

EXPER.
36

1

1986

BALAZS

(808) 395-6409

9651-9675 (25)
9676-9700 (25)
9701-9725 (25)
9751-9775 (25)
9776-9789 (14)

SUMMARY OF TAG STRIPS USED EXP. 36:

SUMMARY OF TMR OBSERVATIONS . . . p. 116

SUMMARY OF FRESH SHARK ATTACK OBSERVATIONS. p. 117 114

~~SUMMARY OF NUMBERS TAGGED . . . p. 98-99~~
SEE BOOK 2

MISCELLANEOUS NOTES p. 80

MAPS OF TRIG, TERN, W-S, GIN-LGIN . . . p. 113-119
" p. 114



COMPOSITION BOOK • 9 3/4 IN. x 7 1/2 IN.

AVAILABLE AS

VM COMPUTER NO.	B&P STOCK NO.	SHEETS	RULING
09-9130	13534	60	COLLEGE RULED & MARGIN
09-9132	13535	60	COLLEGE RULED & MARGIN & PAGED
09-9134	-	100	COLLEGE RULED & MARGIN

BOORUM & PEASE CO. ELIZABETH, N.J. 07208

MADE IN U.S.A.

TAG RECOVERIES, OTHER THAN "TC" NESTING FEMALES ON EAST . . . p. 94

DAILY WEATHER DATA Book 1 p. w/ field notes

BASKING TURTLE COUNTS p. 102

OBSERVATIONS OF NESTING PITS & TRACKS p. 106

Parents in Yucca (619) 365-4571

(808) 395-6409 3510 card calling no.

6/8/86 9726 + 9750 (25) + PLIERS - Rick VETTER - Tern IS.
(Blue jaws - ground end)
Locked as a demonstration for Rick.

MARILYN MADE -

6/24/86 9790 - 9800 (11) - TAG NOS. LEFT AT FFS FOR EAST IS.
9801 - 9900 (100) - + GREEN PLIERS (ground end)

9796, 9797
BAD - Locked
Returned - not Applied

But 9729, 9730 & 9731 applied by me on W-5 6/21/86

TAGS RETURN TO ME BY MARILYN IN LATE JULY:

9795-9799-9800 (3) | 9801-9825 (25)
9826-9900 (75) | LEFT BY MARILYN AT TERN FOR RICK.

TAGS Returned with me to Honolulu 6/24/86:
9901 - 9950 (50)
9951 - 10,050 (100)

Ticks that bite & run:

"CAPENSIS" Group -
genus -
ORNIPHODOROS sp.

The one on LAYSAN IS.:

IXODIDAE (Family)
IXODES laysanensis

According to Lee Goff - This one usually doesn't bother humans - stays on host.

Statistics of Green Turtle Nesting Surveys at East Island, French Frigate Shoals, 1973 - 1985, based on data of G. Balazs.

Year	Period	Survey dates		Number of nights	Estimated coverage rate	Number of turtles seen	Estimated nesting population
		From	To				
1973	1	1 June	19 July	43	0.81	66	81
1974	1	1 June	19 June	19	0.84	104	124
	2	27 June	17 July	21			
	3	27 July	14 Aug.	19			
1975	1	21 May	21 May	1	0.65	104	161
	2	6 June	24 June	19			
	3	19 July	27 July	19			
1976	1	28 June	11 July	14	0.32	28	88
1977	1	24 June	2 July	9	0.25	44	175
1978	1	9 June	19 June	11	0.39	66	167
1979	1	16 June	28 June	13	0.40	55	136
1980	1	10 June	29 June	20	0.54	45	84
1981	1	26 May	17 June	23	0.58	127	220
1982	1	6 June	24 June	19	0.56	111	199
1983	-- 1	4 June	20 June	16	0.54	28	52
→ 1984	1	3 June	27 June	20		157	248
1985	1	11 June	29 June	18	0.52	131	252

1986 June

Check 1984
data I gave
him!

G. Balazs
G. Balazs monitor

TAG SERIES TAKEN TO FFS 6/11/85:

8231-8250 (20) Completed 6/12/85

9251-9350 (100)

9351-9392 (42) = 162 TAGS USED AT FFS by GAIL

9451-9550 (100) → RETURNED AND SENT OR USED ON MOLOKAI EXCEPT FOR 9468-9475 (8) held on Oahu.

DIRECT TO GEAR LIST CONTENTS - T. CROMWELL
EAST IS. SUITCASE #1 (THICK):

NOTE - TAPE ENTIRE EDGE; DOUBLE PLASTIC BAG

& TAPE SECURE. TAPE ON ID TAG AND SPRAY COLOR-CODE

- 1-PAIR TABIS; 1-ARMY PANTS; 2-ARMY JACKETS; 1-Long sleeve green shirt;
- 2-TAN long sleeve shirt; 2-BAN CAPSULES; 100' clothes line; 1 Blue hat;
- 1-SLIPPERS; 1-NEW DICKIE PANTS; 1-TAN PANTS; 1-green NYLON BAG;
- 5-PAIR NEW TUBE SOCKS; 1-NEW C-CELL flashlight;
- 1-Backup sunglasses; 2 NEW 6V NEON TUBES; Plate, cup, T-shirts; wash cloth; GRAPENUTS; PRUNES; RAISINS; INSTANT QUAKER OATS; PLASTIC BOWL;

EAST IS. SUITCASE #2 (LESS THICK): All Medical; 2 Towels;

- (in 2 plastic bags) head lamp; Large sheet; NMFS CB; Silverware
- 100 TAGS; PAPER TOWELS; RAISINS; PRUNES; GOOD NEWS BIBLE;
- FIRST-AID BOOK; sponge; pillow slip;

100' CLOTHES LINE

1" x 2" wood stakes - 24" & 32" Long,

WRAPPED W/ BLUE TAPE

NEW 8' x 10' HILARY SCARS TENT; (PARTIAL SET OF EXTRA POLE; 2 New Long handle extention - wrapped together)

DIRECT TO EAST IS. L.P. "A" DRUM

(All contents in PLASTIC BAGS INSIDE); ID label & CODES;
 2 Propane; BED ROLL (AIR MATTRESS, sheet);
 GLOVES; GSA POCKET KNIFE; Rubberbands; PAINT MARKERS;
 WISK BROOM; RAID INSECTICIDE; CARVING KNIFE; 3 PACKS GADODAM

DIRECT TO EAST IS. L.P. "B" DRUM

2 BOXES C-CELLS; 2 BOXES AA CELLS; 6 LANTERN BATTERIES;
 GLOVES; PANASONIC RADIO w/BATTERIES; TOILET PAPER;
 8 CLOTHES PINS; 2-9V batteries; MATCHES; FLY SWATTER,
 2 GREEN SCRUBBER; LATEX GLOVES; SEARS PROPANE STOVE; EXTRA
 AIR MATTRESS; 3 LUCITE (2 TAN, 1 PARROT); 2 DISPOSABLE
 SURGICAL GLOVES; 1 ISO PROPYL ALCOHOL; TAN PLASTIC FIRST
 AID KIT; 2 FIELD NOTE BOOKS; LARGE NEON LIGHT; FORMALIN;
 2-C CELL FLASHLIGHT; STOP-LEAK TENT WAX; SURVIVAL KNIFE
 GRASSHOPPER PROPANE STOVE BACKUP; w/STONE
 1 PAIR TABIS.

DIRECT TO EAST IS. L.P. "C" DRUM

3 SAUSE PANS; 5 cans salmon; 3-4 large grape juice;
 hacksaw; 200 TAGS; PILLOW; Misc. canned goods; STOCKSTILL w/alkaline
 6V ALKALINE; SAMPLE bottles/vials; 7 titanium tags & applicators;
 INSTANT COFFEE; "POWDER"

TO STAY AT TERN IS. L.P. "D" DRUM

2 BOXES C-CELLS; 2-BOXES AA; 6-6-V lantern batteries;
 PRELL SHAMPOO; 3 PROPANE; 7 cans lucite; 2 large grapefruit
 juice; 6 real fresh milk; Boots w/socks.

Small
 WHITE BUCKET: 2-6 packs real fresh skim milk; ^{DRY ROASTED} PEANUTS

WHITE BUCKET:

WHITE BUCKET:

WHITE BUCKET:

TAKE ON
 PLANE: BLACK DIVE BAG:

BOAT CLOTHES; HOOD; ^{WETSUIT} JACKET; EPIRB; TOWEL; SOAP; TEN TOOTH BRUSH
 & TOOTH PASTE; MY CB & CHARGER; MASK; FINS;

18' x 25' NEW BLUE TARP.

H. EMMETT FINCH
32101 PACIFIC COAST HWY
MALIBU, CA 90265

POST-NEEDS:

✓ CALL FINCH ABOUT PCBs & EAST IS. TRANSFORMERS

- SEND PHOTO (10 YEARS LATER)
Call Stan USCG civilian

- PROTOCOL LIST OF MONITORING NESTING TURTLES
FOR TERN IS. PERSONNEL -

Hand-written now, ^{LATER} TYPE FORMAL COPY ON NMFS STATIONARY.

- TAG Recovery RATE MATCH up WITH COVERAGE RATES?

- Look up old Tide tables to see if low years had
only high tides during the daytime.

Consider

in Recovery Plan Competition for habitat, and
resources, i.e., by monk seals for beach
space, activity on Tern Beach. Lots
of fecal matter on Tern Beach from seals,
laying on nests ready to erupt - cave in
and crushing. Tick aggregations on seals
due to proximity of seabirds, thereby going
into soft parts of turtles nests.
Seals cause crabs to build up too? Do
birds? Also consider ^{cofferdam} wire; insulated
wire and other debris on this beach.

MEMO
NEEDED

- Plan for monitoring of East nesting by
FWS personnel or volunteers.

- FOR Rick VETTER: ① TM-36 ② NAT. GEO. ③ EMMETT'S ADDRESS
④ BILL CALENDARS ⑤ FFS-ARB ⑥ HSTS BOOKLET ⑦ Vitae ⑧ PHOTOS
OF HIM

✓ - CONTACT KMI for specifics. ⑨ 2 prints ⑩ NEWSWEEK

- CHECK HAM RADIO (MOBILE) GEAR - COST, OCT
FREQUENCY FWS - ? KMI = 8728.2; 8204.3
13100.8; 12330.0

+ MONITOR SCANNER, LIKE AT RADIO SHACK.

