

TURTLE Project

G. H. BALAZS

7-3-75 TO 11-11-76

DAILY
LOG - 7/3/75 - 11/11/76

LIBRARY OF
GEORGE H. BALAZS

CONTENTS

- 6/6/72 - wts and diameters of
transplanted egg clutches - page 1-16
- 7/27/72 - Coconut Is. turtle tagging ^{FWS} (#499)
release (olsen) - page 22
- 9/20/72 - Cerium digestion (hawksbills) - page 37, 61
- 8/19/72 - Turtle diet formulae - page 41
- 3/21/73 - "Frenzie" from algae - page 67
- 1/15/73 - hawks shock of new tank - page 71
- 12/6/72 - Diet assignments for greens - page 75
- 4/20/74 - Turtle "eaged" nutrition studies - page 86

DAILY LOG - page 87 ON →
as of 7/3/75



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

~28°C - distilled H₂O PAN
incubator 75000 ml

11:15 A.M.
6-6-72 1

Turtle #202

99 eggs laid - correct

Not practical
to easily measure
length em width em

weight grams

handled roughly, harder

Tray no	Weight (grams)	Length (cm)	Width (cm)
1	47.7	4.6	4.4
2	45.2	4.7	4.3
3	50.2		4.4
4	47.8		4.4
5	49.7		4.5
6	48.4		4.4
7	47.3		4.3
8	50.1		4.5
9	48.6		4.5
10	48.2		4.4
11	47.9		4.3
12	48.4		4.5
13	46.3		4.3
14	51.4		4.6
15	50.1		4.5
16	51.8		4.5
17	50.6		4.5
18	51.4		4.5
19	50.1		4.4
20	46.6		4.3
21	51.3		4.4
22	48.6		4.4
23	48.7		4.5
24	48.4		4.3
25	51.0		4.5

Turtle #202 South side east lab
Ferrer Frigate chow

99 eggs laid

6/1/72

no special care taken to assure that
eggs were taken out or stored in
order - eggs also "tumbled"

newly tagged 40 x L x 39 W

Bar

	Weight gm	Width mm	
26	46.3	4.3	
end 27	49.3	4.5	
May 28	45.7	4.3	
no 29	50.7	4.5	
Sand ^{bottom} 30	47.7	4.4	
May 31	49.2	4.6	
Sand 32	52.2	4.5	
on 33	51.3	4.5	
top 34	47.8	4.3	
bottom 35	50.0	4.4	
36	46.6	4.3	
37	52.1	4.5	soft than spot on shell
38	52.0	4.6	
39	53.5	4.5	
40	49.3	4.3	
41	53.2	4.5	
42	47.4	4.3	
43	49.5	4.3	
44	50.2	4.5	
45	50.7	4.5	
46	49.4	4.5	
47	51.3	4.5	
48	52.8	4.3	
49	53.1	4.5	
50	52.3	4.5	

	Weight grams	Width cm	
51	49.8	4.5	soft
52	48.7	4.5	
53	53.6	4.6	
54	51.9	4.4	
55	50.5	4.5	
end 56	49.4	4.5	
Tray 57	52.0	4.4	
Sand 58	49.9	4.4	
on 59	47.4	4.4	
top ^{Bottom} 60	47.4	4.4	
Sand 61	46.9	4.5	
on 62	48.7	4.2	
bottom 63	50.3	4.5	
of 64	47.2	4.3	
Tray 65	50.6	4.4	
and 66	49.0	4.5	
Top 67	50.8	4.4	
68	47.2	4.5	
69	51.5	4.5	
70	53.3	4.5	
71	51.2	4.5	
72	48.5	4.5	
73	45.3	4.3	soft
74	50.1	4.5	
75	50.7	4.5	
76	48.7	4.4	
77	48.8	4.5	
78	50.0	4.5	

	Weight g	Width cm	
79	49.0	4.3	
80	49.5	4.5	
81	49.4	4.5	Average Weight = 49.6
82	45.9	4.3	Average Width = 4.4
83	53.2	4.5	49.616 ± 1.936 4.4373 $\pm .091$
84	50.6	4.3	Weight range = 45.2 - 53.6
85	51.6	4.5	Width range = 4.3 - 4.6
86	49.9	4.4	
87	49.6	4.5	$N=99$
88	52.1	4.6	
89	49.2	4.4	
and tray 90	50.7	4.5	
Sand on 91	50.2	4.5	
bottom 92	48.9	4.5	
and 93	47.4	4.5	
top 94	46.7	4.3	
95	50.7	4.4	
96	50.1	4.5	
97	49.0	4.5	
98	48.9	4.4	
99	47.5	4.3	

6-8-72 Fan Disconnected - wet Towels placed over Flats -

6-9 Fan reconnected - 60 eggs moved to Manka area
bunnet in 68cm. (31-90)

(1/2) 2 eggs examined - no evidence of fertilization - frozen for analysis.
Remains of eggs moistened and left in incubator.

6-19 Distilled H₂O used daily - remaining eggs in incubator very dry.

Resulted in
live hatchlings

JUNE 1, 1972 ^{white bucket} FRENCH FRIGATE
EAST ISLAND

TURKLE # T62

86 eggs -

eggs deposited in bucket in reverse
order - carefully handled -

over

RWD

Makai pit 6/6/72 1:40 P.M. 84 counted

68cm. deep not packed in plastic - in sand
moist as ones in plastic - mucus & sand

egg width →	4.8	4.6
cm.	4.7	4.6
	4.6	4.7
	4.8	4.7
	4.6	4.7
	4.6	4.7
	4.5	4.7
	4.5	4.6
	4.6	4.8
	4.7	4.8
	4.7	
	4.5	
	4.7	
	4.7	
	4.3	

- 25 - sampled widths cm
- Temperature probe
- Microphone
- Wire enclosed

MAY 8, 72 Round
tagged pl 29 3/4"
Car 35 1/4 x 28 1/4
round 38 x 37
14 1/4 thick
230 ~~000~~ lbs

Average = 4.7
Range = 4.5 - 4.8

Turtle # 201 - north side east island
laid 97 eggs French Frigate Shoals

June 1, 1972

newly tagged 34 $\frac{3}{4}$ x 36 wide

eggs carefully handled -

taken from nest in reverse Green plastic
order

Mauka Pit 1:00 P.M. 98 turtles eggs

72 cm deep

Covered with mucus & sand

egg width Soft
Cardboard box - wet - wrapped in plastic (green)

4.7 5.0 25 sampled widths

4.6 4.9 - wire enclosed

4.8 4.8

4.8 4.8

4.6 5.0

4.7 4.8

4.9 4.9

4.8 4.9

4.9 4.9

4.8 4.9

4.8 4.8

4.8 4.9

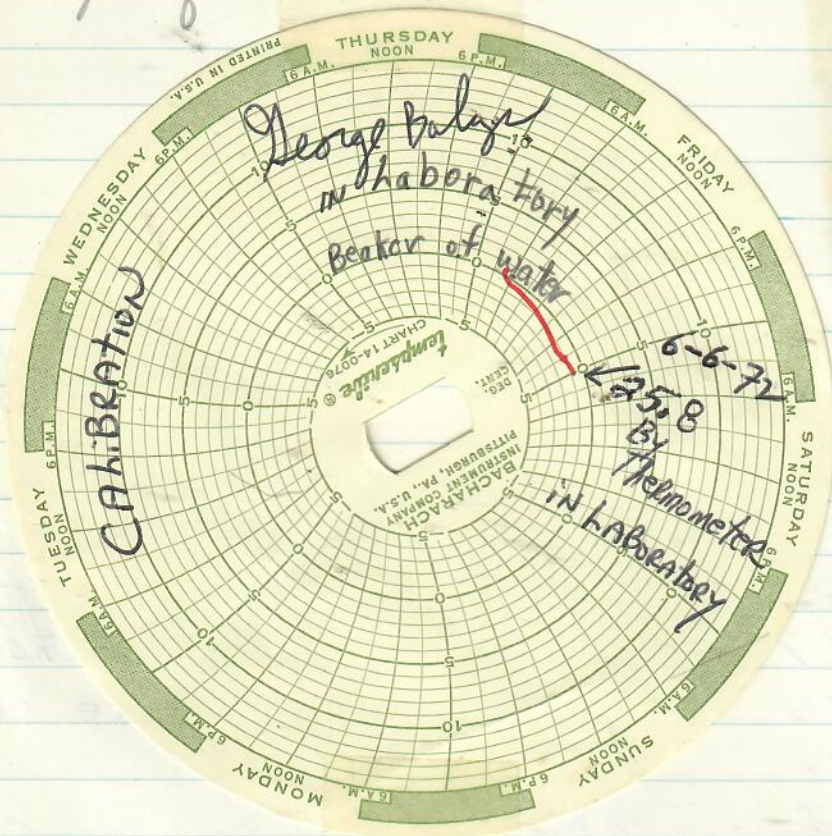
= 4.7

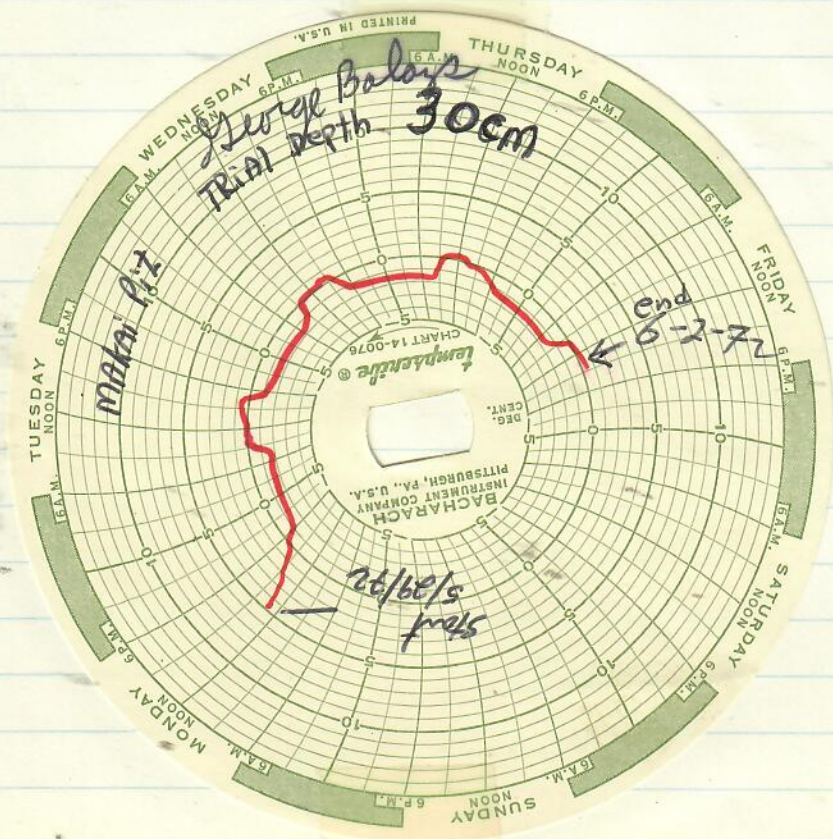
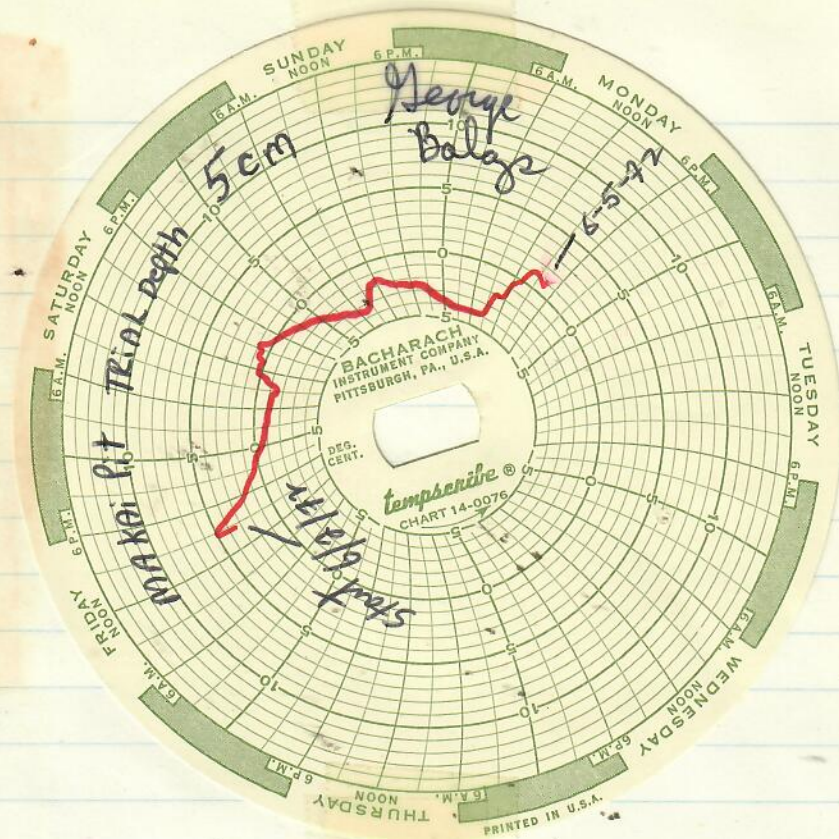
6-9

