in the background.
6/18 Wednesday 3AM		"	
		5:30 toged while returning to the water.	
6/19 11AM	14	crawling on cement slab	
6/20 4:30AM	4	Nest - Lay	
		1 crossed over	
6/20 2PM	SEP	Bask	
6/20 6PM	SEP	Bask	
6/22 5PM	SEP	Bask	
6/24 7AM	SEP	Bask	
6/25 6:30AM	SEP	Bask	
6/27 6:45AM	SEP	Bask	
- 11AM	SEP	still basking	
6/28 2:30AM	SEP	Bask (TC25?)	
6/28 6PM	SEP	Bask	





26-TC ✓

24 DEC 2002

-Recovery-

TAGS-2221 ✓

2221 ✓

3612 ✓ RFL

3613 ✓  
3rd SCALE

S-93.2 ✓ x 71.3 ✓

C-

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/19 2:30 AM	6 ✓	Nest Lay	TC NO. wet from rain not sprayed	6/19 ✓
<del>6/28 2:30 AM</del>				
6/27/77 ✓	6 ✓	EAST		6/26 ✓
	2221 ✓ RFL	2222 ✓ RFL applied		6/27 ✓
	S-36 <sup>3</sup> / <sub>8</sub> x 92.4 ✓	28 ✓		6/22 ✓
		71.1 ✓		6/23 ✓
			C-37 <sup>3</sup> / <sub>4</sub> x 35 ✓	6/23 ✓
			95.9 x 88.9 ✓	6/24 ✓
				6/25 ✓
				6/27 ✓
				6/30 ✓

ENT




FL  
TAGS - 3614 ~~RFL~~  
3615 ~~L 3rd large scale~~  
3616 ~~FL~~

~~TC-27~~

24 DEC 2002

S-93.2 x 70

C-98.7 x 92

<u>DATE/TIME</u>	<u>AREA</u>	<u>ACTIVITY</u>	<u>REMARKS</u>
6/19 3AM	5 on beach 5 on crest	Nest lay	soil and coral rubble 
6/20 2PM	<del>SEP</del>	<del>Bask</del>	
6/21 6PM	<del>SEP</del>	<del>Bask</del>	
6/22 5PM	<del>SEP</del>	<del>Bask</del>	
6/23 11AM	<del>SEP</del>	<del>Bask</del>	
6/23 6:45PM	<del>SEP</del>	<del>Bask</del>	
6/24 7PM	<del>SEP</del>	<del>Bask</del>	
6/25 12:30PM	<del>SEP</del>	<del>Bask</del>	
6/27 11AM	<del>NEP</del>	<del>Bask</del>	
6/30 11:55AM	<del>SEP</del>	<del>Bask</del>	

ENT. NO. 294



28

TC  
HIMB 751  
3622 LFL  
3623 RFL

-RECOVERY-

TAGS-

24 DEC 2002

S - 88.1 x 72.2

C - 92.5 x 93.5

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/19-6/20 12:00AM	5	Nest-Lay	Tag in good condition - difficult to remove	6/19/1
6/20 2PM	SEP	BASK		6/20
6/26 7AM	SEP	BASK		6/23
6/28 2:30PM	SEP	BASK		6/23/6

30 June 1974 TC18

All East

SL-88.3 x 72.4

C-91.4 x 91.4

tag 751, 800<sup>PR</sup>

TC1  
6/15/18



TAGS- 3610

TC- 29

3624

24 DEC 2002

10139

S- 92.6 x 706

C- 318-2

DATE/TIME	AREA	ACTIVITY	REMARKS
6/19/10:30AM	14	Nest	
6/20/2:30AM	14	Nest-Lay	
6/22/6PM	SEP	Bask	Wandering By metal cylinder - (Hot water tank?) - lots of young frigates in the area
6/23/11AM	NEP	Bask	
6/23/6:45PM	NEP	Bask	
6/25/12:30PM	NEP	Bask	

TC18  
6/15/83 3624, 3610 A4 S- 92.7



30-TC

TAGS-3627LA  
3628RFL

24 DEC 2002

S-91.5 x 71.9

C-97.8 x 90.5

DATE/TIME	AREA	ACTIVITY	REMARK
6/20 2:30am	4-5	Nest	
6/20 5am	13	Nest-Lay	
6/22	SEP	Bask	
6/24 7am	9	Bask	

DATE/TIME
6/20
6/21
6/22
6/22
6/23
6/27

3/27/83 3628 RFL (or 3528 RFL), 48" turtle seen sleeping in caves off Poipu Sheraton by Jim Watt, KUA member, transmitted to me by Don Harsock, DOAR.  
 uw. dup photos on file

TC12  
 6/10/83 3627; 3628 S-92.0  
 A6

6/30/7



TAGS - ~~OFF~~ - Recovery -

TC-31

2245 RFL; 3634 2<sup>nd</sup> 3<sup>rd</sup> 5<sup>th</sup>

2246 LPL 3645 RFL

24 DEC 2002

10/29  
10/17

S-94.2 x 72.5  
9/23 94.2 x 73.5

C-100.5 x 94

DATE/TIME	AREA	ACTIVITY	REMARKS
6/20 11:45 AM	5	Nest	2245 some new debris but tag on left on fly? <del>2245</del>
6/21 5:30 AM	5	Nest chamber	Almost complete. A few brownish notes as well as coralline alga on tags and carapace
6/22 3:45 AM	6	Nest	then quite
6/22 11 PM		Nest	
6/23 ~4 AM	6	Nest - Lmy	2245 moved - healed hole close to edge of flap -
6/27 1 PM	SEP	Dusk	3645 applying to same flap (right)
6/30/77	12	East	TC 30

C 38<sup>3</sup>/<sub>4</sub> x 36

98.4 x 91.4



32-TC

24 DEC 2002

TAGS-

3632

3633

S-95 x 74.8

C-

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/20/80 11:45	3	Nest	(abandoned) flap on right missing	6/21/80
6/21 2:45	2-3	Nest-LAY		

6/25 12:00pm NEP (TC32?) Bank

RH Flipper  
healed

NO. 186

6/82 East-N TC 60

TC24  
6/21/8



TAGS- 3630 RFL  
3631 LFL

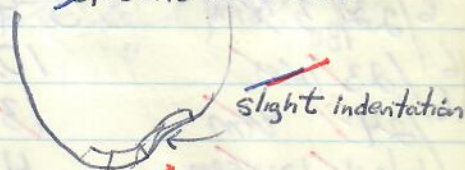
TC- 33

24 DEC 2002

S- 88.5 x 72.7

C- 94 x 89

DATE/TIME	AREA	ACTIVITY	REMARKS
6/21/0230	7	Nest-Lay	Ground wire-cut



light (honey-gold) spot on 1st ventral - seems to be an old injury

TC24

6/21/83 3630; 3631

A8

S- NT



34-TC

24 DEC 2002

TAGS-  
3661 LFL  
3662 RFL

S-96 ✓ x 70.2 F.B.F. C-28-2

DATE/TIME	ACTIVITY	AREA	REMARKS	DATE/TIME
6/22/180 3:30 AM	3-4 ✓	Nest ✓		6/21 11:00
6/23 11 AM	10 ✓	Nest ✓	(crawled a long way)	6/22 11:00
6/24 4 AM	13-14 ✓	Nest ✓		
6/24 10:15 PM	4 ✓	Nest-L.Ay ✓		



TAGS-

TQ- 35

S-

C-

<u>DATE/TIME</u>	<u>AREA</u>	<u>ACTIVITY</u>	<u>REMARKS</u>
6/21 11:30pm	5	Nest -	dig into bank <sup>no old tags</sup>
6/22 1:30pm	5	Nest -	" " "



36 - TC ✓

- Recovery -

1057 ✓

HIMB LF  
TAGS - 1058 ✓

3619 RFL ✓

3635 2<sup>nd</sup> scale ✓

24 DEC 2002

S-89 x 72.7 ✓

C-95 x 94 ✓

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/22 3:30 AM	13	Nest - Lay	See Basher	6/22/80
6/25 12:30 PM	NEP	back	pieces 994 - piece missing from left flap	6/28/77

TC 69 16 JUNE 1975 1057<sup>RF</sup>, 1058<sup>RF</sup> (error? reverse designation<sup>RF</sup> LFL) - Lay AS, back SP.  
 S-88.9 x 72.4, C 94 x 92.7



LF  
1  
FC  
TAGS - ~~2233 LFC~~ - RECOVERY -  
~~2234 RFL~~

~~TC-37~~

24 DEC 2002

S- ~~94.4~~ x ~~71.5~~

C- ~~106~~ x ~~88.5~~

DATE/TIME	AREA	ACTIVITY	REMARKS
<del>6/22/80</del> <del>3:15-6am</del>	<del>6</del>	<del>Nest-Lay</del>	<del>see basket</del> <del>recovered p94</del>

