

79

Sea Life Park Turtle Releases

4/6/73

TAG NO.	Curved C Length	Curved W	SL	SW
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	37 1/4	29 3/4
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 m	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.

SEA LIFE PARK

1975-1979

3/6/75

SLP - (went) to check condition of tags, however,
population(?) attempts to mount hotted early
that morning - deferred draining tank.

84

19 Total - Hawk beak off

moved out for painting and cleaning

Previous SLP Date - go to EAST ISLAND MAIN IS BOOK P 105

Sea Life Park

Tuesday Oct 14, 75

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

Small TMs both shoulders of biggest ♀

(13 Total with tags still on)

- ~~82.6 \times 10 \times 17.5 63.5~~
- ~~32 1/2 \times 25 blond ♀~~
- ~~38 ^{96.5} \times 30 1/4 speckled ♀ 913~~
- ~~27 1/8 \times 21 3/4 gold~~
- ~~68.9 \times 55.2~~
- 30 3/8 \times 24 3/4 multi
- 77.2 \times 62.9
- 33 3/4 \times 27 1/8 Hawk
- 85.7 \times 66.9

- \checkmark 907 found tank bottom
- \checkmark 915 tank bottom
- \checkmark 973 tank bottom
- \checkmark 1501 tank bottom

25.3%

30 7/8 x 23 1/8

37 1/8 x 30

26 7/8 x 21

write to Nickie company makers of model 85

March 13, 75

Oct 14, 1975

10/17/75

915^F-T

972-T

891^{RF}-T

70.8 x 56.5

1501^{RF}-T, 1502 (28 7/8 x 22 1/4)

891 - open lock OK - some corrosion (1501 tank bottom)

measurements

Tank bottom

Missing

10/17 tag not there

corroded at locking site

687, 1504^{LF} (32 3/4 x 27 ♂)

687 83.2 x 68.6

1505^{LF} (34 x 27 5/8 ♀)

1505 "1" lost "5" unmeasurable

1506-T (36 3/8 x 30 ♀)

1506 looks good - small corrosion

902-T, 1503^{LF} (27 x 21 1/8)

902 open locking site severe corrosion 26 7/8 x 21

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 3/8 x 27 7/8 ♀)

1507 looks good

1508^{LF}, 1509-T (25 1/2 x 19 5/8 multi)

1509 corroded at flesh 64.8 x 47.8

910, 911 (34 x 26 1/2 ♀)

911 good shape (910 off in transfer)

694 (37 1/8 x 30 ♀)

694 looks good

Hawk NO TAG largest ♀ NO TAG

NO TAG NO TAG

+ Jan 10, 75 Tag 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

TAG 1195 locked, KUPPA 78.4 x 60

84.8 x 70.8 86.4 x 67.3 94.3 x 76.2

86.4 x 70.2 91.4 x 76.2 68.6 x 53.7

11/26/75

FD by

Russell of Botom

Polysiphonia tenuis

Ref. is

Holzberg 1968
Pac Sci V22

Sat.

11/15/75

Visited SLP - plastic bags still on -
Examined Pacific molly fowl 11/14
in shallow water at Kahuku
beach park - ? ()

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

Schallerberger said that Fish
Game warden had pickled hank
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 TRAP 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 molly
talked to Fletcher Riggs - his wife fowl
Hawkebill - Kailua Beach

11/22/75 Sea Life Park Hawksbill observations

General notes:

1. Hawk #1 obviously smaller than Hawk #2
2. Steve Kaiser - employee - possibly seen
Hawk egg approns - ^{Big Turtles previously held in} neighbors pond - feed breed - paper ^{sky}
3. Neck long, however can be pulled in somewhat
4. Consider bird 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 glass
16. Will have to take hawks out of reef tank due to breaking-up coral formation - 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	7:55-8:00	out - breath
8:10	→ IN CAVE		
8:17	→ MOVE OUT Gliding	8:09	in cave - head down
8:20	2 breaths ✓ along glass spiral - scratching eye	8:10	head up - eyes open
8:25	tank center - bottom	8:14	sleeping
8:30	at least 1 breath gliding, bite at coral, "treading water"	8:22	eyes open and moving out cave
8:45	4 breaths, to cave, wedged	8:24	5 breaths
9:07	still motionless	8:27	biting at underside LFL
9:09	Move out of cave ✓	8:28	sitting on bottom near cave motionless
9:10	2 breaths	8:29	eyes closed
9:15	gliding	8:33	bit eel twice
9:18	to cave and out	8:35	"puffing"
9:21	3 breaths ✓	8:37	sleeping
9:23	to cave eel under turtle hobble eel sleeping with conger	8:39	eyes open
9:35	head down -	8:40	eyes closed
9:43	move out of cave ✓	8:43	moving out - up - breaths
9:45	6 breaths	8:47	moving - gliding
9:48	poking around coral	8:54	resting on bottom on limbs - puffing head up
9:58	4 breaths	8:57	Moving slow - stopped
9:58	3 breaths	9:03	4 breaths
10:00	to cave	9:07	moving slow
10:18	move out of cave, 2 breaths	9:08	3 breaths
10:23	3 breaths	9:12	into cave
10:31	at least one breath	9:27	move out of cave
10:34	1 breath	9:30	4 breaths
10:39	2 breaths	9:38	moving - Scratch head LFL
10:40	to cave	9:41	4 breaths
		9:43	resting close to glass not wedged

