

3 BIG ISLAND 84  
G.H. BALAZS  
PUNALU  
KIHOLO 1984

PUNALU  
KIHOLO TOO

---

G.H. BALAZS  
1984-B



13-18 - MAY 1984 ... EXP. 7 PUNALOU

26-29 JUNE 84 ... EXP. 8 PUNALOU

(NEW TAGS APPLIED = 7730-7747  
TAGS 7749 & 50 COST)

P. 5-

P. 42-73

15-18 JULY 1984

EXP. 9 ... P. 74-  
(1 DAY AT PUNALOU)

"NEEDS" P. 31-32

7-10 AUGUST 1984

KIHOLO EXPEDITION

P. 93-117

(CONT. Book 4)

# G.H. BALAZS



## COMPOSITION BOOK

9 3/4 IN. x 7 1/2 IN. (24.8 cm x 19 cm)

AVAILABLE AS:

- No. 09-9130 (1130) 60 SHEETS COLLEGE RULED & MARGIN
- No. 09-9132 (1130-P) 60 SHEETS COLLEGE RULED & MARGIN
- No. 09-9134 (1143-X) 100 SHEETS COLLEGE RULED & MARGIN
- No. 09-9132 (1130-P) NUMBERED PAGES

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BIG IS.



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LEON = 961-9364 OFFICE

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NAACETHU POLICE 929-7331

MR. ROBERT HIND (KONA) 329-8981

3 guys from Hamakua (invited by w. Orcutt) white Datsun HDW 061

DLNR - DOCAPO - 961-7291  
(BIG IS.)

HARPER (DONNA) - 969-1478

BOB NISHIMOTO - 961-7501

A. HOWARD - 928-8156  
Cavandra Warren - Secretary - Nat. Sci. Division  
P. Kim - 959-7762

236 KANOELANI ST.  
HILO, HI - 96720

Diane - 935-9260 home  
N.Y. home - (516) 878-0641

Bill Gilmartin - 293-2633 home  
Peiterson - 254-3028 "

Hawaii Tel. Book:

Joseph P. Enriques Punaluu 928-8439  
Jos. P. & Pauline Enriques Pahala 928-8894

Hawaii Volcanoes National Park  
Headquarters - 967-7311 (information)

WPPQ office - 955-8831  
Witham Home phone 395-8969

Dorfe Gates - 261-1800

Streeter home phone -  
946-4441

Capt. <sup>Kevin</sup> Nobrega - Kau Police -



# 764-Pound Turtle Caught

**HILO** — One of the largest turtles ever caught here was brought in yesterday by the fishing sampan Mona H.

The turtle, a Pacific Leatherback, weighed 764 pounds.

The turtle was caught on one of the Mona H's flaglines off the Big Island.

A 300-pound turtle is considered large.

The Leatherback species of turtle gets as big as a 1,000 pounds and is found only in warm waters. It deposits its eggs almost exclusively on one beach in Malaysia and has never been raised in captivity.

The Sumida Restaurant here bought the turtle. It was auctioned yesterday morning by the Suisan Co., Ltd.



*Howdy, Advertiser. 11-17-67 Feibary*

Advertiser Photo by Walt Southward

Next stop: Pots and pots of turtle soup and piles of cutlets.



5-13-84  
 SUNRISE - 5:45am  
 SUNSET - 6:48pm  
 MOONRISE - 5:45pm  
 MOONSET - 5:24am

14-18 MAY 84

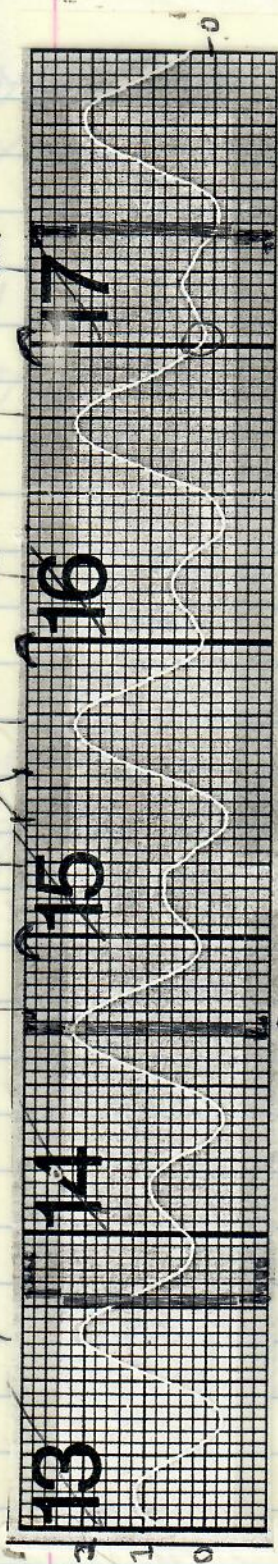
THURS.

WED

TUES

MON

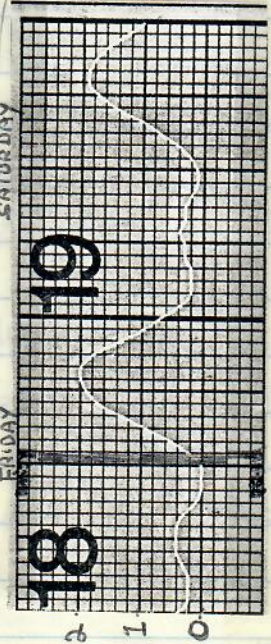
SUNDAY



✓  
 Kulauea seen erupting  
 2 mete. notes out

2 METS notes

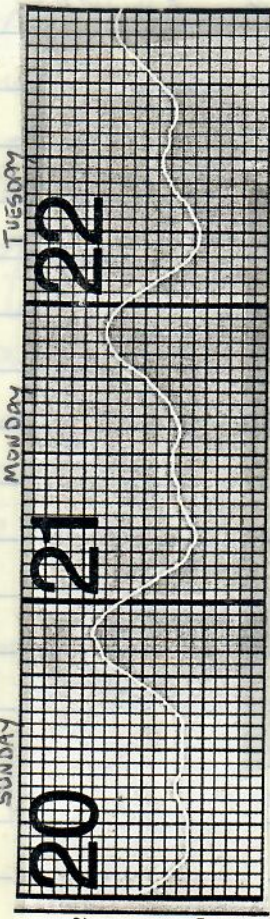
SATURDAY



TUESDAY

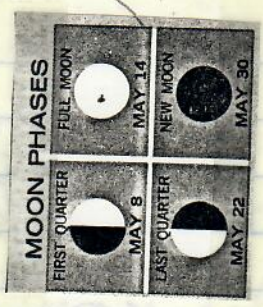
MONDAY

SUNDAY



For tide time at following places, add or subtract from Honolulu time.

PORTS	Hrs. Min.		Hrs. Min.		
	+	-	+	-	
HAWALEI BAY, KAUAI	-1	40	KALUNAKAKAI, MOLOKAI	-0	09
NAWILIWILI BAY, KAUAI	-0	32	KAHULUI, MAUI	-1	48
PORT ALLEN, KAUAI	-0	32	KIHEI, MAALAE BAY, MAUI	-0	14
HALEIWA, OAHU	-1	36	HILO, HAWAII	-0	59
HANAUMA BAY, OAHU	-0	55	HONUAPO, HAWAII	-0	24
KANEHOE BAY, OAHU	-1	35	MAHUKONA, HAWAII	-0	24
LAIE, OAHU	+0	16	KEALAKEKUA BAY, HAWAII	-0	16
WAIANAE, OAHU	-1	15			
WAIMANALO, OAHU	-1	15			





## People on Expedition #

1. Diane
2. Will
3. Bob Laube
4. Randy
5. Bill Brooks
6. Dave Woodworth
7. Kory
8. Grebera
9. Tom
10. Richlin Fong
11. DEAN

Ralph Dedman

P.O. Box 469

NAALEHU, HI-96722



13 MAY 84 Depart 6:05 pm MidPACIFIC -  
 Sunday arrive Hilo ~ 7:20 pm. #7 cab to  
 Hilo Hotel - no Harper van left for me at  
 the airport. # dinner at Chinese restaurant.

5/14  
 MONDAY Picked up van the next morning; Arrived at  
 MOP office ~ 10am to load gear. Called Rick Klemm -  
 Mid-pac story to run in Sept. NatnaLani issue;  
 Picked up gear at boat house - ice blocks - then  
 shopping at KTA - Dean Engle & Toshi each drove  
 their cars. Arrived at Punaluu ~ 3:30 pm.  
 Pavilion I. Telephoned Naalehu police - Ct. Gloy.  
 Reported that no police work after 11:30 pm.

- 6:30 pm Nets put in the water - 1 piece site #1,  
 Turtles seen feeding } 1 piece site #2. - Each outside anchor  
 attached to remains of cement piling with  
 iron hoop.

Bob Laube has a friend from "Woliki"  
 atoll - catches greens coming ashore to  
 rest - between Tank and Yap.

Dean Engle's roommate is from Puluwat.

At ~ 10:30 Diane and I dove in  
 Johnston's Pond and Horseshoe - captures  
 on following pages.



S. Salazar 935-3916

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935-2971 (Mauna Kea Observatory 88 inch Telescope)Bill Brooks 969-1596 (Video for loan  
of "hula hoo"  
Merry Monarchy  
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HILO, HAWAII-96720Kory CAMERON Tel. messages  
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PAHOA, HI 96778 (PAHOA H&R BLOCK)CHRIS J. DOLL (permanent address)  
P.O. Box 8009  
PINE BLUFF, ARK. - 71611Bob Canbe  
P.O. Box 1551  
Hilo, HI - 96721Deborah Halber  
142 Kinooka St.



①

14 MAY 84  
Monday

Horseshoe - (3 others seen, one of which  
had tags) ~ 10:30 pm

7715 RFL

S-39.8 x 30.9

NOTCH-39.5

7716 LFL

C-42.0 x 36.5

PL-31.5

HEAD-6.2

TAIL-7.5

WEIGHT- 22 lbs. (10.0 kg.)

8 burrowing taken from plastron

Painted NO. 1

Blood- attempted and obtained ~ 11 pm - right time  
trial to see if its easier to get  
blood shortly after catch, opposed to later.

Fat- not attempted

Note- "encrusting" on nearly all turtles caught.



②

14 MAY 84

MONDAY

Johnson's Ford - Diane & George  
~ 10pm  
(no other turtles seen)

7717 LFL

S- 41.0 x 32.5 (marginal injured)

7718 RFL

notch- 40.8

C- 43.3 x 38.0

PL- 33.8

1 burrowing removed

HEAD- 7.0

TAIL- 8.0

WEIGHT - 25 lbs (11.4 kg)

Blood- none obtained after repeated tries  
at 11pm; not tried again.

Fat - Not attempted

Painted no. 2

-photos of painting turtle



NOTE - All FAT Biopsy taken LHL area

- All turtles released by Pavillion



(3)

11

14 MAY 84  
MONDAY

Horseshoe

~ 10:30 pm  
George & Diane

7721 RFL

S-57.4 x 46.0

7722 LFL

NOTCH- 56.8

C- 61.5 x 53.5

PC- 46.0

HEAD- 9.2

TAIL- 14.0

WEIGHT - 64 lbs (29.1 kg)

Blood - First tried at 9:35 am - obtained  
after numerous tries.

Painted no. 4

Fat - attempted, but cut too close to plastic -  
thick skin - ∴ only got a small  
sample of fat.



(4)

13

14 MAY 84 Site #1 net capture ~ 11:30pm  
MONDAY

7719RFL

S-51.2 x 41.4

7720LFL

notch-51.2

C-54.5 x 48.2

PL- 408 (3 burrowing removed) (2 from Carapace)  
HEAD- 8.5  
TAIL- 10.0

WEIGHT- 43 lbs (19.5kg)

Blood- yes - obtained at night after capture.

Painted no. "3"

Fat sample not attempted



(5)

14 MAY 84 Site #1 ~ 11:30am next to outside buoy,  
Monday

Recovery Recapture - Diane & I put it loose - badly  
twisted - no need to land -  
a large male.

7634 - These 2 traps seen and read - ~~not~~ search made for others.

7636 -  
7635  
7637

2-19-84  
TMRP  
growth in eye  
p. 27 book 2

NO PAINTED NO.



