

FRENCH FREIGATE STALS

BALAZS

1995, 96, 97

2 OF 2

DATE/LOCATION

COMMENTS

- 6 Jan 97: 2 adult males - one on South Beach, other on Crab Beach
- 7 Jan 97: 1 adult on crab beach, probably ♂
- 10 Jan 97: Tumored male reported in Nix on South Beach
- 11 Jan 97: one on crab + one on south basking (males)
- 12 Jan 97: Adult male on South Beach (Tumored individual)
2 more males on crab beach.
1 platter-size turtle washed over seawall, tagged, measured, biopsy sample taken.
- 14 Jan 97: 2 on Crab beach, ~~Tumored~~
- 15 Jan 97: 1 adult on South Beach, Basking; 3 on south beach
- 16 Jan 97: 1 adult on South beach, basking - tumored
- 17 Jan - 2 on Trig ♂ & ♀, ♂ ~~seen~~ w/ tumors on eyes
Seen basking S. Beach in a.m.
- 18 Jan - Adult male on South beach.
- ~~19 Jan~~
- 20 Jan - 3 adults on Trig
- 22 Jan - Adult tumored male on and adult female sighted on South Beach in the morning afternoon
- 23 Jan 97 - 1 male hauling up at 11:45 on South Beach on and still present in the evening
- 25 Jan 97 - 2 adults, 1 platter-sized seen on crab beach in the morning
- 27 Jan 97 - Adult turtle with graded tail seen on crab beach - possibly a female - could see ovipositors
- 29 JAN 97 2 ADULT ♂s ON S. BEACH - 1 WAS TUMORED
2 ADULTS ON CRAB - PROBABLY BOTH ♀s
- 30 Jan 97: 3 turtles on crab beach in A.M. 2 adults, 1 platter size (~80 cm)
- 1 Feb 97: 1 adult female on crab beach with large tumors on back of neck and tumors covering eyes
- 4 Feb 97: Large male on Crab beach
- 5 Feb 97: Adult female with large tumor on left front flipper on Crab beach

Species / Subject TurtlesPage 2 of

DATE / LOCATION

COMMENTS

- 7 Feb 97 - Very large turtle swimming on S. Side of Tern Isl. by the boat dock. Unable to sex it.
- 8 Feb 97 - A huge male on Crab & ♀ on shell
- 10 Feb 97 - Large adult male on crab beach, Large ^{Very} ♂ swimming near tide gauge.
- Removed plaster-sized from the seawall
- 12 Feb 97 - 2 adults on crab beach in the morning
- 13 Feb 97 - 3 turtles washed over seawall, 2 new captures - one requires refer to data sheet for measurements.
- 17 Feb 97 - 2 large male basking on ~~shell~~ crab beach.
- 20 Feb 97 - 1 adult ♂ on crab beach, basking.
- 21 Feb 97: 1 adult on South Beach
- 23 Feb 97: large adult (probably ♂) spotted on Crab Beach with mangled tail
- 26 Feb 97: ADULT MALE ON CRAB shoreline
 1) FEMALE & ADULT MALE ON SOUTH BEACH
- 27 Feb 97: ♂ + ♀ adult turtles on crab beach.
- 28 Feb 97: ♂ on East Beach
- 1 MAR 97: ♀ on CRAB
- 13 MAR 97: 2♂, 1♀ on Crab beach; F-931(L) F-932(R) found washed up over the seawall at ~570
 Marker - read tags & released back to ocean
- 06 MAR 97: ♂ on Crab Beach
- 05 MAR 97: adult spotted on South Beach - sex unknown
- 07 Mar 97: adult ♂ on South Beach - in 1:00 pm basking
- 09 March 97: 2 adult ♂ basking on South Beach.
- 10 MAR 97: 1♂ + 1♀ basking.
- 11 MAR: 6 male turtles on East Island, 4 male on ~~Crab~~, 1 male on Crab Beach, 1 on South Beach, 4 on Mullet Island.
- 12 MAR: Turned turtle seen on Trig Island. This is most likely the same turtle seen on Tern all winter.
- 13 March: ♀ first adult on south beach + 1 unk sex adult;
 ♀ male adults on Crab Beach

- | DATE/LOCATION | COMMENTS |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20 March 97 | Turtled sighted on South beach not examined by D.V.M. → appeared healthy = 3066 RFL. 77 cm. Straight carapace length. According to DVM, no further action is needed as animal is healthy & vision is not compromised. |
| 26 MARCH | ♂ on Crab Beach |
| 27 March | 2 adults on South Beach |
| 28 March | 2 adult basking on South Beach - 1 ♂ + 1 unkn |
| 30 March | 2 pairs of turtles copulating off of whale + skate island. |
| 2 Apr | 1 adult seen on S. Beach |
| 3 Apr | 1 adult seen on S. Beach |
| 6 Apr | 1 adult basking on S. Beach |
| 7 Apr | 2 adult turtles basking S. Beach & Crab Beach, respectively |
| 8 Apr | Adult seen on South Beach near RFB0 #8 |
| | Adult seen around RTTR #4. Probably ♀ |
| 9 Apr 97 | 3 adults basking on S. Beach - 1 pair attempting to copulate infant of Larracker |
| 10 Apr 97 | 5 adults (3 ♂) basking on S. Beach. 1 ♂ basking on Crab Beach |
| 11 Apr 97 | adult female basking on Crab beach. |
| 13 Apr 97 | over 30 indiv. basking on East - several pair copulating off shore
8 adults in Tray
≈ 35 ind basking around Whale + Skate islands |
| On TRAV | = 1 ♀ + 1 ♂ + 1 unkn + 1 unkn with mangled tail basking on crab + shell. |
| 14 Apr 97 | Tagged turtle washed over seawall east of ground. Tags F910 RFL F911 RFL. Tagged on LFL F938 |
| 16 APR 97 | Adult ♂ with tumor on left side of face below eye, covers mouth estimated 11 cm. long, 5 cm. high. Very lumpy, raw, cut up (as if rubbed against things), no legs visible. Seen on South Beach, @ RTTR 4. Notified Honolulu. |

FRENCH FRIGATE SHOALS JOURNAL

Species / Subject Sea Turtle

4
Page 3 of

DATE/LOCATION

COMMENTS

15 MARCH - observed copulation off Gin Island
17 MARCH 97 - 2 adults sighted on South Beach - sex unknown
18 MARCH - 1 male on S. Beach, 1 male swimming in Twilight zone

18 APR: pair copulating off of Tern Isl.
Have looked for tumored turtle for the past week on Tern Isl. No luck!

20 APR: 2 Turtle copulations noted off Tern. Tumored ♂ reported on 16 Apr sighted basking on South Beach.

Island East Island

Date April 21, 1997

Obsrvs ACV AV KW SW, VP, JD, RS

SPECIES	ADULTS	NESTS	EGGS	CHICKS	COMMENTS
BFAL					
LAAL					Rebanded 2 LAAL adults
BOPE					
BUPE					
CHSH					
WTSH					
TRSP					
RTTR		13	12	1	4 freshly dead chicks found
GRFR		2	2		
BRBO					
RFBO					
ROTE					
WHITE					
GRAT					
ERNO		254	114	140	
BLNO					
BGNO					
BTCU					
SAND					
RUTU					
GOPL					
WATA					
OTHER					

MABO DATA TABLE

# OF ADULTS	# OF NESTS	# EGG NEST	CHICK NEST	1 EGG	2 EGG	1 CHICK	2 CHICK	1 EGG/1 CHICK	TOTAL EGGS	TOTAL CHICKS
	126	31	95							

COMMENTS Mom with 2 pups still on beach; one pup slightly smaller than the other - P1 and P2 size
New mom and pup (brand new - P1) - appear to be no tags
85+ turtles counted on East Island
Turtle digging and 3 false crawls found
Found BFAL chick with shell embedded in leg; removed.
Banded first 2 MABO chicks.
No Penches found
Read MABO bands on breeding adults

FFS OUTER ISLANDS FIELD OBSERVATION FORM

Island Gin Island

Date April 21, 1997

Obsrvs VP, SW, RS

COMMENTS Small cendipit island seen north of Gin
One mom and pup (p1 size) seen
15 turtles seen on Gin, 7 pupulating in water
8 seals seen

FFS OUTER ISLANDS FIELD OBSERVATION FORM

Island Whale / Skate

Date March 30 1997

Obsrvs AV, JT, MP

COMMENTS Turtles pupulating. Lots of seals - 15 on whale
Turtles on skate
Mabo nests had one egg each.
Band read on walker (MABO)

FFS OUTER ISLANDS FIELD OBSERVATION FORM

Island Trig

Date MARCH 30 1997

Obsrvs ARV, CM

COMMENTS Read bands & banded breeding (nesting) adu HTS
1 large ♀ turtle basking

FFS OUTER ISLANDS FIELD OBSERVATION FORM

Island Little Gin Island

Date 2 April 1997

Obsrvs KW, JD

COMMENTS Mom and pup (p2 size) seen
5 turtles & 5 seals seen

10/3/78
T225 FW
USIA/MSH
BASK
9/14/82
USIA/BASK

Tag information--

Tag Number	Date Tagged	Tag Type	Tag Position
2945	10/03/78	1681	
2950	10/03/78	1681	
1225	04/01/73	M49	

Hello
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65
Hello George,

I have included the daily totals and a disk with all tern island ID's & sightings. These are your copies to keep. I'm on the last 25 tags, so another 100-200 should keep us well stocked through the winter.

An adult male turtle was sighted while snorkeling around Shark Island. Tag#2950 LF

Thank you very much for the stamp page - they are beautiful. I look forward to seeing you in Sept. Let me know if you have any more questions or requests.

Take Care
Allison

DAILY TOTALS
NESTING GREEN TURTLES
FRENCH FRIGATE SHOALS, 1997

GEORGE B. COPY

Island: TERN

Date	# Turtles Up	# New Turtles IDed	# Nests	Invest.	Comments
6/24/97	22	7	0/1/0	AV	
6/25	24	6	0	AV	
6/26	13	0	0	AV	
6/27	13	3	0/0/1	AV	
6/28	13	0	0	TC	
6/29	13	3	1/1/1	TC	
6/30	15	1	0/0/1	TC	
7/1	15	3	1/0/1	TC	
7/2	17	3	0	TC	
7/3	16	2	0	TC	
7/4	23	3	0/1/2	TC	
7/5	25	1	0/0/1	TC	
7/6	23	1	0	TC	
7/7	17	2	1/0/3	TC	
7/8	24	0	0/2/1	TC	
7/9	23	3	1/0/1	TC	
7/10	29	4	2/0/1	AV	A turtle w/no moto, nor tags nested-egg counted in turtles up, but not in New ID's. see
7/11	32	2	3/1/1	AV	
7/12	19	4	1/1/2	AV	
7/13	22	0	3/0/4	AV	A turtle w/no moto nor tags nested-egg seen. Counted in turtles up, but not in New ID's.
7/14	16	1	1/0/4	AV	
7/15	12	1	1/0/0	AV	
7/16	18	0	1/1/2	AV	
7/17	27	2	0/1/2	AV	
7/18	24	2	0/1/2	AV	
7/19	20	1	1/0/1	AV	
7/20	31	1	0/1/2	AV	
7/21	27	3	0/0/2	AV	
7/22	22	4	1/0/2	AV	

Island: TERN

Date	# Turtles Up	# New Turtles IDed	# Nests	Invest.	Comments
7/23/77	—	—	—	—	No walk - high winds & rain
7/24	17	3	2/2/0	AV	
7/25	20	3	3/1/3	AV	A turtle w/no moto nor tags nested - eggs counted in turtles up, but not in new ID seen
7/26	7	1	1/0/0	VP	No night walk - Data from MORNING walk 6:30 AM
7/27	17	1	0/0/2	AV	
7/28	16	1	1/1/2	AV	
7/29	15	0	2/0/0	AV	
7/30	12	1	1/0/0	AV	
7/31	17	1	0	AV	
8/1	17	0	0	AV	
8/2	22	3	0/0/1	AV	
8/3	26	2	2/1/1	AV	
8/4	14	0	0/1/0	AV	
8/5	17	1	0/1/1	AV	
8/6	18	3	1/1/0	AV	
8/7	9	0	3/2/0	AV	
8/8	10	0	0	AV	
8/9	10	2	1/0/1	AV	
8/10	11	0	0/0/1	AV	
8/11	8	1	1/0/1	AV	
8/12	8	0	0	AV	
8/13	6	2	0/1/0	AV	
8/14	11	0	2/1/0	Ant. Vagratory	
8/15	15	0	0/0/3	AV	
8/16	14	0	1/0/0	AV	
8/17	17	1	1/0/1	AV	
8/18	13	2	0/1/0	AV	
8/19	18	1	2/1/2	AV	
8/20	8	1	1/1/0	AV	