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CONTINUED

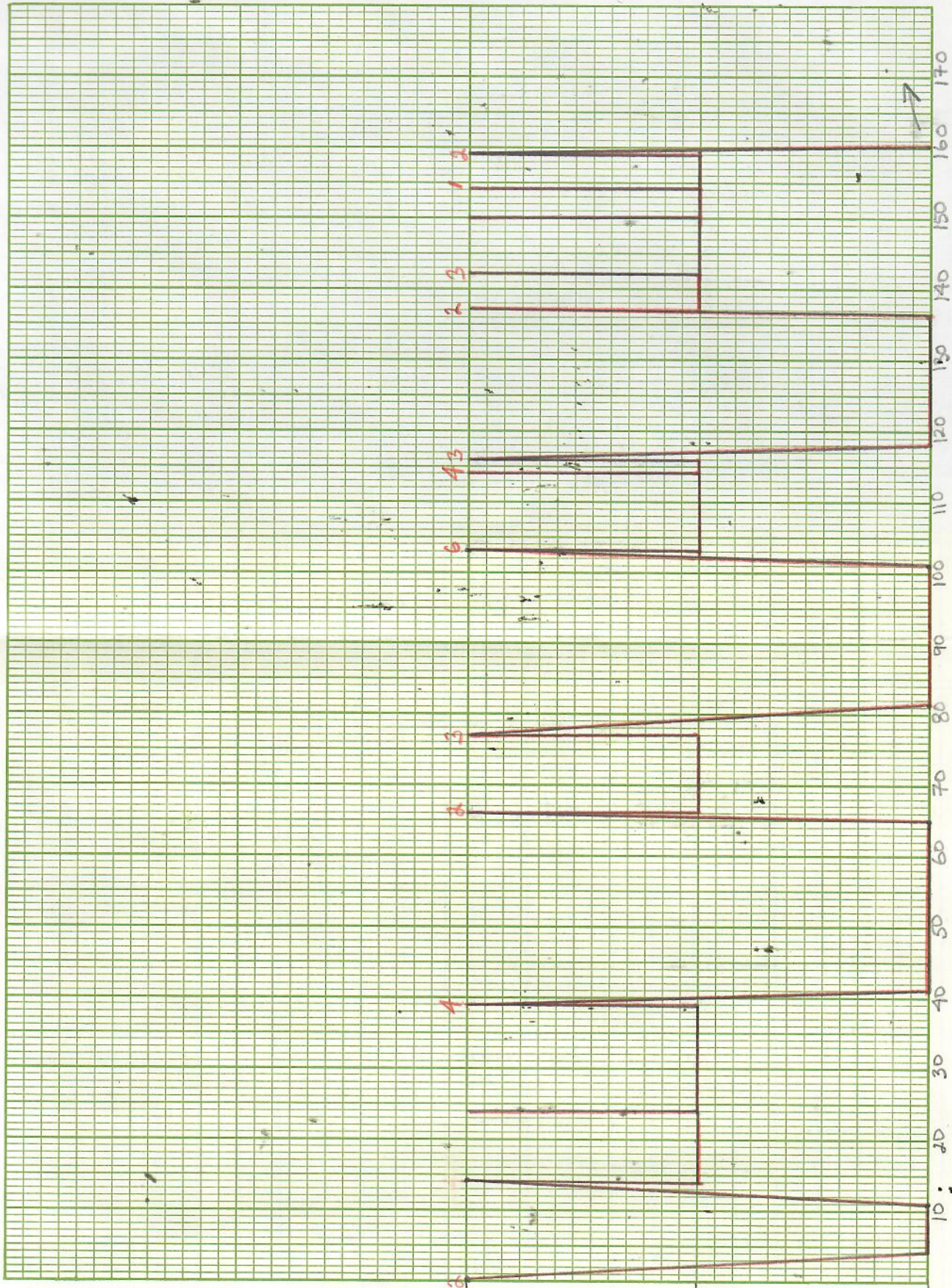
HawksBill #1

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
11:37	to cave - <u>photos</u>

HawksBill #2

TIME	Activity
9:51	Bit left #2
	Resting same place, head up lobster poked turtles left eye twice w/ Antennas
	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} down occasional waking then back to sleep
10:19	moving out of cave - Breath
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 - Breath
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
11:48	resting at same spot by glass

HawksBill #1
11/22/75



TIME IN MINUTES

Breath
Activity
Rest

94

Dec. 27, 1975

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

Hawksbill #2 (large)

Time	Activity
7:22	into cave
7:36	out of cave - breath 5x
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.
Greens never with hawks.

Observations from underneath show that exhalant and 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 Gaswan 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 tags still on turtles. Two loggerheads from AQUARIUM seem to be doing well. Noted surviving hawkbill still hesitant. 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 turtles, or ~~from~~ maintenance person with a garden hose?

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

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

And ~~no~~ parasites noted
MARCH 79 - Post mortem on Adult green iguana found beached at Bellows - Wainanalo ^{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 diver 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 than head - motionless - neck stretched out -
 cont. Convict Tang and bright yellow reef fish (each) grazing on shell & neck - presumably on algae.

Also in reef tank, "Po Maitai 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 - Spallenberger 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

2 JUNE (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/ penis out)

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. Ist said swallowing a response to all of this fat, for buoyancy?

Section of liver preserved - appear to be mottlings of fat in liver.

all material will be cleared and retained.

Waikiki Aquarium

February 2, 1976

Dead
Jan 76

FROZEN Turtles

2 - 1 green

1 CI hawk

MEASUREMENTS

TAG	NUMBERS	CURVED	STRAIGHT	apparent SEX/TAI L LENGTH	PREVIOUS NUMBER (if readable)	COMMENTS
	201 ^{RF}	10 1/2 9 1/2	9 1/2 7 7/8	?	27	Tuamotu green
RFL 1750 TW 202	9th marg. → R	23 3/4 20 1/2	22 1/2 - 18 1/8	?	NONE	green
LF 2005 TW 203	(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	2006 ^{plastic} RFL	33 28 1/4	31 1/2 24 7/8	10" male	28	green ✓
TW 205 9th marg R	2007 ^{plastic} LFL	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 ^{plastic} LFL	33 3/8 30 1/4	31 3/8 25	Female	31	green ✓
TW 208 8th marg R	1752 LFL	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 1/8 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 L green ✓
TW 211 9th marg R	1755 LFL	24 1/4 20 1/4	23 1/4 16 7/8	?	1?	Lauksb. 11
TW 212 8th marg R	-	DEFORMED	30 1/8 24 1/8	Female	-	Deformed Shell 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 GREEN
NO TAG	-	-	-	-	-	Deformed Shell ADULT Loggerhead
TW 215 marg R	-	-	34 1/2 27 3/4	Female	-	ADULT Loggerhead
inside Tank	Bitten by seals	-	-	-	-	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 7/8	80 1/4
14497 ✓	10 3/4 X 9	11 3/8 X 10 1/2	9 1/8
100 1447 481 (off) ✓	16 3/4 X 13 1/4	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 - 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 tag turtle 1277
digging today none in park paying my 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.

original
change 76

report that turtle with yellow tag (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 chalky
270 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. DeGhy reports
that yellow tagged turtles will only
eat squid.
3 turtles total w/ plastic tags -
O-76 7-1277 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, ~~and~~ turtle found at 0630
this morning by Burke's door. No
eggs initially found.