15 May 84 no clouds - full moon all  
TUESDAY night - no other captures.

Right net taken out ~ 10am for  
repairs & untangling - back in at  
noon.

Noted Herocladia drifts on black  
sand beach - always seems to be  
here. Particles of white st. in  
the water.

In the late afternoon at high tide,  
turtles were seen in slope feeding -  
obviously they avoided the nets.

At 10:30 pm Diane & I again to  
the van to Johnson's pond -  
Dave, Richlin and Tom as backups -  
Toshi took photos. NO turtles  
seen here at all.

At Horseshoe, ~ 10:30pm, TC-1  
seen moving out of sleeping spot -  
Another <sup>small</sup> swam away fast out of upper  
area of ledge.



(6)

15 MAY 84  
TUES

Horseshoe - 11am

7723 RFL

S - 51.9 x 41.2

Notch - 51.5

7724 LFL

C - 54.0 x 51.5

PL - 42.8

HEAD - 8.5

TAIL - 10.5

(4 burrowing removed)

WEIGHT -

46 lbs (20.9 kg)

Painted NO. 6

Blood - yes - at night after capture  
 - (note - next morning I noted lots of  
 water on cement - urination major factor?)

Good fat sample obtained next morning - close  
 up photos taken of completed incision.



QUESTION: How OFTEN do they FEED?

- How much do they eat at a time
- Lots of alga going to waste - beach drifts.



(7.)

16 MAY 84 ~ 5:30 am net - right end  
 WEDNESDAY of Site #1  
Recovery 1/8/84

4966 S-69.8 x 57.0  
 69.5

4967

C-74.5 x 71.5

4968

no other data recorded.

4969

Measuring on the beach - Bob took it  
 out in the tube for release, past the nets.

Close-up photos of healing biopsy.

Scab inside - slightly separated (incision).  
 Feels hard around incision. Healing very  
 nice with no signs of necrosis - Unbitting  
 by predators, etc.

Blood - already collected at earlier tagging.



16 MAY 84

Wednesday

Temperature taken by Tony during mid-morning at low tide - between rock outcrops off sand beach where tube/net taken out.

1. over boulders at ~ knee to hip deep -

23.5°C

2. Half distance to Site #1 net -

Surface - 24.0°C

Bottom - 25.0°C

3. AT Site #1 net -

Surface - 24.0°C

Bottom - 25.0°C

Photos taken of Ptero. and springs at low tide.

- Late afternoon wind blowing strong straight in to bay. Parked van by beach did watch turtles feeding (surfacing) over boulder area close to shore - (estimate 3-4 seen (but perhaps indicative of more).

- Red-Orange glow of Kiluea periodically seen over left point of lava land off bay  
 - Dark period before sunrise tonight - still up - cloud bank & yellow moon - reduced light, BUT STILL NO CAPTURE



17 May 84 Site #2 net - ~ 12:15 am  
Thursday Dean, ~~Ally~~ Randy & me  
RECOVERY 3/26/84

7678  
7679  
7680

S - 62.2 x 52.6  
notch - 61.9

Blood - yes

Photos - 3 on 20 exp. roll

FAT - Taken at original capture date -  
infection completely healed - close-up  
photos taken.



17 MAY 84

Thursday - I am Jean & I went into  
 Johnson's Pond - no turtle seen.  
 At Horseshoe - Painted No. 4  
 seen, 1 medium-sized juvenile,  
 and 1 small - + small  
 captured - pretty shell - even seen w  
 by moonlight - data on following page



17 May 84 ~1am HORSESHOE  
RECOVERY 2/17/84

7620 S - 46.1 x 38.2  
notch - same

C - 49.0 x 44.5

7621 PL - 36.7 (12 Burrowing)  
HEAD - 8.8

TAIL - 10.0

WEIGHT - 34.1<sup>0</sup> LBS (15.5 kg)

Photos of growth on togs + Dorsal on chair.

Blood already taken at original capture

FAT - yes - small amount;  
lots of fluid from incision -  
through to body cavity?



17 May 84

Thursday am - moon notably reduced  
from full - less illumination  
present. little wind - water calm

note - little if any evidence that checking  
net with beam scares off  
turtles.



17 May 84  
Thursday

~ 3:45 am Site #1  
Bill Brooks & Kory

7725 LFL S - 63.2 x 51.8  
(notch 62.8)

7726 RFL

C - 67.5 x 62.1

7727 R3-4<sup>th</sup>

PL - 50.5 (5 burrowing removed)  
HEAD - 10.3  
TAIL - 15.0  
WEIGHT - 84 lbs (38.2 kg)

- FAT - Sample obtained (L Hind - like all)
- Photo on pavilion wall
  - Blood - obtained on first attempt.



17 MAY 84

Thursday

Nets taken out ~ 10am.  
 ~ 9:30am small turtle seen  
 in close by net retrievers -  
 chased into net and caught -  
 About the same size as "Myrtle"  
 and Kubio Gardens Restaurant.  
 Feed during the day because  
 big <sup>ones</sup> ~~catch~~ at night?

Photos with Richlin - last of  
 20 EXP.

NOTE: PUNALUU a good place for  
 headstart releases.



Pieces and fragments frequently found in  
 Site #1 net during this expedition.



(11.)

Photos w/ Richlin Fong.

27

17 May 84 - 9:30am  
Thursday

S - 37.8 x 32.0

notch 37.3

7728 LFL

C - 39.9 x 38.0

7729 RFL

PL - 30.7

HEAD - 6.3

TAIL - 7.5

WEIGHT - 18 lbs (8.2 kg)

FAT - not attempted - seems like almost none present.

Blood - tried several times, but nothing obtained.

IMPORTANT NOTES - NO barnacles, soft skin,  
clean shell, very sharp claws,  
Undoubtedly only recently arrived  
in nearshore waters.

Several photos taken with Richlin,  
+ by itself on the gross.  
No graft present.



17 May 84

Thurs.

6:30am called Bill Gilman.

Spent all morning packing up and cleaning. Photos on 36 exp. roll.

Departed at noon; stopped for ice cream in Mountain View. Stored all gear at "boat house" and Mof office. Checked in to Hilo Hotel. Ate Japanese dinner at their restaurant.

18 May 84

Friday

9:30am discussed with Walter who is needed to measure water parameters at Puyalun.

Departed on flight at 11:07 - arrive ~ 12:15 pm.

Sat. evening call from Diane saying that "Myrtle"  
26 May<sup>84</sup> at Kubio gardens restaurant found dead ~ 7pm; fed orvaline at 4pm by Loretta

Died during big Japanese party at restaurant celebrating "bad" year age for Japanese. No one told.



BLOOD

VIAL TAG NO. (call 1 vial each)

1. 7715 ✓
2. 7721 ✓
3. 7719 ✓
4. 7723 ✓
5. 7678 (<sup>corrected</sup>7678 label)
6. 7725 (<sup>corrected</sup>7725 label)

FAT

1. 7721 ✓ 6
2. 7723 ✓
3. 7620 ✓
4. 7725 ✓

STORED AT HILD mol office

- IN SCRAPED CARBONATED BOX
- 15 purple cap needles
  - 15 vials, plastic
  - 19 vacuum tubes
  - 13 manual syringes
  - no 18 & 20 needles
  - 20+ scalpel blades + (biopsy instruments) - NO - in suitcase
  - White plastic bucket - Radio, canned food,
  - weight belt and old dwe knife
  - DACOR LIGHT
  - Centrifuge
  - Neon LIGHT



STORIED AT "BOAT HOUSE"

- Zodiac (16')
- 35hp outboard
- 5 (?) turtle nets.
- Compressor
- 4 buoys, line, 6(?) anchors
- 1 blue tarp
- white plastic bucket
- Fiber drum
- 12 v battery + charger



Need "contact <sup>SAKORO TAGUCHI</sup> NEEDS

- (1) Freshwater plane 50km out "Sea Grant pub. by Dick Young
- (2) Salazar 935-3916 P.O. Box 1956, HILO
- (3) La Motte <sup>nitrate phosphate</sup> (4) Harper - <sup>call</sup> "DONNA"
- ? (5) EXCEL - 2 T-shirts to Robin (6) Check name of "Johnsons Ford" (7) Follow-up note to Ralph, since he came by during this trip. (8) FLASH photos of turtle being brought in by students (9) Bore samples/saw
- (10) ScubaPro travel bag (11) Albert tel. - 929-9101
- (12) "none larger than 76cm" - owens (13) <sup>sidecutters</sup> snippers for cutting net as turtle (14) Kanila wood
- (15) ScubaPro bag (16) Mailmerding line (17) Salinimeter?
- (18) Set nets by boat ramp? (19) invite MOP MANOA or ? to accompany to PUNALOU (20) Black Sand for Barbara Klemm (21) end Doty - KAMEHAME
- (22) See Kēpa Māli (23) Table of tag loss on <sup>gross</sup> short-term recoveries (have any been lost?) (24) <sup>chain of</sup> craters road open
- ~~(25) Note to Doty w/ self addressed asking about access to Kamehame - 4-wheel needed?~~ ~~(26) Note to Kēpa about HILINA PALI turtle petro. (petro. on women's bathroom) stand?~~
- ~~(27) Call HIND.~~ (28) Sumida's Res. - Leatherback photo - send inquiry (or DIANE?) - good to eat? food in stomach
- (29) Note & Map to Alwanya (30) <sup>USING SEYBA</sup> Write housing with/wa for Heraclesia and bottom photos in PUNALOU (31) Calcium precipitation on shells - check w/ walt or? (32) Scrape off entire <sup>+ other LIMU of the bay.</sup> rock for Dennis Russell ID.
- (33) Re-note cable for flash + dust cap (34) Print up "award" certificates of appreciation (CEE or Waikiki Aquarium?)
- x (35) Wet-suit glue ~~(36) Note to Johnson~~ (37) Walk to Kawa (38) Send turtle info to Ernest Kalani



## Needs (continued)

- ~~(39)~~ Hazel - *Pterocladia* reference (40) Long pouch head for Kiholo (41) Note to Kama about Poaching - Awareness of turtles needed at Punaluu - concessions owned by?
- (42) PSA is tourist publications - Turtle/seal photo (43) Quant. distilled H<sub>2</sub>O (44) Sample bellows as trial for nitrates/phosphates
- (45) Card to Dave (46) Card sent to Walter?
- ~~(47)~~ TOPOS IN HICO - NAALUHI; KACAE; PAHALA
- (48) More Limu photos (49) Collect for Russell to ID. (50) Batteries KTA. (51) Slippers
- (52) Plan to heat H<sub>2</sub>O (53) Dist. H<sub>2</sub>O (54) Tel. & map to Alua
- (55) Prints for Randy & Bill (56)



BACKGROUND:  
 on the afternoon of 5/16 wed, Diane saw  
 24 small turtles, presumably feeding, at  
 Johnson Pond area.

Roslyn reported that Ralph asked  
 her why she visited with us,  
 since we were catching turtles.  
 (derogatory MANNER)

She also related that a man caught  
 a turtle, but pregnant wife said let it go.

#### PRE-1983-84 STUDY:

How MANY ORIGINALLY CAPTURED AND  
 TAGGED, AND WHERE?

During this expedition, noted lots of  
 white "bleached out" particles of  
Pterocladia in the bay, especially  
 closer to shore. Also noted that  
 black beach sand is loaded  
 with dried Pterocladia.



