

Book 1

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GEORGE H. BALAZS

FRENCH
FRIGATE
SHOALS

1974

MAY 30 - OCT 10

CONTENTS

Miscellaneous monk seal notes - Page 100
 Tag numbers listing - Page 108
 Juvenile turtle taggings - page 109
 TC, Tag number and date Summary - pages 110 -

LIBRARY OF
 GEORGE H. BALAZS
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PAGE 65 -
 FLOAT LINE
 AROUND NECK

Marked locations of nests summary - pages 115-119
 "Close re-nesting" summary - page 120

- 1974 TC DATA ON CARDS -



NO. 1130
COMPOSITION BOOK
 FAINT RULED WITH MARGIN
 120 PAGES • 9½ x 7½ IN.
 No. 1130-P Has Numbered Pages

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G.H. BALAZS BOOK 1

Make notes on burrows (location, # No.),
injuries (missing limb parts) and Tumors (location, size);
notches

FF/USCG DC-3 useage

May 30th / 74 BALAZS to FFS

June 6th Wheeler, Chau to FFS

June 13th Shirashi to FFS
Wheeler, Chau to HONO

June 20th BALAZS, Shirashi to HONO

June 27th Balazs to FFS (+ 2 oceanography

July 5th J. Wheeler to FFS (2 oceanography
personnel out

July 18th Balazs, Wheeler to HONO

July 26th Balazs-Wheeler to FFS

Aug 15th Balazs-Wheeler to HONO

Sept 19th Balazs-Chau to FFS

Oct 10th Balazs-Chau to HONO

as of July 17 - 192 gal gasoline
32 pints oil

as of July 18 - August 15 - 156 gal gas
23 pints oil

Sub Total — 348 gas
55 oil

Bad tags - [redacted]

Important to Record writing along with No.

722

714

~~Fw 1044~~ U.S. Wildlife 655 and 167; 1048; T60

777

736 (came off); 743 (may have come off)

Kridler's first trip to Refuge - Sept 1966

Time period of tag identification?

Previous Few Tags

v-notch
R postcent

~~T 60 - SEI 3/13/70 [?? from Kridler] - Tc 40 R 40~~

T 216 - Aquarium - Tc 36

391 - 3/3/70 EAST - Tc 21

440 - SEI 3/21/69; 4/22/71 - Tc 391

655 - Hisionaki 3/20/68 235 lbs - Tc 43

976 - GIN 5/18/71 - Tc 71

1048 - Not located - Tc 25

HAWAII Fish and Game

Kridler's TAGS

U.S. Wildlife - Honolulu, USA (440) (391) (655)

Bureau Wildlife - Kailua, HAWAII (T60)

U.S. Wildlife Honolulu (167)

Three types of Kridler tags used.

U.S. WILDLIFE 167 - Tc 94

370 - U.S. Wildlife, Honolulu 7/5

Fish and Game 1048

from Ron Walker 7/23/74

Tagged at SEI, Pearl and Hermes Reef,

March 13th (12 NOON) 1964

Curved 3'3" x 3'4"
39" x 40"

are there both a "T" series and a "NON-T" series with "Kailua" embossed? ?
4/25/76 - consecutive number are duplicated with and without T prefix

Thursday
5/30/79

Arrived ^{Tern} and worked on boat motor, etc.
Patrol of Tern 10-10:35 - no turtles, tracks, or seals.

Friday
5/31

8:00am survey - nothing
at low tide - approx 500 ghost ~~crab~~ burrow on
South Tern Beach -

Note: Launched boat, changed plugs, adjusted throttle linkage.
Bottles for current/Hatchling study.

3:30 To East Island via Round and Mullet - fairly
calm water, little spray - 3 ♂ Baskers on Mullet.

3:40 East Cove - 6-8 adults in water - ~~4~~ basking
on North sand point side

Found bottle with Note -

3 ♀ baskers on sand point seen from land -
Sprayed TC 1 and TC 2

approx 20 pits on point -

" 50 pits for rest of Island - 4 or 5

look good - all mostly in areas 5 through 8.

27 Baskers on East End - 19 of these on
N side. - Many photo with telephoto, including
♀ with missing right hind flipper ⁽³²⁾ _{106 camera}

TC 3 ♂

TC 4 ♀

TC 5 ♀ - big turtle with Tumors on both eyes

TC 6 ♂ Tumors on eye

TC 7 ♀

photo of big male with left hind flipper missing
and laminae flaking.

Approx. 200 BIK ft in areas 1 and 17; 500+ areas ¹⁸ ₈ pole through

NOTE: Males come each year? Eye tumors
interfer with navigation?

TC 8 ♀ Eye Tumor

TC 9 ♀ ^{Small} Tumor on tail (dorsal)

TC 10 ♂

TC 11 ♂

TC 12 ♀ - may have entered water too soon.

TC 13 ♀ " " " " " "

TC 14 ♀

TC 15 ♀ - Light colored shell

TC 16 ♀

TC 17 & 18 both ♀

TC 19 Eye Tumor

Exact count on Total not made, however, ♀ females
seemed to outnumber males ♂

Note: Substrate differences on each island may
come into consideration for extrapolating pit
counts.

Bosker seen in area 10-13 missing
most of right front flipper.

Note: What signals halt of copulation to males?
Males leave area before females?

around the island navigation system as opposed
to basking site preferences.

after leaving off supplies, returned to Tern
for night.

Tape Recorder

Need list - folding chair

~~Very Hammer~~ Leucite Spray paint -
~~Lores - leader~~ J4J's

~~Large book~~ - small wisk Broom

gas can dia ANCHOR

press plant - directions for Sirisiki

samples - ASPIRIN

Bring own food

Ice Chest for eggs, Bacon, etc.

Bags for trash

Finger nail clippers

mustard

wire cutters *

no need for aerial survey

Long sleeve brown shirt

~~Potter element for gas bowl~~ *

Don't send stakes

Notes:

Dead turtle on Trig found to have green algae like fecal material in guts - not unlike that seen when slaughtering turtles in Cayman.

Small Togs and pliers.

Bed 27 1/2" wide.

Photo out tent door and window.

Plastic slide holders.

Photos of Terns at Tern

* Underwater Camera

more side views of turtles - Head, etc.

For night picture - open for more light.

Maniculate report

List for John 24 hour research schedule.

JNB color red or blue?

~~xerox charts of host~~ - WS for track recordings
~~Insect spray~~ *

~~Pillows slips~~
~~folding chair~~ *
~~folding beds~~

* ~~Bulb thermometer~~

No Need AREA STAKES * Tell CG

* ~~Sew travel bag and shirt out~~
cats

NO live Is.

picture of me sitting by tent
Note to Palmer
Pen like batteries

pit markers *

* me & photo of camp site - beer bottle pit - seal tent scars, BIKFT regurgitation

* Small plastic bags for gassy bur

Green paint *

close up of head, pliers
tail - etc.

open low sunrise - sunset photo

Telephoto on EL - Tent light

Wire leader, double hooks, lure,

Spool for winding fish line.

Saturday
6/11/8

Loaded boat in the morning - nothing on Tern
Beach - Left for Trig Vant, 10:30 - clear
skies - moderate brisk wind

2♂ 1♀ Baskers Trig 11:00 AM
5 Pit (1 looked good)

Found dead male turtle - photos - ^{45 yards from} ocean (south)
Trig looks about the same, however, no
sooty tern colony like last year - small
number of BF albatross

Seals - 8 Adults, 5 SA 1P
Whale-skate 12:45 PM

Looks about the same, however, seem to be
fewer Frigate - possibly fewer bushes - 3 small
turtles seen in cove - one or two small shark.
also 2 adult turtles in cove

Baskers - 9 sex uncertain 6♂ 4♀ = 19
Black Foot albatross colony

Pits 30 - 9 Not marked

only 2 look good.

Small turtles seen off S tip.

Seals	A	SA	P
	29	9	13

A914 also head scar and belly scar
Photo of seal with bad mouth - Many photos
of turtles using telephoto on NIKON at EL
To East Island - set up tent and
campsite - radio check OK at 6PM

TC 16 Basking on sand point -
Many small shark -

Notes: Problems encountered locating turtles
 in vegetation and bird colony - bird noise -
 Intensity of utilization by all species present -
 No copulation scars seen as described by
 other workers -

TC 22 microphone excavated chamber adjacent to
 buried sheet metal and 2 ground wires as
 well as an insulated cable - if hatchlings
 do not emerge straight up they will be trapped.

Looking to increase development ^{rate} of eggs? - To get away from ^{learn from one another?} ^{SHARK?} males?
 buoyancy?

To locate nesting turtles - all senses must be used -
 eyes, ears, nose - detective work necessary.

need

lens, logs, paint, nose salve, BIK wt film, BIK marking pen, weather data,
 station history, guest book, photocopy machine, procedure for East town data, NWS FBS info,
 100g tape, sea covered by ground wire, sinker, small hook-swing, large shovels,
 [Census for lost years pups - estimate.]