DAILY TOTALS
NESTING GREEN TURTLES
FRENCH FRIGATE SHOALS, 1997

Island: East

Island: East

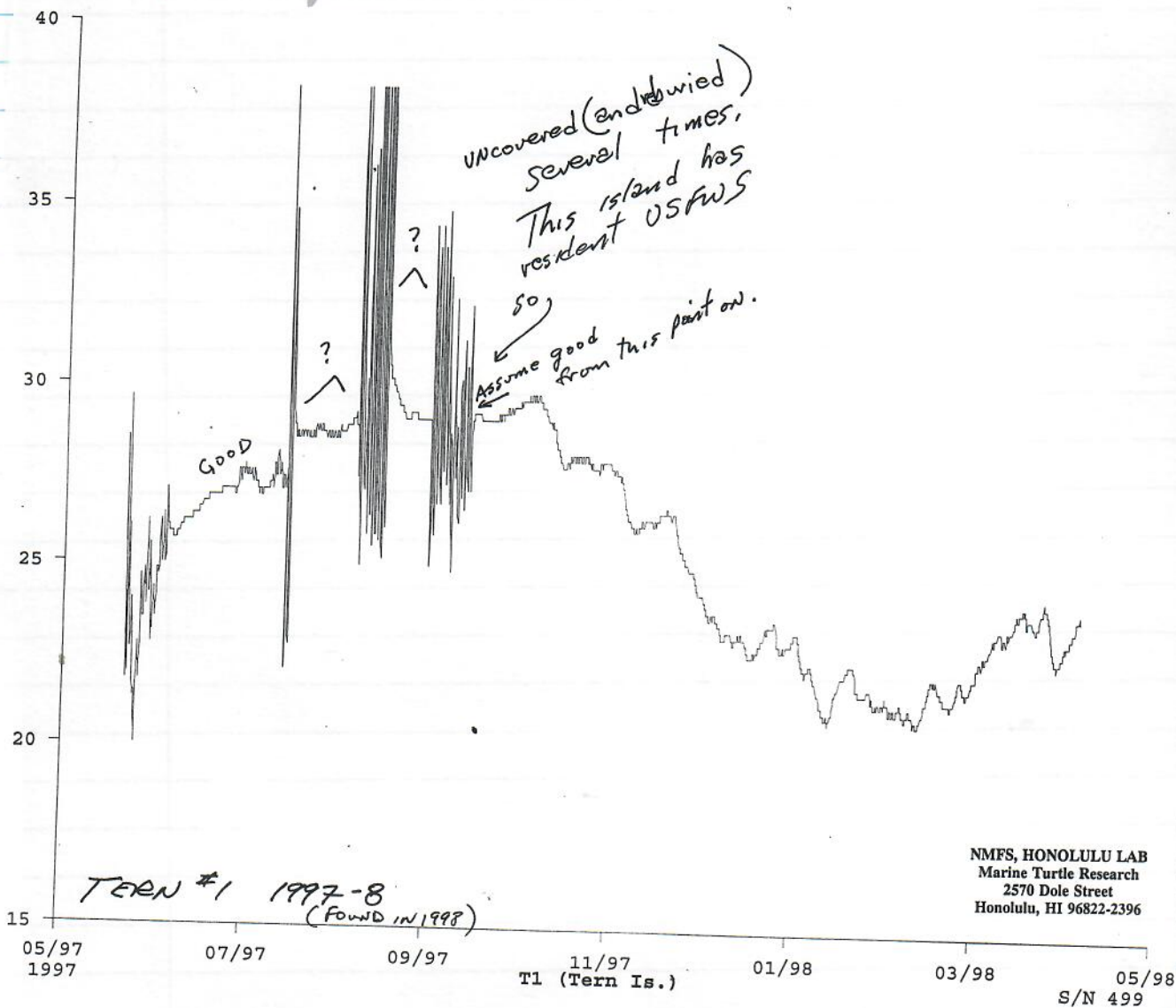
1997
N/P/M

Date	# T
June 28	5
June 29	5
June 30	
July 1	

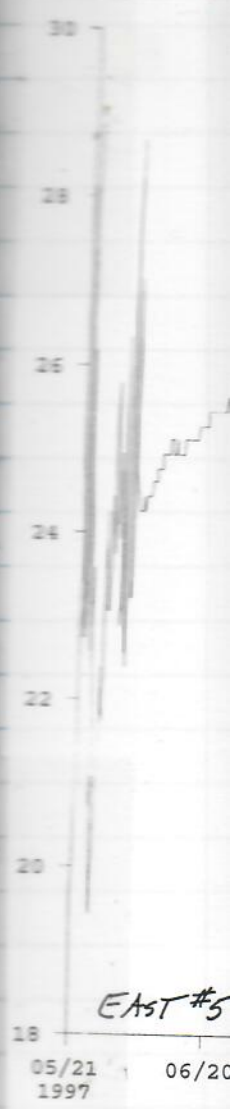
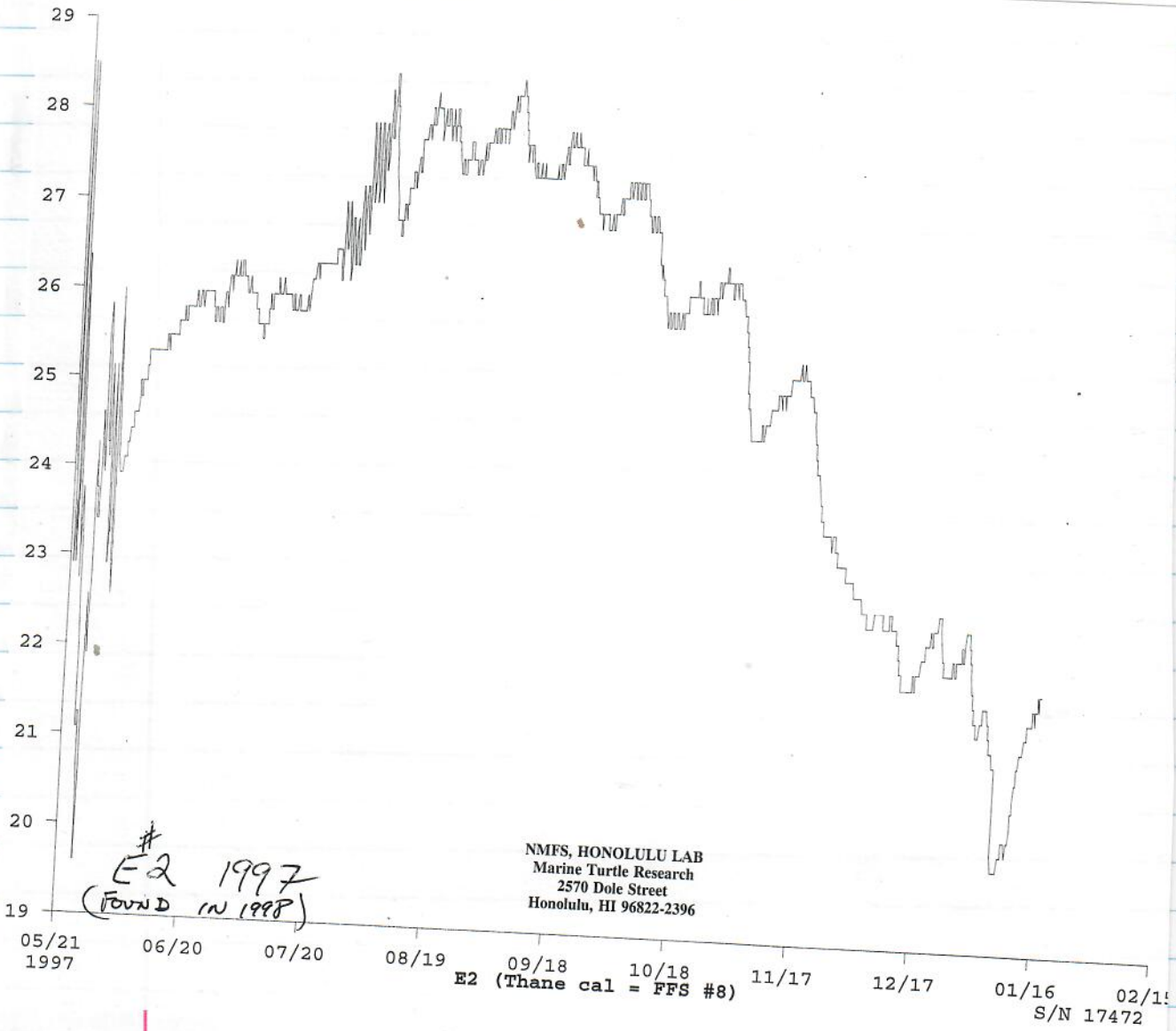
Date	# Turtles Up	# New Turtles IDed	# Nests	Invest.	Comments
6/5/97	27	23	1/9/2	T.C./AV	First night turtle camp. Visit Retrieved sat tag from V44 Tim Clark & Allison at
6/6/97	31	22	4/3/4	T.C./AV	Young pup lost 1/3 mom. Raising it in tent. It loves Rice Dream
6/7/97	31	16	3/2/3	T.C.	The aliens were came to visit. Good to see old friends again.
6/8/97	40	19	6/10/6	T.C.	One tiger shark in lagoon. Has big knob protruding behind dorsal fin.
6/9/97	47	23	1/3/09	T.C.	Retrieved sat tag from V91
6/10/97	47	19	2/3/13	AV	Beautiful calm night - sky full of stars - one amazing shooting star! I love turtle camp!
6/11/97	64	35	5/6/2/10	AV	What a night! - Turtles, turtles & more turtles! First Tiger Kill - BPAL chick
6/12/97	47	27	0/3/10	AV	I saw no nests, sad-sad.
6/13/97	61	25	4/2/8	AV	Took refuge under a bush during squall. Beautiful moon after sunset
6/14/97	64	33	4/11/10	T.C.	Occasional showers, turtles enjoyed playing in the mud.
6/15/97	60	27	1/1/5	T.C.	First walk taking 3 hrs. Beautiful night. the moons coming back!
6/16/97	66	24	3/0/12	T.C.	First night radio has worked this season, saw my first BPAL fledge. Tiger got it 30 sec!
6/17/97	67	28	3/4/4	T.C.	The lost pup came by to say hi. Wants more rice dream.
6/18/97	64	17	7/1/8	ACV	Beautiful moonlit night.
6/19/97	63	15	3/5/11	AV	
6/20/97	62	15	4/0/5	AV	Took dead male weaver away from adult male mating with it!
6/21/97	78	10	11/8/8	AV	RECORD TURTLE NIGHT! ^{Low on Pass} (Tag/Tag)
6/22/97	76	10	5/16/6	T.C.	Heard turtles talking. Reason so many up - planning to over run Fern Island. Have to warn them Today found out turtles are pissed at him. Out for revenge. They are developing weapons! Oh.
6/23/97	74	12	6/4/13	T.C.	In winning! New record! Beat that Allison!
6/24/97	80	10	4/6/9	T.C.	The V438 found dead in desert
6/25/97	90	4	4/8/7	T.C.	Wet wet, windy night - Yuk. Female w/ without REL & fresh wound.
6/26/97	70	8	2/5/7	AV	Record night in the history of tur. camp! Don't feel bad Times - lots of RI
6/27/97	71	4	10/5/17	AV	3 new moms & pups - A pretty slow night
6/28/97	50	6	5/4/6	AV	Using last 20 tags tonight
6/29/97	56	6	6/7/11	T.C.	Quiet night - what happened to all the not back Allison at had all the turtles! lots of nesting
6/30/97	50	3	8/4/16	T.C.	I think stars are alive. That's why they twinkled so much. It's like a heart beat
7/1/97	41	3	3/6/11	T.C.	Don't know what happened to the turtles getting worried. Sang turtle love songs all night.
7/2/97	59	3	7/7/19	T.C.	My last night on East! I'll miss it. Good bye Turtles! Come visit in Texas

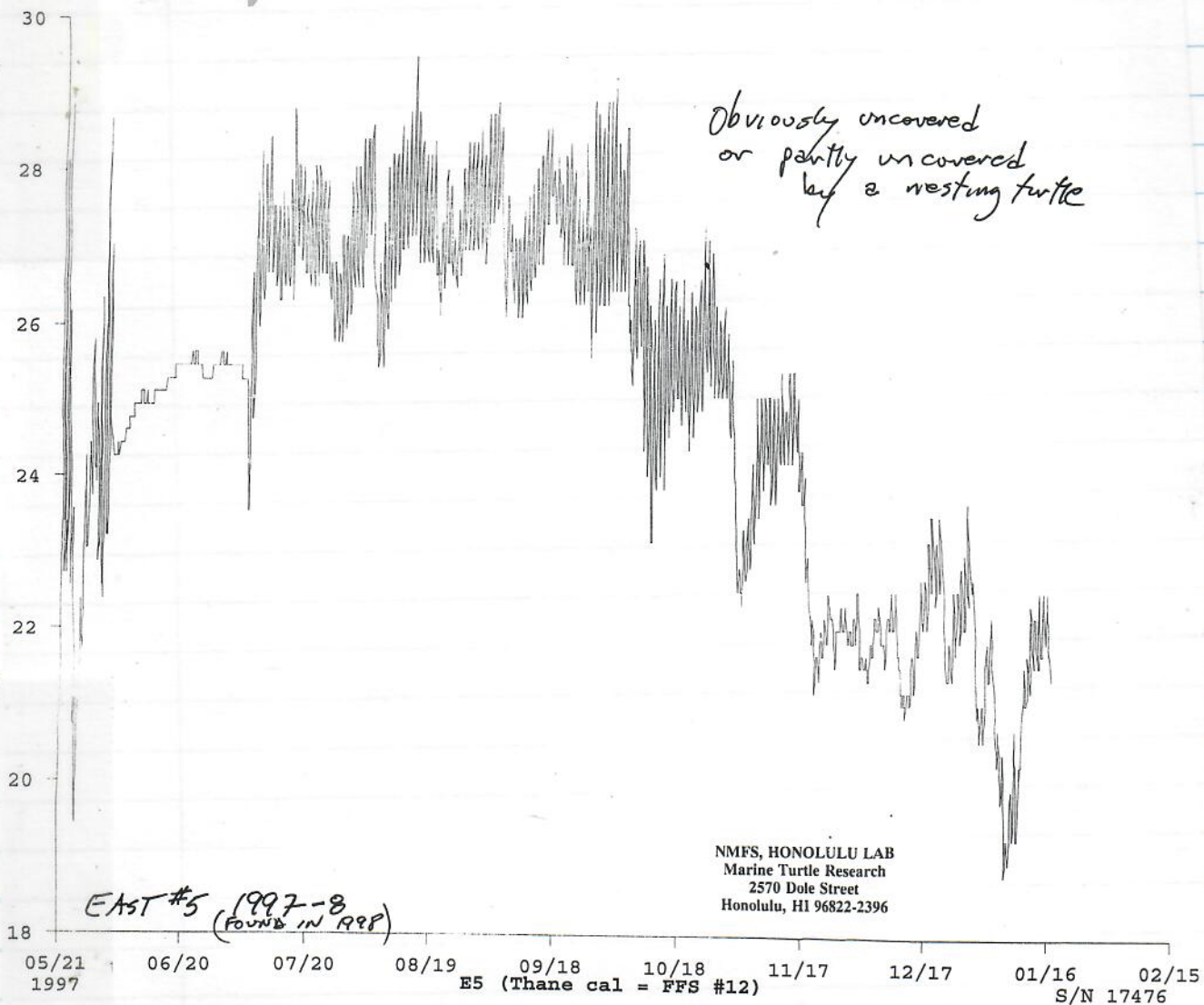
Island: EAST

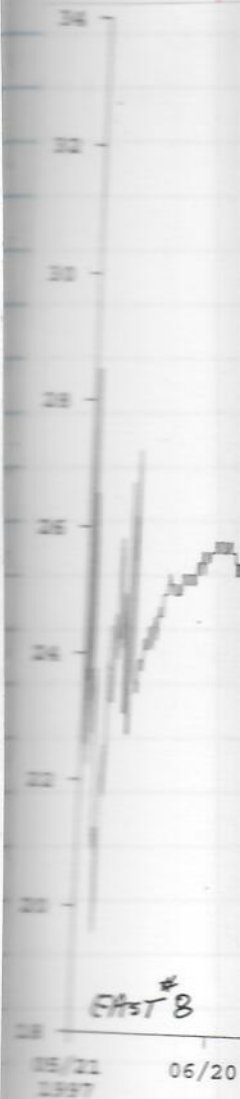
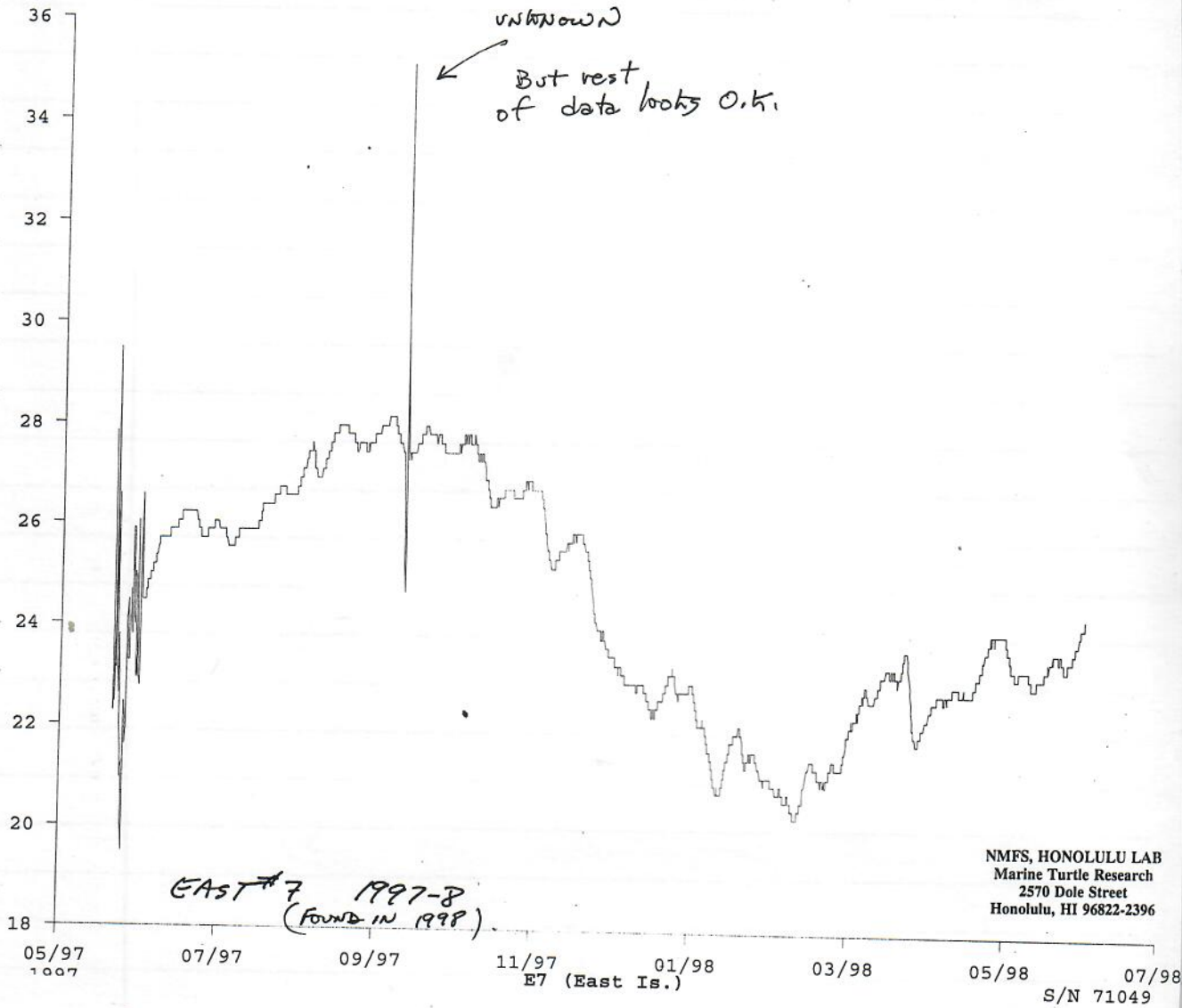
Date	# Turtles Up	# New Turtles IDed	# Nests	Invest.	Comments
June 28	58	7	5/4/11	ACV	The last 4 nights of turtle camp 1997.
June 29	58	6	4/5/14	ACV	Saw a ship/boat in the distance Injured MABO on spit - broken wing
June 30	61	5	6/8/3	ACV	Sat. furt. # V44 Nasted - Staked Windy, wind
July 1	60 58	1	7/8/6	ACV	What a wonderful experience - I will miss my nights on East Is FFS

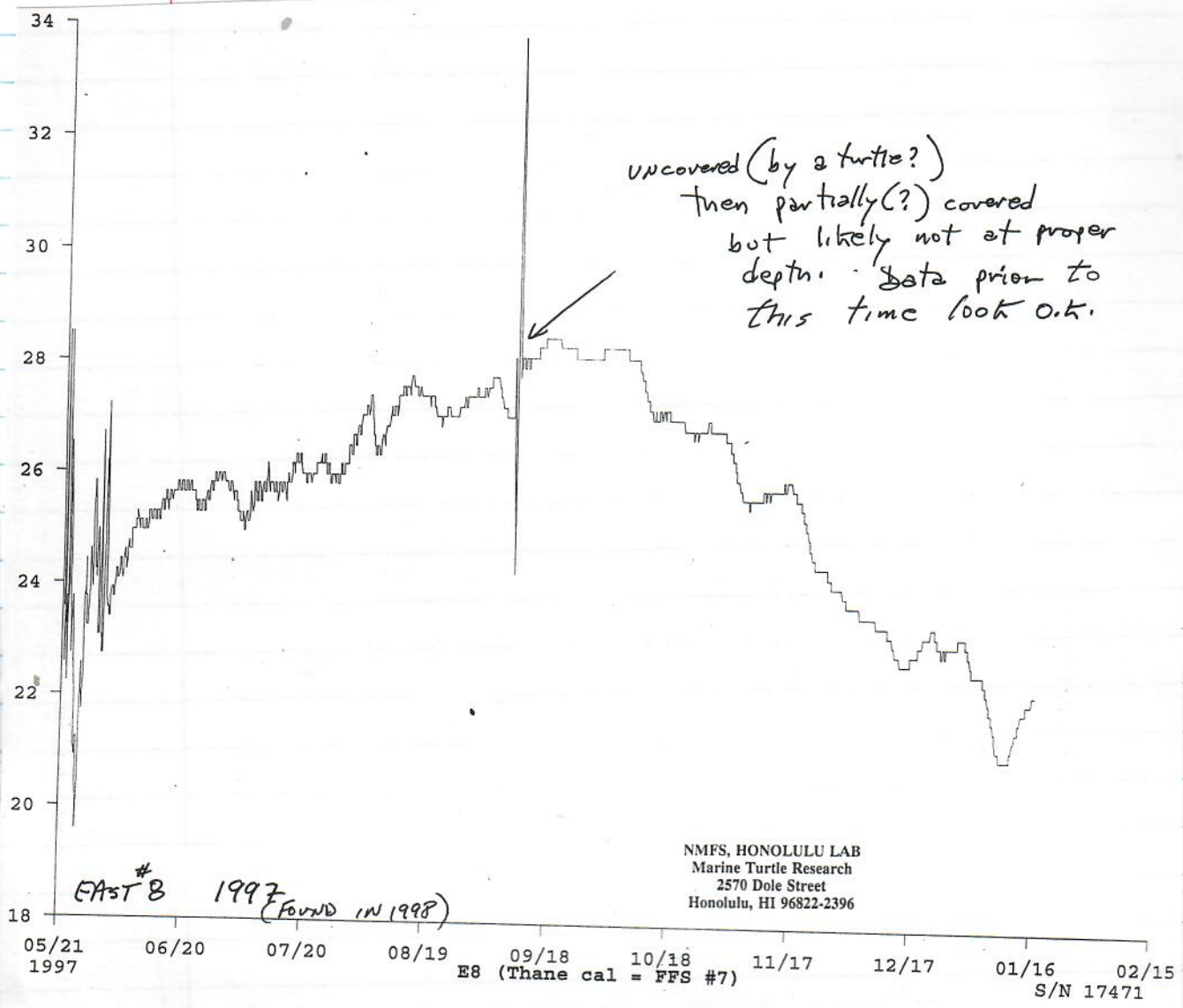


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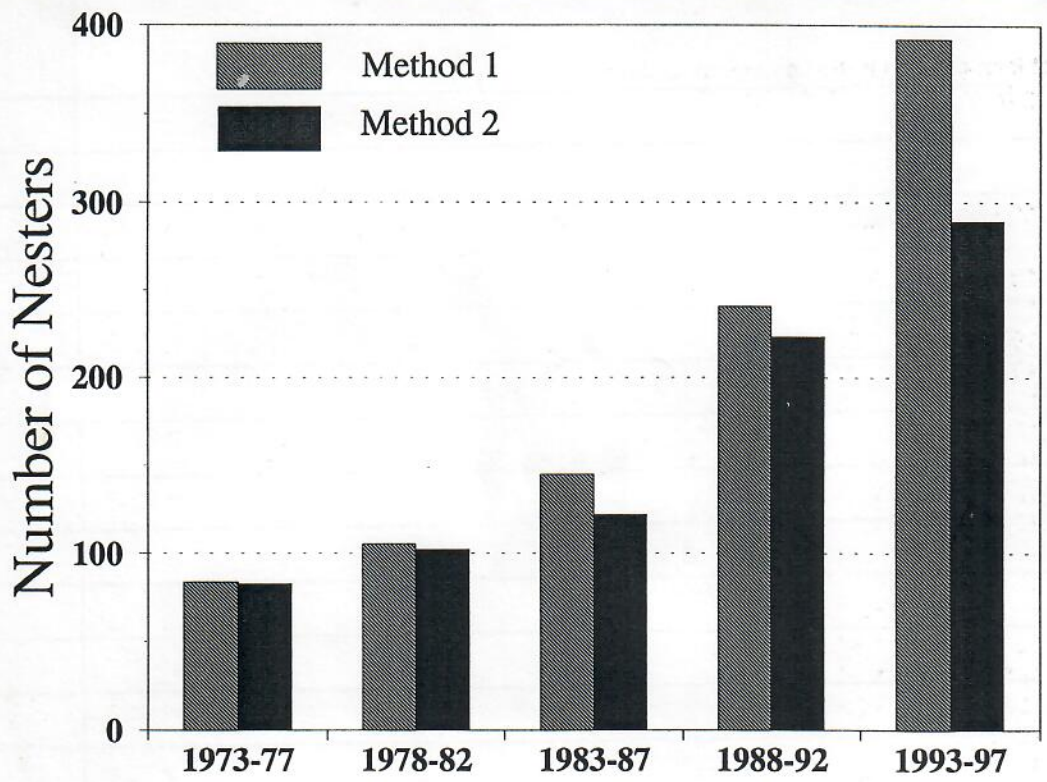




