

BALAZS
1988-

FFS
EXPEDITION 37

1992 FFS
EXPEDITION 38
SATELLITE
TRANSMITTERS

2 of 2

EXP. 37 = 10 - 23 MAY 1988
EXP. 38 = 5 - 11 AUGUST 1992 (p. 11-41)

PN(TC) ^{NESTING} FEMALES - EAST IS. . . . p. 11

PN(TC) FEMALES - TERN IS. . . . p. 41

NO. NESTING EACH NIGHT p. 106
EAST

NO. NESTING EACH NIGHT p. 108
TERN

TIDE CALENDAR p. 116

BASKING CENSUS - TERN IS. . . . p. 102

1993 pages
45, 66,
73, 75, 115

TIM GERODETTE - 373-3067 home
FINCH - (213) 457-7895



NAV 8 - 471-0029
Tom FARE - 395-9711

Composition Book • 9 3/4 in. x 7 1/2 in.

Available As:

Item No.	Sheets	Ruling
09-9130	60	College Ruled & Margin
09-9132	60	College Ruled & Margin & Paged
09-9134	100	College Ruled & Margin

ESSELTE

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Essette Pendaflex Corporation.

HONOLULU LABORATORY
Southwest Fisheries Center
2570 Dole Street
Honolulu, HI 96822-2396

7/3/88 Phil - Radio

63

~~7.76 large green date books +
Bulbs for Flashlights 2-AA~~

3-4 fluorescent bulbs

- ✓ 2 waffle mix
- ✓ 4 dried fruit
- ✓ 4 peanut M&M 1/2 lbs
- ✓ 1/2 frozen chicken

for Darcy

Sandra & Leonard Souza 262-5431

~~7/4 passed for David KUWAHARA~~

"only buy DICTIONARY if < \$20"

- ✓ 1.) PART# 512753 a plug that comes off armature plate
has 4 holes
- ✓ 2.) NO PART# one complete armature plate assembly
includes sensor coil, charge coil
wire harness w/ ♀ end plug.
- ✓ 3.) "parts catalog" for motors
(as opposed to Service
Manual)

-
- Joel - shark narrative
 - Save all bent tops
 - Debriefing report

7/19/88 [frost painted
Tuesday 3-4 night new

definitely seeing hatchling's row

- No significant predation

1 year study VS > 10 years mine

- Sheila + Mitch & Lin
- Sheila on 26 July flight
- Ferisa 5-6 Aug.

7/29/88 Plane returned from FFS

total # tags sent to date -

5/88	-	324	taken w/me
6/9		150	airplane
7/7		191	Cromwell
		<u>665</u>	

8/ /88 Lunch w/ Sheila at
King St. Debriefing +
she provided me with computer
sheets from Phil, + bag of
bent tags.

8/ /88 Lunch with Phil Dye

8/ /
8/2 /
Monday
Mo

8/3 /
Wed.

ARB AMMERSON
= 23.783°N
166.217W

AUG.

TEST

"

"

U260

ON

U236

ON

"

TEST

U260

ON

U306

ON

"

8/26/88 Friday - radio call to
Doris/Ken Tern - What gear to
bring back.

8/29/88 7AM
Monday Morning Radio to Tern concerning
Barry's seal bite 5.9 MHz
(need to enter into log).

8/31/88
Wed. Meeting w/ Vanessa & Dick
Bauder.

ARB AMERSON
= 23.783°N
166.217°W

Concerning - 1) Greater intensity of
labor to work of
K.N. + nests (FWS study)
2) Lynn & Glennis (Lynn-3 opportunity
to send back. Sent to V
w/ro warning)
3) Digging up hatchlings
400 early

AUG. 1992 ARGOS POSITIONS FOR EAST:

TEST	4800	23.743 N	166.376 W	LC = 0
"	4802	23.789	166.208	2*
"	4802	23.794	166.208	0
U260 ON	4800	23.776	166.218	1*
U236 ON	4801	23.784	166.237	1
"	4801	23.793	166.216	1
TEST	4802	23.796	166.244	0
U260 ON	4800	23.789	166.194	1
U306 ON	4802	23.803	166.337	0
"	4802	24.120	166.238	0

*LOCATION CLASS 2 =
ACCURATE TO WITHIN 350M

*LOCATION CLASS 1 =
ACCURATE TO WITHIN 1KM

Bent tags and "practice" tags returned from FFS 1988 Summer 47

6873	10,029	10,101	10,243	10,308
6874	10,047	10,105	10,251	
*	10,052	10,106	10,252	
9819	10,053	10,107	10,253	
	10,054	10,108	10,254	
*	10,058	10,111	10,255	
3595	10,059	10,138	10,257	
	10,071	10,137	10,258	
	10,073	10,147	10,262	
	10,086	10,148	10,275	

10,503	Returned	Mis Applied or Practice Tags -	
10,510	early	3594*	10241 10565
38 Total	Sept	10044	10242 10581
	88	10091	10383
		10098	10414
		10099	10429
		10117	10508
		10206	10509
		10219	10523
		10219	10560
		10221	10563

For mother turtles best helpers, who dedicate
 themselves to long lonely nights under the starlit sky,

Mother Turtle

Turtle dear,
 driven by fate,
 shall you always rest
 your young, lonely island,
 whose birds do mourn,
 and owls sleep?

You swim again to a little isle,
 dead to the world,
 for the sands to keep you babes,
 the treasured cargo of your love,
 For one day,

that they shall hatch,
 you leave your children here,
 upon the loam of the isle,
 to nurse them in your
 stead,

Entrust your young to her
 bosom, and gentle,
 close to heart
 in hope that some liquid
 night
 Mrs Babes will follow,
 the silent call of sea,
 There to the dear and
 tender nurse,

For one day,

The babes will come again,
nurtured once and held so
close,
and grow to be,
the miniature of mama dear,
When her daughter do return,
from sea, from sea,
to once again,
entrust their treasured young,

The sea will know,
and the idle will know,
the loving heart of mama dear,
who held her nest so tenderly,
and covered it with gentle hands,
to know again see her babes,

tender nurse,

Thus, she shed as tears,
for her babes dear,
she held so close,
and left them there,
to look them once farewell,

With a sigh,
she pulled herself,
stirred from a night's hard
labor,

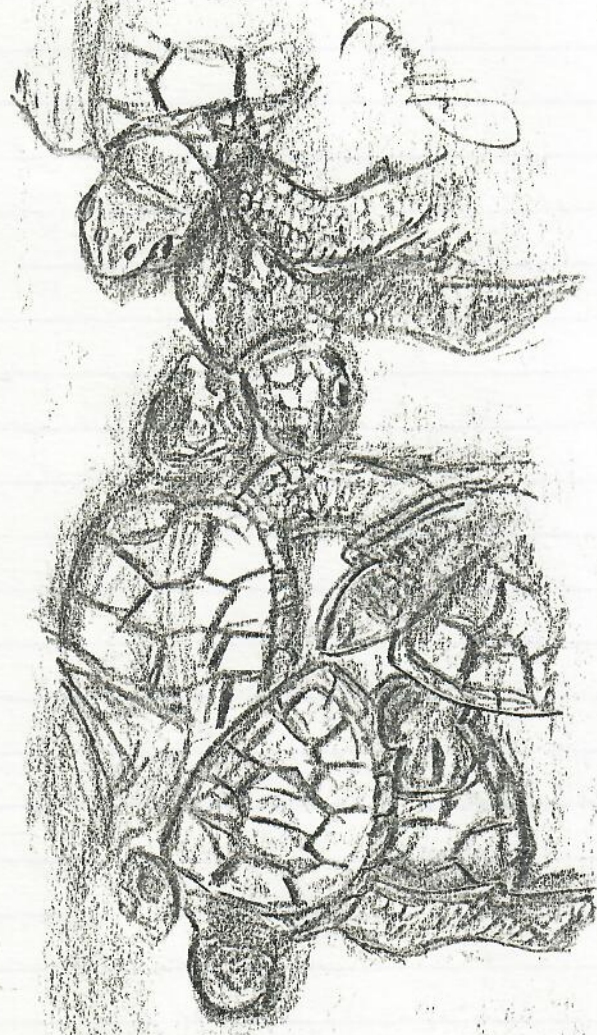
"I entrust the idle in
their care",
thus, saying this,
she left,
Thus ~~she~~ trusted in
the care,

of wind and sun and warm soft sand,
and hawtly to the sea,
For love of sea,
and the sands,
She left his babies,
Upon the ide



19 June, 1988

LYNNE FUKUDA



American Dragonfly
 12/17/88
 83/III/21
 The dragonfly
 nymph

Wall-to-wall chittles

Day old Gran. Saw
Tuffe Chirping
12/VII 1928
Tan Hill (West
(Dunlop/veronica) #1)

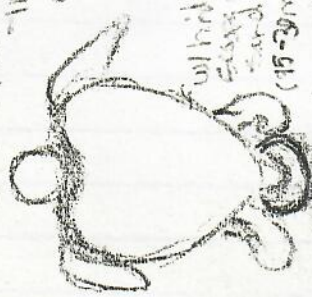


W.P.

Stages of Nesting by *Sceloporus* sp.



1) Female turtle enters burrow, crawls up the firm in search of a nesting spot, leaves behind a track. (15 min - 1 hr)



2) Full hind leg, clearing out sand. (15-30 min)



3) Beginning egg chamber. (30 min)

4) Covering feet - Tail in sand, lift off front, mouth, front flaps. (30 min)



5) Square - turtle starts to curl tail around egg. (15-20 min)

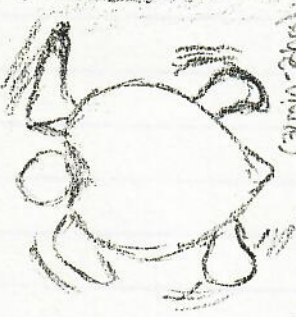


6) Adult egg chamber - complete - turtle scrapes out of deep hole. (15-20 min)

7) Egg laying - with eggs, dips down 2-3 meters, drops eggs. (15-20 min)



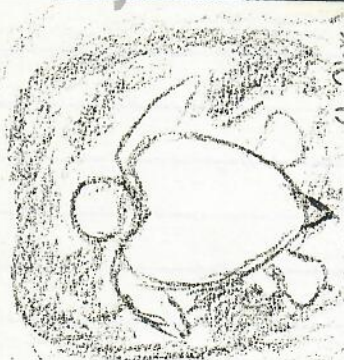
8) Return to surface. (15 min)



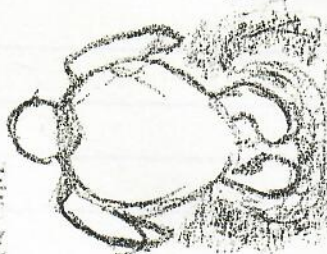
9) Beginning body pit - up all stairs, she scrapes and digs a pit. (30 min - 2 hrs)



10) Egg layer - with eggs, dips down 2-3 meters, drops eggs. (15-20 min)



11) Adult body pit - all eggs laid, she scrapes out of deep hole. (1-2 hrs)



12) Covering eggs - partly covered - just mound and carefully rubs sand on eggs. (15 min)

The Hatching of a Green Sea Turtle Nest

18/VIII/88



1 concave, soft spot
- indicates turtle activity



2 "crab hole"
- sand coned in by
hatchlings digging and
moving



3 "mud of 'snout'"
hatchling turtle
- wood chip from nest
dry - looks like
ice-cream



4 "Scout" turtle emerging
from sand - propels
himself up



5 "Scout" activity arouses
other hatchlings to emerge



6A Activity at surface, excited
total nest - all start to
dig upwards



6B Hatchlings in
lower layer
push water to
cut. All sand
- little hatchling
cut "wallow" out
the hole.