BLOOD SAMPLES FROM  
GREEN TURTLES AT PUNALÓO, HAWAII  
EXP. NO. 7 G. BALAZS

<u>VIAL NO.</u>	<u>DATE</u>	<u>SCL</u> , cm	<u>WEIGHT</u> , kg
1. 7715	5/14/84	39.8	10.0
2. 7721	5/14	57.4	29.1
3. 7719	5/14.	51.2	19.5
4. 7723	5/15	51.9	20.9
5. 7678	5/15	62.2	NT
6. 7725	5/17	63.2	38.2



TAGGING SUMMARY  
13-18 MAY EXP. NO. / 7

DATE	TAG NOS.	SL x SW	kg WT	CAPTURE LOCATION AND METHOD
4/14/84	7715-16	39.8 x 30.9	10.0	HORSESHOE - HAND
4/14	7717-18	41.0 x 32.5	11.4	JOHNSONS HAND
4/14	7721-22	57.4 x 46.0	29.1	HORSESHOE - HAND
4/14	7719-20	51.2 x 41.4	19.5	PUNALUU SITE #1
4/14 RECOVERY	7634 & 36(+?)	CUT LOOSE - LARGE MALE	-	PUNALUU SITE #1
5/15	7723-24	51.9 x 41.2	20.9	HORSESHOE - HAND
4/16 RECOVERY	4966-69 (A MALE)	69.8 x 57.0	NT	PUNALUU SITE #1
3/24/84	> 4.3 mon (+0.8cm) =	69.3 x 57.5	48.6	PUNALUU
1/8/84 RECOVERY	2.23 cm yr	69.0 x 56.5	48.2	PUNALUU
4/17	7678-80 (A MALE)	62.2 x 52.6	NT	PUNALUU SITE #2
3/25/84	2.3 mo (+0.3cm) =	61.9 x 51.2	35.9	PUNALUU
1.57 cm yr				
4/17 RECOVERY	7620-21 (A MALE)	46.1 x 38.2	15.5	HORSESHOE HAND
2/17/84	(3 months) (+0.9cm) =	45.2 x 38.0	14.1	HORSESHOE
3.6 cm yr				
5/17	7725-27	63.2 x 51.8	38.2	PUNALUU SITE #1
5/17	7728-29	37.8 x 32.0	8.2	PUNALUU HAND INTO NET



- POSSIBLE REMAINING ACTIVITIES -

1. Kamehame survey (<sup>DIANE info from</sup> HIGH SCHOOLERS 6/26 night)
2. NITRATE - PHOSPHATE SAMPLING
3. <sup>STAY</sup> SHIROKAWA - <sup>SURVEY</sup> KALAWALU, KAWA,  
KALUA HONU,
4. KIHOCO - <sup>CALL</sup> WRITE TO MR. HINES - DATES
5. VISIT ~~THE~~ IN - PUAKO
6. Shipman estate visit
7. VISIT Brewer <sup>CONDO</sup> + people again -
8. Continue Big Is. - MOP - under water



JUNE 1984

MOON PHASES	
FIRST QUARTER JUNE 6	FULL MOON JUNE 13
LAST QUARTER JUNE 21	NEW MOON JUNE 28

PORTS	Hrs.	Mins.
KAUNAKAKAI, MOLOKAI	-0	09
KAHULUI, MAUI	-1	48
KIHEI, MAALAEA BAY, MAUI	-0	14
HILO, HAWAII	-0	59
HONUAPO, HAWAII	-0	24
MAHUKONA, HAWAII	-0	24
KEALAKEUA BAY, HAWAII	-0	16

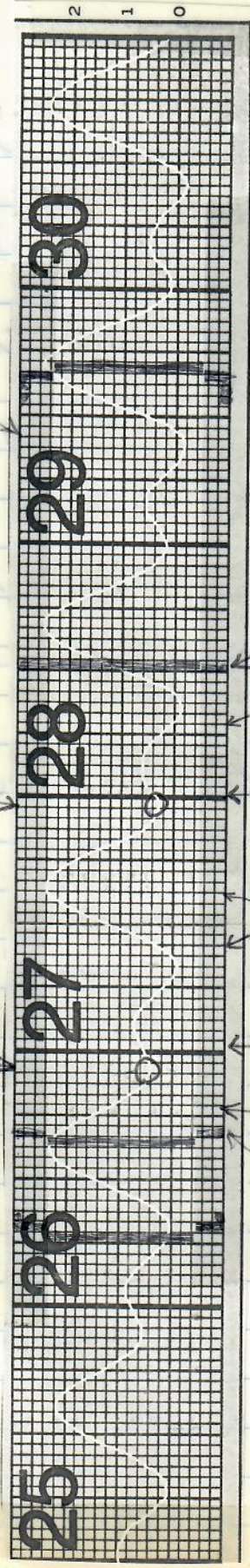
"MYRTLE" Association  
FRIDAY SAT.

HORSEHOE & CANTONERS  
THURS.

10pm HORSEHOE - GARVATI (GARDNER)  
WED.

TUESDAY

MONDAY



ARRIVE PUNALUU  
MAY'S IN  
PUNALUU  
NET OUT  
PUNALUU  
BOTH NETS OUT.  
Depart Lurelun  
Net replaced with combination sphere & cylinder wood-float net.



15:22 WEDNESDAY, JUNE 13, 1984

SAS

OBS	TAG	LOC	SPECIES	MONTH	DAY	YEAR	TEMP	SCL	SCW	TL	WT	TLEVEL	BND	SEX
1	2877	Hawaii	C. mydas	12	17	83	.	60.2	.	.	31.4	473.4	46	M
2	7534	Hawaii	C. mydas	12	17	83	.	68.2	.	.	44.1	8.8	80	F
3	7537	Hawaii	C. mydas	12	17	83	.	56.1	.	.	24.5	68.3	32	M
4	7540	Hawaii	C. mydas	12	17	83	.	56.3	.	.	18.2	84.2	27	M
5	7550	Hawaii	C. mydas	12	18	83	.	66.4	.	.	40.0	91.1	29	M
6	7595	Hawaii	C. mydas	1	8	84	.	46.7	.	.	16.8	40.0	44	M
7	7597	Hawaii	C. mydas	1	8	84	.	58.8	.	.		73.3	30	M
8	4966	Hawaii	C. mydas	1	9	84	.	69.0	.	.	48.2	587.0	41	M
9	5501	Hawaii	C. mydas	1	9	84	.	75.3	.	.	67.3	9.0	91	F
10	7601	Hawaii	C. mydas	1	10	84	.	62.8	.	.	34.1	9.0	83	F
11	7624	Punaluu, Hawaii	C. mydas	2	17	84	.	41.3	.	.	12.3	13.2	88	F
12	7622	Punaluu, Hawaii	C. mydas	2	17	84	.	47.7	.	.	15.5	92.6	35	M
13	7620	Punaluu, Hawaii	C. mydas	2	17	84	.	45.2	.	.	14.1	168.3	21	M
14	7613	Punaluu, Hawaii	C. mydas	2	18	84	.	73.5	.	.	60.4	1138.2	37	M
15	7617	Punaluu, Hawaii	C. mydas	2	18	84	.	62.0	.	.	34.1	159.1	22	M
16	7609	Punaluu, Hawaii	C. mydas	2	18	84	.	68.0	.	.	43.7	13.2	100	F
17	7638	Punaluu, Hawaii	C. mydas	2	18	84	.	61.5	.	.	33.2	13.2	90	F
18	7641	Punaluu, Hawaii	C. mydas	2	18	84	.	63.5	.	.	37.3	13.2	88	F
19	7644	Punaluu, Hawaii	C. mydas	2	19	84	.	65.5	.	.	42.7	685.5	42	M
20	7652	Punaluu, Hawaii	C. mydas	3	24	84	.	61.9	.	.	37.3	7.8	86	F
21	7657	Punaluu, Hawaii	C. mydas	3	24	84	.	63.8	.	.	35.9	13.8	69	F
22	7660	Punaluu, Hawaii	C. mydas	3	24	84	.	74.5	.	.	53.6	110.5	28	M
23	7701	Punaluu, Hawaii	C. mydas	3	27	84	.	59.0	.	.	29.1	10.0	75	F
24	7711	Honolulu, Hawaii	C. mydas	3	31	84	.	52.1	.	.	?	8.3	79	F
25	7713	Honolulu, Hawaii	C. mydas	3	31	84	.	41.2	.	.	?	7.8	92	F
26	7715	Punaluu, Hawaii	C. mydas	5	14	84	.	39.8	.	.	10.0	56.4	65	M
27	7721	Punaluu, Hawaii	C. mydas	5	14	84	.	57.4	.	.	29.1	15.9	95	F
28	7719	Punaluu, Hawaii	C. mydas	5	14	84	.	51.2	.	.	19.5	15.9	87	F
29	7723	Punaluu, Hawaii	C. mydas	5	15	84	.	51.9	.	.	20.9	140.0	43	M
30	7678	Punaluu, Hawaii	C. mydas	5	15	84	.	62.2	.	.		157.7	39	M
31	7725	Punaluu, Hawaii	C. mydas	5	17	84	.	63.2	.	.	38.2	15.9	89	F
32	7730	Punaluu, Hawaii	C. mydas	6	26	84	.	47.0	.	.	15.9	55.1	46	M
33	7537	Punaluu, Hawaii	C. mydas	6	27	84	.	57.4	.	.	26.4	139.1	24	M
34	7742	Punaluu, Hawaii	C. mydas	6	28	84	.	68.2	.	.	48.2	101.5	32	M
35	7745	Punaluu, Hawaii	C. mydas	6	28	84	.	66.7	.	.	42.7	13.1	91	F
36	7766	Kiholo	C. mydas	8	30	84	.	48.2	.	.	17.3	66.4	42	M
37	7787	Kiholo	C. mydas	8	30	84	.	51.2	.	.	22.3	82.6	37	M
38	3496	Kiholo	C. mydas	8	30	84	.	62.1	.	.	37.3	13.3	88	F
39	3499	Kiholo	C. mydas	8	30	84	.	66.3	.	.	40.0	13.3	85	F

21 MALES 53.8%  
18 FEMALES 46.2%  
39 TOTAL

43



EXPEDITION 8 - PUNACUJ

6/26/84

TUESDAY

Depart Cam Aloha Airlines \$29.95 with Gary Means for Hilo. Parked car at the Airport.

Note - Fresh and saltwater mix causes Calcium to precipitate.

Reduced visibility due to temperature differences of the 2 waters, or salinity?

Arrive Hilo 6:45am. Picked up by Harper - rented cargo van - Ate breakfast at Ken's Pancake House. Proceeded to MOP - 8am - Met with Diane, Randy - Gary, Loretta and I went to KTA for grocery shopping. Later I rented a compact car from Harper, due to absence of any students able to drive their cars.

Departed ~ 1:30pm -

Those on expedition -

1. Randy
2. Diane
3. Loretta
4. Dean
5. Lori (not name?) (met us there lives in Waiohiau)
6. Lisa
7. Gary Means



6/26 Round wood float net - Site #1  
 TUES. Red float net (short) - Site #2. } Both in by 6pm

South <sup>swell</sup> created lots of current in the Bay. Difficult putting out red float net which was cross-current. Swell also caused problems in getting turtle out of net, and staying in tube. Also suspect that this made the turtles tangle (spin) more than during other winter (no swell) traps. After arriving at Pavilion 1 I napped for awhile. Very bad headache (flu?).

Turtles seen feeding in close, both before and after setting nets.

Nets set by Gary, me & Randy.

The few number of students <sup>present</sup> caused hardship for net-watches and retrieving turtles.

Gary and I (Loretta & Randy assisting) drove to Johnson's Pond - surge at entrance point too strong due to south swell. Also white water, above sleeping site is very heavy. Could turtles sleep with this high energy water movement present?



6/26/84  
TUES.

Horseshoe acceptable for diving -  
The first turtle I passed over - Gary  
had to point it out to me.  
Two total seen and caught (NO. 445)  
captures

Returned to net watchers to find  
2, possible 3 at once in Site #1,  
net. Gary and I, already suited  
up, swam out to it - large  
with red alga covering by recovery  
numbers. Unfortunately, I didn't  
scrape it to read number. Swell  
heavy - tips tube with large turtle  
in it. Sent Gary in to get  
2 more people. Later when he  
returned, turtle came out of tube  
while I was trying to get floats  
out from under it.

NIGHT 1

CAPTURE  
NO. 1

SITE #1

~ 11pm 6/26

Tag recovery - red algal  
on tag - possibly long-term.  
A large turtle > 80cm. ♀  
Fell off tube and escaped.

CAPT  
2

763

7632

763

+R



CAPTURE

(2)

TAG RECOVERY - SHORT TERM 2-18-84

SITE #1 ~ 11 pm 6/26

Processed on beach at 6:30 am 6/27

HIGH school guys helped pull this up - #3 too. <sup>cap.</sup>

7631 R3-4S

7632 L3-4S

CCL - 93.2 cm

7630 RFL

(Tape-calipers forgotten -  
Brought to Palalun 6/27)

LFL - Healed hole

+ R HIND TAG 7633  
(4 TAGS TOTAL)MALE - Long tail (not  
measured)

- Gary took photos with disc-print camera.
- Gray paint sprayed along each side  
while on its back.

NO blood attempted - obvious male



CAPTURE

(3)

6/26 ~ 11pm capture - Site #1  
 "jock line" tight around neck - had  
 to be cut, along with lots of net.