- Check 1984 data I gave Jerry Wetherall
- Resend tag recovery letter to UH switchboard (and Ikaeohu P.O.?) and HIMB.
- ✓ - PHOTO COPY OF NAVI NEWS FROM LEW ^{TURN LETTER FROM KAREN NEEDED}
- ✓ - NAME OF SOFT TICK (ARB) FOR Dr. Farrell.
- ✓ - GERMAN TURTLE STICKER FOR Bob JUSTMAN
- ✓ - Return fluorescent bulbs to PETLAND ALAMOGADO.

KMI POINT REYES ^{CA} CA
 (415) 669-1055

29 MAY 1986
THURSDAY

Depart for FFS Bob Justman's
Beach 18 6:45am - Sarah,
Pumphrey (turnaround), Lew Consiglieri,
Kristen Jobeen (FWS volunteer), Bob's
Copilot, ^{BRAD} Seal crates (small fibreglass).
John Henderson picked us up and drove
us to the airport. Robert Forsyth,
Thea and Heather at Tern.
Stopped on Kauai for gas and breakfast.
Rain but no wind.

Arrive Tern ~ 11:20 am

Mike Dubray and Paul Atkins filming
crew is here - sailboat Fairwind
anchored off. Cool - overcast.
Report that it has not been hot
during recent months.

Walked Tern Beach at ~ 9:15 pm
with Lew and Robert - Lew banged
his foot on an iron stake buried
deep in the sand - lots of other litter
on this beach. Two sets of
tracks seen, either from last night
or the night before. Also, 2 or 3 sets
of others from earlier nights. Didn't
follow tracks up because of seals
sleeping in the vegetation. Also,
seal tracks are numerous and
could easily be erasing turtle tracks
from earlier days.

29 MAY
Thursday

ENT
478

? (5)

9651 = 9652

29 MAY 1986 Items reported by Robert: ^{approx} MARCH 19th
Thursday

① Rick Vetter found a large turtle carcass washing on Fern's South beach, east end - ♀ female with eggs. He cleaned it out and the dried shell is in the boat house (will photograph). Reported that there was no appendages, head or tail. Parts of plastrons are bitten out.

② Robert saw on turtle ^{4/25/85} on the sand point of east Island in which the nest had "caved in" on it. Turtle laid motionless there for a long time. Later he pulled it down to the water. Once in the water, she swam away, apparently O.K. (eggs not yet ready to be laid? Or old "senile" turtle?) "had dug a hole and couldn't get out" TAGGED (9651, 9652) ^{20-30' from the water} "seemed weak, but swam away ok, slowly"

ENT # 478

③ Turtle on the runway ^{one morning} - came up at ramp on north shore. Obviously disoriented. Tagged and released (see tagging log).

④ TMR turtle seen 5/17 AM, no tags noted, with large tumor covering left eye. Turtle appeared emaciated.

? ⑤ Turtle found alive on its back at W-S. Nestled turned-over on beach rock?

5/30
FRIDAY5/31
6/1/86
SUNDAY

30 MAY 86

FRIDAY

Plan departed at 10:40am with Thea, Robert, Sarah and Larry (FWS) + 2 seal pups ♀ under 90cm girth for head starting.

Motored to W-5 ~ 3pm. 20+kt tradewinds; Dome tent and tarp set up on scarfed shore West side, north end. I proceeded to count, tag and recover basking turtles. Lew and Heather worked on seals, tagging one weaned pup.

Counted 5 nesting pits likely "good"

10 pits estimated two eggs (mostly shallow)

New new tracks seen from last night, and possibly 10 from the last few nights. Used tag pliers with modified, ground off point. Certainly seemed to be less response by those tagged. Two or three didn't go back into the water after applying the tag.

Mason

5/30 FRIDAY TERN BEACH WALK at 10pm - AGAIN NO NEW TRACKS SEEN.

Mike DeBary reported seeing in the water tan tag "H16" on a seal

I saw seal K32 yellow on WS

5/31 SAT. SICK ALL DAY - went to bed - 7pm, slept to 6am

6/1/86 7AM ^{DIARRHEA, CHILLS, ANXIETY} - Walked Tern Beach

SUNDAY Counted Gooat Crab holes - 240 total - at Low tide. At loran building, a fresh track present, wandering up and around bushes. At middle of the beach, a track \wedge up-down like this - lask or nest? At the very end, where the reinforced seawall starts, a basking track present.

~~Mon~~ Loaded and departed for East, arriving about noon. Put all gear ashore and set of campsite (new Sears 8'x10') just west of present seal campsite. Finished ~ 5pm. Noted that area 9-10 has rubble washed up over old log that has been on the beach.

Note: Rick Vetter's discussions of PCBs from transformers left by USCG at Tern; Also looking on roof where water is collected. Consider - PCB's from East rubbish.

Slept, and then made rounds at East 10:30pm, 1:30, 5:00am and 7:30am.
TC1 - 4 recorded. + 10⁺ 1♀ baskers tagged.

June 2, 86 Motored to Tern at 8:15am, Wind
MONDAY and seas down. Air very cool.

JUNE 2,
MONDAY

Left Tern at 10:30am, along
with Rick ^{and JOJOY} in East Is. express, and
Paul and Mike in FWS boat. Photography
of South east reef, then they anchored
to boat mooring area, swam-dove
on gray reef schools. Yesterday they got
good footage of Falcrose Aggregations
of 100+. Returning from Tern,
we idled off of Round to count seals.
Numbers here seem low for mother-pups
Note: Tagging of 4 weaner pups took place
while photo people & Rick's boat were
anchored off South shore. Photos taken.
Mike Dugrey reports seeing an adult
turtle and a juvenile off Falcrose.
Also, seals hauled out.

Rick Vetter reports 1 turtle up on Tern
South beach last night, plus another came
up on the north "shell beach" - crawled
all through coarse coral rubble, through
Sally Tern colony, and eventually back
to the water at the same beach.

IDEA - Basking due to exhaustive
migration? Help explain more at onset?

NOTE - FIRST NIGHT TAGGING NESTING TURTLES
INDICATED GROUND-OFF PLIERS REALLY DO
INFLECT MUCH LESS PAIN.

JUNE 2, 86
MONDAY

Noted lots of greenery on East, except usually barren area but SE end, before machinery. However, vegetation is alot of exotics, plus a portulaca that looks different to me - dark & different form? Also, So far dive only noted a single plant of Tribulus. Where is it all? Need to check closer, plus W-S, Trig and Tern.

While walking east, I found in a casting, a large crustacean that looks to me like a giant Copepod. Saved as is in a sealed jar.

Many moist castings noted, caked with plastic particles, monofilament line, paper, cellophane, caps, etc. Noted one small dead albatross with a considerable pile of plastic particles, presumably from inside its carcass. Died from this cause?

- Anxiety-stress causing inability to sleep (daytime - morning especially). Consequently extremely difficult to get work done at night. Also relevant is heat, mental stress (feelings of panic), solar radiation, shoulder, hand numbness due to squeezing 'pliers' etc. Strain over heart

BACKNOTE - Upon arriving at East 6/1 there was not much nesting activity present.
Est. 10 good pits, lat most.

JUNE 2, 86 AT NEP, where the reef framework drops ^{flat} off to green water a short distance from shore, few spotted (3 pm) 2 juvenile turtles seemingly foraging. Brown-gold shell. One looked especially small - 35cm?

JUNE 3 Couldn't sleep again this morning after 5am check.
TUES. Justman's plane came at 09:30am. Spent all day on East. Tried to sleep in seal camp tent, but couldn't. But bed is pad on plywood - very comfortable and cool. Few and Heather went to Gins. Faded on Little Gin, but only circled Gin and Gin spit to Count seals. Few said he saw one basking, and counted 3-4 pits that elevated rim of island.

NO
Heather
went
asked

Experiencing great swing in emotion, often in a very short period of time. High anxiety - to reasonable peace - Sometimes brought on by distress over not being able to sleep when I know that I need it. Diarrhea almost ever since I got here. Because of this, I have held off eating very much.

Spent part of the day fortifying tent against turtles. At 5:30pm I walked around the island to record baskers, etc. Noted seal A757 w/ pup blk going grey. Mother thin and greenish fur.

one juvenile present at East Reef.
Backnote: yesterday few mentioned

JUNE
TUE

JUNE 4
WEDNES

JUNE 5
THURSD

NO
MULLE

June 3 TUESDAY finding a very fresh spawning by the boat landing at Little Girl which contained an octopus (TAKO), sections of "moray" eel, and parasite worms (presumably Contracaecum.)

Noted that albatross castings dry and scatter quickly.

Again, almost impossible to sleep when I started trying at 7:30 pm.

First round made with Lew at 10:30 pm

JUNE 4, 86 WEDNESDAY Spent the day on East - fixing up around the tent - observed juvenile feeding at East Reef with ~ 10 large gray reefs patrolling back and forth. Virtually no response shown by the turtle, even though sharks come right by it. A second turtle present slightly down (farther, foraging).

POUNDED TAG 9678 INTO COG

ON EAST - GOOSE-NECKS AT BOTH END, -- Should be carried away by a high tide during the next few days.

Did basking census at ~ 3:30 - 4 pm

JUNE 5, 86

Thursday

NO
MULLET

Departed East at 9:30 pm for Round where Lew and Heather got off to count seals (no many births here). Proceeded to W-S and tagged as many baskers as I could. Counted good and bad nests. Found

JUNE 5th '86
THURS.

a plastic lobster trap with a large rope-snarl attached. A turtle track led right to it, turned and went back. Also found an albatross with a blue polyprop line snarled around leg. Lew photoed me (R2) with "my pet bird on a leash. Noted lush fields of Tribulus - large leaves & yellow flowers. Noted again dried remains of turtle that was found dead here in July of 85. I have fumeri collected by Wags. Noted that best nesting area on W-5 now seems to be in the middle portion where some finer sand exists.

Proceeded to Trig at 12:30pm, anchoring off of Trigette - I separated by a deep (waist deep) strong-running channel. Waded across to top of turtles on Trig. Jan. Surf really hit this island hard. All vegetation dead. Deep depression in the middle where high tide causes a salt-water pool. No fresh tracks seen. 1-2 digs older. R. Vetter reports all eggs / many birds destroyed here.

I received 5 bad tick bites while sitting near the water. Previous to this, no bites had been obtained.

Proceeded to Tern arrived ~ 2:15pm.

JUNE 6
THURS.