Hatchlings in the layer instead
break through the glowing waves



9 Hatchlings propel themselves
in water



10 wave, acid-timed, ripples and
- while if water in and goes to sea

Dear G
Aloha
you fo
to ke
have
very
you be
you!
I'm h
the ra
glad
be kee
In re
beginn
just
Needle
I am
period
Have b
the d
season
reliev
The t
with
questi
we m
approx
and Li
hours.
possib
relayed
talk w
I hop
home..
Take c
Aloha,
Mumma

Dear George,

7/11/90

Aloha from French Frigate Shoals! Bob and I would like to thank you for the letters and special turtle articles; it's always good to keep updated on the current issues, especially when we don't have a chance to read the newspaper but every 5 weeks. Also, a very special mahalo for the t-shirt memorabilia - how long have you been hanging on to it? Thank you, it was very thoughtful of you!

I'm hoping that you and I will have the opportunity to chat on the radio some evening soon! We keep missing each other, but I'm glad that you had the chance to talk turtles with Bob. We will be keeping a special eye out for C-15, who has the LHF tag!

In regards to the dead turtle found on East Island at the beginning of May; unfortunately I did not take any pictures -- just measured the carapace, removed tags and an examination. Needless to say, I did not even perform a necropsy. *left it to wash away!*

I am enclosing a copy of the Turtle ID for East Island for the period from 6 May through 9 July 1990, for your information. I have been keeping track of the recovery tags and have been noting the data on the Table 3 that you gave me; at the end of the season I can just give you the copy of this table and hopefully relieve you of the task!

The turtle season is progressing wonderfully, with good results with "temporary identification", tagging, etc. If you have questions, please feel free to call us! As was mentioned by Bob, we monitor frequencies 12432.3 and 7760.2 from 0700 through approximately 1900-2000 hours; radio contact is made with Laysan and Lisianski on Monday, Wednesdays and Fridays beginning at 1945 hours. It is helpful for us to be alerted ahead of time, so if possible you can call FWS Honolulu office and the message will be relayed as to a scheduled day and time. Anyway, I do hope to talk with you in the near future!

I hope you are well and having a good summer with the kids home...have you been keeping updated on the "Ninja Turtles"? Take care!

Aloha,
Alumnis & Bob

Table 2.--Immature green turtles newly tagged at TERN ISLAND 18 JANUARY 1990
K. N.
 (dates)

Tag No.	Date	Location	Status	Carapace length (cm)	
				Straight	Curved
W 557	18 JANUARY	LEFT FLIPPER PRIMARY SITE	BASKING *		74.3
W 559	" "	RIGHT FLIPPER PRIMARY SITE			

This turtle had no tumors

* BASKING ON SOUTH SIDE OF TERN, SECTOR 6
 DID NOT RETURN TO THE WATER AFTER TAGGING
 APPEARED TO BE A FEMALE. - Small tail - but maybe
 not sexually mature yet

W 560 27 Jan. 1990 Left primary site
 W 561 " " Right primary site

Curved
 CL
 79.0

Basking on
 Crab beach during
 AM hours 8:00-11:00

This turtle had no tumors or scars - it had a small tail ♀? - maybe not sexually mature yet

G. WILDLIFE

MARCH 1990
 TERN ISLAND
 REPORT by K.W.

1. Endangered and Threatened Species

a. Hawaiian Monk Seal

The Tern Island pup was weaned on 1 March. He was still around at months end and was looking fat and sassy.

Two still born or aborted pups were found on Tern Island this month. One on 22 March and the other on 27 March. They were found in sectors 4 and 5, respectively.

During March, three seals were found dead on Tern Island. One adult male on 1 March, a juvenile male (tags U34 right and U134 left) on 30 March, and a juvenile female (tags N220 left and N221 right) on the 31st.

On 15 March, seal (tag T15) showed up with a large shark bite on its side. This seal was not seen in late March so we do not know if it survives.

b. Green Turtle

By months end, we had begun to notice a few more adult turtles in the waters around Tern Island but not as much of an increase as observed last March. On 21 March, a possible turtle copulation was reportedly seen north of Shell Beach.

On 26 March, a check of Whaleskate at 1400 hrs found 8 basking turtles (3 male and 5 female) and about another 20 turtles swimming in the shallows.

This year, we plan to set up the East Island turtle camp during the last week of April so that our researchers can catch the beginning of the nesting season.

This turtle had no Timers or scars - It had a small tail ♀ - maybe not sexually mature yet

5 May 1990

80

Dear George -

Hello from French Frigate! In regards to the enclosed "paper weight", I found it a couple days ago in the courtyard (between the two barrack wings) on Tern Island. It was only partially buried. I left it all together for you. I'm curious to know the tag number, how long it's been "lost"... and if the tag is actually suppose to be on the turtle!

Although I arrived on 25 April I have not been able to set up the East Island camp due to weather; the winds have been 20+ knots. On Saturday, 28 April, I had a chance to go to East mainly to check on signs of turtle nesting. There was one false pit below the berm that was probably a day old and another turtle (or the same) crawled around on the East end, digging 3 false pits before returning to the water. That was it. There were 12 turtles either basking or in shallow water while we were there.

We had planned on getting me over to East to set up camp on the following Monday

We had planned on getting me over to East to set up camp on the following Monday but the weather turned for the worst on Sunday. Needless to say I am getting stir-crazy and very anxious to get to East! Everything is packed and ready to go the second the wind dies down a little... hopefully SOON!

There have been no crawls on Tern Island, to this date. We've been seeing more activity in the shallow water (copulating) and more baskers but no nesting activity. I can only hope the same is true on East so that I can still get those first females.

I hope all is well with you! The training and review at Sea Life Park was beneficial to both Bob and myself. I'll be working with him a couple nights when he arrives on the way.

I'll keep you updated and we can set up a radio call after we've been in the field. Take Care!

Aloha,

Glynnis

9 May 1990

Dear George -

Aloha from East Island! The weather finally calmed down so we could set up the turtle camp! My first night on East was Sunday, 6 May with only one female up (crawl only). Upon arrival I took a look around the island for possible nests. Although I saw a few false pits there was only one that is a probable nest. This is good because I did want to get the first females nesting. To this date and time (actually 5/8 at 3:35 am) no definite nests have been seen. There is definitely an increase in the numbers of baskets and turtles in shallow water; this is compared to what I saw on Saturday 4/28.

The day that we set up camp, we found a dead female turtle on the northwest side of the island at the water's edge. Upon examination I found no tumors and a longitudinal cut on the left rear flipper (from base of flipper to tip); it was a fairly deep gash with underlying muscle exposed. She died sometime between Saturday, April 28 and Sunday, May 6; there was definitely a decomposing odor!

I did remove her tags (enclosed) and the tags' numbers are: 9711 L and 10074 R. I also measured her carapace so you have her final data: Straight carapace length 98.2 (using calipers) and curved carapace length 104.0 (tape measure).

I'm anxious to return to Tern to look her tags up on the copy of your data (which I forgot to pack).

Hope all is well with you. I'll be keeping in touch!

P.S. The engraving is working well thus far!!

my
DREMEL
MOTOR TOOL

Aloha,
Glynnis

ORIG. TAGGED BY GHTB 6/9/86 NESTING ON EAST IS.
RESIGHTED 6/1/88 NESTING ON EAST IS.

ENT. NO.
422

9711
10,074

16 May 1990

Hi George!

16 May 1990

Hi George!

Thank you for your letter! Just an update for you. The East Island camp was set up on Sunday, 6 May and I've been on East since then. I did return to Tern for one night for a "tick-less" and shady reprieve!!

Turtling is slow with an average of 2 turtles up a night. The most was 5 in one night. I've identified 9 females thus far, 2 of which needed tags. The pliers work well ~ as well as the applicator!

I've used the Dremel on all the gals with no problems!! I think this is it for "temporary ID"! I'm anxious to get into the season when it'll be much less disturbing to the turtle to get their identification.

Bob Cummins arrived on this flight (today) and we'll get him to East, probably Friday, at which time we'll be able to work together for a couple nights so I can give him "hunts" that I've learned from you and from past experience. Once Bob has the opportunity to be out on East Island on his own with the turtles, I'll talk with Craig or Ken McDermond and set up a radio call with you!! I look forward to talking with you!!

(to next page)

Otherwise, all is well and I'm enjoying being on East Island again. I thoroughly comprehend your "homily" and respect it! I definitely try to not disturb the turtles (and other species) other than to obtain the necessary data; even then, using as much caution as possible!

Take care! I'll keep in touch! By the way, how old was the tag & applicator; did you take them apart??

Aloha,
Glynnis

b. Green Turtle

Monthly Activities Report 5190

Because of bad weather, we could not get the East Island turtle camp operational until 6 May. On the 6th, we finally got G. Nakai and the rest of the equipment to East Island and began coverage on that night. Bob Cummins arrived at French Frigate Shoals on 16 May. After two nights of training on East with Glynnis, Bob became fully operational and he and Glynnis began a 4 night rotation between East and Tern Islands (each person works 4 nights on East then goes to Tern Island for 4 nights).