7/21

Friday - Report from Gasman that turtle was out
digging at 1330 - almost went over
rocks several times - many visitors
around - look 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 flippers 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 and 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 ~~is~~ maintaining moisture content regularly. Temperature near center indicated 29°C. 4 of seven

Tog left at SLP 7/29/76 = 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.

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

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

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

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 tog. 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 tog by cutting twice into webbing of distal left front limb. In process of holding plumb, male tried to mount. Bob reports that 76 was basking while turtle was laying this morning. Report shallow egg chamber.

wed
7/28

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

8/7/76

~~8/10/76~~

8/12

Monday

8/16

Bourke reports turtle out digging (daytime?) - put on by 2009(?)^{??}

Bourke reports 2009 laid 68 eggs - transferred to styrofoam.

Bob reports P77 has been out digging for past two nights.

Monday afternoon - went to SLP Bob's visit.

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

8/21/76

8/25

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

Cut open remainder of my eggs - no development seen.

This date Bourke found his 44 from split clutch to be infertile. Also Group one had 36 infertile, 2/9 small red dot, 1 slightly larger. Of 3rd group (67 total) ^{7/21/8009} two were examined - blood spots present the size of a mill.

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

9/7/76 Called Bob (after my return) - no more
 Tuesday eggs have as yet ^{from mid-way} been examined -
 a ^{large} turtle was out several nights (?)
 ago digging around - one apparently with
 frogged hind limbs (?). Bob put a
toe on (?).

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

9/21/76 VISTED SEA LIFE PARK. INFORMED THAT ON 9/20 Mon
 at 10:00 AM a healthy hatching fowl in shaded
 Cement area behind reef tank. ^{Therefore}

Probably
 from
 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 1/2"
 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 strofoam
 box covered with towels - examined one
 egg and found embryo alive ~~about~~ about
1 1/4" long (total length) preserved.

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. #709 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 (mink) dead, quarter size) - Eggs were about 1 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 Escamiel ~~1~~ eggs from 8/10 67 clutch
turgid - embryo - ^{total} measurement = ~6.5cm
Bik carapace - all parts developed, but small.

also 3 from 2009 - NO Dev. ^{apparent}
appear dehydrated -

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

10/21 Bob Boumke says 41 turtles
out of nest - saved dead
material - 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
seen by Bob - about a week ago -
This leaves a total of 6 yet to peep.

Visited S.F.
to see hatchlings
8 on display in
Tank

The 10/15 hatch 41 alive.
3~~5~~ total ~~hatched~~ (6 that were broken - unable
to determine if devel or no devel - bugs)
23 no develop; 2 develop - ^{Blood} very little;
2 - 1/2" embryos; 1 - 1" embryos; 2 - 1 1/2"
embryo (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 ^{IN} cut open - NO Development seen.

10/15/76 8/10 2009 Styrofoam containers
1 cut - no Develop
Remainder has ants and cockroaches -
but turgid - ^{most} look alright.

42 live hatchlings
from 10/15/76
Sand beach Hatch

	Length	width	straight (cm)	L	W
1	5.84	4.83	18	596	492
2	6.02	5.04	19	585	495
3	5.81	4.81	20	567	456
4	6.16	5.09	21	607	487
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 Aqua #1

8 ↓ ~~INDUSPLAY~~ 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 -
make place to sleep?
as per bombe

Bob has blue tags on 3 turtles in coral.