TAG Recovery - 1-9-84

MACE -  
- long tail

7581 RFL

CCL - 87.2 cm

7582 R3-4S

7583 LFL - expanded slightly  
this date

7584 L3-4S - " "

- no blood attempted - obvious adult male  
 - Painted gray along each side



Captures <sup>N1</sup>  
 (4)

6/26/84  
 TUES.

HORSESHOE - Gary & I ~10:30pm  
 (new tagging) - Released Punaluu 6/27 AM

CCL - 47.0 cm

NOTCH - 46.8 cm

7730 RFL

CCW - 44.5

7731 LFL

35 lbs. (kg)

TAIL - 9 cm

PL (with tape) - 36.5

Painted gray #2

Seen at Horseshoe 6/27/84 11:30pm

Blood sample obtained on first try.



50

N1

CAPTURE

⑤

Horseshoe -

6/26 Released Purohau 6/27 AM  
~ 10:30pm

CC LxW 50.5 x 43.6

notch - 50.0

7732 RFL

PL (TAPE) - 37.5 cm

7733 LFL

TAIL - 10 cm

WEIGHT - 39 lbs ( kg )

- Algal slim felt on carapace & PL
- Numerous trues, but no blood obtained.

PAINTED GRAY "1"

1 Burrowing<sup>BREN</sup> removed from PL.



6/26-6/27/84

TUES. - wed.

No more captures in either net for the rest of the night. However, Site #1 net is almost all rolled or matted up - almost nothing left fishing.

6/27  
wed.

Walked with Gary to Horseshoe ~ 10am - bad smell turned out to be a pig head. photos. Walked to Cemetery "HOKUJOA" overlooking Punakoa - photos.

Site #1 net taken in 11am - replaced ~ 2:30pm with sphere & cylinder Hau wood float net.

Slept off and on throughout the day. Diane & Loretta went to Hills to get calipers, and also Coleman lantern - - electricity went off twice last night.

Note - This and last trip (pp. 7) I have moved into Pavilion and slept on picnic table.



6/27/84  
Wed. Gary and I walked to Turtle Bay (TB) at 5pm - returned ~6pm.  
Big swell rolling into TB. But 3+ turtles seen feeding just outside of overlook. Not new records noted, but a thorough search not made.

~6pm we saw 5+ turtles feeding in calmer water right off the boat ramp.

Turtle seen caught in Site #2 net.

Gary and I retrieved it just as everyone was sitting down to spaghetti dinner.



CAPTURE (6)

TAG RECOVERY

2-19  
and 3/26/846/27/84 6pm SITE #2  
wed (Daylight capture)

2523 RFL (ring present)

2524 LFL

S-66.5 x 53.4

notch-66.2

7644 R3-4S

C-72.4 x 67.0

PL-53.0

HEAD-10.0

TAIL-13.5

WEIGHT-9616s (kg)

- no PL<sup>burrowing</sup> burrows; probably all removed at last capture.
- Fat incision in LHL areas nearly all healed.

(Blood no. 18 - a Male)

- so no blood attempted.



54

N2

(7)

TAG RECOVERY

6/27/84

wed ~ 11:30 pm left net - too large to retrieve  
by Diane, Coretta, Dean & Lou; I suited  
Jay and helped.

6182 RFL

SL - 9<sup>1/2</sup> cm

6242 LFL

PL - 72.2

6260 L2S

HEAD - 12.5

TAIL - 26.0 (Adult female)

WEIGHT - ~ 225 lbs (seems light for  
(kg) SL)

Released on the beach at 6:30 am 6/28

Gary and I.

3 photos my camera; after turning it  
over I noted headed injuries to  
left hind, scapula and parts of  
left hind flipper missing - healed.

No blood attempted - an obvious adult female

ENTRY NO. 199 6/17 - 6/25/82 EAST, FFS N

+ 8/3/82 EAST - N

6182, 6242, 6260

(1 yr 11 months  
ago)



(8)

TRG, Reivsey - SHORT TERM

Right wet Site 1 - 11:30pm -

6/27  
wed

This one retrieved by Diane, Loretta, Dean & Lori after being unable to get capture 7 out.

7537 LFL

S-57.4 x 43.7

notch - none

7538 RFL

C-52.2 x 55.0

7539 R2-3S

weight - 58 lbs ( kg )

PL - 44.6

HEAD - 9.2

TAIL - 11.0

(Blood no. 3 - a male)

Small amount of blood obtained -  
for recheck.



6/27 Dean & I to Horseshoe - Randy & <sup>will pm</sup> assisting  
 wed In addition to captures 9 & 10, I saw painted #2 and another juvenile that  
 had spots of coralline algae. Do these juveniles  
 feed in Lualaba Bay? Perhaps at different  
 times (day?). "Minnow turtle"

S-35.2 x 30.5

7738 LFL

C-36.7 x 35.7

7739 RFL

TAIL - 5.5

PL - 28.5

HEAD - 6.0

Weight - 17 lbs (kg)  
 coralline encrusting + scum; Tan-Brown-chestnut  
 color seen underneath.

- Sleeping on the bottom near <sup>(ET)</sup> herd in  
 horseshoe - where many are found.

- Photos taken - 2 w/ Lisa holding it.

- Blood sampling tried a couple times - nothing.

- Encrustation may prevent resighting  
 of white graft mark.

RHF 1/4 missing → 2 pieces nipped out  
 healed by something small.

- No barns at all remembered -  
 check photos.



(90)

6/27 HORSESHOE - Dean & I.  
Wed ~ 11pm

7740 RFL

S-58.5 x 47.2

7741 LFL

C-62.7 x 55.1

PL-46.8

HEAD-9.3

TAIL-13.5

WEIGHT - 67 lbs (kg)

- Darker pigment on ventral surface of front flippers - should have photoed.
- Both syringe & vacuum tube tried for blood - nothing obtained
- Algal scum on PL (dried now)  
+ algae scum and pink ~~with~~ coralline on carapace.
- 2 burrowing from PL



(11)

N2

6/28 ~ 3 AM left net-site # 2  
 THURS. (Processed on the beach and released after  
 site #1 net taken out) - (Diane, Randy, Dean)

7734 RFL

SL - 85.1 cm

7735 LFL

7736 L3-4S

PL - 68.0

HEAD - 12.3

7737 R3-4S

TAIL - 25.5

WEIGHT - 200 lbs ( kg )

- 2 barns from PL
- 2 photos taken crawling down the beach
- no blood attempted

3/23/87  
 P. W. W.



(12) <sup>N2</sup>

2-19-84

59

TAG RECOVERY - SHORT TERM

6/28 - 3 AM

SITE #2

THURS.

Came in with capture 11(?) ... feeding together(?)  
(Daire, Randy, Dean)

SL - 84.9 cm

7578 RFL

PL - 67.2

7579 L3-4S

HEAD - 12.0

TAIL - 20.5

7580 LFL

(3<sup>rd</sup> S Right has a healed piece missing from it)

Weight - 190 lbs ( kg )

1 barn from PL.

- no blood attempted

- no photos



60

N2

(13)

6/28/84 (L) 3 AM SITE #1  
 (me + others)  
 THURS.

S-68.2 x 52.8  
 (notch - none)

C-73.0 x 67.5

7742 RFL

PL-55.4

7743 R3-4S

HEAD-11.0

TAIL-19.5

7744 LFL

WEIGHT - 106 lbs ( kg)

-6 Barms PL

-Blood obtained - very shallow insertion

-Small amount of blood flowing in  
 mucous from eyes



6/28 (L) 3 Am Site #1  
Thurs.

S - 66.7 x 53.6  
(notch-nore)

7745 LFL

C - 72.0 x 66.3

7746 RFL

WEIGHT - 94 lbs (kg)

7747 R3-45 (expanded)

PL - 55.2

HEAD - 10.5

TAIL - 13.5

- Blood sample obtained

- 1 barn from PL
- red algae on neck

Note Tags 7749 & 7750 <sub>on Ground?</sub> <sub>IN DIET?</sub> lost; tag 7748 lost but found.



NOTE - Relate public meeting  
Testimonies in final report.

6/28/84  
THURSDAY

Nets taken out by Coretta  
and Gary - Fam.  
Three turtles processed by me,  
Lisa and Loui on the beach.

Remaining turtles captured during N 2  
had been taken to pavilion -  
from 8 - 11 am, following breakfast,  
they were processed and released, all  
into Puvalu Bay of standard  
lava-edge site. Not very many  
tourists this time.  
Buses letting them off in front  
of Carcessins.

Checked all gear and departed  
at 12:30 pm -

Dropped Gary off at the airport -  
Stored gear at boat house & MOP office.  
Returned van to Harpers -  
Checked into R101 at H-to Hotel.  
Ate dinner at Hotel restaurant,  
wrote up data and fell asleep  
~ 9:30 pm.

### BACKNOTES:

- Lisa mentioned that Moses has toys  
(or numbers) he will give to her
- "Biggie" told Lisa he will have recovered



tag wailed to me from different places  
"around the world" (she saw him in Honolulu?)

- Lisa squeezes at bases of  
front flippers and this seems  
to reduce thrashing. Pinches  
a nerve?

- Diane recorded seawater temperature  
~ 10am 6/28 - "knee-deep" water at  
Site #1 entry point  $24^{\circ}\text{C}$ ;  
At Site #1  $\rightarrow$   $26^{\circ}\text{C}$  at both the  
surface & the bottom.

6/29/84 Drove to MOP ~ 10AM - Diane  
FRIDAY was meeting with Roy Tabata about  
Richardson Center and someone attempts  
to live there - sell concessions, and, on  
the basis of ancestry.

~ 1045am Coretta brought the  
dead turtle "Myrtle" - thawed  
overnight after being frozen in her freezer.  
Autopsy dissection took place  
in <sup>excitance</sup> LS-16; photos and body  
external inspection; (cont. PAGE 69)



## Blood Samples Obtained - exp. 8

<u>TAGS</u>	<u>VIAL LABEL</u>	<u>SL</u>	<u>WEIGHT</u>
7745-47	① <del>7745</del> full vial	66.7	94 lbs
7742-44	② <del>7742</del> full vial	68.2	106 lbs
7730, 31	③ <del>7730</del> full vial	647.0	35 lbs
7537-39	④ <del>7537</del> (Small amount only - recheck analysis) <sup>(ANALYSIS)</sup>	57.4	58 lbs.



## TAGGING SUMMARY

26-28 JUNE 84

EXP. NO. 8

DATE	TAG NOS.	Blood NOTES	SL x SW	kg WT	CAPTURE Loc./method
① 6/26/84 <sup>NZ</sup> Recovery 11pm	TAG present with red algae		>80 cm	♀ (?)	SITE 1 NET - ESCAPED
② 6/26 Recovery 11pm	7630-32 + HIND TAG 2-18-84 S-88.8 x 68.1 C-93.2 x 82.0 (91.8kg)		CL=93.2	♂	SITE 1 NET
③ 6/26 Recovery 11pm	7581-84 1-9-84 S-81.2 x 63.3 C-87.2 x 81.0 (82.3kg)		CL=87.2	♂	SITE 1 NET
④ 6/26 10:30pm	7730, 7731	Blood SAMPLE OBTAINED	C=47.0 x 46.8	15.9kg (35lbs)	HORSE SHOE - HAND
⑤ 6/26 10:30pm <sup>NZ</sup>	7732, 7733		C=50.5 x 43.6	17.7kg (39lbs)	HORSE SHOE - HAND
⑥ 6/27 Recovery 6pm	2523, 24-7644 2-19-84 S-65.5 x 53.0 (42.7kg)		66.5 x 53.4	43.6kg (96lbs)	SITE 2 NET
⑦ 6/27 Recovery 11:30pm	6182, 6242, 6260 3/84 C-71.5 x 65.6 JUNE & AUG 1982, EAST FFS ENTRY NO. 199		Sk=91.1	102.3kg (225lbs)	SITE 2 NET
⑧ 6/27 Recovery 11:30pm	7537-39 12-17-83 S-56.1 x 42.7 (26.4kg) 4-14-84 (NO DATA)	Blood Resample AMALGAM (24.5kg) scuba	57.4 x 43.7	26.4kg (58lbs)	SITE 1 NET
⑨ 6/27 11pm	7738, 7739		35.2 x 30.5	7.7kg (17lbs)	HORSE SHOE - HAND
⑩ 6/27 11pm	7740, 7741		58.5 x 47.2	30.5kg (67lbs)	HORSE SHOE - HAND
⑪ 6/28 ~3AM	7734-37		SL=85.1	90.9kg (200lbs)	SITE 2 NET
⑫ 6/28 ~3AM Recovery	7578-80 12-19-83 S-85.8 x 66.0 (86.4kg)		SL=84.9	86.4kg (190lbs)	SITE 2 NET
⑬ 6/28 <3AM	7742-44	Blood sample	68.2 x 52.8	48.2kg (106lbs)	SITE 1 NET
⑭ 6/28 <3AM	7745-47	Blood sample	66.7 x 53.6	42.7kg (94lbs)	SITE 1 NET



6/29

FRIDAY

"MYRTLE" Autopsy CONTINUED from p. 63.