~~sequence?~~ matches, margarine, shoyu, suggest ed explain project - Refuge
 to me, cream, Lin seed matches, ^{Seand} 5491 propane fuel, John-Photos
 of me - in tent etc., list of charges, peanut butter, jelly, margain in container, spray street paint
 Phone patch to Palmer, ^{gas, shirt, matches, film}, blasting in How chamber

Refuge books -

SAT 2000
 6/1/8 PM
 74
 22.50
 1050

SUNDAY
 6/2
 130

405
 Marked
 Location <

500
 Marked
 Location <

1000 >

1145

SAT 2000
6/1/8 PM
74
2250
1050

87 Ghost ~~crab~~ holes counted on S sand point -
2 ♀ Boskers on N sand point -
Turtle in area 6-7 - NO pits yet -
" " " " 8 -

1 male basker in 9 and 14-15 -

Turtle in surf at 15 -

SUNDAY
6/2
130

Turtle in pit area 17 -

area 17 turtle gone - area 15 2nd pit
and moving toward log - Male basker in
9 sprayed TC 20[♂] - TC 21 sprayed
covering out of area 7 to water - ^{copy}
area 8 turtle apparently gone - ^{7/10}

405
Marked
Location

Turtle in 2nd pit area ~~is~~ laying - sprayed
TC 22 - Microphone in nest - 4:25 AM start
covering - Tugged ~~CI 715~~ (right) still covering
at 5:25 AM Curved 41³/₄ x 38¹/₂ -

500
Marked
Location

Turtle by pole ^{under log} covering - sprayed TC 23
Tugged ~~CI 716~~ (left) right flap-fold of
skin missing. 40¹/₄ x 38¹/₂

1000 →

Observed turtles ⁽⁶⁻¹⁰⁾ leisurely swimming in
East Cove - 2 TC numbers present - no
apparent attempts at copulation - at least on
surface. Two boskers on sand point - one TC.

1145

East SEAL CENSUS

Adult	SubA	Pup	with new (BK)
20	4	20	pups

Adult ^{seal} with new twins.
Frigate nests in 7-8 (✓ 8-12 w/young)

Note: write for photo of shell scar turtle from Dave.

Sacrifice collection of data in order to prevent adverse effects on wildlife species present.

Egg calcification activated when fasting or other physiological systems related to reproduction.

Compare with last year, sooty terns are much fewer in number - many of those now present are juvenile plumaged chicks.

Portion of "green" on yellowish carapace may be due to algae growing in sutures.

SUN
6/2 cont
1145 →

Some of
722 ident?
on 8/10

1530
330 →

sh

6/2 SUN
cont
1145 →

Baskers - 5 along areas 13-14 TC 8^{sc}, 12^{sc}, 20^{sc}
2 unpaired one of ∴ 3♂ 2♀ (A13-14)

Area 9 - old ♂ w/ peeling shell, 2 ♀

South East Cove - TC 17^{sc}, 15 (lightskell)^{sc}, 14^{sc}, 19
3^{sc} ♂, 4^{sc}, 5^{sc}

Copulating pair with 3 close by - short duration -

Seems to be burst of activity in Cove but no more observable mounting.

comes off
7/22 ident
on 8/10?

Turtle ♀ with large left side shell scar in area 6 -
May be same as one seen on L-GW last year.

TC10 - Area 6.

1530
330 →

3 Baskers N Sandpoint - 1 TC1 - ♂ Basker by boat (same as yesterday?)

3 Basking along NE A 12-13 - 1 with right front limb missing (same as yesterday) TC12 offshore w/ 3 others
Animals seem to have good hind vision while Basking.

shape - Color descriptions: some flat carapace down spinal area!
Plastron yellowish orange with ting of green along dorsal area of marginals. Carapace - Black w/ olive to gold rays - some reddish brown - some yellowish gold -
Look dark when dry due to fine scratches (?).

9 Baskers on NE point - 1 TC16 fat fold such as described at Cayman.

16 Baskers on SE point - TC15 (yellowish)

Some look flatter than others, not necessarily sex related, however, flat ♀ but not seen thick ♂.
Front flipper lesions, on few. Most face inland when basking. Water remains in floor of mouth?

note: Pipe marked nest from Oct survey revealed egg shell 6"-8" beneath the ground. No animals could be found, however, shells look like Chelonia. 4 saved for measurements. Hatchlings in water mid-Dec?

Booby turtle ♀ on sand point seen to have little ^(lesions) pukas on tail; fat rolls.

* must photograph and collect sample.

SUN
6/2 cont.
330 →
1530

1725
525

1920
720 PM

745 PM

800 PM

Sunset 7:49 PM

820 PM

840 PM

SUN
6/2 cont.
330 →
1530

when coming in to bask, animal lets wave wash
aid as much as possible.

* observed turtle ♀ defecating few yards offshore numerous times.

TC15 active, swimming around alot.

Flatter looking ♀ SE point with end of left flipper missing.

No Scars or Wounds seen on any of the turtles.

One animal (Thick ♀) yaws neck and looks around alot.

Length of time on plastron doesn't seem to bother them.

Basking turtle with eye Tumor, neck Tumor, 5 Barn. Left.

TC3 ♂ basking - Turtle can see me from at least 30'

TC10 (A6) Black and Thick: This is listed as a ♂.

I just negated earlier statement!

525 ¹⁷²⁵

8 Baskers on sand point including TC1 (been there
all day).

1920

720 PM

Unmarked ♀ up in area 8.

745 PM

TC24 sprayed by boat ♂ - skin lesions on tail.

800 PM

TC25 ♀ sprayed basking on sand point - Total
6 baskers on sand point including TC1 ♀
and TC26 ♂.

820 PM

TC23 ♀ basking on sand point - sprayed TC27,
goldish, flat and ♀ - shell wet - may rot stick.

840 PM

area 6 basking ♂ TC10 -

Turtle in Pit area 7, right Hind flipper and
part of shell missing -

6 Baskers on SE point TC28 ♂ (35 1/2
x 33 1/4) TC19 ♀ (37 3/4 x 36 3/4) TC29 ♂ (38 x 31 1/2)
TC17 ♀ (38 x 36 1/4)

NE point Baskers TC30 ♂ (35 1/4 x 33 3/4) TC31 ♀
(36 1/4 x 35 3/4)

TC2 coming out of area 9 - left hind missing.

Notes: TC2 seems to be new at nesting procedure.
Neophyte?

TC10 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC9 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC8 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC7 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC6 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC5 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC4 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC3 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC2 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)
 TC1 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)

SUN

6/2 2130

930 PM Area 13 - 3 turtles - 1 in surf; TC13 updown; 1 out of pit.

1010 PM TC9 in area 5 - 1 pit.

Turtle in second pit, area 5.

TC10 ♂ area 6 basking.

Marked/
location

Area 7 turtle in second pit, sprayed TC32 - assisted in digging pit - 126 count eggs (37 x 34 1/4). Did not TAG - Photos.

~~Turtle in 2nd pit, area 5.~~

1130

TC33 sprayed in area 6.

TC9 in 2nd or 3rd pit area 5.

TC 28 and 17 still basking.

TC2 in sand pit close to shore area 9.

♀ laying on beach area 11.

1145

marked
locationTurtle in 4th pit area 12 - sprayed TC34
Left hind, partially missing 0030 (1230 AM) layed -
many photos - (CI 718) (36 1/2 x 34 1/4).

MON

June 3-105

TC9 out of 4th pit (38 1/2 x 35) -

Both TC32 and 33 back to ocean -

340

LAT BUT
NO STAKEArea 2 - tracks - 1 pit - TC9 area 6 in
4th pit looks good (CI 719) (left side).

400

marked
locationTC2 in pit close to ocean area 8 - Left hind
flipper 1/2 off with hole in it. Chamber looks
shallow. (35 1/2 x 32 1/2). Difficulty in
extruding eggs(?) Snores many times!
Tagged (CI 720 ≠ 721).

1000

Motored to Tern for food, wash, send
message - water very calm.9 seals with young pups seen on East - all on
S Beach. TERN 1:15 PM 6 Adult 4 SA

(1 ♀) look ready to pup

Notes

Ever seen basker go into meshy from that position -
or visa versa ⁽³⁾

Undertake writing of turtle do's and don'ts for CG

Do you see recent nesters basking - How long until?

Terns like to get close to the wind -
Far fewer sooty terns this year -

Is log in area 8-9 same as the one on Mullet last year?
More barnacles on W-S turtles?

Night vision underwater?

Noisy birds create strange effect at night.

Black and white of East from Wamen - negatives, also Navy.

origin of FFS islets names.

Talk to Agard.

Seal pup waving flipper on sand bottom looking for ?.

