

For use with Book 1

EAST Island
Turtle Project 1973
Book II

HAWAII Institute of
MARINE Biology -
COCONUT ISLAND

BALAZS

LIBRARY OF
GEORGE H. BALAZS

52P

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NO. 1130

COMPOSITION BOOK

FAINT RULED WITH MARGIN

120 PAGES • 9½ x 7½ IN.

No. 1130-P Has Numbered Pages

S. E. & M. VERNON CO., ELIZABETH, N.J. 07208
DIV. OF THE MEAD CORPORATION

T253 April 73

T 736

372 US wildlife (July 70)

699 " " (June 68)

T212 no found

T254 April 73

Yerkes
7/26/09

Notification must be given to
C.O. on Wednesday
to leave on Friday flight.

* Pick up per diem check
on the 10th (Approx) and
Bring to FFS.

Note: bad travel condition

EXERCISE EXTREME CAUTION
IN HANDLING OR TRANSPORTING
RADIO

Always
Check
FOR THE
ANTENNA.

Walk East once every 2 hours.
 Spot tracks - follow Jimland,
 look for turtle and remember
 of pits. If not digging body pit,
 I do not spray. If digging, (carefully
 spray nest consecutive numbers.

Note time and area or side.
 Keep light to a minimum (hold
 hand over if necessary).

When animal has completed
 nesting and starts to move
 toward sea - turn and tag.

Right flipper - F. and W. Left flipper
 C.I. If not feasible, tag
 during what you consider to
 be the very final stage of
 nest covering.

Turtle can be conveniently measured
 during any of the latter stages
 of nesting (carapace width and
 length). Note previous tags,
 numbers, injuries or any
 other significant fact.

on nighttime walks ground note
 turtle basking or starting to
 come ashore, etc. Keep light off
 turtles, as much as possible
 so they don't retreat.

on your pad, always indicate time of walk. ~~Transfer~~ Transfer all pad info to this book first thing in the morning so it is not forgotten! Be sure and note time turtle completes nesting. also of major importance is how many pits were dug for each animal.

Example - Turtle comes in, digs 3 false then digs "real" pit -
 $3 + 1 = 4 \text{ Total}$

Note scratch marks in paint to signify copulation.
Seals come first - no lights on them and give wide berth walking.

Make total census at 6:30^{PM} (approx) every other day - include -

Turtles - male female

Basking

Tagged?

IN water

Seals

adult

subadult

pup

I would rather not get info on
 sex of baskers or tag present
 if it means making animals
 retreat into water.

Other Islands (date to be given by
 me later)

Trig - Whales - skate

Redrag like - where crossed,
~~follow~~ follow inland and count
 number of pits dig. Be as
 realistic as possible.

Census - (From land while walking)

→ Turtles -
 Basking
 In water
 → seals - adult sub A sub
 Injuries

Significant changes in ~~the~~ weather.

Look for spray animals on
 other islands. Note numbers
 and scratch marks.

Count eggs when falling into pit
 when convenient.

Always carry note pad and pen.

Return to Tern every other day.
Census seals, turtles, on Tern.
Look for tracks when approaching
Island.

Give radio schedule and ETA
to operators -
Notify of return after securing
boat.

Run 20hp every 3 days for 10-15
minutes.

If you must stay overnight on Tern -
use both chains on boat.

Record oil, Gas consumption.
Keep tanks full.

Foot Ware in Mess Hall -

also cleaner shirt and pants (shorts)
if possible.

5

Treat everyone with "kid gloves" as we are the guests.

* No coast guard, guests or otherwise except when Baloyz is here. Check with him.

Keep meal record.

names -

C.O. Mr. Trainer
Chief Mr. Webster
Radio Contact Mr. Gary Klinkman
Construction Supervisor - J RAY WAI

See Mr. Klinkman

Call me on the 18th or 19th
(Monday or Tuesday) to
keep me informed. (between noon and 4:00pm)
946-1760

or if not in
Call Dave Olsen 261-9781 (Bureau of
Sport Fisheries and Wildlife)

* In Emergency or High Priority
Info concerning Turtle
Project - See Chief for relay
of message via Coast Guard
Equipment

MESS HALL HOURS

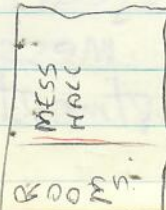
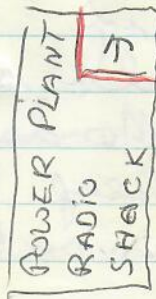
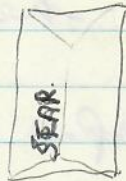
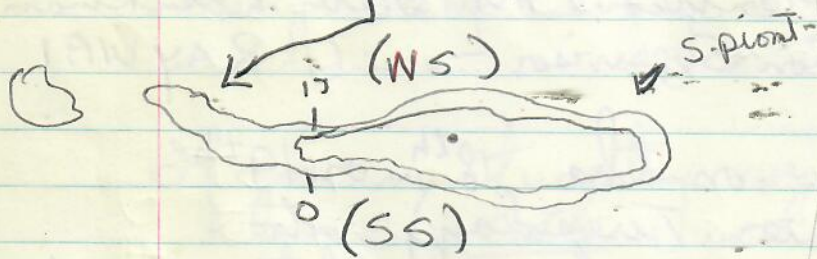
~~B - 6-8~~

S - 11:30 - 12:30

~~D~~

OIL AT SEAR

From stakes 0 and 17
down is called the sand
point



6/7/73 - TEAR ISLAND - 11:30

Seals - 2 sub-adults

6/7/73 - EAST ISLAND - (SAND POINT)

5:30 TURTLES BASKING - (NS.) (4 ♂, 1 ♀)

One of the males had a lumpy shell (SS) - 5 ♂, 5 ♀.

SEALS - 17 adults, 3 sub-adults, 21 pups.

Note: 5 sting ray three feet or less traveling on the north side of the sand point headed in the direction of the main island.

9:30 PM TS 10, first pit. [SS], one male basking on south point. Two turtles in the water on NS.

10:30 PM TS 10 on third ^{3rd} pit inland.

11:30 PM TS 10 on fourth ^{4th} pit inland.

TS 11 on first ^{1st} pit inland [SS]

Male still basking on south point

12:15 TS 10 - Fish and wildlife tag # T253 off of fourth ^{4th} pit.

6/8/73 TS 11 on second pit inland.

1:00 AM TS 11 egg pit about $\frac{1}{2}$ full

TS 10 on fifth pit.

Male still basking on south point...

1:30 AM TS 10 egg pit being filled.

TS 11 - CL. $37\frac{1}{4}$ - CW $26\frac{3}{4}$ - Covering egg pit. TS 12 ashore at 1:30 headed inland. SS

3:00 AM TS 10 CL. $35\frac{1}{8}$ CW $26\frac{3}{4}$ - fish and wildlife tagged already # 253, HIMB # 636

TS 11 - FW tag # 308, HIMB # 638 this turtle

6/8/73

3:00 AM was caught up pretty badly in wire which was exposed as a result of the digging. Male booster on south point was tagged ~~TS 10~~ CW $26\frac{1}{2}$, CL $32\frac{3}{4}$. HIMB TAG # 637. Note there was some ^{yellowish} crude on flippers.

3:30 AM TS 12, CL $36\frac{1}{4}$, CW $26\frac{3}{4}$ left 3rd. pit motionless. This turtle didn't complete a nest.

6/8/73

10:30

4:30 Check revealed no new activity.

SEC. # 2.
SOUTH SIDE 1

TS 10 came ashore at 9:30 AM and dug 5 pits 4 of which were never completed. 1:30 AM her egg pit was being filled. 3:00 AM CL = $35\frac{1}{8}$ CW = $26\frac{3}{4}$ previously tagged by fish and wildlife # 253, HIMB # 636

6/8/73

10:30

SEC. # 6

TS 11 was working on her first pit at 11:30 on the south side inland. 12:15 she was on her second pit inland. 1:00 AM the egg pit was being filled. 1:30 AM she was covering egg pit. CL = $37\frac{1}{4}$ CW = $26\frac{3}{4}$, fish + wildlife tag # ~~308~~ HIMB " # ~~638~~

6/15/73

12:15

NOTE: This turtle was entangled in wire exposed in digging.

(NO TAG)

SEC. # 6 TS 12 came ashore at 1:30 on the south side and headed inland. 3:00 AM on third pit. 3:30 didn't complete nesting CL = $36\frac{1}{4}$ CW = $26\frac{3}{4}$, HIMB # _____ F+W # _____

Male basker - 9:30 basking on south
point till 3:00 when tag HMB # 637
CL = $32\frac{3}{4}$ CW = $26\frac{1}{2}$ gone at 4:30 AM.

6/8/73 Mullet Island.

10:30 turtles basking 1

seals $\frac{A}{2}$ $\frac{SA}{1}$ $\frac{P}{1}$

6/8/73 Round Island [big log]

10:30 turtles basking 1

seals $\frac{A}{2}$ $\frac{SA}{1}$ $\frac{P}{1}$

* Length, width and Tag number -
put on separate line.

6/15/73 Census of seals and turtles
on all the Islands, from the air.

12:15 Disappearing Is. TB - ~~0~~
TW - ~~0~~

seals: Adults + sub adults - 30
~~0~~

Gun Is. [smaller than little gun]

turtles B - ~~0~~
W - ~~0~~

Seal A+SA - ~~15~~ 8
P - 2

Time

T+G on reef between

Little Gem Is.turtles B — ~~1~~

W — 1

seals. A+SA — 7

P — 1

EAST Is.

turtles B — 3

W — \emptyset

seals. A+SA — 17

P — 2

Whale-Skate Is.

turtles B — 6

W — \emptyset

seals. A+SA — 25

P —

Trig Is.turtles B — ~~1~~W — ~~1~~seals. A+SA — ~~18~~

P —

Term Is.turtles B \emptyset W \emptyset

seals. A+SA

P

Round Is.

Turtles B -

W -

Seals A+SA - 6

P -

Mullet Is.

Turtles B 2

W

Seals A+SA

P

Shark Islet

Seals 13

P. 1

It was very difficult to differentiate between pups and adults this is a rough count, because of the height and speed.

Wheeler-CORBIN

6/15/73

EAST ISLAND

4:30

Turtles basking 10 (including TS #s 12, 19, 20)

Water 2 (20-40 lbs)

One of the turtles in the water was almost definitely a small hawksbill.

It had a very light colored shell and the head appeared different from greens in that it had white patches over its eyes.

8:30pm turtles basking 1 NS SOUTH POINT
 water 1
 Seals adult 16
 sub adult 3
 Pup 11

9:30pm Two turtles came up on the NS of sand point TS 24, TS 25. TS 24 dug #1 pits before returning. TS 25 dug 3 pit before returning. TS 26 came ashore on SS section 4, and dug 2 pits and a complete nest.

6/16/73

12:45am TS 26 SEC. 4 on lady pit.

1:15am TS 24 NS sec. 17 on second pit.
 TS 27 NS sand point
 TS 28 " " "

3:00AM TS 24 in final stages of nesting
 Straight CL - $34\frac{1}{4}$ Straight CW - $26\frac{3}{4}$
 CL - 36 CW - $34\frac{1}{4}$

Tag No: HIMB # 652
 F+W # 315

TS 26 nest completed and animal had returned before we could tag or measure. her pit appeared complete.

3:30 TS 24 back in the water.

Composite

TS 24 came up on the NS of sand point and dug 1 pit before returning (9:30). At 1:15 she reappeared on the NS sec. 17 and was on her 2ND pit. At 3:00 she was in her final stages of nesting. 3:30 back in the water.

straight Ck = $34\frac{1}{4}$

" CW = $26\frac{3}{4}$

Ck ————— 36

CW ————— $34\frac{1}{4}$

HIMB Tag # 652

F#W " " 315

TS 25 At 9:30 it had come ashore on the NS sand point and was on her ~~third~~ 3RD body pit, she returned shortly after.

TS 26 At 9:30 it had come ashore and was moving inland, it came ashore SS sec. #4, at 12:45 it was digging a body pit having already dug # 1 ~~the~~ pits. At 3:00 nest completed ~~and~~ and she was already in the water before she could be tagged.

TS 27 AT 1:15 AM came ashore NS sand point, and had returned at 3:00 AM

TS 28 at 1:15 AM came ashore NS sand point, and had returned at 3:00 AM

6/16/73 EAST ISLAND

8:30 AM. turtles copulating in lagoon near whaler mooring.