1997

East Island green turtle nesting population estimates (N)
using Method 1 and Method 2

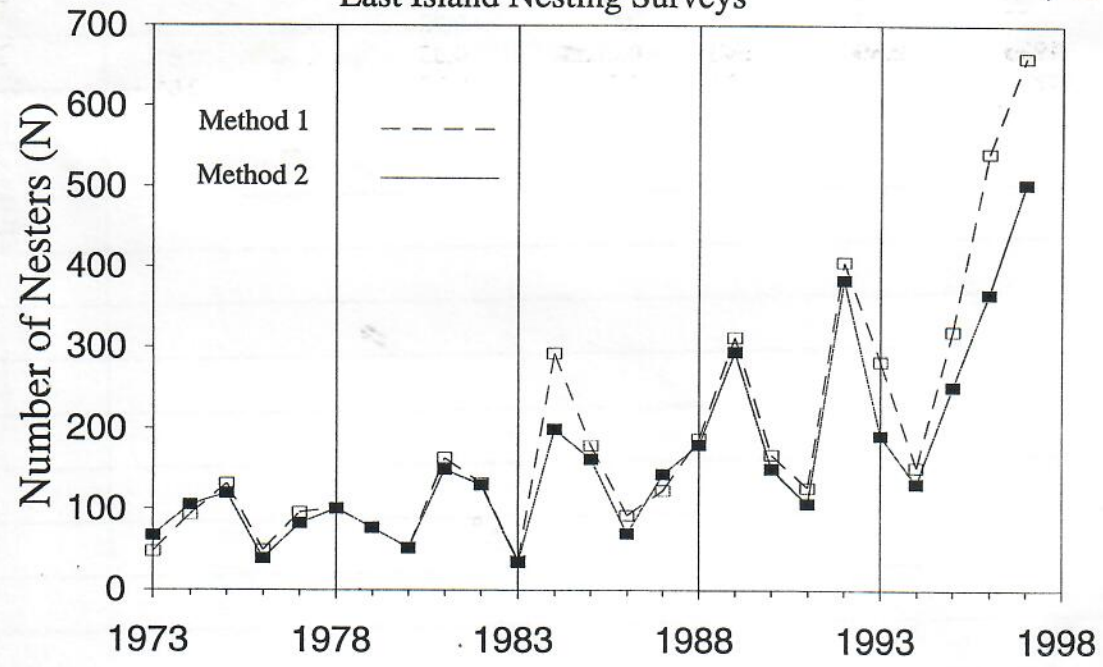
Year	Coverage Rate	Method 1 N	CV(N)	Sighting Probability	Method 2 N	CV(N)
1973	3.94	48	0.0642	0.98	67	0.0163
1974	4.51	93	0.0435	0.99	105	0.0091
1975	2.50	132	0.0526	0.93	120	0.0254
1976	0.92	49	0.1424	0.62	39	0.1272
1977	0.73	96	0.1168	0.53	82	0.1071
1978	1.01	101	0.0948	0.65	101	0.0725
1979	1.19	77	0.0986	0.71	77	0.0731
1980	1.89	51	0.0973	0.86	52	0.0568
1981	1.81	164	0.0577	0.85	149	0.0358
1982	1.83	133	0.0633	0.85	130	0.0378
1983	1.58	36	0.1262	0.81	35	0.0812
1984	1.48	293	0.0509	0.79	199	0.0393
1985	1.57	179	0.0583	0.81	162	0.0380
1986	1.83	92	0.0725	0.85	69	0.0504
1987	1.92	123	0.0624	0.87	143	0.0328
1988	7.19	188	0.0271	1.00	180	0.0000
1989	7.85	312	0.0231	1.00	294	0.0026
1990	7.82	168	0.0266	1.00	150	0.0000
1991	7.73	127	0.0268	1.00	107	0.0046
1992	7.63	407	0.0218	1.00	384	0.0000
1993	2.78	283	0.0392	0.95	191	0.0175
1994	2.45	153	0.0508	0.92	132	0.0252
1995	2.89	320	0.0354	0.95	252	0.0146
1996	2.89	543	0.0328	0.95	367	0.0128
1997	2.93	661	0.0309	0.95	504	0.0110



1997

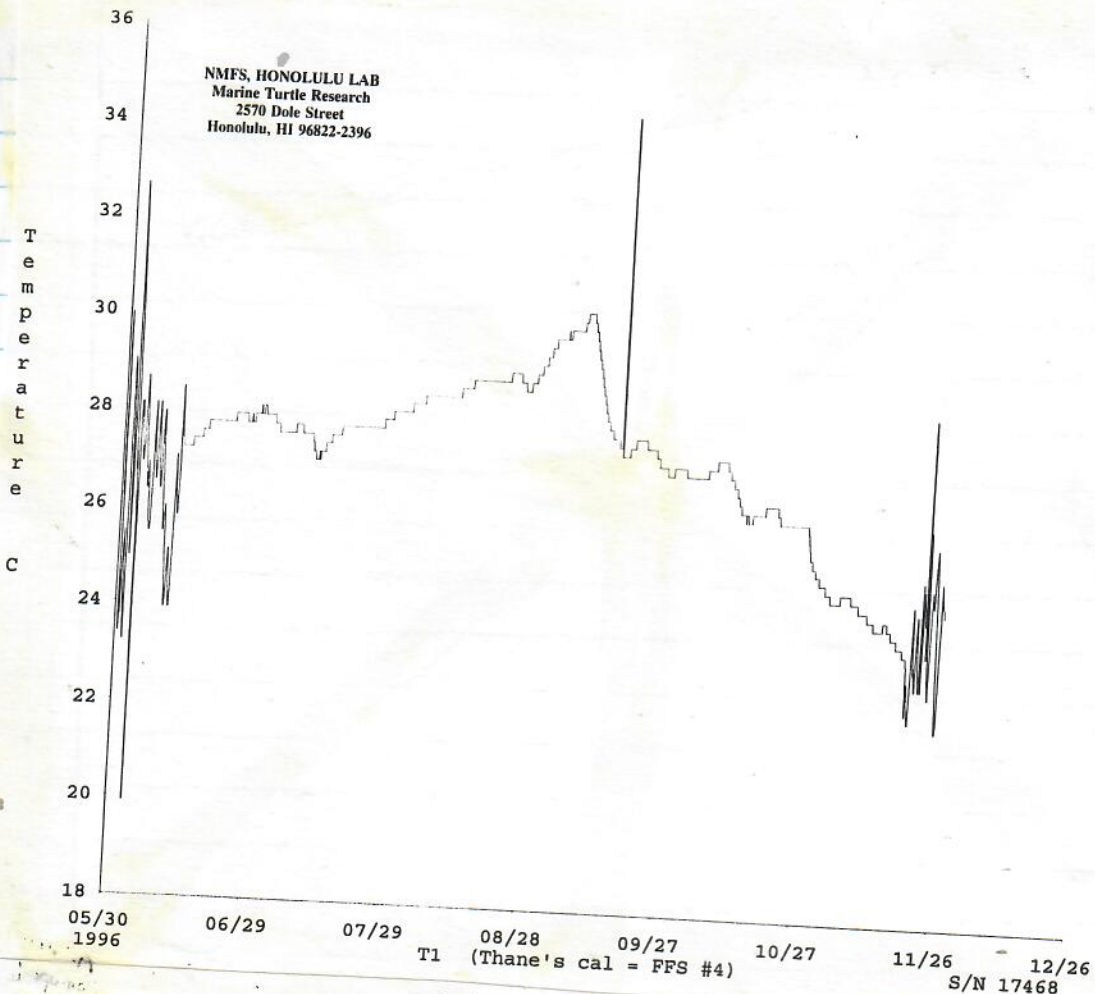
**Hawaiian Green Turtles
East Island Nesting Surveys**

1997



Method 1: $N = \text{total emergences} / \text{survey coverage rate}$
 Method 2: $N = \text{total nesters seen} / \text{sighting probability}$

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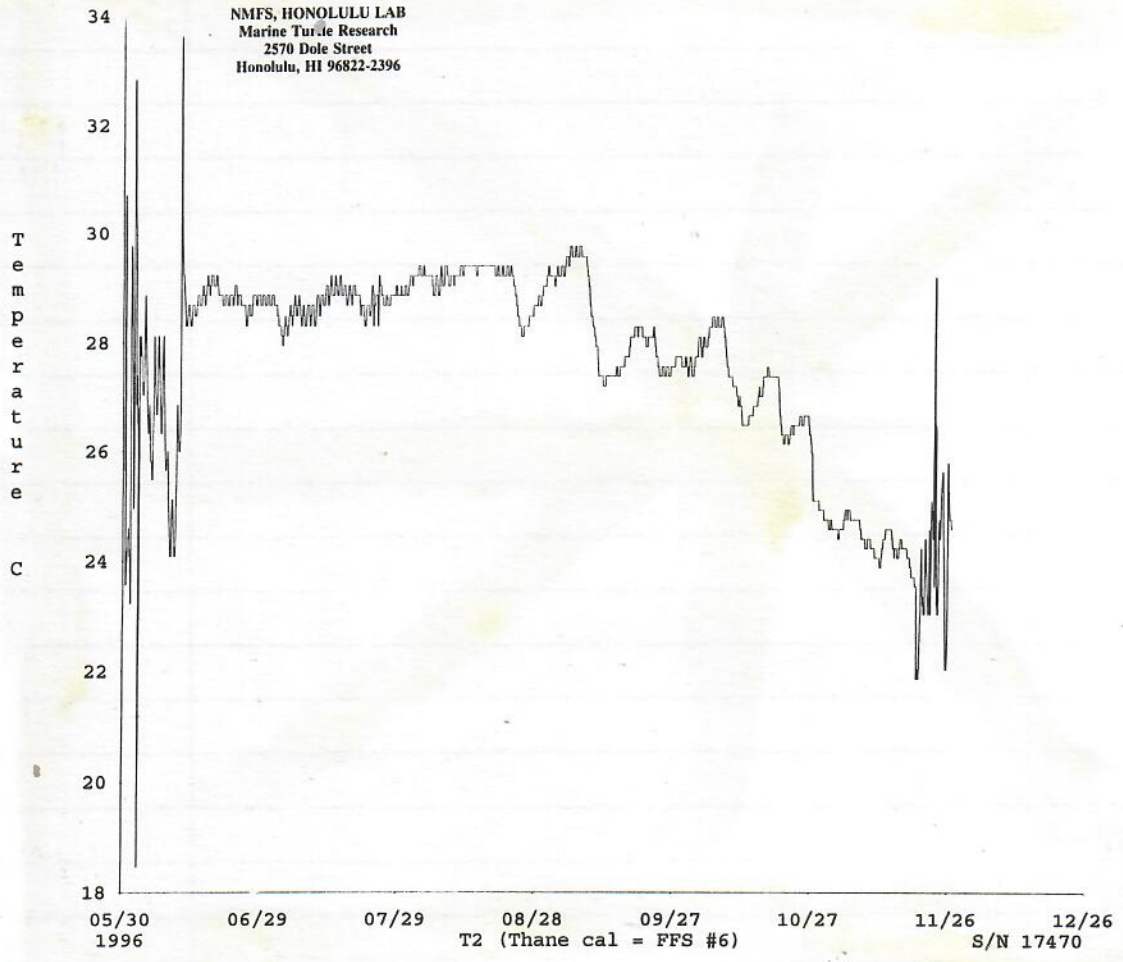
All Data
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 (1996)

Hobologger cross reference list

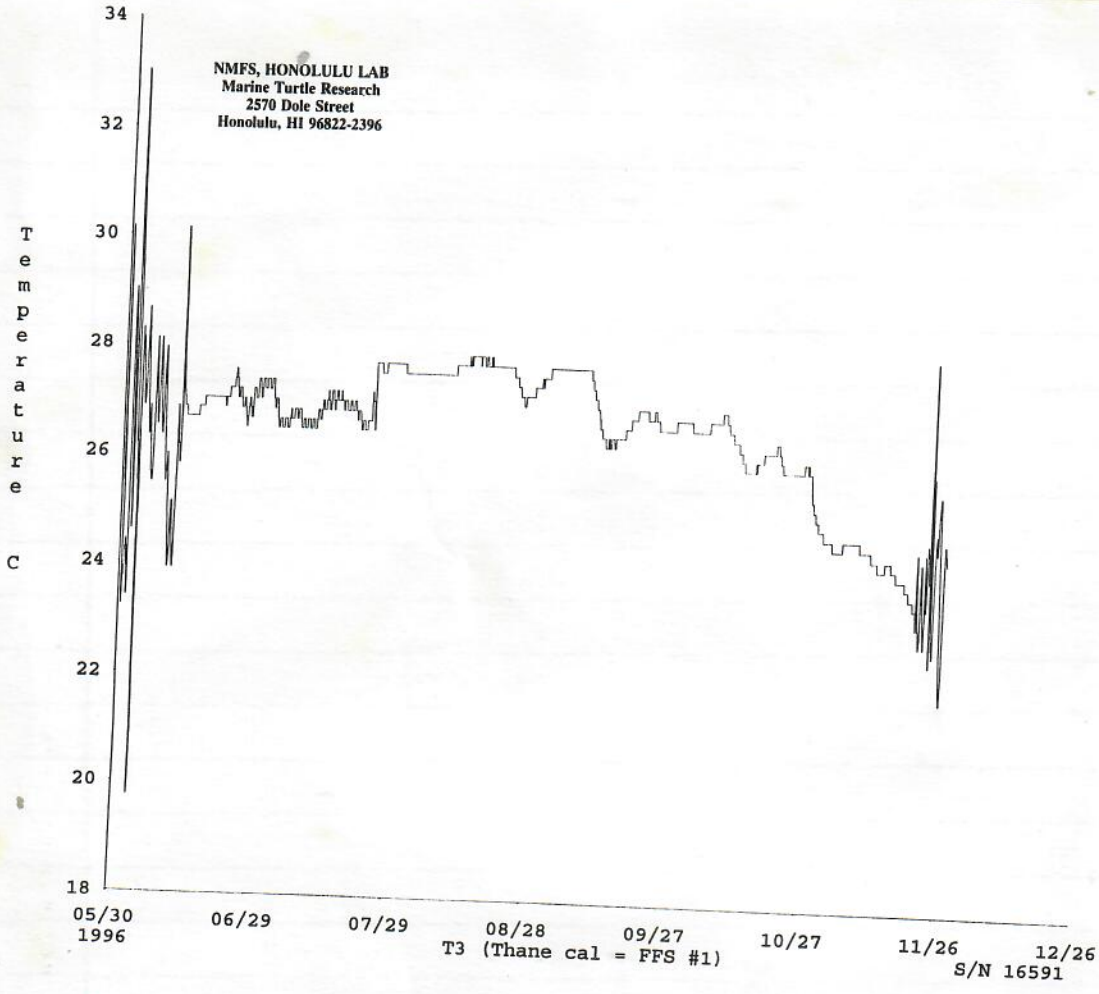
GHB #	Thane's Cal #	SN #	Tag
T1	FFS #4	17468	BBA 472
T2	FFS #6	17470	BBA 500
T3	FFS #1	16591	BBA 480 (1995), Z 700 (1996)
T4	FFS #3	16593	BBA 479
E1	FFS #2	16592	BBA 474
E2	FFS #8	17472	BBA 499
E3	FFS #11	17475	BBA 471
E4	FFS #9	17473	BBA 476
E5	FFS #12	17476	BBA 475
E6	FFS #10	17474	BBA 477
E7	FFS #5	17469	BBA 473
E8	FFS #7	17471	BBA 478