JUNE 6
FRIDA

JUNE 5, 86
 Thurs. Cleaned boat, straightened gear, showered
 and ate dinner.
 At 9:30pm I took Rick on a patrol
 of Tern beaches. Saw 2 nesters and
 1 male basker. one nester had been
 tagged earlier in the day basking on W-S.
 Discussed ghost crab predation, bathings
 and marking. Caught a large O.C. and marked
 with a felt pen "26". I noted "groupings"
 of crab holes - one off of sea (gas) shed.
 Filefish & man-o-war & bird droppings are
 likely sources of food for ghost crabs.
 We also checked "crab" and "shell"
 beaches, sand bar at northeast corner
 of island, and beach in front of the
 quarters where faint tracks ~~has~~ been
 washed under.

JUNE 6
 FRIDAY morning - 9:30pm and he called to Lin.
 At 8:15am Rick, Joan and I walked
 the same route as last night -
 TC 1 had not nested, \therefore perhaps will be
 back here again. TC 2 had dug at
 a second site which I estimated
 contained eggs. If it returns tonight,
 then I am wrong.
 Joan mentioned that she saw father
 often at north shore and frequently
 sees turtles basking at Shell Beach.

JUNE 6, 86 RICK related that Jan. north surf had
FRIDAY washed onto runway, bringing large
amounts of coral rubble. Water drained
off to the west end.

Spent greater portion of the day writing up
data, plus working on boat throttle lift
joint, etc. Called Lin and Christian on
KMI channel 804 at ~ 9pm - 5 minutes
~ \$24.00 3-min. min. \$15.95 + \$5 min. thereafter.


Hawaiiantel.
card 3915?

Walked Tern beaches at 10pm with
Rick and Joan. Found one turtle up
(stripes 19-22) partly under *Tournefortia* 9656
tagged by Robert after being found on runway
coming up north beach. Tagged a
walk lasher with eye TRPS on NE sand bar.

JUNE 7,
SAT.

~ 8:30a

10:4

JUNE 7, 86 UP ~ 6:45am. Went through the procedure
SAT. of starting the generators again with Rick. Here
LISTED: (1) Rotate timer ^(By Door) to present time (2) Pull
master electrical switch to center (neutral) position
(3) Flip switch on generator last run to "off (center)"
position (facing generators, #1 is on the right, #2 is
on the left). (4) Flip switch on generator to be
run now to "remote" position (5) Check oil
dip stick to make sure it has some (6) Go back
to timer by door and flip switch to "on"
(down -- the switch by the  symbol. In
15-30 seconds, the generator will start on
its own. If it doesn't, use a screwdriver
to bridge 2 adjacent contacts on starter solenoid.

First
MAKE
SURE 3 switches
on K0J 638 RADIO
ARE OFF. ALSO,
2 switches OFF on
channel 16

JUNE 7, 86 SAT. which is located on the bottom side of the starter motor. (7) After motor is running, let it warm up for 3-4 minutes before moving master electrical switch to #1 or #2 position to switch up with generator that is running. (8) Go to water valve, up high, in the back (ocean side) of the generator room and turn it on (counter-clockwise) momentarily until seawater overflows out the radiator cap on the cooling unit.

~ 8:30am Walked beach with Joan and Rick to see if turtle TC3 successfully nested last night, and if any others came up (yes, and no).
Calm Seas

10:45am Rick et al. left for Trig & W-5 for bird counts. Lew & Heather to Shark and Disappearing for HOLL seal count. I was alone on Tern for 5 hours, until 3:45 pm. Vetter ^{Also TC2 and TC3} reported seeing a "8" foot tiger off W-5 -- thick body, broad head. Fishing boat Aleutan spray, towed "Daytrill" into mooring buoy. Walked Tern Beach at 11 pm with Kristen & Nancy. No tracks seen, however male basker tagged at NE sandbar - slim and wet. Blue "X", but most unlikely it will stick.

JUNE 8, 86 UP at 6 am and started the generator
 SUNDAY about 6:30 am. Had a reasonably clear
 talk with Lin, Christian (and Paul?) for
 25-30 minutes.

JUNE 8
 SUNDAY

Walked Tern beach at 10 pm - no tracks
 seen by me, however later Joan pointed
 out 4 apparently false digs right up
 and under the front of the big fuel tanks.

Charged lower lube in outboards, but removed
 "pivot pins", instead of drain plug at the
 very bottom of the motor. Wouldn't go
 back in. Used "East Is. Express",
 but there was a gas leak which took
 2 hours for Rick to repair. Motor (50 new)
 still wouldn't run right - on at $\frac{1}{2}$
 speed. Nevertheless, we motored
 to Trig for seal count, and then to
 W-5, arriving at 4:20 pm.

9 JUNE
 MON.

At 3 pm, before leaving, we
 saw an adult turtle with
 finger-size TMS on each eye.

Calm sea, light & variable winds, but
 still the motor only pushed the boat
 at 3-4 kts. I went ashore at W-5
 at 4:20 pm, but not at Trig.

Noted 3 good nests in central sector
 resulting from last night, or the night before.
 Returned to Tern - 5:45 pm. When
 motor stalled, it took a long time to

JUNE 8
SUNDAY start - battery needed for starter, so if this went dead we would only have the 2 hp to push us even slower.

Upon return, Rick had invited 7 crew members of the Alcutin Spray to visit the island, hoping that they would bring barrels of gas to the island on a future trip. After pulling boat out, cleaning gas, etc. I walked the beach at 9:30 pm. only one track at east end. Female basket on Crab beach, and also a dark 50cm juvenile nearby. Both were newly tagged. Rick & Joan ^{were} with me.

9 JUNE 86
MON. UP 7 AM and talked to NMFS Bill to describe engine problems. Robert provided an answer from a mechanic at ~ 10:30 am ie grind bend of pivot pin, remove lower leg, turn upside down, try to pound back pin. For right engine, we got the ^{ground} pin in without disassembly. Left engine required leg removal. Gasket compound put on bolt threads, as manual specified. This doesn't appear to have been done when water pumps(?) were changed. Left engine lower leg gear case had black, burnt smelling oil still in it. Both were replaced, topped off again - one FWS, 4 pints of LUBE.

9 JUNE 86 Also loosened and lubricated both engines' MONDAY "lift bolts" - had been overtightened and motors would lift without great difficulty. Works fine now. Left Tean at ~ 4 pm. Seem to shift much easier now, perhaps due to full lube in lower gears. Notes on H.W.

10 JUNE 86 TUES.

Talked to Rick at 8 & 9 am, passed grocery and boat parts list for Bill because a special plane will come on Thursday chartered by the "DYTRIL" to get a mechanic and parts.

Rick went to Trig today and my radio on East served as the backup.

Consider: Tick bites, scratches, etc should be washed with soap and water - very dirty conditions living on East and going out at night with nesting turtles (throwing up organic-laden bird soil (with ticks)).

Spent most of the day in tent writing data, and reading, and looking up tag recovery numbers.

NOTE: It will not be possible to document any 1-year male breeding cycles this season because Galt P. tagged very few males last year.

10 JUNE TUESDAY

11 JUNE WED.
STRONG NE wind

3 Juvenile seen ~ mid afternoon east reef & to the SE slightly east of the reef edge.

10 JUNE 86 Need brass cleavers to polish Emmett's
TUESDAY plaque before taking a photo. I have
already sprayed it with Ivory colored
Dupont Luceite.

Walked around the island at 6pm.
Saw small shark-bitten female
basking in A15. On the following
morning, Lew reported seeing her dog in
at the extreme end of S.P. Semi-
hibernation? Similar to what I have
previously seen and photos near east reef.
Also, what John Naughton saw and
photos at ~~West Reef~~ Disappearing Is.
Very calm seas again today - has
been since Sat. June 7th.

11 JUNE 86 9AM - Rick reports that Nancy &
WED. Kristen walked Tern beach - found
a "good" nesting pit near the sewage
treatment plant - near where we
buried 8 eggs. NOTE: depressions in
sewage area need to be filled in, as
they could trap and kill hatchlings.
Black squalls in the late afternoon,
North wind from them. H.W. and Lew
watch a female near a male that they
thought was about to give birth.
I felt that older vaginal injuries were
involved - not pregnant; According to Lew,
NO East Censuses were done Monday or Tues. upon our return.

STRONG
NE wind

3 Juveniles
seen ~ mid
afternoon east
reef & to the
SE slightly
reef ledge.

12 JUNE 86 THURSDAY Plane came over at ~ 8:45am and landed at Tern. Rick says there are many 150lb batteries aboard, plus our groceries. TC 26 still out digging on SP. Also, the small shark bitten female is basking at the wave washed end of SP.

NOTE: Campsite inadequate - tent beds and blows down ^{No security fence} easy; Seal camp^o far superior. Why don't I have a set-up like that?

Plane left at ~ 3:30pm - black rain shower nearby. Flew over east and waved his wings.

Rain squalls frequent out of the north - wapes whales swing straight in at the anchor. Walked to SEP several times. Occasional rain showers during the night. Can see light from vessel to the north of Tern; also "Daytrill" at emergency anchor - but must have left during the night.

Jew and I fixed up the toilet - also put wire on top of poles to prevent frigate birds from roosting and shedding bird all over.

13 JUNE FRIDAY

NOTE:
"upper gear case"
& "lower gear case"
are only body
to remove to
"upper gear case"
on the left
engine to get
pivot pin in

NOTE: Pivot
pin goes
through
"Shifter"
Lever

13 JUNE 86 FRIDAY Departed ~ 8:30 am from east for Tern, black squall on the horizon, but calm seas. Received & read mail from home. ~ 11 pm walked with Rick all around the island. Saw tracks and 2 false digs up from shell beach that happened last night. Got 2 letters and packages from my family.

"OMC Commercial Service Manual 25, 40 and 55 Models" (1984) loaned by Rick in their FWS files, but doesn't contain the ~~instructions~~ motor they have.

page 1-7 "Outboard Models covered in this manual, 25, 40 and 55 Commercial Models" J40RWLCR listed (among 4 under "40 models") However, ours (2 40hps are J40RWLCRA. Serial nos. E5933939,

E5933942. Page 1-17 (for '40) figure 7 shows filler plug at the very bottom, where it is on our 40's. "Removal of gearcase" p. 6-19. (These are the instructions we followed to reinsert pivot pin). "Remove the oil level plug first. Inspect the lubricant for presence of water, metal chips or burned odor. Water in the lubricant will give it a white milky appearance. Overheating will give the lubricant a black color and burned odor" [like what was in our left motor]

NOTE:
 "upper gearcase" & "lower gearcase" are only used to remove the "upper gearcase" on the left engine to get pivot pin in.
 Note: pivot pin goes through "Shifter" Lever

13 JUNE 1986
FRIDAY

Our "OMC Service Manual" TITLED
"EVINRUDE-JOHNSON Service Manual -
Final Edition 2 thru V6 Recreational
Models" (1985).