6:15 PM Turtles basking. 11 females, 1 males.
TS # [8, 12, 18, 19, 22] - also one females had no number just a line painted running the width of the shell. ^{TS 1}
all number scratched.

SEAL adults 17

sub adults 6

pups 18

9:00 PM TS 22 came ashore SS sec. 7 leaving 1ST pit
CL 35 ³/₄ CW 33
SEL 34 SCW 27 ¹/₄

TS 14 came ashore SS section 8 on her second 2ND pit and mooring (repainted black other # very scratched)

6/17/73
12:00
Midnight

3:00

4 turtles were in the process of coming ashore none of these had any TS numbers although one had a line running the width of the rear end of the carapace. (Gray) ^{4 TS 1}

SS Sec. 8

NS Sec. 9

NS " 12

" " 14

6/17/73 *

12:00
Midnight

TS 29 fish + wildlife tag put on upside down so we were unable to get the number without upsetting the animal

CL $39\frac{1}{4}$ CW $35\frac{1}{4}$

SCL $37\frac{1}{4}$ SCW 29

On her 4th pit

TS 30 NS sec. 9 on her second 2nd pit just starting

TS 31 NS sec. 10 1st pit

TS 32 NS sand point

3:00

TS 33 NS sec. 3 2nd pit just about completed.

3:00 AM

TS 33 CL 39½ CW 36

SCL 37½ SCW 29 *

HIMB TAG # 648

F+W TAG already present 362 ^{Brown} upside

6/17

9:45

1

11:00

The only other turtles ashore was on the NS sand point and she hadn't dug any pits of her own. She was crawling into old pits. She reached the ocean before we were able to paint her.

TS 14 SS SEC. 9 at 9:00 dug 2 pits and moving. Number repaint extremely scratched. She had left by the next round.

TS 22 ashore SS sec. 7 leaving 2ND pit at 9:00

CL 35¾ CW 33

SCL 34 SCW 27¼

had left by next round after her ~~second~~ 2ND pit which was incomplete.

SEE NOTE ON 4 TURTLES page 15

SOUTH
SIDE

6/17/73 WHALE - SKATE ISLAND

9:45 Am Turtles Basking 1 ♀

1 " in Water 1 ♀, 4 unknown, sex

11:00 Am All of these had clusters of barnacles on their shell. The ♀ basker had one diameter of not less than 3 inches.

Seals A - 25

SA - 9

P - 12

one of the pups very small couldn't be more than a week old.

SOUTH
SIDE

Turtle Tracks 9 10 had come (TRACKS) ashore digging a total of 23 pits - range per animal (0-4)

The beach on the south I estimate 500 large holes crab-holes recently dug.

Turtle tracks North side 4 set of tracks only one set ~~lead~~ led to a series of 3 pits while all the others came up but turned back.

Weather Condition

Wind changed from relatively
NE to E poor weather conditions
swell not very bad.

6/17/73 TERN ISLAND

1:00 AM ^{pm(?)}

Turtle tracks 2 sets one
set lead to ~~one~~ 1 body pit
then back to the ocean (West side)
The other set lead to 5 pits
newly dug 2 of which were
was exposed in digging.

Seals A - 3
SA - 1
P - 1

6/17/73 TRIG ISLAND

4:15 PM No turtles basking or in the water

SEALS A - 7
SA - 0
P - 0

Turtle pits: NS 1ST set of tracks revealed
4 pits before the animal returned to the sea.

2ND set led to one pit.3RD " " " " " "

#

SS 4th set revealed 2 pits before
the animal returned.

Total of 8 pits on trig since
last checked.

6/17/73 EAST ISLAND

6:15 PM Turtles Basking = 5 ♀ [TS #19, 20, 12]
in water =
TS #s scratched.

seeds A - 25

SA - 2

P - 21

6:30 PM* Turtle ashore NS sec. 15 beginning
to dig a body pit. Sun sets 8:00
Animal appeared to be very ~~upright~~
upright.

7:45 PM Turtle in NS sec. 15 on 2nd pit. Every
time we get near the animal almost leaves
the pit.

9:10 PM TS 34 SS sec. 4 coming ashore.
TS 19 SS sec. 7 " " "
TS 35 NS sec. 12 " " "
~~TS~~ One basket section 8 SS

6/17/73

9:30 PM TS 36 SS sec. 2, 2ND pit

6/18/73

2:45 AM

TS 37 completing nest SS SEC 2. It had dug 2 pits previously.

CL 36

CW 36

SCL 34 1/2

SCW 28

HIMB# 651

TS 22 SS sec. 6 on 2ND pit. (repainted)TS 35 NS SEC. 12 3RD pit.

One turtle just coming ashore NS sec. 14 and headed inland turned around and went back ~~to~~ without digging any pits.

(KNOWN FROM FOLLOWING TRACKS IN MORNING)

TS 36 NS sec. 17 on third pit.

Basket sec 8 SS

5:45 AM

TS 35 apparently left after an unsuccessful 3RD pit.

TS 22 on egg pit, this pit is her 6THTS 36 on 4TH pit nearly completed

Basket sec. 8 SS.

6:20 AM

SUN UP ABOUT 10 or 15 min.

TS 36 head back to the water after giving up.

CL 38 3/4

CW 37 1/4

SCL 36 3/4

SCW 29

∴ recap(?)

TS 22 also heading back after giving up on her 6th pit.

Basket SS SEC. 8

6:20 ~~SEALS~~ SEALS A 19
SA 0
P 6

SS SEC. 4

9:00 ~~TS~~ TS 34 came ashore at 9:00 just beginning to dig 1st pit. She dug 2 more before leaving none appeared to be past the egg pit stage. Had left by next round.

9:20 ~~TS~~ TS 19 coming ashore around 9:20 and beginning her 1st pit. SS sec. 7 had gone by next check.

2:45 TS 35 came ashore NS SEC. 12 at 9:30 and was on her 1st pit. At 2:45 she was on her 3rd pit and apparently left after an unsuccessful 3rd pit.

A basket SS sec. 8 (♀) remained there till some time after 5:45.

TS 36 came ashore SS sec. 2 and on her 2nd second pit. At 2:45 she had left

via SS and come ashore on the NS
 sec. 17 and was beginning 3RD pit.
 AT 5:45 she had started another pit
 just getting to the eggs pit stage when,
 she returned to the water 6:20

CL 38 $\frac{3}{4}$ CW 37 $\frac{1}{4}$

SCL 36 $\frac{3}{4}$ SCW 29

TS 22 at 2:45 she had come ashore
 SS sec. 6 and was on her 2ND pit. 5:35
 she was on her 6TH pit. 6:20 she had
 given up and was heading back.

TS 37. AT 2:45 she was completing nest
 after previously digging 2 pits, SS SEC. 2

CL 36 CW 36

SCL 34 $\frac{1}{2}$ SCW 28

Himb TAG # 651

6/18/73 EAST ISLAND.

3:30 PM Turtles basking 2♂, 9♀ including
 TS# (5, 11, 12, 20, 22) all on south
 point sec 8 SS had 7 and sec 9 NS
 had 2.

Seals. TAG RETURN - A 451

adults - 20

sub adults - 4

pups. - 18

8:30 PM TS # 5 ashore SS sec. 4.
 TS 22 " " " 5.
 - another " " " 8.
 - a turtle in the water a gray TS#
 unable to see what one, sec. 8
 SS.

9:25 PM TS 38 SS SEC 2
 CL - 42 CW - 37½
 SCL - 39½ SCW - 31
 1ST PIT.

TS 5 SS SEC. 4 3RD PIT
 CL - 40 CW - 37¾
 SCL - 37½ SCW - 30¾

TS 39 SS SEC. 5

CL 35 1/2 CW 35

SCL 33 1/4 SCW 27 3/4

9:50 PM TS 40 SS SEC. 5 0 pits + moving

CL 39 CW 37

SCL 37 SCW 29 3/4

10:00 PM TS 41 SS SEC. 5

* This turtle is TS 1/4 new ↑ *

* This turtle was almost in the water I was able to get a somewhat legible No. on her. She is the turtle with a grey line running width wise in the rear part of the carapace

10:25 PM TS 42 SS SEC. 8 2ND pit.

CL 35 CW 34 1/2

SCL 32 3/4 SCW 27

11:10 PM TS 43 NS SAND PIONT just down from Sec. 17 marker

CL 38 1/2 CW 36

SCL 37 SCW 30 1/4

1 pit back in water 11:20

6/19/73

12:10 AM Unable to find TS 38 or tracks leading back to H₂O.

12:15 AM TS 5 Completing nest 4th pit

HIMB TAG # 650

12:30 AM TS 39 2ND pit.

12:35 AM TS 40 Completing nest.

HIMB TAG # 656

12:50 AM TS 42 moving NE in sec. 7

1:05 AM TS 42 Gone from sec. 7 after one more try

1:05 AM Two turtles in the water ~~see~~ south side and one on the north side both near south point.

1:10 AM NS sec. 11 Tracks going into the water but none coming out. After looking at it seem very likely that they were the tracks of TS 42 if she remained on her course early noted

that should be where she would come out.

2:00 AM TS 44 leaving SS sec. 3 she was panted while moving down the beach and as a result the 4 on the right side is slightly deformed. Her pit appeared to be incomplete.

Turtle leaving sec. 4 SS appeared to be 41 although it was in the water and there is a question in my mind if it really was.

2:40 AM TS 22 Come from SS but digging NS SEC. 12 3rd pit and moving at 2:40.

Turtle in the water with a gray number NS Sec. 14.

TS 14 ashore NS sand pions no pits and returning to H₂O

6:30 AM TS 22 ~~appeared to have pit incomplete~~
~~completed and unable to dig in time.~~

4 pits

TS 39 leaving SEC. 4 SS

TS 42 leaving area sec. 2 pits appearing

TS 5 came ashore SS sec. 4
at 8:30 PM, at 9:25 on her 3RD pit

CL 40 CW 37^{3/4}

SCL 37^{1/2} SCW 30^{3/4}

Completed 4TH pit at 12:15

HIMB TAG # 650

TS 22 came ashore SS sec. 5
at 8:30 PM. At 2:40 she had left
her 3RD pit. ~~She~~ She came ashore
SS crossed over to NS and that
is where she dug. 6:30 she left
after 4th pit return^{VIA} NS sec. 12.

TS 42 came ashore 8:30 SS sec. 8
on 2ND pit at 10:25

CL 35 CW 34^{1/4}

SCL 32^{3/4} SCW 27

12:50 moving NE SEC. 7 after 3RD pit.
6:30 had gone back to H₂O

TS 38 9:25 SS SEC. 2
CL 42 CW 37½

SCL 39½ SCW 31
On her 1st pit, 12:10 unable to find
TS 38

TS 39 SS SEC. 5 9:40
CL 35½ CW 35

SCL 33¼ SCW 27¾

no pits yet still mousing. At 12:30
she was on her 2nd pit. At 6:30
she left after working on two more
pits both believed to be incomplete.

TS 40 SS sec. 5 no pits and mousing
at 9:50.

CL 39 CW 37

SCL 37 SCW 29¾

Completing nest 12:35

HIMB # 656

she left by next round.

TS 41 SS Sec. 5 10:00

This turtle was almost in the water and I sprayed the number on her * she is one of the animal which had been sprayed with grey even before we ~~at~~ started numbering.

At ~~at~~ 2:00 she was leaving SS SEC. 4

TS 43 NS SAND POINT just beyond

Sec. 17 11:10.

CL 38½ CW 36

SCL 37 SCW 30½

1 pit and returning to the H₂O 11:20

TS 44 SS SEC. 3 2:00 AM

moving back into the water and her pit incomplete. She was moving while being painted and as a result the right hand 4 is deformed.

TS 14 ashore NS SAND POINT no pits and returning to water 2:40 AM.

6/19/73

Mullet Island

11:30 AM

No turtles

seals A - 3

SA - 1

P - 3

11 11

ROUND ISLAND.

11:30 AM

No turtle

seals A - 4

SA -

P - 1

11 11

TERN ISLAND

12:30 PM

no seals

One set of track and 2 pits just
down from SA SEARS.

6/19/73 EAST ISLAND.