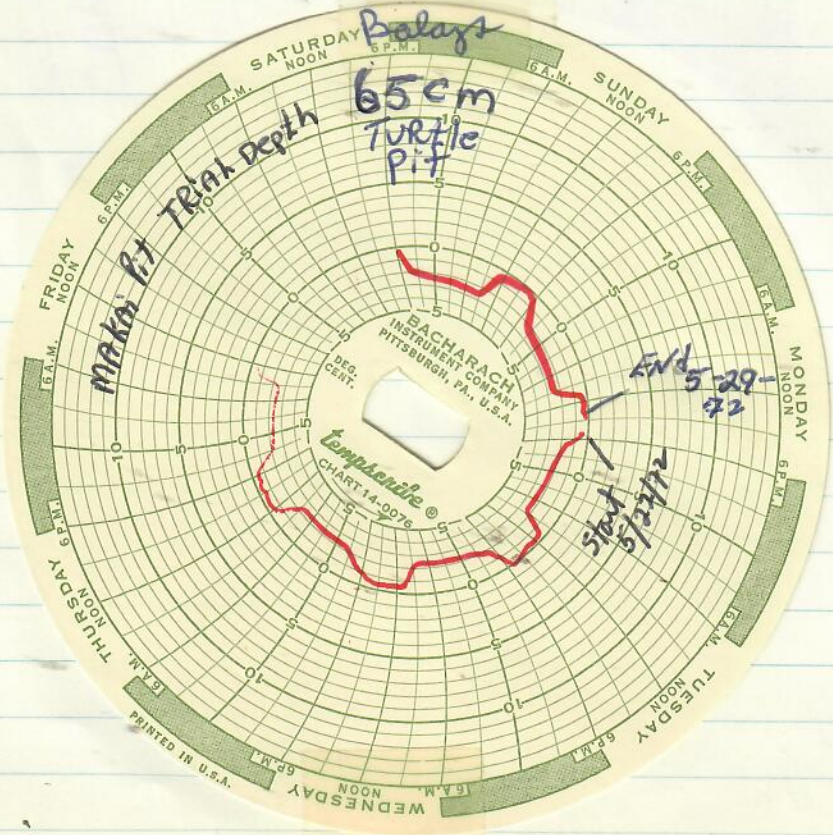
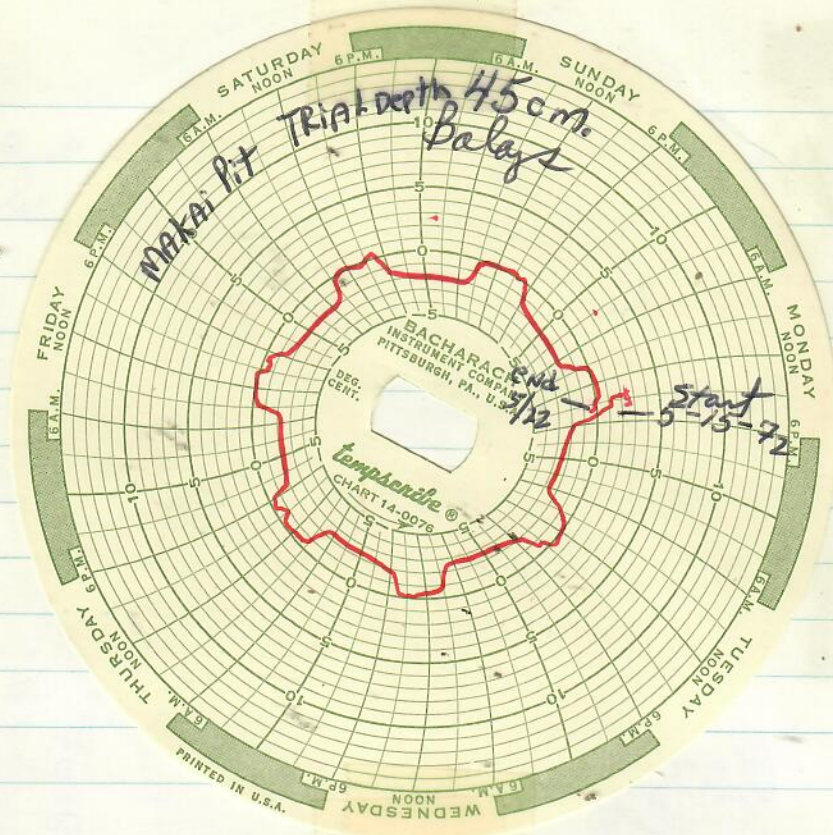
60 eggs from incubator buried 65cm this enclosure - separate pit.

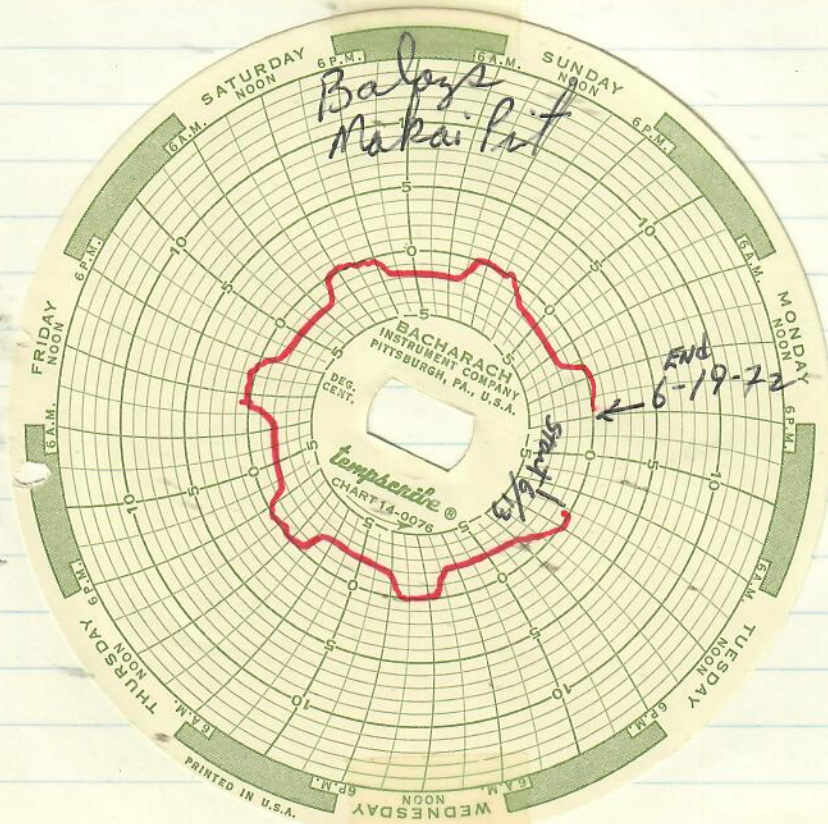
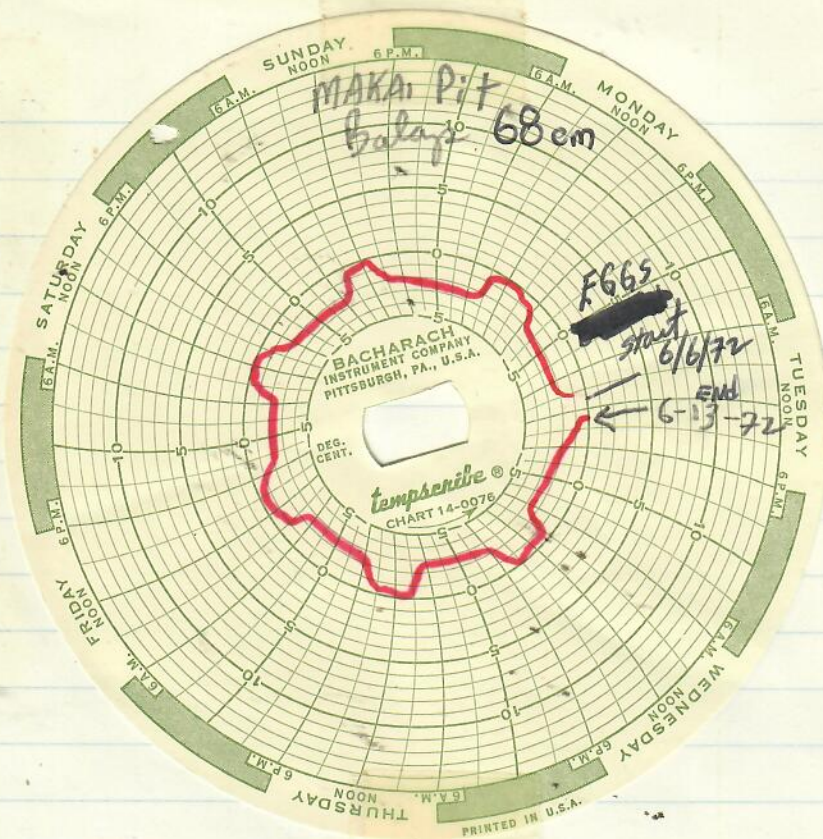
7-20

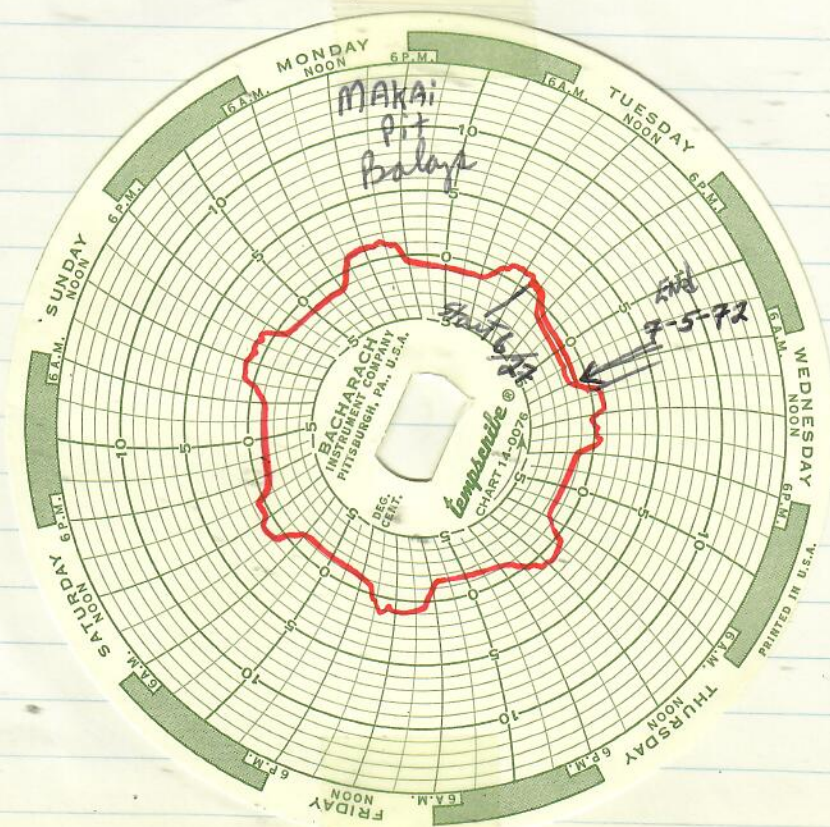
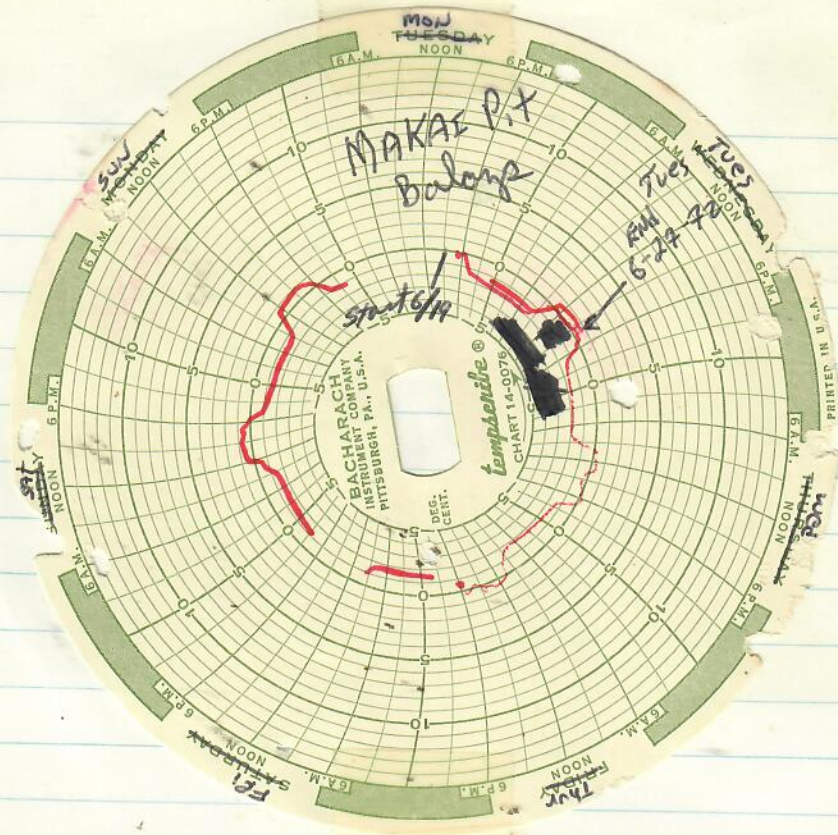
6 to Benedict for antibody test from pit. Remainder of eggs stored in frozen-dry - have No signs of development.

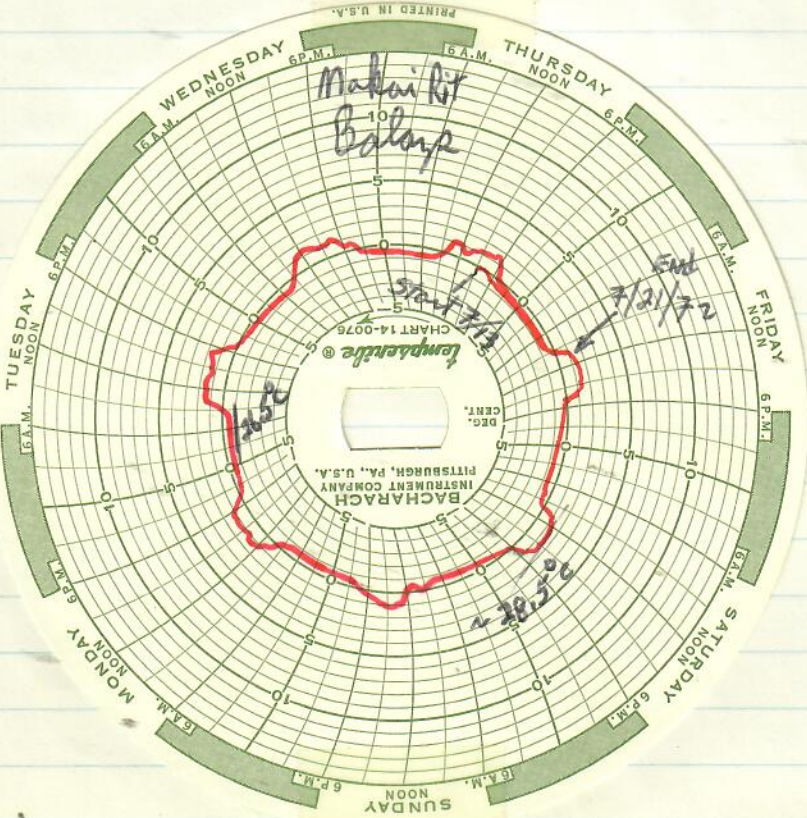
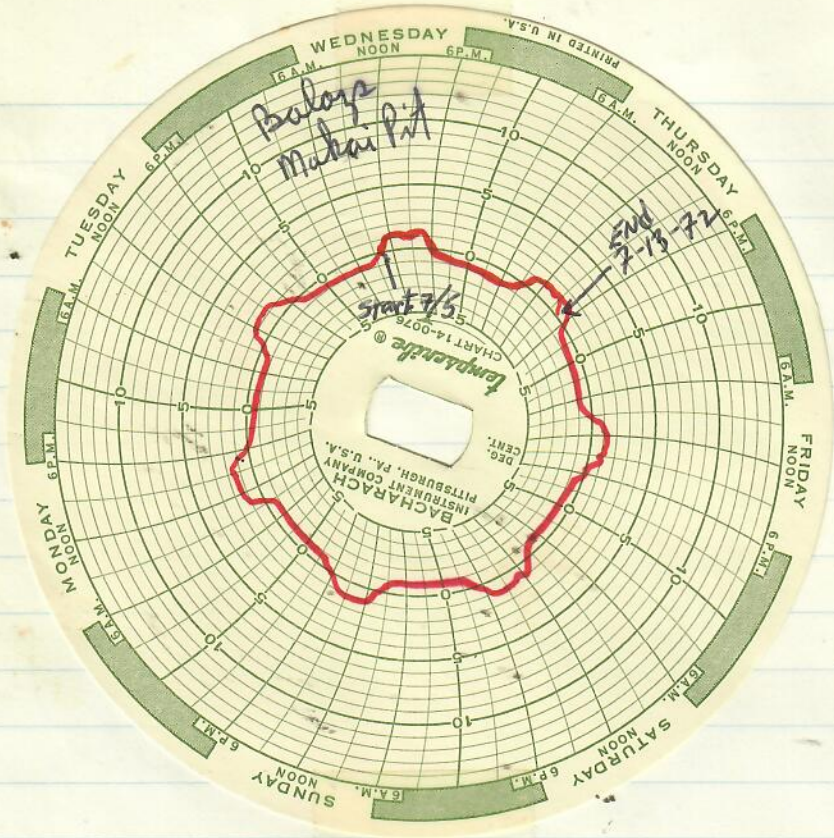