Also,

Given to me by Rick Vetter - found
in their FWS file cabinet folders:

"JOHNSON OUTBOARDS COMMERCIAL"
ENGLISH OWNER'S - OPERATOR'S MANUAL (1983)
J40RWCR, J40RWLCR.

Page 14: "Salt Water Operation"

"Your motor is built for operation in
either fresh or salt water. Fresh water
interval flushing is not normally required,
however, it may be desirable after
use in especially polluted or brackish
water. Your local dealer will assist
you in securing the appropriate
flushing device.

If motor is to remain on boat during
long periods of inoperation, tilt gearcase
out of the water (except during freezing
temperatures). When removing motor from
water, allow cooling system to drain
thoroughly, by placing motor in upright
position. We recommend that motor
exterior be rinsed with fresh
water and wiped off."

13 JUNE
FRIDAY

BEST "ch"

"chom"

14 JUNE
SATURDAY

13 JUNE 86 talked with WGG on the radio.
 FRIDAY At 7:00 pm walked around Tern with
 Rick. one fresh up-down track at
 the east end. A basking male
 with TMR eyes basking near seawall
 at extreme east end, 9698 RFL RFL,
 9720 LFC (new) put on new by Rick.
 At Crab beach we saw ♀ basker 9777+.

KMI Marine operator (23°N 166°W)
 (Pt. Reyes?)

FREQUENCIES

BEST "channel 804"

C1 Receive 8728.2 Transmit 8204.3

"channel 1201"

C2 " 13100.8 " 12330.0

14 JUNE 86 Up at 6:15 am to start the generator.
 SATURDAY Had a clear 30 min. talk with Lin, Christian
 and Paul at 7:15 am.

Walked beach at ~ 9:30 am. Nothing new.
 Noted that high vegetation on S. Tern
 beach has the potential for shading
 nesting and presumably producing more moles.

14 JUNE 86 SAT. Saw a fresh Seal regurgitation consisting mostly of lobster. Carapace is soft, like a new molt. Do seals prefer to feed at moon stage times when molts are more likely to occur? Frigates now nest abundantly on Tern. I have seen none on WTS and East, undoubtedly due to scarcity of elevated vegetation. More Frigates on Tern may possibly result in some predation there? No fresh tracks on Tern beaches pm or am. ^{6/15 SUN.} Had slipper lobster dinner with Tern FWS people - watched a video movie afterwards.

15 JUNE
SUN

16 JUN
MOND

FATHER'S DAY

15 JUNE 86 SUNDAY Up at 7am and started the generator. Tried calling KMI to call Dad, but couldn't get a response from them until ~ 9:30am. Had a clear call with parents.

Opened Father's Day present sent on June 12th flight. A red cap that reads "World's Great Dad" + a beautiful Hardwood card from Christian that says "Hope you can come home soon dad" Signed by "Christian, Paul, Mom and Jess". Depressed and anxiety all day that I couldn't be with them all!

2 other mothers w/ no pups at 5500 -
Disturbed -
Penned

15 JUNE 86 SQUALLS and 20-25kt winds all
 SUN morning. Let up some in the afternoon
 so Iwe went to W-5 at 4pm,
 proceeded to East at 6:15-7pm.
 Walked around and noted baskers.

16 JUNE 86 Winds still up strong - all night.
 MONDAY Reported SCW in the main islands.

Morning display by H.W. concerning
 new seal pup that swam out, or got
 caught by currents at end of SP. I
 never saw it, though apparently she came
 running up right away to tell me ("Lew want
 help me"). She immediately wanted to
 go out in the boat so she could "jump in
 with mask and fins to save it". Emotionally
 distraught and definitely not thinking clear.
 Potentially dangerous situation with
 respect to sound judgement. Suspected
 fabrications of sightings to get me to
 launch boat. Lew told her it was "unsafe".
 Later she related numerous complaints
 to me about Lew: "Want talk to her
 about work, doesn't show emotion, etc."
 These are exact opposite of complaints
 she previously had for me: ^{disapprovingly}
 retards and awfully. Seriously considering
 suggesting to WGG that he remove her soon
 from FSS, lest her poor judgement

2 other mothers w/ new
 pups at Spand -
 disturbed by
 people present

result in a serious boat, or other, accident.

18 JUN
Wednes

During the early AM of 6/16 Monday I walked out SP intertidal to examine the small shark-bitten female. CCL-77cm. Coarse sand particles wedged under scutes of carapace. Not present 6/16 - 6/17 TUES nocturnal, but showed up 6/17 am morning light. Motionless, letting waves hit her.

17 JUNE 86 Strong winds. Mention by H.W. TUESDAY that R.F. and T.J.K. left East on morning and radioed after departure because they new winds were strong and they didn't want Rick Vetter to tell them they shouldn't travel in the boat! Note rotten example-teaching for H.W.

~~Log~~ became dislodged off SP this afternoon and presumably drifted to sea to the west.

19 JUN
THURS

18 JUNE 86 WIND STILL UP strong, but seemed WEDNESDAY down a little in the afternoon.

Several rain squalls.

Collected more fine netting from albatross regurgitations. Female 19#10 again on SP sandbar, but later swam for a long time in front of tent, but got nowhere. Seems weak.

SL-72
Cm

18 JUNE 86 • Mention again of 3 being needed to run Wednesday the boat.

Consider: effect of seal workers on basking turtles. Note many basking on WGS, but not on East. Note basking used to occur on SP north shore. How intense was seal monitoring at beginning of turtle basking season on East? Recall

H.W. mentioning the R.F. walked right down by seal and turtles, T. J. K. stayed up high.

Noted "white spots" from the sun(?) on my arms and legs.

Noted shark-bitten female swim for 1-2 hours in front of tent in the afternoon, but no progress made.

19 JUNE 86 AT 5:50am TC 33 crawled THURSDAY over aluminum sling being used as barricade, and became entangled in tent lines. Difficult to get it removed, but did. At 8am shark-bitten was buried into the intertidal sand at SP. We turned the turtle over and found deep shark slashes in the plastron - some punctured through.

SL-72.3
cm

19 JUNE 86 Put turtle into aluminum sled
THURS. and dragged it to the boat, for
transfer to Tern, departing
~ 9am. Placed in garage on its
back in bowl of sand. Washed
clean w/ freshwater and blew dry
with air compressor. Put betadine
on all wounds to keep flies off.
Used silicone sealant to seal
two major punctures in plastron.
Several hours later we noted
considerable "sinking-in" of plastron.
Eyes look waxy sunken to. Moved
old ^{UH} Boston whale to by salt
water tank and filled partly to
accomodate her. When I walked
Tern at 9:30pm she was alive
and breathing well.

Chick
Broom made
brought to
Tern from
east.

Three sets of tracks along south
Tern beach, but no "good" pits.
Male & Female basking at NE sand
bar - both tagged. U Mrs. eye male
basking on shell beach.

Thursday at 8pm Heather talked to
her boyfriend at KW 48. They and
Alan there too. Alan mentioned seeing
lots of turtles on the north shore
where he is painting a house on
Crozier Drive. Then passed a
message from Bill requesting ideas

20 JUNE
FRIDAY

are crab per burrows?

Sh

in the research of law skills.

20 JUNE 86

FRIDAY

Turtle found to be dead.
 Walked the island beaches at
 ~ 10am. ① Fresh track along iron seawall
 of west beach (a nesting excursion). ② Up-down
 and 2 false pits (by paint locker (in front
 of main building). ③ Up-down but no pits
 by sewage plant. ④ Up-down and long beach
 top excursion just east of SP building.

Ghost Crab Count: nearly full moon (6/21 Sat.)
 Edge O.C. burrows only

West to SP building: 100

SP to Sears: 100

Sears to east end: 105

305 total

are crab per burrow?

Post mortem exam with Rick in Boston Whaler:

Shot
tail.

Photos by Lew. S-72.3

CCL-77.0

Muscle red and fresh; Fat green, thick
 and abundant. Shark punctures seemed to
 go only into muscle - not deep - no
 obvious internal damage; But did it
 create rupture of peritoneal cavity? Causing
 imbalance of osmoregulation - eyes very
 sunken in. Many phylloporous barnacles on
 skin; Vial of fat obtained and frozen.
 Removed plastron entirely and noted

20 JUNE 86 right away that some of intestines
FRIDAY were spindly, empty "pencil-like".

Liver large and healthy looking.

No obvious signs of pathology.

Excised esophagus and stomachs to pyloric sphincter. Crop had hard

mixed with greenish algae(?).

Stomach had algal food matter, the only one being recognizable - *Turbidaria*.

Sample vid preserved in formalin.

Along intestine there were many packets of material - All were

cut open and nearly all consisted of plastic film, ^{plastic} particle, & synthetic line

& other synthetics not recognizable. All saved, cleared & soaked in

bleach. Other contents past this debris in intestine consisted of

very hard, dry fecal pellets. ^{exclusion}

Shikely blockage of guts, but not (a big obvious "plug" like

some of the pelagic-phase juveniles seen earlier.

What was this size turtle doing at FF5? TO small to be a breeder,

plus good exam revealed it to be an immature NAAC. Lost on the

seas after being bitten and becoming weak? obviously picked up the

plastic debris in pelagic habitat.

+
1-Bird
feather

20 JUNE
FRIDAY

We cooked Chicken Dinner
for everyone!

*

ENT.
NO. 425

20 JUNE 86 How long ago was it bitten?
FRIDAY 1-2 weeks?

Cut open heart and large vessels, but saw no parasites.

Note also - pockets of some gage neck barrocles were also present in the intestines.

We cooked Chicken Dinner for everyone!

*

HW: comment at dinner about "Hogs"

Walked Tern beach at ~10pm; TC 3 Blue laid in front of tennis courts. Everyone got a chance to watch her. A new one, double tagged and painted TC 9, on the berm in front of SP building. Noted that vegetation (*Tournefortia*) is thick and presumably encroaching on the available beach between high tide mark and vegetation. Could this be a future problem for nesting nesting space? Note that turtles seem to come out in clear areas, where they can crawl inland further. But also note that thick vegetation shields the view of the hard flat reflectant runway, a likely cause for disorientation. Painted a TC 8 on an ~~untagged~~ female on berm of SP building (9770, 9771 applied). Two sets of tracks up-down by blue bird stake 038" - a big pit, but false. At Crab Beach, I flipped a male

ENT.
NO.
425

20 JUNE
FRIDAY
night

to tag 9772 LFL; 9773 RFL.

21 JUNE 86
SATURDAY

Talked to Jim, Christian & Paul on KZU 48. I could hear them good, but they only heard me poorly and intermittently.