F651 TAG - yellow scab still around it inside  
pierce site -

S - 41.2 x 34.0  
(notch - 40.5)

C - (17<sup>5</sup>/<sub>8</sub>" ) x (15<sup>3</sup>/<sub>4</sub>" )

C - 44.8 x 40.4

[2/19/84 C - 43.9 x 40.03 S - NT]

PL - 32.7

HEAD - 6.6

TAIL - 6.0

Curved length  
increase = + 0.9 cm

IN  
4 MONTHS  
10 DAYS

HEAD, Front flippers & attached pectoral meat - 9 lbs

Carapace, guts & organs and hinds - 16 lbs

Plastron ~ 1 lb

TOTAL -

26 lbs (11.8 kg)

Scales on both sides of the head  
are missing - should be show in photos.  
Is this due to being in too fresh  
of water? Salinity needed.

Plastron removed to reveal thick  
slabs of greenish fat along sides  
and under pelvic skin. Samples  
taken - 2 small vials + large bottle  
composite. ("Scratched" lid has  
plastron side fat.)

Bottom of cone vial  
Saved subsequently

"blew-out" while on  
my office shelf - (stunk!)



6/29

FRIDAY With plaster off and body cavity opened, there appeared to be a considerably enlarged right liver lobe, possibly 50% larger than photo shows in Rainey autopsy manual.

Dorsal neck dissected to expose paired tendons. Blood sinus on left side seen and photographed.

Photos also taken of trachea excised, and glottis held open with probe.

Stomach removed and opened. Upper section (1st compartment?) found to contain wadded-up piece of fish skin ~ 12-14" long, several inches wide. Earlier, I saw small scales found in esophagus.

Main stomach contained partially digested (fish, meat?) and fluid. The rest of intestine felt to contain no hard objects.

Lungs appeared normal.

Humeri excised and saved.  
Carapace and plaster saved.



6/29/84

FRIDAY

Departed Mid Pacific 2:40pm -  
Met Charlotte ALMAREZA, airport  
security.

Paid \$24 for car parking at airport.

## BACKNOTE:

On Diane's visit to Shipman with  
Arlo Fast, she talked to  
ranch foreman SOLOMON KAUINUI -  
reportedly knows a lot about turtles  
along this coastline.



From - Pukui "Hawaiian Dictionary"  
 & Marie C. Neal - In Gardens of Hawaii 1965

KAUJIA -  
 (wood)

Colubrina oppositifolia

a rare <sup>endemic?</sup> native Hawaiian tree found only on Hawaii and Oahu. - hard dark red, heavy wood that sinks in water - formerly valued by Hawaiians for spears & tapa beaters

<sup>occurs in other areas besides Hawaii</sup> Alphitonia ponderosa - a closely related, larger native Hawaiian tree. Softer, but still sinks in water - red and black streaked -

"3 TREES" - found on the 6 largest Hawaiian "Kālai-pāhoā" islands. <sup>WOOD WAS ONE OF 3 KINDS FROM TREES OF MAUNA LOA MOLOKAI, THAT WERE BELIEVED TO BE POISONOUS FROM THAT LOCATION ALONE - USED IN BLACK MAGIC.</sup>

ALONG WITH CHE AND NIŌI.

Both of the "BUCKTHORN" Family (Rhamnaceae)

SIZE?

Specimens on campus? FOSTER GARDENS? BIG IS



HILINA PALI - N-10 Block in  
 Atlas of Hawaii - Hilina Pali Rd.  
 & trail. - Volcanoes Nat. Park

~ 10" long



Aggregation of <sup>20"</sup> turtles around 30' spot  
 just outside HONO KONA Small Boat Harbor.

Mr. Robert HIND  
 P.O. Box 1149  
 KAILUA-KONA - 96740

TEL. ~~324-1295~~

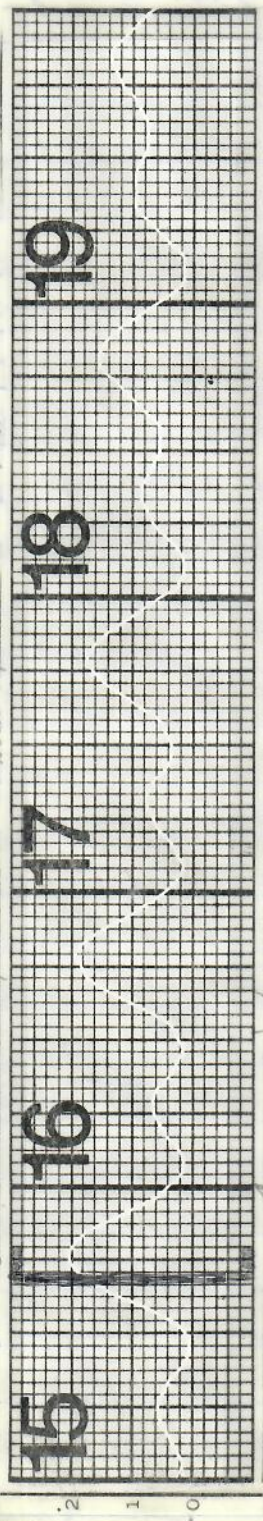
329-8981



SUNDAY MONDAY TUESDAY WEDNESDAY THURSDAY

6:00 12 noon 6:00 12 noon 6:00 12 noon 6:00 12 noon

Witnessed fringed  
with long o. juvenis  
killing



Hilo  
HOTEL

Simple  
limu  
AT Punaluu



MOON PHASES



For tide time at following places, add or subtract from Honolulu time.

PORTS	Hrs.		Mins.	
	+	-	+	-
HANAIE BAY, KAUAI	1	40		09
NAWILIWILI BAY, KAUAI	0	32		48
PORT ALLEN, KAUAI	0	32		14
HANAUMA BAY, OAHU	1	36		59
KANEHOE BAY, OAHU	0	35		24
LAIE, OAHU	1	48		24
WAIANAIE, OAHU	0	16		16
WAIMANALO, OAHU	1	15		16
KAUNAKAKAI, MOLOKAI	0		0	09
KAHULUI, MAUI	1		1	48
KIHEI, MAALAE BAY, MAUI	0		0	14
HILO, HAWAII	0		0	59
HONULULO, HAWAII	0		0	24
MAHUKONA, HAWAII	0		0	24
KEALAKEKUA BAY, HAWAII	0		0	16



## EXPEDITION 9

15 JULY 1984  
SUNDAY

Depart Mid-Pacific Airlines FL158  
4:30pm for Hilo. Arrive 5:30  
picked up a Toyota compact at  
Harper. Checked in at Hilo Hotel.

16 JULY UP ~ 6:45am (Thought it was "8:15" DT!)  
MONDAY

Departed for Puuoluu at 7:30am.  
Stopped at Volcano store for  
donuts. Thumbed through Degener's  
book - Plants of Volcanoes Park (?) -  
Noted *hauila streas* - "considerably  
abundant" at Puuwaawaa (Kona district)

Arrived Puuoluu - 9am - Parked  
at Nirole Cove across from Golf Course  
restaurant; hiked up to archaeological  
sites and took photos of coastline  
looking north - purpose to compare  
with old photos prior to storms.  
Noted protected area inside of  
"rock islet" (Pahoehoe dome with algae on it).  
Noted that anything white really  
shows up sharply on black lava rocks.

At 10am I located the site where  
photos were taken that appear in  
K&V book. Photos are a composite -  
recent ones needed in B.W. & color.



16 JULY 1984 Walked to Johnson's pad, where  
 MONDAY I took WA photos. Noted  
 that just before J.P. there is a  
 seemingly protected area. Sites  
 like  $\checkmark$  these need to be examined  
 during the day to see if  
 suitable sleeping habitat is present.

Drove to Kalahele and Woiwoi. Bought  
 film, soap & fixers, and ceramic sea turtle.  
 Drove down the paved portion of  
 Kalahele Road - olive crystals.

1:30pm Returned to Punaluu to collect algae.  
 Tide starting to come in - slightly  
 noticeable.  $\checkmark$  Swam out over smooth oval  
 rocks just a short distance from  
 sand beach. This is between the 2  
 rock outcrops - pavilion-side of the Bay.  
 The area we cross over when setting  
 the net and bringing-in turtles. At  
 this tide stage, about 15-20'  
 from waters edge, and in water 1 meter  
 or less deep. Along here there is  
 a band where the *Pterocladia* is lush  
 (and present!). Closer to shore it is  
 absent, or much less present, probably due  
 to the abrasive effects of sand  
 (and high energy effect?) In deeper



16 July 1984, water out from this band, the  
 Monday alga is absent. Along this  
 band there is much freshwater  
 infusion - which makes it cold and of  
 poor visibility. The water-worn  
 rocks here commonly have coralline  
 algae - red & white (dead?). Is some  
 of this "Calcium precipitation"? Most  
 of the rocks are large and securely  
 imbedded in the sand bottom, with only  
 a portion of the top exposed. Smaller  
 rocks, however, are wedged securely  
 at various places between the  
 larger ones.

At first I swam over the rocks  
 trying to pull pieces off and  
 put them in the knit bag. This  
 didn't work well because (pieces (all  
 small) would float away. Surge back  
 and forth, and low visibility, retarded  
 the effort. Impossible to use  
 scissors, - but possibly along the  
 hard rock reef-ridge they might  
 work using SCUBA.

I then brought to shore - 6 rocks total  
 with what appeared to be good representative  
Herocladia. Sitting on the beach I  
 proceeded to use scissors to cut off alga  
 into the knit bags. Problems included  
 ① sand on beach sticking to everything ② sand



16 July 84  
MON DAY

in algae on rock (3) small crustaceans and molluscs living in algal mat. Do these latter <sup>items</sup> get eaten by the grazing turtles - or do they crawl (within the "hold-fast" base of "rocks" and escape their bites. I suspect that this is the case, since the turtle scraping off the hold-fast would seem counter-productive. If the crustaceans were being eaten, this would be counter-productive to their survival - consequently they probably developed strategies for evading turtle bites. If this is not the case, then probably large quantities of animal protein are being consumed. Maybe this is indeed the turtles diet strategy. TO confirm or reject, one would look at the stomach contents to see if hold-fasts (and crustaceans) are present. What does a Stevocladia hold-fast look like??

Alga from these rocks were taken to the pavillion and rinsed with fresh water to remove "foreign" material - stored in plastic bag, was SAMPLE 1.

I then "harvested" select rocks and took them to the sink at the pavillion.



16 July 84  
Monday

Rinsed the rocks well with facet-stream and set them to drain. A couple of photos, taken of one with available light, then numerous close-up with flash - red mode, then blue, then red again, settings 5.6-8 to 8-11. The last couple of photos were more elevated and angled down in an effort to have flash aim at subject. Need remote flash cable. Trim off alga with scissors, letting pieces fall onto knit bag. Several sand & mollusc particles seen and removed but undoubtedly there were others I missed. Two plastic bags collected - Sample 2 & 3. These can probably be combined for analysis. ~ 8 rocks total clipped. Returned rocks to the ocean.