Luckily, turtle nesting activity this year seems to be about one to two weeks delayed from what we documented the last two years. Upon her arrival at East Island on 6 May, Glynnis determined that we may have missed only one turtle nest before our coverage began. As the month progressed, the number of turtles encountered each night on East increased from one or two at the beginning to around 10 per night. At the end of May, 45 different turtles had already been identified on East.

The first nest on Tern was on 9 May. The second nest was not until 25 May. By months end, we had 8 nests on Tern.

On 20 May, a female that had come ashore to nest ended up on the runway in the morning. We guided her back to the ocean.

On 31 M
upside
however
return
High s

4 June 1990

90
4 June 1990

Dear George -

Alpha from East Island! How are you? I hope all is well! I'm sitting in the tent on East after making a walk around the island; one turtle digging and two crawling. In general, the activity has picked up a little with 9-15 turtles up each night; it's a slower increase than last year when at this time we had some 25 turtles a night. But, all is well here and going smoothly thus far. I wanted to give you an update on what's happening turtle-wise!

To date (5/6-9/3) we've identified 58 females; 60.3% (35 turtles) are previously tagged turtles. We are up to 64 turtles, but they've only been "Motortooled" (engraved) and tags need to be read or applied.

The Dremel Motortool is working quite well. Bob and I have gotten the "knack" of engraving with the right amount of pressure so it takes seconds to engrave a "C-" and the consecutive number. A majority of the engraving is performed when the turtle is crawling. George, it's really working great! We have had repeat nesters and the engraving is legible and only a quick look with a flashlight enables us to identify the female! Yahoo... no more

85
On 31 May, a female turtle was found on the northeast beach upside down. At first it was thought that she was dead, however after flipping her back over she revived and quickly returned to the ocean. How she got upside down is a puzzle. High surf or roudy males may have been the cause.

re-reading tags on the repeat nesters, thereby eliminating future disturbance to the turtle!! We have been using Zynolite spray paint (white) which is not as viscous as the Ace paint but much easier to handle than a paint container and brush. We're looking forward to having everyone identified later in the season!

In regards to tag applicators, they are all working well and the people using the applicators (Bob and myself) are applying the right amount of pressure, with that final "hold", so the tags clinch into place! Bob and I are aware of the importance of the tags and have gotten into the habit of checking the tags after application. No problems there.

Bob has had the opportunity to be on East by himself and has quickly adapted to the different schedule. We would like to hear from you! Naturally, only one of us is on Fern Island at a time; how about setting up a radio call! I will be on Fern from 7 June (Thursday) to 11 June (transfer day); is it possible to set up a radio call for Thursday or Friday night? On Mondays, Wednesdays and Fridays we talk with Lausan at 8:00 p.m. After that would be perfect. We found that the reception was much more audible when you were able to call at higher altitude. Please take a look at your schedule and let Fish and Wildlife know

the day and time that is convenient for you. At that time, we will be able to arrange a second radio call so that you have a chance to talk to Bob.

New Light Interference? Yes

the day and time that is convenient for you. At that time, we will be able to arrange a second radio call so that you have a chance to talk to Bob.

Take care! We look forward to hearing from you!

Alona,
Glynnis

6/20/90 Radio Talk
from home with Bob
Cummins at Tern. Thus far
IDed 114 turtles on East.
Last few nights: 12, 6
& 5 up to nest. Perhaps
3-4 new ones. Dredge
working good: engraving 4th
lateral on the right.

7/1/90 Jennifer
Bob Cummins MEGYESI
IN
1988 whale - skate
Separate - channel
Then rejoined

6/30/90 -
94 baskers on W-S
Saw 4 engravers,
from East

LH2 8471 NO TMR
LFL 8470 102cm
RFL 8468

R3-4 8469 6/18/85
Maui Electric
Kahului Bay

Baskers
Male - LFL 8178

→ 6/22/84 SRL BASKER EAST

7/8/90 Bob Cummins
Sunday

135 ID

12.432.3 MHz

They monitor daytime

" June 15 - July 26

158 turtles

98 turtles

58

13 new

4 long term

38% recovery =

→ 55 book on East highest yet

LAY

may 24

7/16/90
Mon.

7.7599

→ Term First Hatch

July 13

Carcass there for 2 days - then washed away

Trapped 37.3 cm NE point night book on term recently

7/27

Book C

Term

Eggs

9/2/9
Sun

Vertical text on the left margin: ...

Glynnis

7/27/90
142

engraved to date.

New ones don't seem to have old tags.

A Really high turtle

curved width almost as long as curved length, col 89.1 cm
CCL =

Bank Counts on WS =

Tern nesting = very, very slight 1 every 4 days
Eggs? Date to send?

away

9/2/90 7:7 Glynnis
Sun.

Glynnis
8/10 -
1 week
3 new

Flight
9/6
9/12
9/20

Then no more new
2 to 5026
collected Total
8/16 - 8/23 eggs 3 x 13 T

7/27/90 Glynnis
142 engraved to date.

New ones don't seem to have
 old tags.

A Really high turtle

curved width almost as long
 as curved length, ccl 89.1 cm
 CCL =

Book Counts on WS =

Tern nesting = very, very slight 1 every
 4 days
 Eggs? Date to send?

9/2/90
 Sun

7.7
 Glynnis

Glynnis
 8/10 -

1 week
 3 new

Flight
 9/6

9/12

9/20

Then no more

2 to 5026

collected Total

8/16 - 8/23

eggs 3 x 13 T

7/1/90 (cont) 125 engraved so far.

9/3/90
7:30 AM

Wednesday

ENGRAVED = EAST = 151

- 3 dup
~~NOT TAGGED~~
148 BUT NOT
ALL TAGGED

Tern 26 Sept last female up

FWS Jon Williams - Midway



not TAGGED

Table 2. ---Immature green turtles newly tagged at TERN ISLAND, FIES November (dates) 1989

Tag No.	Date	Location	Status	Carapace length (cm)
W-556	11/04/89	Left: primary	Basking on Tern Island Beach By Burrows & Loh probably a female - not named Tri. - but maybe this refers to Telford	70.5cm
W-558	11/04/89	Right: primary		

Recapture of Juveniles at Tern Island Last caught

DATE	TAGS	curved CARAPACE	NO Tumors	Curved CARAPACE
11/07/89	[10595 R 10594 L]	43.5	NO Tumors	(3/23/89) 42.5cm

11/07/89	[10584 L 10585 R]	48.5	NO Tumors	01/05/89 46.5
----------	----------------------	------	-----------	---------------



The tags on both of these turtles had CRUD growing on them - The tags had to be scrapped before they could be read.

ENTD MAY 27 1993



ENTD MAY 27 1993

1988

(WHALESKATE

DATE TOTAL # ASHORE TO NEST

SUMMARY OF NESTING - TURTLES

FIRST SEEN EST. NEST TERM TAG RECOVERYS

DATE	TOTAL # ASHORE TO NEST	# FIRST SEEN	EST. NEST	TERM TAG RECOVERYS	
5-25 → 5-26	2	2	2	0	VG
5-26 → 5-27	5	5	2	1	VG
5-27 → 5-28	9	4	7	2	VG
5-28 → 5-29	9	7 (6 PAINTED)	3	1	VG
5-29 → 30	7	2	3	0	GN
5-30 → 31	7	3	4	1	GN
5-31 → 6-1	9	4	7	0	GN
6-1 → 6-2	5	4	4 (POSS. 2)	2	GN
6-2 → 3	8	5	4	1	SM
6-3 → 4	5	2	2	0	SM
6-4 → 5	6	4	2	1	VG
6-5 → 6	5	3	1	1	VG
6-6 → 7	13	5	3	1	VG
6-7 → 6-8	7	2	5	1	HF

WHALESKATE SUMMARY

WHALESKATE SUMMARY

DATE	TOTAL	#FIRST SEEN	EST. NEST SUCC.	EST. NEST SUCC. INITIALS	RECOVS.
6-8→6-9	9	1	5	HF	0
6-9→6-10	14	3	8	HF	0
6-10→6-11	10	4	3(+2?)	HF	1
6-11→6-12	20	4	6	SM, PD, VE	3
6-12→6-13	16	4	7	SM, AD	1
6-13 16-14	13	2	2	PD, SM	1
6-14	22	2	5	PD	4
15	12	3	3	PD	3
16	8	4	5	VG	0
17	6	4	4	VG	2
18	6	0	2	VG/DB	0
19	17	9	5	VG/DB	2
20					
21	19	1	5	SM	0
22	21	2	12	SM	0
23	19	0	9	SM	0

WS DATE
June 24, 88

TOTAL Ashore
17

No. First Seen
1

Est. Nesting Successful
5

Tag Recoveries
0

25
26
27
28
29
30

SM/PA

—
—
—
PA
PA
PA

1
1
1
2
6
5

0
0
0

1988
DATE | ASHORE | FIRST SEEN | SUCC_NEST | INITIALS | RECOVERIES |
01 JUL | 7 | 1 | 1 | | |

NIGHTLY Summary - WHALE - SKATE

1988

NIGHTLY SUMMARY - WHALE - SKATE

DATE	ASHORE	FIRST SEEN	SUCC_NEST	INITIALS	RECOVERIES
01 JUL	7	1	4	PD	0
02 JUL					
03 JUL					
04 JUL					
05 JUL					
06 JUL	18	0	2	SM	0
07 JUL	19	2	9	SM	0
08 JUL	18	2	7	SM	1
09 JUL	9	0	5	SM	0
10 JUL					
11 JUL					
12 JUL					
13 JUL					
14 JUL	17	2	6	PD	0
15 JUL	8	0	1	PD	0
16 JUL	16	1	7	PD	0
17 JUL	18	0	5	PD	0
18 JUL	24	3	10	TC	0
19 JUL	21	2	8	TC	0
20 JUL	14	1	9	TC	1
21 JUL	7	1	2	TC	0
22 JUL	9	0	2	PD	0
23 JUL	15	0	4	PD	0
24 JUL	14	0	5	PD	1

NO COVERAGE

NO COVERAGE

0 - No walkabouts between 1130 + 0130

5/25
7/24/88
49 nights

115 Total
∴ 2.34 per night

32 (27.89%)

ENT'D MAY 27 1993
JUN 1 1993

---Immature green turtles newly tagged at TERN ISLAND 1-05-89
(dates)

Tag No.	Date	Location	Status	Carapace length (cm)	
				Straight	Curved
10584	1-05-89	LEFT FRONT FLIPPER	FEEDING AT BOAT DOCK, 1800 hrs		46.5
10585	"	RIGHT FRONT FLIPPER			