~~6/28/77~~

~~2~~  
S- ~~37.8~~ x ~~27~~

~~N-East~~

~~TC41~~  
C- ~~39~~ x ~~35~~

~~94.3~~ x ~~68.6~~

~~99.1~~ x ~~88.9~~



38-TC /

24 DEC 2002

TAGS-  
3552 RFL  
13599 LFL

S-

C-

DATE/Time	AREA	ACTIVITY	REMARKS	DATE/TIME
6/22/80 4 AM	15	Nest-Lay?	3599 embedded-	6/22/80
6/22 5 AM	SEP	Bask	see Basker taggings	6/23
6/23 11 PM	2	Nest	right hind "club" flipper	6/23
6/23 6:45 PM	SEP	Bask		6/24
6/24 7 PM	SEP	Bask		6/24 7
6/25 12:30 AM	SEP	Bask		
6/25 6:30 PM	SEP	Bask		
Rec 6/6/86 EAST-N				6/19/78

10170



TAGS - 2805 RFL - RECOVERY -

TC - 39

24 DEC 2002

2806 RFL  
3656 3rd scale

10175  
~~10175~~

S - 91.3 x 68.1  
1/2490.7 C -

DATE/TIME	AREA	ACTIVITY	REMARKS
6/22/80 4 AM	2	Nest	Returning to the water
6/23 2 AM - 3 AM	13	Nest	Small TMRS brought around tag - ventral flipped
6/23 10 PM	1	Byte test	TC number sprayed
6/24 4 AM - 5:30	16	Nest - LAJ	lopper wire trailing removed and save
6/24 7 AM	SEP	Bask	Healed
6/19/78	SEP	EAST - BASK	Barnacles on 4 marginal left.



40-TC //

24 DEC 2002

- Recovery -

TAGS //

HMB  
749 LFL //

364 RFL //

36421 3rd scale //

S-93.1 x 74.8

C-99 x 95

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/23 2:15 PM	3 //	Nest Lay //	749 near concrete slab left on turtle	6/23/8

(1048 PG 3/13/64 SE IS. P&H)

17 July 1974 A16-N (also 6/8/74 A17-N) TC 25

S-93.3 x 74.9 //

C-97.7 x 93.3

6/25/8



TAGS - 2212 RFL - RECOVERY -

TC-41

3643 LFL

3644 2<sup>nd</sup> scale

24 DEC 2002

S- 95.5 x 75.9

C- 100 x 95

DATE/TIME	AREA	ACTIVITY
6/23/80	6-7	Nest - Lay

REMARKS  
Knot in left flap -  
from old tag? ~~yes tag 22118~~

6/25/77

14

East - N TC-5

2211 LFL & 2212 RFL applied

S- 37 1/4 x 29 1/2

C- 38 3/4 x 37

94.6 x 74.9

98.4 x 94



How did "knot" form from  
TAGS?  
1) corrosion  
2) not cinched & "popped" off



42-TC

24 DEC 2002

TAGS-

365 RFL

3652 RFL

S-90.4 x 67.7

C-95.5 x 85

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/22 6pm	5(?)	Nest	Bob Schulmeister - Turtle w/ many barnacles seen out nesting	6/24/08
6/23 11:45am	SP	Nest	crawled up by tent - no tag felt -	
6/24 1am	SP	Nest-Lay	- many carapace and skin barnacles - Skin between scales of front flippers and flaps feels very soft Tag 3650 bad - not applied. All carapace barnacles removed and saved - BEAK Patches of white scumline on carapace	



TAGS-

3654 RFL

3655 LFL

TC-43

DEC 2002

S-93.5 x 72.1 x C-

<u>DATE/TIME</u>	<u>AREA</u>	<u>ACTIVITY</u>	<u>REMARKS</u>
6/24/80 4:55 AM	6	Nest-Lay	Left flap partly missing



44-TC ✓

- Recovery -

TAGS -

24 DEC 2002

HMB ✓

802<sup>OFF</sup> ✓

3659 ✓

3660 ✓

S-85.9 ✓ x 62.7 ✓

C-92 ✓ x 82.5 ✓

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/24 10:30 AM	8 ✓	Nest ✓	dig into deep	6/26/8
6/25 3 AM - 4:30 AM	3 ✓	Nest-Lay ✓	scratch deep scratches in carapace	

16 July 1974

East J - S.P. - ✓

only tag 802 ✓

S-86.04 x 62.9

C-91.4 x 82.6



TAGS- 3665 LFL  
3666 RFL

TC-45  
24 DEC 2002

S- 90.3 x 72 C- 2

DATE/TIME	AREA	ACTIVITY	REMARKS
6/26/80 4:30-6 AM	SP. by tent - to Area 16	Nest - Lay (7)	Scum on shell need to check for spulation orbs. TMR (fast size) on ventral <del>right</del> front flipper - adjacent to flap.

indentation -  
all healed

ENTO NO. 294

10th  
24th  
down-light out. Photos on rolls.



46-TC

SEE TC 11  
(SAME TURTLE)

TAGS-

S-

C-

<u>DATE/TIME</u>	<u>AREA</u>	<u>ACTIVITY</u>	<u>REMARKS</u>
------------------	-------------	-----------------	----------------



TAGS-

SEE TC 18  
(SAME TURTLE)

TC- 47

S- - C

P.80 C- LHP - 2

<u>DATE/TIME</u>	<u>AREA</u>	<u>ACTIVITY</u>	<u>REMARKS</u>
------------------	-------------	-----------------	----------------

11-28 x 95-0  
800 x 1.00

800 x 1.00

TC 1 - 48



48-TC

-RECOVERY-

TAGS-

24 DEC 2002

2589  
3672R<sup>2nd</sup> scale 2590

S-94.1 x 68.9

C-

DATE/TIME	AREA	ACTIVITY	REMARKS	DATE/TIME
6/29/80 5:30 AM	16-2 (center)	Nest-Lay	Good mother photos end of Roll 8, start of Roll 9, 6 by young Frigates	

6/11/78

3' EAST-N  
S-37 1/2 x 27  
95.3 68.6

TC14

C-39 x 35 3/4  
99.1 x 90.8

TC1-48

6 June - 1 July 1980  
EXPEDITION



1980  
BASKING INCIDENCE

N Total = 46, 39 meaning full

~~77%~~ seen basking  
23% not seen basking

TC	Observed basking	NOT OBSERVED BASKING	DETECTION not Possible	TC
	① 31	①	12	1
	2 32	34	14	2
	3 36	35(?)	15	3
	4 37	40	19	4
	5 (only on W-S) 38	41	9a	5
	6 39	42	26	<del>7</del>
	7	43	48	8
	8 N=30	44		9
	9	45	N=7	10
	10			11
	11	N=9		12
	13			13
	16			14
	17			15
	18			<del>17</del>
	19a			18
	20			19
	23			19a
	24			20
	25			9a
	27			23
	28			24
	29			25
	30			26

note high numbers

Possible explanation - As season progresses the incidence of basking declines, therefore turtles identified (TC nos.) later in season are less likely to be documented basking.



## AREAS OF SUCCESSFUL NESTING

visible

TC	AREA	TC	AREA
1	6, 12	27	5
2	13, 17	28	5
3	2, 1	29	14
4	1, 1	30	13
5	15, 15	31	6
<del>7</del>	4, 5	32	3
8	2, 17	33	7
9	5, 6	34	4
10	17, 3	36	13
11	3, 5	37	6
12	17	39	16
13	2, 3	40	3
14	13	41	6
15	7, SP	42	SP
<del>17</del>	6, 5	43	6
18	2, SP	44	3
19	16, 3	45	17
19a	6, 6	48	16
20	1, 4		
9a	16		
23	13		
24	12, 5		
25	4		
26	6		

→ Turtle Carapace  
- same as  
painted number  
or monogram

46.8% IN AREAS 3, 4, 5, 6

NO EGGS LAYING RECORDED IN AREAS 8, 9, 10, 11 (OR 4 of 18 available)

N = 60

Area 1 = 4	6.7%	Area 12 = 2	3.3%
Area 2 = 4	6.7%	Area 13 = 5	8.3%
Area 3 = 7	11.7%	Area 14 = 1	1.7%
Area 4 = 4	6.7%	Area 15 = 2	3.3%
Area 5 = 7	11.7%	Area 16 = 4	6.7%
Area 6 = 10	16.7%	Area 17 = 5	8.3%
Area 7 = 2	3.3%	SP = 3	5%



(Transcribed 1 July 1980)

Tern Island Turtle Observations  
by Schulmeister et al.

5 April 1980 - North shore - east cove - crawled  
up on beach at night - about 10:00

10 May 1980 -

Found basking at 9 PM - This turtle  
had large lesions on both rear and  
fore flippers. It was also seen on  
Trig - April - (North shore - west cove)

Found by Jon basking between 7 & 14 April  
about 2 PM (South shore - east end).

First pits seen May 5, 1980 - South  
shore - eastern end.



Trig Island turtles (most all observations  
10 AM - 3 PM).