10/25

4 in out
went to
skid

10/29 photos
- 2100

3 days ago new coral head was 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	Direct	Wt	
1 ✓	"	5.6-8	
2 ✓	"	5.6	
3 ✓	⊙	5.6	Bourne
4 ✓	⊙	5.6-7.4	"
5 ✓	⊙	5.6	
6 ✓	Direct	5.6-7.4	Bourne
7 ✓		3.5	"
8 ✓		3.5-5.6	"
9 ✓		5.6	"
10 ✓		3.5-5.6	"
11 ✓		5.6	"
12 ✓		5.6-8	"
wide angle	16 Direct	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 no 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 89 - ate all young.

10/28 - More young are hatching - 11 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 development. 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. 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 Makapu'u. (let 60)

11/1/76 Report that one more hatchling found in rocks - makes total now (4)

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

11/3 Bourke came by in evening - said
 lost night's emergence to take ^{next} 48 ⁴⁷ ⁷⁰
 with also ^{egg out of beach} ⁴⁸ ⁶⁸ ^{+1? whalers cove}
 a turtle ^{found in} ^{Whalers Cove - chewed up by Dolphin - details}
¹⁹¹ ^{total} ^{egg} ^{size} - ^{need} ^{details}
 Number of clutches deposited in sand - 9 ^{no} ^{clutches} ^{retrieved}
 Number of times eggs released in pond 3 - 132 eggs ^{total} ^{eggs}

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

Total turtles in pond
 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 Stylenbeys
 "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 Shallenbeger)
 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 -
 hatching already in box - bucket - 44 -
 Excavated nest, found 3 live (1 w/ umbilical
 put in incubator) 30 INFER - no 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 clean's 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 8/10	- 20
5	25 10/15	- 43 08/30 4 Taylor 0 dead
5	2 10/30	- 14 07/30
	24 11/2	- 49 025/4
5	11 11/5	- 47 041/5
		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 ♂	see Bourke 23 1/8	14" tail
	905	2015 RF ♀	23 7/8 23 7/8	14 1/2" tail
687	911	2013 RF ♀	♀ 26 3/4	
739	76	RF EGGS yellow plastic	♀ 37 5/8	30 3/8
4.	1502 (removed)	2057 RF / 2058 LF ♀	31 1/2	23 3/8 RELEASE
8. Old tag missing	EGGS	2016 / 2059	97.3 38 1/4	38 3/4 Light shell
RF hole		2017 / 2060	95.0 36 5/8	30 1/2 + 70 reddish flipper tag hole RF
9. Old tag hole		2018 / 2061	80.3 31 5/8	66 26 0 13" tail
10. LF		2062	33 3/4	26 1/4
11. 1277 yellow		2019	33 1/4	27 0 18 3/4" tail
687		2063 - 2064	79.1 31 1/8	63.5 25 0 RELEASE
13.		2065 - 2066	29 0	22 3/8 RELEASE
14. removed		2067 / 2068	93.8 31 1/8	63.8 25 1/8 9 1/2" Tail
15. corrosion		2069 LF / 2020 LF	31 1/4	23 3/8 RELEASE
16. removed RF bent		2070 RF	93.8 33 0	64.8 25 1/2 16" Tail
17. 2009 LF	EGGS	2071 LF	33 3/8	27 5/8
18. BLACK TAG		2021 L	34 1/4	28 0
19. 1505				

19 total - 4 nakai
Pre = 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
Diemensis - Vol Sea water
sand shell

11/27
81 Total
4 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 -
all but 5 released at Mokapu Beach.

24 unhatched (advanced 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 - Guard
report about 40 ^{at Mokapu} hatching turtles
found. - 1 HBD
2 full devel but dead 17 No development

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

12/23/76

Thursday - Visited SLP - Two Hawks in Reef Tank were being transferred to pond - Measurements -

tagged 216FL (smaller) C $30\frac{1}{2} \times 23\frac{3}{4}$ (photos w/Debbie)

217FL (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 hid flippers "folded" together.

"POMAKAI" was moved to Reef Tank 2 weeks ago. Hawks from ^{Waikiki} 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 -

1 in small reef tank display shelf. Small tags 218, 219, 220 and 221 put on 4 identifiable from 2009 ♀.

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

Need FUNDERS TELEPHONE NUMBER -

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Turtle Project 1973
Book II

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