7-27-72

DOI Tag 1

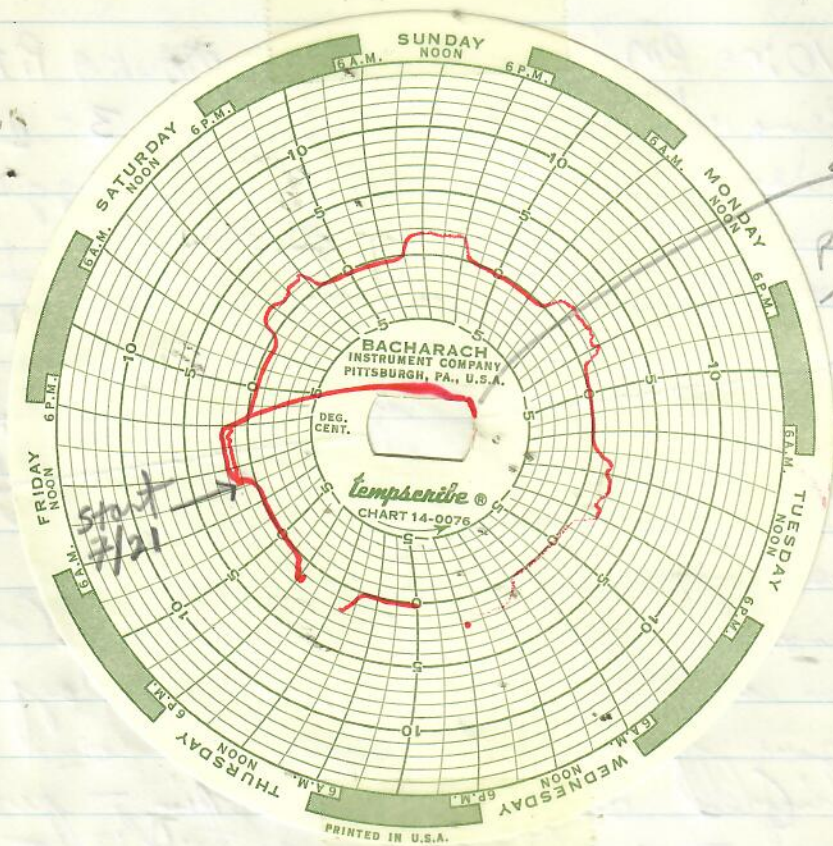
released off
coconut
Island

TURTLE TAG 499

16 $\frac{3}{4}$ length (CL)

26 lbs wt

14 $\frac{1}{4}$ width (CW)13 $\frac{3}{4}$ (PL)7 $\frac{1}{8}$ thick31 barnacles left onall
straight
measurements



Friday -
 7/28/72
 Temp scrib
 pen plunges -
 no longer
 operating

start
 7/21

PRINTED IN U.S.A.

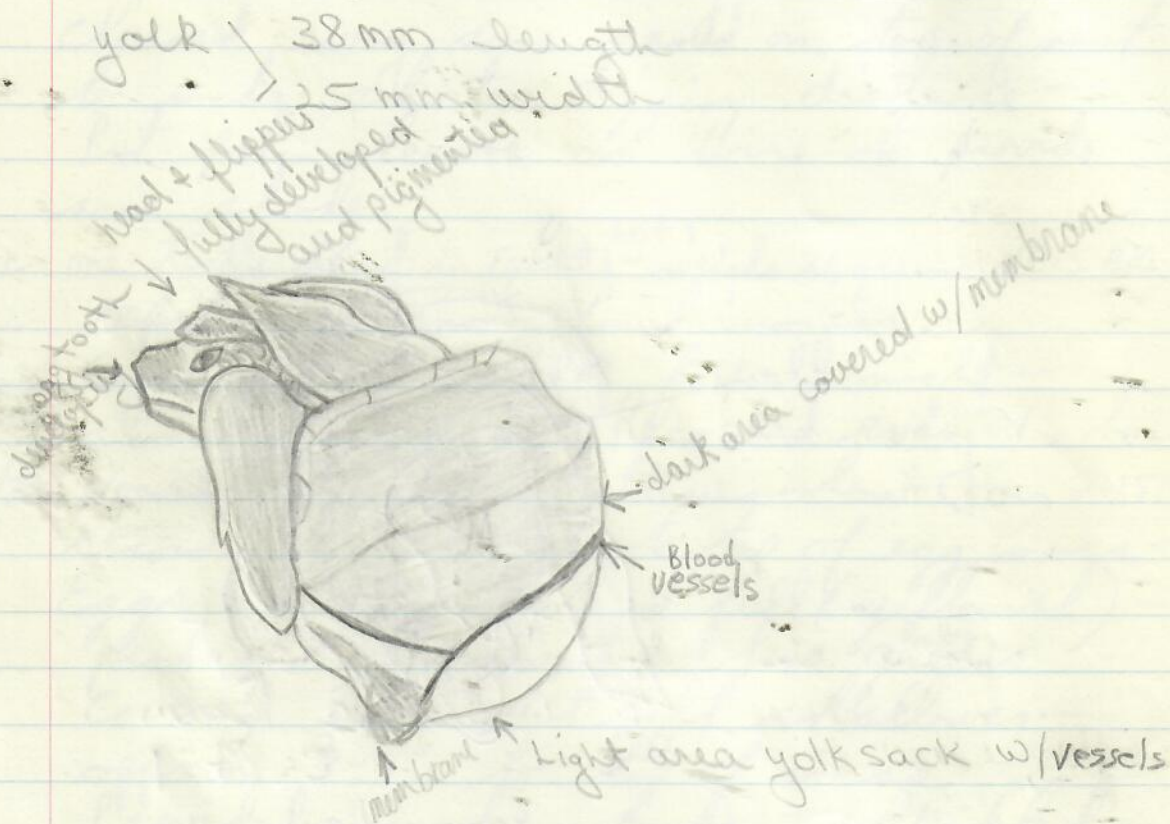
8/11/72 10:00 P.M. DUG INTO MAUKA PIT -
 Removed ^{all} eggs - cut open 3 - NO sign
 of development. removed all eggs - washed,
 counted, dried refrigerated -94
 Dug into Mauka Pit cut open
 $\frac{3}{3}$ eggs - 1st dead but small
 embryo - 2nd - no development
 3rd live - developed - no shell.
 preserved in formalin. covered up
 nest.

8/12/72 removed ^{all} eggs from Mauka pit #2 (those taken
 from incubator during first few days of experiment)
 Many fine roots matted around eggs,
 shingled and dried looking - pushed off
 soil - smell bad - putrified - 52 eggs
 total removed. 5 cut open - no obvious
 signs of development - These eggs were
 stored in plastic bag w/ those removed
 from incubator.
 Removed Mauka #1 from Frig - small
 amount of roots also present on these.
 outside calcareous layer rubs off -
 14 eggs cut open - soft, leathery yet
 obviously shrunk up - no obvious signs
 of development in any - contents mostly yolk
 but coagulated pieces frequent -
 contents very liquid.

8/14

8 Eggs from Mauka Pit delivered for Benedict

Inspection of developed embryos from 8/11/72 Makai Pit.



slightly larger than life size

14.7 mm head width behind eyes

13.6 mm head thickness

12.7 mm front flipper width at claw

16.6 mm hind flipper at claw (widest point)



f = flipper

t = tail

y = yolk

v = blood vessels

Small embryo

mm total length

mm C. length

Sat.

8/19/72

Taped at 2:00 PM - Many loud noises -
cleared away some sand on top of nest
to make shorter digging distance -
put palm leaves on wire to provide
some shade.

8/20/72 one turtle dead in Tank #1^{Lot 1} - weighs 36 grams 11:15 AM

8/21/72

taped in afternoon - loud noises.

12 midnite

Came out at 9:00 PM for all night -
almost full moon^(Setting) Recorded every 1 1/2 hours

8/22/72

Noises present - batteries low (on 2:15 AM

Tuesday

recording. Excavated to top of egg mass -
Eggs look viable and full (yellowish) -
probed area found 2 live greens^{Baby} -
Covered nest but left shallower -
approx. 8-9" to top of mass.

Provided much shade - sprinkled sand
top with ^{TOP} water.

my numbering



Green NO.#

6-1

Green NO.#	weight, grams	Carapace length, cm	carapace width, cm	Thickness, mm
6-1	27.21	10 plates 3c 49.8	35.7	21.7
6-2	26.39	10 p 3c 49.2	37.2	20.8

6-2

7340221

Leahi - Community Studies on Pesticides

Dr. Klemmer - (Director)

Dr. Korsak

Beneme's Lab - Cynthia Shultz
Maile #10 Bath
EX 8709

10/11/72 5 samples from each of the
3 nests delivered to Maile #10 -
5 Makai samples were in glass finger br

8/22/72 Eggs for Mercury analyses separated -
 5 from Manka Pit-T201 #1
 5 from Manka Pit-T202 #2
 Wrapped in Plastic, labeled - sent
 to Brooks

#1 27.99 10 plates
 23.4
 30.2
 30.7
 27.0

#2 19.8 10 plates
 13.3
 18.6
 18.4
 23.5

#3 Mankai Pit - Petri dishes →
 NO. 1
 2
 3
 4
 7

Aug 23 '72 9:30 PM

opened nest and removed 6
live turtles

removed 3 developed embryos
but dead. One with large
yolk sac one w/no sac one
w/ small sac and external visera
shells from live hatched turtles
rinsed and dried 8 total

12 eggs removed palpated no developm
dissected & placed in petri dish

- Mercury
1. no sign of development
 - 2 yolk encased in hard white substance ^{no development (1,2)}
 - 3 ditto (red color on hard yolk casing)
 - 4 same as 1
 - 5 small embryo noted & removed approx 5
 - 6 same as 6
 - 7 no sign of development but some red color
 - 8 same as 7 but less color
 - 9 embryo 1 1/2 cm, removed for preservation
 - 10 same as 7
 - 11 same as 7
 - 12 same as 9, removed for preservation

dead embryos placed in formalin

shells from hatched turtles to
be dried and stored

remainder of eggs (suspected to continue developing) recorded w/ microphone only.

8/24 12:15 weighed, measured, marked w/ ink.

	Green No.	weight	length	width	thickness
10p 3c	6/3	26.0 g	49.0 mm	37.9 mm	19.9 mm
10p 3c	6/4	25.5	50.2	37.8	21
10p 3c short umbilico attached	6/5	26.5	47	35	21
12p	6/6	25.5	45.8	36.2	20.9
16c interior 12p 4c	6/7	26	49.8	36.2	21.1
10p 3c	6/8	26.5	49.1	36.3	20.9

for					
8	X	26.2	48.7	36.5	20.9
	±	0.5	1.4	1.0	0.5

8/30/72 Recording made every several days - no signs of activity.

8/31 8:00 PM lot 1 found to have numerous nips on tail and gill flipper trailing edges - Liberal crystal violet applied.
Lot 2 egg Carnoole still obvious.

9/3/72 3:00 PM Lot 1

All animals removed from tanks, wiped dry, given U.V. treatment. Fungus in notched plates scraped out with knife blade. G Violet liberally applied to notches, and front and hind flippers. Animals subsequently treated with sun lamp and direct sunlight for 20 to 25 minutes.

9/1/72 Lot 3
 Received from FFS via FAA - Lt CO O'HARA
 #41 six inside plates, 11 marginals
 26 outside
 #54 four inside plates, 11 marginals
 25 outside
 #'s 57 and 73 outside plates
 curved up on edges.
 #1 extremely white on belly and
 between plates on head, named
 Gertrude by G. Balazs
 #55 very light also
 9/14 Egg tooth still visible.

9/5/72 9:00 PM

opened turtle egg nest; removed
eggs to lab for opening

1. no sign of life - pink color - ~~petri dish~~ ^{discarded} ^{except shell}
2. Small embryo approx. 10 ~~mm~~ ^{discarded} ^{Shell saved}
- discarded ^{except shell} 3. pink, small embryo 15 mm - ~~p. dish~~
4. embryo 15 mm - shell plate formation -
~~rotten~~ - ~~p. dish~~ - discarded
5. fully developed embryo 45 mm ^{total} length
~~in~~ - plastic bag
6. same as 5
7. same
8. 45 mm carapace length - embryo
9. 25 mm carapace length - embryo
10. 32 mm carapace length - embryo
11. pink - no embryo - ~~petri dish~~ ^{discarded} ^{except shell}
12. pink - no embryo
13. pink - no embryo
14. 15 mm carapace - plate shell development
15. embryo same as 14.
16. embryo 18 mm carapace - formalin
17. 30 mm carapace
18. pink - no embryo - shell saved
19. small embryo 5 mm.
20. 35 mm embryo carapace
21. 40 mm embryo carapace
22. pink - no embryo - shell saved
23. pink - no embryo - shell - saved
24. same as 23

- 25 42 mm embryo carapace
 26 45 mm embryo carapace - glass petrie
 27 35 mm embryo carapace - glass petrie
 28 15 mm embryo carapace - glass petrie
 29 47 mm embryo carapace - glass petrie
 30 35 mm embryo carapace - glass petrie
 31 pink - no embryo - shell saved
 32 55 mm embryo carapace - rotten - eyes
~~eaten - ~~discarded~~~~ - most developed so far
 33 10 mm embryo carapace - glass petrie
 34 20 mm embryo carapace - glass petrie
 35 50 mm embryo carapace - glass petrie
 36 55 mm embryo carapace - glass petrie
 37 pink - no embryo - shell saved
 38 50 mm embryo carapace - rotten - formalin
 39 10 mm embryo ^{Glass} - petrie
 40 15 mm carapace - glass petrie
 41 white - rotten - discarded
 42 15 mm carapace - glass petrie
 43 pink - no embryo - glass petrie
 44 40 mm embryo - glass petrie
 45 25 mm embryo - glass petrie
 46 30 mm embryo - ~~glass petrie~~
 47 30 mm embryo -
 48 20 mm embryo → formalin - rest discarded
 49 50 mm embryo - eyes eaten - discarded
 50 40 mm embryo
 51 5 mm - shell saved - embryo in formalin
 52 pink - no embryo - shell saved

From
8-26-7

8/28

8/31

9/3/7

53. Same as 52
 54. no development - whole egg in formalin
 55. 30 mm embryo carapace
 56. 35 mm embryo carapace
 57. 50 mm - very intact membrane - embryo
 58. pink - no development - shell saved
 59. Same as 58
 60. 50 mm embryo carapace

From Ross Book - our writing

maybe lot 2?