---Immature green turtles newly tagged at TERN ISLAND 1-22-89
(dates)

NOTE Previous and subsequent Tag No. MUST BE

Tag No.	Date	Location	Status	Carapace length (cm)	
				Straight	Curved
10586	1-22-89	RIGHT FRONT FLIPPER	FEEDING AT BOAT DOCK		41.5
10587	1-22-89	LEFT FRONT FLIPPER	"		

Not 10856
10857

They have 10856
10857

TT

---Immature green turtles newly tagged at TERN ISLAND 2-5-89

--Immature green turtles newly tagged at TERN ISLAND 2-5-89
(dates)

Tag No.	Date	Location	Status	Carapace length (cm)	
				Straight	Curved
10588	2-5-89	LEFT FRONT FLIPPER	FEEDING AT BOAT DOCK		46.5
10589		RIGHT FRONT FLIPPER			
MAY 27 1993					
10590	2-10-89	Right Front Flipper	Feeding AT Boat Dock		55.0
10591		Left Front Flipper			
MAY 27 1993					
10592	2-11-89	Right Front Flipper	Feeding AT Boat Dock		50.5
10593		Left Front Flipper			
MAY 27 1993					

Table 2.--Immature green turtles newly tagged at TERN, FFS
(dates)

Tag No.	Date	Location	Status	Carapace length (cm)	
				Straight	Curved
10594	3/23/89	Left - primary site	Caught while Feeding at Tom boat dock		42.5cm
10595					
MAY 27 1993					

354	TERN	07-08-90	JUV1	(W592	RFL	N	37.3	0	U
355	TERN	07-08-90	JUV1	(W594	LFL	N	37.3	0	U
368	TERN	09-30-90	JUV2	(W958	LFL	N	44.5	0	U
369	TERN	09-30-90	JUV2	(W959	RFL	N	44.5	0	U
370	TERN	10-15-90	JUV3	(W960	RFL	N	44.5	0	U
371	TERN	10-15-90	JUV3	(W961	LFL	N	44.5	0	U
372	TERN	10-15-90	JUV4	(W962	LFL	N	44.5	0	U
373	TERN	10-15-90	JUV4	(W963	RFL	N	44.5	0	U
374	TERN	10-23-90	JUV5	(10588	LFL	O	47.8	0	U
375	TERN	10-23-90	JUV5	(10589	RFL	O	47.8	0	U
376	TERN	10-23-90	JUV6	(W858	RFL	N	48.0	0	U
377	TERN	10-23-90	JUV6	(W859	LFL	N	48.0	0	U

JUVENILE TURTLE BASKING ON NE BEACH. HAS SMALL 'V' LHF BETWEEN 3-4 SCALES FROM PROXIMAL END.
 JUVENILE TURTLE BASKING ON NE BEACH. HAS SMALL 'V' LHF BETWEEN 3-4 SCALES FROM PROXIMAL END.
 JUVENILE TURTLE BASKING ON CRAB BEACH.
 JUVENILE TURTLE BASKING ON CRAB BEACH.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.
 JUVENILE TURTLE CAUGHT WITH NET AT TERN BOAT DOCK.

tag, already present	Species ² and sex (if known)	Date and time	Place-name location (or latitude and longitude)	Activity of the turtle ³	Curved carapace length ⁴
Left fl: or 3/23/89 Right front flipper Recapture 11/7/89	CM	1300 hrs Local 4/23/91	TERN ISLAND, FRENCH FRIGATE SHOALS	JUVENILE "grazing" Along seawall near The Tern Island Seawall	44.7 cm
10594(LFL) 10595(RFL)					

5/5/91
 May 3 91
 5/13/91
 Monday
 5/14/91
 North Channel left
 5/21/91
 5/24/91
 Saturday

- Count Baskers
- No tags off

5/5/91 RADIO TALK 12.432.1
Ken N. & Jennifer

4/28/91 1st nest seen on Tern.
5/1/91 East survey - no nests

May 3, 91 (5/3) First night of monitoring on East
(by Greg Spencer.) 2 nests (digs?)
present when they arrived,
so must have been dug then 5/2

5/13/91 - FFS "no turtles last ^{5/12} night, but 4 nests
7 turtles up 5/11/91; 5/13 = 3-4 up

Monday

5/14/91 5/13 Brenda - no nesting yet at Laysan.
No turtles see w/ tumors.

Neethammer left
5/21/91.

Glynnis NAWAI
23-B SQUIRE Village Apt. Route 116
Sunderland, MA 01375
(413)

(413) 545-1770 WORK
665-2189 Home

5/24/91 TALKED TO Greg. 5/24 Bob Cummings first night alone;
Several nites prior they spent together.
SATURDAY NATIONAL GEO. LEAVING TODAY. 5/23-11 up; 3-4 NESTED
STARTED engrave L30. 5/23 (AS OF) AT L65.
Tagged used so far A235.

7.7600 MHz

5/31/91 Bob Cummins

"lost 3 nights
11 total nestings"
3 were new

UP TO
L75 now

7/12

4 TUMOR TURTLES / out of 46

Seen so far

7/20
SAT.

^{TOEAST}
6/1 for 4 days Bob

6/5 return to Tern.

6/9/91

Sunday

now

~~L807~~

Strange #1 "growth" ¹⁰⁰
will send photos. 57

6/30 → AS Radio call w/BOB Cummins

6/29 →

L118

30
L88

7/12 Radio w/BOB Cummins

FRIDAY

Now UP TO → L124

FIRST HATCH ON YESTERDAY.

7/12 Spoke w/Brenda at Laysan -
3 nestings only - all at same area. likely same
turtle.

Tern

7/12 Brenda - Dead ♀ ^{→ 6/25/91} 5275 - 3784
will bring humerus & skull.

WGL - LISIANSKI = 2950 Left ♂

seen. ORIG. TAGGED 10/3/78
T225 off (294 LFL 2950 LF SF = 79.4 cm)

7/20 8:30 am
SAT.

UP TO earlier in season

L127 following tick bite
extreme chills - vomiting etc.
16 hours

7/27/91 Still at L127 Radio call w/ Greg
L127 severe tumors Spencer

→ Camera needed for east

hind flipper injury - tumors growing at sites

→ severe tumors
L52 Greg photographed - TURS

L116 tumors on hind flippers - injury causing tumors

No entanglement as hooks on any.

Turn - 10 L started
34 L now

TERN ISLAND BASKING TURTLE CENSUS

DATE	TIME	NO. SEEN	PAINTED NO.	LOCATION
5/13/88	1050pm	3	none	E. Beach

8/21
DONG
WHAT?

7/29/91 Radio w/Tern Jennifer

3135

6/17/91 = C 45.7cm

3136

CL 59.9 cm

8/24/91

8/28
Wed.

[14.2cm IN 12 years]
TAG 2950 Adult 90cm reported
by WGG from Lisianski

9/3/
Mon

8/3/91 7 Jennifer
Salt more clutches traced.
Nesting activity slowing down

8/17/91 L/35 :: 105 Turtles
SAT.

3 new ID's in one night
8/11/91 Algae on shell

9/8
SUN.

Francis Akela

8/21/91. ^{on} 8/11 3 showed up new

Does
WHAT?

(Bob tagged) L101 = Bob has
tagged a SL now

74.4 cm = is it a ♂ or ♀?

Should they do SL's? yes.

8/24/91 Radio w/Jennifer at Tern.

8/28
Wed.

JRH - P&H says C131 engrave
has been seen at
NORTH IS. - ♀ 1990 west EAST

"ANTS" heavy on Tern. But not where
turtle nests are.

9/3/91 No turtles on 8/31.

Monday No new turtles for
some days.

Ghost crab predation as
Tern seems high.

9/8 Radio w/Bob Cummins

SUN.

EAST = _____

RC =

Tern = 25 Turtles

MARKED
NESTING 5/17/91

EAST L50
5340 REF
A223 IFL

Monday August 19, 1991
Resighted number 1 Miss Hotsy-totsy CCL = 105.4cm

Number 2 Miss Hoity-toity
Miss Green Machine Female Green
Turtle 36 inches long 50 pounds. All
above turtles sighted at the end of Tiger
Shark Alley. 350 yards in front of 68-155
Aust. Building. Waialua beach about 9 A.M.
No Tumors. No distinguishing features.

In outstanding health condition.

Miss L50 Female Green Turtle 84 inches
Seven feet long 400 pounds. Sighted 450 yards
in front of 68-155 Aust. Building. Waialua
Beach about 9 A.M. No Tumors. Distinguishing
features is L50 clearly written on the
back shell in six inch lettering with white
paint forward of the right rear flipper.
In outstanding health condition.

Thank you very much for the turtle Power
button!

Bradley HARA

6/81 EAST-N

9/85 EAST-N

5/89 EAST-N 5340

5/91 EAST-N 2340

8/91
A223 IFL

September 7, 1991

TO:

George Balazs
National Marine Fisheries Service
2570 Dole Street
Honolulu, Hawaii 96822

FROM:

Robert E. Cummins
USFWS
300 Ala Moana Blvd.
Honolulu, Hawaii 96850

Summary of 1991 Turtle Field Season

This season was slow as far as turtles were concerned totaling only 103 adult females on East Island from May 4 to September 2. Tern Island had a total of 26 adult females identified during the same time. Camp closed on September 3, and for the previous three nights on East Island there were no turtles up on the island.

The number of turtles with old tags as opposed to newly applied tags for East Island was 48:55 and for Tern Island was 9:16. The last newly identified turtle on East Island was on August 15th. Tern Island's last newly identified female was on August 9th. One mototool number during the field season was not used. The number that was not used was L-126. So, in the database file, even though there appears to be 104 turtles identified for East Island, in actuality, there are only 103.

The number of tumor afflicted females on East Island is 14 and on Tern Island was 8 (See COMMENTS section of data base files). Sizes of tumors for the turtles on East ranged between size class of 1 and 4 and for Tern they ranged between 1 and 2. On East Island, about mid-way through the season, a turtle (L-116) was examined for tumors and it was determined that she had none. About two weeks later, when she reappeared to nest, the other researcher was looking at her because she had severe, fresh, wounds on her hind flippers. It was then decided that she had tumors located on her right hind flippers. It closely on successive times ashore throughout the season. She was monitored season, she was observed again and it was decided that she did not have any tumors. The area described by the other researcher as being tumored, I believe, was just inflamed, possibly infected, tissue resulting from the wounds. Also, by the end of the season, the wounds appeared to be healing nicely and the inflammation and redness was almost non-existent.