Basbers

16 Sept 1979	1		
19 Oct.	3		
28 Oct	7		
10 Nov.	2		
10 Dec	6		
4 Feb 1980	14		
23 March	11		
17 April	7		
23 April	22		
14 May	1♀	2?	
23 May	5♂	7♀	20 $\frac{1}{4}$ miles south
30 May	12		
7 June	15		



## Whole Skate

	Basket
28 Oct. 1979	5
10 Nov.	2
6 Dec.	15
22 Dec	7
1 Jan 1980	9
18 Jan	14
8 Feb	16
17 Feb	11
28 March	6
17 April	11
23 April	18
28 April	25
30 April	18
14 May	<del>25</del> 3♀ 1♂ 4?
25 May	<del>18</del> 25
30 May	<del>25</del> <del>18</del> <del>23</del> 23 7 TW
7 June	20 19 IW



## East Island

9 Dec 1979 1 medium sized basket  
 28 March 1980 1 " & 1 large  
 2 April 2 (by Townsend Cromwell)  
 17 April 24  
 14 May 4♀ 6? 7ZW 2 copulating  
 30 May 18 basket 4ZW  
 7 June



Round

28 April 1980

1 IW nearshore

Mullet

14 May 1980

2 Copulating



Gin

30 May 1980 2 Turtles sw  
 1 basket  
 2 pints

L. Gin

30 May 1980 1 pit NE side



## Tern Island

30 Sept 1979	1 small	Tide station (TS)
9 Oct	1 "	TG
15 Oct	1 "	TG
11 Nov.	1 "	north beach
15 Nov	1 "	TG
1 Dec	1 "	TG
6 Dec	1 large	SW channel
10 Dec	1 small	TG
6 Jan 1980	1 small	TS
30 Jan	1 small	- west end
2 Feb	1 large	- north beach in channel
2 March	1 small	TS
9 March	1 large	- south beach
5 April	1 on	southeast beach basking



others  
middle to late May

2 Turtles copulating IW near coral head between Shark & Tern

late May 2 Turtles copulating near whole skate in shallow water

- 21 Turtles on a coral reef ~~area~~  
about 1/2 mile NW of Trig (aerial observation)

$N=19$

$\bar{x} = 13.16$

Range = 12 - 15 days

(the total 21 turtles distributed)



SUMMARY OF INTERESTING INTERVALS  
 - EAST ISLAND 6/10-6/11 to 6/29-6/30 1980  
 (20 days)

<u>TC NO.</u>	<u>Interval in Days</u>
1	13
2	13
3	13
4	13
5	14
7	13
8	13
9	12
10	12
11	13
12	15
13	12
15	15
17	13
18	13
19	14
19a	13
20	13
24	13

$N = 19$        $\bar{X} = 13.16$       RANGE = 12 - 15 days  
 (46 total TC females identified)



Turtle observations recorded by Jim Parrish research project  
 - transcribed June 6, 1980 -

date	size	time	place
5/22	<i>Chelonia mydas</i>	0023"	0300 Behind fuel tanks, E. Tern Is. on shore
5/27	<i>C. mydas</i>	1' 00"	1500 SE N.E. of Tern Is
5/29	<i>C. mydas</i>	3 1/2'	1000. N.W. of Tern Is.
	<i>C. mydas</i>	1 1/2'	1000-1400 NW of Tern Is
	<i>C. mydas</i>	1'	1000-1400 NW of Tern Is



5/30

turtle

2'

1130-1200

NE of whale skate

turtle

1 1/2'

1100-1200

NW of whale skate

turtle

3'

1430

N. of whale skate

6/1

C. mydas

3'

1500

N of whale skate

6/2

turtle

1 1/2'

1100

SW of Tern Island

6/3

turtle

2'

1000

SW of Tern Is.

6/4

turtle

2'

1500

Tern Is. dock

6/5

turtle

3 &amp; 3 1/2'

1200

W of Whale Skate



- FEMALES - TC'S  
- LONGER-TERM RECOVERIES -

TC NOS.	- OLD & NEW - TAG NOS.	ISLAND (NonB)	INTERNAL
X TC 1	2652 (3653, 3772)	East-N	13 JUNE 1978 EAST-N 2 YRS
X TC 2	FWS 956 (3773, 3774)	East-N	16 May 1971 EAST-B 9 YRS
X TC 5	HIMB 1063 (3663, 3664)	East-N	JUNE 1975 EAST-N JUNE 1978 W-S - B 2 YRS
X TC 6	2219, 2218	East-N	2 July 1977 EAST-N 3 YRS
X TC 10	2257 (3584)	East-N	2 July 1977 EAST-N 3 YRS
X TC 11	HIMB 1298, 1299 (3585)	East-N	March 1968 May 1971 JULY 1971 LISI EAST EAST 7 YRS
X TC 12	HIMB 758, 828 (3586)	East-N	March 1968 JUNE 1974 LISI EAST EAST 6 YRS
X TC 13	2690 (3590, 3669)	East-N	15 JUNE 1978 EAST-N 2 YRS
X TC 14	HIMB OFF 677 (3592, 3593)	East-N	13 JULY 1973 EAST-N 7 YRS
X TC 15	2249 (3594)	East-N	30 JUNE 1977 EAST-N 3 YRS
X TC 23	2227 (3609)	East-N	27 JUNE 1977 EAST-N 3 YRS
X TC 26	2222 (3612, 3613)	East-N	27 JUNE 1977 EAST-N 3 YRS
X TC 28	HIMB OFF 751 (3622, 3623)	East-N	30 JUNE 1974 EAST-N 6 YRS
X TC 31	2245, 2246 (3634, 3645)	East-N	30 JUNE 1977 EAST-N 3 YRS
X TC 36	HIMB 1057 1058 (3619, 3635)	East-N	16 JUNE 1975 EAST-N 5 YRS
X TC 37	2233, 2234	East-N	28 JUNE 1977 EAST 3 YRS
X TC 39	2805, 2806 (3656)	East-N	19 JUNE 1978 EAST-B 2 YRS
X TC 40	HIMB 749 (3641, 3642)	East-N	10 48 56 7 JULY 1974 EAST-N 6 YRS
X TC 41	2212 (3643, 3644)	East-N	3/13/64 SE-AM 25 JUNE 1977 EAST-N 3 YRS
X TC 44	HIMB OFF 802 (3659, 3660)	East-N	16 JULY 1974 EAST-N 6 YRS
X TC 48	2589, 2590 (3672)	East-N	11 JUNE 78 EAST-N 2 YRS
X 6/14 2.6/23/80	HIMB 859 (3591)	East-B	1 August 1974 EAST-N (one tag applied) 6 YRS

1977 East female taggings - 38

1977 recoveries in 1979 - 11; in 1980 - 8; as yet unaccounted - 19

X - now on recovery data sheet

TOTAL ♀ (ENCOUNTERED) TAGGED ON EAST - 49

TOTAL ♀ RECOVERIES - 22 9 of 108 encounters  
90 RECOVERIES - 44.8%

CYCLES - 5-2YR = 22.7%; 8-3YR = 36.4%; 1-4YR = 4.5%; 1-5YR = 4.5%; 5-6YR = 22.7%



## SUMMARY OF NUMBERS TAGGED

	(BASKING)	NEW	RECOVERY	ENCOUNTER TOTAL
4 YRS	TRIG			
	MALE -	1	1	2
	FEMALE -	5	5	10
	WHALE-SKATE			
	MALE -	9	12	21
	FEMALE -	7	6	13
	LITTLE GIN			
	FEMALE -	1	0	1
	EAST			
	MALE -	5	4	9
	FEMALE -	3	1	4

	(NESTING)	NEW	RECOVERY	ENCOUNTER TOTAL
6 YRS	EAST - (T's)	24	21 (46.3%)	45
	WHALE-SKATE -	3	0	3

TOTALS - 58 50 (46.3%) 108

	NEW	RECOVERY	ENCOUNTER TOTAL
MALES -	15	17	32 males
FEMALES -	43	33	76 females

108

5-6 YR = 22.7% ; 1-7 YR = 4.5% ; 1-9 YR = 4.5%







- MALES -  
- LONGER TERM RECOVERIES -

08 JAN 2002

DATES	OLD & NEWS TAG NOS.	ISLAND - BASK	INTERVAL
X 6/7/80	2599 (3551)	EAST <del>110 JUNE 1978</del>	2 YRS
X 6/10	3058 (3769)	EAST <del>may 79 JUNE 79</del>	1 YR
X 6/10 & 12	2576 (3582)	EAST <del>10 JUNE 78</del>	2 YRS
X 6/20	3274 (3629)	EAST <del>29 JUNE 79</del>	1 YR
		<del>W-S BASK</del>	
X 6/8/80	3078 (3556)	W-S <del>6 MAY 1979</del>	1 YR
X 6/8 & 6/30	1160, 2400, 2401 (freq. 351)	W-S <del>JULY 75 APRIL 76</del>	3 YRS
X 6/8	3041 (3588) 6164	W-S <del>may 79 JUNE 79</del>	1 YR
X 6/8	3215 (3589)	W-S <del>23 JUNE 79</del>	1 YR
X 6/8 & 6/30	956, 957, 958	W-S <del>Feb 75 JUNE 75 NOV 76</del>	4 YRS
X 6/8	3069	W-S <del>5 MAY 1979</del>	1 YR
X 6/9	3047	W-S <del>4 MAY 1979</del>	1 YR
X 6/9	2663	W-S <del>JUNE 1978 JUNE 1979</del>	1 YR
X 6/9	2712	W-S <del>15 JUNE 1978</del>	2 YRS
X 6/9	3031 (3762) (freq. 541)	W-S <del>3 MAY 1979</del>	1 YR
X 6/9	3234 (3765)	W-S <del>26 JUNE 79</del>	1 YR
		<del>W-S BASK</del>	
X 6/23	<del>1204, 1749</del> (3647, 3648)	TRIG <del>21 JAN 1976</del>	4 YRS



## DOCUMENTATION OF LONG-DISTANCE MOVEMENTS

## EAST ISLAND

TC 11 <sup>0330-0400</sup> 13 JUNE 1980 Lisianski, <sup>20</sup> March 1968 (May 71 - July 76 > East)

NOTE! Bask, travel and nest together?