5:45 PM Turtles basking, 8 ♀, 1 ♂.
 TS#s (11, 43, 30, 20, 22, 19),
 no turtle visible in H₂O

Seals. A - 27

SA - 2

P - 22

Tag returns (adult - A 786) - Yellow Tag
 (sub. A - 756)

9:40 PM TS 4 came ashore 8:15 and is on
 second 2ND pit SS SEC 2

TS 45 SS SEC. 2 1ST pit.
 CL 40 1/2 CW 37

SCL 39 1/4 SCW 30 1/4

9:50. TS 22 on den & 1ST pit SS SEC. 4

TS 46 SS SEC. 5 2ND pit
 CL 35 CW 34

SCL 33 SCW 26 3/4

6/19/73

10:05 PM TS 22 moving in sec. 5

10:10 PM TS 47 SS SEC 5 3RD pit
CL 42 $\frac{1}{2}$ CW 40 $\frac{1}{4}$ SCL 40 $\frac{3}{4}$ SCW 34

10:30 PM Dec. 13 tracks leading out but none going in.

10:45 PM TS 14 NS SEC. 15 2ND pit

6/20/73

12:15 AM TS 22 digging ~~next to~~ sec. 5 3RD pit
TS 47 " " " " " " " "

TS 22 + 47 are digging within a foot of each other. They keep throwing dirt into each others pits.

TS 22

HIMB # 653 (later lost)
F+W 319

TS 47 SS SEC 5

HIMB # 658
F+W —

12:30 AM NS south point ~~one~~ 1 pit among gone.

6/20/73

1:00 Am TS 3 NS Sec. 12 1 pit
 CL $36\frac{1}{2}$ CW $31\frac{1}{2}$

SCL $35\frac{1}{4}$ SCW $24\frac{1}{2}$

headed back 1:10

1:30 TS 44 sec. 3 SS 1 pit

NOTE This animal has previously been referred to as TS 41 the other TS 44 has the number painted in black * this one has its number white. This is the animal with a gray line running the width of the carapace (rear).

5:10 Am TS 45 nesting SS sec. 2

5:20 Am TS 22 digging SS sec. 5

5:45 Am TS 47 gone from SS SEC. 5

TS 14 NS SEC. 13 beginning to dig.

TS 45 finished HIMB # 655

TS 3 NS SEC 13 leaving after 3 pits.

Turtles Basking 8♀, 1♂ - these include
 TS* (11, 43, 30, 20, 22, 19)

TS 4 came ashore 8:15 SS Sec. 2
 at 9:40 on 2ND pit. Had left after ~~one~~ 1
 more pit by 12:15

TS 45 came ashore SS sec. 2 and was
 on her 2ND pit at 9:40. Unable to find
 on next round. At 5:10 completing nest
 SS - SEC. 2.

CL 40 $\frac{1}{2}$

CW 37

SCL 39 $\frac{1}{4}$

SCW 30 $\frac{1}{4}$

HIMB - 655

F+W -

TS 22 came ashore SS SEC. 4 on 1ST
 pit 9:50, at 10:05 moving into sec.
 5. At 12:15 she was on her 3RD pit next
 to TS 47. At 5 still digging SS SEC. 5.

HIMB 653

F+W 319

TAG CAME OFF BV NEXT NIGHT

TS 46 SS Sec. 5 2nd pit at 9:50

CL 35 CW 34

SCL 33 SCW 26^{3/4}

She had left by the next round
with out completing a pit.

TS 47 SS SEC 5 3rd pit. at 10:10

→ CL 42^{1/2} CW 40^{1/4}

SCL 40^{3/4} SCW 34

12:15 digging a foot away from
TS 22. ~~at 5:10~~ at 5:10 gone from SS SEC 5

→ HIMB 658

TS 14 NS SEC 15 2nd pit at 10:45
at 5:45 beginning to dig NS SEC. 13

TS 3 NS SEC 12 1 pit at 1:00. 5:40
leaving after 3 more pits NS SEC ~~13~~ 13

CL 36^{1/2} CW 31^{1/2}

SCL 35^{1/4} SCW 24^{1/2}

TS 44 SS SEC 3 1:30 1 pt.

SPECIAL NOTE

Her number was extremely faded and she was taken to be TS 44 when repainted in white paint after later reference to notes she was found to be TS 41 because she had a gray stripe running with wise on (rear) carapace the other TS 44 is sprayed with black paint and has no gray stripe.

• she had left by 5:40

6/20/73 EAST ISLAND

11:50 AM Turtles basking ϕ
water σ , ϕ , TS# 18

Seals A 15

SA 1

P 18

Tag # 756

NO - should it have circled -
2 seal!6:30 PM turtles Basking σ , 43, 20
water ϕ

Seals A 17

SA ϕ

P 19

8:45 pm

Him B # ~~636~~ 636 SS Sec. 2 (TS 10)

TS 9 SS SEC 2

TS 48 SS SEC 5

TS 14 SS SEC 3 1 pit

TS 4 NS SEC 12

10:35 PM HIMB* 636 ^{TS10} 1 pit and returning

11:15 PM TS ~~49~~ SS SEC. 2

TSX
TSX

CL 39

CW 37

SCL 37 $\frac{1}{4}$

SCW 29 $\frac{3}{4}$

HIMB# 634, 633

11:30 PM TS 49 SS SEC 5. 2nd pit

CL 38 $\frac{1}{4}$

CW 36

SCL 37

SCW 28 $\frac{1}{2}$

HIMB# 654

F&W T 314

11:40

TS 11 HIMB 638 SS SEC. 6

just moving around.

TS 47 SS SEC 5. 1st pit

HIMB# 658



6/21/73
1:45 AM

HIMB 636 TS10
SS SEC. 1
NO pit TS 10

11:40 AM TS 22 SS SEC 5

SIZE 49

HIMB # 657
P+W # T319

ALL IN THIS
BOOK ARE
MONEY
NBT TAGS

Tags from previous night gone!

1:45 AM Tracks going back no animals
in SS SEC. 2

SS SEC 4 tracks on and off
no pits.

1:50 AM TS 22: leaving in water
area 5

TS 9⁷ digging egg pit SS SEC
5.

1:50 AM SS SEC. 6 tracks on and off
no pits dug.

2:45 AM ^{TS10} HIMB 636 gone from ~~SS~~ SS SEC. 1

3:45 AM TS ~~9~~ gone from SS SEC 5 1 pit.

5:30 AM All animals gone back to the water.

^{TS10} HIMB* 636 8:45 came ashore SS
Sec 2. 10:35 1 pit and returning.
1:45 SS sec. 1, 2ND pit. 2:45 gone
from SS sec. 1. During this night
she dug a total 3 pits.

TS ~~9~~ SS SEC 2 8:45. The
number when repainted appeared
to be 9 but #9 shouldn't have a
tag. HIMB 633, 634. 1:50
TS ~~9~~ digging eye pit SS SEC 5.
3:45 gone from SS SEC 5 appeared
to be 1 pit. (originally 7)
GHD

TS 48 SS SEC. 5 ashore

she had gone by next round by
11:30, no measurements or Tags.

TS 14 Ashore SS SEC 3 (8:45
gone by next round 1 pit, by

11:30.

↙ 9:00

TS 4 NS SEC 12 gone
by next round 11:30 2 pits.

TS 49 SS Sec 5 2nd pit 11:30

CL 38 $\frac{1}{4}$ CW 36

SC L 37 $\frac{3}{4}$ SCW 28 $\frac{1}{2}$

Himb # 654

F+W # T 314

Gone by 1:50

TS 11 SS SEC. 5 no pits
 still moving around. 11:40

HIMB # 638 gone by 1:45,

TS 47 SS SEC. 5 1st pit 11:40

HIMB # 658 gone by 1:45

TS 22 SS SEC. 5 11:40

HIMB 657

F+W T 319

HIMB tag from previous
 night gone.

1:50 leaning in water SS SEC

6/21/73 Trig 3:00 PM

Pit Count NS Total 6 pits
two sets of tracks.

No turtles basking or in the water.

Seals A - 10
SA - 3
P - 1

3:45 PM Whale - Skate 3:45 PM

Pit Count 22 set of tracks (new)
40 pits SS 15 sets of
tracks.
13 pits NS 7 sets of
tracks

Turtles basking 10 in a cluster
Water 8

Seals A - 32
SA - 9
P - 11 a few very small ones.

6/21/73 Mullet 4:45 PM

turtles basking 1

seals A 1

SA \emptyset

P 7

Round 4:50 PM

TB \emptyset

TW \emptyset

seals A 7

SA \emptyset

P \emptyset

Dark night no moon Stormy (RAIN) 45

6/21/73 EAST ISLAND.

10:20 PM TS 9 1 pit SS SEC 1

^{original} TS 9
CL $37\frac{1}{2}$ CW $34\frac{1}{2}$

SCL $35\frac{1}{4}$ SCW $29\frac{3}{4}$

This turtle had no Tag
which made it possible that
this animal is the real TS 9
unable to tag without disturbing
the animal.

^{This is}
TS 9/157 HIMB 633, 634
SS SEC. 1 1ST pit and
moving.

10:45 pm Tracks SS SEC. 4, 2 pits
retrived

11:00 pm TS 47 SS SEC 4 2ND pit.

TS 22 SS SEC 5 2ND pit

♂ basket SS SEC 7

♂ basket SS SEC. 8.

6/22/73

3:00 AM

HIMB

636

TS10

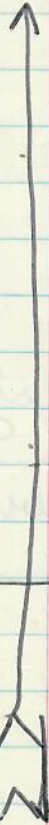
SS

SEC 5

appeared to

be covering pit

2ND pit



TS 22 digging SS SEC 6

3 baskets SS SEC 7 + 8 both gone

5:00

HIMB 636

TS10

gone SS SEC. 5

TS 22 gone SS SEC. 6

3:00

TS 47 gone from SS SEC 4

TS 9 gone

TS 9^{TSX}

HIMB 633 - 634

SS SEC. 1

TS 9 gone

TS 9 SS SEC. 1 1 pit 10:2

CW 37 1/2

CW 34 1/2

SC L 35 1/4

SC W 27 3/4

gone by 3:00 after 1 more pit

TS 97 HIMB 633 634 10:20
 SS SEC 1 1 pit and mowing
 gone by 3:00.

TS 47 SS SEC 4 2ND pit 10:20
 gone by 3:00

TS 22 SS SEC 5 2ND pit 10:20.
 3:00 digging SS Sec. 6 gone
 by 5:00

HIMB 636^{TS/10} SS SEC 5 3:00
 appeared to be covering 2ND pit
 gone by 5:00

5:00 AM

FRED - George June 22, 1973 Friday
 Lighter

6:30 PM

EAST ISLAND CENSUS - IN Book one

YAP and Wheeler

6/29/73 EAST ISLAND

5:00 Turtles Basking H(♀) [49, 20, 44, 40]
 " Water - ϕ

seals A - 13

SA - ϕ

P - 17

5:00

8:00 Three turtles coming up on SS SEC. 1-5
 [TS 21, 53, 57]

10:00 TS 21 SS SEC. 1 1ST pit

TS 33 SS SEC. 3 1ST pit

SS SEC. 3 tracks coming and leaving
 1 pit.

10:20 TS 57 SS SEC. 5 but digging nearer
 the north side. 2ND pit.

Tracks ashore NS SEC 15 leaving
 NS SEC. 14 2 pits

6/30

2:05 TS 21 SS SEC. 1 3RD pit.

TS 53 1ST pit incomplete and the animal
 has gone.

TS 57 3RD pit incomplete

TS 24 NS SEC 16 3RD pit
and moving

5:00 TS 21 gone 4TH pit appears incomplete

TS 57 gone back via SS SEC 5

TS 24 gone after 4TH pit

Recap

6/29/73 - 6/30/73

TS 21 ashore SS SEC 1 at 8:00
was on her 1ST pit at 10:00 PM,
was digging 3RD pit at 2:05
and was gone after her 4TH pit
which appear still incomplete, by
5:00.

T.P. - 4

TS 53 SS SEC 3 at 8:00
just coming out of the water.
at 10:00 she was on her 1ST pit
and by 2:05 she had ~~left~~ gone
back leaving first pit incomplete.

T.P. 1

Tracks going to and fro 1 pit
no animal at 10:00

SAT
6/30

6:00

TS 57 SS SEC. 5 coming ashore
at 8:00. At 10:20 it had crossed
over to the NS and was on her
2ND pit. At 2:05 was moving away
from incomplete 3RD pit and had
gone back by 5:00 via SS after
4TH pit which appears complete.