Mon June 3
330 1530
1805
605

1845
645

1900
700

1930
730

2100
900

2120
920

2140
940

2210
1010

2245
1045

- Mon June 3
 330 1530
 1805
 605
- Returned to East, little wind - Hot! Brought back ice chest with eggs, bacon, hot dogs. Sighted adult turtle in H₂O off Terns. TC 26 ♂ basking by tent - TC 25 B sandpoint - Big black ♀ sprayed TC 36 sp (TC 35 missing for now) flat yellowish (fun algae) ♂ too wet to spray - sp TC 37 Blk ♂ sprayed sp - notch in 2nd to lost marginal like ♀ nest in photo last night (34 1/2 x 32) - TC 38 sp Thick Blk ♀ (41" x 39") - small ♀ sprayed TC 39 = 7 on sandpoint.
- 1845
 645 ~ 6 1/2 Boskers observed and photo in area 1 13" wide track at ridge - more small tracks next to those.
- 1900
 ♀ 700 Copulating pair seen outside reef area 7 - ♂ ^{Barroale left side front} is TC 29 - 6 others in attendance - Telephoto 125 speed. 12 boskers total on SE point TC 14, 15, 19 - 4 other with no. but unable to see.
- 1930
 730 5 Boskers total on NE point - TC 12 ♀, old gold peeling ♂, 3 ♀ not marked.
- 2100
 900 2 in wave wash, N sandpoint. NEP - peeling yellow ♂ (38 3/4 x 36) - ♂ w/right front flipper bitten off - TC 35
- 2120
 920 NEP TC 15 and 1 turtle lying underwater at edge ~~2'~~ 2'.
- 2140
 940 Turtle in and out of pit ^{chamber} area 6 - didn't like it, Moved about 1' and is starting to clear another area w/front flippers - tail moves curiously. First fronts than hinds sweeping - clearing.
- 2210
 1010 3 ♀ on sand point for nesting - 4 pits. TC 37 basking - 1 ♀ at H₂O edge.
- 2245
 1045 Area 6 turtle in 3rd pit - sprayed TC 39
 Turtle in pit area 7 - 1 turtle SEP

Notes: will only
work up straight-curved conversions for ♂ and ♀ adults.
Is TC42 a neophyte.

0600 adult Seal Tog A451 by log.

Sharks swim right by small turtle with no alarm response.

Third claw on ♀s used for egg chamber excavation.

Double dig when excavating chamber, sometimes triple before scoop.

Fewer sooty terns could be due to taller, greener and more dense vegetative (?) growth all over island.

Frigates can be found nesting a various places in interior.

Mon June 3
2305
1105

area 11 turtle sprayed TC 40 - out of pit with wire by log - v-notch in last marginal on right.

Tues June 4
0100

location
Marked < ⊗

TC 41 sprayed in area 16 clearing 2nd pit.

TC 35 in water off Area 9. TC 40 completing second pit (37³/₄ x 35¹/₂) previous Tog (upside down) T6 ~~760~~

Bureau Wildlife Kailua (CI 722 no good) CI 723.

Area 7 turtle out of 2nd pit - sprayed TC 42.

TC 39 crossed over to area 13 and scarled in ground wire - had to free - med. size section out of right side of shell (39³/₄ x 35) CI 724.

0145

TC 41 (looks thick) in 3rd pit area 16 and moving.

0340

TC 41 in 5th (40¹/₂ x 38¹/₂) CI 725.

0400

TC 42 digging 3rd pit in area 7 and out -

0415

TC 18 up in area 6.

~~0440~~

TC 41 No lay-back to ocean (38¹/₄ x 29¹/₂ straight)

0600

TC 42 - returned to very same pit and digging egg chamber again - Gravel-slip - (38 x 36)

CI 726. Small tumor left of head - very sensitive.

TC 18 back in water (1 pit?) stranded by low tide. T36 basking on sand point.

1000

1300 -

1400

Seals adult SA Pup

15 4 17 including 7 w/young pup

TC 35 coming out to bask in area 12 - ♀ basking in Area 11. TC under ledge offshore area 10.

NFP - TC 31, 33, 1 ♀ with shell indention left, gold ♂ TC not readable + 2 more ♀, 1 with TC 32.

15 total basking at SEP, 9 with TC - 2, 5 (Big ♀), 10, 15 (olive w/ brown coloration) 13, 17, 19 (Blk) 28, 39 TC 38 on sand point basking.

- June 4 Tues 10 basking on sand point - 1 ♀ 1 ♂ by tent, includes
 1600 TC 36, 38 and ?
- 1800 → Seal 756 (Photo) 1/2 between A and SA - TC 10 basking in
 area 6. SEP - 15 baskers TC 4, 15, 17, 19
 NEP TC 31 - paint peeled bod - area 10 - 2 ♀ 1 ♂ 1 w/ shell
 gone above left hind flipper (photo) - Seal A451 by long (photo)
 TC 16, 13 area 12 - 1930 - sand point - total 9 -
 TC 1, 37, 38, 25, 39, 27 (peeled bod - only able to repaint ?)
 (curved 39 x 38) (straight 37 1/2 x 30 1/2) - ♀ with part of
 trailing edge of left front flipper hanging loose - TC 37
 straight 33 1/2 x 26). Observed copulating pair
 at end of sand point - end of ♂ front limb fold
 over anterior edges of carapace down from precentrals.
 Turtle in A16 up and down - 2100 Turtle in area 1 -
 T13 in pit area 12, also one ^{turtle} more in pit.
 Marked location < T13 84 eggs with temperature probe (38 x 36)
 (36 1/4 x 28 1/4 st) (CI 727 and 729) (728 no good)
- 2200 SEP T15, 17, 19 and TC 43 ♀ - 5 total, 3 laying
 in water.
 T42 in pit area 8 - unmarked ^{turtle} in 1 pit area 7.
 T33 and 39 each in a pit area 6, also 1 unmarked
 in a pit area 6 (healed injury to left hind flipper and
 end of carapace) T10 ♂ basking in area 5 (34 x 26 1/4 st)
 area 1 turtle in pit right behind tent - went under
 tent lines. T41 in pit on sand point. Other Area 12
 turtle laying eggs T44 (39 3/4 x 36 1/2) (36 3/4 x 29 1/2 st)
 (CI 730 and 731). 2250 - T42 - still in pit area 8.
 Area 7 turtle unmarked in 1 pit - V-notches 2nd
 and 3rd to last marginals, right side - sprayed T48.
 T33 and 39 same pits - 39 V-notches 2nd to last right.

Notes: Does tail determine how many eggs to lay? ² doubt it. 7/11

♀ Evening^{-night} of June 4 observed copulating pair off area 14-15 close in to shore - should have had camera.

14-15 animals in sand point cove during midday.

Little turtles eat something from birds (albatross), insects?
Possibly all the birds on East came much earlier this year. ∴ fewer now.

Rain showers blowing from the East -
Smells fishy.

June 4 Tue
2250
Marked Location

2340
Marked Location
Marked Location

June 5 Wed
0050

Marked Location

0300

Marked Location

0445

1200-1400

1630

1830

June 4 Tues

2250

Marked
Location

Area 6 post central inj in 2nd pit and doing good -
T33 - 102 egg (-1 one) $(38\frac{3}{4} \times 37\frac{1}{2})$ (36×28) flap gone
 on right **CI 732**. Area 12 **TC45** scared out of
 initial body pit - Wildlife tag present.

2340

Marked
Location

T41 laying eggs right behind tent area 1 - **CI 733**
 $(38\frac{1}{4} \times 29\frac{1}{2} \text{ st})$ - other tent turtle out of 2nd

marked
Location

pit. **T39** in one more pit. - Post central injury turtle
 laying - **TC46** **CI 734** and **735** $(40 \times 36\frac{1}{2} \text{ c } 38 \times 28\frac{1}{2})$

June 5 Wed

0050

marked
Location

T48 now in 3rd pit area 7.
T48 still digging. **T39** has V notch second to last
 marginal and section out of right side of shell - started to
 lay - 6 eggs - then stopped - started covering. I may have
 confused here. Turtle behind tent area 17 covering
 eggs - sprayed **T47** $(38\frac{1}{4} \times 35 \text{ c})$ $(36\frac{1}{4} \times 27\frac{1}{2} \text{ s})$
CI 736. Turtle on sand point digging.

0300

marked
Location

Turtle in 1 pit border of A5 and 6. **T48** area 7
 3 or 4 pits no lay. **T46** back to ocean via
 area 12. Turtle on sand point laying, sprayed
T49 $38\frac{1}{2} \times 37\frac{1}{2} \text{ c}$ $(36\frac{1}{2} \times 28\frac{1}{2} \text{ st})$ **CI 737**.

0445

Area 5-6 turtle in 2nd or 3rd - chamber looks good.
T39 nesting all over again.

1200-1400

Area 12 **T3**? ^{5 very weak}, front flipper off ♂. **T42** offshore A12.
 Area 10 **TC29** and old yellow. **NEP** - 33, 31 + 3 in H₂O.
SEP - a little barker and **T19, 28, 32, 5 ♀ +**

1630

6 more. **T2**? ♂ by boat. 9 on sand
 point including 37, 38 and **TC?**.

1830

T10 area 5 15 - **SEP**, 8 w/ **TC 41, 19, 17**, - 4(?), ♀
 with medium sized tumor left front flipper, small one
 on right neck.

NEP - 1 ♀, area 10 3 ♂ (**TC35**) 1 ♀

Notes: Several turtle have made grunting noises while loafing.

Make observations on steepness of banks around island.

areas T42 almost covered up by digging into TCD areas

possible card format:

TAG NO - SEX T NOS. used TAG NO.