8-26-72 Lot 2 - Starting to eat evening of 8/25
 and 8/26 Red Ration #1 + fine chopped Smelt/Squid

8/28 Pen 1 #8 very aggressive - Big

8/31 7:30 PM - Many animals w/ fungus on hind
 flippers - bitten tails apparent - CV treatment

Egg tooth in Lot still present

9/3/72

lot 1 3:00 PM

all animals wiped dry and given UV
 treatment - Fungus in notched plates
 scraped out with knife. G. Violet
 applied - also to flippers.

Sun lamp treatment and direct
 sunlight for 20 minutes.

	No Embryo - No Development observed	EMBRYO 5-10 mm CL	Embryo 10-25mm CL	Embryo 25-40mm CL	EMBRYO 40-55mm CL <u>Reformed</u>	Live Hatchlings
8-11	1	1	-	-	1	2
8-22	-	-	-	-	3	6
8-23	8	2	2	-	-	-

9-5

Cerium Digestion Study

9/20/72 321 and 305 4 kg each
mixed -

500g 321 + 250ml H_2O - cartons PEN 2

500g 305 + 500g squid - cartons PEN 1

500g 305 + 500g viscera - cartons PEN 3

9-21-72 Fed

9/27 - Bottles labeled - first collection made. 9/28

		Vials
P1	9/28 - 29, -30 10/1, 2, 4, 5,	7
P2	9/28 - 30 - 10/1 2, 3, 4,	6
P3	9/28, 29, 30 10/1 2 3 4 5	8

SEPT. 1 - 72

Lot 3 Hatched ~ 9-1-72

10-5-72 3 Lot 3 turtles brought to C.I. Lab

10-6-72 Thursday

36 Day Weighed - # 2 10 7
 52g 56.6 58.0

offered live shrimp (~1.5g); Mollies; crab; 35% oil + Cod oil;
 chopped squid.

10/14/72 Day 44 gain gain gain
 65.5 13.5 71.8 15.3 73.0 15.0

chopped shrimp - 35% + cod oil

10/19/72 Day 49 82.4 16.9 89.8 18.0 97.6 14.6

10/25/72 55 chopped Number - 4 Coconut Island Brought to Lab
 PA 30 on 3

10/25/72	55	98.1	15.3	105.0	15.2	116.0	18.1
11-3-72	64	115.2	17.1	123.9	18.9	131.0	15.0
11-8-72	69	135.2	20.0	143.8	19.9	150.5	18.5
11-15-72	76	160.0	24.8	168.6	24.8	181.0	30.5
11-22-72	83	189.0	29.0	188.5	19.9	195.4	14.0
11-29-72	90	221.5	32.5	213.6	25.1	229.0	33.6
12-6-72	97	242.5	21.0	245.0	31.4	261.5	32.5
12-13-72	104	261.8	19.3	256.5	11.5	280.5	19.0
12-20-72	111	290.0	28.2	280.2	23.7	295.0	14.5
12-27-72	118	279.3	-10.7	298	17.8	317	22
1-3-73	125	312.2	32.9	314	16.0	362	45
1-10-73	132	355.1	42.9	361.5	47.5	408.9	46.9
1-17-73	139	364.8	9.7	386.8	25.3	420.7	11.8
1-24-73	146	394.0	29.2	413	26.2	466	45.3
1-31-73	153	422.9	28.9	449	36.0	500.7	34.7
2-7-73	160	441.9	19.0	471.7	22.7	501.5	.8

10-25-72 C.I. Turtle

10-31-72

11-8-72

1-3-73

1-10-73

2-14-73

2-21-73

2-22-73

August

Hatched 8-22-72

10-25-72 (65)

C.I. Turtles

5
126.9

6
100.5

7
123.1

8
119.5

10-31-72 (71) 152.3

112.8

134.4

123.5

11-8-72 (79) 184.2

129.0

150.0

143.9

1-3-73 (135) Stanton #9 165g 42T 82W 100L

1-10-73 Turtle tags (2 sizes) received this date.

	#2	Gain	#10	Gain	#7	Gain
2-14-73	472.7	30.8	497.4	25.7	521.2	19.7
2-21-73	482.8	10.1	518.4	21.0	538.4	17
2-22-73	tagged w/ #3 size TAG NO 2 ✓		(12) ✓		(13) ✓	

Adult Turtles
 algae eaten -
 from Max "Wai Wai eole" - codium muelleri

8/19/72 Recorded turtle formulas from sheets

	<u>305</u>	<u>303</u>
Ground Corn	21.3	36.8
Soy Meal	60.0	50.9
Tuna	10.0	5.0
Meat & Bone	5.0	2.5
Alfalfa	3.0	3.0
Tricalphos	—	1.0
Salt, Sod.	0.4	0.4
R ₃	0.3	0.3
Methionine	—	0.1

	20%			25%		30%		
	20	20	20	20	20	20	20	20
wheat flour	20	20	20	20	20	20	20	20
Corn	52.75	46.45	40.15	32.05	25.75	25.65	19.35	13.05
Soy	17.5	18.8	20.1	33.1	34.4	38.1	39.4	40.7
Meat and Bone	2.5	2.5	2.5	2.5	2.5	5.0	5.0	5.0
Tuna	5	5	5	5	5	10.0	10.0	10.0
Fat	—	5	10	5	10	—	5	10.0
Tricalphos	1.0	1.0	1.0	1.0	1.0	—	—	—
Salt	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Vit mix	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Meth.	—	—	—	0.1	0.1	—	—	—
	↑			↑		↑		
	326			327		321		

	<u>20%</u>	<u>20%</u>	<u>20%</u>	<u>25%</u>	<u>25%</u>	<u>30%</u>	<u>30%</u>	<u>30%</u>
Corn	67.25	61.1	54.8	46.7	40.4	41.7	35.4	29.1
Soy	23.0	24.15	25.45	38.45	39.75	42.05	43.35	44.65
Tuna	5	5	5	5	5	10	10	10
Meat & Bone	2.5	2.5	2.5	2.5	2.5	5	5	5
Fat	—	5	10	5	10	—	5	10
Tricalphos	1.0	1.0	1.0	1.0	1.0	—	—	—
Salt	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Vit Mix	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Methionine	—	—	—	0.1	0.1	—	—	—
ME/lb	1352	1463	1573	1384	1494	1216	1327	1437

	2090			25%		30%
Corn	63.85	57.55	51.35	45.8	38.2	27.55
Soy	32.1	33.4	34.2	47.1	48.7	62.3
Fat	—	5	10	3	9	6
Limestone	1.25	2.75				
Tricalphos	1.50					
Salt	0.25					
Vit Mix	1.0					
Meth	0.5			0.1	0.1	0.15
ME/lb	1334	1444	1555	1303	1455	1311

	20%			25%		30%
Wheat Flour	20	20	20	20	20	20
Corn	48.8	42.5	36.2	30.7	23.2	12.65
Soy	27.1	28.4	29.7	42.2	43.7	57.2
Tuna	—	—	—	—	—	—
Meat & Bone	—	—	—	—	—	—
Fat	—	5	10	3	9	6
Limestone	1.25	1.25	1.25	1.25	1.25	1.25
TRicalphos	1.5 ^{2.75}	1.5	1.5	1.5	1.5	1.5
Salt	0.25	0.25	0.25	0.25	0.25	0.25
Vitmix	1.0	1.0	1.0	1.0	1.0	1.0
Methionin	0.1	0.1	0.1	0.1	0.1	0.15
	↑			↑		↑
	324			325		320

Dry Matter of Hawksbill feed - Lot 0

1. Chicken Visera

9. DM

	Bowl	Bowl + sample	Bowl + D. Sample	
Bowl 1	281.94	326.52	295.01	29.3
" 2	277.40	312.08	287.32	28.6

2. Pen 1 (Squid + 305)

8/20 Bowl 1	274.69	308.35	294.01	57.4
" 2	378.91	417.26	400.89	57.3
Ross Bowl 3	319.30	355.40	338.96	54.5
Bowl 4	339.56	383.12	363.50	55.0
" 5	307.19	358.70	337.21	58.3
" 6	275.90	320.18	301.79	58.5

3. Pen 3 (C.V + 305)

Bowl 1	308.59	333.62	322.95	57.4
" 2	297.96	331.28	316.85	56.7

4. Fish / SQUID Flesh _{44.31}

Bowl 1	289.19	333.50	298.14	20.2
" 2	281.10	317.92	288.75	20.8

9%
DRY
matter

Turtle T

Bowl #	Whole Squid Bowl wt.	Bowl + sample	Bowl + Dry Sample	
1	277.35	356.29	78.94	294.89 17.54 22.21
2	275.82	337.88	62.06	287.84 12.02 19.36
3	308.53	394.26	85.73	327.25 18.72 21.83

whole Smelt

$\bar{x} = 21.13$

Bowl					
4	378.88	403.10	24.22	384.90	6.02 24.85
5	289.10	310.36	21.26	293.92	4.82 22.67
6	281.83	319.01	37.18	290.35	8.52 22.91

Squid Flesh

$\bar{x} = 23.48$

7	339.52	361.10	21.58	343.65	4.13 19.13
8	274.60	302.40	27.80	280.20	5.60 20.14
9	301.01	344.00	42.99	309.71	8.7 20.24

Smelt Flesh

$\bar{x} = 19.84$

10	292.38	313.52	23.14	295.30	4.92 21.26
11	319.28	344.25	24.97	324.90	5.62 22.50
12	281.02	311.45	30.43	288.19	7.7 23.56

$\bar{x} = 22.44$

15 8/16

8/17

44 8/20/7

Turtle Total

Lot 1

48 48 Chelonia mydas received Aug 9, 72 ^{wed.}
 hatching date probably 8-6-72
 measured, weighed, grouped Aug 9-72

47 one D.O.A.

8-13-72 thickness measured

Groups one and 2 notched 8-15-72.

46 1 dead from group 3 8-15-72

Posterior - yolk sac 25mm long 15mm wide

took out entire gut -

lungs - bubbly froath.

stomach contains sand - measured 16mm -

15mm from stomach - pocket of white sand -

no food.

120mm post yolk sac - greenish sand.

Exit of stomach to anus 35cm.

15 8/16 2PM 1 dead 26g, 51mm long 41 wide 20 deep
 at 8PM weigh, measured and notched all groups

8/17 Set up feeding

P 1 - Squid-fish

2 - 321 + Tuna + Meat (30% Protein)

3 320 corn Soy (30% Protein)

4 305 squid

5 320 - fat

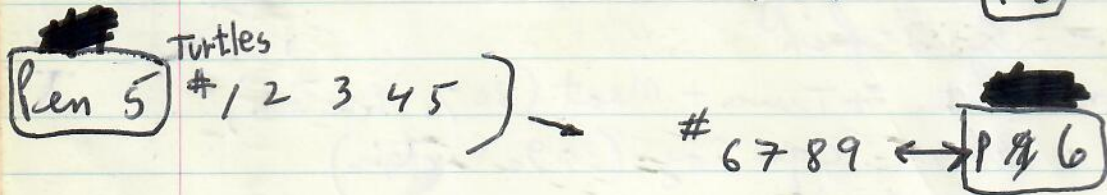
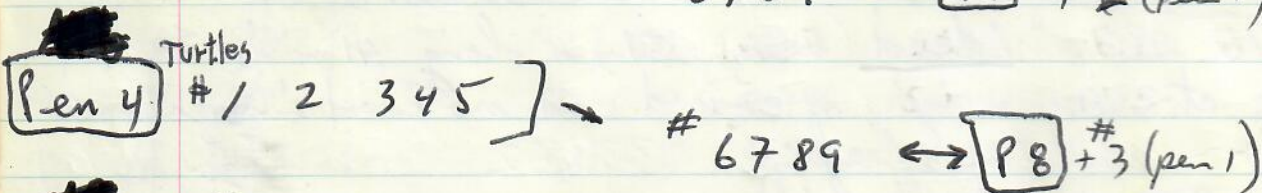
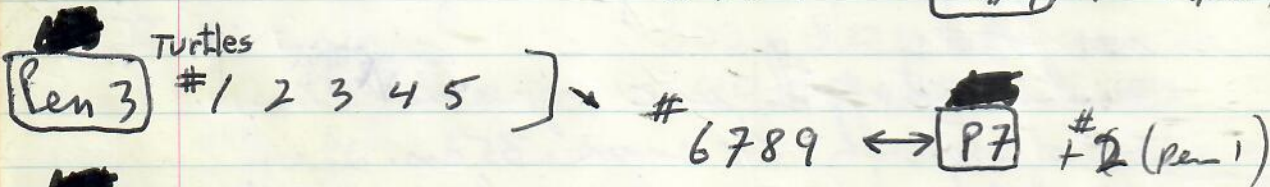
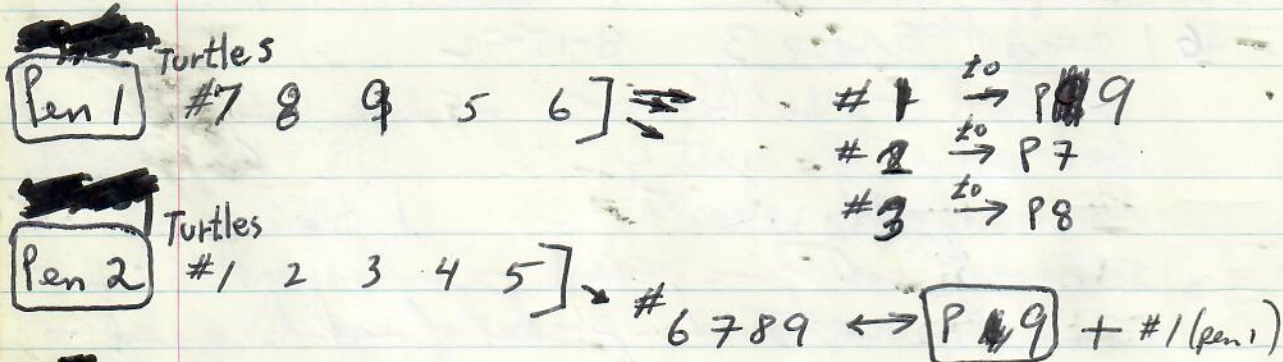
44 8/20/72

11:15 NO, 4 ^{notch}

found dead at tank bottom in
 Tank 1. frozen. 36g

Plan to split Lot 1; use rations

No. turtle	#			
4	6	324	Corn Soy (20% Protein)	500 + 250 H ₂ O
5	7	325	corn Soy 25% P	500 + 255 H ₂ O
5	8	326	+ Tuna + meat 20% P	565 + ³⁰⁰ 500 H ₂ O extruded
5	9	327	+ " + "	25% P 500 + 250 H ₂ O



split 9/13/72 all weights and measurements taken -
 notches look good - no fungus 1/1 lost plates.