For turtle ID # L-70, on the data base file she is listed as having a size 1 tumor on her neck. Throughout the season we had used her in the tumor study for hatching success. Although, it was hard to determine if it was a fibropapilloma tumor or not. It appeared to be an abnormality.

For turtle ID # L-120, on the data base file she is listed as not having tumors, even though there was a large bulge on her jaw under the scales. It was decided that since a tumor was not seen, she should not be classified as a tumored turtle.

Tags that were lost while applying were: A227, A229, A333, A355, A270, A300, A306, and A416. The tags that were misapplied and recovered were: A243, A250, A251, A259, A262, A281, A283, A311, A312, A325, A332, A360, A361, A363, A367, A372, A381, A386, A387, A394, A402, A403, and A411. Tags that were used as practice on cardboard are as follows: W612 (04-20-90) and A410. Tags that were found are as follows: W151, W393, and 10150.

Pliers 1, 2, and 3 did not seem to work as well as the pliers that were on Tern Island (Plier # 4-- which appears to be an older pair than the ones used on East Island). The pliers that were used on Tern (#4) seem to close the tags with less effort and just feel more comfortable in the hand. Pliers 1, 2, and 3 were a bit too large and maximum leverage could not be obtained unless two hands were used to apply the tags. Plier # 1 was lost at the end of the season somewhere on East Island.

For the hatching success of the tumor afflicted turtles, as opposed to the control turtles, upon excavation of the nests, sometimes there appeared to be a bit of uncertainty where exactly the turtle had nested. This was because even with as few turtles as we had on East Island, non-tumor turtles would seem to nest in close proximity to the tumored turtles nest. Sometimes this occurred within days. Even if the non-tumored turtle were to lay a clutch close to that of a tumored turtle, that already had a control, say within a weeks time, the hatching dates could be very similar, thus, causing a bit of uncertainty in which nest was which.

The above brings to mind a problem with marking tumored and control nests. It is difficult to pinpoint the exact location of the nest, even when the researcher has seen the eggs and has been able to triangulate the nest with markers, so that one can return the next morning to stake the nest with appear that staking the nest during the time the tumored or control turtle is laying eggs, or, while they are patty caking, would seem to be a more accurate method. Although, the disturbance to the turtle and the disturbance to the ground and eggs before they are completely covered by backfill by the adult may be harmful to the eggs.

Both Greg and I were very pleased with the small size of the NEEDS list at the end of the season. We have gone over the data and double checked it against the original field data sheets and it appears to be in good order. The constant feedback from you throughout the field season when questions arose concerning data, procedures, and just general questions was very helpful and the info that you would send up (newspaper clippings ...) kept us up to date.

NUMBER OF ADULT FEMALE GREEN TURTLES RECORDED NESTING ON EAST IS.

DATE	TOTAL NO. ASHORE TO NEST	NO. FIRST SEEN	ESTIMATED NO. SUCCESSFULLY NESTING	NO. LONG TERM TAG RECOVERIES
5/15/88 NIGHT	8	8	5 GB SM	5 (62%)
5/16 MAY ①	8	8	5 GB SM	5 (62%)
MON TUES 16-17 MAY ②	5	3	3 HF GHB	2 (66.6)
17-18 MAY ③	4	3	2 VG GHB	0 (0)
wed 18 19 MAY ④	3	3	2 GN GHB	2 (66.6)

DATE
 5/29 -
 5/30 -
 5/30 - 6/31
 5/31 - 6/1
 6/1 - 6/2
 6/2 - 6/3
 6/3 - 6/4
 6/4 - 6/5
 6/5 - 6/6
 6/6 - 6/7
 6/7 - 6/8

DATE
 6-8 → 76-9
 6-9 → 610
 6-10 → 6-11
 6-11 → 6-12
 6-12 → 76
 6-13 → 76
 6-14 - 6
 6-15 - 6
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26

DATE	TOTAL # ASHORE TO NEST?	HOW MANY FIRST SEEN?	EST. # SUCCESSFUL NESTERS	TAGGER'S INITIALS	# LONG TERM TAG RECOVERIES
5/15-1988	8	8	5	GB/SM	5
5/16-1988	5	3	3	GB/HF	2
5/17-1988	4	3	2	GB/VG	0
5/18-1988	3	3	2	GB/GN	2
5/19-1988	6	4	5	GB/GN	2
5/20-1988	2	0	1	GN	0
5/21-1988	4	3	2	GN	2
5/22-1988	7	6	4	GN	4
5/23-1988	7	4	2	GN	2
5/24-1988	7	5	4	GN	3
5/25-1988	3	2	2	SM	2
5/26-1988	4	3	1	SM	2
5/27-1988	8	2	1	SM	0
5/28-1988	14	6	6	SM	4

DATE	TOTAL # ASHORE TO NEST?	HOW MANY FIRST SEEN?	EST. # SUCCESSFUL NESTERS?	TAGGERS INITIALS	# LONG- TERM RECOVERIES
5/29 - 5/30 /88	10	3	3	SM	1
5/30 - 5/31	9	6	4	HF	1
5/31 - 6/1	9	4	3	HF	0
6/1 - 6/2	13	5	3	HF	1
6/2 - 6/3	6	3	3	HF	1
6/3 - 6/4	9	2	1	HF	0
6/4 - 6/5	13	6	8	GN	3
6/5 - 6/6	13	2	5	GN	0
6/6 - 6/7	13	5	6	GN	5
6/7 - 6/8	10	3	4	GN	0

DATE	TOTAL ASHORE	#FIRST SEEN	EST. SUC; NEST	TAGGER	# LONG-TERM RECOVS
6-8 → 6-9 1988	9	3	3	GN	2
6-9 → 6-10	18	7	5	VG	4
6-10 → 6-11	12	3	6	VG	3
6-11 → 6-12	22	6	11	VG + YAM LF FUKUDA	3
6-12 → 6-13	20 19	6	7	VG + LF	4
6-13 → 6-14	23	7	7	VG + LF	4
6-14 → 6-15	29	5	8	LF SM	7
6-15 → 6-16	27	6	10	LF & SM	5
16	11	2	5	HF	0
17	15	5	9	HF	2
18	18	1	10	HF	2
19	17	2	9	AG HF	1
20	12	1	4	PD	1
21	14	0	7	PD	0
22	13	1	8	PD	1
23	7	1	1	PD	0
24	16	3	8	VG	1
25	13	2	7	VG	2
26	21	4	8	VG	2

(continued p. 109)

NUMBER OF ADULT FEMALE GREEN TURTLES RECORDED NESTING ON TERN IS.

DATE PM-AM	TOTAL NO. ASHORE TO NEST	NO. FIRST SEEN	ESTIMATED NO. SUCCESSFULLY NESTING	NO. LONG TERM TAG RECOVERIES
13- 14 MAY 1988	2	0 <i>BOTH PREVIOUSLY TAGGED BY KN IN RECENT WKS ON TERN</i>	2	0

14-
15 MAY

15-
16 MAY

MAY

MAY

MAY

MAY

MAY

MAY

MAY

JUNE

27

28

29

30

DATE	AS
01	JUL
02	JUL
03	JUL
04	JUL
05	JUL
06	JUL
07	JUL
08	JUL
09	JUL
10	JUL
11	JUL
12	JUL
13	JUL
14	JUL
15	JUL
16	JUL
17	JUL
18	JUL
19	JUL
20	JUL
21	JUL
22	JUL
23	JUL
24	JUL

NEED
PIV IS.
NO. LON
TERM TR
RECOVERIES

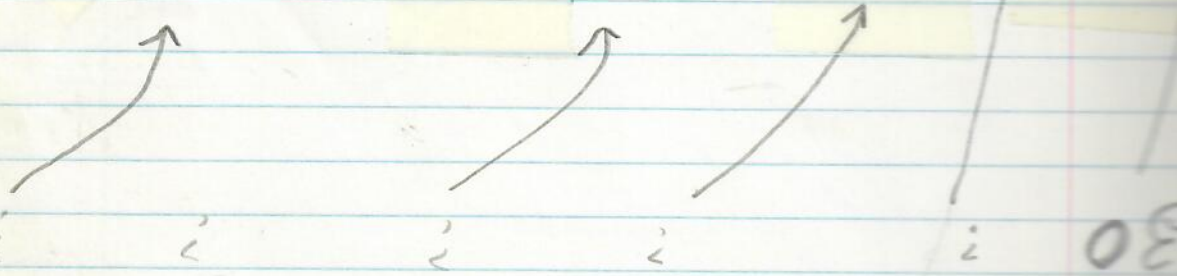
June 88

EAST-

Centurion from PIV
first seen

109
Long Term
Recoveries
1 VG
1 SM
1 SM

30



ALBATROSS SUMMARY - EAST

NO. LON TERM TR RECOVERIES

DATE	ASHORE	FIRST SEEN	SUCC NESTS	INITIALS	RECOVERIES
01 JUL	21	3	12	SM	0
02 JUL	11	2	8	VG	0
03 JUL	13	2	7	VG + DS	0
04 JUL	11	1	4	VG	0
05 JUL	20	0	8	VG	0
06 JUL	12	0	1	PD	0
07 JUL	19	1	6	PD	0
08 JUL	17	0	8	PD	0
09 JUL	23	0	8	PD	0
10 JUL	10	2	3	VG + TC	0
11 JUL	24	5	10	VG + TC	0
12 JUL	20	5	13	TC	0
13 JUL	18	1	11	TC	0
14 JUL	15	0	12	SM	0
15 JUL	8	0	5	SM	0
16 JUL	8	3	8	SM	0
17 JUL	5	0	4	SM	0
18 JUL	9	1	5	VG	0
19 JUL	10	3	6	VG	0
20 JUL	22	0	14	VG (incl 1 night)	0
21 JUL	22	2	12	VG	0
22 JUL	11	0	7	SM / MBS	0
23 JUL	13	0	4	SM / MBS	0
24 JUL	18	0	12	MB	0

96
97
98
99
100

8:14
night
::