Date area, Is of Tagging

I.D. - Injuries, BARNACLES, notches, Tumors
Observations

Date time status remarks

Removed tags as of 8/15/74 T216, 1048, 655,
167, T66 (lost)

June 5 Wed
1930
2100

1010

June 6 Thurs
0110

0200
Marked location

0330

0630
Met plane
Pick-up point
and John

1845

1920

- June 5 Wed TC 1 (37x38) 25 (38 $\frac{1}{4}$ x37 $\frac{1}{2}$) 27, 36, 38, 48
 1930 / TC 17 area 6 on beach slope. T42 in 1 pit
 2100 area 7 - steep beach slope this area, also
 another turtle this area. A9 and 10 also
 steep. ♂ bosker by boat.
 1010 1 turtle at waters edge area 2.
 Turtle in area 6 looking around. T42
 up down area 7.
 ♂ Bosker SEP (36 $\frac{1}{2}$ x32c) TC 50 - 3 others SEP.
 ♂ bosker area 11 TC 51 (36x34 $\frac{1}{4}$)
 TC 24 ♂ bosker by boat (34x31 $\frac{1}{2}$) (33 $\frac{1}{4}$ x26.5)
 June 6 Thurs
 0110 area 6 turtle wandering around. Area 7 turtle
 in 2nd pit. TC 42 in area 8 covering pit - already
 tagged 736. ♂ bosker SEP TC 52 (39x35c)
 TC 21 at SEP. T48 in 1 pit on sand point -
 another pit present (36 $\frac{1}{2}$ x35 $\frac{1}{2}$) (CI 739)
 0200 T42 was just digging - did not lay. T53♀
 sprayed in 1 pit on sand point. T42 - 100 eggs
 but broke several during cover up. (36x28.5).
 marked location
 0330 area 7 turtle digging 2-3 pits - also same for
 area 6 turtle. area 6 turtle moving out of
 pit - area 7 turtle back into ocean.
 0630 2 turtles in area 6. 1 - TC 18 (faded) refaint
 (36x36c) 2 pits each (?) CI 751 -
 Met plane
 Pick-up sandy
 and John
 starting on another pit very light out photo.
 other turtle still digging egg chamber -
 sprayed TC 54 (38 $\frac{1}{2}$ x35 $\frac{1}{2}$) out of pit.
 1845 T48 offshore NEP - SEP T 17, 43, 30, 19 and
 1 more 8 total + 4 in H₂O. ♂ area 7.
 T18 going up area 4 and down.
 1920 Sand point TC 1, 25, 38

Notes - Xerox several East charts to plot tracks of emerged turtles. Such as T22 on 7/11 "looking" for site.

[Faint, mostly illegible handwritten notes and bleed-through from the reverse side of the page.]

June 6 Thur

2000

1 up in A6.

2100

Turtle in area 1, and 4. T17 in area 4. 2 in area 5.
1 in area 8. ♂ Buster NEP. 1 in area 11.

2300

♂ up high - shallow pit in area 1 TC55.

Seal - Tog 756. T17 in 3rd pit area 4.Turtle up beach area 5, 1 in 5 clearing. T54
in area 5. 1 in 2nd pit area 6. In out area 7
2 pits. Area 8 2 pits and going with algae on
back. Unreadable TC (♀) in NEP. TC54 mistakenly
sprayed (♂) area 10 only on one side. TC48June 7 Friday
0000in pit area 9. 1 on beach area 10. ♀ up
area 2 from area 3 TC53. T37 area 4
up beach. TC17 coming down area 4. TC (5?)clearing in area 5. T54 in egg chamber really
swings tail. Another 1 in pit area 5.* marked
locationTurtle in ^{area} 6 laying CI738 (38 1/2 x 34 1/2 c)T56 practically no body pit. T48 moved
on to another pit area 10. ♀ area 10

0145

over log. TC53 on sand point in pit.

TC? area 5 1 pit. T54 ♀ starting a pit area 5.

TC56 36 1/4 x 26 1/2. ♀ T57 sprayed area 8

* marked
location

going out. T58 (36 1/2 x 29 3/4 s) (40 3/4 x

* marked
location

38 1/2) laying area 10 CI740. area 10

* marked
locationCI739 T48 2nd pit laying (35 x 28 s)

TC53 laid sand point. (37 1/2 x 35 1/2 c)

(35 3/4 x 26 1/2 s) CI741.

0345

Area 4 T39 changed to 391 CI742, previous

⊗

US Wildlife Hono 440. T54 going back
from 5 - 1 pit. T57 still laying on SEP
(38 1/2 x 35 1/2 c) (37 x 30 s) - T4 or 14 on sand point.

Notes - ^{stage of} Tide important for occurrence of basking ^{in certain area} w/ reef at entrance.
 Press plant samples.
 - Used Small tags -

Make barnacle counts -

several
 Turtles "snore" when laying eggs.

John captured small turtle off W-5
 with scoop-net. 3 photos by Randy - (80 1/2 x 18 1/2)
 estimate wt 25-30lb. curved C measurements -

Seal 1/2 SA 1/2 A 954 →
 Seal Adult 698

airplane flew over ~ sunset to the south.

June 7
 Friday

0545

0600

* marked
 location

1230

80

1435

1830

2200

June 8
 0030

June 7
Friday

- 0545 T5 in one more pit area 5. T54 in 1 pit area 6.
TC 54 ~~1 pit area~~ still in area 8.
- 0600 T5 laying eggs - T54 still digging. T5 ($44\frac{1}{2} \times 39\frac{1}{2}$)
*marked locator $(41\frac{3}{4} \times 32.5)$ CI 743, 744. Notch in last
marginal on right.
- 1230 SEP 5 baskers, T28 neck tumor - 4 in H.
1-T19(?) - ♂ tumor on dorsal left flipper with
a tag. Area 10 copulating pair floating
along w/ 7 ♂ around + 5 more (see?) in general area.
T12, 32*, 14, T34(?) ♂. Swan in water with
animals - male smelli genital area.
- 1435 Whale-Skate - Transported tent. lots of
blue face boobies. Seal number A797

Seals	A	SA	P
	24	11	18

Seals with very young - 2

Pits - markers in

(38)

Turtles - 19 ~ includes 9 offshore

Round - Seals	A	SA	P
5 w/ new pups	9	—	19

- 1830 area 10 - Bask 1 flipper ♂, NEP TC 18, 40
and one unreadable - SEP 9' total TC 13, 17,
19, 39 and 27. (♀ flat lighter) all ♀ except
1 male. T10 ♂ area 7. Sand point TC 38,
2200 - 36, 391 and 1. area 4 up down. TC 17 AB

June 8 sat
0030

- 1 pit - 4 baskers SEP.
area 5 1 pit and out unmarked turtle. Seal 1/2
way across island. area 6 turtle 1 pit, also
1 with good chamber. T17 moved inland
2nd pit and into third. SEP T59 ♂ sprayed - retreated.

Notes- Front flipper ^{and tail} nipping with males, often exposing the bones in limb.

June 8
Sat
0330

main
location

0600

1200

afternoon

1400

1700

1800

2000

[Faint, mostly illegible handwritten notes and scribbles covering the page]

June 8
Sat 0030

0330

T3 bosker ♂ SEP. (36 $\frac{1}{2}$ x 33 $\frac{1}{4}$) (35 $\frac{1}{2}$ x 27 $\frac{1}{4}$)
area 4 TC54 - laying 2nd pit.marked
location

area 5 turtle 1 out and 1 more pit P 60.

area 7-8 T17 still digging. T54 III (38 $\frac{3}{4}$ x 35 $\frac{3}{4}$)
eggs (33 good estimate initially) (36 $\frac{3}{4}$ x 28 $\frac{1}{4}$) CI 746. Tracks

0600

and 1 pit area 8. area 5 TC 60 (36 x 34)
(34 $\frac{1}{2}$ x 27 $\frac{1}{2}$) CI 747 - notch on second
to last marginal right. T17 out of
last pit and gone - no lay, - John observed
in area sand point 2 pits. Polychaete
worms washed ashore all along area 14.

1200

SEP - 4 bosk, 1 ♂, TC 39, 19 and ? unmeasurable. area
10 ♂ bosker TC 20 T^oP horny growth dorsal tail.

afternoon

to Tern John and Sedge return at 10:30 -

(During previous evening turtle came ashore on
N Tern beach near black top plane parking area.2 pits dug - none successful. Bosker still on
beach with sand thrown on top. Photos 50mm

1400

1700

Nikomate EL. TC 1 and 38 bosking on sand point.

1800

TC 1 and 38 sand point boskers. SEP 7 total

T 19, 39, + 4 ♀, 1 ♂ (Tumor dorsal tail) 2 ♀ with
scum like algae on tail. NEP 3 total - T33 +unmarked w/ 3 barnacles 6th right marginal ventral -
♀ ♀ ♀^{NO?} area 9 1 ♀ bosker area 10 1 ♀ bosker
shell injury above left hind flipper. Photos
of these lost 2 turtles.

2000

Turtle up on sand point - crawled around
awhile and left - several photos.