8:45

T.P. - 4

tracks ashore on NS SEC. 15 and
leaving.

Sunday

7/1/73

1:00

TS 24 NS SEC 16 on her 3RD
pit at 2:05 and moving gone
after 4TH pit which appears incom-
plete.

Saturday
6/30/73 EAST ISLAND

6:00 Turtles basking 6 (♀) including
— [TS 18, 11, 40].
turtles in water φ

Seals A - 4

SA - ~~2~~ 2

P - 40

2 can't be counted.

8:45 Track going and coming NS
SEC. 11 no pits.

Sunday
7/1/73 TS 21 NS SEC 15 no pits yet.

1:00 SS SEC. 7 2 set of tracks coming
and going no pits.

SS SEC. 8 tracks going all
over and in circles 1 pit.

TS 59 NS SEC. 12

CL - 40½ CW - 37

SCL - 37¾ SCW - 29¼

HIMB 664

F+W T-323

1:00

TS 59 3RD pit complete two
eggs fell out and are planted
near the tent.

TS 21 NS SEC 14 2ND pit

It rained almost continuously
till about 5:00 so we skipped
3:30 round.

5:00 TS 44 in water SS SEC 4
tracks going up and back
no pits.

TS 21 NS SEC 14 gone after 3RD
pit appears ~~complete~~

Recap — 6/30/73 - 7/1/73 —

Tracks coming and going NS
sec. 11 no pits

TS 21 NS SEC 15 at 8:45 at 1:00
she was on her 2ND pit and by
5:00 was gone and her 3RD pit
appear complete.

TP - 3

TS 59 Ashore sometime before
1:00 has dug two pits the 3rd.
being complete NS SEC 12

CL 40 $\frac{1}{2}$ CW 37

SL 37 $\frac{3}{4}$ SCW 29 $\frac{1}{4}$

HIMB # 664

FW # T 323

TS 44 in water 55 SEC 4 tracks
going up and back no pits.

Sunday
7/1/73

8:30 AM

Mullet Island

Seals A 1

SA 4

P 3

Round Is

Seals A 1

SA

P

fur seals

me

9:00 TERN ISLAND

One set of track and 9 pits behind
Seals

Seals A 0
SA 0
P 1

SUNDAY

7/17/3 EAST ISLAND

5:20 Seals A 19
SA 2
P 15

turtles basking, TS 49, 20, and 2 ♀
turtle water - 1

9:00 TS 8 leaving SS SEC 3 no pits.

TS 60 NS SEC 9 leaving. 1 pit

track ashore and back no pits

TS 14 1st pit NS SEC. 15

July 2

↓

3:00 TS 44 Completing nest SS SEC 4
appears to be 1ST pit.

Tracks up and back NS SEC 13
no pits

TS 14 NS SEC 15 3RD pit

5:00 TS 44 gone SS SEC 4

TS 14 gone appeared to have completed nest.

^{changed to TS 63}
TS 61 SS SEC 8 entangled in wire

HIMB# 674

F#W# T-325

three pits all incomplete.

I found a 22 1/2 inch. squid laying on the beach.

RECAP

↓

9:00 TS 8 came ashore SS SEC. 3 no pit turned around and left not returning throughout the night.

MOND
7/2/17

8:00

TS 60 NS sec 9, leaving after ~~one~~ 1 pit not to return for the rest of the night, at 9:00

TS 14 ashore NS SEC. 15 at 9:00 PM 1ST pit at 1:00 NS SEC. 15 2ND pit and by 5:00 was completing most total of three (3) pits

10:00

TS 44 at 3:00 it appear to be completing nest SS SEC 4 seemed to be 1ST pit. She had left by 5:00

TS ⁶³61 at SS SEC 8 at 5:00 had dug 3 pits and was entangled in wire from the last pit. Left after she was un-
tangled

2:00

HIMB 674

F+W T 325

Monday
7/2/73

TRIG ISLAND

8:00

4 sets of tracks all on NS
12 pits total.

No turtles either basking or in
the water. TB ϕ
TW ϕ

10:00

TERN ISLAND

SEALS A 1

SA 1

P 1

TB ϕ

TW ϕ

No tracks

2:00

WHALE SKATE ISLAND

11 sets of new tracks and 36
pits. majority of activity SS,

SEALS A 28

SA 10

P 11

Monday
7/2/73

Whale-Skate continued

TB 6 all ♀

TW 3 5

2 of the turtles in the water were
very small 10-20 lbs.

Seals tag returns A 757

A 1036

A 1100

4:00 Round Island

SEALS A 3

SA

P 4

TB ∅

TW ∅

4:00 Mullet Island (nearly submerged)

SEALS A 1

SA ∅

P 4

TB ∅

TW ∅

7/2/73 EAST ISLAND

6:20 pm TB (TS 20, 49, 57, ♀, 11)
TW Ø

SEALS A 9

SA 6

P 23

9:30 pm TS 47 SS SEC 5 (moving)

TS 46 SS SEC 5 digging on NS
of the island

HIMB 665

F+W T 276

10:00 pm TS 11 SS SEC 6 just coming
ashore

TS 63 NS SEC. 9 * previously
TS 61

HIMB - 674

F+W - T 325

1st pit starting 2nd.

Tracks up and back NS SEC 9
1 pit

2:00 Am SS SEC 1 2 pits no animal,

TS 47 SS SEC 5 in egg pit stage
2nd pit

TS 11 just ashore SS SEC 6
down bathed from first entrance

Turtle looking SS SEC 8

TS 46 left via NS SEC 13

5:30 Am TS 46 6 pits NS SEC 14

TS 47 3 pits

All others gone by this round.

TS 47 SS SEC 5 still moving
around at 9:30, at 2:00 in egg pit
stage, 2nd pit at ~~5:00~~ 5:30 working on 3rd pit
and left shortly after,

TS 46 ashore 9:30 SS SEC. 5
 but digging on NS. of sec 5
 leaving her for 1st pits at 2:00

HIMB # 665

F+W # T 276

she had left via NS SEC. 13,
 and at 5:30 was found to have
 dug 6 pits in N.S. SEC. 14

TS 11 was ~~digging~~ just coming
 ashore SS SEC 6 at 10:00.
 By 2:00 she had returned and
 was just coming out down a little
 further SS SEC. 6 and was gone
 by 5:30.

[TS 61 - TS 63] NS SEC 9 at 10:00
 was just leaving 1st pit

HIMB # 674

F+W, T- 325

Starting another pit, and gone by 2:00

Tuesday

7/3/73

EAST ISLAND

100 PM TB {TS-13, 16, 18, 22, 57} and 2♀
TW 3

Seals A 10

SA 3

TAG RETURN A 923

P 20

5:30 PM Seals A 12

SA 6

P 19

TB - (TS 20), 1 ♂ untagged
TW ∅

8:30 PM TS 45 SS SEC 6 still moving

TS 4 SS SEC 6 still moving

Wednesday

7/4/73

12:00

Midnight

TS 22 SS SEC 6 1st pit

Tracks up and NS SEC 12 2 pits

Tracks up and down 1 pit NS SEC 11

~~SS~~

TS 64 SS SEC. 8

CL 35 1/2 CW 35

SCL 33 1/4 SCW 27 1/4

Himb # 666 F+W # T 316

3rd pit

TS 10 SS SEC. 6 1st pit
paint all scraped off.

TS 45 appears to be second pit
SS SEC. 6

TS 11 SS SEC. 6 2nd pit.

TS 46 SS SEC 5 digging 3RD pit

5:00AM TS 10 heading back to the
sea. SS SEC. 3

TS 45 still digging SS SEC. 4
very possibly covering up nest
see if she comes up the next night.

TS 11 appears to have completed
nest SS SEC. 6.

All other animals have returned
to the sea.

RECAP.

TS 45 ashore SS SEC 6 still
moving at 8:30 at 12:00 ~~she~~ she
was on her second pit; and at
5:00 she was found SS SEC. 4
still digging.

TS 4 ashore SS SEC. 6 still moving
at 8:30 and had left by next
round.

TS 22 SS SEC 6 on her
~~for~~ 1ST pit at 8:30 and had
left by next round

TS 64 SS SEC. 8 3RD pit
at 12:00

CL 35 $\frac{1}{2}$

CL 35

SCL 33 $\frac{1}{4}$

SCW 27 $\frac{1}{4}$

HIMB# 666

F+W# T 316

she dug 1 more pit and returned by next round.

TS 10 SS SEC 6 at 12:00

1st pit paint all scraped off, had returned by ~~at 5:00~~ at 5:00 leaving SS SEC. 3

TS 11 SS SEC. 6 2nd pit at 12:00

and at 5:00 appear to have completed nest SS SEC. 6.

TS 46 SS SEC. 5 on 3rd pit at 12:00

had left by next round leaving last pit apparently complete.

Wednesday

7/4/73

TERN ISLAND

9:00

TB ϕ

TW ϕ

No new tracks.

A ϕ

SA 1

P 1

wed.
9/4/73 EAST ISLAND

5:30PM TB ♀, 22, 49
TW 1

Seals A 5
SA 12
P 26

8:30 TS 65 SS SEC. 2

CL $34\frac{3}{4}$ CW 33

SEL $34\frac{1}{4}$ SCW $26\frac{1}{4}$

HIMB - 667

F+W - T 320

still moving.

TS 66 SS SEC. 1 Returning

AIMB# 668

F+W T 312

TS 9 SS SEC. 5 1st pit
no longer has bar ~~out~~

9:00 TS 63 SS SEC. 5

CL 37 $\frac{3}{4}$ CW 37 $\frac{1}{4}$

SCW 35 $\frac{1}{2}$ SCW 30

1st pit and moving

TS. 49 NS SEC 15

just coming out

TS 9 no longer painted NS SEC 14

(HIMB 634)

2nd pit and returning

10:30 TS 45 S.S SEC. 1 2nd pit.

TS 9 leaving SS SEC. 5
unable to tag

7/5

TS 66 NS SEC. 9 1ST pit.

TS 64 NS SEC. 9 just coming ashore.

TS 63 NS SEC. 13

Dropping eggs 1ST pit.

TS 49 leaving NS SEC. 14

last pit may be ~~IN~~ complete appears so.

3:00AM TS 66 NS SEC. 9 2ND pit

CL 37 CW 31 ³/₄

SCL 34 ¹/₂ SCW 25 ¹/₄

TS 64 NS SEC. 9 1ST pit.

TS 13 NS SEC 14 moving back

TS 45 has returned last pit appears complete.

5:30 AM TS 66 3RD pit SS SEC. 8
 heading back.

TS 64 still digging 4TH pit
 NS SEC. 9

TS 13 ~~NS~~ NS SEC. 1~~6~~
 Completing nest now painted
 white

— Recap —

TS 65 came ashore SS SEC 2
 at 8:30

Ch 34 ³/₄ CW 33

SCh 34 ¹/₄ SEW 26 ¹/₄

HIMB # 667 F+W # T 320

She had returned by ~~the~~ next
 round not to come back again.

TS 66 SS SEC. 2 heading back

HIMB # 668 F+W T 312

cont.

at 10:30 she was on NS SEC 9
1ST pit. At 3:00 on 2ND pit.

CL 37 CW 31 $\frac{3}{4}$

SCL 34 $\frac{1}{2}$ SCW 23 $\frac{1}{4}$

AT 5:30 SS SEC 8 3RD
pit incomplete and heading
back.

TS 9 whose SS SEC. 5 1ST pit \uparrow 8:30
no longer has bar. She had
returned by next round.

TS 63 SS SEC. 5 1ST pit and moving

CL 37 $\frac{3}{4}$ CW 37 $\frac{1}{4}$

SCL 35 $\frac{1}{2}$ SCW 30 ^{connected}

HIMB # 674 F+W # T 325

at 10:30 was dropping eggs
NS SEC 13, and had returned
by 3:00.

NOTE

This animal may have
been previously tagged ~~and~~ appeared
as though this was a hole where

a tag might have been,

TS 49 NS SEC. 15 at 9:00 just coming out at 10:30 last pit incomplete and she didn't return the rest of the night.

TS ~~4~~ 7 NS SEC. 14 2ND pit and returning (9:00)
(see next recap No. # changed to 7 again) she never came ashore again this night.

TS 45 SS SEC. 1 ^{at 10:30} 2ST pit she was gone by next round last pit appeared complete.

TS 64 at 10:30 NS SEC. 9 just coming out. at 3:00 she was working on 1ST digging 4TH pit at 5:30 didn't complete nest.