Prepared
 5/30/96

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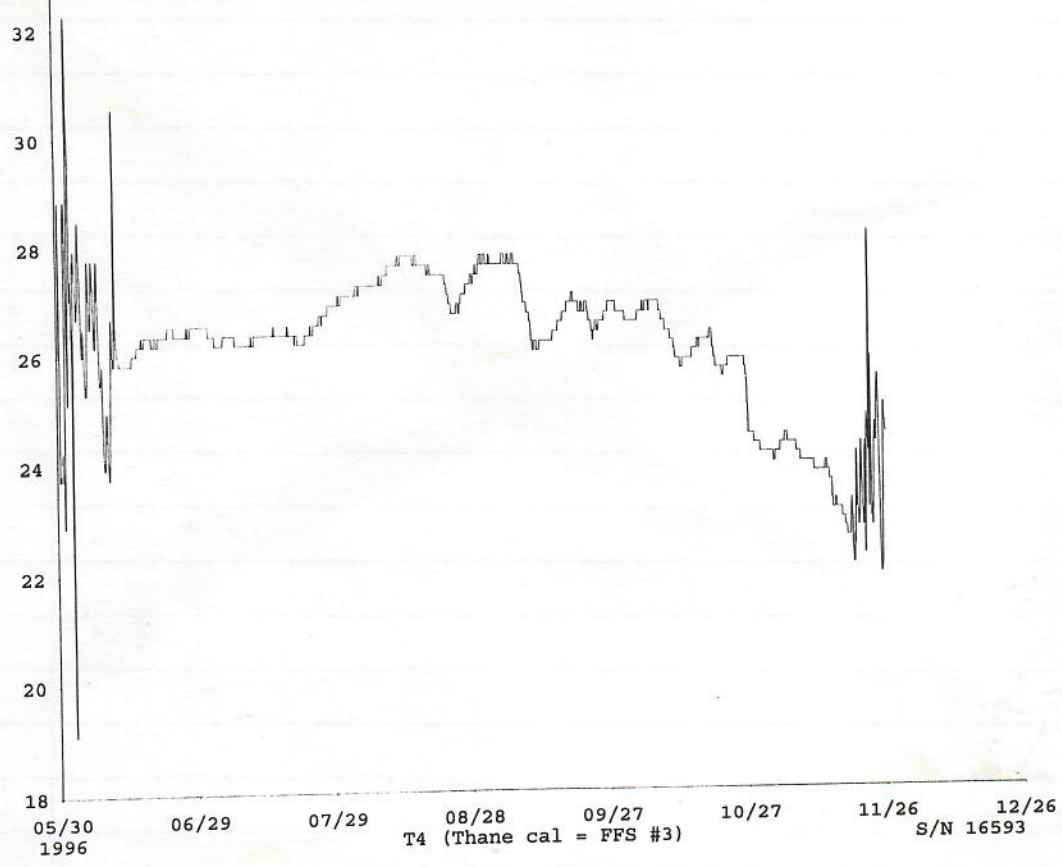
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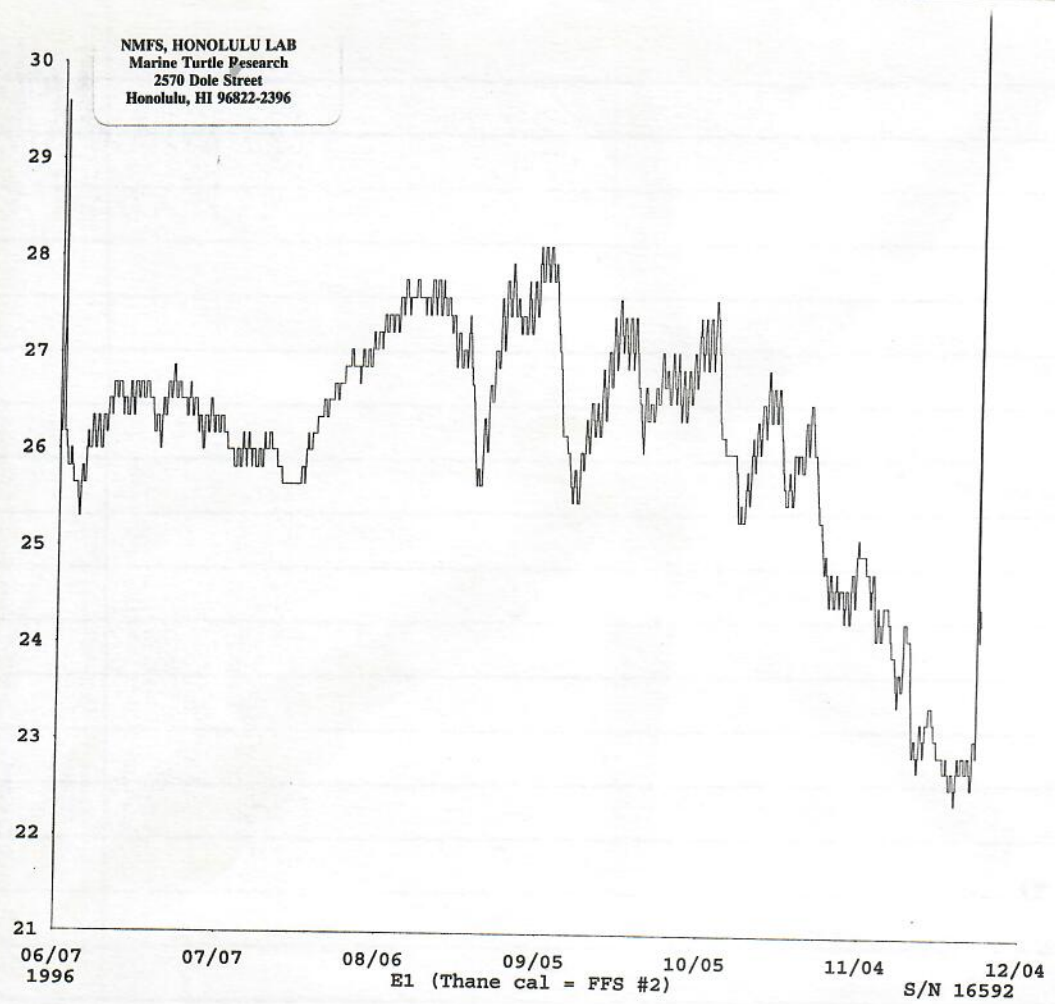


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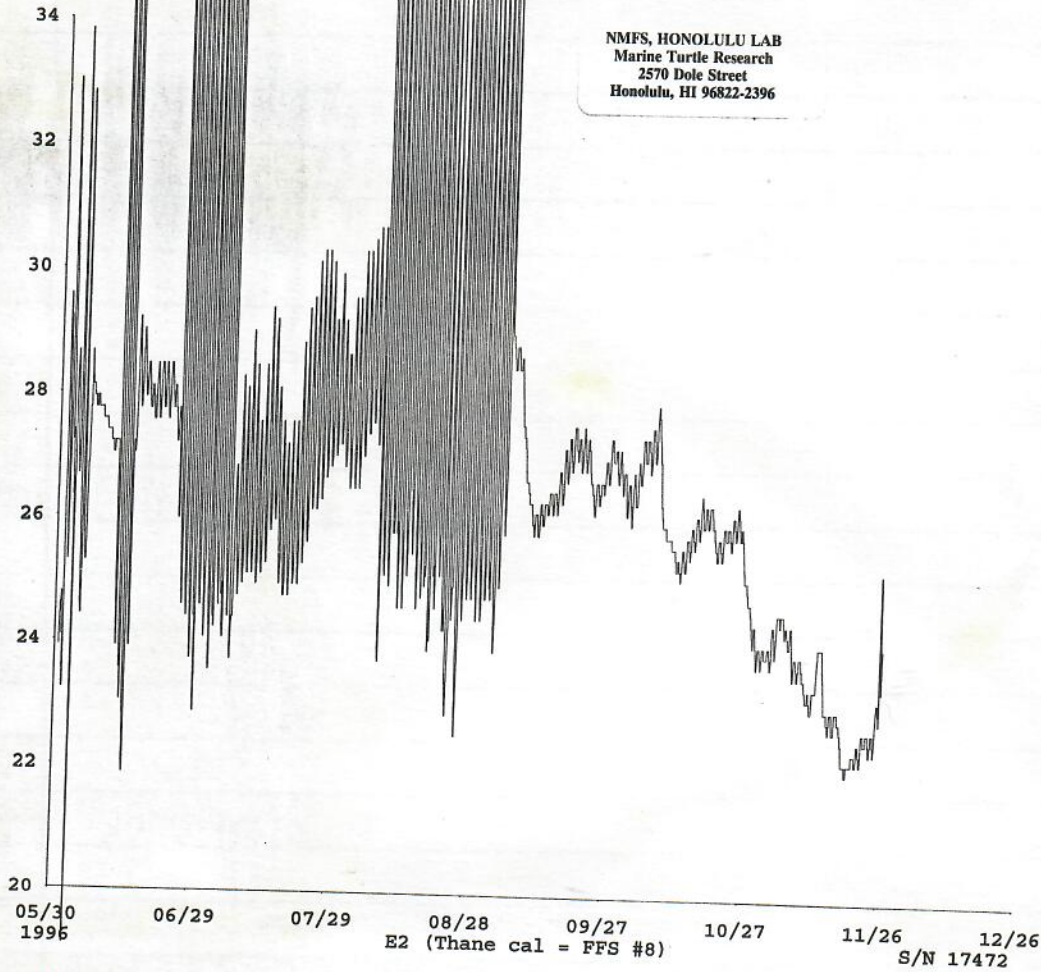
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1996

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E2 (Thane cal = FFS #8)

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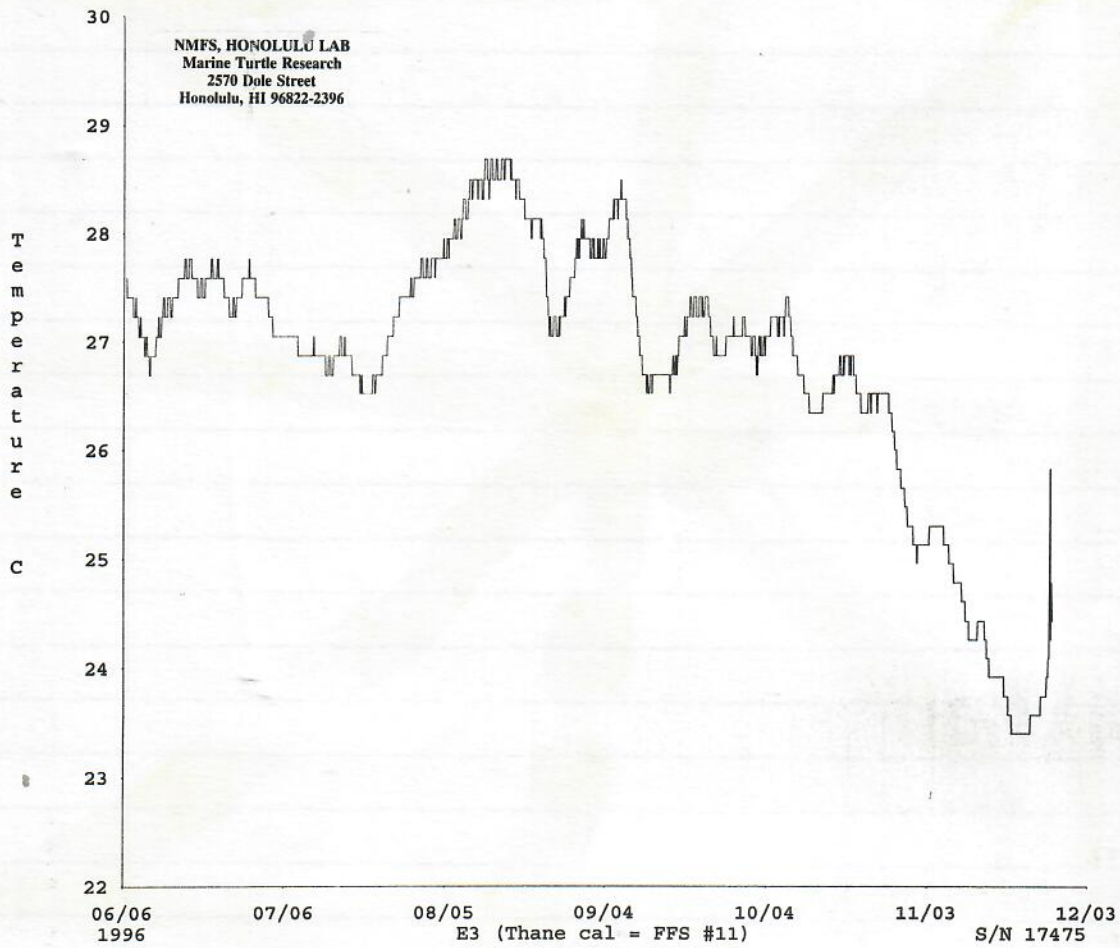
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1996

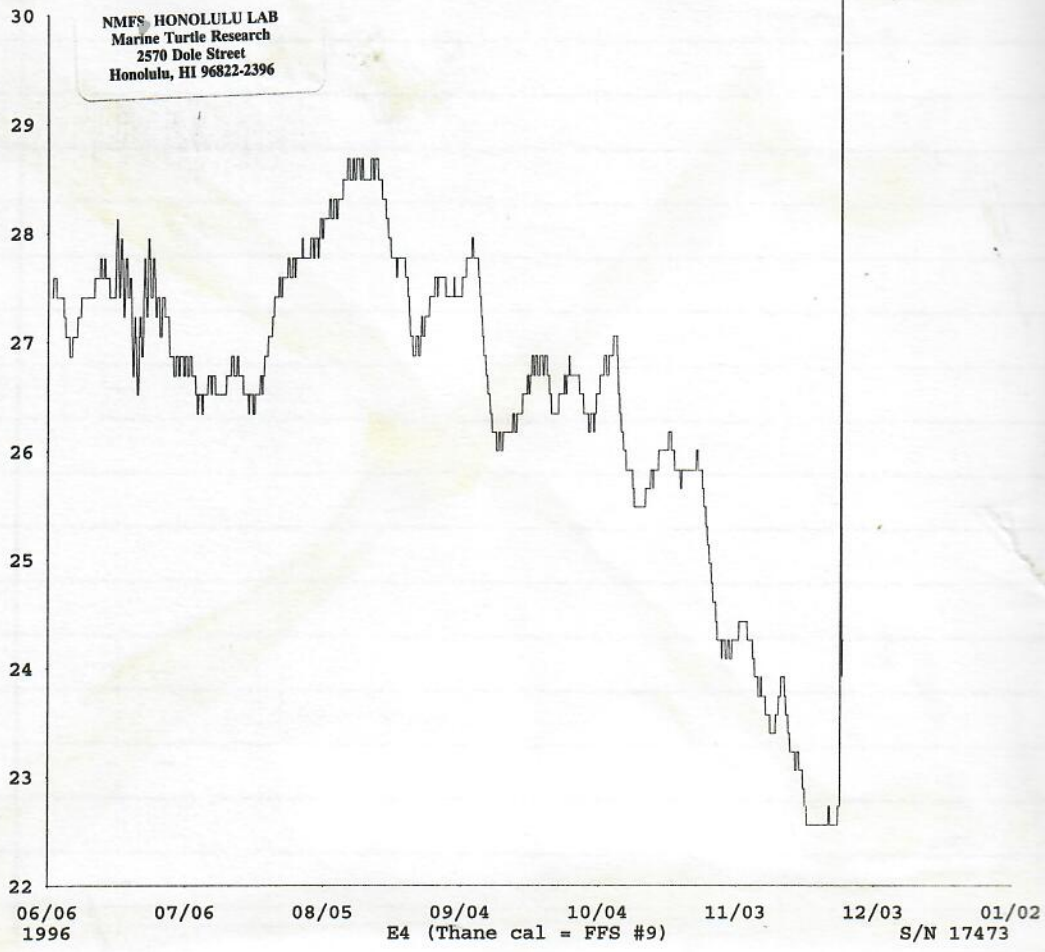
99

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Marine Turtle Research
2570 Dole Street
Honolulu, HI 96822-2396



Temperature
C

NMFS, HONOLULU LAB
Marine Turtle Research
2570 Dole Street
Honolulu, HI 96822-2396



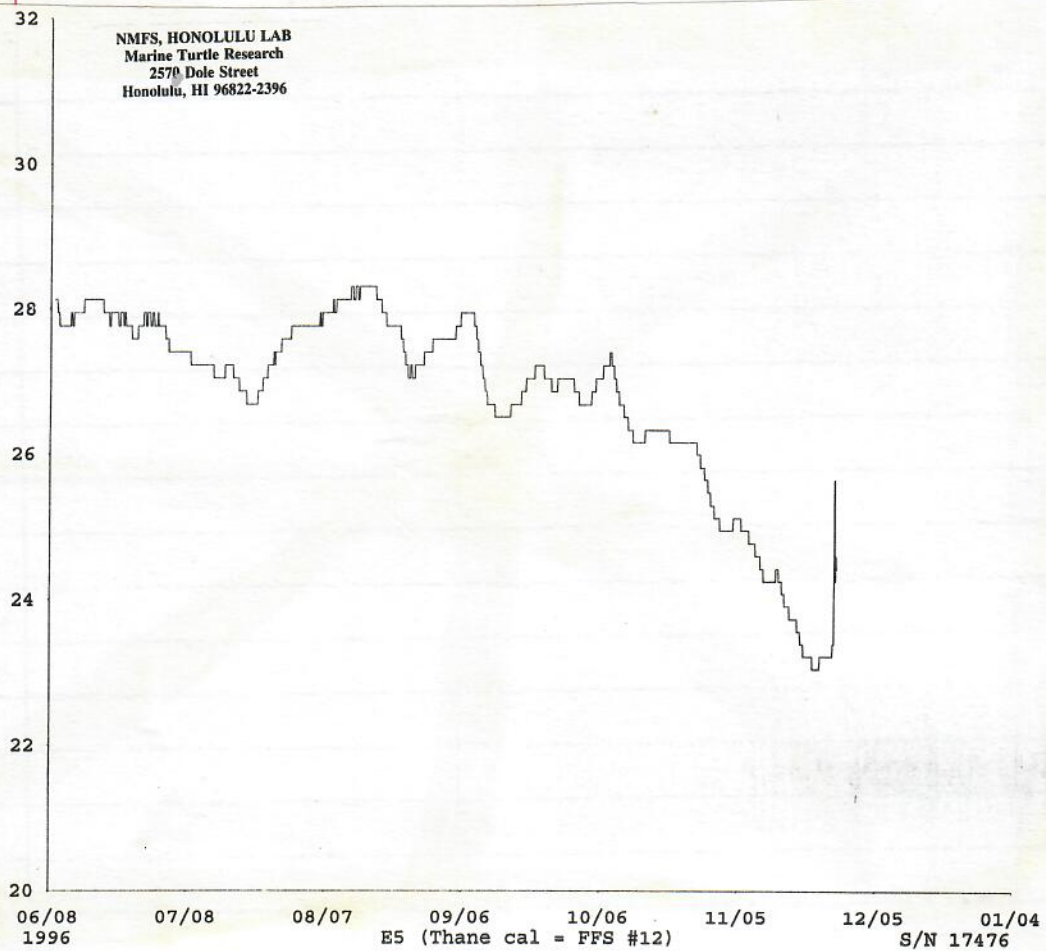
1996

101

NMFS, HONOLULU LAB
Marine Turtle Research
2570 Dole Street
Honolulu, HI 96822-2396

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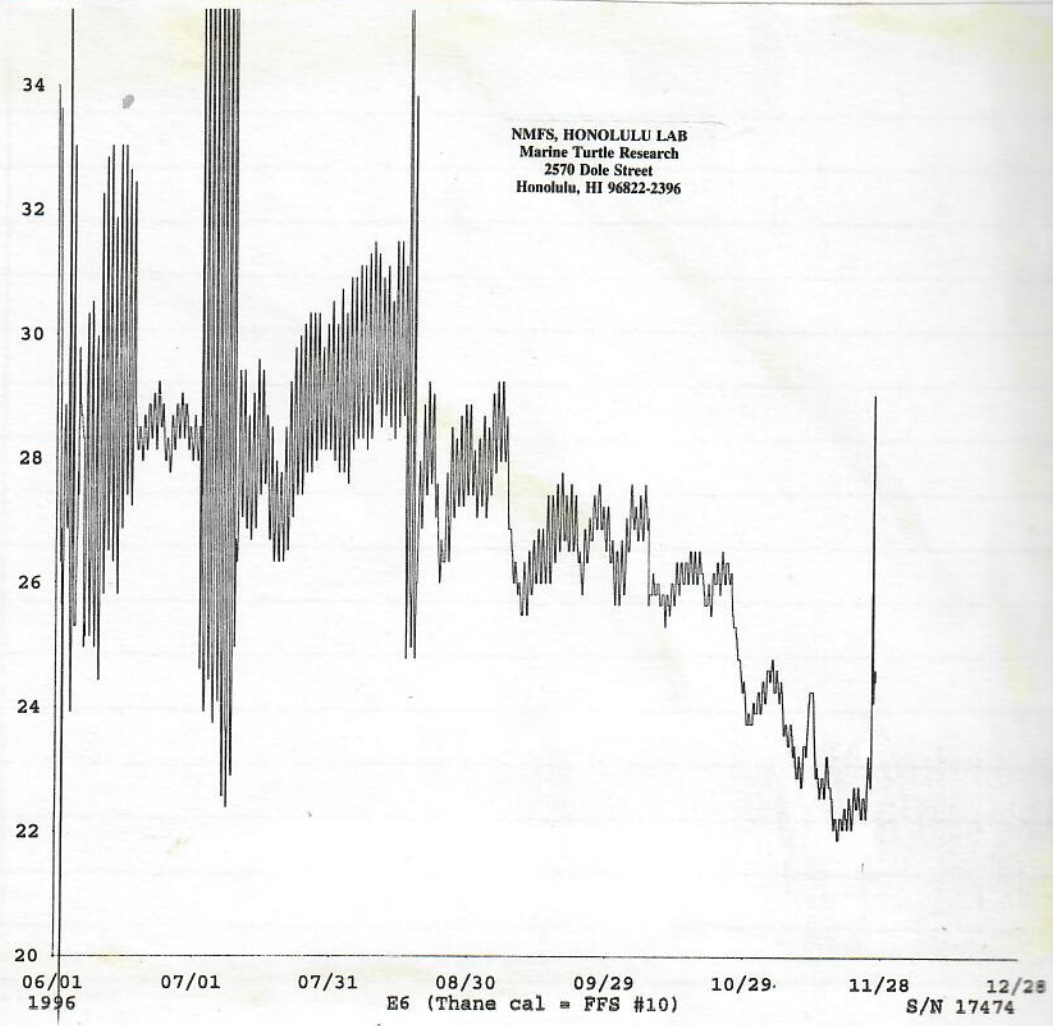
E5 (Thane cal = FFS #12)