TC 12 <sup>0300-0400</sup> 13 JUNE 1980 Lisianski, <sup>20</sup> March 1968 (June 74 East)

TC 40 23 JUNE 1980 SEI-PH <sup>13</sup> March 1964 (July 74 - east)

Both could have stayed at FS, but this seems unlikely

## Whale-Scate

FWS 115,986 30 JUNE 1980 Laysan 17 Sept 1966 (May 75 - w-s)

FWS 43? 8 JUNE 1980

## TRIG

FWS 665, <sup>100</sup> 200 9 JUNE 1980 SEI-PH 22 March 1968

lengthy movement from one small sandy island to another for nesting purposes seems to make no sense whatsoever, except

- 1) <sup>progeny of</sup> those that do have survived
- 2) ~~scate~~ hatchling predation?
- 3) physiological "need"?



84  
FREQUENCY

TAGGED  
JUNE 1980

TRANSMITTER NO. 193

START of positions - 11 JUNE 80

08 JAN 2002

351

MALE

whale-skate-B tags 2400, 2401, 1160

PL-9/25/77-

PL-65-6

6/17  
Tuesday

Short but strong (3-4) pulses noted during the <sup>morning and</sup> early afternoon. <sup>possible in the</sup> 10°-20° bearing from East. Same type of intermittent short pulse strings as 361 yesterday. Possible explanation - copulation. Turns partly off? 1640-1900h out to base.

6/18  
Wed

Short but strong pulses during 9 AM block. Positioned in 3 AM block. at 0312h

6/20

A position recorded at 358° 85° (outside barrier reef?)

6/20 at 1031h

004° and 103° - speeds at base minimum at the surface 4-5 pulse

6/21

AT 0333, 351°, 90° - South E. East of whale-skate.

6/21

6/24

Out 1610h, back in 0020 6/25.

6/25-6/26

Some short pulses. 350-360° and 18° at 0918 6/26

6/27

AM ~ 350°; PM - only short duration pulses - bearing not possible.

Friday

2136h - 350°, period = 472 (good contact);

6/28 SAT.

0342h - 000°, 93° (Term)  $\rho = 504$ ; 0945h - 017°, 95° (Term);

1600h - only short pulses - position from East not possible;

6/30 Mon

1830h - observed basking on east shore of W-S.

Many photos on Roll 9. (Possibly heard continuously until ~ 9:30 pm or later.)

1-21 July 80

Checked in at least once daily by Sue Schulmeister under contract

"Weak signal" reported on 15 July \* but note, detection for continuous signals only possible at time that radio was turned on - usually only once a day for one hour at ~ 10 PM.

No "continuous signals" detected.

22 July -

Sample monitoring by Ruth Ittner; last

4 Sept 1980

heard 4 Sept at 1958h. Signals periodically "weak". "Continuous" signals heard on 8/6, 8/7, 8/23 8/26-8/27, & 8/29.



08 JAN 2002

## CASE HISTORY OF 351 - MALE

Originally tagged 31 July 1975 basking on Whale-Island  
 - Recovered <sup>0-9</sup> 12 April 1976 basking on Whale-Island  
 - Recovered <sup>1-5</sup> 25 September 1977 basking on Whale-Island  
 Recovered <sup>2-9</sup> 8 June 1980 - TRANSMITTER MISSED basking on Whale-Island

25 September 1977 (see p 21, 1977 Gray data book) -  
 Observations of basking started at 3:15 PM emergence  
 - Radiometer at 5:10 PM; turned, at cloaca temperature  
 recorded (28.1°C) - photo with telephoto lens - Roll #3  
 ~ exposure #35, after turtle with mouth open.



86

TAG 665P

8 June 1980

TRANSMITTER NO. 194

start of position 5-11 June 80

Frequency

361

08 JAN 2002

MALE Whale-Skate tags 3561, 3562 PL-75.0

6/14/80 → Bask W-S at 0850, by 1130 period had ranged from 0466 to 14380; in water at 12:40 PM; sample plot

6/12 → at 87°, 352° 450 AM.

6/15 Sunday only short bursts of transmission, 2-5 clicks - weak - ~ 02°? or near 0°; AM Steve at ~ 15-25°

6/16 Monday now "normal" 9 PM evening; larger signals again picked up PM

6/17-6/18 "missing" during afternoon & AM monitoring - got it at 0415 6/18

6/18 wed (basking at 2:30 PM) 3:12 PM p. 478 (22°) [seen by Beth John 6/18 paint green NW W-S ~ 2 PM] first out 12:50 - 343° back in at 1700h.

6/19 Thursday 0550h out 700h back in (?) basking or at the surface? 1250h out, back in at 1350h.

6/24 out 1700; back in 2010h.

6/25 out 1540; back in 1850h

6/26 9 AM position block - strong pulses, but short duration speed - no definite fix. Weak signal received at Tern, 350° - 020°

6/27 0300-0400h - short moderate strength pulses between 020-045°

" 1000-1100h - short duration pulses - positioning not possible

" 2100h positioning block showed "no contact" - no contact thereafter.



CASE HISTORY OF 361 - MALE  
No previous tagging record -  
Transmitter tagged on W-S 8 June 1980

*[Faint, mostly illegible handwritten notes in pencil or light ink, covering the lower two-thirds of the page. Some words like "checked", "point", "also", "at", "to", "of" are visible.]*



88

TAGGED 9 JUNE 1980

TRANSMITTER NO. 200

FREQUENCY

start of positions - 11 JUNE 80

08 JAN 2002

541 ✓ MALE ✓ Whale-Skate-B ✓ Tags 3031, 3762 PL-66

6/14 ✓

2 PM out to back 87° 339° (W-5)

6/16 ✓ - 6/17 ✓

out 2100 - Al-328° Night back (midnight p. 490 - 338°) returned to the water 6/17 0600h

6/18 wed

1550h (1537 676° 329°) 1810 back in the water, <sup>Back</sup>

6/20 ✓

out at 1410 back in at (3350) 1520

6/21 ✓

1405h out to back position at 1508h - 324° p. 360 = ~34°  
position at 2130h - 330°; back in - 0300/23  
Earlier this morning short dive intervals were recorded -  
2-4 minutes max in air - few to 5 minutes up  
according to Al - reflection of calmer weather?

6/25 ✓

out 1410h; back in 1600h

6/27 ✓

at 0335h - 350°; 1030 - 1045 - 24°; 2112h - 020°;

6/28 SAT

0315h - 158°; 0932h - 018° 95° (rem); 1600h - 010°

"

Out at 2030h position 330° 76° p. 475° Back in at 0600h 6/29.  
(out to back, or continuous floating at the surface?)

1-21 July 1980 Checked in at least once daily by Sue Schummeister -  
Faint signal reported on July 11 (5 sec. duration); 15,  
16, 19, 21; Also, on (17) July continuous signal  
~ 2230h to 0030 (18) July - period .460; <sup>551 Beacon = .465</sup> out  
(20) July 2200h - 2248h period .493, with 551 Beacon  
at .478.

22 JULY - Sample monitoring by Ruth Ittner - last  
12 AUGUST heard 8/12 at 2133 hours. Signals periodically  
weak (but not weak several days prior to termination)  
Continuous signals heard 7/26, 7/29, & 7/30;



CASE HISTORY OF 541 - MALE

ORIGINALLY tagged ~~3~~ May 1979 basking on ~~Trig~~  
Recovered ~~1~~ 9 JUNE 1980 ~~TRANSMITTER TAGGED~~ basking on ~~Whale~~ State

Tagged <sup>3031</sup> on Trig at <sup>4:15 PM</sup> 5/3/79, observed there again  
basking on 5/4/79 - noted that turtle  
was "bitten" (indicative of recent copulation)



90

tagged

9 JUNE 1980

TRANSMITTER 198

START OF POSITIONS - 11 JUNE 80

Frequency

511

Male <sup>08 JAN 2002</sup>

Whale ~~skate-B~~

tags 3763, 3764 PL-71.2

6/14 last contact at ~ 10 AM. ~~WJ~~

6/15 Sunday no contact - departed? transmitter failure? antenna bent? transmitter lost

Partially dislodged?