Animals being fed twice daily - 2 and 3 to a 13" diameter
 or 10" x 12" plastic dish pan.

Pen 1

Pen

Pen

Pen 4

Pen

Pen

Pen

Light
 window

Fu

Box

Lot 0

~~Hand~~ Growth Data

53

for 4/3/72

Pen	Length	Width	wt - grams
1	56.5	46	33
2	49	42	22
3	53	44	27
4	52	42.5	26

Pen 2	52	43.5	27
	54	44	28
	56	46	32
	52.5	43	26

Pen 3	48.5	40.5	20
	55	44.5	29
	57	47.5	33
	51	43.5	26.5

Pen 4 \bar{x} = 53 43 24.5

Pens 1 through 5 - 20 gal all glass aquaria

Pen 6 - 10 gal aquaria

Pen 7 through 9 - 15 gal aquaria

Lights off during day - dim in room due to painted windows.

Fungus and nipped flippers on all Pens -
Bad in Pen 1 - this group always active.

54 9/13/72 RAE Teramoto Hired.

9/14/72 Lot 3 - animals have been fed 305 + squid -
 really started eating good about 9-7-72
 Lot 2 - 305 + squid, started eating little
 4-5 days after hatching.
 Animals in tank by themselves.
 Many loss taken home for nursing
 off land on.
 Animals growing slowly.

9/11/72

Lot 2

8/27/72	wtg	old 9/6/72	new	length	width	weight	thick	
6-1	28	1	2	52	41	27	20	many 9/17
6-2	28.5	2	9	55	45.5	35	22.9	Long Tail many 9/17
6-3	29 ^{LT}	3	8	54	44	33	22	extra plates 9/17
6-4	27.5 ²	4	7A	57.8	48	35	23.1	extra plates 9/17
6-5	26 ^{LT}	5	6	52.1	40.5	30	22.1	9/17
6-6	27.5 ^{LT}	6	extra plate 7B	53.4	46.1	35	24	9/17 Lot #3
6-7	27	7	5	57	45.2	34.5	22.8	9/17 Lot #6
6-8	27.5	8	3	56.2	45.6	33.5	22	9/17 Lot #3
\bar{x}	27.6			54.5	44.5	32.9	22.4	Lot 2
	± 0.9			± 2.0	2.4	2.7	1.1	

many 9/17

many 9/17

Long Tail many 9/17

extra plates 9/17

extra plates 9/17

9/17

9/17 Lot #3

9/17 Lot #6

9/17 Lot #3

Lot 2

Lot 2

LONG TAIL

extra plates

extra plates

dead 9/25

x

9/11/72

observed and photographed Heart puncture procedure at Waikiki Aquarium w/ Voight and Ross - Took pictures - all greens except 2 loggerhead 2 Hawksbill turtles (1 shell defamed) 6" needle used - 200-300ml blood taken.

Lot 2

			<u>length</u>	<u>width</u>	<u>weight g</u>	<u>thickness</u>	<u>increase</u>
	Many	2			25.59/13		-1.5 9/13
	9/17	9	59	50	38.5	23	
	Many	8			35.59/13		2.5 9/13
	9/17	7A	62	53	41.5	24	6.5 9/17
	LONG TAIL Many	6	56	46	34.29/17 35.09/13	22	5.0 9/17
	extra 9/17 plates	7B	58	52	41.5	24	6.5
	extra 9/17 plates	5	63	50	44	25	9.5
	9/17	3	61	50	41.5	24	8.0
	9/17 lot #29	3	58	49	38.5	23	
	9/17 lot #62	3	56	48	39.0	23	
	9/17 lot #67	3	59	49	36.0	23	
	lot 2 animal #2						dead 9/14/72 at Ross's House

<u>Lot 2</u>			9/20	Dead	9/27
	2				
	9		40		35
	8		45		55
	7A		46		53
	LONG TAIL 6		34		Dead
	extra plates 7B		43		49
	extra plates 5		48		51
	dead 9/25 3		41		Dead

* #6 to Mary 9-20-72 Dead 9/25

Lot 0
 9-21-72 4/4 and 3/1 marked by buttoneer
 plastic plug method. Little blood.
 9/27 Marked all group with Buttoneer.

Lot 3 RATIONS

PKN	1 -	Squid + Smelt
	2 -	305 + Squid
	3 -	M 3 corn soy
	4 -	M 6 corn Tuna
	5 -	M 9 corn Shrimp
	6 -	M 12 corn Soy Tuna
	7 -	M 15 corn Soy Tuna Shrimp

Lot 2
 Turtle NO. 3 Dead 9/25/72 - weight loss -
 floating on surface

3-30-73 2 Unidentified eggs from BSFW -
Thailand

weight, g.

31.6

32.1

diameter, cm

3.89

3.89

Large yolk - little albumin

10-9-72 Monday

61

P1, P2 and P3 - fecal Dry matter - Lot 0
for Freeze Drier

	PAN		PAN + Sample	Pan + Dry	% Dry
P1/9-28 -	1.4290	5.2000 1.1195	6.6290	2.5485	21.5
P1/9-29	1.4352	17.8725 3.3041	19.3077	4.7393	18.5
P1/9-30	1.4387	4.3215 1.1913	5.7602	2.6300	27.6
P1/10-1	1.4309	4.7001 1.8788	6.1310	2.3097	18.7
P1/10-2	1.4340	18.9210 3.6187	20.3550	5.0527	19.1
P1/10-4 -	1.4198	14.8772 2.8959	16.2970	4.3157	19.5
P1/10-5	1.4220	7.0297 1.7300	8.4517	3.1520	24.6
P2/9-28 -	1.4266	4.6856 .8530	6.1122	2.2796	18.2
P2/9-30	1.4240	.7923 .1924	2.2163	2.6300 1.6164	24.3
P2/10-1	1.4210	.6667 .1400	2.0877	1.5610	21.0
P2/10-2	1.4227	10.0064 1.6740	11.4291	3.0967	16.7
P2/10-3	1.4266	10.6978 2.0696	12.1244	3.4962	19.3
P2/10-4 -	1.4237	1.7127 .3414	3.1364	1.7651	19.9
P2/10-5	1.4198	1.2552 .3478	2.6750	1.7676	27.7
P3/9-28 -	1.4215	4.0167 .9522	5.4382	2.3737	23.7
P3/9-29	1.4200	3.3205 .9050	4.7405	2.3250	27.3
P3/9-30	1.4259	1.0738 .3103	2.4997	1.7362	28.9
P3/10-1 -	1.4285	2.2624 .5862	3.6909	2.0148	25.9
P3/10-2	1.4224	7.5991 2.0571	9.0215	3.4795	27.0
P3/10-3	1.4257	1.5374 .4473	2.9651	1.8730	29.0
P3/10-4 -	1.4232	3.3562 1.0021	4.7794	2.4253	29.9

PANPAN + samplePAN + Dry10/11
% Dry

305+

Viscera

1 1.4460 9.8840 11.3300 6.1277 7.5737 62.0

2 1.4481 9.8574 11.3055 6.0480 7.4961 61.4

321+C

1 1.4465 6.5030 7.9495 3.9620 5.4085 60.9

2 1.4444 7.0821 8.5265 4.3699 5.8143 61.7

305+

Squid

1 1.4386 5.9409 7.3795 3.5071 4.9457 59.0

2 1.4445 6.0177 7.4622 3.4831 4.9276 57.9

10/11/72
% Prng

all lot 3 Turtles cranked by notching for Pen No.
10-13 and animal numbers.

11-8 - Lot 1 term. all to 30559 - 12wk.
except control

11-10 - Lot 3 term. all to 30559 - 10wk.
except control

62.0

61.4

60.9

61.7

59.0

57.9

64

Loto Cerium Study

weighed 10-24

<u>Feces</u>	<u>Vial wt.</u>	<u>Vial + Swt.</u>	<u>s. wt.</u>	<u>PPM</u>	<u>% Protein</u>	<u>Feed</u>
P1-8 ^{first} 1	1.17145	1.27260	.10115	690	} 667	305S
P1-8 ^{day} 2	1.18200	1.29460	.11260	644		305 Sg
P1-4 ^{last} 3	1.18700	1.30955	.12055	875	} 816	305S
P1-4 ^{day} 4	1.18308	1.30117	.11809	758		
P1 ^{Inter} 5	1.16085	1.26380	.10295	758	} 766	
P1 ^{mediate} 6	1.19005	1.31054	.12049	775		
P1 7	1.16339	1.27130	.10791	690		
P2-8 ^{first} 8	1.17335	1.28131	.10796	316	} 310	321
P2-8 9	1.16930	1.27705	.10775	304		321
P2-4 ^{last} 10	1.19824	1.30403	.10579	629	} 593	321
P2-4 11	1.17190	1.28566	.11376	558		
P2 12	1.16644	1.29330	.12686	572	} 575	
P2 ^{INT} 13	1.19646	1.31772	.12126	573		
P2 14	1.18154	1.29461	.11307	582		
P3-8 ^{first} 15	1.19836	1.32269	.12433	581	} 594	305V
P3-8 16	1.19061	1.31966	.12905	608		305V
P3-4 ^{last} 17	1.16346	1.28962	.12616	802	} 850	305V
P3-4 18	1.19814	1.30641	.10827	899		
P3 ^{INT} 19	1.17550	1.30800	.13250	792	} 734	
P3 20	1.17343	1.31205	.13862	731		305 S
P3 28	1.18892	1.29168	.10276	678		321
						305

Macrobrachium Feces & Feed

M15 FEED 33	1.18685	1.31370	.12685	151		approx v
M15 FEES 34 ⁹⁻¹⁰	1.17307	1.27833	.10526	1613		P 1
M15 FEES 35 ⁹⁻¹⁰	1.18682	1.29525	.10843	1776		P 2
						P 3

Feed		Vial wt.	Vial+Swt	s.wt.	PPM	% Protein
305SQ	22	1.19476	1.38532	.19056	165	154
305SQ	23	1.17000	1.34425	.17425	147	
305SQ	24	1.17900	1.30757	.12857	165	
					+ ↓	
321	25	1.18253	1.30858	.12605	152	154
321	26	1.19785	1.31710	.11925	163	
321	27	1.19959	1.31021	.11062	151	
					+ ↓	
305V	28	1.18572	1.28965	.10393	133	144
305V	29	1.18328	1.29501	.11173	149	
305V	30	1.18087	1.29546	.11459	151	
					+ ↓	
305SQ	31	1.18814	1.38640	.19826	138	PPM % Protein
321	32	1.17235	1.35805	.18590	151	
305V	33	1.15657	1.34460	.18803	142	

approx wt. feces for analyses

P 1

grams

14.6

P 2

4.8

P 3

5.7

3-21-73

4 types of algae put in circular tanks at DCI for Lot 1 and Lot 3 greens. Frenzie initiated after few minutes which did not subside until after material removed. Smell or sight.

10-25-72 Furacin antibiotic added to water
250mg to each gallon - all tanks.
added as disappeared - No obvious improvement.

10-30-72 Different agents tried -

Tank 6	750 mg	Tetra HCL	capsules	10g:
Tank 3	1000 mg	Ilosone (Erythromycin)		20
Tank 8	100 mg	Polymyxin B - Sulfate		
Tank 7	750 mg	Tetra HCL	cap.	
" 5	5g	Furacin		
" 9	500 mg	Tetra HCL	cap	
" 4	50 mg	Polymyxin B - sul		
2	5g	NEOCIN		

M1-7 Lot 3
8g Furacin

All Filters off -
2 days later - filters clogged -
no apparent results.
Back to Crystal violet - change H₂O

1-15-73 Lot 0 animals removed from C.I.
water tables and placed in Nehu tanks.
Many animals dove to bottom.
Several minutes later 2 animals observed
floating on surface, flippers on back, hind
flippers curled over tail, motionless.
Eyes wide open, neck and head retracted and

all very stiff. appearance of shock.
Animals immediately removed! Recovery to
normal activity was slow. Replod
15 minutes later in Nehu tank for
rest of afternoon, during which time
normal behavior was observed.

lot 0 11-8-72

<u>NO.</u>	<u>wt. grams</u>
3-5/3	393
NO # (1/2)	655
5/1	545
2/3	437
3/1	560
2/2	640
5/2	852
2/1	596
4/4	814
1-5/4	775
3/4	599
1/1	1316
1/3	887
1/4	1152
3/3 bad eye	675
3/2 bad eye	741

17 weeks old

12/6/72

Lot 1, Reshuffled animals - New Experiment started that Date P.M. - Feeding ~ 50% Mixed SQUID. Starting 12/13 $\frac{1}{2}$ dried no SQUID.

Pen	Label	MF %	#	gal
Pen 1	Fish and SQUID		(4)	20 glass
Pen 2	R 321	30% MF	(4)	20 glass
Pen 3	R 326	20% MF	(4)	20 glass
Pen 4	R 305 SQUID		(4)	20 glass
Pen 5	R 327	25% MF	(4)	20 M
Pen 6	R 321	30% MF	(4)	15 M
Pen 7	R 326	20% MF	(4)	20 glass
Pen 8	R 327	25% MF	(4)	15 M
Extra	Fiberglass tank 30559		(2)	
Extra	Fish SQ + 30559		(3)	10M

Lot 3 ^{corn soy berries}

12/8/72 14 weeks - measured and regrouped
for new experiment

Pen	Group	CS	#
Pen 1	Fish-Squid		5
Pen 2	3055g		5
Pen 3	320	30%CS	5
Pen 4	Fish Squid		5
Pen 5	324	20%CS	5
Pen 6	320	30%CS	5
Pen 7	325	25%CS	5
Pen 8	325	25%CS	5
Pen 9	324	20%CS	5
Pen 10	Extras 3055g		

12-22 324 & 325 changed to 320

Tag 319 - ^{size #4} put on Canton Is.
Female - 39.5 C. Length (curved)

2-22-73 Tag 320 #4 put on Lot 0 animal
number
Elastic plugs appear to be falling
out as hole enlarges with
age.