Notes:

Area A TCTA
 Area 2 turtle
 Area 7-8 TIF
 Area 33
 Area 8
 Area 10
 Area 11
 Area 12
 Area 13
 Area 14
 Area 15
 Area 16
 Area 17
 Area 18
 Area 19
 Area 20
 Area 21
 Area 22
 Area 23
 Area 24
 Area 25
 Area 26
 Area 27
 Area 28
 Area 29
 Area 30
 Area 31
 Area 32
 Area 33
 Area 34
 Area 35
 Area 36
 Area 37
 Area 38
 Area 39
 Area 40
 Area 41
 Area 42
 Area 43
 Area 44
 Area 45
 Area 46
 Area 47
 Area 48
 Area 49
 Area 50

CG no diff eggs.

To Tern early morning for painting boat -
 Returned late afternoon with Randy.
 Brisk trades - nothing for turtles on Tern.

June 8 Sat 213

233

Confirmed 4/6
 must be CI 798
 Marked location

June 9 020

MARKED LOCATION
 This added

Marked location

1830

June 8 Sat.

2130

1 on sand point - 1 in area 1 in pit - TC36 area
2 going back in water - coming up beach area 4-5
border - Turtle up in area 6 - Turtle in good pit
area 7 - 2 in area 8, 1 on bank - Bosker in area
11 - turtle coming up area 13 - TC25 in area
17 - sand point turtle in fireplace (TC15)

2330

TC 61 sprayed - ran into tent (39 1/2 x 36 1/4)
(37 1/2 x 29 3/4) TC 62 sprayed on area 1 -
round tumor under right front limb joint -
(38 1/2 x 35) (36 1/2 x 27) - TC 36 in area 1
(40 1/2 x 37 1/2) (38 1/2 x 30) FW T216 ^{Previous}

Confirmed 4/6

Must be C1748

Marked location

Area 6 turtle not there - Sprayed TC 63
area 12 - Laid - (39 1/4 x 37) (37 1/2 x 28 1/2) ✓ notch.
1 bosker area 10 and 1 at SEP. TC 25

2 covering in area 17 (36 3/4 x 29 1/2) (C1749)

High and Game

FW 1048 ^{Previous} - TC 15 area 14 1 pit and
moving inland. Unmarked turtle in 3rd pit
area 11. T62 tumor in pit sand point -

came through camp site.

June 9 Sun
0200

TC 15 in 2nd or 3rd ready to lay - area 14.

MARKED LOCATION
This designation added 8/16

Area 12 turtle laying - sprayed TC 64
(34 3/4 x 28) (36 1/2 x 34) (C1750 = 752) (2nd)

toy upset her - must toy 5 minutes after
eggs are laid. TC 15 egg count - right

Marked location

hind flipper partially missing (39 1/4 x 37 1/4)
(38 x 28 1/4) 114 eggs (C1753)

TC 65 (40 1/2 x 36) (38 1/4 x 29 1/4)

missing hind left flipper.

1830

Seals EAST	A	SA	P
	19	4	24

1000 → T62 1 pit sand point
 2200
 3330
 4000
 5000
 6000
 7000
 8000
 9000
 10000
 11000
 12000
 13000
 14000
 15000
 16000
 17000
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 100000

June 9 1830

2200

marked location
June 10 Monday

0300

1030

1830
 2 cables EAST
 A
 A2
 9
 PI
 H
 H

June 9 sun
1830

T62 off area 3. T240[♂] bosk area 11. 1♂1♀ (posterior section of shell missing, also burrows on 1st right marginal).
NEP T33, 34 SEP T15, 39, 19, 2♀ no mark
one with burrows 2nd lateral left.

2200

Area 3 2 unmarked each 1 pit. Area 5
T62 in pit, unreadable # on second
turtle. Bosker ♀ area 7. T16 area 7 1 pit.
unmarked ♀ in water area 8. ♀ bosker area 12.
T17 sand point 2 pits. Unmarked turtle
sand point - hole in back of shell to left.
T61 1 pit sand point. T16 egg count 107 eggs -
(40¼ x 37½) (37½ x 29¼) **C1 754.**

marked
location <

June 10
Monday 0130

eye tumor left.
Area 2 unmarked turtle no lay - 1 pit. Area 3
unmarked another pit. Area 6 unmarked
(notch in marginal, 2nd pit. T66 area
7 sprayed laid 3rd pit (37 x 37½)
(34¼ x 28¾) **C755.** Area 12 ♂
bosker T20 (?) ♂ tumor dorsal tail.

0300

T67 digging pit. ^{sand point} Area 3 leaving after 2 pits
none complete. Notch turtle now digging
in area 6-7 border sprayed T68.

T62 lying in water area 5. 0500 - unmarked
turtle digging on sand point 2-3 pits -
left at 0730 no lay.

1030

Sand point boskers T1, 2♀ 1♂ - 5 or 6
floating offshore. 8-9' shark come
right to water's edge chasing
small turtle - turtle swam like
hell to get away following close
to shore. Several other large sharks seen.

'beach patrol'

photos of chewed male flippers needed.

June 10
Monday
1250Basket in area 11 has section out of left side
of shell similar to TC 39 (section out of right)

1335

Where are all of the nesters between nesting
intervals. Lolling offshore, sleeping under ledges, etc. - South side and W Reef?
Sardinian turtle eyes on sand front?

1600

Seal Tag 757

Area 10 bank very steep.

'at irregular intervals seal censuses and tag
recording were conducted.'June 11
Tuesday

0245

location
MARKED <

June 10
Monday
1250

Gin Island - detached sand spit

Seals $\frac{A}{7}$ $\frac{SA}{3}$ $\frac{P}{0}$ Pits marked $\textcircled{25}$

1335 ~ 50 blue face boobies - 1 turtle offshore; 1 ♂ bosker w/ scum on shell. Entered through different spot in reef. Little Gin - 42 marked pits - 12 counted but unmarked. Turtle tracks all over island, East half subject to waves/tides. ~ 50 BKft Albat, a few BF Boobies. 2 ♂ boskers - a few turtles offshore. Seals: only 3 weaned pups; 1 SA w/ pup nose.

1600

7 boskers on sand point, TC5. ♂ w/ front flipper missing in area 12. T20[♂] area 11, Area 11 3 - photos taken. T47 offshore + 2 others, NEP T33 + 2 ♀ + 34, 40 + 2 no marks. SEP - 15 boskers - 4 offshore (15, 44) 39, 38, 18, ^{eye tumor} 16, 32(?), 42, 41, 52 ♂, 1 w/ barnacles on 1st and 5th right marginal. ♂ small, flat w/ scum-tumor on ventral side of each flipper near tagging area. TC(?) barnacle on first and fifth left marginal.

June 11
Tuesday 0000

Area 2 - turtle with partial hind flippers in chamber. Area 4 (pole) turtle coming up beach. Area 5 in pit TC unreadable - left hind flipper 1/2 missing. 2 in area 5, 1 - TC 43, other very close and unmarked. Area 6 T12 going down beach - barnacle 1st & 5th left marginal. Area 9 ♂ bosker / side TC 20 other T24 - remade 24. T38 leaving sand point - 2 or 3 pits. Area 2 turtle sprayed T69 in 2nd - cut wire.

0245

location MARKED <

T69 3rd pit getting ready to lay. T70 laying in area 5 sprayed T70 (42 1/4 x 38) (39 3/4 x 31) CI 756. T43 out of 2nd or 3rd pit, laying on board and starting to clear.

Notes - fish follow tail of seal mother
around eating feces.

* [State government aided in destruction of Hawaiian
green sea turtle population by allowing CG to
reestablish permanent habitat, raise substrate,
install structures and generally adversely
alter in every possible manner the only
Island in the archipelago which hosts
nesting animals in any numbers.

Seal Tog A 1044 SA

Recovered seal bones -

June 11
Tuesday

032
Marked
location

0610

0630

1100

1145

1300

1830

2300

marked
location

June 11
Tuesday

0330
Marked
location <

T68 going out of area 7 or couldn't climb bank.
Area 11 up-down and 2 pits. T69 laid
108 eggs (look small) ($37\frac{3}{4} \times 35\frac{1}{2}$) ($36 \times 27\frac{3}{4}$)

0610

CI 757 - ground wire around flipper
and neck - many Blk wt photos taken.
Area 5 T43 In another pit. 24 broken
eggs (no signs of development), found where
T70 covered - source unknown. T43

0630

has thick and partially injured hind right
flipper ($38 \times 32\frac{1}{2}$) ($36\frac{1}{2} \times 27\frac{1}{4}$) CI 758
old tag FW 655 ()

1100

removed due to bad positioning and unreadable
number. Baskers on sand point include
1, 69, 25, 56 ♂ and 65.

1145

area 12 T391 basking.

1300 →

T391 ($37\frac{1}{4} \times 34\frac{1}{4}$). T44 offshore area 11. T47
offshore area 12. One flipper missing ♂ area 11. SEP
T53, 41, 17, 19, 59, 39 (right shell notch), left
shell notch, ~ 12 total basking - Swan in
water, crawled on beach w/ turtles. TC100 ♂
area 5.

1830

T27 sand point. T8 south side of sand
point - first turtle seen here.