08 JAN 2002

CASE HISTORY OF 511-MALE

No previous tagging record -  
Transmitter tagged on W-5 9 June 1980



92

8 JUNE 1980 TRANSMITTER 195

START OF POSITIONS - 11 JUNE 80  
08 JAN 2002

FREQUENCY

450 FEMALE - whale ~~skate~~ - B tags <sup>450</sup> 3567, 3568, <sup>(370)</sup> ~~(FW506)~~ PL-68.4

6/17 ~~ves~~ <sup>(210h)</sup> out to ~~back~~ <sup>whale-skate?</sup> - returned at 0040 ~~6/18~~ nest?

6/20 out at 1410 <sup>329°</sup> back at 1535, out again to back at 1540;  
2250h back in the water.

6/24 Out 1330h - back in 1400h; Out 1410h, back in 1450h.

6/27 Friday Visual confirmation at surface, to the south of Trig, at 4:00 - 4:45 PM. ~ 100m from shore. Seen twice by me from the Boston Whaler.

1-2/July 80 Checked in at least once daily by Sue Schulmeister. on ③ July, continuous signal from 2053 hours - 2135 hours, period .510 with 551 beacon at .490. - also out at 0326 and 0556-④ July as per Beth. on ⑥ July, continuous signal at 1630 (.425, 1650h (.430), 1710h (.430), 2055h (.490) - Beacon 551 at 1512h = .370. 2235h still. 21 July - 1526h continuous signal - period .350 at 1550 hours

22 July - Sample monitoring by Ruth Ittner -

13 November Last heard on this date by Schulmeister - last of all turtles to be monitored.



08 JAN 2002

## CASE HISTORY OF 450 - Female

originally tagged <sup>FWS370</sup> 10 July 1970 Nesting on East FFS  
 Recovered <sup>4-0</sup> 5 July 1974 Nesting on East FFS  
 Recovered <sup>5-11</sup> 8 June 1980 - TRANSMITTER TAGGED Basking on Whale Skate

5 July 1974 nesting in Area 1 (TC<sup>NO</sup> but on card) - dug one pit - turtle ("small, goldish")

10 July 1970 measurements recorded as:

S 32.8" x 26.1	(83.3 cm x 66.5)
C 35 1/8 x 30 7/8	(89.2 x 78.4)



TAGGED 94 JUNE 1980

TRANSMITTER 196

START OF POSITIONS - 11 JUNE 80

FREQUENCY

491

FEMALE

08 JAN 2002

Whale - Skate-B tags 3164, 3760 PL-74

appeared in 10 minute scan at 9 AM

6/13/80. Came out to bask, apparently on Whale-Skate at ~1540 - returned to water ~1940. Came out to (west) ~2110. Temperature of transmitter 23 3/4 - 23 1/2 - same on locator transmitter. At 1:30 AM

6/14/80 AM/NEST

Took position of 346° - A1 at Tern 87-90°. Turtle went back in the water at 0540. First surface bearing (other surfaces may have taken place) at 0933 from East 342°, from Tern at 1025 (the nest surface) at 1020 096°. (about the same time at the surface according to me. Surface again at 1048 - sue bearing 096°; 11:05 AM surface. Surface at 11:39 AM - in 60 seconds - bearing 337°; 11:56 AM; 12:10 PM ~10 seconds; 12:37 PM ~20 seconds; 12:56 PM bearing 344°; 1:30 PM ~20 seconds; 1:47 PM <1 minute; 2:40 PM 340°; 3:04 PM; 3:45 PM 340°; 6:42 PM 340°; 6:58 PM ~340°; 7:13 340°; 7:37 PM 10:04 PM 340°.

6/15 Sunday

out to bask at 3:38 bearing 330° p. 491. 1700h in

6/18 wed. first out

1130h (Basking at 2:30 PM) back in at ~2:30 PM.

(seen by Beth-John NW W-S - green paint went back as to the water returned at the time position was taken!)

6/21 Monday

BASK -

6/23

out to bask at 1330h - returned at 2120h (time position was taken!)

1-21 July 80 Checked in at least once daily by Sue Schulmeister on 6 July, continuous signal at 1512h (.430 period), 1543h (.400), 1620h (.380), 2055 (.480), 2235h, 0004 7 July (Beth). Beacon 551 at 1512h = .370. 17 July 18 July - 0028h period = .470 Beacon 551 = .465. 21 July continuous 1526-1554 (period .355).

22 JULY - 7 AUGUST

Sample monitoring by Ruth Iltner - last heard on 8/7 at 2140 hours (strong signal noted at that time). Continuous signals heard on 7/25 (observed basking on W-S - photos taken beside tagged adult).



08 JAN 2002

## CASE HISTORY OF 491- female

ORIGINALLY TAGGED <sup>3164</sup> 19 June 1979 Basking on Whaleshake  
 Recovered <sup>1-0</sup> 9 June 1980 ~~TRANSMITTER TAGGED~~ Basking on Whale-Skate

Also seen basking on whale-skate on 6/29/79



TAGGED 96 9 JUNE 1980 TRANSMITTER 192

START OF POSITIONS - 11 JUNE 80

FREQUENCY 09 JAN 2003

200

FEMALE

TRIG-B

~~Whale Shark~~

tags 3570, 3571 PL-72.3  
(FWS 665 off)

Freque  
200  
(Cont  
6/29 S  
6/30

6/12/80 ~ 11:09 AM emergencies started for several minutes - up to 70 minutes; At 12:35 positioned  $84^{\circ} 34' 2''$  (W-S); - temp  $29^{\circ}C$   
Bask until ~ 2:45, then again at 3:15. This turtle surfaces frequently. (11 AM & 7 PM Bask 6/13 - TRIG?) 12:30 PM P-415

6/14 sat. 0810 continuous bask - bearings for trig - return to water at 11:00 AM;  
11:10 AM - Bask again - 12 noon in water; 12:20 Bask;  
Bask from 8 AM - 10:20, out again at 11:30

6/15 skidday Transmission (at least) 1 AM - nest? 2320 back 0300; 0350 out in out (transmission) Basking?

6/16-6/17 several times -  
6/17 Tuesday 9:10 PM Tern - visual by quarters (2039 - 2107) 2138 by Avgas building; down for 20 minutes, then back on Tern; At about 9 AM 6/17 .200 was found in the middle of the runway - "headed" back by John Beth, etc. - Signals picked up later in the vicinity of Trig (?)

6/17 NEST Came out again on Tern to nest at Steve - nest located - Eggs 60 - 60 Confined by Beth JOHN

6/18 wed 0909 position  $309^{\circ}$  - off the south shore of Tern Island. Return to water 0120 AM  
AT 2:00 PM -  $314^{\circ} \times 75^{\circ}$  (P.548) - About 1/3 the way to Trig from Tern.  
Some constant signal, but apparently not basking on Trig (floating?).  
position at 2:20 PM  $314^{\circ}$ , 086; at 3:50 AM (off W-S) 086, 086; 6/19 positioned at  $342^{\circ}$

6/19 0850 out 1040 back in; 1330h out, 1420h back in;

6/20 Friday at 17th Steve "red" closing in on Tern - bearing loud - all the way around - No bearing taken from Tern

6/21 bask - on or on coal head of floating at the surface? why wasn't period recorded?

6/22 Sunday 1209h out to bask; Returned at 1350h. When not basking, spent a lot of time near the surface - i.e. short dive intervals - 2-4 minutes bottom up, few to 5 minutes between up (according to AI) Reflection of calm weather?

6/23 out to bask at 1330h, returned at 2120h.

6/25 wed out at 0800h, back in at 1020h. out at 1500h, back 1540.

6/26 Thurs. "looked" for turtle with hand-held antenna from Boston whaler - no visual contact achieved.

6/27 Friday visual confirmation north of Trig at 4 PM - 4:45 PM - seen twice by me floating at the surface - 100M from shore.

6/28 SAT 0920h - 1000h bask (?) Need period to determine if she was only floating at the surface.

7/14/80



Frequency  
200  
(continued)

97  
09 JAN 2003

6/29 Sun. 2050 out (start transmission), 2114 back in (stop)  
6/30 Mon. - 9PM recorded on scanner at Tern Is. seemed to be mild "spill-over" into other frequencies. Andy and I walked down Tern beach with hand-held antenna - Turtle 200 found nesting ~100m east of old SP building. Returned 15 minutes later to find her digging another pit - removed transmitter by backing out screw - threading of bone seems to have been retained.