TS 13 NS SEC 14 moving back at 3:00 no pits, at 5:30 completing nest NS SEC 16 now painted white.

Thursday
7/5/73

TERN ISLAND 9:00 AM

A 1
SA 1
P 0

1:00 PM TRIG ISLAND.

TB ♀ ♂ ♂

TW no fresh tracks or
new pits

A 10
SA 0
P 1

2:00 PM Whale Skate

TB - 3 ♂, 7 ♀

TW 1

Seals A 33
SA 10
P 7

7/3/73

Pit count 10 sets of tracks mainly distributed on SS and 29 new pits with no visible red chips and tracks leading up to and out of.

ROUND IS.

TB \emptyset TW \emptyset

A 4

SA \emptyset

P 1

Mullet Island

TB \emptyset TW \emptyset

A 2

SA 3

P 4

Thursday

7/5/73 EAST ISLAND

6:30 PM TB ♂, 22, 44, 636, ♀

A 5
SA 7
P 19

8:15 PM 2 coming ashore in sec. 4 + 5 SS

TS 64 1st pit NS SEC. 15TS 9^{new} 15^g (HIMB 670) SS SEC 1

(F+W T277)

just coming ashore

10:30 PM TS 15^b (HIMB 631) 1 pit
leaving NS SEC. 11

7/6/73 TS 64 NS SEC. 15 Completing nest

3:00 AM TS 9[#] SS SEC. 5 SS SEC. 5
1st pit

TS 49 SS SEC 2 coming ashore.

TS 6 (HIMB 631) SS SEC 6
1ST pit

TS 64 has returned AS SEC 15.

~~5:30~~ TS 7 SS SEC. 1 1ST pit.

5:30 TS 49 SS SEC 2 still digging

TS 7 (HIMB 634) still digging
SS sec. 1 (now sprayed 7)

~~scribble~~ ~~scribble~~

Apparent sexRemarks - Injuries

1 male

m long tail

m longtail shorten than 693

F

Hawkbill

very short tail does not extend past premax

F

short tail

Sea Life Park Turtle Releases

79
4/6/73

<u>TAG NO.</u>	<u>Curved C Length</u>	<u>Curved W</u>	<u>SL</u>	<u>SW</u>
684	40	35	37 1/4	29 3/4
✓ 685	30 1/2 probable male	26 3/4	29 1/4	22 1/2
686	30 1/2	26 1/2	29 1/2	22 1/4
686	36 1/4 female	36 1/2	34	27
687	34 male	31	32 1/2	26 1/4
✓ 688	29 1/2 pr female	26 1/4	28	21 3/4
✓ 691	22 1/2 p fem	19	21 1/4	16 1/4
✓ 701 692	25 p f	21 1/2	23 3/4	17 3/4
✓ 693	28 1/2 in	24 3/4	27 1/2	21
✓ 694	28	26	26 1/2	21 1/2
695	34	29	32 1/2	25 1/4
696	35 3/4	32 3/4	33 3/4	27 1/4
✓ 697	20 1/4	18	19 1/2	15 1/2
✓ 698	25	22 1/4	23 3/4	19 1/2
699	35 1/2	32	33 3/4	27 1/4
700	32 3/4 ♂	27 1/2	30 3/4	23 1/2
✓ 702	28 1/2	24	26 3/4	20

7 Retained SLP

✓ 9 released at 10:04am off Makai pier
one or two seen swimming very close
inshore.

8/25/74 - 1973 TS review

Seal June 3 adult w/pup - 15
 East adult alone - 15
 SA - 11 (SA # P 4?)

June 5
 Trig adult - 9
 SA - 3

W-S pup - 0
 adult - 29
 SA - 9
 pup - 12

June 4 - L. Gin ♂ boater w/ head shell injury.

TS14 - Hinds ^(both) partially missing (p. 20)

TS19 F:W Kailua 212 (B.1. p. 21) - R front tip missing

TS21 - C1647, Tumors both eyes, left front by tag ventral,
 hind dorsal, Barnacle right marginals - central appears loose.

TS23 - C1649, 1/2 left Hind missing.

TS5 - Right hind Flipper 1/2 missing.

TS53, C1661, curved piece out of L hind flipper,
 barnacle on precentral.

June 26 - ♂ boater w/ hind left flipper gone to adjacent shell.

TS57, C1662, 3 pit marks in carapace.

TS22, C1657, hole in shell.

TS53, C1661, round bite out of left hind flipper.

SEA LIFE PARK

1975-1979

3/6/75 SLP - (went) to check condition of tags, however,
population(?) attempts to mount hotel early
that morning - deferred draining tank.

Previous SLP Date - go to EAST ISLAND Main IS Booth page 105

Sea Life Park

Tuesday Oct 14, 75

- Turtles transferred short tail
- Rotated 1509 RFL - medium green corrosion at flesh site
- 891 RFL - short tail - open locking site ^{extensive corrosion at}
- 1502 LFlap - lock o.k. - same cor at flesh site
- RO 1506 LFlap ^{big ♀} Photo good tag - small corrosion
- RO 905 RH ^{big ♂} Bridge corroded out Photo
- RO ^{sq washed} 687 RF ^{big ♂} - block flesh at locking mechanism - ^{looser front claws}
- RO 902 RFI medium - number, locking ^{looser} weak corrosion
- RO 904 RFI ^{size 681} medium - open - bridge corroded
- 1505 L - ^{adult female} First scale - First number unreadable corroded
- 911 RFL appears good shape
- 910 came off in transfer process
- RO 684 RFI ^{adult} number some corrosion - ^{other areas look good}
- RO 908 RFI ^{adult} open - lock corroded out
- RO 1507 LFI looks good ^{adult} small female

Small TMs both shoulders biggest ♀

(13 Total with tags still on)

~~82.6 x 41.25 63.5~~

~~32 1/2 x 25 blond ♀~~

~~38 x 30 1/4 speckled ♀ 913~~

~~27 1/8 x 21 3/4 gold~~

~~68.9 x 55.2~~

30 3/8 x 24 3/4 multi

77.2 x 62.9

33 3/4 x 27 1/8 Hawk

85.7 x 68.9

907 found tank bottom

973 tank bottom

915 tank bottom

1501 tank bottom

~~25 3/10~~
30 7/8 x 23 1/8
March 13, 75

37 1/8 x 30
26 7/8 x 21
write to Nickie company
makers of model 85
Oct 14, 1975

10/17/75
915^F-T
972-T
891^{RF}-T
1501^{RF}-T, 1502 (28 7/8 x 22 1/4)
891 - open locking site
1502 - lock OK - some corrosion (1501 tank bottom)

70.8 x 56.5

measurements
Missing
corroded at
locking site
Tank bottom

687, 1504^{LF} (32 3/4 x 27 ♂) 687 83.2 x 68.6
1505^{LF} (34 x 27 5/8 ♀) 1505 "i" lost 5" unmeasurable

TAG 1195
locked
Kura
86.4 x 70.2
91.4 x 76.2
68.8 x 53.7
78.4 x 60

1506-T (36 3/8 x 30 ♀) 1506 looks good - small corrosion
902-T, 1503^{LF} (27 x 21 1/8 multi) 902 open locking site severe corrosion 26 7/8 x 21 Tail length

903^F-T, 904-T (27 1/4 x 22 multi) 904 open, corroded bridge 69.2 x 55.9
906^{LF}-T, 905 (30 1/2 x 23 3/4) 905 bride out 77.5 x 60.3

907^{LF}-T, 908 (30 7/8 x 23 5/8) 908 open - lock out (907 Tank bottom)
973^{RF}-T Tank bottom

1507-T (33 1/8 x 27 1/8 ♀) 1507 looks good
1508^{LF}, 1509-T (25 1/2 x 19 3/8 multi) 1509 corroded at flesh 64.8 x 47.8

910, 911 (34 x 26 1/2 ♀) 911 good shape (910 off in transfer)
~~684~~ (37 1/8 x 30 ♀) ~~684~~ looks good

86.4 x 67.3
94.3 x 76.2

Hawk ^{NO TAG} - NO TAG
largest ♀ ^{NO TAG} - NO TAG
+ Jan 10, 75 Toy 913 apparent gone Mar 13, 75 - NO TAG

Total in Logom = 19

Rotating tag aids retention in that even when lock corrodes out, tag is not always lost.

Reef Tank - 2 captive hawks; 1 small green Toy 894

Sat.

11/15/75

11/26/75 ID by Russel of Botom - Polysiphonia tenuis Ref. is Holyberg 1968 Pac Sci V22
 Visited SLP - plastic bags still on -
 Examined Pacific oyster found 11/14
 in shallow water at Kahuku
 Beach park - ? ()

RF limb missing - heaped; red lime
 on shell - sample taken for ID - also
 sm Goose neck barnacles; Plaston sunken
 in - emaciated - laminae soft -
 snapped at water flow - try
 feeding fish -

Schallerberger said that Fish?
 Game warden had picked hawk
 hatchling that was taken from
 Kailua Bay approx. Jan 1975

also that leatherback was taken
 Kaneohe Bay in fish trap -
 early 1970's also off Big
 island in FISH TRAPS 500-600'
 Lester MAX. fish trap size 4' x 6' x 8' -
 previously bigger - deep for ulua, grouper,
 etc.

11/26/75

Call from Steve Varrti (548-5895) about riddle
 talked to Fletcher Riggs - his wife found U
 Hawkbill - Kailua Beach

11/22/95 Sea Life Park Hawksbill observations

General notes:

1. Hawk #1 obviously smaller than Hawk #2
2. Steve Kaiser - employee - possibly seen
Hawk caught eggs - ^{Big Turtles previously held in} neighbors pond - feed breed - paper ash
3. Neck long, however can be pulled in somewhat
4. Consider band eating interaction with each other, & other reef tank animals.
5. Pure yellow plastrons - whereas your Malekakanay Hawk has many black speckles.
6. Swimming has an appearance of being effortless
7. Small green turtle not carefully observed, resting location never found; largest hammerhead shark attached back of green, very rapid, quick-turn escape behavior. Green does not seem to stay deep like hawks.
8. Cave is ^{near} deepest site in tank
9. Tank Volume ^{Sea water temperature -} Measurements -
10. Tank lights on 11/22 - ^{condition appears to} vary, however when lights are on, shark predation on reef fish is higher.
11. During Hawk rest periods, nostrils are closed - open when active.
12. Greens in Turtle Lagoon crawl on pond bottom - very little activity
13. Moon up about 10 PM - clear sky - some illumination from park lights on Turtle Lagoon - animals congregate to darker end?

14. Hard to tell if nostrils are closed while sleeping.
15. Hawks paid little attention to people outside of cave.
16. Will have to take hawks out of reef tank due to breaking-up coral formations - scratch back from underneath and scratch ventral (plastron) with top of coral.
17. FEEDING SCHEDULE -
18. When not swimming, seem to have slightly positive buoyancy.
19. Cave is dark - but not as dark as higher cave.
20. Only time Hawks are at surface is for breathing.