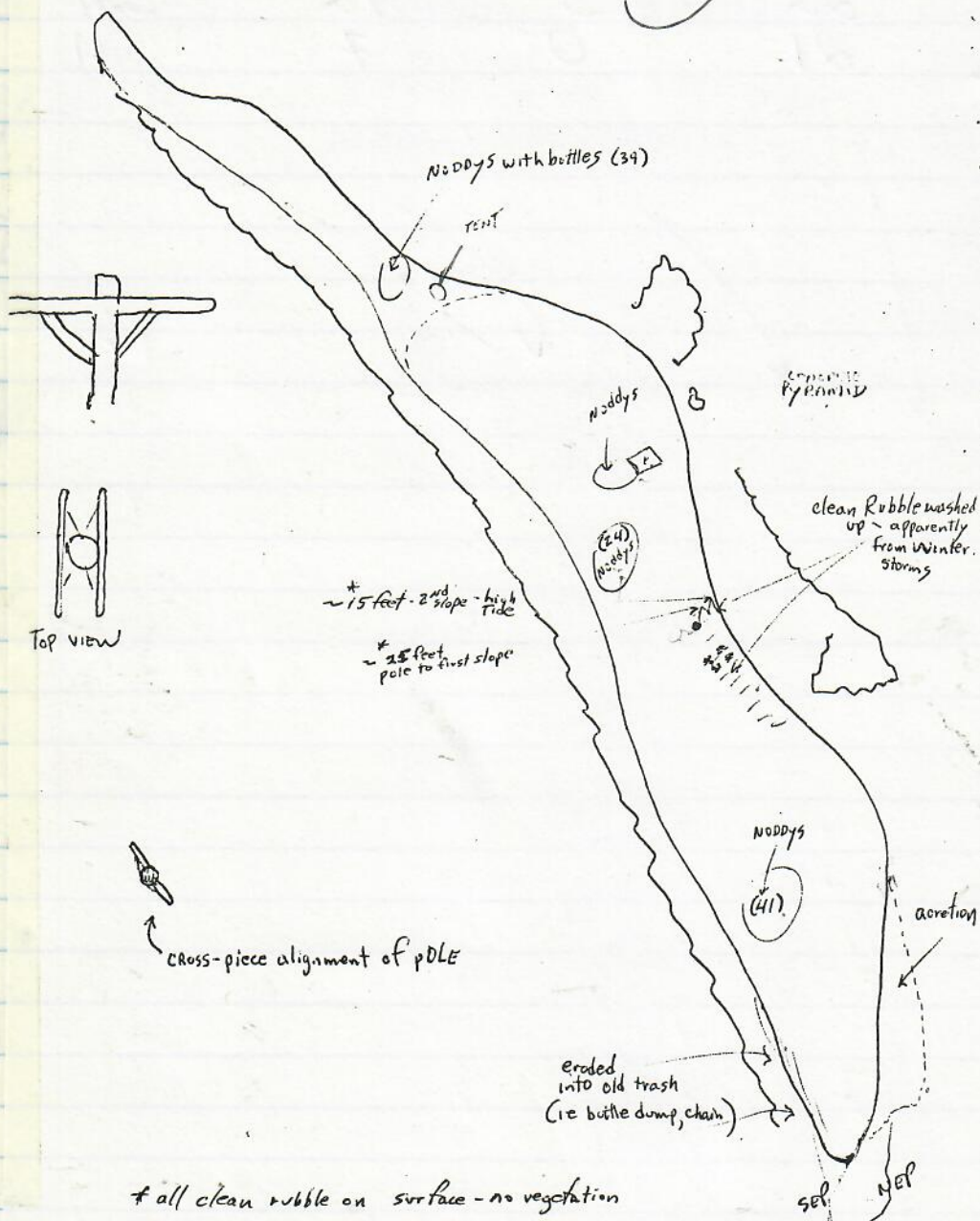
5/15 - 2/24
30 nights
192 bottles

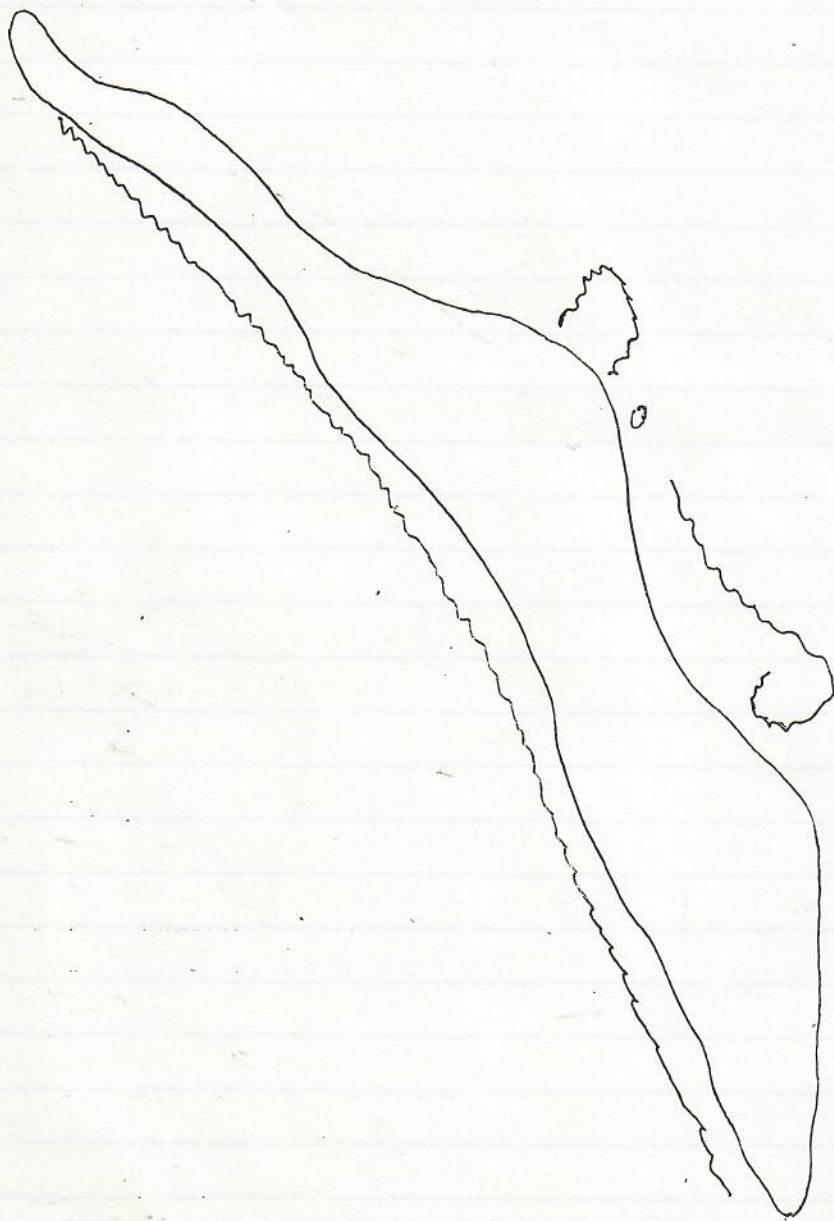
30 nights
86 (44,890)

Poor weather (wind)
No visibility at night
Poor weather (wind)

64

EAST ISLAND -
JUNE 1981





1986

108

NUMBER OF FEMALES NESTING
EACH NIGHT - EAST IS.

NIGHT TIME, PM TO AM DATE	NO. OBSERVED	NO. OF THOSE, EST. NO. SUCCESSFUL	NEW OBSERVED	% LONG TERM REC.	DAY	NO. of LONG TERM RECOV.
6/1 - 6/2/86 SUN. - MON. TC 1, 2, 3, 4	4	3	4	75%	(1)	3
6/2 - 6/3 MON - TUES TC 5, 6, 7, 8, 9, 10	6	1	6		(2)	1
6/3 - 6/4 TUES - WED TC 11, 12, 13 3, 8, 9, 5	7		3	100%	(3)	3
6/4 - 6/5 WED - THURS TC 14, 15, 16a, 16b TC - 8	5		4	50%	(4)	2
6/5 - 6/6 THURS. - FRIDAY						
6/6 - 6/7 FRIDAY - SAT.						
6/7 - 6/8 SAT. - SUN.						
6/8 - 6/9 SUN - MON.						
6/9 - 6/10 MON - TUES TC 18, 19, 20, 21, 22, 23	6		6	33%	(5)	2
6/10 - 6/11 TUES - WED TC 24, 25, 26; TC 20, 21, 22	6		3	67%	(6)	2
6/11 - 6/12 WED - THURS TC 24, 21, 26, 20	4		0	0	(7)	0
6/12 - 6/13 THURS - FRIDAY TC 27, 28 TC 26, 23	4		2	100%	(8)	2
6/13 - 6/14 FRIDAY - SAT.						
6/14 - 6/15 SAT. - SUN.						

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109

DATE	NO. OBSERVED	OF THOSE EST. NO. SUCCESS	NEW OBSERVED	% Long TERN REC.	DAY	NO Long TERN REC.
6/15-6/16	4		2	100%	(9)	2
SUN - MON. TC 29, 30, 9, 12						
6/16-6/17	3		1	0	(10)	0
MON. - TUES. TC 31, 2, 4						
6/17-6/18	8		3	33%	(11)	1
TUES - Wed. TC 32, 33, 34 ^R ; TC 11, 2, 16, 13, 5						
6/18-6/19	8		1	100%	(12)	1
Wed. - Thurs. TC 5, 13, 2, 11, 14, 16, 33, 35 ^R						
6/19-6/20						
Thurs. - Friday						
6/20-6/21						
Friday - SAT						
6/21-6/22	5		5	40%	(13)	2
SAT. - SUN. TC 36, 37, 38, 39, 40						
6/22-6/23	5		3	33%	(14)	1
SUN. - MON. TC 41, 42, 43; 40, 37						
6/23-6/24	9		3	33%	(15)	1
MON. - TUES. TC 41, 19(B), 33, 39, 20 ^R ; TC A, C, D						
TOTAL			46	50%	15 NIGHTS	23