7/14/80 - Telephone report from Schufmeisters on 7/12/80 indicated that tagged turtle 3570, 3571 nested on Tern from 9:30-12:30 AM - photo taken

### CASE HISTORY OF 200 - Female

Originally tagged 22 March 1968 basking on SE Is. P&H  
Recovered 12-3 <sup>TRANSMITTER TAGGED</sup> 9 June 1980 basking on Trig



Tagged 98 9 JUNE 1980 TRANSMITTER 199

START OF POSITIONS - 11 JUNE 80

Frequency

531

FEMALE

09 JAN 2003

TRIG-B

tags 3574, 3575 PL-673

- 6/14 1800h Note that turtle surfaces seldom - and for very brief transmission periods (antenna bent?)
- 6/15-<sup>2020</sup>6/16 2107h bearing 328° NEST? 6/16 0600h back in the water.
- 6/16-<sup>2030</sup>6/17 ~~2030~~ out (TRY) NEST? 6/16 back in the water at 0530.
- 6/18 wed 2020 out at 342°, 83°; back to the water at 2220h. NEST or night back?
- 6/19 (2030h out, back in at 2240h, NEST?)
- 6/22 Sunday Spent a lot of time near the surface - i.e. short dive intervals 2-4 minutes maximum up - few to 5 minutes between up (according to Al); reflection of calmer weather?
- 6/28 SAT. Quit at 2030h - position <sup>W5</sup> 340°, 80° p.571; back in at 0100h 6/29.

1-21 July 1980 Check in at least once each day by Sue Schulmeister.

- 2 July constant signal at 2255h for at least 45 minutes (period .570); 3 July 2053h - 2135 continuous signal (.580) with beacon 551 = .490; 4 July 0326h by Beth, 5 July 2139h - 2300h, 551 Beacon .470.
- 8 July 2125-2208h continuous (.580) (.570) with beacon 551 = .470
- 10 July 2117-2215h (.560) - beacon .470.
- 12 July "listened during afternoon - ~~but~~ up about every 1/2 hour".
- 13 July 2125-2242h continuous signal.
- 14 July 2225-2310h continuous (.570) with 551 at .470.
- 16 July 2145-2217h continuous; 2230-0028 17 July 18 July continuous (.560) with 551 at .465.
- 19 July 2155-2225 continuous.

22 July - Sample monitored by Ruth Ittner; last  
10 August heard on 8/10 (strong signal noted at that time). Continuous signals recorded on 7/22, 7/23, 7/26, 7/27, 7/28, 7/29, 7/30



09 JAN 2002

## CASE HISTORY OF 531 - Female

No previous tagging record -

Transmitter tagged on ~~Trig~~ 9 June 1980



\* Radio-tracking signals must be interpreted in view of my direct biological observation of turtles at EFS.

## BASIC DATA COLLECTION STRATEGIES

- 1.) Position, if possible, on each of 8 turtles once every 6 hours
- 2.) Observer scans once every 10 minutes for 40 seconds - record if turtle is transmitting. <sup>Relative surface + male vs female surface</sup>  
 If in each scan, then turtle is up basking, nesting, or possibly floating - Go to transmitter (temperature (period) to distinguish)
- 3.) 24 surface interval for all 8 turtles -  
 ① beginning, ② middle and ③ end of experiment
- 4.) Frequency of transmissions <sup>analyze</sup> vs diurnal/nocturnal; <sup>(time at the surface)</sup> weather conditions; moon cycle
- 5.) as of 6/13 (or larger) all "positions" movements could be operator variation - error, 10 to 15 to 20°
- 6.) Activity cycles - <sup>measure</sup> daily; post-nesting;
- 7.) Can't plot from one fix to another for tracking line, because error is greater than <sup>actual</sup> movement of turtle
- 8.) What are the chances of a transmitter failing?
- 9.) Problem of distinguishing "night basking" and nesting by females.
- 10.) Basic assumption - Radio-tracking does not effect survival, reproductive success or behavior.
- 11.) Problem of interpreting 10 minute spans with respect to answering the question if the turtle is basking, in and out basking, or bobbing at the surface.



- 1.) Number of seals born on East
- 2.) Number of Albatrosses born on East
- 3.) Reduction in the <sup>land area</sup> size of East (see "Synopsis")
- 4.) Photo dossier

Expedition June 1980

- Some Tentative Conclusions -

- 1.) Large number of tag recoveries - Cycles, recruitment of turtles
- 2.) Relatively low number of turtles present this season (2nd lowest in 8 years)
- 3.) Tag retention for Immanuel
- 4.) Growth rates (of adults)
- 5.) Growth rates of ~~immature~~ immature turtles
- 6.) <sup>some what</sup> Restricted movements of females (2 males)
- 7.) No copulation after first nesting because transmitter intact

### MAJOR COMPONENTS OF STUDY

1. Determine positions of 8 turtles (4♂, 4♀) for 20 days, approximately 4 times daily (HABITAT USAGE)
2. Sample of each turtles behavior taken at 10 minute intervals - a) determines relative frequency of time spent at the surface or underwater, more that appears in 10 minute sample, the more time spent at surface - and converse) b) detect event and measure frequency of basking and resting.
3. 24 hour, continuous monitoring of behavior. Absolute measurement. length of dives - means -
4. One hour daily monitoring of presence in Shoals - + sample of behavior for the one hour period



- MONK SEAL CENSUS -

DATES	Times	LYP	ADULT <sup>PREG</sup> <sub>molts</sub>	SA	P	SWP	LOCATION
7 JUNE 80	~ 2 PM	0	21	4	22	16 (?)	EAST
<p>(Subadult noted that just hauled out, but some old fur still molting off back. Black pup alone (Schulmeister's report see 3 total alone - first time today).</p>							Total = 47
11 JUNE 80	Wednesday 6 PM	1	24 (1 molt)	2	23	10 (?)	EAST
							Total = 49

18 June 80  
Wednesday  
~ 1:30 PM  
Schulmeister

19 June 80  
Thursday  
Noted mother with new pup while aiding turtle, found by John & Bob, w/ net around neck

19 June KAIMI saw only one seal while out fishing at STARK

Schulmeister's survey

22 JUNE 1980  
Sunday  
Bob - just before dark  
"Wearers" - 12  
Seals w/pups - 11  
Adults - 8  
Juveniles - 3

- earlier survey -

12  
11  
9  
9 (7 subadults, 2 juveniles)

Converted - for	LYP	ADULT	SA	P	SWP	LOCATION
22 JUNE 80	-	19	3	23	11	EAST
						Total = 45

23 JUNE 80  
Monday 11:15 PM  
with Bob Schulmeister

7	1	2	1	LGIN
---	---	---	---	------

1 emociated



## - MONK SEAL CENSUS - (CONTINUED)

Dates	Times	LYP	ADULT	<sup>Reg</sup> Molt pairs	SA	P	SWP	LOCATION
23 JUNE 80 Monday	11:45 AM		4		1	1		GIN
with Bob Schulmeister (dead drying SA on Gin)								
23 June 80 Monday	1 PM				3			La Perouse
24 June 80 Tuesday	7 PM	2	20		5 <sup>4 green</sup>	23	10	EAST
(emaciated pup, eye out, not seen) Total = 48								
(Also, consider movement of seals to Bare Island and unnamed sand spit a short distance to the NW of East Island.)								
25 JUNE 80 Wednesday					23			TERN
increase due to "pairs" reported by Sue Schulmeister (highest count to date)								
26 June 80 Thursday	12 noon	-	3		1	1	1	BARE
27 June 80 Friday	6:45 AM	0	19	3 pairs 2 molt	4	22	10	EAST
(some nesting turtle tracks go right to seals w/ pups) Total = 45								
29 June 80 Sunday								
Very small black pup seen alone on the north shore of TERN - possibly premature								
29 JUNE 80 Sunday	5:30 PM	1	7	1 molt 2 pairs	3	2	1	TRIG
Total = 12								



## MONK SEAL CENSUS (CONTINUED)

DATE	TIME	LYP	ADULT	SA	P	SWP	LOCATION
6/30/80 Monday	7PM	2	22 <sup>2 pairs</sup> <sub>2 molts</sub>	10	21	7(?)	W-S
							Total=53

Male seal coming ashore, looking around, ignore me, and crawl off towards "pairs"



## MONK SEAL TAG RECOVERIES

DATE/Time	TAG NO.	STAGE	LOCATION/REMARKS
6/9/80 <sup>12:15pm</sup>	A500	large adult w/pup	W-S
6/8 11:10 PM	(SA)	new molt - light patch on right side	W-S
6/10 7 PM	775 <del>000</del>	new molt Adult	By Log - measured <sup>best</sup> East (also seen later in the evening) - TWO recordings - 83 1/2"; 79 1/2"
6/11 6 PM		Rope scar on neck - crescent scar on torso - adult with pup on South-East Island.	- Photo Roll ?
6/13 5:30 PM	A787	Adult	East-SEP
6/19- 6/20		started noticing the presence of fecal matter along the trails left by monk seals coming ashore - related to increasing infauna?	
6/21 SAT	A215	Adult w/pup	EAST - Area 1 <sup>scar on left side</sup>
6/27 7 PM		photo Te/250, fore on with pup	(high # of view on roll)
6/30		Seal w/pup - mother has light patch on R(?)	W-S