Previous  
~ 2pm The man who gave us the small turtle (photo of him in file) came by in his pick-up truck. Asked about turtle study. He had just collected some of the "bristly" alga and was going pole fishing - mentioned the tide coming up. He said that he sees small turtles in the various "inlets" this side of Minole. "They seem to stay by themselves - don't mix with the



16 JULY 84

MONDAY

larger ones. If he catches another, on his line, he will bring it to us.

no phone Book listing

send  
Turtle  
into

Arnold Howard and an Ernest Kalani (of Pahala) stopped by the pavilion to tell that a large turtle was found yesterday morning with its flipper caught in the buoy line located at the entrance channel. "Dog wasn't read". Turtle pulled down buoy. Apparently untangled(?) or cut, and released - need to clarify with points with him - He works for the Parks Service at Volcano Park. Indicated he will soon be deputized to enforce turtle and Nene protection both inside and outside park. He knows Kim Wright - mentioned about a training class she gave. Need to call Kim Wright to ask about class.

Ernest said that he had recently scuba dove off Johnson Pond - and along the coastline - saw a lot of turtles underwater. Tattled Jane on the head; "one came quickly out of a cave - lucky it didn't crash into one of the divers".

At about 4:15 PM I completed the algae collection. Drove car to parking area adjacent to concession. Walked down



16 July 84

Monday to area where springs occur where  
algae was collected. When I


Base work  
partly in front  
of C.C. plate  
had to view  
from several angles.  
TON PAUL  
ON BRIGGS  
257.018  
4:55pm

returned a blue and white  
pickup with large tires and lights on  
top of <sup>was present</sup> cab ("F150 custom") lic. 875 HF  
(rectangular sticker on the left - woman's name(?),  
or something like that). Parked to  
my left. Several women tourists walking  
around. 3 men were proceeding down  
the beach immediately in front of  
concessions (and we in car) with stout  
bamboo pole - snag hook dangling from  
line <sup>NOV STACH  
MOSTLY FILIPINO?</sup> Second man was carrying a  
spool of line - more <sup>Portuguese?</sup> caucasian (with  
tattoo on arm - I've seen him around before)  
They crouched by the shoreline - watching  
the nearshore water. I saw a  
turtle head surface to breath. Previously  
I had seen surfacing turtles  
in the waters off the boat ramp.  
I took 1-2 photos of them standing  
crouching there; Hook and line  
were thrown shortly thereafter. At  
first I thought the hook snagged  
on the bottom - as the pole was pulled  
back hard. However, immediately the  
line was pulled and the splashing  
turtle was visible at the surface.  
Dugged in closest to shore where  
I took another photo - last on roll.



16 July 1984  
Monday

83

The 3 men picked up the turtle and ran/walked it up the beach and put it on the ground between my car and the truck. I tried to make myself visible, thinking that they would recognize me and release the turtle for fear of prosecution. The hook-on point of it - was deeply imbedded into the left ventral neck. A long (with algae cover - dull sheen tag) was seen on the left flap. The HMMB inscription was visible, but not the tag number. I was totally flabbergasted by this occurrence! State of mind shock!? The "catcher" couldn't seem to pull the hook free - he seemed rushed, apparently wanting to get everything completed quickly. Several tourists were walking around. Mrs. Enriques was in her stand talking to ~ 2 people. I'm uncertain if the stand next to hers was open, but feel it was. The hook wouldn't come out, so he used an angled  knife to cut it free - a moderate amount of blood spurted out. While he was trying to get the hook out, I asked if he minded if I read the tag number. He answered in such a way



16 July  
Monday

as to be unclear if it was "yes" or  
later he said "no"  
yes, I don't mind  
A short time later, I reached  
hard over to move the tag to  
read the number (while he was  
cutting with the knife). He said  
loudly "EXCUSE ME, SIR" - I withdrew  
not having been able to read the  
number. Turtle was put into  
back of truck - rag over head and  
bleeding wound. Pote was quickly  
put in rack behind Mrs. Enrique's  
stand. A second truck (white)  
pulled up - 3 other men got out -  
I with longer hair - Filipino -  
recognized clearly as being Enrique's  
son. Several begged to recognize me.  
Both trucks drove off shortly  
thereafter. I asked Mrs. Enrique  
if that was her son - expressing  
disbelief that all of this had happened.  
She answered that it was her  
husband's truck. Also, that she had  
told them not to do it. I told  
her that I now work for the  
federal government - that they wouldn't  
let me read the tag numbers - and  
that it would be unethical for me to  
ignore all of this. She asked me  
twice - what am I going to do?  
She then said that "she didn't see



a thing. ("I haven't seen a thing".)

I roughly estimated turtle at  
65-70cm shell length (26-28")  
weighing 75-125 lbs.

I departed at ~ 5:10pm. Stopped to talk to  
Janette Howard for a few minutes. Drove to  
pay phone at Pahala Hospital 5:30pm tried  
calling DOCAEO afterhours number - told  
by the operator that the Enterprise line is  
"out" - being repaired now. Called Jim ~ 7pm -  
got Bill Gilbert's unlisted home phone from her - 293-2633  
called but he wasn't in. Called Gail Peterson 254-3028 -  
told her what had happened - said I needed guidance from  
Bill on what I should or shouldn't be doing. Noted  
that I had been previously told not to  
personally request assistance from another  
government agency - must go through the lab  
director.

17 July  
Tuesday At ~ 8:30am I called Bill's office, but no  
answer. At 8:40am I called Jerry at  
the switchboard - she couldn't locate  
Bill, Gail or Tim. At 10am Bill called  
me. Said that I should pursue  
this - cooperate as needed. He  
will go talk to Gates. J. Gates called me  
at 10:30am - I spoke to both him &  
John Naughton. Naughton at first thought  
this might be part of Coopers plan.  
Street & Witham are on the N. Shore area  
turtle case.



17 July 84 I talked to Street, at 4:50pm  
from payphone at Uchik's visitors center.

The following are miscellaneous notes - thoughts

- It's not wise to antagonize someone when they have a knife in their hand
- Previously asked William & Street, to accompany survival research
- Surprised to learn turtle hook works so well from shore - cliffs aren't needed
- Credibility with students / conservation minded residents will be destroyed if nothing is done.
- Togs are government property
- "Sacrificial turtle"
- Check Pahala dump
- Concession stand - check storage areas.
- Federal wildlife biologist - on work time when witnessed "are of the experimental animals of the study."
- No since tagging work at Jurbelum if this is the turtles' fate - lost togs
- Turtles are compelled to come close to shore to feed - no alternatives for them.
- Who manages - gives rental space to concession stands? free?

Emphasize



Turtles value includes:

- 1) threatened species - a lost member to the population
- 2) research animal - had been tagged  $\therefore$  represents considerable investment of time, effort, taxpayer's money
- 3) meat and shell

What \$ value can be applied to the above?

- Did Witham & Street talk to concessionaires when they went to Luvaluu 1-2 years ago?
- Varnished shells
- Small stuffed animal, possibly at vending stand, is old
- Ask other vendors if they saw anything
- My photos
- Noted no effort to carefully remove hook from the neck of the turtle.



17 July - noon went to MOP office -  
 TUES. Met with Diane, Lisa and Randy -  
 also Lisa's friend who is  
 interested in sharks:

DANIELLE R. Sinjem  
 372 HAILI ST.  
 HILO 96720

Rents a room from Red Thompson (changed name  
 from Clewlyn Steve Thompson - new reporter).  
 Looked at preserved turtles Diane had  
 previously cut from turtle found by Bob Laube  
 Will take up to Honolulu (pesticide  
 analysis by Tony Bazzon?). Discussed  
 possible trips to Kiholo & Kaluaka using  
 4-wheel drive bronco.

Departed for Lana District, arriving at  
 Poiki Harbor 2:45 pm. A small boat ramp  
 with sport protective breakwater (built 1978). Ramp  
 is within Isaac Hale Park. Many boats  
 or trailers parked in the area. Sign says  
 water unsafe to drink. The area is  
 generally crummy looking, having the appearance  
 of a squatters camp. Two old wood frame  
 houses adjacent to the ramp. Then drove  
 to McKenzie State Park - Many ironwood  
 trees - sea cliffs made of blocks  
 of basalt - sign says "cracks" don't go  
 near the edge. Drove on toward  
 Kalafana - private property and houses  
 are present between the road and ocean -



17 July - mostly the ocean is not visible due to vegetation.  
 TUES. Passed the Opikikao Church (Congregational) and took photos of coastline (Photos #1-3). Recalled that security guard Mose Cabrallo (sp?) at Johnston had told of a <sup>underwater</sup> cave where many turtles sleep. This was many years ago when he was young (see Johnston book). Continuing on, I drove to sheer high cliffs with fine black sand at the base. Footprints seen on beach, so there must be an easy access trail. Continued on to Kaimu Black Sand Beach - the beach with ~~many~~ palm trees close to the water (landward). The roadstead here affords minor - to moderate protection to the brisk trades now blowing. Lots of tourists stopped here. Several souvenir-trinket sellers present working from a truck and temporary tables. No turtle parts - however local shells, etc and a jackfruit on sale. About only 1 mile from Kaimu is Hapūki, Brown Park, and "Queens Bath" in poor condition. Seawall stonework noted (ABC?) and an outfall pipe (sewer?) of sewer, attractive to turtles? Photos of beach, including one showing a jeep. Many vehicles (trucks noted) - Dunes seem to be ~~devegetated~~ - allowing brisk wind to blow the sand. Vehicles seem to beat the vegetation back? Queen's bath has a chain-link



17 July 1984

TUESDAY

"Wind  
blown fine  
black  
sand"

fence around it, parts of which have fallen flat. A hatchling Hawksbill could easily crawl through the mesh. Kalapana Store, and "Painted Church" a short distance before Harry Brown. A Harry Brown, I asked the life guard about nesting turtles. He knew of none, but mentioned that he sees turtles in the water.

Talked to Strater at 4:50 pm from Waihi Visitors Center. At Center I asked Head Ranger Francis Paulani 'about Hili'a Pali, petroglyphs. Saw "turtle shell" fishhook on display. Took photo of fishing regs concerning natives and residents of Kalapana area. The volunteer girl told me that you must ① sign in at this office or ② have a native or resident as a guide.

A few LOS petroglyph field I walked to the site which now has a wooden walk-way built around it. Photoed a turtle petroglyph on a lava slab at an angle. I do not recall that the one I photoed in BW years ago was at such an angle. A second petroglyph that I thought was a turtle didn't appear



to be such on closer inspection. Sign says  
 puu loa gives long life when  
 piece of umbilical is placed in a hole  
 at this site. NOTE - no new  
 burial apparent. Does this practice  
 still occur? Check with Park Rangers.  
 Across the street from the petroglyph parking  
 area is a sign telling about the  
 KAU - puu loa trail. UKAPUS were not  
 in effect when walking this trail, according  
 to the sign.

BACKNOTES - Diane's report of students  
 (cher?) calling DOCAEO about large nets set,  
 and being patched in Hilo Bay ("Front Street")  
 Dinner at Kiji restaurant in Hotel.

18 JULY 1984

WED.

Sent all day with Bill Streete and  
 Gene Wilton. Visited Hilo Police  
 Dept. Judge <sup>william</sup> Chillingworth, Charles Supe  
 DOCAEO. Wrote out affidavit, identified  
 photos.

Ate at Burger King - IRS had just taken all  
 their money! Met with Diane at  
 MOP at 9 - 2pm. Brought canoe "tail  
 tumor" to Honolulu - gave it to Bayaan.  
 Hallacher reports seeing turtles while  
 diving at Puako - as follows:



18 JULY 84 Bob Nishimoto, DAR, 961-7501

WEDNESDAY reported to Diane seeing

turtles with "white painted numbers"  
while diving at. Lafahoehe - I need  
to contact him.

called him 7/23 HAKU Pt (on Chart) Hilo side (a Boy)  
seen 90' - 100' away FLOATING - left out right  
50-60 lbs. at most; "ledge" 64"

observation ample time.

July 17th; Scuba - 40-50 sec. observation  
Uniform no. on each side.  
(See letter and drawing in file)

Departed for Honolulu on Mid-Pac at 6pm

Exnote - Park Ranger Steve Shackleton  
967-7314  
(ENFORCEMENT)



MOON PHASES

FIRST QUARTER AUG 3	FULL MOON AUG 13
LAST QUARTER AUG 19	NEW MOON AUG 26

For tide time at following places, add or subtract from Honolulu time.