Rinsed tort plastic from turtle gut and put it on paper to dry. Cleared and arranged NMFS items in various storage area.

Walked around Tern at ~ 10:30 am. Tracks and 2 DIGS in front of Sears. One may possibly be good, but I'm inclined to think not.

Counted 745 large ghost crab holes along entire south-shore beach. Do the same crabs dig each night? Or rotation?

NOTE: Seals crossing beach obliterate some holes.

Motored to W-S at 1:30 pm to let H.W. off for two nights. Choppy seas - wind about 20 kts.

Copulating turtles seen 300-400 yards offshore. Farthest I can ever remember seeing them. Female spooked and dove with male when

21 JUNE
SATURDAY

22 JUNE
SUN.

Mention of
Chiroprocte
signing of
on phy

"Drea"

21 JUNE 86 we approached in the boat,
 SATURDAY Most all of the 10⁻¹² so turtles
 I examined basking already had
 my tag (recently applied).
 TO of East arriving ~ 3 pm.
 basket census.

22 JUNE 86 TP - Sam for radio check ^{Garbage buried}
 SUN. ^{WASNT TOLD FIELD BUT SWAMPING A TENT} Lew mentioned Roberts' initial comments to
 him about HW problems (2). ^{Rick reports TC card last night}
 Low tide. Winds are down to
 10-15 kt. est. ^{FIVE} new turtles
 last night - no repeaters up. Fast
 walk was at 3 am - as I was
 exhausted and needed sleep.

Lew mentioned HW, trying to draw
 him into discussion about her boyfriend -
 Robt. told him the same problem.
 Lew counted large Ghost crab
 holes around coast at 11 AM -
 Full moon last night, low tide
 this morning: (Clockwise)

"Area" 1- SP (Northside) to Veg. line = 4
 2- Veg (" ") to end veg. = 17
 3- Veg to SE SAND = 0 (all coarse)
 4- SEP to veg. (south side) = 2
 5- veg. to veg. = 9
 6- Veg to end of SP = 3

TOTAL = 35

HW:
 Mention of
 Chrioprocter
 signing off
 on physical

22 JUNE 86 WINDS DOWN TODAY 10-15 KTS.
 SUNDAY Pleasant for a change. ^{by composite, etc.}
 took photos for Lew of him. Wrote info and
 instructions in Marilyn Major's Turtle
 Log book. Talked to Rick at 5:15 pm -
 was informed that H.W.'s bird died.

NOTE: NO SHARK INJURIES HAVE BEEN
 SEEN ON A TURTLE FROTH AFTER A
 PAINTED NUMBER HAS BEEN APPLIED.
 (BUT CHECK TC 29). CHECK ALSO PREVIOUS YEARS.

Lew reported seeing small female with
 many TMRs basking on east - probably
 tag recovery 7194.
 Note - spray paint green doesn't
 seem to be sticking as well as the "hot
 yellow".
 KRYLON brand spray paint
 reported to dry "in 12 minutes" according
 to T.V. advertisement.

23 JUNE 86
 MONDAY Departed with Lew at ~ 8:30 am
 for W-S to pick up H.W.
 proceeded to Tem to meet
 airplane at ~ 10:30 am.
 Graham - co-pilot, plus Darcy
 Hu, Marilyn Major, and new

23 JUN
 MOND

24 JUN
 TUESD

23 JUNE NIMFS Junior Fellow Joel
 MONDAY Rick took them to W-5 to
 practice tagging, weaned pup. Darcy
 later commented about disturbance of
 doing ^{this} within 15' of mother w/pup.
 I walked Tern Beach by myself 6/23 pm.

Departed for East with Marilyn ~ 4 pm -
 rough, wet crossing. Taught her basking
 census technique at 7 pm. Also
 monitoring of nesting, 10 pm through the
 night. I walked to look at sharks
 preying on fledging gooneys at ~ 6 am.
 They have just started flying off
 the island during the past few

24 JUNE days. Large (10-12') tiger seen snapping
 TUESDAY at black-footed within 10' of shore
 (low tide) - head full out of the
 water. Amazingly, it didn't get the bird.
 A second tiger (~ 8-9') seen.
 Further off, a possible third large
 tiger successfully ate a bird, head
 again rose out of water. Looked
 clumsy, like the earlier one.
 When we departed anchorage ~ 8:15 am
 a large tiger came swimming right at
 the boat, but veered away.
 Backnote - During the night, I a turtle
 nesting right into the larvae
 of my tent, but then abandoned it.

24 JUNE 86 Cleared gear back at Tern
 TUESDAY and walked island with Marilyn.
 Found a grasshopper alive and
 reported it to Dick, who said
 he had seen others on Tern.
 Jack Beardsley, Chairman of ITH
 Ornithology, later ID'd it for me
 as the same one I brought back
 from Necker.

Plane departed ~ 2 pm - direct -
 Arrived in Honolulu ~ 5:30 pm.

7/6/86 report from Marilyn Major indicates
 " 3268 nesting on Tern, basking on
 East". Not previously recorded by
 me during exp. 36.

Turtles tagged at Term 15

by R. Vetter 86/87

Date	Tag #	Sex	Location
6/12/86	9727 LF	Adult Female	Crab beach basking
6/15/86	9728 LF	Adult Female	Basking Female behind Gen Bldg on beach <small>3" dia scar on left side of rock</small>
6/16/86	9729	Adult Female	basking at Fuel-tank beach

with George at Term 1
 did you use tags 9730, 9731? - during the last days of your visit

ENT #485
 Term

6/25/86 9732 Adult on Female (laying eggs)
 9733 not seen

6/29/86 9734 on Adult Female (trapped at seawall near crab beach)

1/3/87 9735 LF Sex unknown, 48cm
 9736 RF basking near fuel tanks

1/25/87 9737 RF Sex unknown, 48cm
 9738 LF caught by net at tide gauge 2" scratch on right side of Plastron

2/26/87 6862 LF Tide gauge Sex unknown 48cm, Dentated shell
 6863 RF

Tags on Hand: 3 sets, 6864-6875
 9739-9750
 9801-9825

9749-50

Rec.

7/12/89

Term-N

Green Sea Turtle Observations at Trin Is. FFS 1986
arrived on 10/25 - Trig

Date	Left Tag	Right Tag	Sex	Location	Comments
6/25/86	9727	9707	F	Crab beach	Basking
6/26	32	62	F	meter 719	Nested
6/26	9769	9700	M	Crab beach	Basking
6/26	9727	9707	F	Crab beach	Basking
6/27	9731		F	Barbeck beach	Digging, dime size tumor where dog goes <small>on R flipper</small>
6/27	6696 ⁵			Crab beach	Basking
6/28	97	97	M	South beach	Basking, small tumor on right eye
6/29	9697	9734*	F	Cement pad Shell - Crab	Trapped between concrete <small>*tagged</small> (ground)
6/30	9728		F	NDB Beach	Basking
6/30		9707	F	South beach	Basking
7/2		9086	F	Under fuel tanks	Nested & trapped & released <small>born on 10/25 and on shell dark head</small>
7/4	9727	9707	F	Crab beach	Basking
7/18	9697?		M	Crab beach	Basking
7/28	9727	9707	F	Crab beach	Basking
7/29	97	77?*	F	South beach	crawling along berm <small>*blue #8</small>
8/10	96	86	F	west of shell beach	trapped along seawall near <small>born on 10/25 and nested there with shell</small> (ground)
8/12	9729		F	South beach	basking
8/16	9727	9707	F	Crab beach	basking
8/16	9699			Crab beach	basking
8/17	82 45	31	M	Fuel tank beach	basking
8/17	9727	9707	F	Crab beach	basking
8/21	9727	9707	F	Crab beach	basking
9/20	9727	9707	F	Crab beach	basking
9/27	3129		F	Crab beach	basking
9/28	9727	9707	F	Crab beach	basking
10/17	3032	2614	?	Crab beach	basking <small>also had black plastic bag on L Fl and metal tag on flipper</small>
10/25	3014		?	Trig Island	Basking
11/30	9729		F	South Beach	Basking <small>part of L rear flipper missing</small>

see original data

Green Sea Turtle Observations at FFS 1987

Date	Left Tag	Right Tag	Sex	Location	Activity	Comments
1/16/87	3135		U	East IS	Basking	about 50cm in size
1/28		4259	M	South Beach Sector 1	↓	
1/31	4729			South Beach Sector 1		
2/3		4259	M	South Beach Sector 1		
2/8		4259	M	South Beach Sector 1		
2/9	3135	3136	U	East IS		

see original data

Turtle Tag & Obs. Notes

- ① If I did not have info concerning which flipper the tag was on I wrote it in pencil and ~~in blue~~ in the two options. Your records probably have that info.
- ② Two tags were partially read before the turtle demonstrated its interest in the water again. (on 6/28/86 and 8/17/86) You should be able to figure the one on 8/17/86 out by the other tag.
- ③ Tag # 6696 or 9969 depending on what position the observer's head was in (or under the influence of) was read incorrectly once. Therefore I left it in pencil until the correct # is known I think it should be 9699. It was read on 6/27/86 and 8/16/86.
- ④ After I made this table I realized I actually have more observations of turtles if I used the blue painted #s on the turtles & figured out what tag they had on. later
- over
↓

Tagged by me
6/21/86 W-S
? basking ♀s

(4 1/2) A question mark means I did not collect the info so part is missing.

(5) I don't have any record of tags 9730 & 9731 that were on the set of tags we used to do dog studies during your visit. I continued to use that set after you ⁽¹⁹⁸⁶⁾ left. Since they were used before you left I hope you have notes on them. Let me know about the outcome, I'll improve my records at this and also, for the season.

(6) In general I don't attempt to read the tag unless the turtle is unaware of my presence and the tags are visible without moving the flippers to the point where the turtle heads for the water. I also limit this activity to myself and Joan, who conducts the seal counts. How do you feel about this? Should we leave the turtle alone or try to read all tags? - My next mail drop is about March 17 - write by the 13th to catch the plane parking.

Hope to see you around April 11-13 or May 8-10 when I am in Honolulu - otherwise I'll be on vacation during my time off in between those dates and I am sure I'll be busy during those dates as usual.

*Any Luck with the Abbott Bulletin
from your secretary??*

DEAR FRIENDS & FAMILY:

DECEMBER 1986

HAPPY HOLIDAYS FROM JOAN & RICK!