09 JAN 2003

TAG Summary  
-LOCATOR-

TAG NO.	DATE	Notes
3551	6/7	(with 2599)
3552	6/7/80	(with 3899)
3553	6/8	(with 3789)
3554	6/8	(removed FWS 43?)
3555	6/8	
3556	6/8	(with 3075)
3557	6/8	(with 3676)
3558	6/8	(with 3041) <sup>WATER</sup>
3559	6/8	(with 3218)
3560	6/8	NOT USED
3561	6/8	
3562	6/8	
3563	6/8	
3564	6/8	
3565	6/8	
3566	6/8	
3567	6/9	<sup>450</sup> Removed FWS 378
3568	6/9	
3569	6/8-6/9	
3570	6/9	
3571	6/9	Removed FWS 665
3572	6/9	
3573	6/9	
3574	6/9	
3575	6/9	

TAG NO.	DATE	Notes
3751	6/9	
3752	6/9	
3753	6/9	
3754	6/9	W-5 49 <sup>not for tag</sup>
3755	6/9	
3756	6/9	
3757	6/9	
3758	6/9	
3759	6/9	(with 3553)
3760	6/9	(with 3164)
3761	6/9	Bent not used
3762	6/9	(with 3031)
3763	6/9	
3764	6/9	
3765	6/9	(with 3234)
3766	6/9	
3767	6/9	
3768	6/9	
3769	6/10	(with 3058)
3770	6/10	
3771	6/10	
3772	6/11	PC 1 (with 2652)
3773	6/11	PC (removed)
3774	6/11	2 (with FWS 450)
3775	6/11	Back on (with 3578)



TAG Summary  
-LOCATOR- (continued)

09 JAN 2002

TAG NO.	DATE	TAG NO.	DATE
3576 ✓	TC 6/11	3600 ✓	TC 6/15
3577 ✓	3 6/11	3601 ✓	19a 6/15
3578 ✓	back 6/11 (with 3575)	3602 ✓	TC 6/15
3579 ✓	TC 6/11	3603 ✓	20 6/15
3580 ✓	7 6/12	3604 ✓	TC 6/16
3581 ✓	TC 8 6/13 (with 3583)	3605 ✓	24 6/16
3582 ✓	back 6/12 (with 2586)	3606 ✓	TC 19 6/16
3583 ✓	TC 8 6/13 (with 3581)	3607 ✓	TC 6/16
3584 ✓	TC 10 6/13 (with 2257)	3608 ✓	9a 6/16
3585 ✓	TC 11 6/13 (with 1298, 1299)	3609 ✓	TC 23 6/17 (with 2227+)
3586 ✓	TC 12 6/13 (with 758)	3610 ✓	TC 24 6/17 (with 3624)
3587 ✓	TC 9 6/13 (with 3597)	3611 ✓	TC 25 6/18 (with 3625, 3626)
3588 ✓	BACK 6/13 (with 3673, 2038)	3612 ✓	TC 6/19 (with 2222)
3589 ✓	6/13	3613 ✓	26 6/19 (with 2221)
3590 ✓	TC 13 6/14 (with 2690)	3614 ✓	TC 6/19
3591 ✓	3007 6/14 (with 859)	3615 ✓	27 6/19
3592 ✓	TC 6/16	3616 ✓	6/19
3593 ✓	14 6/16	3617 ✓	6/19
3594 ✓	TC 15 6/15 (with 2249)	3618 ✓	6/19
3595 ✓	TC 6/15	3619 ✓	TC 36 6/22 (with 1058)
3596 ✓	17 6/15	3620 ✓	6/19
3597 ✓	TC 9 6/15 (with 3587)	3621 ✓	6/19
3598 ✓	6/15	3622 ✓	TC 6/19
3599 ✓	6/15 (with 3552)	3623 ✓	28 6/19
		3624 ✓	TC 29 6/20 (with 3610)

shown  
6/17/07  
Becket  
needed - GB



09 JAN 2003

## TAG Summary - LOCATOR -

TAG NO.	DATE	TAG NO.	DATE
3625	TC 25	3650	3649
3626	6/20	3651	TC 42
3627	TC 30	3652	6/24
3628	6/20	3653	TC 1
3629	3244 6/20	3654	TC 43
3630	TC 33	3655	6/24
3631	6/21	3656	TC 39
3632	TC 32	3657	TC 4
3633	6/21	3658	6/24
3634	TC 31	3659	TC 44
3635	TC 36	3660	6/24
3636	6/22	3661	TC 34
3637	6/22	3662	6/24
3638	6/22	3663	TC 5
3639	6/22	3664	6/26
3640	6/22	3665	TC 45
3641	TC 40	3666	6/26
3642	6/23	3667	6/26
3643	TC 41	3668	6/26
3644	6/23	3669	TC 13
3645	TC 31	3670	6/27
3646	6/23	3671	TC 24
3647	6/23	3672	TC 48
3648	6/23	3673	6/30
3649	TC 4	3674	6/24
		3675	6/29

(with 3611)

6/20

6/20

6/20

6/21

6/21

6/21

6/20 (with 2275)

6/22 (with H1MB 1058)

6/22

6/22

6/22

6/23 (with H1MB)

6/23

6/23 (with 2212)

6/23 (with 3634, 2246)

6/23

6/23

6/23

6/23 (with 3657)

(with 3611)

6/20

6/20

6/20

6/21

6/21

6/21

6/20 (with 2275)

6/22 (with H1MB 1058)

6/22

6/22

6/22

6/23 (with H1MB)

6/23

6/23 (with 2212)

6/23 (with 3634, 2246)

6/23

6/23

6/23

6/23 (with 3657)

3649

TC 42

TC 1

TC 43

TC 39

TC 4

TC 44

TC 34

TC 5

TC 45

TC 13

TC 24

TC 48

TC 4

TC 13

TC 24

TC 48

TC 4

TC 4

TC 4

3649

TC 42

TC 1

TC 43

TC 39

TC 4

TC 44

TC 34

TC 5

TC 45

TC 13

TC 24

TC 48

TC 4

TC 13

TC 24

TC 48

TC 4

TC 4

TC 4

6/24

6/24

6/24 (with 3772, 2652)

6/24

6/24

6/24 (with 2805, 2806)

6/24 (with 3649)

6/24

6/24

6/24

6/26

6/26 (with 1063 and H1MB)

6/26

6/26

6/26

6/26 (with 26908, 3590)

6/27

6/29 (with 3664, 3605)

6/29 (with 2584, 2590)

6/30 (with 3588 and 3038 etc)

6/24

6/29

6/29

6/24

6/24

6/24 (with 3772, 2652)

6/24

6/24

6/24 (with 2805, 2806)

6/24 (with 3649)

6/24

6/24

6/24

6/26

6/26 (with 1063 and H1MB)

6/26

6/26

6/26

6/26 (with 26908, 3590)

6/27

6/29 (with 3664, 3605)

6/29 (with 2584, 2590)

6/30 (with 3588 and 3038 etc)

6/24

6/29

6/29

6/24

6/24

6/24 (with 3772, 2652)

6/24

6/24

6/24 (with 2805, 2806)

6/24 (with 3649)

6/24

6/24

6/24

6/26

6/26 (with 1063 and H1MB)

6/26

6/26

6/26

6/26 (with 26908, 3590)

6/27

6/29 (with 3664, 3605)

6/29 (with 2584, 2590)

6/30 (with 3588 and 3038 etc)

6/24

6/29

6/29



## TAG Summary - LOCATOR -

113

09 JAN 2003

TAG NO.	DATE
3676 ✓	6/30 (with 3557)
3677 ✓	6/30
3678 ✓	6/30 (with Himb 986 <sup>f</sup> & FWS 115)
2038 Black Plastic	6/30 (with 3588 & 3673)
↑ 6 JUNE - 1 JULY 1980 ↑	

3551 - 3678

3751 - 3775

Bent - brought back to Honolulu  
(3560; 3761; 3650; 3658)

149 tags applied 6 June - 1 July 1980  
Expedition

TAG NO.

DATE

date hatched  
Facility

• ASAP = software •

Captive Reared  
Turtles.