PORTS	Hrs.	Min.	PORTS	Hrs.	Min.
HANAIEI BAY, KAUAI	-1	40	KAUNAKAKAI, MOLOKAI	-0	09
NAWILIWILI BAY, KAUAI	-0	32	KAHULUI, MAUI	-1	48
PORT ALLEN, KAUAI	-0	32	KIHEI, MAALAE BAY, MAUI	-0	14
HALEIWA, OAHU	-1	36	HILO, HAWAII	-0	59
HANAUIMA BAY, OAHU	-0	55	HONUAPO, HAWAII	-0	24
KANEHOE BAY, OAHU	-1	48	MAHUKONA, HAWAII	-0	24
LAIE, OAHU	+0	16	KEALAKEKUA BAY, HAWAII	-0	16
WAIANAE, OAHU	+0	15			
WAIMANALO, OAHU	-1	15			

AUGUST 1984

KIHULO

MONDAY

TUES.

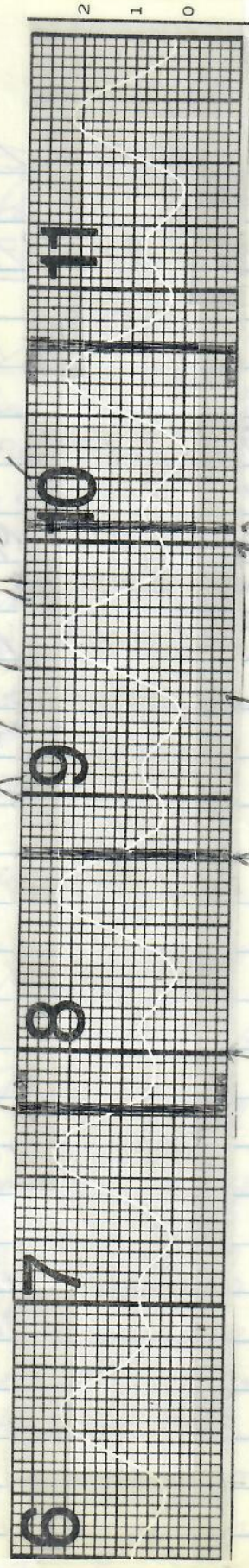
WED.

THURS.

FRIDAY

SAT.

4 HOURS SEEN OR ANTICIPATED  
6:30 - 8:00 PM NETTING



TOTAL TIME FISHED - 30 HOURS



EXP. 5<sup>th</sup> to KIHOLLO  
HISTORY

- EXP. 1 14 - 15 MAY 1973 (15 CAPTURES)  
 6 years 10 months (single size MUMPS 40 applied to each)
- " 2 18 - 21 MARCH 1980 (14 captures, with 2 short repeats)  
 7 months
- " 3 14 - 20<sup>th</sup> OCTOBER 1980 (23 captures, with 8 long term & 4 short repeats)  
 5 months
- " 4 5 - 7 MARCH 1981 (7 CAPTURES, with 5 long term & NO short repeats)  
 3 years 5 months
- " 5 7 - 10 AUGUST 1984 (22 CAPTURES, with 5 long term and 2 short repeats)

40  
 INDIVIDUALS



7 AUGUST 1984 (TUESDAY)

Depart Mid-Pacific for Hilo at  
6:20pm -

Notes - Of the total number of named  
fish ponds in Hawaii, how many  
have any reference to turtles?

Recall that Gene Witham previously  
visited <sup>NORTH KOHALA</sup> Hawaii region of the  
Big Island and saw fresh turtle  
shells nailed to house. Mentioned  
something about firemen.  
(FIRST STREET PAST JOSEF) MR. HIND:  
Sunset to  
Marlin  
Then Right to -000

Spent night of 8/7 at the Hilo Hotel  
after driving the Harper 4-wheel Bronco  
from the airport.

8 Aug. 84 - Met Randy and Bill Brooks at the  
Wednesday MOP office, loaded all gear, went  
shopping at KTA and departed via  
Hamakua Coast for Kipolo ~ 12 noon.  
Went to Hind's house to pick up  
3 keys for new gates - system of roads.  
Coffee at McDonalds - then drove  
to Kipolo - crossing over bridge  
near new outhouse, through shallow  
water, to campsite by large ironwood



1.4.  
sent

ELVIN K. HAO (Son of KITCOO CARETAKER  
 - HONOKAA 775-7349  
 - 96727  
 During the 1950's)

8 AUGUST 84

WED.

tree. Met the above man and his family - hadn't been here in 2 years. Stated that his father was the caretaker during the 1950's.

2 nets, ○ oval float, and ○ and "white" float combination net, joined and 7pm set - 2 sail boats inside pond - Monitored by walking to & from Bronco

First captures at 8:30 pm -  
 tag recovery 3497 + 1 <sup>Recov.</sup> 3488 <sup>Recov.</sup>  
 All captures at night, 1 and 9:30 am  
 8-8-84.

8-9  
Thursday

Worked up the 12 turtles on the small black-sand beach starting ~ 6:15 am before sunrise - Randy and Bill retrieved 3+ turtles 4-5 pm while I helped from shore.

1 1/2 am 8-8 snorkel throughout entire perimeter <sup>w/ Randy</sup> of pond resulted in 4 captures, 1 medium not too far from net base, and 3 very small all within a short distance of each other. In the nearly back of the pond, we found a large turtle, old fouled tags, and monofilament around the oval of one flipper -



It flipped free of tube and got away. -  
 Never showed up in the net the  
 following day. Saw and missed another one.

8-9  
 Thurs.

During tagging the problem was encountered  
 of Upliers (old style sent by NBT)  
 Knot locking - bending over the point of  
 the tags. All had to be  
 manually done.

Finished measurements, weighing and  
 release ~ 11 AM. Rested until  
 1 PM when we pulled back net  
 to release let the larger sail boat  
 out on high tide.

Narrative continued Book 4,  
 PAGE 4; - DATA FOR TOTAL OF  
 22 captures on following pages 98-117.



8 AUG 84  
Wed

net

11.1 cm increase

RECOVERY4 YRS 5 MON INCREASE  
(53 MONTHS) 11.1 cm.(ELAPSED 4 YRS 4 MON.  
= 52 MONS)(3/21/80 S-53.4 x 43.0  
42.3 34.5)  
notch-NT0.209 cm/mo  
2.51 cm/yr  
0.987 in./yr.

3313 LFL 2 TAGS APPLIED

C-56.5 x 51.0

3314 RFL

(Tel. no inscribed)

Both already RINGED

PL-44.0

HEAD-8.8

TAIL-11.0

INCREASE  
20.2 lbs

WEIGHT - 64 lbs (29.1 kg)

(3/21/80 - 23 lbs)

41 lbs (18.6 kg) increase

Photo - Turtle dorsal on the beach



②  
8 AUG 84HAND CAPTURE - Pond  
This one, and the next 2, caught in  
the same general area. No sign of grafts.

S - 38.3 x 31.2

notch - NT

7751 RFL

C - 40.5 x 36.5

7752 LFL


(both exp.)

PL - 30.4

HEAD - 6.5

TAIL - 6.0

WEIGHT - 22 lbs (10 kg)

1 dorsal photo showing mostly missing healed  
left hind flipper 



8 AUG 84

HAND CAPTURE - pond

S - 38.4 x 30.9

notch - 37.8

C - 41.0 x 35.5

7753 LFL

7754 RFL PL - 31.0

(Both org) HEAD - 6.2

TAIL - 6.8

WEIGHT - 22 lbs (10.0 kg)

Swam back into pond when released.

2 dorsal photos



(4)

101

8 AUG 84

HAND CAPTURE - POND

S - 42.7 x 35.7  
notch - 42.0

7755 RFL

C - 44.7 x 40.7

7756 LFL

(both exp)

PL - 34.4

HEAD - 7.2

TAIL - NT

white scum/silt on carapace; red alga  
on PL; This one, and previous 2 turtles,  
have a whitish plastron).  
WT - 28 lbs (12.7 kg)

Receipts

HPA #6

3/2/89



⑤

8 → 9 AUG 84  
Wed-Thu

S - 50.6 × 39.2  
notch - 50.3

7757 LFL C - 54.0 × 46.0

7758 RFL PL - 39.9

HEAD - 8.0

(both EXP)

TAIL - 10 cm

WEIGHT - 42 lbs (19.1 kg)

Round "swirl" cuts in carapace.

No photos taken.

Release in "S" shaped channel, but it  
swam back toward net - was from  
Canadian sail was walking in water deep  
water - said it came up right near net. then swam  
parallel.



⑥

8-9 AUG 1984  
Wed-Thurs

S - 53.6 x 42.2  
notch - 53.4

7759 LFC

C - 57.7 x 51.5

7760 RFC

(both  
exp)

PL - 42.2

HEAD - 8.5

TAIL - 10.5

"Swirls" on carapace, like all  
seen over juvenile (35-40cm) size.

WT - 56 lbs (25.5 kg)

patches of white coralline  
look like 6 or <sup>old</sup> burrowing barn sites  
in PL.

no photos taken



(7)

8-11 AUG 84  
Wed- Thurs.3YR 10 MONTHS  
(46 MONTHS)

first catch of trip - 8:30 PM.

10-17-80

INCREASE 9.4 cm  
52.9

41.1

0.204 cm/mo  
2.45 cm/YR2 TAGS  
APPLIED

S - 62.3 x 49.5

0.965 IN./YR

RECOVERY

notch - 62.1

3496 LFL (3 photos close up -  
Then taken off and reapplied "knob" LFL  
to L2S) - flesh wadded in tag, but dorsal from  
not raw - clean skin) tag.

3497 R2S

C - 65.0 x 60.5

7761 RFL  
(new)

WEIGHT - 82 lbs (37.3 kg)

10-17-80 - 51 lbs

(23.2 kg)

INCREASE - 31 lbs

14.1 kg

PL - 50.2

HEAD - 9.3

TAIL - 12.0

photos of turtle?



(8)

8-9 AUG 84

RECOVERY3478 CFL (off - worked in tag,  
reapplied to L25)

3479 R25

3yr 10mons  
HGMONS INCREASE

0.241 cm/mo

2.90 cm/YR

1.14 INCHES/YEAR

3480 R1S

3 TAGS LIES  
APPLIED

APPLIED 10/15/80 = 58.5

11.1 cm

x

43.0

S - 69.6

x

53.3

notch - 69.0

C - 73.7

x

66.0

PL - 54.5

HEAD - 10.5

TAIL - 17.5

WEIGHT - 100 lbs

10/15/80 = 52 lbs

INCREASE 48 lbs

(45.5 kg)

(23.6 kg)

21.9 kg

Swam into pond following release.



(9)

8-9 AUG 84

S-56.0 x 43.1  
 notch- 55.8

7762 RFL

C- 59.0 x 52.0

7763 LFL

(BOTH  
EXP)

PL-45.4  
 HEAD-9.1  
 TAIL-13.0

WEIGHT - 54 lbs (24.5 kg)



(10)

8-9 AUG 84

wed-Thurs

S - 62.6 x 50.0  
notch - 62.1

C - 66.1 x 58.5

7764 LFL

7765 RFL

(Both  
exp)

PL - 49.8  
HEAD - 9.9  
TAIL - 15.5

WEIGHT - 79 lbs (35.9 kg)



⑪

8-9 AUG 84

net ~ 4am

RECOVERY3YR, 10 MON  
46 MONS

INCREASE - 10.1 cm

0.220 cm/MO

2.63 cm/YR

1.04 in./YR.

10-16-80

57.9

44.3

2 TAGS  
APPLIED

S - 68.0

X 52.2

3487 LFL

notch - 67.7

3488 R2S

C - 72.5 x 63.5

(molluscs growing  
inside)

PL - 52.9

HEAD - 9.9

TAIL - 15.0

WEIGHT

87 lbs

(39.5 kg)

10-16-80

56 lbs

(25.5 kg)

31 lbs

14 kg

photos # 29, 30 &amp; 31

- encrusting scum on PL &amp; carapace

Swam out "S" channel when released.