YES, WE ARE STILL ON OUR TROPICAL/DESERT SAND SPIT IN THE NORTH PACIFIC, PREPARING FOR THE WINTER STORMS.....30 FOOT OCEAN SWELLS, A CURTAIN OF SALT SPRAY, YOU GET THE PICTURE? OUR ISLAND IS 6 FEET ABOVE SEA LEVEL AT LOW TIDE, BUT WE HAVE LIMITED PROTECTION FROM A FRINGING REEF. AT THIS MOMENT, A HIGH SEAS STORM WITH 25 FOOT WAVES IS POUNDING THE REEF.

THE PAST YEAR WAS QUITE EVENTFUL:

WAVES CRASHED OVER THE ISLAND FOR THE SECOND TIME SINCE ITS CONSTRUCTION IN 1942. THAT KEPT US AWAKE MOST OF THE NIGHT.....

RICK WAS NOSED BY A GREY REEF SHARK; CURIOSITY GOT THE BEST OF BOTH OF THEM, AND BOTH OF THEM ARE (AMAZINGLY) ALIVE AND WELL AFTER THAT HEART STOPPING ENCOUNTER.

AND A GREAT FRIGATEBIRD POOPED ON JOAN FROM 70 FEET ABOVE. SHE WATCHED THE GUANO BOMB CHANGING SHAPE AS SHE RAN DOWN THE RUNWAY TRYING TO DODGE IT.....AND THEN, BY A STROKE OF ILL FATE, SHE RAN OUT OF RUNWAY!

WE HAD A MAY VACATION ON SEVERAL OF THE MAIN HAWAIIAN ISLANDS WITH JOAN'S PARENTS AND RICK'S BEST FRIENDS, THE BENNETTS. QUITE A HUMOROUS GROUP, AS USUAL. THIS WAS FOLLOWED BY A 4 DAY BIRD STUDY (FOR US) IN A REMOTE VALLEY ON MAUI. WE WERE WORKING FOR THE RESEARCH PORTION OF USF&WS, OBSERVING THE FIRST KNOWN BREEDING PAIR OF PO'O'ULI AT THEIR NEST. THE BIRD IS CLASSIFIED AS AN ENDANGERED SPECIES, AND WAS ONLY DISCOVERED 13 YEARS AGO.

BISHOP MUSEUM OFFERED US A ONCE IN A LIFETIME OPPORTUNITY TO PARTICIPATE IN A SCIENTIFIC EXPEDITION TO A REMOTE PART OF PAPUA NEW GUINEA. SO, IN SEPTEMBER, WE SPENT 3 WEEKS COLLECTING BIRDS, MAMMALS, AMPHIBIANS & REPTILES. SOME OF THE AREAS WE VISITED HAD NEVER BEEN TOUCHED BY "WHITE CIVILIZATION", AND RICK SCARED AWAY HALF THE NATIVES (CALLED NATIONALS IN THAT COUNTRY) WITH HIS

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Just received your letter with the
Newspaper clipping, Thanks A lot!!
Our office never sent a clipping yet
I finally asked Dick for some
info they are writing concerning
the matter - They are sure keeping
us in the Dark out here.
When will I be talking to you over the radio
yours

tuible data should be in your
hands by Jan. 25

DECEMBER 1988

DEAR FRIENDS & FAMILY:

DECEMBER 1988

PROMISED TO NAME THE FROG AFTER RICK, BUT RICK WANTS A LIST OF NAMES, AS MANY HILARIOUS (BUT UNACCEPTABLE TO HIM) ONES WERE SUGGESTED BY THE GROUP OVER WILD TURKEY AT AN EVENING CAMPFIRE. EVEN THE NATIONALS LAUGHED, AND THEY DID'NT KNOW WHAT THE HELL WE WERE TALKING ABOUT.

BACK HOME, JOAN WAS HIRED AS A BIOLOGIST (TECHNICIAN) FOR USF&WS ON TERN ISLAND. RICK IS ANTICIPATING A TRANSFER TO THE NORTHWESTERN U.S. IN APRIL, MAY, JUNE, OR JULY 1987, 1988, OR 1989. WE'LL SEE WHAT HAPPENS. WE ARE CERTAINLY LOOKING FORWARD TO RETURNING TO THE MAINLAND, AND HOPE OUR NEW HOME WILL BE NEAR A MOUNTAIN RANGE WITH TREES, TROUT, DEER, ELK AND SEVERAL FEET OF SNOW.

IF YOU ARE INTERESTED IN A FULL DESCRIPTIVE ACCOUNT OF THE PNG EXPEDITION, COMPLETE WITH NUDE PHOTOS, SEND \$5.00 (EXTRA \$5.00 FOR PHOTOS OF JOAN) TO YOUR CRAZED FRIENDS ON TERN ISLAND.

BEST WISHES FOR THE NEW YEAR.

HUGS & KISSES,

RICK & JOAN

P.S. WE CAN STILL BE CONTACTED THROUGH: USFWS - TERN ISLAND
P.O. BOX 50167 HONOLULU, HI 96850 U.S.A.

George, Just a quick note.
You the copper wire is here - I never knew it was until I looked. Finch has a good memory (at 1st I thought you were describing some other insulated wire) I will save the uninsulated wire for you. By the time you return several buildings will be destroyed and everything in the other bags will be burned or buried at sea - this place will look like a ghost town? Personally I hope it does not close down but the latest word (Dec 13) indicated it

a reason for keeping it open - we got
some lot of hatchlings & several
Adult Females (4) from certain death on
Tern. Found a Turtle skull on Thry Is
Dec 14 If you don't want it I will
destroy it.

Also have some B&W pictures of
trapped Turtles for you on next flight
I am making enlargements for you.

The Cave
Paul

They hired Joan on Dec 22

I might be around till May or June
or even later depending on when a transfer
comes up I don't mind staying if the
generators are running --- to get a better
location for Joan & me with a transfer
we will run out of diesel fuel about
July 15 - Many things will change then

5/15/86

George,

This will be quick -

- 1) I got your attached letter and all your gear was unloaded.
- 2) Tern - A few pits \approx 5 - appear to have all been in the last few days (Night of 5/13 two digs) a few probably a few days earlier.

Trigs - None seen

W.S. As of 5/10 6 different digs don't really know when they started, but there are many turtles on and around the island. (Most probably in the last week)

East - 12 different digs starting around May 1. Most in last week but doesn't appear to be too busy yet. Several turtles are congregating at the East end of island.

L. Gin - 2 or 3 pits from a week ago.

- 3) We have left people at the W.S. camp and even though it is small it is complete and comfortable enough if the weather is not too wet.

gear was unloaded.

2) Team - A few pits \approx 5 - appear to have all been in the last few days (Night of 5/13 two days) a few probably a few days earlier.

Trip - None seen

U.S. As of 5/10 6 different digs don't really know when they started, but there are many turtles on and around the island. (Most probably in the last week)

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L. Gin - 2 or 3 pits from a week ago.

3) We have left people at the U.S. camp and even though it is small it is complete and comfortable enough if the weather is not too wet.

See you in a few weeks.
rather slow. I will try to get you some
activity level (nesting) appears to be still

in getting to the other islands but the
of weather we have been a little inconsistent
I hope the turtle info helps - because

uncommon at this time. It has been
have received a few bites but they are
5) The ticks are not a big problem yet. I
wet if that means anything.


4) We seem to be fairly well stocked for
food. You will want to bring any film
you need other than that you should be
O.K.

BASKING et al. TAG Recoveries

DATE/TIME	TAG NOS.	SEX	STATUS	Remarks	Location	DATE/TIME
3-27-86	(3136 R 3135 L)	JUVENILE	B	From R. Forsyth (TL)	EAST IS	6/3
4/4/86	5450 RFF	Female	B	8/81 Tern? See EXP. 28229 "90% of RFF missing" R. Forsyth	TERN	6/4 SAT now TO
4/11/86	951 RS2-3	Female	B	"T3 F" = 91cm R. Forsyth	BASK- TERN	6/4 4
5/3/86	3255 RFF	Female	B	ENT. NO. 142 Nest	0645 R. Forsyth EAST	6/4 10
5/30/86	5458 RFL	Female	B	ENT. NO. 190 1 tag only	GHB W-S	6/4 10
5/30	6371	M?	B	NOV 82 TERN? see below p 45	GHB W-S	6/5 TH
6/2	5175 RS	Female	B	NO ENT. NO. MAY 81? 495:30pm + 1 LS FRESH SHAKCUTS LHF & TAIL.	Big TIME Left front ventral. NEP EAST	6/5
6/3	3056 RFL	Male	B	ENT. NO. 104 5246 6/11 AM AREAS BASK	"Whistles" - Theat time? No tag on LFL NEP EAST	6/5
6/3	5176 RFL	Male	B	ENT. NO. 99	3 Big A11 BARKS EAST	6/5 11
6/3	8172 RFL	Male	B	1984? Likely 6/16 mon night - copulating Area I - photographed	SEP W EAST TAIL	6/8 SAT.
6/3	(5147 L2S 5070 LFL)	Male	B	ENT. NO. 27 2655 6/9 6pm SEP. 6/12 SEP 10:30pm	SEP EAST	6/8 SUN
				RFF 1/3 off healed. Big tail fresh cop. bites		6/8 SUN
				Big Male (tails) are more successful copulators?		

DATE/TIME	TAG NOS.	SEX	STATUS	REMARKS	LOCATION
6/3 10:30pm	(5083 LFL NO ENT. NO. 5406 RFL)	Male	B		NEP EAST
6/3 5 AM SAME TURTLE NOW TC-35	6074 RFL + R25 NO ENT. NO. 6/84?	Male	BASK AREA 7	(FRESH AMP, LHL)	EAST
6/4 4 AM	6073 LFL + R25 NO ENT. NO. 6/84?	Female	B		SEP EAST
6/4 4 pm	7194 FL EXP. 33? NO ENT. NO.	Female	B	FL TMR + BAD TMR BOTH SHOULDERS	SEP EAST
6/4 10:30pm	5883 RFL NO ENT. NO.	MALE	B	BIG - NO SCABS	A9 EAST
6/4 10:30pm	3737 RFL NO ENT. NO. 6/80?	MALE	B	LFL (TMR)	EAST
6/5 12:30pm Thurs.	5983 RFL NO ENT. NO. 6/83?	M	B	Short tail	TRIG
6/5 "	4262 RFL NO ENT. NO. 6/84?	M	B	Short tail?	TRIG
6/5 "	7256 LFL NO ENT. NO. 6/83?	M	B		TRIG
6/5 11:30am	6176 LFL NO ENT. NO. 6/80?	F	B		W-S
6/7 SAT. 12:30pm	5456 RFL NO ENT. NO. 5/82? 9699 (New) LFL	M Small TAIL Likely onshore all night.	B	CRAB BEACH TERN Blue TC "0"	
6/8 SUN	2818 LFL ENT. NO. 167	F	Large FAT folds in quarters.	Dangling fresh hind	W-S
6/8 SUN SAME AS ABOVE 5/30	6371 LFL NO ENT. NO. 5/83? 9/82? EXP 32?	M	KNOT RFL		W-S
	9706 RFL (NEW)			6/15 4pm	W-S

BASKING RECOVERIES, CONTINUED

DATE/TIME	TAG NOS.	ENT. NO.	SEX	STATUS	Remarks	LOCATION
6/9 6pm	5084 LF 5085, RFL + L2S	84	M	B		Area 5 EAST
6/11 11AM	5255 RFL + LFL	NO ENT. NO. 6/81?	M	B		SEP EAST
6/15 4pm	3553 RFL	NO ENT. NO. 6/80?	M	B		W-5
6/19 1pm Thurs.	6231 LF + RFL	NO ENT. NO. 6/82?	M	B	TC "6" BLUE RFF = 	TEPN
6/20 Tracks show it was up all night;						
photos of me by POAN: Hauled out a short time later by fuel tanks.						