Events  
↳ Captive Care  
"Rehab"



Summary of 1980  
CARAPACE MEASUREMENTS

115

	Straight		CURVED		TAGS ON	TAG LOSS ON RECOVERED TURTLES	Lost ONE OF TAGS
TC	LR 90.5	x 67.9	—	—	(1-1978)	2 YRS	on
	2R 96.1	70.6	103.3	x 95.5	(1 FWS-1971)	9 YRS	on
	3	96.9	73.3	—			
GR →	4	93.3	69.2	—	(2-1977)	3 YRS	both on
	5R	93.5	73.0	—	(1-1975)	5 YRS	on 1978 on 1980
	7	91.3	74.0	98	91.5		
	8	90.1	69.8	—			
	9	92	68	—			
	10R	96.9	76.3	—	(2-1977)	3 YRS	lost one
	11R	103.6	79.3	—	(2-1976)	4 YRS	both on
	12R	92	—	—	(2-1974)	6 YRS	both on
	13R	97	81.4	106	106.5	(2-1978)	2 YRS lost one
	14R	96	71.8	—	(1-FWT 2-HIMB > 1973)	7 YRS	lost T & 1-HIMB
	15R	100.3	—	—	(2-1977)	3 YRS	lost one
	17 <sup>tag</sup> SCAB	92	70.5	—			
	18	93.3	69	—			
	19	92.5	72.5	97.4	90.5		
	19a <sup>tag</sup> SCAB	95.5	72.6	—			
	20	92.3	69	—			
	9a <sup>tag</sup> SCAB	91.8	68.8	—			
	23R	94	—	—	(2-1977)	3 YRS	both on
	24	90.8	72.5	—			
	25	93.3	71.8	—			
	26R	93.2	71.3	—	(2-1977)	3 YRS	lost one
	27	93.2	70	98.7	92		
	28R	88.1	72.2	92.5	93.5	(2-1974)	6 YRS lost one
	29	92.6	70.6	—			
	30	91.5	71.9	97.8	90.5		

- CONTINUED ON PAGE 116 -



	STRAIGHT		CURVED		Tags on	Loss
TC 31 R	94.2	x 72.5	100.5	x 94	(2-1977)	3yrs both
32 <sup>tag scars</sup>	95	74.8	—	—	—	—
33	88.5	72.7	94	89	—	—
34	96	70.2	—	—	—	—
36 R	89	72.7	95	94	(2-1975)	5yrs Lost
37 R	94.4	71.5	106	88.5	(2-1977)	5yrs both
38 R	91.3	68.1	—	—	(2-1978)	2yrs both
40 R	93.1	74.8	99	95	(1-1974)	6yrs on
41 R	95.5	75.9	100	95	(2-1977)	3yrs Lost
42	90.4	67.7	95.5	85	—	—
43 <sup>tag scars</sup>	93.5	72.1	—	—	—	—
44 R	85.9	62.7	92	82.5	(1-1974)	6yrs on
45	90.3	72	—	—	—	—
48 R	94.1	68.9	—	—	(2-1978)	2yrs both

Hmb 859 basket

$N = 42$       39

$\bar{X} = 93.2 \text{ cm}$

RANGE = 85.9 - 103.6 cm

$\bar{X}$  Recoveries SL = 93.9 cm  
 $N = 20$   
 RANGE = 85.9 - 103.6 cm

$\bar{X}$  "new" tags SL = 92.5 cm  
 $N = 22$   
 RANGE = 88.5 - 96.9

$\bar{X}$  Recoveries <sup>w/Tag</sup> Scars = 93.9  
 $N = 25$   
 RANGE = 85.9 - 103.6

$\bar{X}$  "New tags" SL = 92.3  
 $N = 17$   
 RANGE = 88.5 - 96.9

Represents careful examination for tags - not always possible with baskets.

22<sup>of</sup> recoveries - 29 years of (36yrs) (or more) tags, a follows:  
 2yrs - 1 <sup>orig</sup> 2  
 3yrs - 4      2  
 5yrs - 1      2  
 6yrs - 1      2  
 7yrs - 1 (lost) 3

TAG LOSS ON RECOVERED TURTLES  
 Tags on      Loss  
 (2-1977) 3yrs both

TC 1 2  
 6/13/7  
 TC 2 9yrs  
 5/16/7  
 .015 cm/m  
 TC 5 5  
 6/1/7  
 (106)  
 TC 10 3yrs  
 7/2/7  
 TC 11 3  
 7/1/7  
 (1298, 129)  
 .0021 cm/m  
 TC 12 6  
 6/1/7  
 (758, 828)  
 .0097 cm/m  
 TC 13  
 6/15/7  
 TC 14 6  
 7/13/7  
 .0012 cm/m  
 TC 15  
 6/30/7  
 TC 23  
 6/27/7  
 .0083 cm/m



	STRAIGHT		CURVED	
TC 1 <sup>2 YRS</sup>	90.5	x	67.9	-
6/13/78	<u>90.8</u>	x	68.6	-
	-0.3			
TC 2 <sup>9 YRS</sup> <sub>1 mon</sub>	96.1	x	70.6	102.3 x 95.5
5/16/71	<u>94.5</u>	x	70.8	<u>101.6</u> x 95.3
.015 cm/mo	+1.6			+0.7
TC 5 <sup>5 YRS</sup>	92.7		72.7	
6/ /75	<u>93.5</u>	x	73.0	-
(1063)	-0.8			
TC 10 <sup>3 YRS</sup>	96.9	x	76.3	-
7/2/77	<u>97.2</u>	x	73.3	-
	-0.3			
TC 11 <sup>3 YR</sup> <sub>11 mo</sub>	103.5	x	79.3	-
7/ /76	<u>103.5</u>		78.1	
(1298, 1299)	+0.1			
.0021 cm/mo				
TC 12 <sup>6 YRS</sup>	92.7	x	69.2	96.5 x 82.6
6/ /74	<u>92.0</u>		-	-
(758, 828)	+0.7			
.0097 cm/mo				
TC 13 <sup>2 YRS</sup>	97.0	x	81.4	106.0 x 106.5
6/15/78	<u>97.2</u>	x	81.6	<u>104.1</u> x 106.7
	-0.2			+1.9
TC 14 <sup>6 YRS</sup> <sub>11 mon</sub>	96.0	x	71.8	-
7/13/73	<u>95.9</u>		74.3	-
.0012 cm/mo	+0.1			
TC 15 <sup>3 YRS</sup>	100.3			
6/30/77	<u>100.3</u>			
	0			
TC 23 <sup>3 YRS</sup>	94.0			
6/27/77	<u>93.7</u>			
.0083 cm/mo	+0.3			



	STRAIGHT		CURVED	
TC 26 <sup>3YRS</sup>	93.2	x	71.3	
6/27/77	<u>92.4</u>	x	71.1	
<sup>.022 cm/mo</sup>	+0.8			
TC 28 <sup>6YRS</sup>	88.1	x	72.2	92.5 x 93.5
6/30/74	<u>88.3</u>	x	72.4	<u>91.4</u> x 91.4
	-0.2			
TC 31	94.2	x	72.5	100.5 x 94
6/30/77	—			<u>98.4</u> x 91.4
TC 36 <sup>5YRS</sup>	89.0	x	72.7	95 x 94
6/16/75	<u>88.9</u>	x	72.4	<u>94</u> x 92.7
<sup>.0017 cm/mo</sup>	+0.1			
TC 37 <sup>3YRS</sup>	94.4	x	71.5	106 x 88.5
6/28/77	<u>94.0</u>	x	68.6	<u>99.1</u> x 88.9
<sup>.011 cm/mo</sup>	+0.4			
TC 40 <sup>6YRS 1 mon</sup>	93.1	x	74.8	99 x 95
7/7/74	<u>93.3</u>	x	74.9	<u>97.2</u> x 93.3
	-0.2			
TC 41 <sup>3YRS</sup>	95.5	x	75.9	100 x 95
6/25/77	<u>94.6</u>	x	74.9	<u>98.4</u> x 94
<sup>.025 cm/mo</sup>	+0.9			
TC 44 <sup>6YRS 1 mon</sup>	85.9	x	62.7	92 x 82.5
7/16/74	<u>86.4</u>	x	62.9	<u>91.4</u> x 82.6
	-0.5			
TC 48 <sup>2YRS</sup>	94.1	x	68.9	
6/11/78	<u>95.3</u>	x	68.6	
	-1.2			



$N=18$

"0" or negative measurements =  $N-9$

$N=9$  with increases:  $-0.012 \text{ cm/mo}$  36-109 months  
range -

• Flap knots, scars or other abnormalities indicative of loss

still had one old tag	TC13 -	"pieces of right flap missing"
	TC17 -	healed notch in distal right flipper - small TMR right flap
	TC19a	"part of right flap missing"
	TC9a	"knots in left & right flaps"
	TC32	"flap on right missing"
one " tag	TC36	"piece missing from left flap"
one " tag	TC41	"knot in left flap from old tag?"
	TC43	"left flap partly missing"

∴  
5 of these  
turtles could  
have had old  
tags

-or 27, instead of 22, of the 49 turtles (females)  
encounter on East represented tag recoveries,

55.1% instead of 44.9%



AGAR HOOKANO vessel → crab traps - targeted  
 resides - Kam ~~HAWAII~~ Lokehoni - leatherback 1971  
 6/16/80 - Information provided by Jim Cooke <sup>30-40 F</sup> - vessel Kaimi  
 Seals seen at Brooks Banks, but thus far no turtles.