S/N 17476

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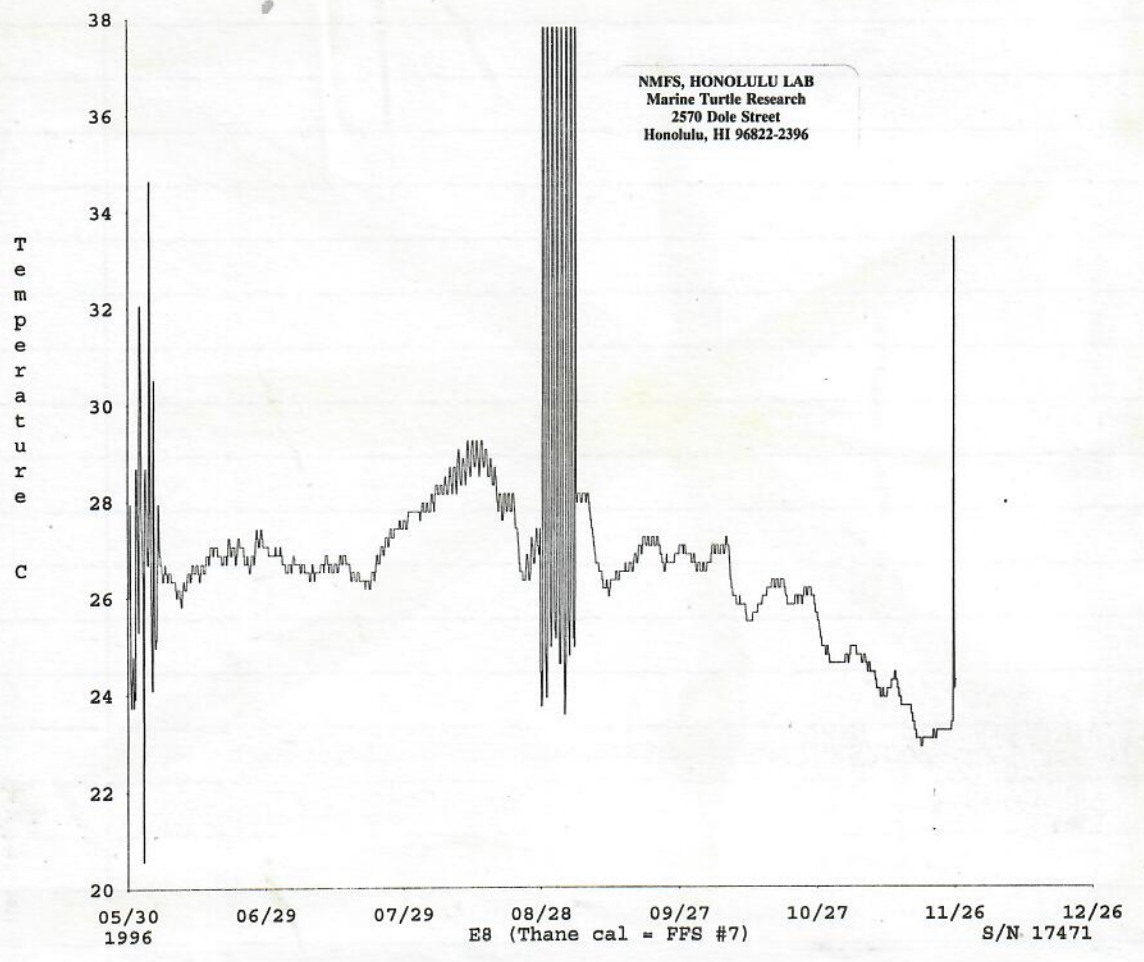
C

NMFS, HONOLULU LAB
Marine Turtle Research
2570 Dole Street
Honolulu, HI 96822-2396



E6 (Thane cal = FFS #10)

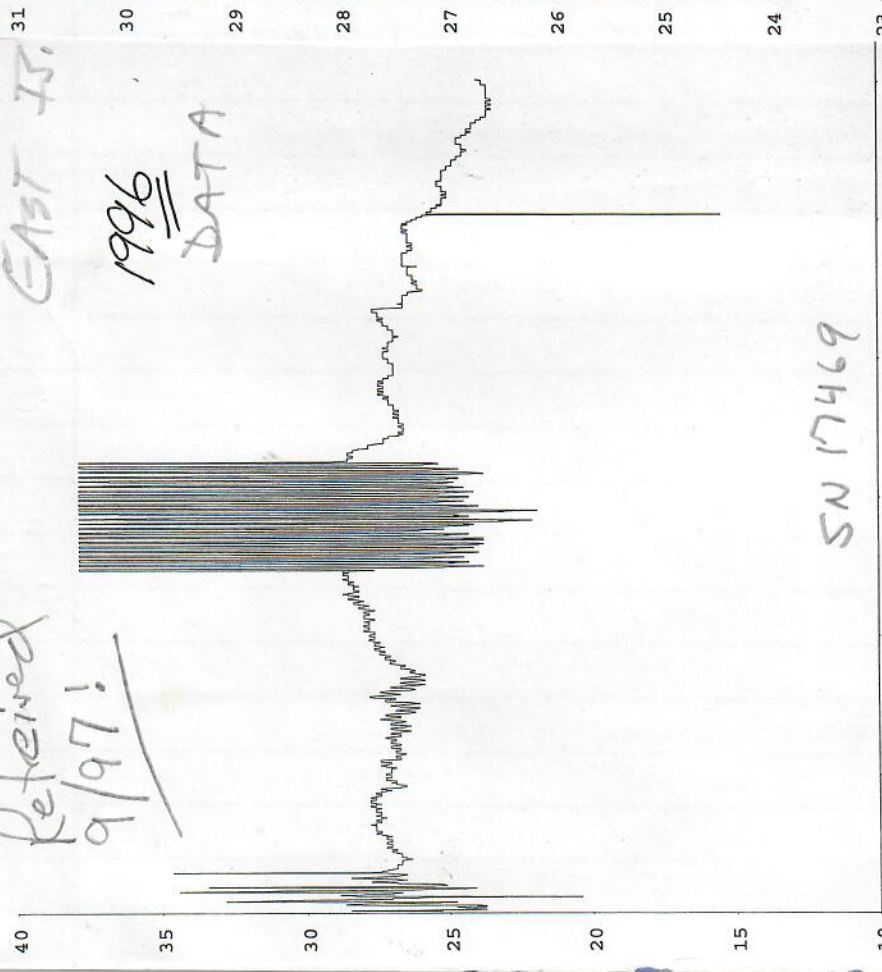
S/N 17474



Retrieved
9/97!

EAST IS.

1996
DATA



SN 17469

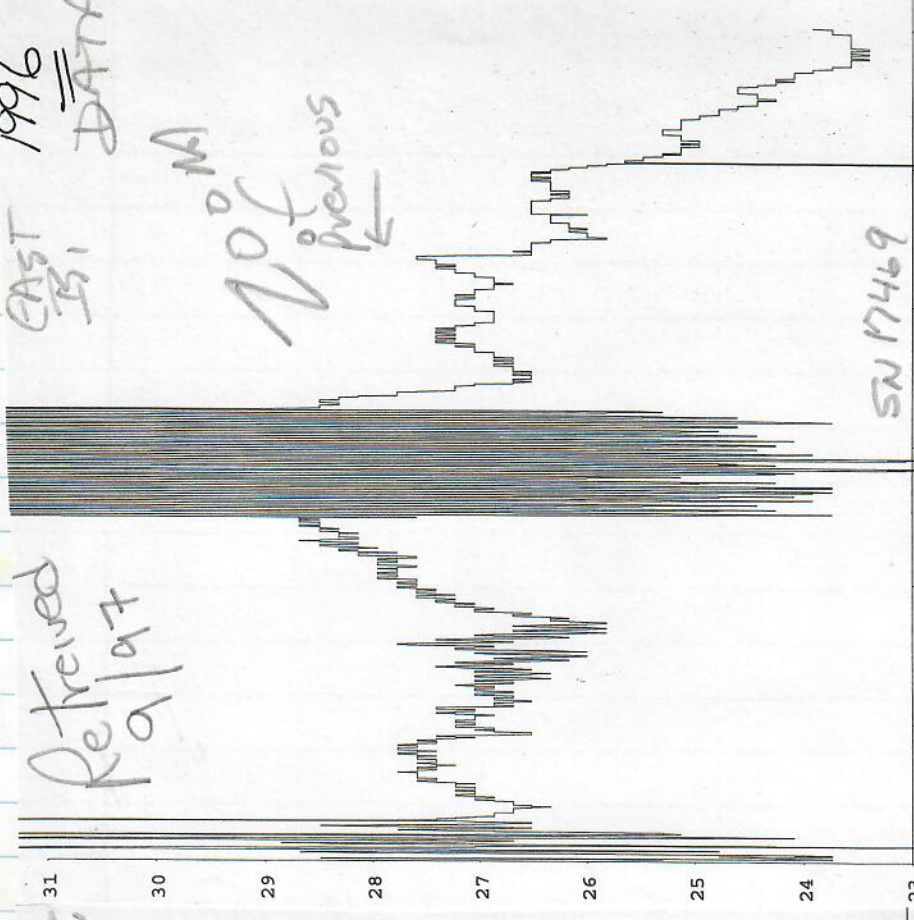
05/30 1996
06/29
07/29
08/28 E7 (Thane cal = FFS #5)
09/27
10/27
11/26 S 1996

Retrieved
9/97

EAST IS.

1996
DATA

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SN 17469

05/30 1996
06/29
07/29
08/28 E7 (Thane cal = FFS #5)
09/27
10/27
11/26 S 1996



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pacific Remote Islands
National Wildlife Refuge Complex
P.O. Box 50167
Honolulu, HI 96850
PHONE: (808)541-1201 FAX: (808)541-1216

April 10, 1997

Memorandum

To: George Balaz

From: Nick Palaia (Biological Science Technician)

Subject: Biological note (Hawaiian and Pacific Islands NWR Tern Island Field Station 235N 1661W)

On October 8, 1996 at 1130 hours I witnessed a Great Frigatebird (*Fregata minor*) snatch a Hawaiian green turtle (*Chelonia mydas* Linnaeus) hatchling from the runway at the Tern island field station. The Frigatebird used its' bill to grasp the hatchling from the runway, tossed it twice in the air and then quickly consumed it head first. I was approximately 5 meters away from the hatchling when this event took place and can confirm that the hatchling was moving just prior to capture. The temperature was between 75-80 degrees with sunny skies and mild winds out of the north.

1996 East Island Green Turtle Nesting Survey

RESULTS

Method 1 -

Total emergences:	1569
Coverage rate:	2.89
Estimated total nesters:	543

Method 2 -

Total ID'd nesters:	349
Sighting probability:	0.9522
Estimated total nesters:	366

TEEN IS. FFS (all com) 12 DNA

SEAWALL TURTLES DATA

NMFS, HONOLULU LAB
Marine Turtle Research
2570 Dole Street
Honolulu, HI 96822-2396

SEASON: Nov 1996

Loc. : East of Shell Beach = E; West of Shell Beach = W

Pos. : RFL = right front flipper, LFL = left front flipper, RHF = right hind flipper, LHF = left hind flipper

P = Primary position, 1/2 = between scales 1 and 2, 3/4 = between scales 3 and 4

DATE	LEFT TAG	L. TAG POS.	RIGHT TAG	R. TAG POS.	CCL (cm)	SCL (cm)	Recap. (Y/N)	Loc	Comments
X 9 Nov 96	F671	P LFL	F670	P RFL	50.2	45.75	Y Dec 95		1 tissue sample taken
X 9 Nov 96	F639	P LFL	F638	P RFL	45.7	42.25	Y Nov 95		1 tissue sample
X 11 Nov 96	F641	P LFL	F640	P RFL	46.8	44.8	Y Nov 95		1 tissue sample
X 11 Nov 96	F906	P LFL	F905	P RFL	46.9	44.25	N		1 tissue sample
X 14 Nov 96	F908	P LFL	F907	P RFL	46.4	43	N		2 tissue samples
X 14 Nov 96	F911	LHF P	F910	P RFL	47.2	44.25	N		2 tissue samples
X 14 Nov 96	F913	LFL P	F912	P RFL	46.1	43.75	N		2 tissue samples
X 14 Nov 96	F915	LFL P	F914	P RFL	61.6	56.75	N		2 tissue samples
X 14 Nov 96	F916	LFL P	F917	P RFL	55.2	52.1	N		2 tissue samples
X 14 Nov 96	F918	LFL P	F919	P RFL	41.2	38.4	N		2 tissue samples
X 14 Nov 96	F639	LFL P	F638	P RFL	—	—	Y Nov 96		—
X 15 Nov 96	F926	LFL P	F921	P RFL	51.6	47.75	N		2 tissue samples
X 2 Nov 96	F904	LFL P	F903	P RFL	54	51	N		1 tissue sample
X 3 Nov 96	—	—	#3066	RFL	85	—	—		* See below

Note originally tagged by GHB
5/5/79
Basking on
TAG. ~~NO TAGS~~

teens 13
overall score 7

3 Nov - Turtle - male on South Beach with Golfball sized tumor on left shoulder. Left eye sheathed by tumor and marble sized tumor above eye. Right eye had marble size tumor over eye

72RN IS. FFS

5 TISSUE BIOPSIES

SEAWALL TURTLES DATA

NMFS, HONOLULU LAB
Marine Turtle Research
2570 Dole Street
Honolulu, HI 96822-2396

Loc. : East of Shell Beach = E; West of Shell Beach = W

Pos. : RFL = right front flipper, LFL = left front flipper, RHF = right hind flipper, LHF = left hind flipper ; NOTE: If tag is in position other than primary position, record as follows: 1 / 2 = between scales 1 and 2, 3 / 4 = between scales 3 and 4 (example : RFL - 1 / 2 - F803)

SEASON F96/97

Date	Loc	Recapt (y/n)	Last capt date	Left tag (pos. - tag#)	Right tag (pos. - tag#)	CCL (cm)	SCL (cm)	Tissue (y/n)	Comments
X 16DEC96	E	Y		RFL-7/8 - F803 LFL F-47	RFL R46	44.7	42.25	Y	TISSUE Biopsy
X 16DEC96	E	N		LFL F-925	RFL F924	45.4	43.25	Y	TISSUE Biopsy
X 16DEC96	E	Y		LFL F-918	RFL-F919	-	-	N	
X 16DEC96	E	N		LFL F927	RFL - F928	59.7	56.34	Y	Destroy Tag F926 Tissue biopsy
X 16DEC96	E	Y		LFL F906	RFL - F905	-	-	N	Right tag not closed fully - Tag Replaced
X 16DEC96	E	N		LFL-F930	RFL-F929	42.3	38.5	Y	TISSUE Biopsy
X 24NOV96				F922 ^{LFL}	F923 ^{RFL}	41.0	38.5	Y	TISSUE Biopsy (Need other data - embryo, GB)

08
Hi George,

I will take the first two passes you received for this example. This is the Dispose data (DS). The location, if there was one for that pass, is always shown in the first line of data. Below, I will explain what each of the field represents.

```
01092 19580 7 2 J 1 1997-03-26 13:21:30 30.203 187.885 0.000 401649672
1997-03-26 13:17:11 1 2805 2805
1997-03-26 13:21:21 2 2806 2806
1997-03-26 13:22:32 1 2807 2807
1997-03-26 13:23:35 1 2808 2808
1997-03-26 13:24:25 1 2809 2809
1997-03-26 13:25:48 1 2810 2810
```

Line 1:

01092 = program number
19580 = platform number (turtle number)
7 = number of lines (shown in this message)
2 = number of sensors defined in our system
J = satellite identifier
1 = location class
1997-03-26 = day of location
13:21:30 = time of location
30.203 = latitude (this would be North)
187.885 = longitude (this would be West)
0.000 = defined altitude
401649672 = calculated frequency

Line 2-7 = data collection information (day of data collection, time of data collection, number of identical messages received, then the sensors data values)

```
01092 19580 2 2 D
1997-03-26 19:44:20 1 4197 4193
```

The second pass shown here did not report a location, so the 1st line only shows: program number, platform number, number of lines, number of sensors defined, and satellite identifier. The second line shows the data collection information (same as above).

Hi George,

In my last message, I said that 187.885 was a West longitude. Well, I forgot to tell you that you need to subtract it from 360 to get the West value. For example, $360 - 187.885 = 172.115$ West. Got it? Anything under 180 is East, anything over 180, you need to subtract it from 360. Okay, and for the latitude, positive values are North and negative values are South. Sorry for the confusion.

ONSET STOWAWAY

FRENCH
FRIGATE
SHALS

Date	Time	Temp C	Temp F	A-D	1-255
06-02-95	08:18:22	25.74	78.34	64	
06-02-95	11:30:22	24.01	75.22	74	
06-02-95	14:42:22	24.18	75.53	73	
06-02-95	17:54:22	26.79	80.23	58	
06-02-95	21:06:22	26.79	80.23	58	
06-03-95	00:18:22	26.62	79.92	59	
06-03-95	03:30:22	26.44	79.60	60	
06-03-95	06:42:22	26.27	79.29	61	
06-03-95	09:54:22	23.49	74.29	77	←
06-03-95	13:06:22	24.52	76.15	71	
06-03-95	16:18:22	26.62	79.92	59	
06-03-95	19:30:22	26.27	79.29	61	
06-03-95	22:42:22	25.92	78.66	63	
06-04-95	01:54:22	25.57	78.03	65	
06-04-95	05:06:22	25.22	77.40	67	
06-04-95	08:18:22	24.87	76.78	69	
06-04-95	11:30:22	25.74	78.34	64	
06-04-95	14:42:22	26.79	80.23	58	
06-04-95	17:54:22	25.92	78.66	63	
06-04-95	21:06:22	24.87	76.78	69	
06-05-95	00:18:22	24.87	76.78	69	
06-05-95	03:30:22	25.04	77.09	68	
06-05-95	06:42:22	24.87	76.78	69	
06-05-95	09:54:22	26.09	78.97	62	
06-05-95	13:06:22	29.14	84.47	45	
06-05-95	16:18:22	27.86	82.16	52	
06-05-95	19:30:22	26.44	79.60	60	
06-05-95	22:42:22	23.83	74.90	75	←
06-06-95	01:54:22	23.83	74.90	75	
06-06-95	05:06:22	22.98	73.37	80	
06-06-95	08:18:22	25.57	78.03	65	
06-06-95	11:30:22	28.96	84.14	46	
06-06-95	14:42:22	37.91	100.24	1	
06-06-95	17:54:22	34.34	93.83	18	
06-06-95	21:06:22	23.66	74.59	76	
06-07-95	00:18:22	23.83	74.90	75	
06-07-95	03:30:22	23.49	74.29	77	
06-07-95	06:42:22	23.83	74.90	75	
06-07-95	09:54:22	26.27	79.29	61	
06-07-95	13:06:22	34.96	94.94	15	
06-07-95	16:18:22	31.78	89.22	31	←
06-07-95	19:30:22	25.57	78.03	65	

ENROUTE TO Tern

NOT DEPLOYED -
PACKED AWAY OR
IN TENT

ON FENCE Behind tent on East

REMOVED FROM FENCE -
DEPLOYED ELSEWHERE
BY YOWAT SWIMMER

MISCELLANEOUS NOTES ON TURTLE MONITORING AT EAST IS. - 1994
by G. Balazs

Minimal or no disturbance to monk seals- especially mother/pup and pregnant females.