(12)

8 Aug 84  
Med.

9:30 AM capture

S-48.3 x 36.2  
notch - NT

7766 RFL C-51.0 x 44.0

7767 LFL

(both  
exp)

PL-38.8

HEAD-7.8

TAIL-8.5

WEIGHT - 38 lbs (17.3 kg)

Finished processing previous 12 on small beach at ~ 11 AM 8/9



- (13) -

9 AUGUST 84

net - no photos

S - 42.1 x 34.3

Notch - 41.5

C - 44.5 x 40.0

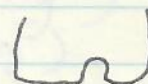
7768 R2S

7769 LFL

PL - 34.3

HEAD - 7.2

TAIL - 7.5

(both  
exp)R2S has piece missing 

WEIGHT - 31 lbs (14.1 kg)



(14)

9 AUG 84  
Thurs.Recovered  
Kiholo #5  
HPA 10/27/88 net4 years  
3 mo =S- 38.0 x 31.9 4.2 yrs  
notch- 37.7

7770 R2S

S- 44.6 6.6 cm increase

7771 LFL

C- 40.0 x 37.0

1.57  
cm/yr

PL- 30.9

HEAD- 6.8

TAIL- 7.0

29 lbs

WEIGHT - 22 lbs (10.0 kg)

dried silt/algae on PL, like all  
others caught here of this size.ventral & dorsal photos taken representative  
of this size category (new recruits)



(15.)

9 AUG 84  
Thurs.

Hand caught by Randy &amp; I

S - 53.0 x 44.2  
notch - 52.0

7772 RFL

7773 LFL

C - 56.5 x 51.6

(both  
exp)

PL - 41.5

HEAD - 8.5

TAIL - 13.0

WEIGHT - 46 lbs (20.9 kg)



(16)

9 AUGUST 84

net

S-53.0 x 41.3

Notch-52.5

7774 FL

C-56.5 x 50.0

7775 FL

PL-43.1

HEAD-8.5

TAIL-11.0

WEIGHT - 52 lbs (23.6 kg)

Swirls, like others - noted on flipper scales, too.

3 burrowing in PL cut out

2 dorsal photos showing silt on carapace  
white scum-like or swamy

A few skin platylepas - like  
most this time.



(17)

9 AUG 84  
Thurs.

net

S - 52.8 x 41.1  
(notch - 52.5)

7776 RFL

7777 LFL

C - 56.0 x 50.0

(both  
exp)

PL - 42.8  
HEAD - 8.4  
TAIL - 10.0

WEIGHT - 46 lbs (20.9 kg)

Recaptured  
HFA #6  
3/2/89

following release, it crawled ashore  
on island across channel

- no photos taken



(18)

9 AUG 84  
Thurs.

net

7778 RFL S- 57.8 x 47.0  
notch- 57.5

7779 LFL C- 61.4 x 56.0

(both exp)

weight 63 lbs (28.6 kg)

small hole through end of R front flipper -



(19)

9 AUG 84

Thurs.

net

S - 65.7 x 52.9  
 notch - 65.3

C - 70.0 x 62.0

7780 RFL

7781 LFL

(both exp.)


PL - 52.5

HEAD - 10.0

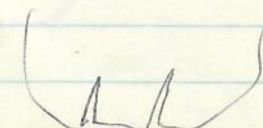
TAIL - 16.0

WEIGHT - 88 lbs (40.0 kg)

L Hind  
 healed  
 cut-like gash



R Hind<sup>2</sup> - healed slits




healed deep scratch cuts  
 in posterior of carapace.



9 AUG 84  
Thurs

4Y 5MON  
(53 MONS)  
3-21-80

INCREASE  
14.1 cm  
49.4

net

0.266  
cm/MO  
OR  
3.19 cm/YR  
1.26  
IN/YR

RECOVERY

2 TAGS  
APPLIED

S - 63.5

x 37.7  
x 48.3

Notch - 63.3

3317 RFL  
(395-6409)

C - 67.5 x 60.5

3318 LIS (OFF)

PL - 51.5  
HEAD - 9.8  
TAIL - 14.0

7782 L2S  
(new) exp

WEIGHT - 77 lbs (35.0 kg)  
3/21/84 - 37 lbs (16.8 kg)

INCREASE 40 lbs

18.2 kg

dorsal photos taken - #22, 23, 24

Earlier on roll - close-ups of tag 3318 LIS - black  
tar - photos of 3317 - bulky algae present.

3478,80

(21)

and

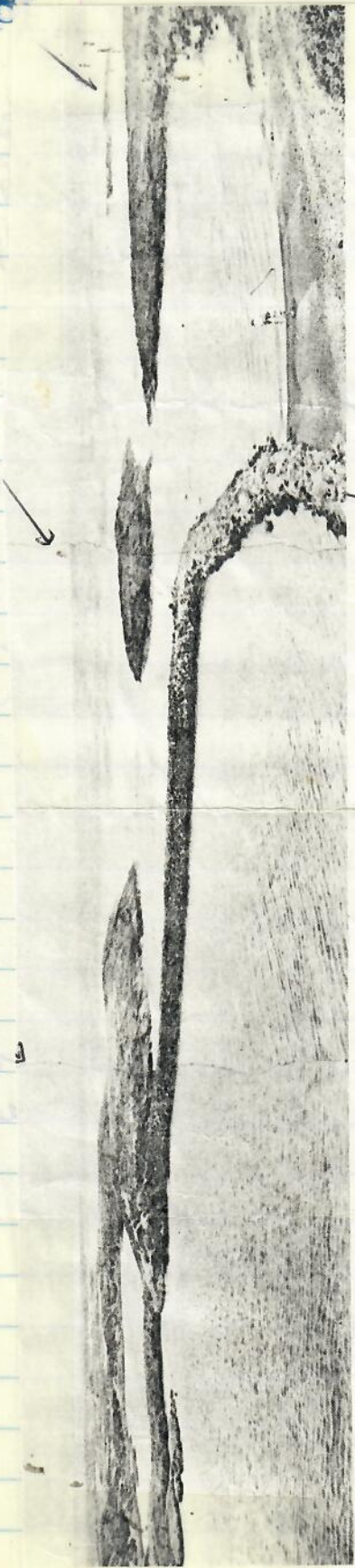
(22)

3313,14

Same recoveries recaptured

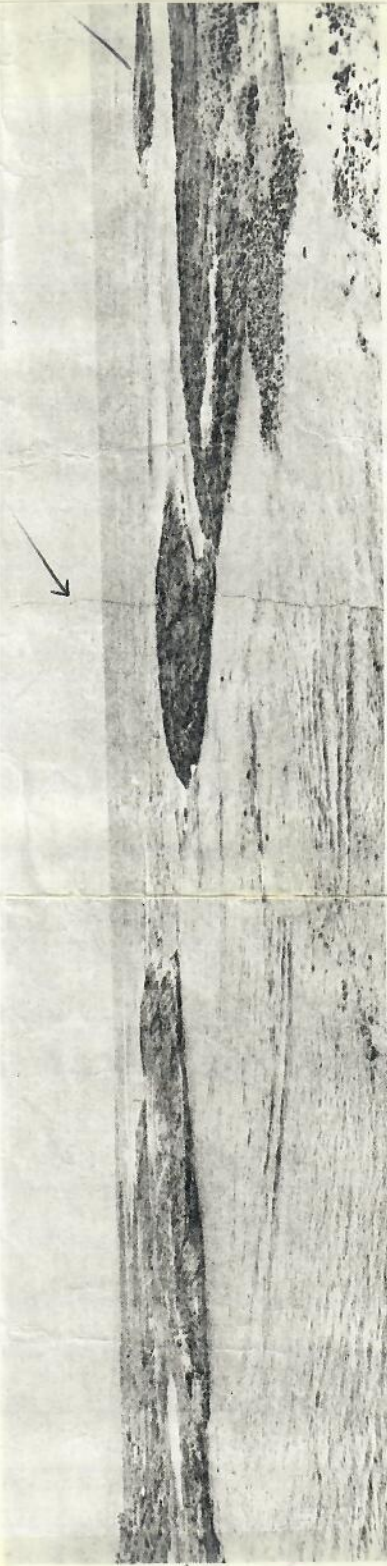
(CONTINUED P. 4, BOOK 4)





a. August 21, 1954

map?



b. March 14, 1972

Fig. 23. LOOKING MAKAI FROM TOP OF A'A FLOW TOWARD EASTERN WALL OF NINOLE POND AND SMALL POND NE OF NINOLE POND (at left in photo).

Handwritten notes in the top right margin, including "A P" and "1972".

Handwritten notes in the middle left margin, including "1972" and "A P".

Handwritten notes in the bottom left margin, including "1972" and "A P".



13-18 MAY 84

(Cast of 36 exp.; <sup>no. 2</sup> Full Roll 36; <sup>no. 2</sup> 20 079; <sup>no. 3</sup> 20 079)

- Meal preparation
- Fat biopsy - healed & fresh
- Pterocladia at low tide; springs.

15-18 July 1984

needs - Restaurant - ponds (springs) - condos - coming down the road to Punaluu - turtle being brought in on tube

Roll 1:

- area photos of Johnsons Pond to match old photos.

16 July 84

KR135-36 Remainder of roll that also has Aquarium autopsy of Dooney turtle; Trip to Kawai; = Road to Punaluu, Coastline from South-end sites; Johnsons Pond;

Roll 2:

KR135-20 Honouapo; close-ups of algae; flash close-ups of algae; poaching turtle w/ pole &amp; hook

Roll 3:

KR135-36 7-17 Ophikao coastline (use Cabeltra JA); Kaimu black sand beach; Petroglyphs at POU LOA; coastline toward South Point from lookout.

7-10 AUGUST 1984 KIHOLO

Roll 1-

Seal heart photos for Bill; Area views of Kiholo; tagged Kiholo turtles;

Roll 2-

8/10 Turtles tied to tree to be worked-up; tagged turtles; Kiholo from <sup>ROAD</sup> belt road;



## TAG RECOVERIES MADE AT PUNALUU

	No. of tags applied	Elapsed time in the wild (years)	Growth in straight carapace length (cm)	No. of tags shed
1.	2	5.3	41.3 → 60.3	0
2.	2	6.0	57.2 → 78.0	1
3.	4	2.4	68.1 → 75.3	0
4.	2	5.5	39.4 → 61.5	0
5.	2	6.1	39.0 → 65.5	0
6.	2	5.6	42.9 → 69.5	0



Summary of long term recoveries of green turtles made at

Tag No.	Tag loss	Date recovered and length	Date/location originally tagged and length
2877, 79 (7533)	0	12-18-83 60.3 (Net)	8-31-78 Punaluu (Horseshoe) (41.3)
2514, 15 (7593, 94)	1	1-8-84 78.0 (Scuba)	1-23-78 Punaluu (Bay) (57.2)
5501-04	0	1-9-84 75.3 (Net)	7-28-81 Punaluu (Bay) (68.1)
2875, 76 (7638)	0	2-18-84 61.5 (Net)	8-31-78 Punaluu (Horseshoe) (39.4)
2523, 24 (7644)	0	2-19-84 65.5 (Net)	1-25-78 Punaluu (Horseshoe) (39.0)
2896, 97	0	3-25-84 69.5 (Net)	9-2-78 Punaluu (Hale Loke) (42.9)
2885 (7686-88)	--	3-25-84 75.5 (Net)	8-31-78 Punaluu (Horseshoe) (54.9)

Expedition 1.-- 3 turtles captured, 26 November 1983.  
 Expedition 2.-- 12 turtles captured (1 long term and  
 Expedition 3.-- 13 turtles captured (2 long term and  
 Expedition 4.-- 12 turtles captured (2 long term recov  
 Expedition 5.-- 31 turtles captured (2 long term  
 Expedition 6.-- 5 turtles captured (2 short term recov  
 Expedition 7.-- 11 turtles captured (4 short term recov  
 Expedition 8.-- 14 turtles captured (6 short term recov  
 and 1



Punaluu, Kau District, Island of Hawaii (ND = not determined).

Interval		Increase in carapce length		Mean yearly growth rate		Sex
Months	Years	(cm.)	(in.)	(cm)	(in.)	
63.5	5.3	18.9 19	7.4	3.6	1.4	Male
72.0	6.0	20.8	8.2	3.5	1.3	ND
29.0	2.4	7.2	2.8	3.0	1.2	Female
65.5	5.5	22.1	8.7	4.0	1.6	<del>ND</del> Female
73.0	6.1	26.5	10.4	4.3	1.7	<del>ND</del> Male
66.7	5.6	26.6	10.5	4.8	1.9	ND
66.8	5.6	20.8	8.2	3.7	1.5	ND

1 short term recovery), 15-19 December 1983.  
 and 2 short-term recoveries), 8-10 January 1983.  
 overies), 17-19 February 1983.  
 and 9 short term recoveries), 23-28 March 1984.  
 overies), 13-14 April 1984.  
 overies), 14-17 May 1984.

eries  
 unknown ), 26-29 June 1984.