112 also p. 106
see also Book 1

NUMBER OF FEMALES NESTING
EACH NIGHT - TERN ISLAND

DATE	NO. OBSERVED OF THOSE DETECTED BY TRACKS/PITS	OF THOSE ESTIMATED NO. SUCCESSFUL	NEW OBSERVED	% LONG TERM REC'D.	DAY	NO. LONG TERM TERNS
6/5-6/6/86 Thurs.-Friday (BLUE) ^{1 2}	2	1	2	GHB	1	0
6/6-6/7 Friday-SAT.	1	1	1	GHB	2	0
6/7-6/8 SAT.-SUN.	1	1	1	GHB	3	?
6/8-6/9 SUN-MON	1	1	1	GHB	4	?
6/9-6/10 MON-TUES	NO KNOWN DATA AVAILABLE.				5	
6/10-6/11 TUES-WED	NO KNOWN DATA AVAILABLE.				6	
6/11-6/12 WED-THURS.	1 (TC4 BLUE)	2 FALSE, 1 good right by sewage treatment facility.			7	
6/12-6/13 THURS.-FRI	ON SHELL BEACH -- 2 SHALLOW FALSE PITS				8	
6/13-6/14 FRI.-SAT	NO FRESH TRACKS ON S. TERN BEACH; ONE TRACK updown track at eastern end seen 10 PM. At 9 AM in THE MORNING track way up on SHELL BEACH. DIGGING UNDER (PHOTO)				9	
6/14-6/15 SAT-SUN	GHB	nothing - no fresh tracks pm or am.			10	
6/15-6/16 SUN-MON.	Rick reports no signs of nesting pm & am				11	
6/16-6/17 MON.-TUES.	Rick reports no signs of nesting				12	
6/17-6/18 TUES-WED	NO KNOWN DATA AVAILABLE				13	
6/18-6/19 Wed.-Thurs.	GHB	walk 6/19 am located a good nest this date west of Sears, at point where runway is close.			14	

DATE	NO. OBSERVED	OF THOSE EST. NO. SUCCESSFUL	NEW OBSERVED	% LONG TERM REC.	DAY	NO. LONG TERM
6/19-6/20 Thurs. - Friday	GMB	Am 9:20	4 separate up-down discussions, only 2 false seen - no good nests. All by the same turtle?		15	
6/20-6/21 Friday - SAT.	2	TC 3 LAY & TC 8 Ashore			16	
6/21-6/22 SAT - SUN.	1	TC 8 "BLUE" LAID EGGS	mean 19-22	bind stakes -	17	
6/22-6/23 SUN - MON.	GMB	6/23 am walkaround -	NO signs of nesting -	NO tracks	18	
6/23-6/24 MON. - TUES	GMB & MM	walked TUE 6/24 am	NO signs of ANY nesting.	NO tracks	19	

FIRST MONITOR TRAINING
OF TERN

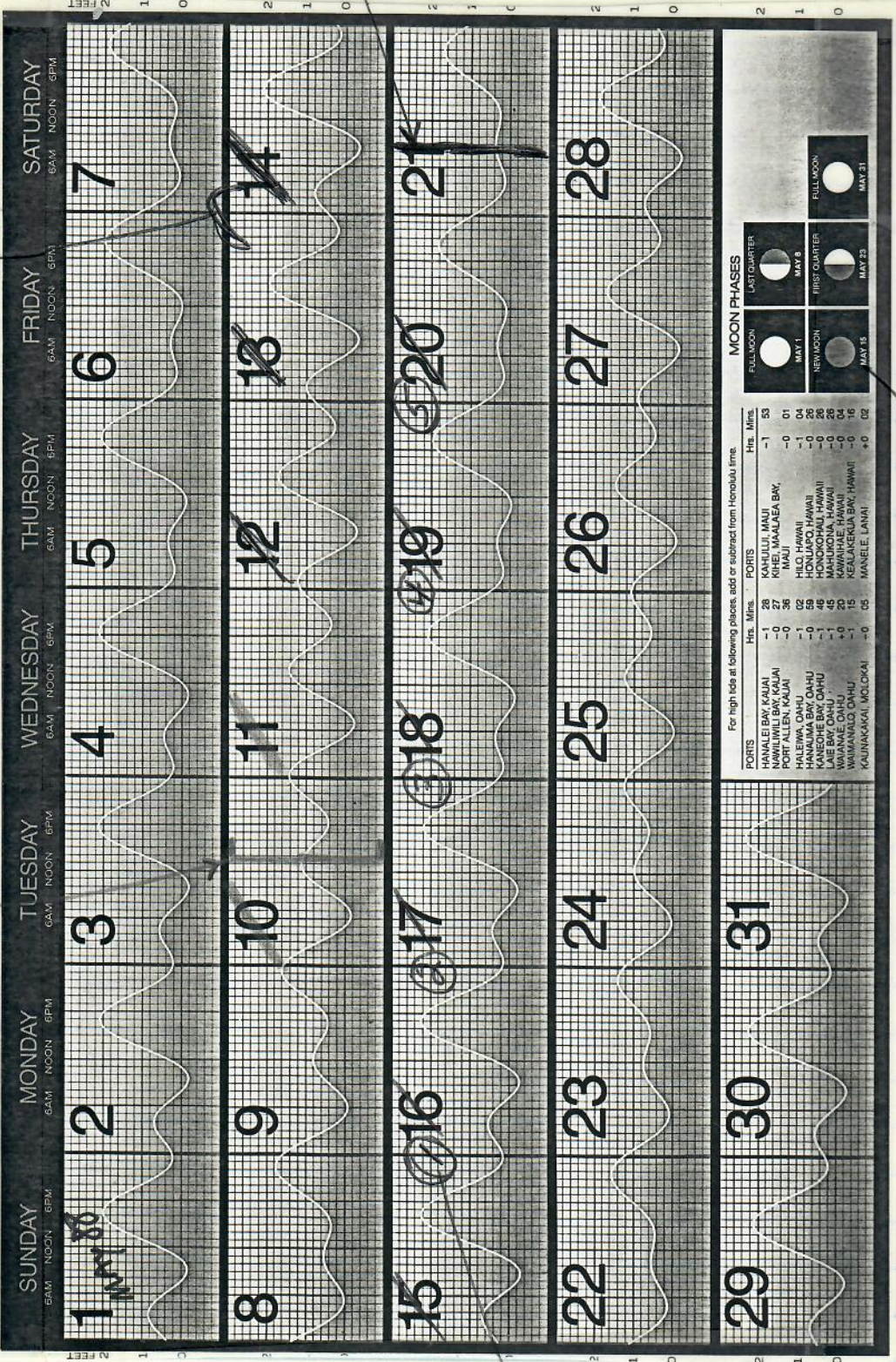
MAY 1988

CRAMER
EIGHT
HONOLULU

+8 MINUTES
OFF HONOLULU

FIRST NIGHT MONITORING FIRST
GRT +

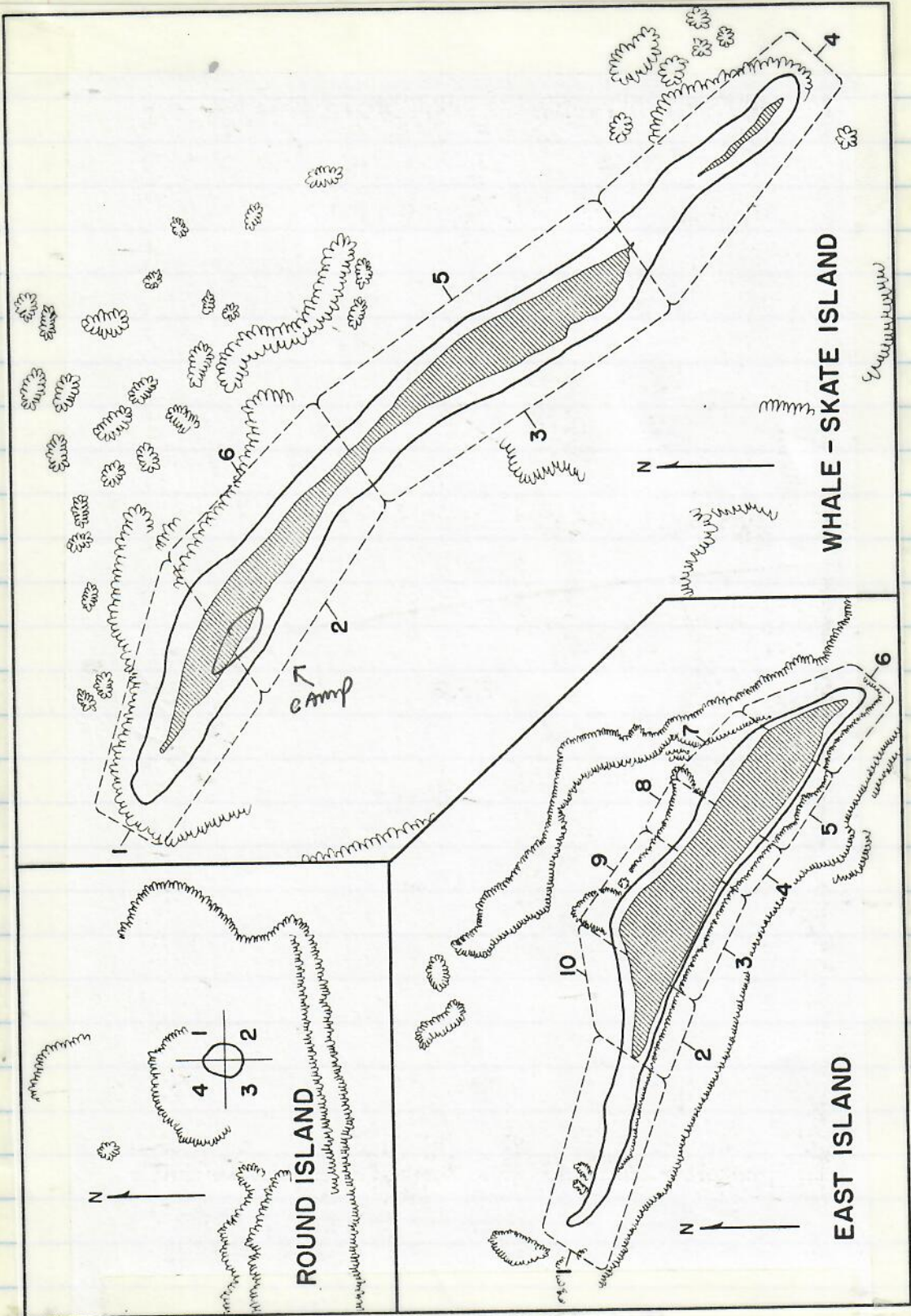
observed
picked



For high tide at following ports, add or subtract from Honolulu time.