DATE/TIME TAG NOS. SEX. STATUS PARAMS LOCATION

X 3254 (L) 3255 (R) ENT. NO. 142 MM PF 5/3/86 ENT 2207 + two to go
 O 3577 (R) 3587 (L) TC 20 ENT. NO. 184 +2 upside down

likely 2209
 TC 46
 7765 For D

J 3788 = (R) NO ENT. NO.?
 H H 5146 (R) = (R) NO ENT. NO.?

EE 5394 (L) 5322 (R) TC 30 "NO ENTRY NO."

P 6213 (L) TC 28 "NO ENTRY NO."

NN 6208 (R) 6207 (L) TC 41

V 6713 (L) - NO ENT. NO.?

K⁹³⁴ 7180 TC 34 "NO ENTRY NO."

N 7165 7190 = (R) NO ENT. NO.?

S 7177 (L) 365? (R) TC 26 ENT. NO. 210

CC 7173 (R) left needs scraping TC 24 "NO ENTRY NO."

E 9668 6696 9669 TC 4 new tagging 6/2/86 6/5/86

L 9663 9682 new tagging TC 166

W 9666 (R) 9682 (L) TC 8 new tagging 6/3/86

CL 9681 (L) 9680 (R) TC 14 new tagging 6/4/86

MARILYN MAJOR DATA

2 turtles seen 5 tags, unable to tag

4 9718 9719 small tumor close to (R) tag
 TC 25
 new tagging
 6/11/86 TMK

Code: I-drive East.GHB 10/86

Numbers of adult female green turtles recorded nesting during June and July 1986 at East Island, French Frigate Shoals

Date	Total No. ashore to nest	No. of new females first seen ashore to nest in 1986	Repeat nesters seen ashore	Long-term tag recoveries
<u>June 1986</u>				
1	4	4	0	3
2	6	6	0	1
3	7	3	4	3
4	5	4	1	2
--	--	--	--	--
9	6	6	0	2
10	6	3	3	2
11	4	0	4	0
12	4	2	2	2
--	--	--	--	--
15	4	2	2	2
16	3	1	2	0
17	8	3	5	1
18	8	1	7	1
--	--	--	--	--
21	5	5	0	2
22	5	3	2	1
23	9	3	6	1
Subtotal	--	46	--	23 (50%)

MM
↓July 1986

1	8	9790	7	0
2	6	1	5	3788
--	--	--	--	--
4	3	0	3	0
5	3	0	3	0
--	--	--	--	--
7	4	1	3	7165
8	2	0	2	7190
9	10	2 9291	8	0
10	5	0	4	6713
11	10	3 9792, 93, 94	7	3254, 3255
12	5	1 9795	4	0
--	--	--	--	--
17	3	0	3	0
--	--	--	--	--
19	9	2 II	7	5146
20	9	0	9	PREVIOUSLY seen by RF 5/3/86 TREN
21	8	2 9797 9798	6	0
Total	--	59	--	28 (47.5%)

BASKING TURTLE CENSUS

DATE/TIME	by	FEMALES	MALES	I	TOTAL	IN ISLAND	DATE/TIME	
1 APRIL 86	by Robert FORSYTH	6	6	3	15	TRK	6/12 5 Thurs	
30 MAY 86 FRIDAY 3:30pm		12	1 Cop. seen	9	27	48 ~6?	W-S	
5/30 FRIDAY 7pm				1 IN front of GUACTERS	1	TERN	6/15 5 4pm	
6/2 MON. 3pm			2 A5-6	6 NEP 8 SEP	16	EAST	6/15 SUN 7pm	
6/3 TUES NOON			TC 9 & 10 present	10 SEP 1 NEP	13	12	EAST	6/17 TUE
6/3 TUES. 5:30pm		7	1 ♂ A11, SEP (2) A6-1	4	12	23	EAST	6/18 we
6/4 wed 4pm		4	TC 1, 5, 8, 9, 10-SEP TC 2-NEP	4	13	21	EAST	6/21
6/3 NOON			TC 9, 12-SEP TC 2-NEP			1	L. GIN	6/21 3
6/5 Thurs 12:30pm		2	by Lew & Heather - None at GIN.	4	2	8	L. GIN	6/21 3
6/7 SAT. 2:1pm					3	3	L. GIN	6/23 M
6/7 SAT 1pm	Lew & Heather COUNT			1		1	GIN	
6/8 SUN 4pm							W-S	
6/9 MON. 5:30pm		5	♀ 1 A6; TC 14-A6 TC 9-SEP 2 ♀-SEP	2	2	9	EAST	
6/10 TUESDAY 6pm		6	♂ 2-A5 ♂ 1-SEP			7	EAST	
6/11 Wednesday 5pm		11	TC 9, 12, 14, SEP; TC 1 A-4-5; A15 - small ♀ shark bite	1		12	EAST	
6/11 Wednesday		11	I EYE TMP			12	EAST	
			TC 1, 14, 9, 10, 12					

DATE/TIME	FEMALES	MALES	I	TOTAL	IN ISLAND EAST
6/12 5PM Thursday	3 (TC 10, 14, 15) SEP	1		(4)	
6/15 SUN. 4pm	6	1	2	(35) COUNTED 35 STANDING AT CENTER	W-S
6/15 SUN. 7pm ♀	All-1; SEP 9, 10, 11, 14; 1 TRRS.			(9)	EAST
6/17 3pm TUESDAY	9 1 TC UNREAD. TC 9, 10, 28, 24; 4 NOT CQ; ♀	-	1	(10)	EAST
6/18 5pm wed.	7	1		(8)	EAST
6/21 2pm SAT.	TC 1, 9, 10, 29, 11 or 12?; 1 UNREAD.			(16) ROUGH COUNT ALONG BACKSIDE. APPROX.	W-S
6/21 3pm SAT.	8	0?	2	(10)	EAST
6/22 4pm SUN.	7 TC 1, A5; SEP 5, 12, 10, 20; NOT TC 26; TC 9, A10; A5 TC 1		3	(9)	EAST
6/23 6:30pm Mon	6 TC 40 A2; TC 10, 12, 29, 35, 5; TC 1 A5		1	(7)	EAST
	TC 12, 10, 10, 26 SEP; TC 1 A5; TC 14 A4;				

See P. 108-109
MSO

OBSERVATIONS OF NESTING PITS AND TRACKS

<u>DATE</u>	<u>LOCATION</u>	<u>REMARKS</u>	<u>DATE</u>
5/3/86	<u>EAST</u> sector 8	0645h Nesting turtle 3255RFF seen by P. Forsyth.	5/30 6/5 Th 6/8 Sun

5/13/86 5/29/86 9:30 pm 5/30 10 pm 6/1 9 AM	<u>TERN</u>	sector 3	<p>2 pits seen. R. Forsyth</p> <p>NO fresh tracks seen</p> <p>NO fresh tracks seen</p> <p>- 1 track wandering near Loran Bldg., NO digging; 1 gashed BASK OR NEST?; far east end - a basking track.</p>
--	-------------	----------	--

<u>DATE</u>	<u>LOCATION</u>	<u>REMARKS</u>
5/30 SUN.	<u>W-S</u>	Can see 5 "good" nesting pit 10 false
6/5 Thurs.		- 5 recent good
6/8 SUN		- 18 recent false - 3 ^{recent} good seen in Central Sector - didn't walk to other areas.

OBSERVATIONS OF NESTING
PTS AND TRACKS

Whaleskate 5-10

Turtle pits

1 - Center of island sector

2 - 10 meters west of

refuge sign - post - before 9/3

2 - at base of refuge

signpost - before 9-3

3 - center of island sector

2 - 15 meters west of

large bush - before 5-10

4 - 2 pits one at center

other 6' south of first

Sector 3 close to dead

bush & stump

before 5/10

East Is. Turtle Pits

Before 5-11-86

- 1- Sector 1 at tip of high Burm - 2 pits
- 2- Just East of 1 - (10') 2 pits
- 3- NE sector 1 just at top of Burm 1 pit
- 4- Sector 2 - 40' from Burm 2 pits
About the middle of the sector
- 5- Right at sector 3/4 Burm - 2 or 3 pits
20' over Burm