2300

T68 area 6 1 body pit. unreadable TC 1 pit w/ left
hind flipper partial in area 7 - also ~~unreadable~~ unmarked
going back - area 8 TC 12 in 1 pit. T5 (7?) area 12
crawled all over area 12; 102 pits. basker area 11.

marked
location <

area 14 in 2nd chamber, wire discouraged, 1st laying sprayed
TC 72 CI 759 ($38 \times 29\frac{1}{4}$) (40×37) wire in nest.
103 eggs. Section out of right side of shell above hind
flipper.

Notes -
 observed a Jaysan parent feeding a Blk. ft. chick
 obtain sample of small parasite barnacle.

June 11 Tue
 June 12

1010
 1030
 1100
 1142
 1800
 1830
 3300

Faded handwritten notes on page 38, including field numbers and species names like "Blk. ft. chick".

030

*

040

052
 marked
 location

063

09

120

- h/b. June 11 Tuesday Tumor on left (bigger) and right side of neck. T71 sprayed
 ♀ on sandpoint (basher or nester?)
 June 12 wed 0200 T68 left front flipper 1/2 missing - tumor on right flipper
 ventral near tag area - 2nd pit. TC73 sprayed on
 area 6 turtle U 1 or 2 pits. unmarked in one pit area 6.
 TB in 2nd pit area 7. TC unreadable (1/2 left hind
 missing) 2 or 3 pits area 8. T5(?) digging another
 body pit area 12. T74 sprayed in area 17 - 4th pit.
 0300 T73 returned to ocean. T68 (41 x 39) (38 1/2 x 28)
 leaving pit no lay - caught on wire - V notch in last
 marginal left. area 6 unmarked returned to ocean
 and sprayed T75 (one of burrows on 3rd ventral).
 TB in area 7 pit and chambering. T unreadable area
 8 ~ 2 pits - returned. T5(?) (resprayed 57) *
 (39 x 36) (37 x 29 3/4) return - no lay. previous tag
 taken to be CI 745 (can't locate data)
 T74 area 17 returned to ocean.
 0400 TC8 3rd or 4th and chambering.
 0530 marked location < TC73 area 5 laying 94 eggs (37 x 35)
 (35 1/2 x 25). Fat roll hind section hanging out.
 Tip of right flipper missing CI 760. TC8
 no lay leaving pit area 7 U (39 3/4 x 35 3/4)
 (37 1/4 x U 28 1/2).
 0630 T25 and 1 ♀ unmark basking on sand point.
 0930 TC1 (35 x 27)
 1200 Whale-Skate → swam from behind baskers
 and spray letter w/ green A through I. Animals
 alarm easy - A, B and C doubt if struck. 4
 other animals retreated before spraying. ♂ w/
 1/2 of tail missing. ♀ basker w/ section out of right
 rear shell above hind flipper. sub-total 11 + 3 more ♂

Seals 754 SA

797 A

914 A

Notes: South side of whale-spate has a lot of fist size coral thrown up on island & photos by chain of coral chunk nesting pit, shark bitten seal and me spraying bospers. SA seal with cut up jaw (healed) seen near same area observed in Oct. and June-July 1973.

Removed ^{dead} turtle from Trig.

East Seal 958 SA

Various East measurements taken with line:

Sandpoint - Nol to end - 621 feet

across ds. at Telephone pole - south to pole - 132 feet

bank to bank - 162 feet

across ds. at tip of diagonal log - 162 feet

outfall to cover tip -

Round Island log - 22.5 feet

Telephone pole lying parallel to N beach - 72 feet

End center machinery - 7 feet long.

End north machinery - 8 feet long.

June 12
Wednesday
1325

afternoon

1900

2300

to

0030

June 13

Thursday

marked
location

0300

marked
location

1015 turtles offshore.

June 11 ~~Wednesday~~ whole-skate pit count 27¹ of these 3 or 4 look obviously good.
1325 Trig pit count - 11 of these 4 " " " "

30-40 B F albatross. No sooty Terns.

afternoon No Boskers. Seals A 5A P
Tern for dinner - 22 2 2

No turtle tracks or pits.

1900 SEP T13, 15, 16, 18, 39 one each unmarked ♂ and ♀, 2 ♀ offshore. NEP T33 and ♀ unreadable. Area 11 T24 ♂, 30, and missing left front ♂. Sand point T1, 25, 10, 2 ♀ ("dug in"), 71.

Caught small turtle at East right near ^{BW} HONV. Several photos High speed Ekta dual flash. (16 1/4 x 15 1/2) (15 3/4 x 13) 4 3/8 thick Goldish reddish brownish in color.

2300 T8 in area 17 - 2 pits and moving. T27 in to area 17 from area 1 in 2nd pit. T19 area 5 0030 into 2nd pit. TC unreadable in pit area 5. June 13 Thursday 2 turtles at border stake 6-7 - no pits yet. Unmarked in pit area 8. ♂ 1 flipper bosker area 11.

marked location < area 12 in 1 chamber sandy country, sprayed TC 76 (39 1/2 x 36 3/4) (37 1/2 x 29) CI 761

140 eggs time - 25 minutes. Cluster of 4 barnacles 2nd lateral left - 2 on third lateral left.

Cluster of 6 on 2nd marginal right. Area 12

0300 T34 going down beach. Bosker on sandpoint. marked location < only 1 turtle left on South side - area 7. Bosker ♂ still in 11. TC 74 laying area 12 CI 762 (38 1/2 x 34 3/4) (36 1/2 x 26 1/2)

T27 area 17 total 4 pits. T8 in chamber total 5 pits.

notes - Turtles ^{often} ^{head} face into wind for nesting (to keep dirt out of eyes?)

Tide high late in the evening has been accompanied by turtles finishing up later in the early morning hours.

6/13 0700

♂♀

Copulating pair just off sand point - 1 photo - no other animals.

Unsuccessful pit in area 8 due to beer bottles buried in one area.

John and Randy C. depart - Randy S. arrive

03
June
Thurs
marked
location

marked
location

marked
location

173

♂♀

2400

June 14
Frid

0130

marked

location

marked

location

0300
June 13
Thursday
marked location

TC8 still digging. ^{SUNTRISC} TC78 sprayed, laying in area 6. Section of shell over left hind flipper missing. Barnacle on first right marginal. U (35 1/4 x 28) (37 x 34 3/4)

marked location

CI 764. ^{SUNTRISC} TC71 covering on sand point - 4th pit (39 3/4 x 36) (38 1/4 x 28 1/4) previous tag U.S. Wildlife 976

marked location

CI 763. ^{SUNTRISC} TC1 2nd pit - laying closer to S side of sand point CI 765.

1730

area.

♂

area 14 T391 basking. T24 ♂ area 11, also old yellow ♂ and 1 unmarked ♀. Copulating pair off area 11 6-8 other ♂ in attendance. ♂ observed trying to mount ♂. NEP T33, 18♀, 65, 40, 9, and 2 unmarked ♀. SEP T43, 54, 39, 66, 12 and 2 offshore. Male with 5 barnacles on 2nd left lateral-tumor under left flipper near tag area. Copulating pair off sand point (same area?) + 3 around. one ♂ basking and T25.

2400

T12 in pit area 4-5. 2 turtle unmarked areas 5-6 in pits. 2 unmarked in pits area 6. 1 in area 6. Basker ♂ area 9. T34 in pit area 12. ^{GROUND WIRE} 1 coming up beach area 12. U-turn area 13 1 pit. T unreadable above boat moving 1 pit. T8 area 17 1 pit chambers. unmarked area 17 1 pit. 1 unreadable sand point 1 pit.

June 14
Friday

0130

marked location

T8; unmarked area 17, 2nd pit each, unmarked sprayed T79 laying (38 1/2 x 34) (31 x 29) v-notch lost left marginal, right hind flipper 1/2 off, CI 766. T34

marked location

area 12. Still in ground wire pit. (34 x 28 1/2) laying CI 767 (already has 718) v-notch lost on right - 2nd to lost on left.

Notes - Movement on land during nesting - eg #pits in different areas.

tail off in captive animals, important

0130
June 14
Friday

0230

0500

daylight

marked location

3 eggs

offers do after check

Seal 756 - 1/2 adult

possible - marked location

marked location

1330

1400

♀

0130 →

June 14
Friday

45

area 12 animal 1 pit and gone. Unmarked in 1 pit area 7.
Unmarked in pit-chamber area 6. 2 in pit unmarked
area 5. T9 area 5 1/2 way in. unmarked in 1 pit
area 4, also a pit below veg zone from this animal.
T17 in another pit sand point.

0230 →

T8 area 17 1 more pit and unmarked sprayed T80
also another pit, T17 another pit sand point.