Minimal daytime movement on the island (ie sleep days, work nights).

Minimal disturbance to nesting turtles within the limits of getting the job done.

When possible, 4 tags on all turtles (includes one on each hind flipper).

Carefully read and record all tag numbers, using sufficient light and scraping of tag (with butter knife) to reveal full number. Imbedded tags can be left unread (but presence and position noted), if there is at least one certain reading of another tag on the same turtle.

Whenever possible, take both curved and straight carapace length measurements.

Examine each turtles thoroughly and record presence of tumors.

Missed nights and missed segments of nights will be damaging to population modeling because of shortness of coverage. Strive to get ideal coverage.

Use Iysool (or alcohol) to treat engraver bit of mototool after each engraving.

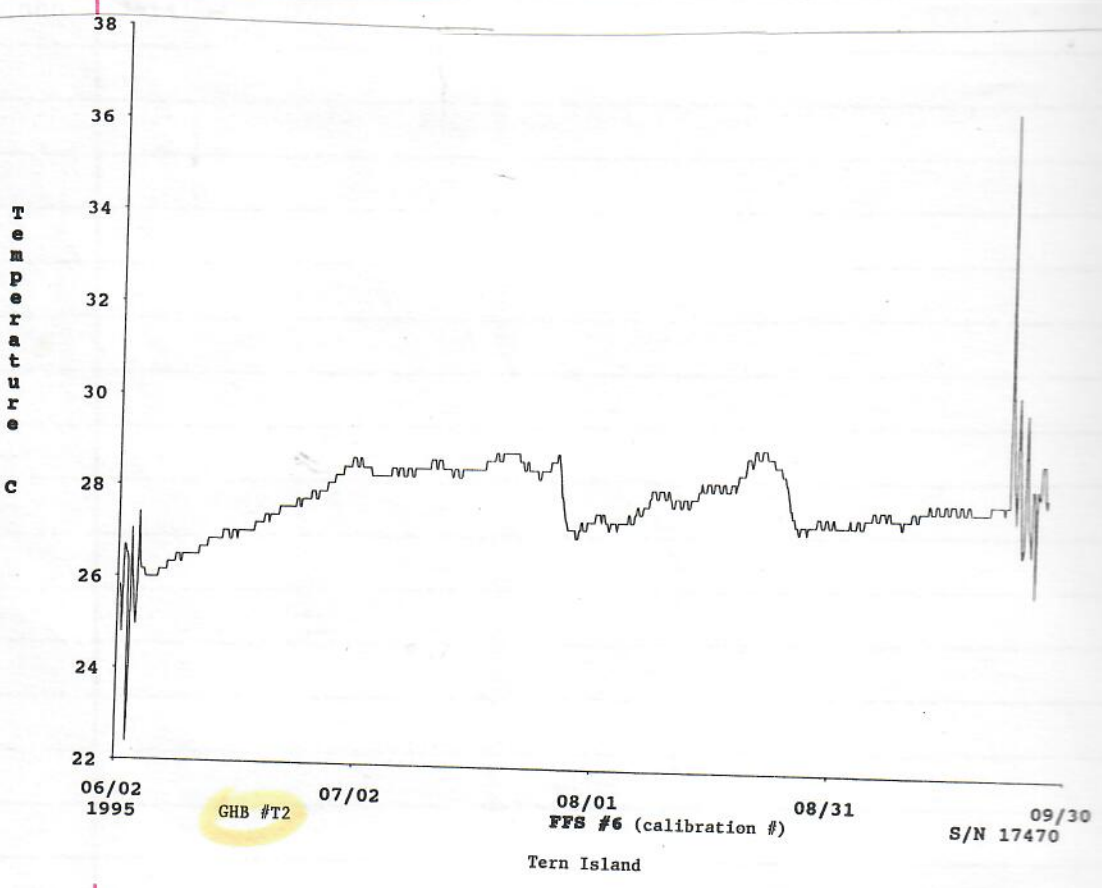
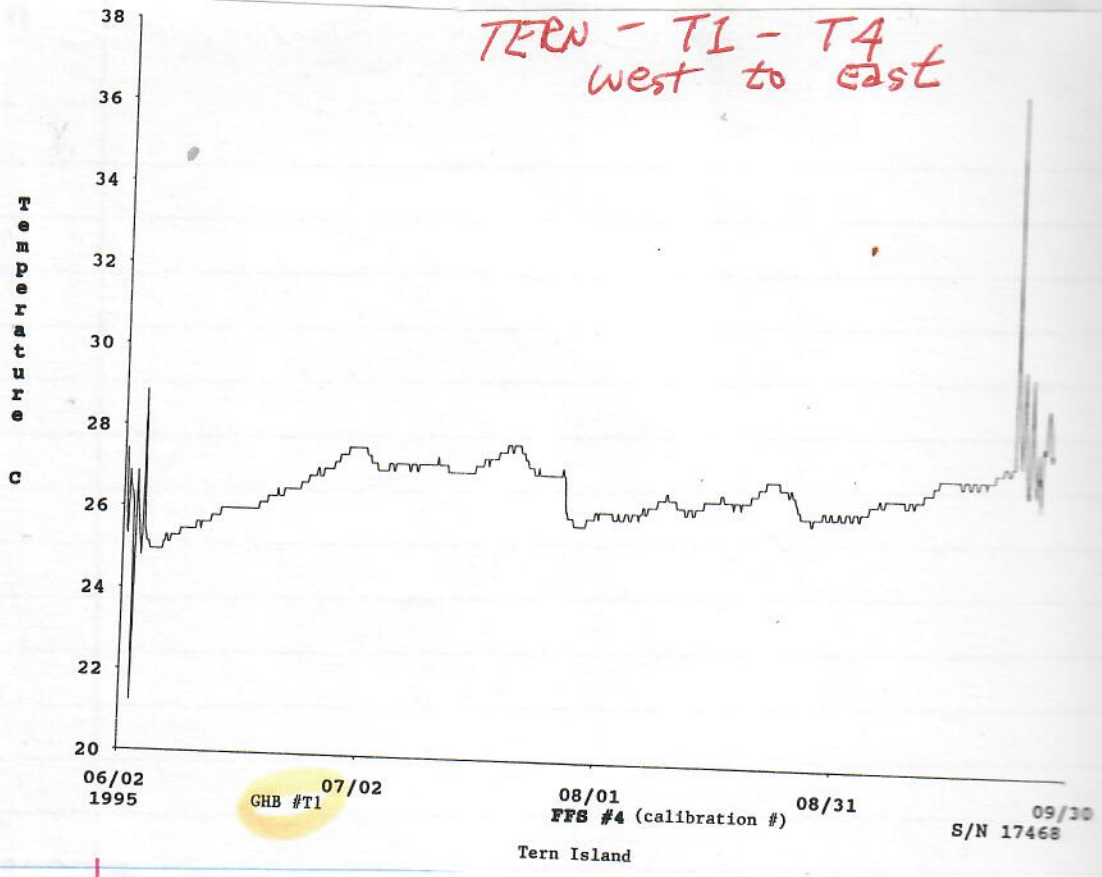
Have pliers, wire cutters, and sharp knife available on rounds.

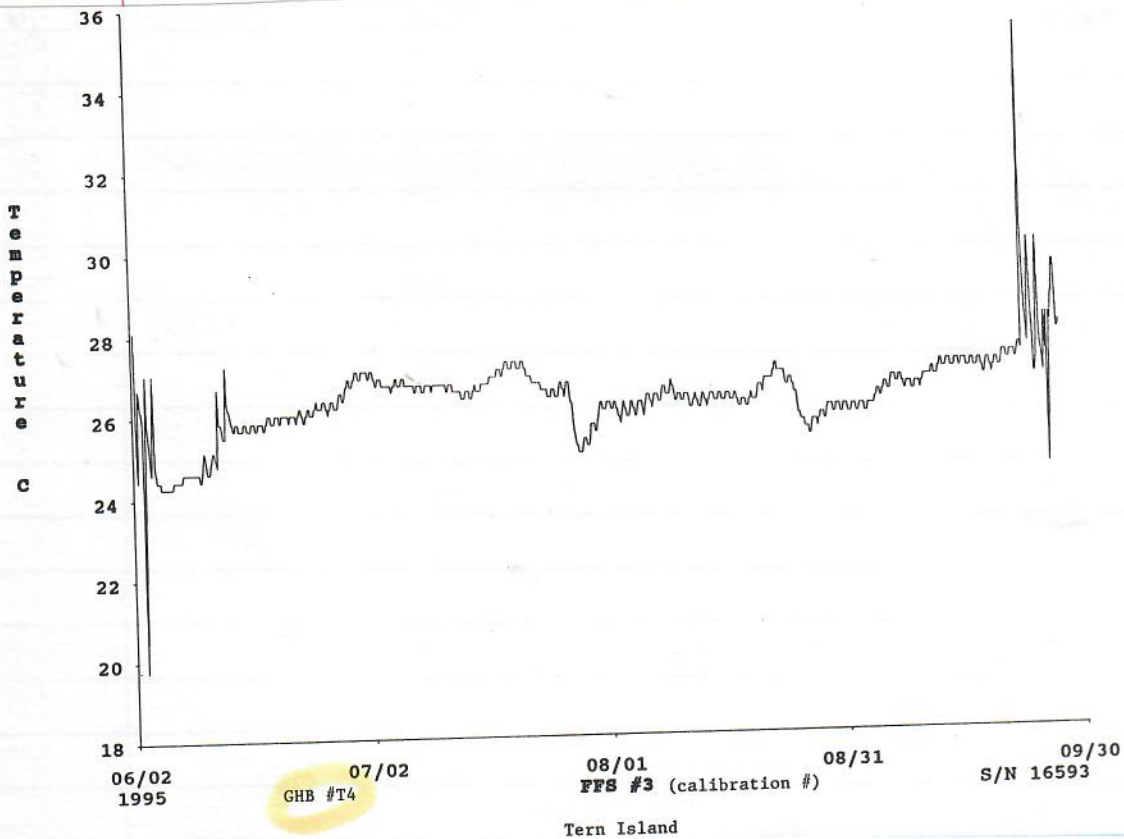
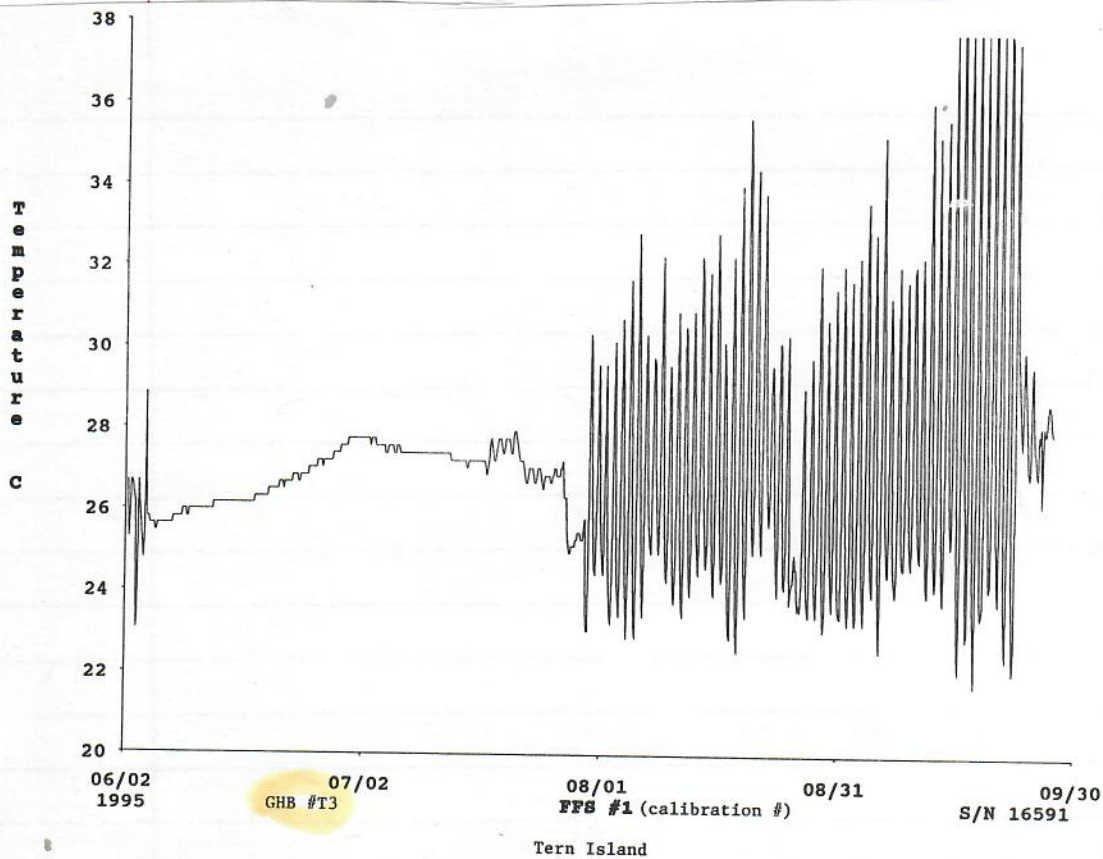
At Tern, maintain a handwritten list of the tag number(s) and engraved mototool number of all turtles encountered that have old tags. Please relay to me when I call on the radio.

Maintain special attention to computer data entry and precision- what you bring back is the "bottom line".

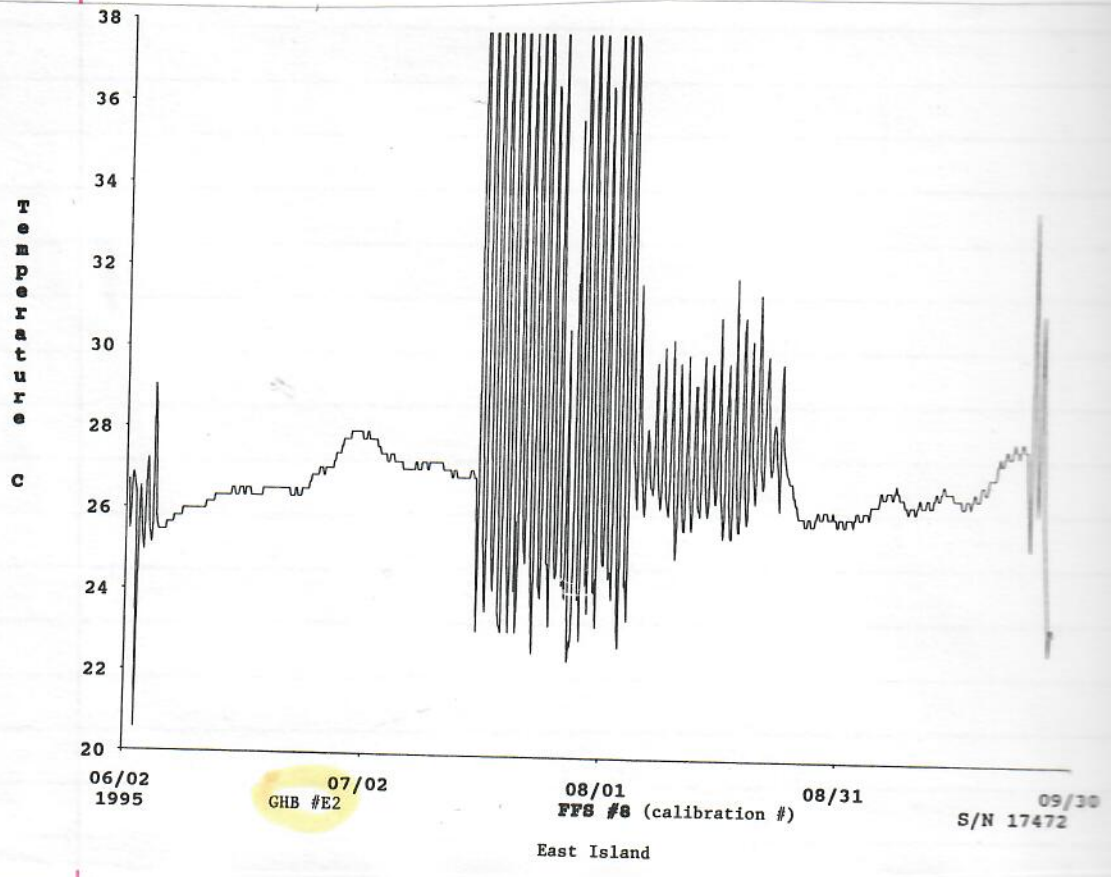
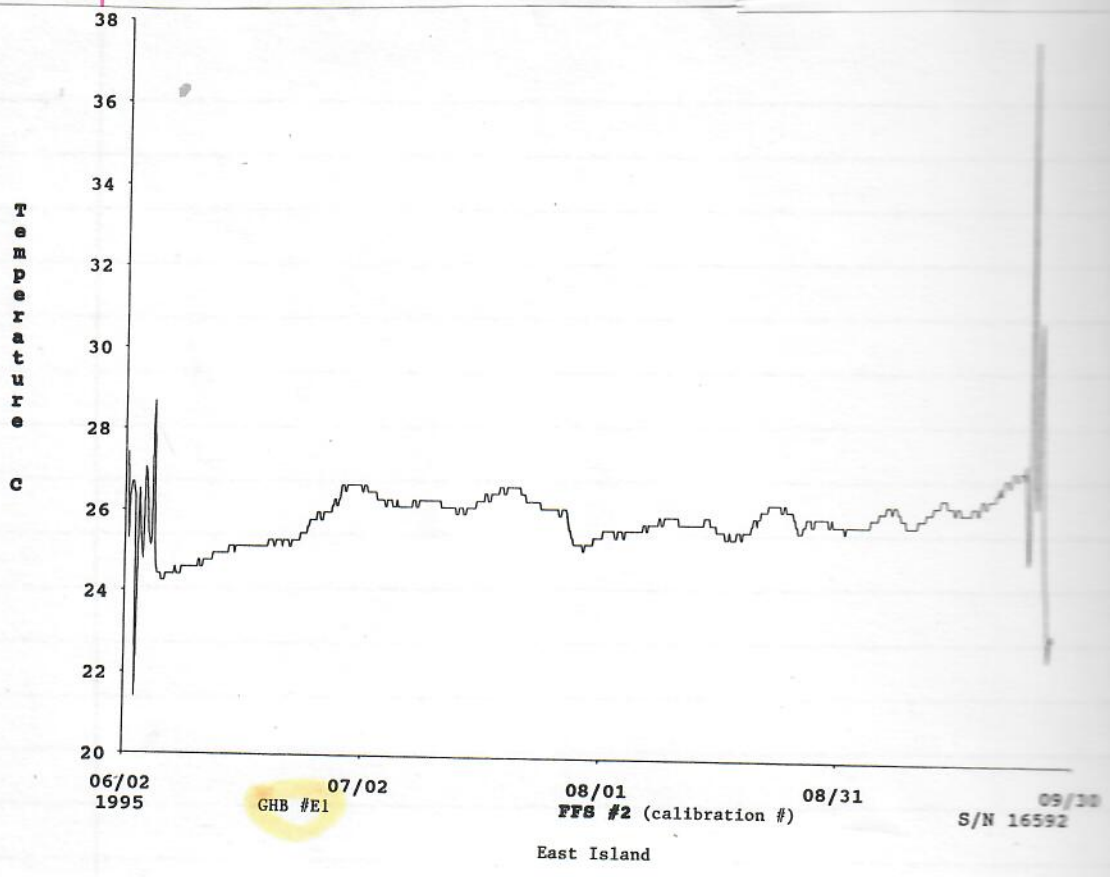
No Coleman lanterns or other billiard light sources to illuminate the East Island Tent. Use skin lighting only, such as when at minimum level necessary