TIME	Activity	TIME	Activity
8:06	IN CAVE	7:55	motionless by branched coral Near glass, possibly wedged
8:06	out - 4 breaths ^{5 sec intervals}	7:55-8:00	out - breath
8:10	→ IN CAVE	8:09	in cave - head down
8:17	→ MOVE OUT Gliding	8:10	head up - eyes open
8:20	2 breaths ✓ along glass spiral - scratching eye	8:14	sleeping
8:25	tank center - bottom	8:22	eyes open and moving out cave
8:30	at least 1 breath gliding, bite out coral, "treading water"	8:24	5 breaths
8:45	4 breaths, to cave, wedged	8:27	biting at underside LFL
9:07	still motionless	8:28	sitting ^{motionless} on bottom near cave
9:09	Move out of cave ✓	8:29	eyes closed
9:10	2 breaths	8:33	bit eel twice
9:15	gliding	8:35	"puffing"
9:18	to cave and out	8:37	sleeping
9:21	3 breaths ✓	8:39	eyes open
9:23	to cave ^{eel under turtle nibble eel}	8:40	eyes closed
9:35	head ^{sleeping with conger} down	8:43	moving out - up - Breaths
9:43	move out of cave ✓	8:47	moving - gliding
9:45	6 breaths	8:54	resting on bottom on limbs - ^{head up}
9:48	poking around coral	8:57	puffing Moving slow - stopped
9:58	4 breaths	9:03	4 breaths
9:58	3 breaths	9:07	moving slow
10:00	to cave	9:08	3 breath
10:18	move out of cave, 2 breaths	9:12	into cave
10:23	3 breaths	9:27	move out of cave
10:31	at least one breath	9:30	4 breaths
10:34	1 breath	9:38	moving - Scratch head LFL
10:39	2 breaths	9:41	4 breaths
10:40	to cave	9:43	resting close to glass not wedged

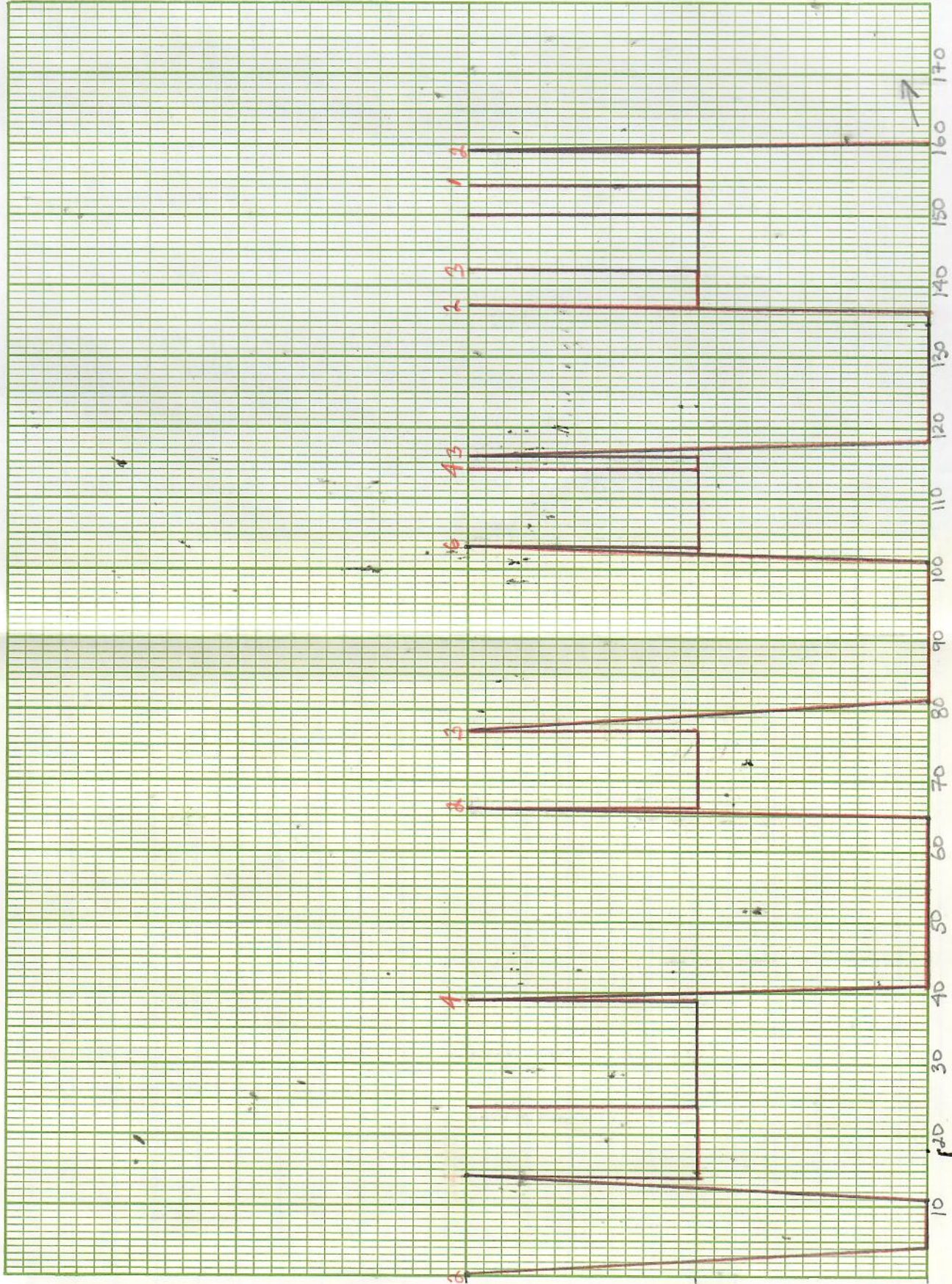
Hawksbill #1

TIME	Activity
11:01	move out of cave
11:03	3 than 2 breaths
11:09	at least 1 breath
11:17	1 breath and to cave
11:33	move out of cave
11:34	3 breaths
<u>11:37</u>	to cave - <u>photos</u>

Hawksbill #2

TIME	Activity
9:51	Bit left eye
	Resting same place, head lobster poked turtles left eye twice w/ antennae
	No response (eye open)
9:54	Hawk #1 Bite Hawk #2 Right + Limb
	#2 moving up, 2 breaths - disturbed -
9:58	Blowing small air bubbles while moving
9:59	into cave, head up ^{then} occasional waking then back to sleep
10:19	moving out of cave - Bre
10:24	2 breaths - slow swim
10:32	1 breath - slow moving
10:40	into cave
10:43	Big yawn - head down
11:00	puffing
11:02	moving out of cave - Breat
11:08	4 breaths
11:09	into cave, yawn, ^{close eyes}
11:33	out of cave
11:35	up for air - 5 breaths
11:42	4 breath
11:43	1 breath - down to eat sand - By glass
<u>11:48</u>	resting at same spot by glass

HawksBill #1
11/22/75



TIME IN MINUTES

Breath

ACTIVITY

Rest

94

Dec. 27, 1975

Hawksbill #2 (large)

Time	Activity
7:20 (arrive)	swimming
7:26	breath 2+
7:28	into cave
7:44	out of cave
7:45	breath - 7x
7:46	into cave
8:03	out of cave
8:05	breath - 7x
8:09	into cave
8:21	out of cave
8:22	breath - 8x
8:30	breath 4x
8:35	breath (?x)
8:36	into cave
8:54	out of cave - breath 2x
8:56	breath - 4x
8:58	breath
9:01	into cave
9:16	out of cave - breath 3x
9:20	into cave
9:33	out of cave - breath 8x

Time	Activity
7:22	into cave
7:36	out of cave - breath 5
7:41	breath 4x
7:43	motionless on ledge
8:01	breath
8:04	into cave
8:16	out of cave - breath
8:20	into cave and out
8:25	into cave
8:40	out of cave - breath 7x
8:45	into cave
9:00	out and breath 5x
9:05	into cave
9:18	out and breath 6x
9:20	into cave
9:35	out of cave - 8x breath

Dec 27, 75 Sat - SLP Hawksbill observations

Steve Krises (or Mike?) - Reef tank turnover time 2 hours
Hawks have eaten octopus (3-4 lbs) on several occasions.
Greenies never with hawks.
Observations from underneath show that exhalant inhalant
only takes place above water.
Why are turtles helpless in water when turned over?
White Uva piloting on ray.

2/13/78 Talked to Gasman Wary - They have just completed construction of walkway around turtle area. Last month a turtle got out and went down to Wheeler's Cove. Ever since completion of ramp, turtles have been hauling out, sometimes seen in morning trying to get over rocks out of sand area.

On 2/4/78 at 0043h one large turtle reported walked over asphalt over low stone wall. Guard tried to get back in, but too heavy.

3/8/78 WEDNES. Visited SLP to see Loggerhead (see daily log for details) - observed for first time the new widened ramp (does not extend further in water though) - noted some plastic and metal toys still on turtles. Two loggerheads from JOURNAL seem to be doing well. Noted surviving hawksbill - still healthy. Noted stone wall constructed ground enlarged beach - about waist-high. Ed indicated that basking turtles are present almost every morning (IS NIGHT BASKING TAKING PLACE?). Fresh tracks were all over in sand beach. - noted ^{chamber like} excavation that was wet. Was this from a nesting turtle, or ~~from~~ maintenance person with a garden hose?

See page 99 - Daily Log 12/18-1/22/79 97
for SLP measurements 1/78

Pond drained about one month later - no signs of parasites - as per Bourke and Kaiser -

And ~~at~~ no parasites noted
MARCH 79 - Post mortem on Adult green mule found beached at Bellows - Waimanalo ^{see other data books}

5 April 1979

Thursday evening

Visited SLP during evening (5:30 PM) to give ~~lecture~~ to Docents - noted Tag 2026 LFL out basking on wooden structure - head facing to water. no corrosion noted on tag, however "color wave lines" ^{from} oil on tag surface ??

No previous tag no like this at SLP read incorrectly?

19 April 79 -

J. Wong reports that ♀ (good) loggerhead is sick - hasn't eaten for a week.

→ Report from Bourke that hawksbill in Reef tank died on 19 MARCH 1979. Water was lowered ~3' and turtle got stranded in dives entry area. Stress caused death ??

5/24/79

Family visit to SLP in afternoon - Noted untagged (fat?) green in reef

5/24/79 tank. Flippers perched out - tail higher
 CONT. than head - motionless - neck stretched out.

Convict Tang and bright yellow reef fish
 (each) grazing on shell & neck - presumably
 on algae.

Also in reef tank, "Po Maikai Hawkbill"
 (fat).

- Bourke reported that: Waikiki Aquarium
 loggerhead ♀ died about 3 weeks ago -
 postmortem performed with vet ~~present~~ present -
 they found some lesions in lungs - also
 large abscess on posterior of one side -
 Schallerberger indicated it "had eggs".

- See reports and correspondence in file
 - Report that eggs were laid on beach;
 largest female has been regularly out
 at night (they see it returning in the morning)
 This "nesting" is based on some
 eggs being seen that were dug up by a
 turtle.

- Noted copulation attempts (successful for
 short periods?) among greens.

SEA LIFE PARK

from Waikiki
Hawksbill Aquarium
Died - 19 March
1979

99

2 Jaws (S) $30 \frac{3}{4}$ x $21 \frac{7}{8}$

1979 (C) $32 \frac{3}{8}$ x $27 \frac{1}{4}$

SATURDAY PL $22 \frac{5}{8}$

HEAD $4 \frac{1}{8}$

TAIL 11" # ~ 5-9

Photos taken; both front flippers bitten ^{but healed} on ends up
also of fat inside to second nail. Larger tail (poss. w/ possible penis gut)

Large quantities of internal fat; no "yellow" nodules noted in fat. Coagulated frozen blood filling up body cavity.

GI tract virtually empty; frozen water in stomach; Fat seems to have pushed in on all body organs - clustered together in center. Is sand swallowing a response to all of this fat, for buoyancy?

Sections of liver preserved - appear to be waddings of fat in liver.

all material will be cleaned and retained.

Waikiki Aquarium
February 2, 1976

Dead
Jan 76
FROZEN TURTLE
2 - 1 green
1 CI hawk

MEASUREMENTS

TAG	NUMBERS	CURVED	STRAIGHT	apparent SEX/TAIL LENGTH	PREVIOUS NUMBER (if readable)	COMMENT	
	201 ^{RF}	10 1/2 9 1/2	9 1/2 7 7/8	?	27	Tuamotu	
RFL 1950	9th marg → R	23 1/4 20 1/2	22 1/2 18 1/8	?	none	green	
LF 2005	(PL) 11th marg → R	34 1/4 32 3/4	32 1/4 26 5/8	Female	27 none	green Female	
TW 204	8th marg R	33 28 1/4	31 1/2 24 7/8	10" male	28	green ✓	
TW 205	9th marg R	35 3/4 30 1/2	34 1/4 25 1/8	10 1/2" male	3	green ✓	
TW 206	9th marg R	1751 LFL	29 27 1/2	27 1/2 23	6 3/4 male	1	green
TW 207	9th marg R	2008 LFL	33 1/8 30 1/4	31 3/8 25	Female	31	green ✓
TW 208	8th marg R	1752 RFL	27 5/8 25	26 1/2 21 1/2	5" male	8	green
TW 209	9th marg R	1753 RFL	31 28 3/4	29 1/2 24 1/4	Female	34	green ✓
TW 210	9th marg R	1754 LFL	31 1/4 28 1/2	29 3/4 24 1/4	Female	none	several marg green ✓
TW 211	9th marg R	1755 LFL	24 1/4 20 1/4	23 1/8 16 7/8	?	1?	Lauksbill
TW 212	5th marg R	-	Deformed	30 1/8 24 1/8	Female	-	Deformed HAWKSBILL
TW 213	9th marg R	1756 LFL	20 17 5/8	19 1/8 16	?	-	Benedict green
TW 214	9th marg R	-	29 1/4 24 1/2	27 3/4 19 1/2	?	3	TMR Right HAWKSBILL ABSCESS
NO TAG	-	-	-	-	-	-	Deformed shell ADULT Loggerhead
TW 215	marg R	-	34 1/2 27 3/4	Female	-	-	ADULT Loggerhead
inside Tank	Bitten						CI Hawk
inside Tank	Bitten						Benedict green

keep for
possible breeding

Sat
2/14/76

SLP - small Hawkbill
Po-MAI-KAI

straight

length - $8\frac{3}{4}$ "

width - $7\frac{5}{8}$ "

weight - 1670 grams

Curved

length - 9"

width - $8\frac{1}{2}$ "

photos also taken inside Reef Tank.