0500 →

Pushed by 7/7 on 7/7

daylight

marked location
3 eggs

appears doubtful
after recheck *

T17 one more pit sand point. T80 area 17 another pit,
left hind 1/2 missing. T8 two more pits no lay
returning to water so tagged C1768, 3
eggs left on tracks buried at marked
location near tent. Pit in area 15 looks
good - may have been miss (?). Wandering
unmarked area 6 sprayed T81 (39 1/4 x 36 1/4)

(37 1/2 x 28 3/4). 1 unmarked area 5 in a pit. 3 sets
tracks out area 5. T17 moved on to another
pit right next to tent (area 17). Pit in area 4
looks like a good one (?) tonight (?). T80
returning from pit to ocean - no lay - so tagged
C1769, tip of right front flipper missing (37 x 37 1/2).

possible
marked location *

marked location

T82 sprayed area 5, laying, (sun starting to rise)
U-notch last (also V 2 1/5 to last??) left marginal,
(38 x 34) (36 1/4 x 27 1/4) C1770. T17 out of pit (36 1/2)
by tent, returning, no lay (36 1/2 x 31) (38 x 37 1/2)
C1771. V-notch last marginal left.

1330

NEP T16 and old yellow ♂

1400

T15 offshore area 14. 1430 - T391 area 13 most of afternoon.
T68 offshore area 13. 1500 - T27 and unmarked
on sand point. Moved to La Perouse - observed turtle at
East end reef flat and East Cove close in to West Reef.
Copulators pair #1 off detached sand spit.

♂
♀

Notes - Basking could prove to be extremely hazardous until a minimum size is reached. dangers would include crushing from seals and other turtles. It is unknown if these problems would be greater than the in water equivalent time exposed to sharks!

Nesting procedure similar to "programed machine".

Most of sooty tern chicks flying - Little bird damage from turtles because of stage of maturity - able to get out of the way, except for shearwaters in burrows plus their eggs.

Seal pup alone almost at end of sand point - moved to previous location before outfall - mother not identifiable.

June
Friday
193
230

June 15
Sat
marked
location

marked
location

030
marked
location
06
marked
location

1310

1500

June 14
Friday
1930

SEP T36 and 10[♂], NEP 1 ♀ no mark and T21 ^{back} sprayed
unmarked directly in at stake area 5, also another
2300 in chamber area 5. T21 ^{back} in pit area 6[♂] border. T22 ^{back}
area 12-1 pit and moving. T2 (?) ^(6???) area 12 clearing.

June 15
Sat
0100
marked location <

1 up beach slope area 14. up down pit area 17.
unmarking in 2nd pit area 14. T22 (39 1/2 x 29 3/4)
laying area 12 (C1 772 (previus 715) 3rd pit.
T2? in 3rd pit area 12. T81 returning from
area 7. T21 in pit area 7. T83 sprayed area 6
marked location < gravel pit (assumed she layed?) (C1 773 (37 3/4 x 35 1/2)
(36 1/2 x 28 1/4). T? area 5 moving out of pit.

marked location <

T17 area 5 1 pit. Area 14 turtle returned-
2 pits total, 2nd very hard substrate (concrete?) after
body pit. T2? back to ocean-3 pits total
no lay. T9 laying area 6, (37 1/4 x 28 1/2)
marked location < (C1 774 (previus 719) T17 in another pit area 5.

0300
marked location <

0600 area 5 unmarked turtles sprayed T84 laying 145
marked location < eggs counted however ~ 3 or 4 broken during coverup.
(38 1/4 x 36 3/4) (37 1/4 x 29 1/2) (C1 775, right
hind flipper 1/2 missing as well as left front 1/2 missing.
Small pock mark on 3rd right lateral, white half
dollar size coral spot on 2nd left lateral, very
little body pit and head into hind.

marked location <

1310

Seals A SA P 5 small turtles
20 2 20

together over offshore reef area 5 - scum - algae on
backs - all look light colored brownish. No boskers
SEP - NEP 10[♂] 2 TC offshore. T18 and and 1 ♀
unmarked - sand point.

1500

Noticed offshore - saw T46 - large UVA off S reef.

2300

In Hawaii?

Notes - Wet bird smell.

→ Remora seen on turtle - what happens to it during nesting?

Start of rain →

marked location
June 16
Sun 01

0900 to Tern Island for supplies -

Phone patch w/ Palmer at 1600.

Bob ~~Irresen~~ Irresen

Seal crushing - destruction of birds, Nood.e eggs etc.
Island - bird feces releases ammonia after heavy rain (?)

marked location

Interactions of Birds, Turtle, SEALS

0400

marked location

0600

1900

1900

June 15
Saturday

49

SEP - 2♂s for several hours this afternoon, T10 (dug in) and 1 unmarked w/ right front flipper tip off.

2300

Turtle starting 1 pit-chamber area 3. T33 departing area 5. 4 turtles total entering or already in area 6-7, 2 pits - 1 below bank.

→ marked location < June 16 Sun 0100

1 turtle area 8, 1 pit. T8 typed ^{prev. obs} C1768 - 4 pits - laying area 13.

area 6 turtle (unmarked) in another pit below bank. T75 area 6 baracle on 3rd central right, nest to unmarked in 1 pit.

marked location <

1 returning area 6 unmarked. Area 8 ^{gold color} turtle returned. Area 17 T27 7 pit only laying 106 eggs - notch in last marginal on each side - V notches out of inside of each hind flipper - prominent in left. C1776.

0400

T21 in pit area 5. area 6 turtle 1 more pit low on bank - departed - no lay. Unmarked area 6 leaving a pit-sprayed T85 left hind flipper, moon-shaped.

marked location <

T40 area 11 (8) (FWT6 - C1 tog not on as for as would like to see it) (38 x 27 3/4) 3 pits and laying - exact location uncertain.

0600

Sand point 2 top-down tracks 1 pit. No other turtles on island.

1900

SEP T54♀ (5th marginal on right - 2 Baracles ventral) (left hind flipper, V notch) T28♀ back(?)

Sand point T18, 1♀, 1♂ - also 1 ♀ with badly deformed left section of shell (notched) emerged while observing.

Notes- turtles emerge at tidal time
of best advantage for that evening?

Frigate on cloths line right outside
tent entrance - 2000 6/17/74

Seal tags A909 and A923
both between SA and A

June 16
2300

marked
location
June 17 M
0045

0330

Marked
location

marked
location

↑
Rain
5-5

↓

marked
location
063

marked
location

ENTERED
NO. 19

MOVIES
Taken -
JUL 1978

1200

1800

June 16 Sun
2300

T39 in a pit area 5. T33 in pit near 39. T46 area 6.

marked
location
June 17 Mon.T23(?) returning area 8: also unmarked in pit area 8.
Unmarked area 9 sprayed T86 laying (39 1/2 x 39)
(38 1/4 x 30 1/2) 1 pit, **CJ 778**. T17 on sand0045 ^{check and}
_{no to capture}
possiblepoint. T33 returned - may be good. T39 still digging -
T46 still digging. T47 up down area 6. T17
area 17, pit. Turtle in chamber area 4 T21

0330

Marked
locationlaying 126 eggs **C1779** (40 x 36) (38 1/2 x 30) Previous
tag - V.S. Wildlife 391, split right hind flipper.marked
locationT39 laying area 5 2nd or 3rd pit, V-notch 2nd
to last marginal right (37 1/4 x 28 1/4). ^{measured}
_{behind healed shell}
_{injury}Rain
5-5 WT46 wandering around, resprayed, 1 pit no good due to
ground wire. Turtle departing area 6, hole in left
hind - T2^{back}. Turtle T23^{back} area 7 same as

↓

last evening bosker. 1 new pit area 8. Unmarked
starting body pit area 12. T17 area 17 (previousmarked
locationtag **C1771** covering (?)

0630

Area 7 T23^{back} 1 pit previous tag **C1716** small tumor
dorsal right flipper where tag would be - flap missing.marked
locationUnmarked laying in nice chamber area 12 - 106 ± 2
eggs - 1 egg broken (2nd to come out) sprayed T87
C1780 (39 1/2 x 39 3/4) (37 x 29 3/4) (left hind 1/2

ENTERED

NO. 193

Movies
Taken - TC 14
June 1982missing and right deformed from injuries) ^{1/2} of
abnormal plate count: 5 laterals left,
last split in two - and 6 centrals - last
split central.

1200

3 pits on sand points.
Sand point boskers - T36[♀], 56[♀] and 4(2)[♀].

1800

SEP T17, area 7 T82.

Several up at twilight along both sides.

Notes - Sections of areas 7 and 8 have banks that are probably too steep to ascend same for 10.

Not too steep

June Mon 230

marked location

June Tues 0130

0345 marked location

0445 marked location

1400 ♂♀

Large shark in cove at ~ 0900. Retrieved seal pup from end of sand point - constructed holding pens.

adult tag A209

June 17
Monday
2300

marked
location

T47 area 1 just entering vegetation. T46 area 6
1 pit-chamber looking good. T2(1)(21)? below
vegetation zone 1 pit area 7. T48(?) coming up
bank of area 9. Turtle going up bank of
area 13. Turtle in 1 pit area 16 (came
up by boat during twilight) sprayed T88
($38\frac{3}{4} \times 35\frac{1}{4}$) ($37 \times 27\frac{1}{2}$) CI 781 laying.
T47 crossed over to area 17 - in gpt.
T41(?) or 44(?) sand point 1 pit and return 0100 no
lay. ^{area 6} T46 (post-centrals turned up) digging
chamber then covering - confused - no lay.
Turtle coming up beach area 6 same

June 18
Tues
0130 -

0245
marked
location

T47 area 17 laying. ^{v-notch 2nd}
to last marginal right. (previous CI 736) -
^{not checked}
2nd additional tag CI 782. T46 wandering.
T18 ($34\frac{3}{4} \times 28\frac{1}{2}$) coming out of area 6.
2nd to last right marginal and left
post central notched. T85 wandering
in areas 5-6.