Tag 2 - size #3 put on animal original
NO. notch 2 this date. lot 3
Tag 12 - notch 10
Tag 13 - notch 7

changed to 3-6
Tag 8 - CI 8
T 39 - CI 6
T 10 - CI 7
T 11 - CI 5

2-27-73 4 - 3055♀ Lot 1 animals Pen 4
brought to HIMB and tagged -
T15 - notch 5
14 - 1
16 - 3 Lot 1
17 - 4 Pen 4

2-28-73 ^{New} Tag-19
 Small eye
 22
 18
 20
 21
 23
 24

old
 2/4
 1/3
 2/3 Lot 1
 Extras
 1/1
 2/2 Pen 2
 3/2 Lot 1
 2/1

3-1-73 T-26
 27
 28
 29
 30
 31

4/6
 3/9
 4/7 Lot 1
 6/3
 2/8
 4/9

3-6-73 T-25
 32
 33
 34
 35
 36
 37
 38
 3
 4
 6
 5

15
 18 Lot 1
 19 Pen 1
 16
 15
 12
 13 Lot 3
 14 Pen 1 and 4
 16
 17
 ?
 ?
 ?

new number MARCH 3-20-73 to C.I. old number

new number (N.N.)	TANK I weight G	old number (O.N.)
LOT 3 # 41	475	24
# 42	536	25
LOT 3	TANK 3	
# 43	325	44
# 44	326	39
# 45	421	38
L-3	T-7	
# 46	291	66
47	314	53

MORE OVER

84

3-26-73

Lot 3

New Tag NO.

old notch

51

52

~~53~~

54

55

56

57

58

59

60

61

62

29

35

49

44

31

22

23

33

52

61

42

36

3-27-73

63

64

65

66

67

68

69

70

71

27 \

58

56

48

lot 1

53

43

✓

52

12

from
Ross

and

Rewinded of all greens moved to
CI on 4-4-73 Wednesday

10-30-73 Hawksbill dissection

TAG

326

weight 4125.5g on 10-25 4278

Peloton opened - flesh very gray -
fat - gray - an abundance of fluids...
organs - intestine separated -
fluids removed - refrozen for photos

MISC NOTES:

See Bather - Lewis/Watson for some temperature on Kaneohe Bay

Measurements on floating turtle pens -

$$56.5'' \times 56'' \times 25'' = 79100 \text{ in}^3$$

$$1 \text{ liter} = 61.02 \text{ in}^3 \quad \therefore \approx 1296.3 \text{ liters}$$

Turtle Nutrition studies
now in progress

Date	PENS	Diet
4-20/79	1, 3	4-74-25%
4-20	4, 6	4-74-20%
4-20	7, 8	4-74-15%
4-27	7 change	4-74-15FS%
5-4	12, 15	4-74-20BAR%
5-11	7, 8	4-74-20BAR%
5/17	1, 3, 4, 6, 12, 15	4-74-25%
	13	→ Trout chow
	2, 7, 8, 9, 10, 11, 14	→ M12 TUNA T. 14P. 19
	9, 10, 12, 15	→ algae supplement
6/26	25% MINUS HAOLE KOA FOR PENS 4 and 12	(12 supplement w/ algae)

7/3/75

Dick Sixbery called concerning Brander - SPC turtle project in Cook Islands - Green turtles obtained from Palmerston Atoll.

From Creswell 1979 - Mr. Max Downes
Head, Ecology Section, Dept of Agriculture, Stock and Fisheries
Kororua, Papua, New Guinea

Edmond Island 941-9760 Kaera Pt -
Diligian Side - Small Bay - turtle on beach ^{APRIL 75?}
Sue Valentine - 1st Humber Bank Korohe - 9/13/75

Togs 872 and 873 Kailua Bay - Photo -

7/14/75

Dillon - Sekora - Kim Weight visit to C.I.

Visited MOKAPU - North Beach and
Pyramid beach - algae specimen collected

8/8/75

KAHALA Hilton w/ Nicholas MROSOVSKY
8 Turtles Total - 3 ♂ 2 ♀ 3 Inv (smaller)
Photos Bk & Wt

8/75

From John Elliot - N.G.M. = Birdie
Laysan Schlemmer Unger, 79 years old,
lives on Mot-Smith Drive

8/29/75

Turtle jewelry/products taken on
Maui. by Dillon / Foster et al.

9/7/75

201 class saw turtle (small) Buoy 13.

9/9/75

Lonnie called from Botany Dept -
948-8588 - Kawai Surf gift shop -

2' stuffed turtle \$3800 about 2 wks ago.

9/11/75

Tom Telfer from Kawai called
about ~50lb turtle - weakened with many
tumors, some around eyes - caught
and turned in by Kawai fishermen.
P.O. Box 1671, Lihue 96776

9/20/75 - Turtle skin purses at Shiokijyo - Itok

9/21/75 - caught turtle in Paul's pond -
not toy, but 3-3 notches (growing out?)

10/7/75

R. Chan contacted new woods man at
Push out, Game Division - sent summary
of turtle catch form statistics

10/7

talked to Bob Iversen - mentioned
that leatherback was caught ~10
years ago by ^{call John Munnagh/TOW} research vessel on Long Line
- also should check w/ Ben Sablan
again • Mowaynewonie 521-3911

10/15/75

Navy Public Affairs - 474-8139
R.G. Chittleborough
Officer-in-Charge
CSIRO - Division of Fisheries & Oceanography
103 Floraterace North Beach, WA 602
P.O. Box 20, North Beach W.A. 6020
← *Paraulius longipes*
culture

10/15

letter to Koichi, Masaki

10/18

tags "spring" back when bridge breaks -
creation of a "battery" - two salinities
see physics man

10/18/75

1-681 1-49 suspended in
sea water - floating cages.

10/20

Henry Yuen tracked tung Kanda Is. (NMFS)

10/20
10/20

ITT Hopper owned letter
smallest novel toy #143 suspended
also #519.m

10/21/75

Received a call from Dan Channey,
concerning student (Hilo college) Bob Wright - watching nesting
situation at Puralieu - Jay / Sept 28

10/21/75 RAO'S wife indicated that copper tortoise is put between walls of house when new - stands for a long time.

10/22 Purchased the wrap at Atlas Electric - said to be chemical resistant - Monel comes in varying grades - Navy uses large supply

10/27 Tom Marquette MK 1st class FFS visited - new light to be installed 1500w - swim platform already in - glass ball - visits to other islands - lots of FISH.

11/2/75 Mcomber visit to Lolo -

11/6 Balazs Creswell - SLP - Plastic tags still on looked at tags - green on 99 081 at 5

11/12 Canadian Nickel suspended -
11/18 Visited YSFWs Dillon/Wright and inspected hawk jewelry shipment to Gindi Horton Bob 496, Kahuku 96731 from 58 BELMONT ROAD, SINGAPORE idly died

11/18 National Canners Association
133 20th Street, N.W.
Washington, D.C. - 20036

11/20/75 - Jim Juvic - called ^{grant from} Faura
J. Reservation Society Hawks until
doing well in Hilo ^{concerning} observation
study by Bob Wright - Sathunajin,
next Bay, green and hawks together,
→ Going to Reunion, Seychelles,
Madagascar (This summer)
Send reprints?

11/21/75 ~~✓~~ Tattoo Ink looks like its coming out
Dougherty at lab - **Kashman 247-1865**

1/7
1/8
1/9

11/22
12/5 ~~✓~~ Tattoos look good - scab has ink
Talked to Dick Brock about
Vernon Brooks toy work - indicated
that he use stainless plates w/
numbers and stainless bolts for shell.
(Need to know features, method, etc.)
(also bought about 20 turtles
at Hawaii Kai, tagged, took to
sea and release. Brock will
check his old records - also
suggested check F&G records, at
lab at NMFS lab.

1/13

↓ 1/23

1/23

12/17 ~~✓~~ Called **Pete Hughes** USCG
check w/ Joe Anson (1949 - East IS)
USCG Loan station
APO NY 09069

NOV 11/27/75 Karen Klien saw a Big Turtle at
60' in a hole - Fantasy Reef off
Kahala.

1/23

12/30 Mr. **NASON E. Newport**
General Manager and Vice President
Castle and Cook Foods
Hawaii Pineapple Division
P.O. Box 3380
Honolulu, HI 96801

1/26

1/7/76 ~~✓~~ Called **Burke** - about Ilihai cage
eggs checked at it was "offspring" canned soup

- 1/7 Burke (cont) = from FRANCE.
- 1/8 talked to Henry Bush
- 1/9 Roger Russel called office via HAM
- FAA Contract renewed for
one year. Also need ramp parts for
motor.
- 1/13 talked with Lovejoy about Pritchard
proposal for Territories - send
Information: 202-466-2160
- 1/23 Talked to Benson with Advertiser
Talked to William Bethgrew
tel. 637-5314 Mokuleia - group of
turtles are in Bay.
- 1/23 Call Carl Glerum ²⁴⁷⁻ 8375 about one
month ago a stranding occurred -
people gutted and took the shell.
I suspect it was another
Pacific Ridley.
- 1/23 Palmer talked to Director of
Public works on 1/22/76 at
Molokai airport - about leather book
entangled in fishing gear near Poneape
it weighed 978 lbs and 81"
len - shipped to Guam but
somehow "lost."
- 1/26 Saw on K6MB TV Channel 9 Bob Jones
news about FG warden report -
spared lobsters, & caught people

1/26 cont

3 turtles (small) - took to court
but only fined \$25.00 - talked to Jones
he said they had been speared
in flippers. Warden Al Stevens
Judge?

3/30

2/1/76

A cabin Brighton called about
\$25 fine for 3 turtles that were taken.
Husband is Keith Brighton - a
discouraged game warden - 1 year

3/2/76

Call from PFS talked
to Doug ^{more} turtles seen - some
look subadult
Buoy tender will go out during
mid-April

3/4
3/10

Jackie Miller called from Environmental Center Cr 316
? Woodward called about
Humpback whale man going to
NHI - needed flight back from
Midway -
Monk Seal Team will be
Ficus Kenyon (?)
Bob DeLong, Axelis (?) Ansel Johnson
Ship - "Easy Rider" leave

4/2/7

3/17/76

Marine Mammal ~~Biological~~ Biological Lab
Naval Support Activity
Bldg 192
Sand Point Naval Air Station

4/28/

Steve
Leatherwood →

3/30/76 Visited Aquarium, KAHALA Hilton w/
SLP with ITAE, UCHIDA -
talked to David Alessi at Hilton
(obnoxious) turtles kept there 12 years,
some caught large, others grew,
absolutely no records kept, one
chewed sup. adult brought in about
5 years ago (hit by boat?). Many(?)
eggs deposited in Japan (?) (some
small), turtles tried to dig
in sand on bottom - depth
~ 6-8" of water - copulation
seen (?). Take all info with
grain of salt - lots of B.S. and
mental problems.
Uchida indicated possible hatchling
predators in Japan as octopus
and porpoise.

4/2/76

Mrs. Dori Huddleston call (262-5406)
865 N. Kapaheo Ave, Kailua 96734
about turtle soup (from Bahamas)
at Pineapple Hill (Feb, 1976). Saw on
"Hawk Bill" 666 Nuk sub Ltjg Colin
FPO SF 96601

4/28/76

Fletcher Riggs of FG (Biologist)
called about man who accidentally
caught ~ 20 lb turtle with number
75, very nicely carved on back -
photo (taken and release) - RICHARD KADAOS
471-8230

9/29/76 ^{KaPaws} Talked to him. Caught while
 stubbing outside of Okapa Bay -
 hooked on hind flipper - looking
 very professionally carved - 75 - block
 style about 1 1/4" high on shell
 back near right front wing. He
 will try to get a copy of photo
 from friend who took photo.

5/4/76 " Shallenberger indicated that
 "Mork" seal sighting of the last
 few months actually turned out to
 be California Sea Lion (according to
 John McNaughton)

T258 Recovered Zalkemaker
 dead and decem
 Lisinski Is. Nov 29.
 1976
 Adorned H Tide SW beach,
 facing obsequy,
 partially by bird

FFS 469 ♀ 3.5 x 33½ Tape
3/14/67

FFS 456 ♀ 33 x 30½ Tape
3/13/67

302

♂

Cabin Plaster length 12.7
Copper 15.9" x 12.8" Thick 6.2

3/16/68

Tape 16.5 x 14.75

Midway

Wednesday
5/19/76

RAY of
some sort?

Call from al kam about
several kanehe fishing boats
sighting 30' turtle off North
Shore of Molokai - one boat
owner's name - Snodgrass -
said to have "horns" and
"ridges" down back.

sent
5/20

Bill Zoochie USP Center

Nuku'alofa ^{Tonga}

Mr. Elvin G. Staker

President

National Audubon Society

950 3rd Avenue

New York, N.Y. 10022

5/21

Calpelt Eijermaker 828-1431

Said that several tag recoveries
were made - will send.

5/21

Called Pennington 548-6262

about Bob Wright proposal

5/24

Talked to David Snodgrass

235-3231 - his friends

live on Molokai, are fishermen and
have seen turtle with spines/large.

Names are (?) Joe Wright

Dave Martin

They talked to National Geo people
(not about this) in relation to
Hokuo'lea.

5/2

5/26

5/2

5/21/76 Talked to Martin Vitosek
at 948-7668 home 737-0202

indicated that Japanese are
interested in Palmyra - he flew
there last weekend - first flight
in a long time to that location.

5/26

poss. gally from Bob Kinzie concerning
turtle nesting on Kahoolawe
as indicated by Rene Silva

5/27

Larry Ogren called concerning
formation of National Sea Turtle Plan
by NMFS. He along with Donald
J. King (physiologist with expertise
in management) will be leaders.

Carr, King and Pritchard are appointed
members of committee. Calling
possible people to see if they
want to serve.

Has some end of year funds. Plans to
work more on effective Trawl
net. He heard from unnamed

person that heard from
Smithsonian that my FW
funding had been substantially
increased to \$37,000 for
next year. Had ~~to~~ told this
to Wayne King. and Wayne

5
6/27/76

disclaimed any knowledge after Ogren call I called Wayne King - he had no information - but indicated that sea turtle rules are being written - 2 year grace + \$25.00 more for Marinulane, Ltd.

6/1

Released 6 turtles from Aquarium from "EASY RIDER" of entrance to Hanauma Bay.

6/7

Call from Larry Ogren about TIP
Gave him name - Richard Parsons
FTS 343-9237
Special Agent in Charge
Regulations and Rulings

6/11 and
6/14/76

Call from Steve Kim (Army Colonel Herwig's office) NAP of South flying project - explosions only at Pohakuloa - not in offshore areas - He gave me address of Dr. George Young Naval Ordnance Laboratory, White Oak, Silver Spring, Maryland 20910
"Guidelines for evaluating the environmental effects of underwater explosion tests" NO LTR 72-21 FEB 13, 73

↓
 6/18/76 SeaLife Park Turtle
 1400h started digging in beach
 1900h I visited ponds - saw excavations
 2130 crawled out of pond toward
 reef tank - put on plywood and
 gained back to pond.