PORTS	Hrs. Mins.	Hrs. Mins.	
HANALEI BAY, KAUAI	-1 28	KAHULUI, MAUI	-1 53
NAWILIWILI BAY, KAUAI	-0 27	KIHEI, MAALAEA BAY,	-0 01
PORT ALLEN, KAUAI	-0 36	MAUI	-1 04
HALEIWA, OAHU	-1 02	HICO, HAWAII	-1 04
HALEIWA, OAHU	-1 48	HONOKOHAI, HAWAII	-0 26
KANEHOE BAY, OAHU	-1 45	MAHUKONA, HAWAII	-0 26
LAE BAY, OAHU	+0 00	KAUNAKAKAI, HAWAII	-0 04
WAIMANALO, OAHU	+0 15	KEALAKEKUA BAY, HAWAII	+0 04
KAUNAKAKAI, MOLOKAI	-0 05	MAHELE, LANAI	+0 02





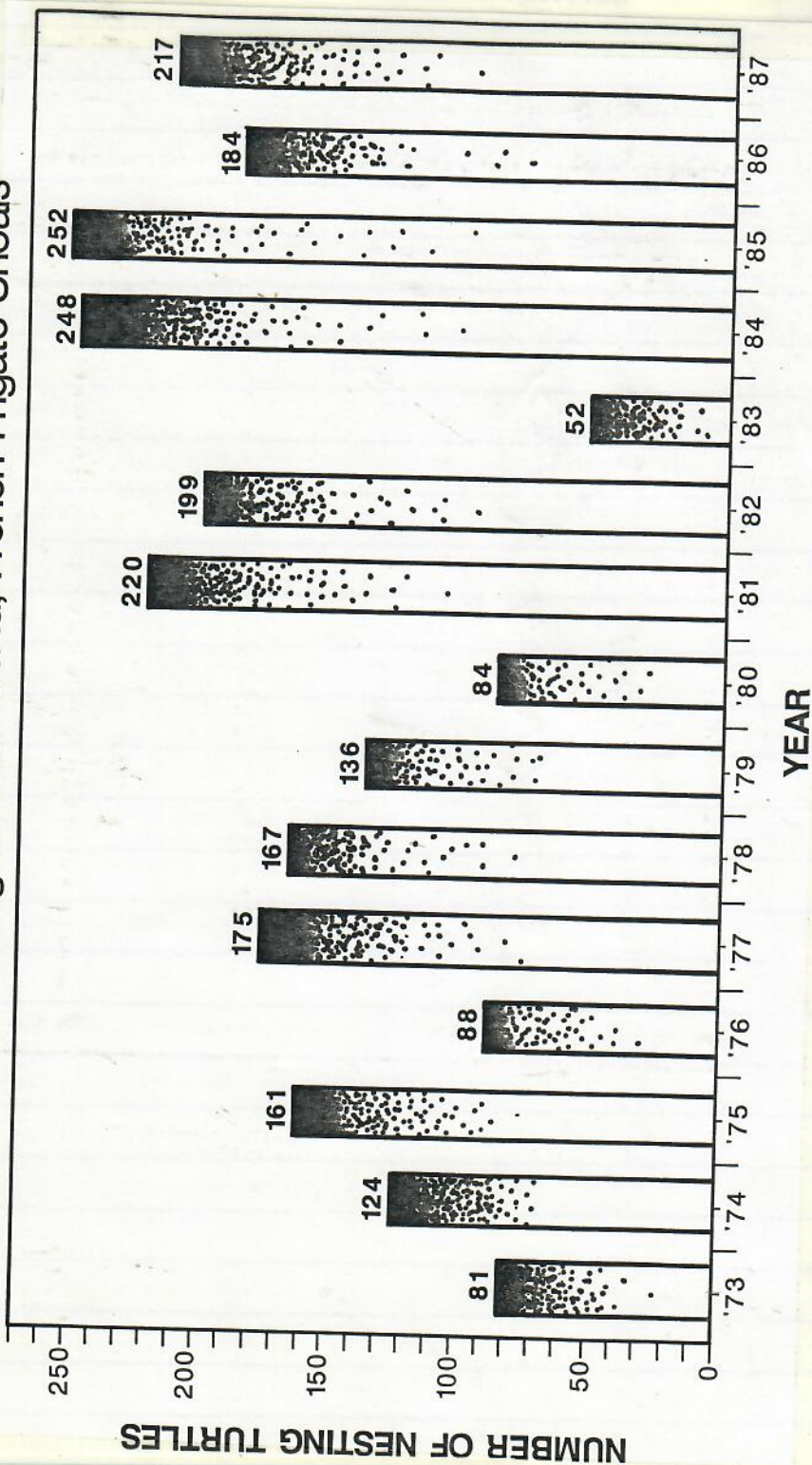
= 217

Number of adult female green turtles recorded nesting during May/June 1987 at East Island, French Frigate Shoals (for 26 nights with complete coverage).

Date 1987	Total No. ashore to nest	No. of new females first seen ashore to nest in 1987	Short-term repeat nesters seen ashore	Long-term tag recoveries
May				
25	2	2	0	1
26	7	6	1	4
27	5	3	2	2
28	1	1	0	0
29	8	6	2	5
--	--	--	--	--
June				
1	4	4	0	1
2	0	0	0	0
3	8	7	1	2
4	9	7	2	4
5	5	3	2	1
6	8	3	5	1
7	3	2	1	1
--	--	--	--	--
11	15	13	2	7
12	10	6	4	1
13	17	8	9	3
14	8	4	4	2
15	8	3	5	0
16	15	8	7	4
17	15	5	10	2
18	9	5	4	3
19	8	3	5	0
20	14	3	11	2
21	14	3	11	1
--	--	--	--	--
26	15	10	5	3
27	11	4	7	2
28	17	5	12	2
Total	--	124	--	54 (43.5%)

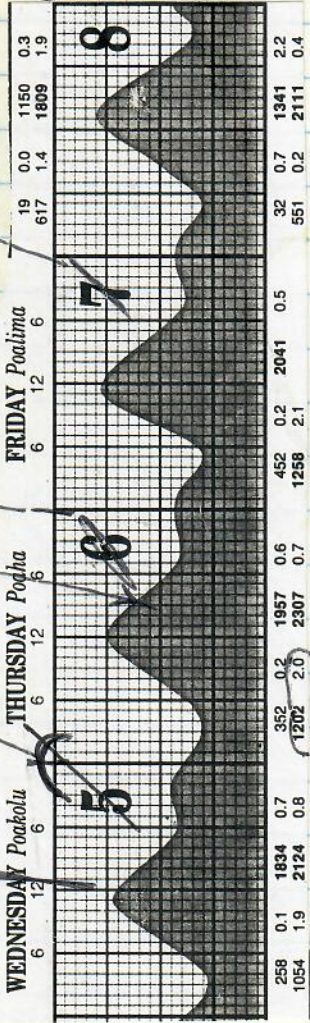
NOAA, National Marine Fisheries Service
 SWFC Honolulu Laboratory F/SWC2
 2570 Dole Street
 Honolulu, HI 96822-2396

Green Turtle Nesting at East Island, French Frigate Shoals

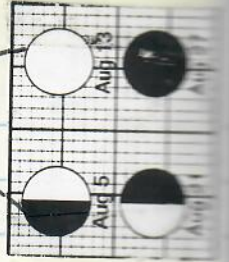
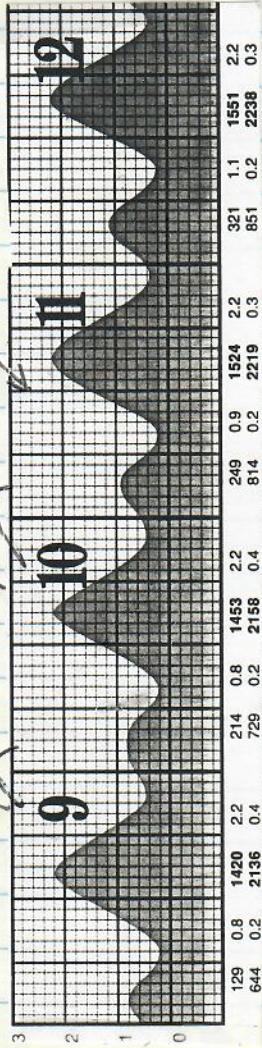


486 # 10-16
489 # 1-13

ARRIVE TERN W/ EAST AUGUST 1992 EAST



depart for HAWAII
Tern
TUES
MONDAY
SUNDAY



W-prefix = 1989
C - " = 1990

L-prefix = 1991
U - " = 1992

MOTORPOOL
engraved
in
car space

FISH AND WILDLIFE SERVICE
RED ROCK LAKES NATIONAL WILDLIFE REFUGE
Monida Star Route, Box 15
Lima, Montana 59739

KEN NIETHAMMER

~~W~~ = 1993

1994 = Z
1995 = X

METRIC SYSTEM WITH U.S. EQUIVALENTS

METRIC UNIT (1) U.S. EQUIVALENT

LENGTH

millimeter	(mm)	0.04 inches
centimeter	(cm)	0.39 inches
decimeter	(dm)	3.94 inches
meter	(m)	39.37 inches
decameter	(Dm)	32.81 feet
hectometer	(hm)	109.36 yards
kilometer	(km)	0.62 miles
myriameter		6.2 miles

AREA

square centimeter	(cm ²)	0.155 sq. inches
square meter	(m ²)	1.196 sq. yards
are	(a)	119.60 sq. yards
hectare	(ha)	2.47 acres
sq. kilometer	(km ²)	0.3861 sq. miles

WEIGHT

milligram	(mg)	0.015 grains
centigram	(cg)	0.154 grains
decigram	(dg)	1.543 grains
gram	(g)	0.035 ounces
decagram	(Dg)	0.353 ounces
hectogram	(hg)	3.527 ounces
kilogram	(kg)	2.2046 pounds
quintal		220.46 pounds
metric ton		1.1 tons

METRIC UNIT (1) U.S. EQUIVALENT

VOLUME

cubic centimeter	(cm ³)	0.061 cubic inches
cubic decimeter	(dm ³)	0.0353 cubic feet
cubic meter	(m ³)	1.31 cubic yards
cubic decameter	(Dm ³)	13.10 cubic yards

CAPACITY, CUBIC

milliliter	(ml)	0.06 cubic inches
centiliter	(cl)	0.6 cubic inches
deciliter	(dl)	6.1 cubic inches
liter	(l)	61.02 cubic inches
decaliter	(Dl)	0.35 cubic feet
hectoliter	(hl)	3.53 cubic feet
kiloliter		1.31 cubic yards

CAPACITY, DRY

deciliter	(dl)	0.18 pints
liter	(l)	0.908 quarts
decaliter	(Dl)	1.14 pecks
hectoliter	(h)	2.84 bushels

CAPACITY, LIQUID

milliliter		0.27 fluidrams
centiliter		0.338 fluidounces
deciliter		0.21 pints
liter		1.057 quarts
decaliter		2.64 gallons