0445
marked
location

1400
♂♀

T85 area 6 ($35\frac{1}{4} \times 27\frac{1}{2}$) ($37 \times 36\frac{1}{4}$)
left hind flipper shaped
2 barnacles on 5th marginal left. CI 783,
laying completed. (♂'s nipping at flippers)
To Whale-Skate - observed, photo and swam with
copulating pair and from 2-4 following males -
once again saw ♂ attempting to mount ♀. 2 ♂ w/white
scum on carapace. 1 ♂ with tag on right. Tail penis
did not seem to be entering ♀ cloaca (?).

Seals

A
43

SA
14

P
15

Notes - appears to be little organic matter on W-5
 (compared to East) except by South end in from
 border-shoreline of coral chunks - I believe this
 to be the best (greatest chance for success) nesting
 ground on the island. Sand areas when moist are also good
 for pit excavation - more rain on W-5? Loran Sta regards for East?

(Numerous) Ghost crabs all over W-5
 - only small island

What is the effects of wedge tail shearwater burrows
 into egg complement(?) Open way for better access
 by ghost crabs?

Nesting turtles on the move cave-in and trap (destroy)
 shearwaters in burrows regardless of stage of
 maturity. More shearwaters out at night therefore
 less damage(?).

NO. of emergences per night vs number of successful nesting

Rapid low pit NO. nesters vs long high pit no. nesters.

Animals seldom seen basking vs frequent baskers

Turtle Data Collecting - Record previous CT on layers - Note V-
 notches - prominent barnacles - injuries - tumors - area - NO. of
 pits - If unsure of TC, go on to ^{next} consecutive and note prominent.

1st objection - ^{possible} reintroduction of disease if subsequently released.

2nd objection - "he don't know if it's legal" to remove to captivity permanently

Who are seal experts?

Phone latch with Iversen 1430

Seal information - Ziegler

Zoos - San Diego

Others

Kennyon

N. Underwater Test Center

Kridler

assemble Monk literature - blk & whd photos

Seal pathologists -

Sekora ^{will he help?}

D. Olsen

Furumoto, (?)

Wayne King - Bronx Zoo

Defenders of Wildlife

NMFS Wash.

Newspaper

June 18
Tues
1400 →

Pits (32) (marker not placed in 3)
observed A and C avocado.

Turtle - 8 ♀ baskers 2 ♂ baskers one w/ right hind section missing above flippers. ~ 6 offshore sex unknown. * TERN - (No tracks on beach)

1830
2400

Returned to East-T18 and 36(?) basking on sand point. Turtle going up beach area 2. T46 and unmarked in area 5-1 pit each - 1 other pit. T18 in 1 pit area 7. T32 in 1 pit and at same site as previous nesting (area 7). T4(3) or (9)? area 9 ascending bank. Gold: turtle with V-notch 2nd to last left marginal, 1 pit area 10. T44 1 pit and moving in area 11-12 by log.

June 19
Wed.
0130
marked location

Area 10 turtle covering nest - last sprayed T89 (38 1/4 x 34) (35 3/4 x 27 1/2) C1784.

T32 still in pit - looks like covering. TC unrecordable up beach but retreated violently. Area 4 going up beach T3(?)

0220
marked location

T37 up down (area 4. T32 (34 3/4 x 26 1/2) marked as likely lay.

0415

T54 area 5 1 pit. area 1 turtle 1 pit depart via N sand point.

0630
marked location

T54 area in a pit covering (?) - likely lay - (previous 746) additional C1785.

1400

Trig Island
Seals $\frac{A}{8}$ $\frac{SA}{3}$ $\frac{P}{2}$

Tag 1/2 SA 1/2 A 906

Pits (7) one problem with pit counts to take into consideration is the fact that when turtles crawl into previously dug pits they will instinctively start digging.

Notes

Question after tagging (bad nesting experience) could some animals change nesting site to other islands?

Sand point is obviously a successful nesting location. why was this not identified last year? Could moisture this year be higher therefore providing less slippage? Rainfall or moisture must be greater in that state of vegetation is lush.

June 19
Wed
Trig 140

2330

June 20
Thurs
0211
marked location

040
marked location
053
marked location

063
marked location

June 19
Wed

Trig 1400 cont.

Basking turtles - 4 baskers - 3♀, 1♂ with tumor ^{Med size 57}
on left front flipper in general area of tagging spot.
2 offshore. To Terns and return to East at
1830. - N&P and SEP 5 total - T82, 8(5?), 1 unmarked,
1 unreadable, 1 w/ 5 barnacles on 2nd left lateral.

2330

T53 in fire pit. Turtle coming up bank area 1.
T17 in pit area 5 (are there two 17?) 7(?) 5
2nd pit area 5. Unreadable area 5 stake-1 pit.
T65 returning area 6. 1 coming up bank area 6.
Tracks coming in area 9-1 pit. 3-4 pits on
sand point (UT56 seen earlier) T53 out of
fire pit and wandering - returned to ocean.

June 20
Thursday

02100

marked as likely

(subsequent ID)

T56 in fire pit, and 2nd pit.
Unreadable (C1726) ^{T42} covering (?) at stake 5
[This is T42]. Another unreadable
(T5) big and moving inland area 5.
T58 motionless in area 8.

0400

marked location

T56 covering by fire pit (previous 1738) (area 1)
additional C1786

0530

marked location

T5 covering area 5 (previous C1744) ^{39 1/2}
additional C1787. 2nd to last right
marginal and last left notched (44 1/2 x 39 3/4)
also notched inside hind flippers as others
observed.

0630

marked location

Avocado H covering on sand point
tagged C1788 (38 x 37 1/4) (36 x 29 1/4).

marked location

In process of covering H dug into
unmarked egg nest - ~3 egg broken -
embryos size ~ approx.

notes -

Phone patch Monday ^(6/24) evening indicated
 seal died Sunday night.

Aerial Survey 1200 ^{6/27}

	Turtles	Seals
Disappearing (cut in half)	0	35-37
Little Gin	0	5
Gin	3 (in lagoon)	5
Sand spits	2	2
East Mullet	3	26 (see next page)
Round	0	8
Whale-Skate	7	7 (see next page)
		35-40
Trig	0	13-15
Shark	0	16
Tern	0	1

Note: EL malfunction w/ coupling to auto light meter
 several bad photos taken & discarded

Apparently many pups close to mother are not
 identifiable in aerial surveys.

20-30/16 Turtle seen over shallow
 deep bottom

June 10
1935

Barachaded tent and transferred seal to Tern. Departed
FAA for Honolulu.

June 27

Depart FFA 8:35^{For FFS} w/ new medical corpman.
Pilot Tom R. ~~ROSE~~^{SP} and Marmon. ^{Davis} Sann hecl
boat 1630 TO East Is via Round and Mullet

→ (Total 24 seals on round). Tent in good shape,
island about the same except for noticeable erosion of
N bank of sand point. Report S-SE, at times
strong with some rain for past week. Straighten
camp site and at 1900 hours walked around
island. Pits noticeable in area 3, some 4 and
5-6. Island still very green. Many juvenile
plumage sooty chicks and adults still left. Blk.
feet fewer, little fuzzy left, "grouping" present.
Seal census taken as follows:

A	SA	P	
16	5	17	= 38 TOTAL

includes 9 seals w/pup - 4 are brand new
since leaving (1 by tent; 2 area 5-6; 1 area 8)
Adult seen (w/ portion of upper lip missing - previously
photographed on Ingor whale-skate. SA reguintated area 9
very yellow, few bones. Very fat seal pup area 1-2
blk & wht. photo. New pups look very short, small.
Turtle beaching (basher?) ♀ area 6 TO present.
-THI seen on sand point upon arrival.

SEP - 4 total 2 ♀ (T54 and ?4) 2 ♂
(1 with many healing nips on front flipper - photo; 1 with
tumor in both eyes, left flipper, 5 barnacles 2nd
left lateral - 2 photos) NEP - T8, T? (hole in
precentral)

20-30 16 Turtle seen over shallow
reef between Tern and Round.

age)
age)

Notes: Lots of small gnats.

Census seals by sex. (very difficult to do)

- Sooty terns ^{adults} appear more abundant, especially areas 5, 6, 7 and 13-15; No eggs seen.
- wedge-tail shear water eggs seen.
- but seals ridge mother and visa versa-

Color photos taken of 20 in 182, also shark bite and emaciated condition (bail?) of seal pair.

Shark bite article - note.

photo of many seals around campsite - ∴ presence O.K., disturbance not O.K.

"Ecology and population status" "past, present and future"

"basic ecological information" "wildlife survey"

"inter-relationship of animals with their habitat"

"ecological and behavioral studies"

Page 6 of 1st Animal Kingdom

"related"

"Periodic aerial censuses"

"Population estimates and trends"

"Evaluate the population"

one night on Gin - Little Gin?