Turtle Lagoon observations - only black
neoprene plastic tag observed,
other hard plastics gone(?)

3/2/76

Pool at SLP drained - black
tag and ~~three~~ two "yellow" plastic
tags present.

3/14/76

Captiv Greens
coconut island

TAG NOS	straight	curved	weight
176145 96 ✓	11 X 8 7/8	11 1/2 X 9 1/8	80 1/4
14497 ✓	10 3/4 X 9	11 3/8 X 10 1/2	9 1/8
100 1447 481 (600) ✓	16 3/4 X 13 3/4	18 X 16	26 1/2
1698 ✓	14 1/2 X 12	15 1/4 X 14 1/4	17
1440 94,3 ✓	19 1/2 X 16 3/4	20 5/8 X 19 1/4	38 1/4
91 1443 384 ✓	19 3/4 X 15	20 3/4 X 18 3/8	40
1444 451 ✓	17 1/2 X 14	18 5/8 X 16 1/4	27 1/2

23°C sea water

copied
from
other
log

Sea life park

- 6/18/76 1400h - started digging in beach
 1900h - I visited park - saw excavation
 2130 - crawled out of pond toward reef tank -
 put on plywood and carried back to pond.
- 6/19 6/20/21 apparently no activity reported
- 6/22 Talked to Gasman - yellow toy turtle 1277
 digging today none in park paying much attention
- 6/23 Talked to Bob Burke - turtle out of pond
 toward reef tank on 3 occasions - each
 time brought back by workers. Sand
 pile 1' deep exists behind reef tank.
 Another excavation in art. beach.
 Poss. some H_2S at bottom.
- 6/28-7/12 FFS trip

7/13 Call at home from Bob Burke.
 Report that turtle with yellow toy (but no
 number) laid ~70 eggs in 2nd pit
 in art. beach last night (7/12).
 On 7/6/76 a turtle (1277) dropped ~40
 eggs in pond. The night before this (7/5)
 she came out on sand. On July 9
 turtle 1277 crawled behind reef tank.
 Week of 7/5 report of copulation at
 night. Presently lots of daytime
 bobbing by ♂. Also report that big
 male crawled out on asphalt.

2000h 7/13 visited SLP talked to Burke.
 Eggs dropped in water are in styrofoam

by data sheet -
18 turtles now in SLP pond(?)

7/13 cont. ice chest. Dissected one egg - looks chubbier
 ~70 eggs of 7/12 are in white plastic
 bucket with sand on bottom (~8")
 and wet rag on top. Bucket on top of
 small "culture" oven - holes in bottom.
 Thermometer in top shows 26°C - I put
 in deeper. Burke reports that
 feeding rate was doubled from earlier
 amount - also 4-5 one a day vitamin pills
 are now put in fish-squid. Dealy reports
 that yellow tagged turtles will only
 eat squid.
 3 turtles total w/ plastic tags -
 076 7-127.7 - BFT - no number.

Shallenberges ^{originally} arrived at SLP 1970

7/20

Talked to Bob Burke - last night a "new"
 turtle (clean back) crawled all the
 way out and went around to sand pile
 behind reef tank (3 1/2' deep), dug
 hole, ~~the~~ Turtle found at 0630
 this morning by Burke's door. No
 eggs initially found.

7/23 Friday

Report from Gasman that turtle was out
 digging at 1330 - almost went over
 rocks several times - many visitors
 around - back into pond at 1530.
 out again before park closed(?)

7/24 Sat

I arrived about 0900, turtle out

7/29

digging - photos taken - there is a size (68) at left front flipper webbing and left rear (injury). Bob Burke and I dug up beach but did not find eggs. Bob reports that to his knowledge nobody has seen turtles locked in copulation. I saw large male with bite/scab marks on neck. He chased a female but was rejected. Turtle with flaring 76 (underside) [This must be previously mentioned yellow tag no number] out basking - is not disturbed by anyone! Very large (st) green nervous trying for long period to crawl out on lava rock at opposite end of pond. Also later by sun swimming nervously back and forth. Bob reports that several days ago ~~a~~ an unidentified turtle crawled on beach and dug around.

Examination of eggs in styrofoam container taken from pond indicated dark spots on some. all were cut open (total examined = 35). H₂S in some. No signs of development. Seven (7) were then taken from clutch laid in sand but now in plastic bucket. Bob is ~~maintaining~~ maintaining moisture content regularly. Temperature near center indicated 29°C. 4 of seven

Tog left at SLP 7/24/76 = 2009, 2012, 2013, 2014, 2015

7/24 Sat showed very small blood spot. all consisted of yolk that appeared broken down and some chunky/cloudy.

wed 7/28

7/26 Mond. Talked to Josman and Burke - possibly same turtle came out last night, dug, constructed nice, rear limb egg chamber, - but did not lay.

7/27 Tues This morning 17 eggs were found in pond - Bob indicates they had this male. 1277 was out digging today -

8/7/76
8/12

also a turtle at early evening (same one?) yes 1277 - Bob stayed about 1 1/2 hours that night - she dug high flippy chamber but stopped when she hit dark soil.

8/16

7/28 wed Bob Bourke called at 0830 to report that very largest green was "grunting and groaning" laying eggs. by 0930 report that finished - but chased her back to pond in process of trying to lay. She laid 107 total - but 2 go to freezer (1 small, one broken). Male "went after her" as soon as she returned to water.

7/28 wed I went to SLP at 1145. Turtle that laid was resting in water close by ramp. Light colored shell with healed scuffing on hind limbs. I attempted to tag by cutting twice into webbing of distal left front limb. In process of holding limb, male tried to mount. Bob reports that 76 was basking while turtle was laying this morning. Report shallow egg chamber.

8/18/76

wed

8/21/76

8/25

wed
7/28

61 eggs to CI and stacked evenly in thick sided styrofoam container - placed in back storeroom. Damp towels on top of egg. One egg large and oblong. Bob Bourke retain 44 eggs in thin walled styrofoam with apparently lots of sand on the bottom.

8/7/76
~~8/10/76~~

Bourke reports stullie out digging (daytime?) - fut on to 2009(?)^{??}

8/12

Bourke reports 2009 laid 64 eggs transferred to styrofoam.

Monday
8/16

Bob reports 1277 has been out digging for past two nights.

Monday afternoon - went to DLP Bob's not in.

Note left that he had dissected one of his 42⁴ eggs (second batch) - it doesn't look good. Gasman reported that turtles have been crawling out of nesting area at night. Small burdhole set up.

8/18/76
Wed

Cut open 2 eggs of my 61. Not fertilization apparent.

8/21/76

Cut open remainder of my eggs - no development seen.

8/25

This date Bourke found his 44 from split clutch to be infertile. I also Group one had 36 infertile, 2/9 small red dot, 1 slightly larger. of 3rd group (67 total) ^{7/11/8009} two were examined - blood spots present the size of a nibble.

8/25/76 Bob says, turtle activity slow -
 night before last one came out, dug around,
 "white" back is description given.

9/7/76 Tuesday Called Bob (after my return) - no more
 eggs have as yet ^{from M. D. W. W.} been examined -
 a ^{large} turtle was out several nights (?)
 ago digging ground - one apparently with
 ragged hind limbs (?). Bob put a
 tag on (?).

9/10/76 Tuesday Tel. Bob Boyne - he ^(from lost & remaining clutch) offered two
 one nothing (no devel) - one embryo
 about 8mm long - no apparent movement.

9/21/76 Tuesday VISTED SEA LIFE PARK. INFORMED THAT ON 9/20 Mon
 at 1000AM a healthy hatchling found in shaded
 cement area behind reef tank. ^{Therefore}

Probably
 from
 2nd observation
 Preserved

We scouted entire area and found 2 partially
 eaten hatchlings (nongoose, rats, cats?). Sand
 pile behind reef tank methodically excavated -
 found hatched nest - not more than 1'-1'6"
 below surface. 36 empty shells and 9 NO
 development (total 45). Water (salt?) from
 leaky tank may have kept sand moist.

Concerning clutch of 8/10 (turtle 2009) in styrofoam
 box covered with towels - examined one
 egg and found embryo alive ~~about~~ about
 1 1/4" long (total length) preserved.

contin
 9/21/76

9/28

9/29

9/30

10/5/76

Continued

- 9/21/76 Note from Bob Bourke = "Between 9/8 - 9/20 a turtle came out to dig on several occasions (2-3x week) (tattered flipper turtle?) she was tagged #2012. on 9/20 morning ~ 80 eggs were found in pool bottom" I examined 2 - no signs of fertility.
- 9/28 Bourke indicates he took a "bad" egg ^{w/holes} out of remaining clutch #2009 67 eggs. Pats of cover over styrofoam containers.
- 9/29 ~ 12:05 "turtle up on sand. laying in hole" 02:24/02:59 → back in water. #tag unknown - This turtle ran into incubating clutch - broke eggs and scattered about - Developing embryos noted - ants into nest, also Mongoose trying to dig in.
- 9/30 Call from Bourke - Count of excavated material 9/29 EVENING - 24 no development; 9 good (to containers); 3 unknown broken (1 early stage (bad); 1 advanced stage dead (puked); 2 small size (middle) dead, 1 quarter size) ^{dead} - Eggs were about 1.8" down.
- New clutch discovered resultant from nest 9/29 12:05 - 114 EGGS placed in container on morning of 9/30.
- 10/5/76 Call from Bob indicated that Debby says nesting turtle was blue tag (2009)

from 2009 -

10/6/76 Emanuel 1 egg from 8/10 67 clutch
 turgid - embryo measurement = ~6.5 cm
 BIK carapace - all parts developed, but small.
 also 3 from 2009 - NO ^{apparent} Dev. appear dehydrated

10/15/76 34 hatchlings from artificial beach
 Photo in 10/18/76 S-B

10/21 Bob Bourke says 41 turtles
 out of nest - saved dead
 materials - some hatchlings

10/24 ~ 10/21 1st in batch of 9 hatched
 SUNDAY 10/22 crawled out - I saw hatchling - still seen
 Today - 2nd egg of 9 peeping through
 Another egg of 9 previously opened too
 open by Bob - about a week ago
 This leaves a total of 6 yet to peep.

Visited SLP
 to see hatchling
 8 on display in
 Tank

The 10/15 hatch 41 alive;
 36 total ~~hatchlings~~ (6 that were broken - unable
 to determine if devel or no develop - bugs)
 23 no develop; 2 develop - very ^{Bloody} little;
 2 - 1/2" embryos; 1 - 1" embryo; 2 - 1 1/2"
 embryos (one of these preserved); 1 - pea egg
 2 1/8" long; 1 1/16" width - means

10/24/76 5 weights -

29.4; 32.4; 30.8; 32.1; 27.2 -

Picked

114 Eggs from 9/30 2009 (dehydrated)
all cut open - NO Development seen.

laying of 8/10 2009 in Styrofoam containers
1 cut - no Develop

Remainder has ants and cockroaches -
but turgid - ^{most} look alright.

	Length	width	straight (cm)	L	W
42 live hatchlings	5.84	4.83	18	596	492
from 2	6.02	5.04	19	585	495
10/15/76 3	5.81	4.81	20	567	456
4	6.16	5.09	21	607	487
Sand beach Hatch 5	6.07	5.08	22	597	509
6	6.04	5.08	23	615	518
7	5.34	4.54	24	565	472
8	5.73	4.82	25	572	496
9	5.97	5.07	26	602	480
10	5.88	4.86	27	574	479 - split scale
11	5.90	5.04	28	568	479
12	5.85	5.00	29	609	501
13	5.95	4.88	30	594	489
14	5.83	4.88	31	584	476
15	5.75	4.88	32	585	504
16	5.52	4.47	33	569	461
17	5.94	4.87	34	590	491

turtles from Aqu #1

8 ↓ ~~indisplay~~ TANK W

35	598	478
36	596	488
37	546	456
38	586	468
39	581	482
40	596	495
41	605	492
42	562	466

also noted -
turtles "crush down"
pointed coral -
wake place to sleep?
as per bombe

Bob has blue tags on 3 turtles in porch.