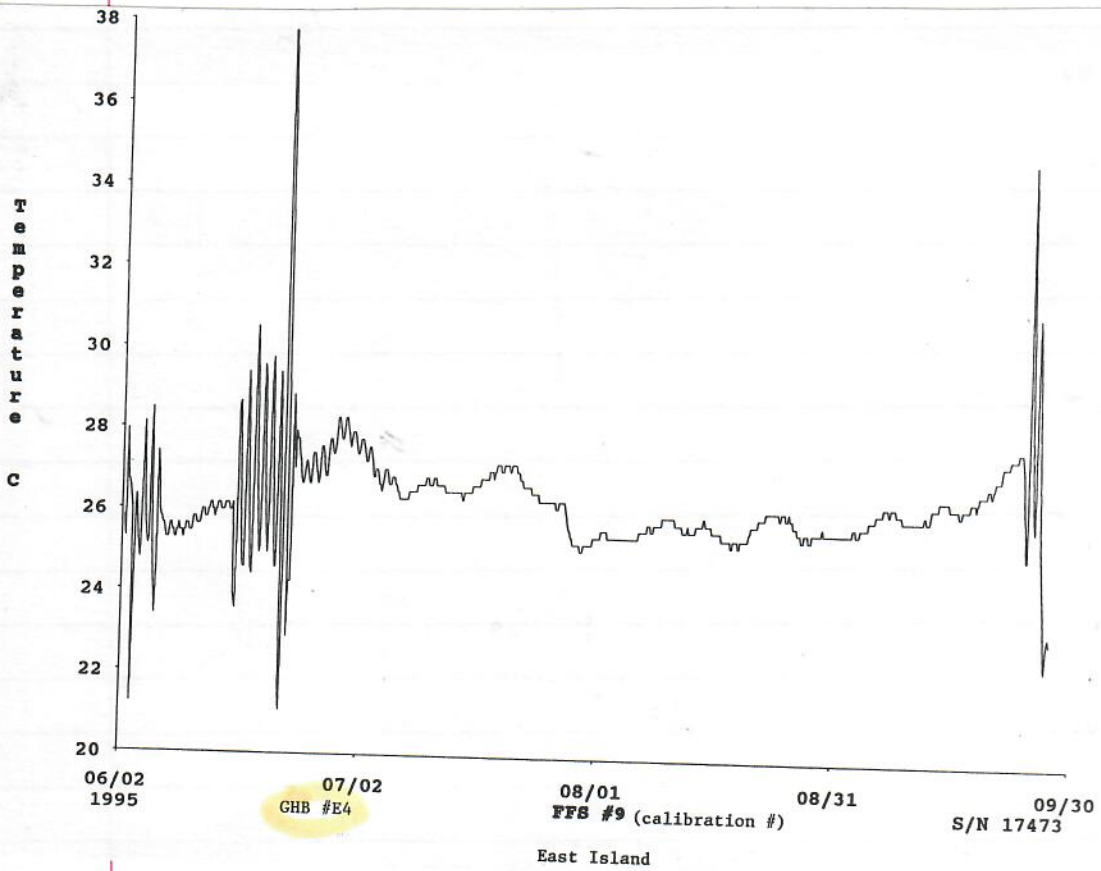
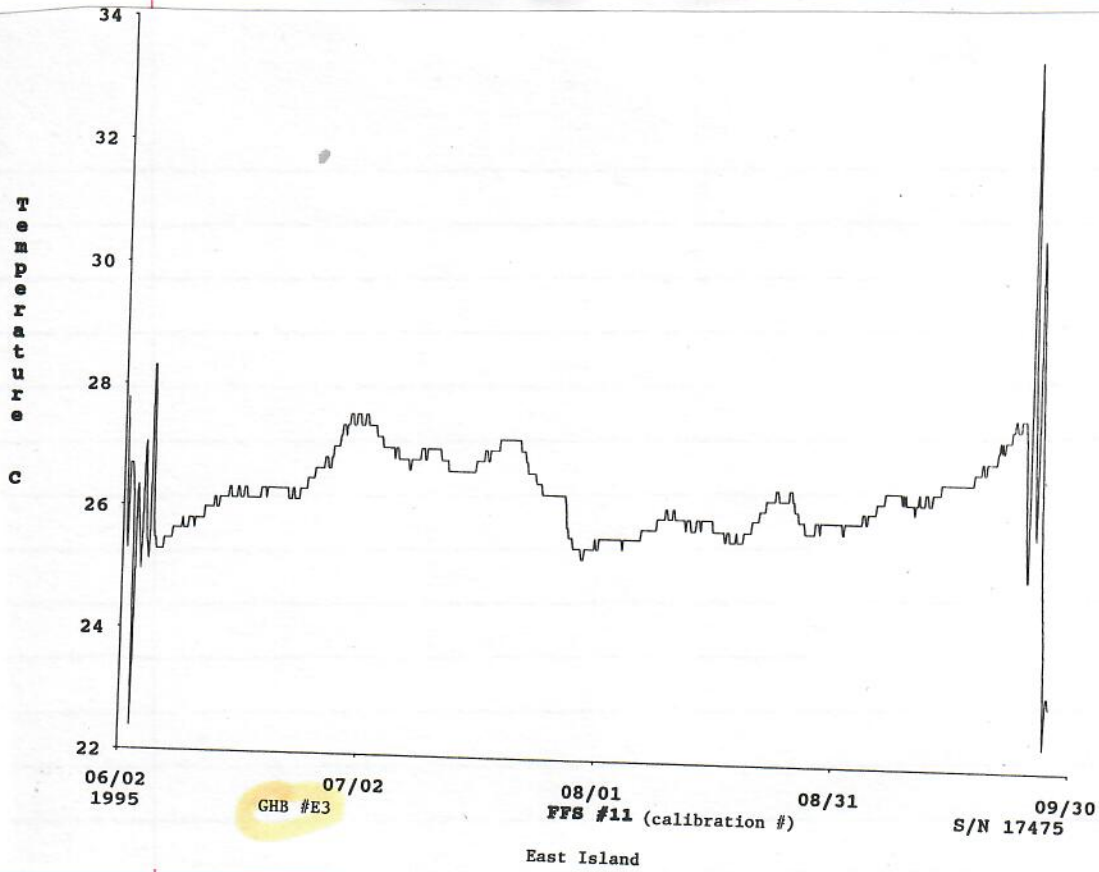
TERN - T1 - T4
West to East

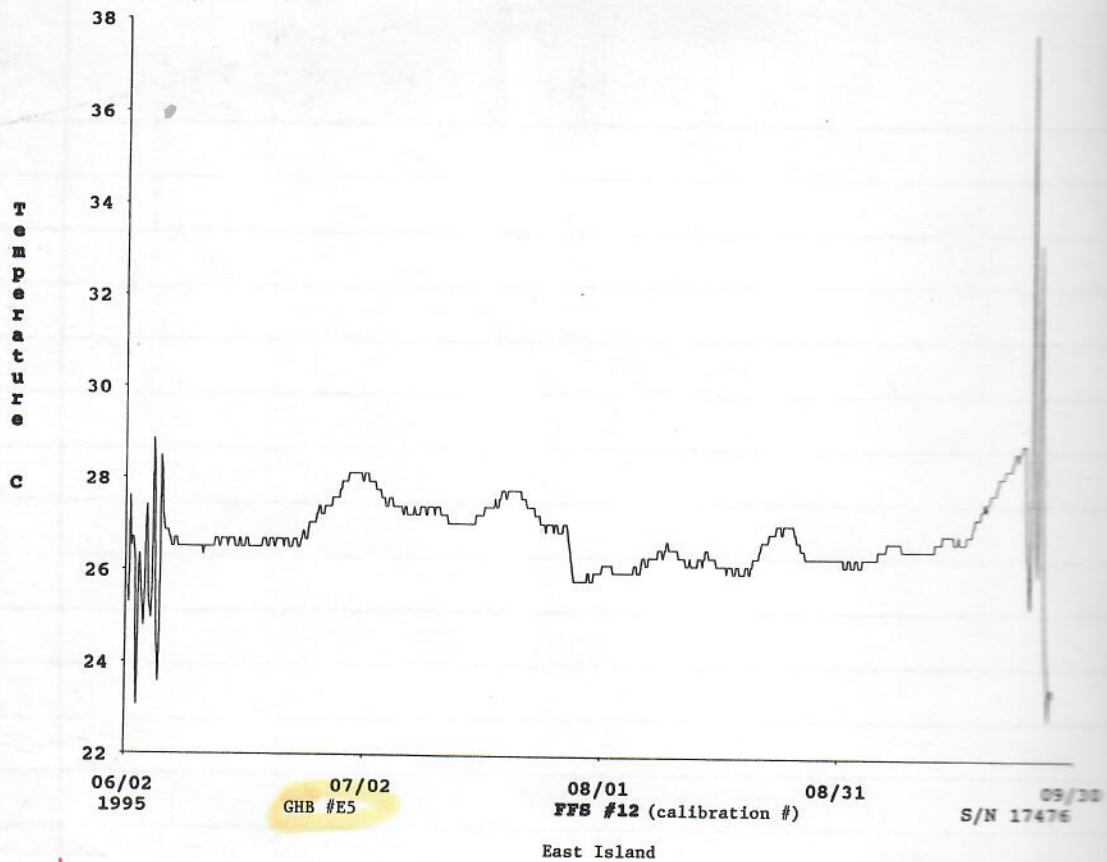




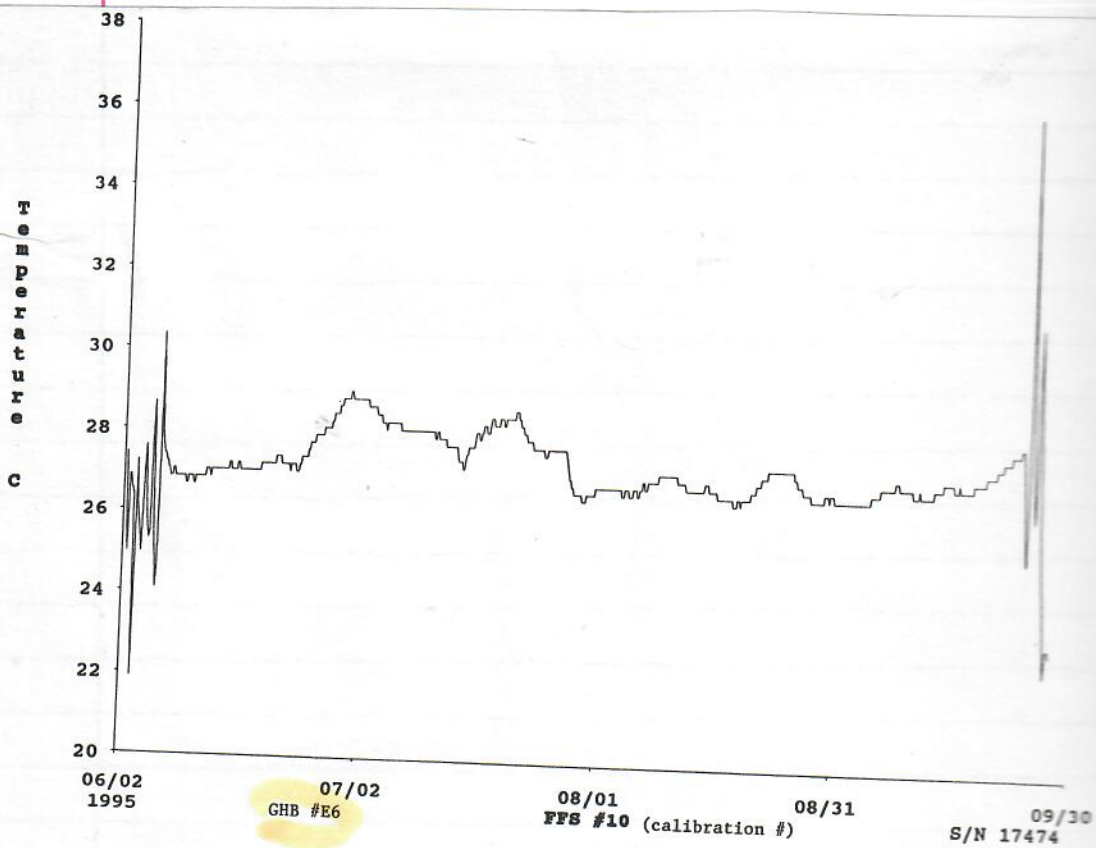
112 SE end (SINEP) TO SP (NE end) E1 - E8



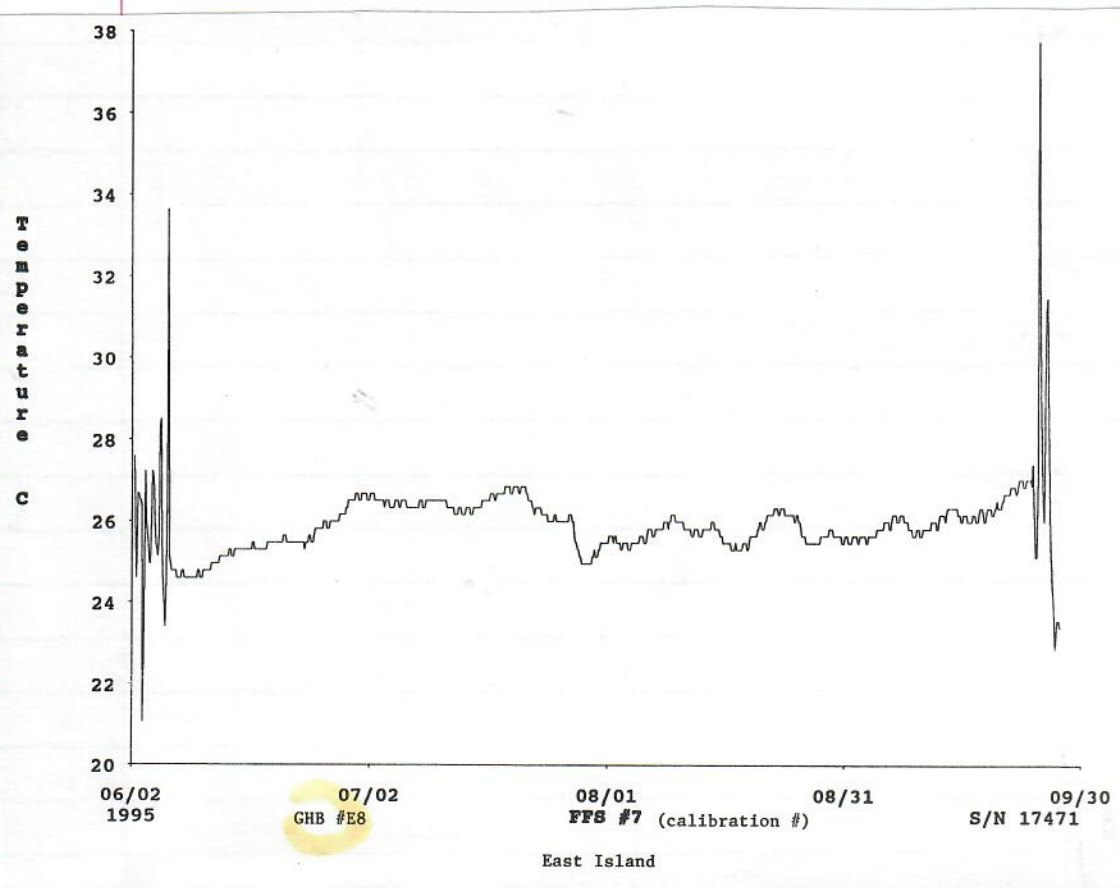
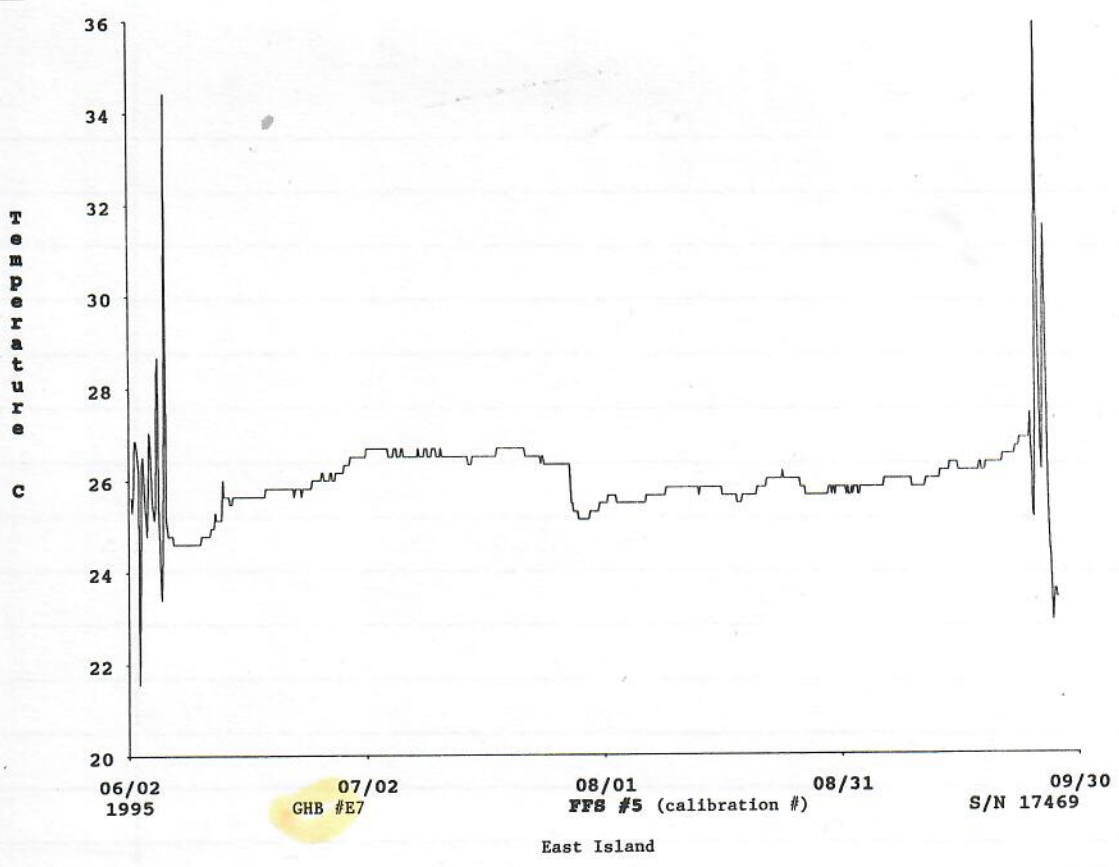