6- Sector 4 close to

Sector 5 border

3 or 4 pits maybe more than 1 nesting

20' from burm

2 marker - bottle & plastic. Nest w/flag tapes

7- Sector 8 Between

concrete slabs & pole

1 pit

8- Sector 9 - Between

pole & Mt. Balayo

30' over burm

9- Sector 10 30' from

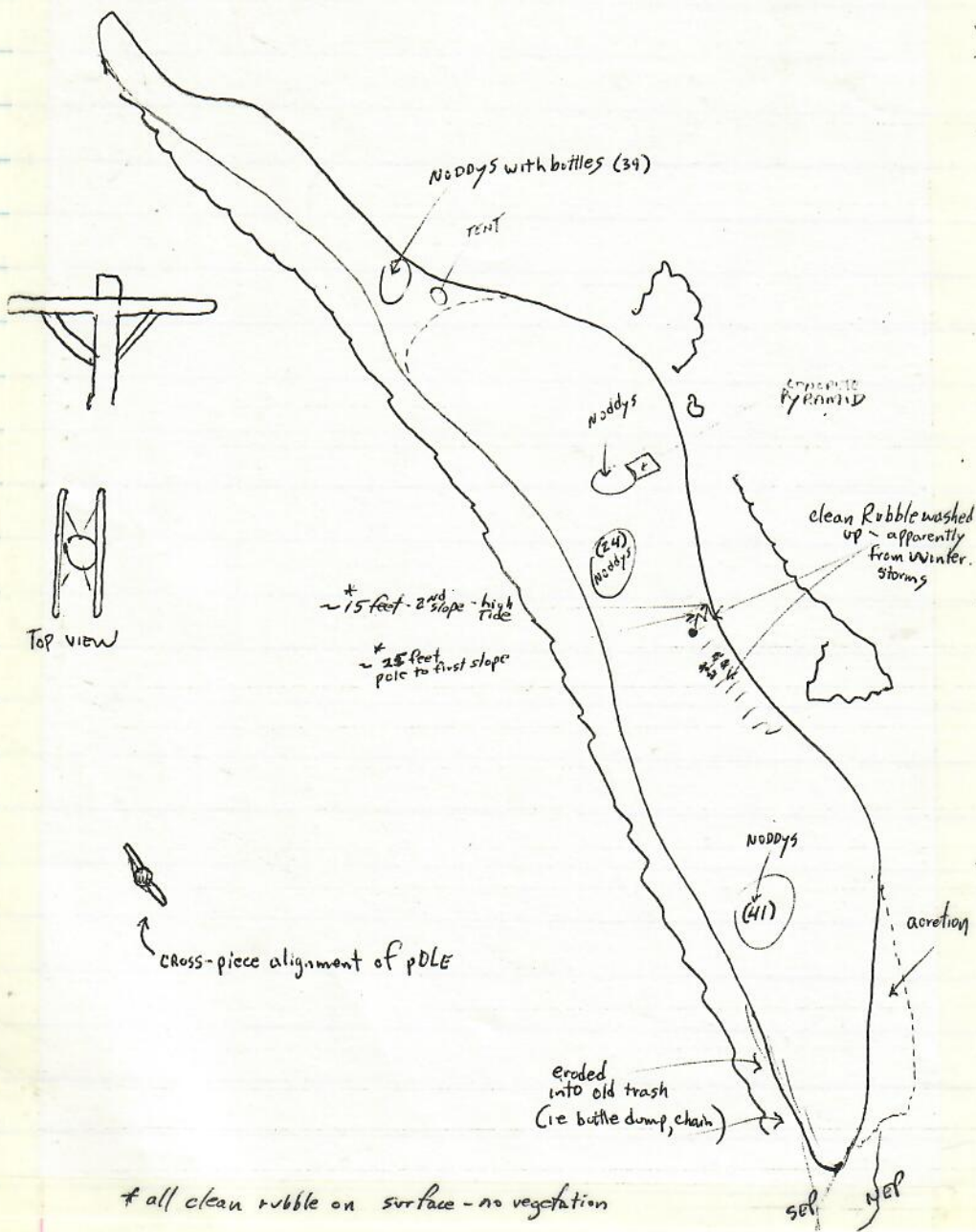
camp

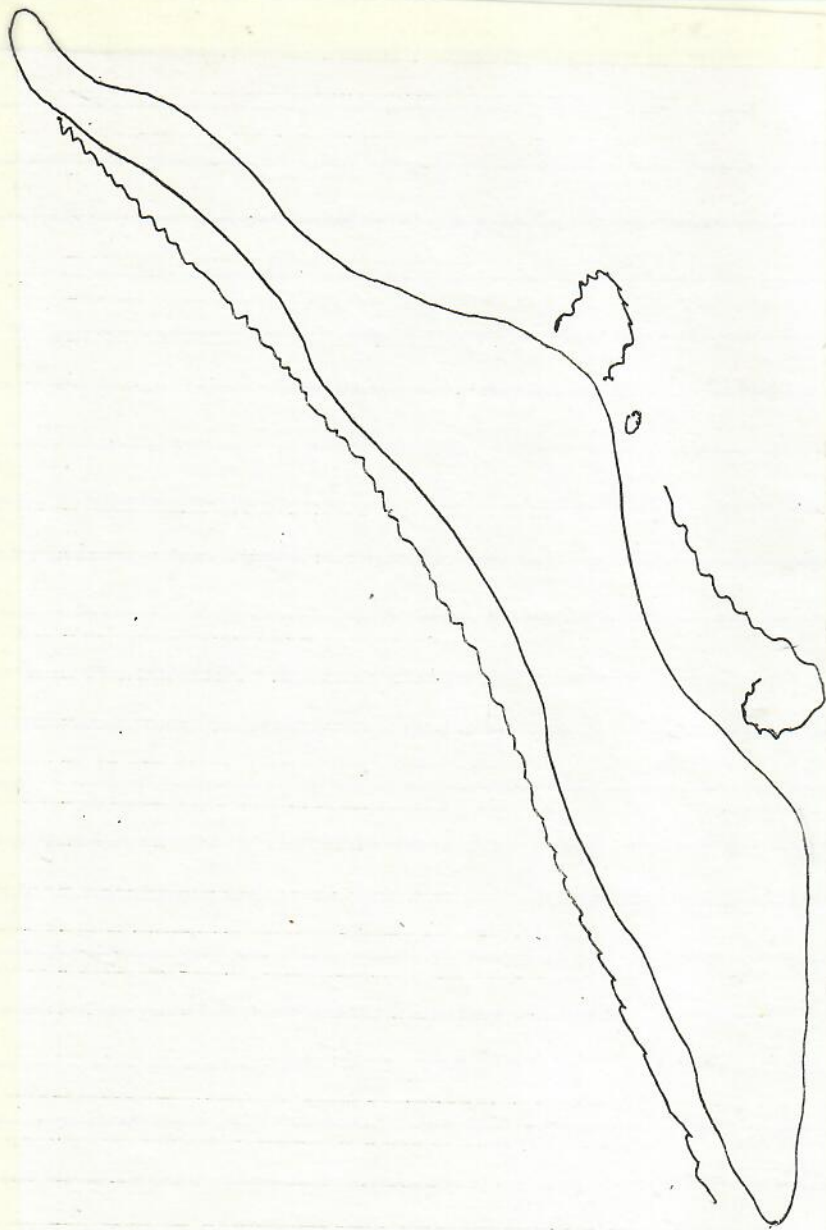
10- Sector 10 - 10'

East of camp

64

EAST ISLAND -
JUNE 1981





8-2-86

Dear George,

Just a quick note before plane
departs. The stress level was at an all
time high out here for awhile. I have
writers cramp from trying to contact all
the people that will be affected by my leave
from Tern Is. that AWS changed. Seems
like it was all for nothing because now they
don't think it will close by Oct 31! ^{Great,}
they really caused us alot of grief. Oh well
we still are going to New Guinea - just a
shorter stay & I will miss my parents in HI.
I am going to write Dick and ask for an
extra week off, he hasn't been very receptive over
the radio. Considering all the work I've been doing
out here I think an extra week isn't asking
to much.

Anyway it appears at least two unmarked
nests hatched - getting ready for the last marked
one we did near "Ghost Crab Point." I will try
to drag a dead hatchling by Ghost crabs this
week to monitor their behaviour.

Would you be interested in having some
of these ^{adult} turtles sprayed again to keep the
visible and see if they spend time
around the shoals. Wouldn't have to disturb
them to read the tags then, OR would

I was hanging over the seawall last night trying to catch some fish on the surface for the Aquarium and a damn shark scared the hell out of me when it broke surface several feet away --- feeding on a large school of file fish?

The blue parrot interfere with their normal activity?

The Blue 8 just nest on Ternn after several nights of terrorizing the other beach frost guests. And then she dug up another nest behind the water tank (west one) to lay her eggs! Damn Island is getting too small for everyone.

Glad to see you are addressing some of the issues concerning the closure of Ternn. I hope they don't close it - Harry can't wait for them to close it. If they do close it I don't think it will occur till March. At least I will have several months to look for a new job. Besides we enjoy the winters out here.

Your HAM Radio class sounds exciting. I will look into it. Yes I think that copper wire is still here - its about 1/2 thick with a black plastic coating. I will check to make sure how much there is and what other types are around.

I am wondering if I can program the HAM radio frequency into our Motorola radio. Will talk to you when I get back in Sept-Oct. Had a great time with the Weather Service & Bob Watanabe

Blue 0 basking on South beach tonight.

Till later, Rick

1977

will try to get last years
turtle data to you soon. wish
hobby gone its been very busy
just when the volunteers know how
to run this place they leave on
the next plane.

Dear George

Sorry for this rush, but its plane day with
new volunteers & doctor for me - malaise fellow up.
I am fully recovered! Now I can work
100 hrs / wk instead of just 60.0

Thanks for calling Joan in Honolulu
believe it or not you are the best contact
we have in Honolulu & most regular

I'll simply say the info you are sending
is keeping us informed because nobody
else does.

I wish I could talk more about Tom
is closing but in the interest of my
career and the clamp that the office has
put on all FWS personnel concerning the topic
it will keep silent. At this moment I am
applying for transfers and requesting super
visory appointments from the office. So
it dont or cant interfere. Sure wish
I was a mouse in a corner to hear
some of these conversations.

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I was a mouse in a corner to hear
some of these conversations.

Make later
blood sample time
APK

Found a small turtle on East @ Jan 17
small @ 55cm had 3136 on R & 3135 on L

I tagged a smaller one on Tern Jan 3 0735 0736
That was a strange day or days - about 6
turtles hatching on Tern very unusual - some
of the resident turtles at crab beach still
show up

①

1987

Update on Turtle Logging

On 2-26-87 about 8:30 AM I saw a small turtle swimming in an eddy near the tide gauge near the North seawall. While I was waiting for it to swim close enough to the wall so I could net it, some observations were made.

It definitely had an interest in the material floating on the water surface near the eddy. The material included rope, bottles, pieces of plastic, small blue man-o-wars and possibly small mats of Algae. I just took a break and scooped some of this material with a dip

Its also loaded with larvae stages of many marine inverts. Looks interesting? I am sending you samples of the material just as I dipped it out, so you have everything - including many small pieces of plastic. They look very similar to the types of plastic we find while stomach pumping seabirds for plastic. I am sure its the same. However, I wonder if birds & turtles consume the plastic more often when it is associated with ^{these} eddies in large quantities ^{rather than floating around individually.} Maybe the turtles and birds are naturally attracted to the eddies due to a natural food source; jellyfish, crabs and other

Small @ 55cm nod (3136) on R 3135 out
 with
 10/11

will try to get last years
turtle data to you soon. wish
having gone its been very busy
just when the volunteers know how
to run this place they leave on
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some of these conversations.

More later
blood sample bins
Pete

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show up



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