6/19 →
 6/20 →
 6/21 → apparently no activity

6/22 Talked to Jasman - yellow toy
 turtle 1277 - digging today - no one
 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 persists behind reef tank.
 another excavation in beach.
 H₂S at bottom.

6/7/76

Recessat discussion
 Bill Zoochie

Tonga	
Lae	
Port Moresby	Smidt
Saifang	transists out
Noumea	at conservation
Cook Is.	meeting in apia
Niue	Brandon
Honuaia	no
Tarawa	no
Villa	no
Hono	

Robert Stone
 Suva Bill Travis
 Wellington Doug
 Gordon

6/7 cont. ^{EGG} Travis indicated that predators, in W. Samoa are, Carnivorous worms, ghost crabs, polynesian rats, pigs, domestic cats and dogs - also, on Rose Taveuni ^{long lines} ^{stone} Suva - has Green hawk (most), loggerhead, ridley, belly much, same situation in Tonga (closeness?)

Stone mentioned about sending toys (recovered) to Tahiti - no reward sent back. Recoveries from Fiji, Solomons, where else (3).

6/25 Kay Mura-Davidson visited lab - has 2 blk & wts of min
7/15/76 Call Bob Wright ~~2300h~~ 2300h charged to MOP -

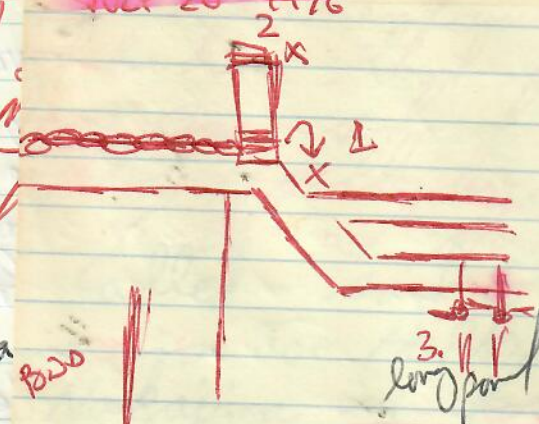
Reports seeing ~30 turtles, but only tagged 3 (19", 30", 31" ♀) - act differently during Full moon. (one smelled very bad)

7/18 0930 ^{Sund} Bob Wright call me - one more turtle tagged ~30" (?). Will be camped out on private property for the next week.

7/19/76 Bruce Carlson, former fence Coy worker in Fiji, called. He was at ENewetak and Bikini on Randal's project. Returned last week after 5 weeks absence. Indicated

that 3rd Island off has caught

July 20th 1976



7/19

Dillon agent na Roy at General install

7/19

Bob

in plastic

SURFACE TEMP Conting 31 °C

SURFACE WATER (27) (27) ^{TOP ↓}

↓ 3' DOWN (26) (26)

SURFACE TEMP

SURFACE WATER (26) (26) ^{TOP ↓}

↓ 3' DOWN (26) (26)

100' [↓]

pool SURFACE WATER (27.5) (28) [↓]

3' DOWN (26.5)

as
d boun
gent. He
so he
Bay next
investigat
also
Boas
transfer
military
Johnston
"turtle

Ed Sheehan (Save Whales) 732-2934

7/26 Visited Kim Wright at Dillon's office

7/31/76 ^{sat} - Bob Wright called me at home ^{save small from tide pools} 10 Turtles

8/2 - I called Bob Wright - changed to HIMB

8/6 - I called Sekora - Kreider no longer under D.C. - Regional office now - saw turtle!

8/8/76 SUNDAY

PEACESAT talk - on air

Bill Zochie; Mandy (Lae); Jim Gould and Dick James (Honiara); Dr. Arthur ^(?) Pall (Women

that 3-4 troops were seen on
Island at bikini that pod end of four
off. Many Gray sharks present. He
was Photo collector. also he
caught turtle at Haravua Bay reef.

- 7/19 Dillon called - said Foreign Investigations
agent name is Joe HOPKINS. also
Roy Nakajima is Foster's boss
at Customs and is excellent translator.
General Spedd is in charge of military
installations at Enevetak and Johnston.
- 7/19 Bob Wright called - caught 1-31" turtle

Ed Sheehan (save whales) 732-2934

- 7/26 Visited Kim Wright at Dillon's office
- 7/31/76 ^{sat} - Bob Wright called me at home <sup>save small from
Tide pools</sup> 10 Turtles
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Regional office now - saw title!

8/8/76
SUNDAY

PEACESAT talk - on air
Bill Zochie; Mandy (Lae); Jim Gould and
Dick James (Honiara); Dr. Arthur Pall (Woumea)

Peacesat

8/8/76

There is a Dr. Marshall in Suva (not on).
Talk dealt with ① Tagging Turtles, ② Regional
Tagging center and safe culture.

→ Fookie ^{TONGA} indicated 2 or 3 recoveries of
greens from Tahiti - also Stone reported
one taken in FIJI.

SPC has "Environmental Newsletter"

McKEOWN IS A VSO volunteer.

8/8/76 2020 hours called Bob Wright charged
to MOP - he was on night dive - caught
two turtles yesterday.

8/16/76 Graig McDonald indicated Kawela Bay
had turtles - often called Turtle Bay.

8/16 Kim Wright is member of Hapeiwa
Dive Club - they popch turtles -
many old time North shore divers.

8/17 Call R. Shamura sometime after Sept 1.
He will be gone until then. (Concerning
funds as per Dr. Jensen 8/17 telephone)

9/5/76
Sunday
1500-0

PEACESAT TURTLE DISCUSSION

^{Fishing Management}

DOUG GORDON - New Zealand

DR. Arthur Dabl → Noumea SPC

+ Fishing Advisor ^{Rene Dr.} GRANDPERRIN, RENE DR.

Terry Spee Donald Brandon - Rarotonga

no participant - NIUE

MR. Phillip - APIA

Between
 Apia - F. - W. Samoa 4 islands, 1 square mile area
 Hatchery at end of Upolu Is. - Village
 23,000 eggs collected - little over 11,000
 released - ^{most} mortality during ~~incubation~~ incubation.
 3 weeks before release. Due to handling.
 Hatchling mortality - ~4% due to fungus.
 No Greens hatched in Samoa, as known.
 Top turtle (6th months) - found some show
 up in fish traps.

KERDAMEC - ~~MARKED~~ Weather Station
 on Raa Islands - others
 Brand of Turtle Soup - ENGLISH -

Where eggs turtles released - 1/2 - 1 mile
 off ^{from} reef which surrounds that

Questions

part of Samoa (area of 4 islands)
 Conservation regulations in W. Samoa

NO. per night resting - decrease or
 23,000 - nearly all?

Sanctions - wise Meeting - helped?
 - What will it take -

2 months - come ashore

- Conservation awareness -
 Sounds pretty dismal

Two visits each week to 4 islands,
 Honiara on - with Dick James

"Village level" ^{emphasis} farming in Karstorga

My "Pacific Islands" letter - to participants
 Recent Honiara publicity of Hawkbill poisoning.
 Dick James says shell color controlled by algal (?) request copies also -
 Name of Japanese
 October 10, 76 next session -

next TOPICS -
 1. Regional Cooperation -

Send ITTST Western Samoa article NEW PEACESAT STAFF

ESIKEA SIOSA
 Director of Education
 APIA
 W. SAMOA

Attention: MR. P.H. Lip

"Conserving Edible Turtle" to Doug Gordon, N.Z.

request
name

One particular village in W. Samoa specifically goes for turtles - rest incidental.

Welcome
letter to Dave

Don Brandon - send Calipers
 next session Oct 10 chaired by new Fisheries man

He is not mobile

PEACOCK CONTI - concerning my letter to Doug Gordon, N.Z.
 9/5/76 ~~He~~ He may leave soon for awhile - passed on
 letter to Director of fisheries research - no
 reply yet - other possibilities - Honors project
 for third year student - Have data collected
 by weather station people - north islands.
 Possibility of oversea to islands.

9/6/76

828-1431. Fred Zellerwaker
 (Palmer's other assistant - BRENT)

Several turtles off of Pinnacillo
 mating not too long ago - about a week
 ago - ^{visits} 1/2 mile Jennyson 7-12" deep -
 He will call me from Honolulu.

9/13/76

MR. RICHARD CARROLL Called
 Collect 2476631 P.O. Box 850
 Pahoa, HI 96778

reports
 that rangers
 have told him
 of nesting
 at Halafai
 about 5 years
 ago

Said he has observed nesting on
 black sand beach ~ 1/2 mile
 NE of Kumpahi Pt. Private
 residence there - road leads there.
 He was at ocean institute place (?)
 name - Jim Rutherford. Richard is
 a Hilo - UH student - schedule
 is 10AM Ocean 201 Life Sciences
 Mon Wed Friday. He has a house
 half finished at Puna. The is
 a man (John) who lives on beach.
 Fast drop off on ocean bottom.

Ivan Zeffler visited office on a Sat (avg-july?)
from Ridge point Ocean/maime Science class

9/13/76

Maideff said Guam's Ralph's
Market advertises "Fresh Turtle
Meat Daily" on radio.

9/13/76

Ralph Alexander visit
average - 15 lbs squid or smelt
whatever is available - daily.
Seaweed - once a week
Chris YAMASHITA - work seal trainer
K.C. - other Waikiki helper 1/2 time student
300,000 gal (?) drain every week, sometimes
every two weeks.
Hokama - Foreman

10 turtles approximately 1470 lbs
each \bar{x} = 147 lbs feed = 1.5 lbs
~ 150 lbs 1% of body wt daily
range 35 - 220 - as fed -

Squid - 21.1% smelt - 23.5% D. Matter

on a dry basis - each turtle
receives, on the average .25% of body
weight - or .375 lbs dry nutrients.

Ability of each turtle to obtain food.
Is there equal distribution among turtles
of food fed?

9/14/76

Telephone call from Dave Olsen in Washington
concerning my earlier letter of funding inquiry.
"Funding of species does not occur, but rather
of programs - program management. Turtle is

(cont.)
Olsen

also not listed "Endangered"
or "Threatened"

107

now in limbo between NMFS and FWS.
Turtle could fall into Mamawaligand
Migratory Bird Program - but would
undoubtedly receive low priority there.
Another possibility - sometimes ~~the~~ resource
monitoring is funded by Ecological
Services.

Dave had talked to Kridley this morning
by phone. Suggested I sit down person
to person with him - get his
recommendation for turtle money to
his (Kridley's) boss.

9/15/76

Richard Carroll called collect -
Thought I was coming Friday -
Man and wife on beach - Johnson.
Contact/intermediary is Jim ext 364
at Hilo Camp. Beach is
about 150 yards long. Nestings
occurred on July 4 and Aug 13.
Possibly more.

9/16/76

From Nani Pai - KAWELO family
(old fishing people) knows of nesting
at remote section of KUALA.
- also her husband is a friend of
Bary Bloomfield. Caught two
large turtles - polished shells in home.

9/16
9/17

Bob Wright/Karen charged to MOP - ^{not there -}
in Hilo
Bob Wright called me - charged to MOP
at 961-3568 - 37 turtles total
36 inches was Sawbill - Saw hawk at 120'

108 WRIGHT, cont.

9/17/76 at Kamehame. Bob observed turtle walking into hole. also 9 recoveries since I left - one was as far away as Kamehame, caught midwater. No turtle meet at Boelig reception. Bob gave turtle talk to PTA. I also saw snorkelers in H₂O by Kamehame, man on shore with AT. Turtle hunting?

9/17/76 Call from Wayne King's Secretary. Wants a proposal

9/20/76 Calm day - Kona - went with Jerry Akiyama to Moku Manu area. Saw are very large and are 20" turtles dive from surface off of Pyramid Beach. Notes are indicated on Oahu chart.

9/20/76 Call from Sekora - suggest that I prepare permit application on Greens. also indicated tentative schedule by Monk Seal people - ① forays intensifying Feb-June ② Breeding range April-May ③ aerial one per month Feb-June.

9/22/76 Talked to Captain Frank JIRON Intelligence Squadron - Wheeler AFB 655-1855 - call back Monday (Contact originally was Sgt. Edwards as per Hista).

9/22/76 Telephone call from Mr. Norman Lawson ^{200 lbs} about 38" turtle caught ^{Kailua Bay} by son in net - many tumors present. ^{Meat Eaten} Norman used to be agent for

9/20

9/28

9/28

9/30

Castle and Cooke - bought turtles for
Matson Lines - (soup, meat). Been
in Islands a long time. Lives
Kahaloa Avenue. Says area has
many turtles. Has boat, will take
me out. Wants to come to lab.
also friend is fisherman - Joe
Gillman (Neighbor). Man named
MAHOE used to polish and sell
shell. LAYSON Tel. 261-5454

9/22

Meeting with Tapata - Ego Fish
and Glame about Turtle Project.
Discussed possible Sea Grant funding -
he gave me copied correspondence. Also
mention of casual contract concerning
taking of turtles on high seas.

9/28

Talked to Sgt. Edwards

OCT 7

Wheeler - Guanigata - straight 1st hangar
left - trailer near hangar

9/28

Called Lekele - he said they are
cross checking Bush meat shipments and
that in stock at restaurant. Jose Angel
reported selling turtle meat to Haleiwa
Sauka - FG / Bryan Kani (V?) NAKA - TAKES CARE
OF TURTLE RECORDS
CONSIDER - Cost to State
from Enforcement Burden
IMPOSED by "FARM" MEAT.

9/30

~~Talked~~ Talked to MAP Pete Hendriks
and Amy Fujimoto in my office.
Described Shipman estate out

Brooks H. Takenaka

- card in files

Thursday 9/30 King's Landing, Hawaii - several protected white (?) sand beaches - Roy Black-shear ^{man} Managers of land. Alison Kay doing study there.

9/30 Lunch with Sekora, Zeilernaker, Brent. Fred mentioned daily watching of turtles feeding below cliffs.

9/29 wed - VIVIAN INDICATES many turtles between "Black rock" and Ophae. Also around turtle island at entrance to Kaveoke Bay.

10/3 Sunday Cory of SLP caught 13' (?) Tiger shark off Diamond Head - he set lines. Turtle in stomach - shark was brought into Ala Wai - Home phone 9470-1621. He mentioned catching Tiger 3-4 years ago off Makai Pier - 3 small-medium turtles in stomach. See other book for results of dissection.