East Island



East Island



DAILY TOTALS (PM-AM) FOR ADULT FEMALE GREEN TURTLES NESTING
AT EAST ISLAND, FRENCH FRIGATE SHOALS

1995 DATE	TOTAL NO. TURTLES UP	NO. OF NEW TURTLES IDed	NUMBER OF NESTS N/P/M	YOUR NAME	COMMENTS
1-24 June 8, 9, 15	24	24	U = 3 P = 3 M = 0	YS/KT	
25-37 June 9	23	13	N = 1 P = 2 M = 0	YS	
37A-50 June 10	25	14	N = 0 P = 4 M = 6	YS	
51-67 June 11	26	17	N = 1 P = 0 M = 1	YS	add 1 m
68-70 June 12	17	3	N = 0 P = 6 M = 1	KT	
71-88 June 13	27	18	N = 1 P = 2 M = 3	KT	
89-105 June 14	34	17	N = 3 P = 8 M = 4	KT	
106-115 June 15	27	10	N = 0 P = 4 M = 2	YS	
116-134 June 16	33	19	N = 2 P = 9 M = 0	YS	
135-148 148A-149 June 17	31	16	N = 2 P = 6 M = 1	YS	
150-173 June 18	42	24	N = 3 P = 5 M = 2	YS	
174-186 176A June 19	36	14	N = 2 P = 1 M = 8	KT	
187-194 June 20	37 DAY 13	8	N = 4 P = 2 M = 5	KT	
195-196 June 21	42	4	N = 6 P = 7 M = 4	KT	
199-200 June 22	26	2	N = 3 P = 6 M = 5	YS	
201-204 June 23	24	4	N = 1 P = 3 M = 6	YS	
205-209 June 24	28	5	N = 2 P = 6 M = 1	YS	
210 June 25	24	1	N = 2 P = 3 M = 4	KT	↑
211-212 June 26	29	2	N = 2 P = 7 M = 3	KT	
213-214 June 27	29	2	N = 4 P = 7 M = 2	KT	
215 June 28	32	1	N = 5 P = 2 M = 3	KT	
216-218 June 29	30	3	N = 1 P = 6 M = 2	YS	
June 30	27	0	N = 0 P = 7 M = 3	YS	
219-221 July 1	24	3	N = 0 P = 3 M = 4	YS	
222-225 July 2	42	4	N = 2 P = 6 M = 4	KT	
226-230 July 3	46	5	N = 6 P = 10 M = 7	KT	
231 July 4	31	1	N = 3 P = 4 M = 3	KT	
July 5	33	1	N = 4 P = 5 M = 7	KT	

DAILY TOTALS (PM-AM) FOR ADULT FEMALE GREEN TURTLES NESTING
AT EAST ISLAND, FRENCH FRIGATE SHOALS

1995 DATE	TOTAL NO. TURTLES UP	NO. OF NEW TURTLES IDed	NUMBER OF NESTS N/P/M	YOUR NAME	COMMENTS
235-235 July 6, 95	24	3	N = 2 P = 9 M = 4	YG	
236 July 7	20	1	N = 1 P = 6 M = 2	YS/AN	with Asst. Lt. Mgr. Anthony Kiegele
237 July 8	32	1	N = 1 P = 4 M = 3	YS	
		240 - 31 nights			

N = Nested
P = probably nested
M = Maybe nested

Date: 30 Aug 96 17:37:03 EDT
From: TELONICS E MAIL SYSTEM <75052.1563@CompuServe.COM>
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: fail safe function

TO: INTERNET:gbalazs@honlab.nmfs.hawaii.edu
(George Balazs)
DATE: 1996.08.30
FROM: Brenda Milam
(75052.1563@compuserve.com)

SUBJ: Fail-safe function

Dear George:

Thank you for your email of 21 August 1996. The transmitter goes into the fail-safe mode after the consecutive hours (number of hours you have specified) have elapsed and have not received any interrupts from the saltwater switch (SWS). When an interrupt finally does arrive from the SWS, the fail-safe mode is terminated and the fail-safe time-out counters are reset.

The fail-safe flag is set to 00 for normal transmissions, and 11 for fail-safe transmissions.

I hope this answers your question. If not, or if you have any further questions, please don't hesitate to drop me a line.

Sincerely,

Brenda Milam
Telemetry Systems Manager
TELONICS
332 East Impala Avenue phone: (1-602) 892-4444
Mesa, Arizona 85204 USA fax: (1-602) 892-9139
email: 75052.1563@compuserve.com

Date: Tue, 12 Mar 1996 19:07:24 GMT
 From: Lisa and Debbie <USEROFFICE@argosinc.com>
 To: gbalazs@honlab.nmfs.hawaii.edu
 Cc: USEROFFICE@argos5.argosinc.com
 Subject: RE: Australian program 01446

Dear George,

Sure, you may send your colleague a fax of my response about his platforms/data.

Platform 22129 is in your program 1092. Following is a list of all platforms in both your programs, 1092 and 9092. If you have any questions, please do not hesitate to contact me.

It would be nice to have a user seminar in Honolulu!! However, I would probably not be the person of choice to send to Hawaii. I may be coming to Hawaii in June. If so, I would like to visit you to see how you keep track of all your turtles. I will keep you informed.

Best regards,
 Debbie

List of platforms belonging to a program

Program number: 01092
 User code : BALAZS

Date modified: 03-Jan-1996
 Site: USA

Number of platforms: 25

Meteorological code:

Platform	Service	Center	Type	Class	Sensors	Alarm	WMO n	Date modif.
ST3 04800	FFS 8/92	S	U	-3	4	06	N	20-Aug-1992
04801		S	U	-3	4	06	N	20-Aug-1992
04802		S	U	-3	4	06	N	20-Aug-1992
ST3 04803	FFS 8/93	S	U	-3	4	06	N	30-Aug-1993
04804		S	U	-3	4	06	N	21-Aug-1992
ST3 04805	ROSE 10/94	S	U	-3	4	06	N	21-Aug-1992
04806		S	U	-3	4	06	N	21-Aug-1992
ST3 04807	ROSE 11/93	S	U	-3	4	06	N	21-Aug-1992
04808		S	U	-3	4	06	N	21-Aug-1992
04809		S	U	-3	4	06	N	21-Aug-1992
22127		S	U	-3	4	06	N	20-Jan-1994
ST3 22128	FL 7/95	S	U	-3	4	06	N	20-Jan-1994
22129		S	U	-3	4	06	N	20-Jan-1994
ST10 24179	KBAW	S	U	-3	4	02	N	30-Aug-1995
24180		S	U	-3	4	02	N	30-Aug-1995
24181		S	U	-3	4	02	N	30-Aug-1995
ST 24182		S	U	-3	4	02	N	30-Aug-1995
10 24183		S	U	-3	4	02	N	30-Aug-1995
24184		S	U	-3	4	02	N	30-Aug-1995
24185		S	U	-3	4	02	N	30-Aug-1995
24186		S	U	-3	4	02	N	30-Aug-1995
ST 24187	AZORES 9/95	S	U	-3	4	02	N	30-Aug-1995
10 24188		S	U	-3	4	02	N	30-Aug-1995
24189		S	U	-3	4	02	N	30-Aug-1995
24190		S	U	-3	4	02	N	30-Aug-1995

List of platforms belonging to a program

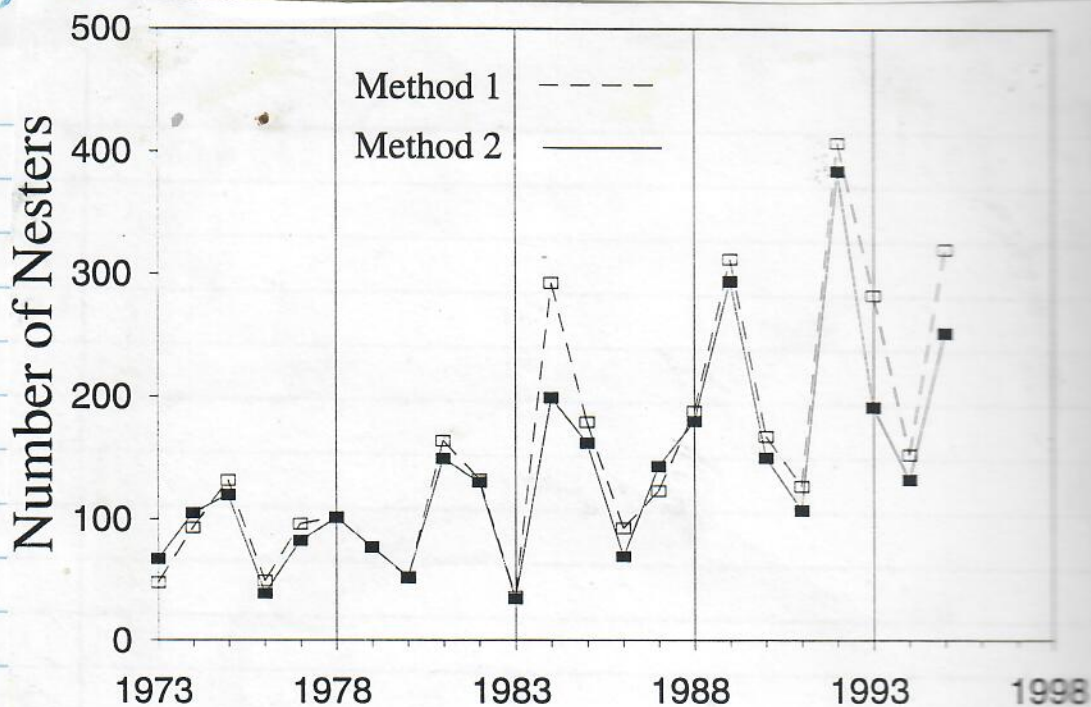
Program number: 09092
User code : BALAZS

Date modified: 03-Jan-1996
Site: USA

Number of platforms: 23

Meteorological code:

Platform	Service	Center	Type	Class	Sensors	Alarm	WMO n	Date modif.
ST3 22125 FFS 6/95	S	MALE	U	-3	4	06		
ST3 22126 NAME 8/95	S		U	-3	4	06		20-Jan-1994
22130 AZORES 94	S		U	-3	4	06		20-Jan-1994
ST6 22131 AZORES 94	S		U	-3	4	06		20-Jan-1994
22132 FFS 9/95	S		U	-3	4	06		20-Jan-1994
ST3 22133 FFS 6/95	S	MALE	U	-3	4	06		20-Jan-1994
ST3 22134 NAME 8/95	S		U	-3	4	06		20-Jan-1994
ST4 24191 in office	S		U	-3	4	06		20-Jan-1994
24192-	S		U	-3	4	06		30-Aug-1995
24193-	S		U	-3	4	06		30-Aug-1995
24194-	S		U	-3	4	06		30-Aug-1995
24195-	S		U	-3	4	06		30-Aug-1995
24196-	S		U	-3	4	06		30-Aug-1995
24197-	S		U	-3	4	06		30-Aug-1995
24198-	S		U	-3	4	06		30-Aug-1995
25688 FL 8/95	S		U	-3	4	06		30-Aug-1995
25689 FL 8/95	S		U	-3	4	06		25-Aug-1995
25690 FL 8/95	S		U	-3	4	06		25-Aug-1995
25691 FL 8/95	S		U	-3	4	06		25-Aug-1995
25692 ROSE 10/95	S		U	-3	4	06		25-Aug-1995
25693 ROSE 10/95	S		U	-3	4	06		25-Aug-1995
25694 ROSE 10/95	S		U	-3	4	06		25-Aug-1995
ST4 25695 in office	S		U	-3	4	06		25-Aug-1995

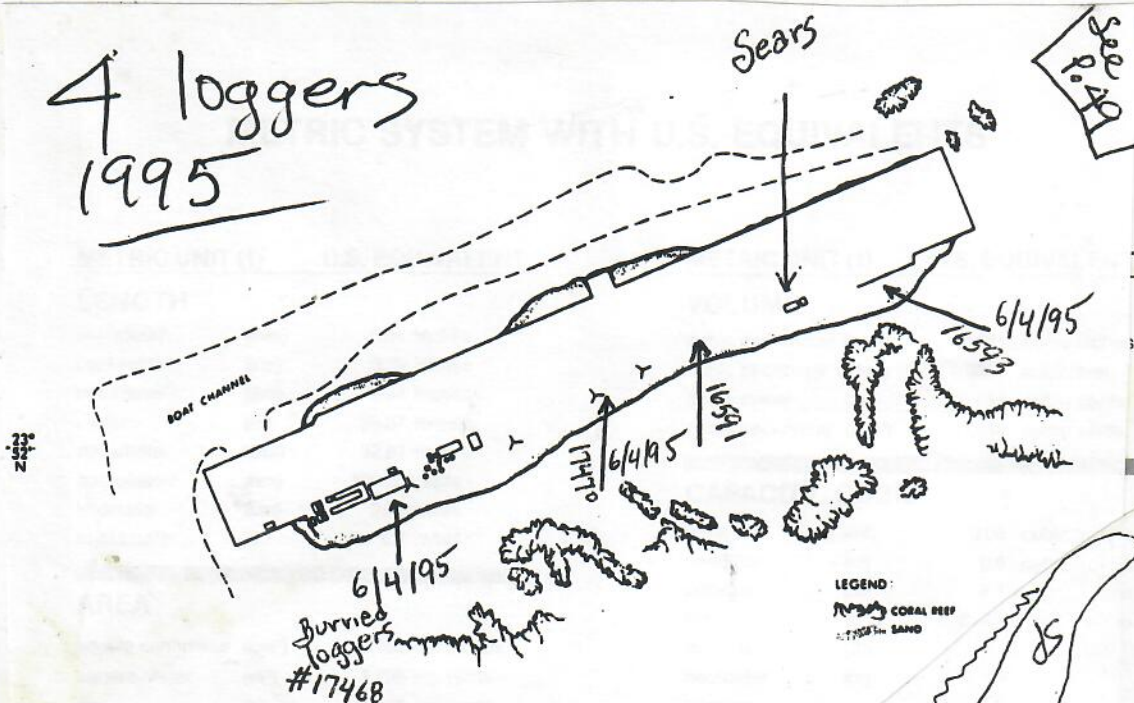


East Island green turtle nesting population estimates (N)
using Method 1 and Method 2
(20 July 1995)

Year	Coverage Rate	Method 1 N	Sighting Probability	Method 2 N
1973	3.94	48	0.98	67
1974	4.51	93	0.99	105
1975	2.50	132	0.93	120
1976	0.92	49	0.62	39
1977	0.73	96	0.53	82
1978	1.01	101	0.65	101
1979	1.19	77	0.71	77
1980	1.89	51	0.86	52
1981	1.81	164	0.85	149
1982	1.83	133	0.85	130
1983	1.58	36	0.81	35
1984	1.48	293	0.79	199
1985	1.57	179	0.81	162
1986	1.83	92	0.85	69
1987	1.92	123	0.87	143
1988	7.19	188	1.00	180
1989	7.85	312	1.00	294
1990	7.82	168	1.00	150
1991	7.73	127	1.00	107
1992	7.63	407	1.00	384
1993	2.78	283	0.95	191
1994	2.45	153	0.92	132
1995	2.89	320	0.95	252

NOTE: Method 2 estimates, based on counts of ID'd (tagged) nesters are more accurate than Method 1 estimates, which are based on total counts of nesters ashore.

4 loggers
1995



TERN IS.

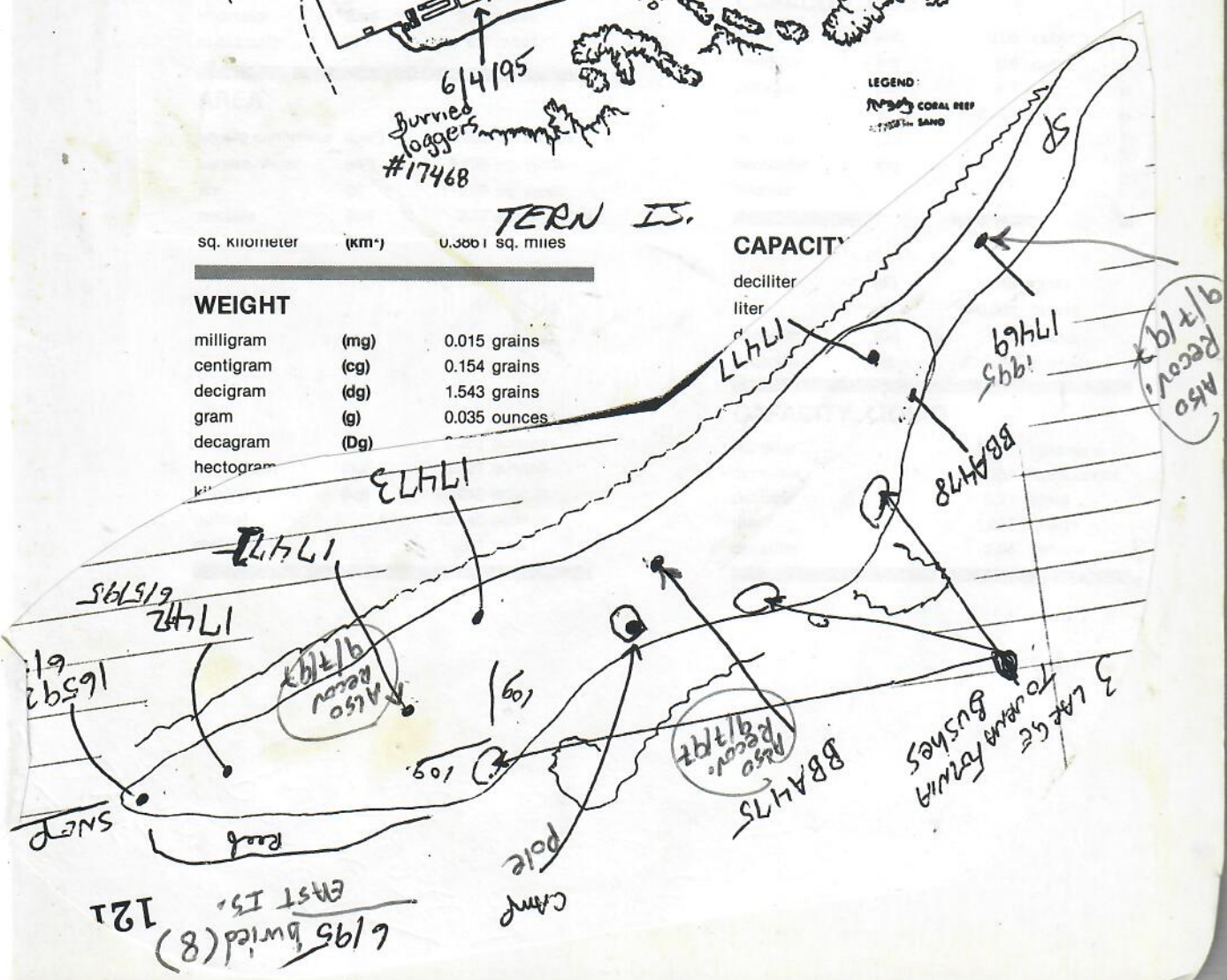
sq. kilometer (km²) 0.3861 sq. miles

WEIGHT

milligram	(mg)	0.015 grains
centigram	(cg)	0.154 grains
decigram	(dg)	1.543 grains
gram	(g)	0.035 ounces
decagram	(Dg)	
hectogram		

CAPACITY

deciliter
liter



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