10/25

Lin out
went to
slip

10/24

2100

3 days ago ^{new} coral head were put in reef tank - hawk now sleeps under it - other in cave - green by window.

Photo #23 -

#25	bounce at F4	Hawk
26	Direct F4-5.6	w/red FISH
27	" "	
28	" 5.6	
29	" 5.6-8	
30	--- 5.6-4 Bounce	
Micro 31	--- 5.6-8 "	
" 32	" 5.6-8	
" 33	" 3.5-5.6	
" 34	--- 3.5 "	
" 35	--- 5.6-8 "	
" 36	" 8 ---	
" 37	" 8-11	
1138 Hatchling	" 5.6-8	

Micro	Diet	Wt	
1 ✓	"	5.6-8	
2 ✓	"	5.6	
3 ✓	⊙	5.6	Bourne
4 ✓	✓	5.6-7.4	"
5 ✓	5.6	5.6	
6 ✓	Diet	5.6-7.4	Bourne
7 ✓		3.5	"
8 ✓		3.5-5.6	"
9 ✓		5.6	"
10 ✓			"
11 ✓		3.5-5.6	"
12 ✓		5.6	"
13 ✓		5.6-8	"
wide angle	16 Diet	5.6-8	
17		5.6	
18 ✓		8	
19			
26 ✓		2.8	
27 ✓	diet	4	
28 ✓		5.6	
29 ✓		8	

10/25/76 Call from Bob Bourne -
 Mongoose got into Eggs 8/10 2009
 by eating into styrofoam bottom -
 10 with only egg shells remaining
 3 rotten in devel
 3 partial devel rotten (just Blood, 1/4" embryo - very dehydrated embryo)
 3 Embryos inside - shell broke - put in with separate.

10/26/76 Bourke reports that Mongoose again got in - this time into box of 9 - ate all young.

10/28 - More young are hatching - 11 ~~removed~~ removed live in 8/10 #2009 box.

Sat
10/30

13 live, healthy hatchlings were found from unknown nest in artificial beach this morning. 3 found dead in drain. One seen being carried away by Mongoose.

Excavation revealed ~ 25 empty shells, 4 well advanced embryos in egg (one cut) put in containers. 43 no develop. 1 very slight development. Total (73)

Some of the live were found in pool from 8/10 #2009 in artificial containers - there are now ~~of~~ about 15 hatched and transferred to second box this far.

10/30

I had a long talk with Shallenberger, Bourke. He wants to give 20-30 away, keep 10 permanently, keep 10 for raising for future release. As of this date there are $43 + 13 = 56$ live swimming hatchlings. Plan to let $8 + 7$

Saturday go tonight at Makopuu.
(let 60)

11/1/76 Report that one more hatchling found in rocks - makes total now (14)

11/2/76 Bourke came by at ~2200 and said he had received a call that a ~~new~~ another nest in art. beach emptied - 10 out.

11/3

Bourke came by in evening - said
 lost night's emergence to take ^{next night} 48 ⁴⁷ ⁷⁰
 with ¹⁹ total ⁴¹ ⁵² ^{3 part} ⁴⁹ ⁷⁸
 also a turtle ^{found in}
 Whalers Cove - chewed up by Dolphin - ^{need details}

19 total ~~total~~ egg
 total clutch size -

Number of clutches deposited in sand 9 - ^{total eggs}
 Number of times eggs released in pond 3 - ^{132 eggs}

Total no. Females thought to be involved 3-4.?

Total turtles in pond

those thought to be adults - ^{size}

black and white photo, needed of facility
 total number of hatchlings produced -

square feet in beach; square feet in pond;
 volume, depth, history?

11/5

SLP series of events as per Shollenbeyer
 "Turtles with 4 seals in 'seal' tank
 up until Dec 1972; at that time SLP
 got 10-15 more sea lions due to forthcoming
 MMPA implementation. - After Dec 1972
 moved to present turtle pond, which has
 been there since park opened, but used
 for other animals. In spring of 1973
 copulation noted, followed immediately
 by eggs being dropped in tank. Nest

11/5/76 (as per Schallenberger)
 day copulation again - so Ed (he)
 took turtle over to seal
 tank where at that time there
 was a sand beach. Didn't work.
 Eggs put in sand for incubation
 but no development.

In December, 1973 I measured
 turtles for the first time. at that
 time ramp constructed and pond painted
 with Vinyl Cop(?). Turtles back
 in by end of December. but sand not
 put in / constructed until _____ later on.

Questions - Was copulation noted Spring
 of 1974 or Spring of 1975?

11/5/76 10 PM received call from Bob, report of
 hatching by guard - Went to Park -
 hatchling already in box - bucket - 44 -
 Excavated nest, found 3 live (1 w/ imbedded
 put in incubator), 30 INFes - 10 Devel;
 12 part devel (6 early, 6 late all dead)
 Counted about 43 shells - so it matches
 pretty well. total clutch size - (89)
 Nest depth = 19" I released
 41 at Makapu'u beach.

Recorded
 11/7
 copulation
 summary
 1976

from Bob and Debbie -
 Since before first nesting - lots of
 attempted mating, but no
 locked copulation ever noted.

I seem to recall 3/13/75 pool cleaning delayed due to Cop observation

11/8/76
 TO SLP with Bob at 1945 for release
 of turtles at Sandy Beach

By	Dates	Releases
all Retain 11/8/76	2009 Release 11/8	8/10 - 20
⑤	[25] 10/15	- 43 ⊖ 8 ^{10/30} ⊖ 4 ^{11/10/2} ⊖ dead
⑤	[2] 10/30	- 14 ⊖ 7 ^{10/30}
	[24] 11/2	- 49 ⊖ 25 ^{11/4}
⑤	[1] 11/5	- 17 ⊖ 41 ^{11/5}
		[81]

11/8 Total release [52] calculated,
 but only [51] counted

TOTAL Release [132]

Pool drained 11/1/76 -
 Toys found on bottom - 2012 and 1506

11/8/76

SLP

Tag no present	New Tag	Apparent sex	SL-SW	comments
1. Hawk 2. large green 902	2014 RF	♂	23 1/8	14" tail
4. 905	2015 RF	♂	23 7/8	14 1/2" tail
4. 684 911	2013 RF	♀	26 3/4	
5. 739 76	RF yellow plastic	♀	37 5/8	30 3/8
7. 1502 (removed)	2057 RF/2058 LF ♀		31 1/2	23 3/8 RELEASE
8. old tag missing RF hole	EGGS 2016 / 2059		97.2 38 1/4	28 3/4 Light shell
9. old tag hole LF	2017 / 2060		93.0 36 5/8	30 1/2 27.5 feathered flipper tag hole RF
10. 2018 / 2061	♂		80.3 31 5/8	26 0 13" tail
11. 1277 yellow	2062		33 3/4	26 1/4 beat up shell gone showing ↓
12. 687	2019 /	♂	33 1/4	27 0 18 3/4" tail
13. 2063 / 2064			79.1 31 1/8	63.5 25 0 RELEASE
14. 1509 (removed) corrosion	2065 / 2066		29 0	22 3/8 RELEASE
15. 2067 / 2068			29 0	22 3/8 RELEASE
16. 908 (removed RF) bent	2069 LF/2070 LF	♂	31 1/4	23 7/8 9 1/2" Tail RELEASE
17. 2009 LF	EGGS 2070 RF		83.8 33 0	64.8 25 1/2 16" Tail
18. BLACK TAG	2071 LF		33 3/8	27 5/8
19. 1505	2021 L		34 1/4	28 0

19 total - 4 makal pier = 15 Remaining

- 902 14" tail
- 905 14 1/2"
- 2018 13"
- 2019 18 3/4"
- 2020 16"

9 adult females, 3 adult males
Subadults - 4 unknown, 2 males

Type of sand Schallenburgers - weed
 11/27 81 Total Hatchlings - val Sea Water
 57 Hatchlings Evening - hatchlings
 found by pearl factory at SLP -
 Steve had already dug up
 major portion of sand - found nothing.
 Small fence was down. Mokapu

11/30 Bourke reports that ~~77~~ ^{9 int fresh} 77 total hatchlings 66 Mokapu
 found in/on sand beach at 7:30 this evening - 5 unpatched 4 now
 all but 6 released at Mokapu Beach. 1 blood
 24 unpatched (advised but rotten) (1 fertile) (21 infertile)

12/11/76 call from Bourke - he indicated
 that ♀ 2021 and ♂ 2015 seen
 copulating for 4-5 minutes today.

12/19/76 ^{60 Total} call from Bourke 9:30 PM Mokapu Guard
 report about 40 hatching turtles
 found. - 1 HBD 17 NO development
 2 full devel but dead

12/21 call from Bourke - They excavated entire sand beach -
 found a clutch of rotten eggs (infertile?).

Thursday - Visited SLP - Two Hawks in Reef
12/23/76 Tank were being transferred to pond - Measurements -
tagged 216 FL (smaller) C $30\frac{1}{2} \times 23\frac{3}{4}$ (photos w/ Debbie)
217 FL (Flat top) C $31\frac{1}{2} \times 26\frac{3}{4}$

Shortly after placing in pond, what looked like
younger males chased, mounted (photos) - hawks
hind flippers "folded" together.

"POMAKAI" was moved to Reef Tank 2 weeks
ago. Hawks from Aquarium will be moved
there (Reef tank) on 12/27/76. doing good on
1/29/77

- Examined greens that have been retained -
some nipping on hind flippers - "continually
hungry" - a couple much larger than others -
in small reef tank display shelf.
Small tags 218, 219, 220 and 221 put on 4
identifiable from 2009 ♀.

ENTANGLEMENT
* Examined small green - C $13\frac{1}{2} \times 12\frac{7}{8}$
that was turned in (22 wks ago) SLP, recovered by
women Waitole/Waikane(?) wrapped in "rope" -
Extremely EMACIATED - hardly any cartilage in
plastron "cellulose wrap". Right front limb has
healed notch where tag may have been.
Turtle needs to be force fed - rubber
tube. Animal's health activity now seems better.
Need FUNDERS TELEPHONE NUMBER -

12/30/76 Call from Bob Bourke stating the
one of Hawksbills transferred to pond
was found dead - no apparent external
injuries. *subsequently dissected - see other
book.*

Lots of INTERNAL FAT - shell cleaned
OUT - plates taken
OFF

2/11/77 on this visit to measure out log turned in,
green, I was informed that single egg was found
in pond on 2/6/77. No others seen. Also that
2105 does alot of basking - opinion that it is
hard to get out on ramp - slippery. Also
that on occasion over the past few weeks males
have been seen (mornings) attempting to mount
females, but rejection occurred. Theby males
have been trying to mount males. My observations of
hatchlings being reared indicates that many have bites,
white excoriation - one very severe - may die -
lots of variation in size.

4/17/77 Bourke reports that
last week he saw copulating pair - observed
locked together for 5 minutes - also they are now digging
out sand beach. called about tagging young turtles -
estimate weigh 800 grams - stopped biting one another
Diet -

6/15 - In recent weeks the turtle pool was drained and
cleaned and painted numbers put on turtles. backs -
NO. 7 has been basking alot - no resting. 6/16 - 6¹⁷ attempts
during morning - my hawk & Aquarium hawk are crow in holding tank.

9/28/77 - Shallenberger reported that yesterday two groups of
eggs were found in pool 42 and 17 U - I advised
that fertility be checked. (but it wasn't)

10/4/77 call from Bourke - reports that ↑ was 10 eggs found early
morning 32-40 plates - 10/5 later - all put in pond. Two small captives
both greens have been accumulated to reef tank recently - now in all the
time; 10/4 saved stuck in drain dead; 1 stolen long time ago - one returned
sprung; Big W. S. Hawk in pool and seems o.k. - nothing more
FROM KAHALA H. HON. GET @ STUCK IN DRAIN
@ RIDLEY SHELL

9610196