10/6/76 Talked to Docents, Waikiki Aquarium. Evening talk to Hawaiian Malacological Society - (John Julius 254-2423) worked with Ron McOmber on Lawai - he is interested in tagging. Indicated that science teacher Roy Rounds of Kailua High School told class that greens eat Turbinaria. Also, a Dr. F. H. RICKET told of seeing green nest on beach 15-18

10/6/

10/7/

10/6/76 years ago at ~~the~~ Laie



after meeting I also talked to (Joren??) man who deals in turtle shell, stuffed specimens, etc. Told of shipment from New Zealand recently by friends. Told of Swapmeet dealings by Samoans. He is getting 6 greens from Philippines - to sell to tourists (?) 100% profit. Two sales a month could make payment on his van. Dealing with Japanese is hard. - They want 10-13 K orders, not 1-2K. Money must be sent first.

10/7/76 Visited Sgt. Harry Edwards - Capt. Rick JAEK(?) Capt. Jiren - Intelligence Wheeler AFB after aerial turtle spotting. Charts given to me. ~~taught~~ taught on to read coordinates - with 6 numbers. First number is horizontal; 2nd vertical. Lines meet at lower left corner of square applicable.

Rich mentioned sighting turtles off Kahuku point by Kuilima.

10/10/76

10/8/76 Meeting with Shinoura and Skillman (and Helfrich) at NMFS lab.

10/10/76 PEACESAT TURTLE DISCUSSION

SUNDAY
3:00PM

Noumea Chair -
Coff (Marou) engineers

N.Z. - Elsa (engineer)
SUVA -

TARAWA -

HONIARA - Jim Golds -

TONGA - Zoochie

Address?
←

- | | |
|---------------|------|
| - order - | N.Z. |
| 1. Wellington | NO |
| 2. Suva | NO |
| 3. Tonga | YES |
| 4. Rarotonga | YES |
| 5. Honiara | YES |
| 6. Tarawa | YES |
| 7. Noumea | NO |

Zoochie will leave ^{TONGA} in the near future -
Perhaps his last session!
(Hon) (Tonga) (Rarotonga) (Honiara) (Tara)

subject

Hatchery - Restoration

Notch Shell Palmerston

How Toy - Rarotonga? Island?

raised from egg

May 4, 1972

caught in net

13 August 1975

recovery length 48cm width 45cm

curved 6 other recoveries

Submarine capture

length 36.9cm

width 34.6

9cm growth

personal letter from Stein

I read portions from 3 publications
condition of recapture?
curved - straight?
Publication by Stein?
What was the condition of Toy?
TYPE of toy in Honiara? McKewon?
copyright free

* SEND PUBLICATIONS

TO GOPAL-TARAWA

question

10/10/76

Growth rates of turtles

Education - my booklet

Bill got Ball rolling!

Cooperating over system

Regional Cooperation

I will send info on our discussions to Motu News letter.

Gene pools - Fuji ↔ RAROTONGA

Honiara -

what was in stomach

gattle ear toy on arm of turtles - corrosion?
Where is Andrew?

Ringed tags on shell -

Tarawa -

Farming turtles in TT

↓ Fuji ↓

INCONEL TAGS

next session

[Sunday 14th November] 2h

10/10/76 ~ 1030
 SUNDAY SCUBA dive at Haurayma Bay with
 Alan Kaur - 50' turtle stop horn
 reef - saw three turtles - caught one
 ~ 22" - 25" shell length - no tag
 apparent

10/21
 Tolped to George Kaysay - Kure
 flight now once every other week

10/22
 Call to Mike Blume G.G. C.O.
 Wake IS - before his departure.

10/22
 Call from Sgt Edwards
 21 sightings of turtles - I must call
 him, Wed or Thurs.

Address - 28th TASS / IN
Wheeler AFB / 96515

10/22
 Zeigler called about Ridley parts -
 he has large size turtle bones
 he wants to I.D. (from Huphine
 excavation). also he has
 seen ^{turtle} jaw bone from crypt (French
 Polynesia?)

10/28/76
Causey Whitlow visited lab in
 morning - discussed sea turtle boating.

Call from Leighton Taylor - Monk seal people
 will be on Laysan for March.

Turtle given to aquarium - by Keith JAEGER
 262-6869 964 Ifono house
 from Likiep IS, Marshalls - at 2 wks in NOV
 given to Aquarium OCT 14, 76

CAPTURE
CI
Weighing TAG NOs
10/23/76
144 OFF# 97 - CORR#
NEW-2051LFL
16 lbs
13⁷/₈ (11¹/₄)
14³/₄ x 13¹/₂
wrt S C
w/10 Tag
NEW 2052RFL
CORR#000
176, 145, 96
15¹/₂ lbs.
14¹/₂ x 11¹/₂
15¹/₈ x 13¹/₄
marginal hole healed
marginal holes healed over

new LF
corr. 2054
45 OFF 1444 OFF
30¹/₂ lbs
18¹/₄ x 14¹/₄
19¹/₄ x 17
barnacle in tag. u-notch is still present
2nd Turtle roll 2

new LF
corr. 2053LFL
100, 1447 OFF
37 lbs
18³/₈ x 15
19¹/₂ x 17³/₈
barnacle, first central u-notch disappearing
3 Turtle roll 2 and photo #31

10/28
Need plaster shot of Sept 79 turtles (#45)

Talked/visited with (Mr. U Kyi Win, Head, Department of Marine Biology, Moulmein College, Moulmein, Burma.) Nesting on Diamond Is. He will write to me with further info.

10/28/76
Evening

Talked to Keith Jaeger, -262-6869 (works for Continental) he gave small green to Waikiki Aquarium on 10/14/76. He dove Maloelap, Likiep, and Wotho during visit by 77 AVR (newly acquired) from Majuro. At Likiep he saw children hold some small turtle (for fun), not being real well taken care of. A friend subsequently got/gave him two as a gift. Likiep has

cont
10/28

a trading post, possibly previously a big center (?). He will find out hatching date. Has influential/knowledgeable friends at Mojiro - Joe Buluip (sp?) and Kapala.

10/28
EVENING

Visited "Shell World" McIpermy Waikiki and spoke to sales man who had worked there 3 months - Says he has not yet sold a turtle. at this store there are 4 juvenile greens ~ \$160 - 200 each. Not all that good of a stuffing job. (Shell for \$50) Owner is Mr. Kiainjn 521-6606. Has warehouse, takes buying trips, buys in large quantities (at least for shells). Critical comment of Saberon was that natives first eat meat of turtle then stuff it (katorial). Yesterday an FG agent came to store and required that they get a permit - \$cost 2.50. There other store apparently already had one.

10/29

Call from Sekou about Naughton concern of seal harassment. Also MM Seal meeting yesterday - George Harry was here - put 2 people on Laysan March 1 - June 1, 77.

11/5/76

Called Carl Glerum - he hasn't seen a turtle in 3 months - no observations 247-0375

11/5

Sent booklet and wrote letter to Sybra about KINZIE info on Kahoolawe

10/3/76 TAG NOS wt S C
 NEW TAG 1443, 16^{good} 51 1/2 lbs 20 7/8 x 16 22 x 19 1/4
 2055 RF corroded (plates lifting → drying out?)
 (V-notch visible) loose

NEW TAG photos 94, 1440, 3 50 lbs 21 x 17 3/8 22 x 20 3/4
 2056 RF mild corr. corr. corr.
 (V-notch clearly visible)

~~In your - plastic photo~~

11/5 Letter to Bob Robbins - "Bujied in sand" ?
 11/5/76 Called Jim ⁹⁴⁸⁻⁸⁵⁹⁸ Hauke - he will call me back.
 11/4 EVENING talk to Hui Lwin Kai
 (Kim's dive club) in Haleiwa (Sands Restaurant)
 Bob Sakai - President
 Alan Chang - friendly ex SCUBA (1st in islands)
 George Brown - Representative to Diving Council
 George Morris - took/takes lots of turtle.
 33 members were present - they seemed to enjoy my talk.
 "Frenchie" will take Kim and I diving to turtle holes.
 Sakai indicated that previously dozens of heads ^{to feed on} ^{Himu Kai} could be seen bobbing ^{30' water} off Haleiwa.
 Another indicated that Kawela Bay had lots of small turtles.
~~Morris~~ ^{Someone} once saw 6 turtles sleeping

11/4 Haleiwa Dive Club (Mokuleia)
 in caves within 150' of each other.
 From discussions it sounds to me
 as if most of these turtles are
 large. Indication that turtles
 are found along "drop off". Sakai
 crew of "Molly" Philippines that
 loaded turtles onto boat from net -
 30-40, put so many on that it sunk.
 ~ 10 years ago (?) Morris sees
 lots of big turtles, but in all his
 diving he has never seen a male.
 Someone said that some of big ones
 have light shell. Most of smaller
 ones have brown/lighter shell.
 Man presented, who previously netted/
 fished Kaneohe Bay. Said turtles
 "come in" Haleiwa and Kaneohe Bay.
 I gave them ~ 50 Oahu sighting
 forms.

11/5 Removed all suspended toys - coins from H₂O

11/10/76 Call from Larry Green - explained about
 meeting held - will be sending written
 material. King, Carr, Pritchard attended.
 Pete Hendricks - P.O. Box 4911

Send
 5 sighting
 forms

Kawaihae, HI 96743
 Amy Fujimoto - 113 Luana way
 Hilo, HI 96720

Wednesday
 10/10/76
 7:30

11/64
 Hnd Iuka
 373-4791

Wednesday
10/10/76
7:30

(Presentation)
Talked to S.W.A.S.H. at Waipiki Aquarium.

Afterwards met ENS. JOHN SCHMIED

239-8300 home

diver off Malow who on Sekoua trip up
Refuge - Dave at Laysan (west coast), with
USCG Rik Kessler

call him soon

-546-5510 Recruiting

They made 14 dives total (15-60%) (and
only saw one turtle (~18" shell?) ^{They have Zodiac}). Also
reports that only one basket seen on beach.
He offered suggestion that CG mission
the northwestern chain could be used for
diving surveys for turtles - simulate
search and rescue practice. This should
be investigated further.

listed - 533-1566 or
525-8340

Also spoke to oriental man TOM NITTA
who remembered that in 1938-1939 Filipinos
used to bring in turtles at Waikoa,
hold them in Kraal for a week or so, to
be picked up by FISH CAKE COMPANY.

also spoke with another man JOE
PICKENS and his daughter Sherry
about tattooing turtles for I.D. He seemed
knowledgeable about marking dogs and horses -
Zinc Oxide for dark skin (?). Must
call him.

Gordon Fisher - AKU MARINE Divers also at
meeting. Also oriental woman secretary
who is going to put form and summary in their
newsletter - SEND ME A COPY.

1164
Hind Iuka DR.
373-4791

(Cont)
10/10/76

after meeting, I attended MOP gathering at Aquarium -
Saw Athline Clark-Cruzen also present.
Talked to Doug Davis ^(aquarium collector) commercial spear fishing
who said that aggregations of turtles
occur at - ① near wreck buoy off of
Alawai - on bottom (resting) ② off
boulder breakwater off Uby reef runway.
Suggestion made that I talk to Chw Dive Club
Call from K. Wright - During past week a
young hake woman was apprehended by custom
official bring from Indonesia ~ 70 pieces of
hawkbill jewelry - ~ 20 brackets on
arms - swollen; ~ 18 combs taped to
waste. also 2 ounces of Marijuana in
powder jar.

10/10

11/11

Talked to Sam Gon 595-6760
about student project proposal to study
Wailau Valley, Molokai. sheet in "Hawaii" folder.

11/12/76

Joel Kern, Pearl Divers, 471-0871
talk for December 16, 1976 7:30 he will call.

11/11/76

Visited at Wheeler AFB - Davis
needs film; indicated that turtles
get frightened, dive, when plane gets
low; he can see them to ~ 30'
dependent on weather conditions. I
saw photo of turtle thought to
be 6' shell

11/14/76

~~PEACESAT~~ Talk
Wellington - NO
Suva
Tonga

Apia
Laié
Port Moresby
Sopran

Villa
Tarawa
Noumea
Ponape
Nuku
Honolulu

- F to aid peoples of the Pacific
Ombu Hussey UNDP - now in Calif.
- UNDP - ESCAP - Makrutchen
- EW Center / participants

NO PARTICIPANTS - ^{① Wellington}
 ② Noumea
 ③ Rarotonga

11/15/76 - talked to hon Walker about States concurrence with ENDANGERED listing for Seal.

11/15/76 - Talk with Dillon about Seal.

11/15/76 ^{Endangered Species - etc.}
^{Refuge Trip - U.S. Attorney Bill Eggers}
 Call to John Naughton concerning disturbance to seals during the course of my studies - he recommended that I do not "stir up a hornets nest" by making formal inquiries as to if I need a marine mammal permit.

11/15/76 talked to P. Sekora - said Commercial fishing should not take place in lagoon waters, as per memo from NMFS Howard to Doug Blesh. Said ^{Mr.} FISCUS # (206) 442-4734

11/15 Call Cliff Fiscus - also DeJong

11/16 talked to Rick Kessler, Malou Divers - been on 2 summers - at Layson guys caught pretty good size Tiger(s) - don't remember turtle parts.

9/30/76 Pete Hendricks - King's Landing
Roy Blackman ~~Shear~~ Page 110

9/29 Vivian - Black Rock - Kurehe Bay page 110

10/6 DOCENTS TALK page 110
MALOCCOLOGICAL

10/28 Marshall Is. turtle - Keith JAEGER page 114
+ 116

10/28 Shellworld

11/4/76 Haleiwa Dive Club TALK page 117

11/5 Removed suspended tags page 114

11/10 TALK TO SWASH TATOO page 115

Intro

7/3/75

9/11

10/7/75

10/7

12/5

1/23/76

1/23

2/1/76

3/3/76

4/2

4/28

5/4/76

5/19

5/26

5/27

6/14

7/19

8/16

9/16/76

9/20

9/22

←

Interview - conversations

LIBRARY OF
GEORGE H. BALAZS

- 7/3/75 E. Oslund page 87
9/11 T. Telfer " 87
10/7/75 R. Chav at FGD Page 88
10/7 Iversen/Naughton leatherback " 88
12/5 Dick Brock - Vernon Brock page 90
1/23/76 W. Pettigrew - Mokuia page 91
1/23 E. Sterum - stranding page 91
2/1/76 Brighton - FGD page 92
3/3/76 Alesis, Kahala Hilton page 93
4/2 D. Huddleson - Hawk Bill " 93
4/28 Riggs about KADAOS "75" Turtle " 93
5/4/76 Zeilermaker recovery
dead turtle at Kisianski page 94
5/19 Al kam - Snodgrass "30' turtle" page 96
5/26 Kinzie - Silva Kahoolawe page 97
5/27 Ogren " 97
6/14 Steve Kim - Herwig (explosives) page 98
7/19 B. Carlson - Bikini " 100
8/16 C. McDonald - Kewela Bay page 102
9/16/76 Nani PAI - nesting on Oahu page 107
9/20 Akiyama to Moku Manu page 108
9/22 Norman Lawson - C.C. - Kailua page 108



