

G.H. BALAZS  
1979-1981

BALAZS (MAY 1979 - JANUARY 1981)

- MISCELLANEOUS RECOVERIES - RELEASES
- BELLOWS NET CAPTURES; ENDANGERED NAVIGATORS DISPLAY;

- 23 MAY 1979 KAILUA HEAD MISSING JUVENILE . . . . . Page 3  
(McMann)
- ⑨ 29-30 MAY 1979 BELLOWS NETTING . 16 hours . . . . . Pages 5-7  
(2 captures - 1 recovery, 1 new)
- ⑩ 5-6 JUNE 1979 BELLOWS NETTING . 19 1/2 hours . . . . . Pages 9-15  
(7 captures - all new)
- 19 JULY 1979 BELLOWS TORSO RECOVERY . . . . . pages 18-21  
(SUBADULT)
- Mid-JUNE, PUTKA HAWAII KAI PORTLOCK RECOVERY . . . . . page 24-25
- 7 AUGUST 1979 BELLOWS REPORT OF TAG 2937 . . . . . page 29  
STEVE PITTERBUSH
- Barber's Point net mortality, from  
Fish & Game Freezer - dissected 6 Oct 79 . . . . . page 31  
(74.8 cm immature male)
- 11 OCTOBER 1979 (SL 60.5 cm) Kawelo - Kaneohe Bay . . . . . page 34  
capture - (by Kam)
- 12 OCTOBER 1979 (SL 64.8 cm) Kawelo - Kaneohe Bay . . . . . page 35  
capture - (by Kam)
- 23 NOVEMBER 1979 3 juvenile greens  
confiscated by NMFS from A. Anderson  
Kewalo restaurant . . . . . Pages 38-39
- 18 DECEMBER 1979 (53.3 cm) juvenile green hand -  
captured by Kam Kawelo site - page 41



**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

Made in U.S.A.

VERNON McMILLAN, Inc., ELIZABETH, N.J. 07208

- 26 DECEMBER 1979 Review of Turtle Exhibit at . . . . . page 43-44  
B.P. Museum  
"ENDANGERED NAVIGATORS"
- ⑪ 3-4 JANUARY 1980 BELLOWS NETTING . 17 hours . . . . . page 49-50  
(1 RECAPTURE)

- ⑫ 21-22 JANUARY 1980 BELLWS NETTING 18:45 hours p 52-  
(nothing)
- ⑬ 28-29 JANUARY 1980 BELLWS NETTING 19:45 hours p 53  
(nothing)
- ⑭ 7-8 February 1980 BELLWS NETTING 19:45 hours p 55  
(nothing)

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2/80 Juvenile green FWS confiscation (source FIJI) p 60  
(JAN-FEB 1980) - stuffed

2/26/80 Juvenile Green given to Waikiki p 62  
(release) Aquarium by Mr & Mrs. Hook

⑮ 10-12 APRIL 1980 BELLWS NETTING 36 hours p 65-68  
(2 captures - all new)  
2538, 39 - 2540, 41

⑯ 6-8 MAY 1980 BELLWS NETTING 4 hours p 70-76  
(6 captures - all new) 45 minutes

⑰ 13-15 MAY 1980 BELLWS NETTING 40 hours p 78-89  
(8 new) → 13 captures; (2 M<sup>mortality</sup>; 1 EXPEDITION 16;  
1 EXPED. 9-May 30th 1979; 1 EXPED. I; 1 LOST)

5 JUNE 1980 Waikiki Aquarium - juvenile green  
release from captivity . . . Page 90

⑱ 30-31 JULY 1980 BELLWS NETTING 28 hours p 92-  
(3 captures - 1 new, 2 recoveries) 97

17 September 1980 - Marshall Is. Aquarium p 99  
(release) ON Sept 80

17 AUGUST 1980 J. TOPLISS JUV. MORTALITY - KAILUA-PILOI  
(T.O.C. CONTINUED ON PAGE 120)

# Bellows to Get Sandgrabber

The "sandgrabber" system will be used at a third beach on Oahu for shoreline protection, the Army Corps of Engineers has announced.

Col. Peter D. Stearns, Honolulu district engineer for the Corps, has issued a permit to the 15th Air Base Wing, Hickam Air Force Base, authorizing construction of the sandgrabber at Bellows Air Force Station, Waimanalo.

The sandgrabber will be 150 feet long, 3 feet high, and 4½ feet wide. It is constructed of hand-placed concrete hollow blocks tied together with steel bars.

The system will be placed parallel to the shoreline near the low water mark. It is designed to reduce wave

energy acting on the beach and the water's ability to transport sand, thus reducing shoreline erosion and promoting sand collection.

Sandgrabbers were placed early this year at Kailua Beach Park and in December 1977 at Kualoa Beach Park.

Don Griffin, planner with the city Department of Parks and Recreation, said the sandgrabber at Kualoa worked very well at stopping erosion but has not worked well at collecting sand.

HE SAID THE sandgrabber is an emergency solution if the wave action is not too large, such as exists when there is a protective reef offshore.

He would not favor its use on the North Shore, where the waves are higher.

The sandgrabber project at Kailua Beach Park was aimed at halting severe erosion on the Lanikai end of the beach, where the boat mooring area was being undermined.

Plans for the project were scaled down after storms following the Christmas season brought back sand, thus reducing extent of erosion.

A 250-foot sandgrabber was installed, parallel to the coastline but was buried so it is not seen.

Griffin thinks it will work well as a protective device for the future.

23 MAY

HONOLULU ADVERTISER Thursday, Oct. 22, 1979 <sup>1979</sup> AS

## Bellows: it's endless sand — but not for all times

In 1917 President Woodrow Wilson signed an executive order taking 1,510 acres of choice land at Waimanalo to create Bellows Field. That included almost three miles of the finest white sand beach on Oahu.

A 53-acre section is open to the public from noon on Friday to midnight Sunday (pay no attention to the sign that says the place is open until 8 a.m. Monday). In 1976 (the last official count to date), 380,000 people used that section.

The military uses Bellows for

recreation, as an antenna farm, and as a site for Marine Corps training. There is also a wildlife refuge there.

Many Waimanalo people think Bellows is being wasted. They all are aware of the splendid stretch of beach. "The beach is fantastic," said one. "It never loses sand."

Mayor Fasi has said: "It's been my dream that Bellows Field will be returned to the people of this state and be used for the most beautiful regional park on the Island."

WHAT RETAINED?

23 MAY 1979

Telephone call from Streets informing me that Bryan McMahon or McMahon Jof 43- Luohala Place had found turtle on beach dead (washing in waves). Tel 261-1140. I picked up turtle from back yard - Did not see residents.

photo taken 6/1/79 at CI #1-4 ASA 64  
Data as follows:

HEAD Missing weight - 22 lbs

S -  $16 \frac{5}{8}$  x  $13 \frac{3}{8}$   
(42.2 cm)

C -  $17 \frac{5}{8}$  x  $15 \frac{5}{8}$   
(44.8 cm)

PL - 13

TAIL -  $3 \frac{1}{2}$

C/S Ratio: 1.168

WHAT RETAINED:

NO EVIDENCE OF PREVIOUS TAGS.

No skin barnacles, but some red skin alga present.

Holes (from spear?) in 1<sup>st</sup> lateral, right and 3<sup>rd</sup> central; Short cut on ventral side of right flipper - distal humerus.

Mild to moderate putrefaction.

Retained content of 1<sup>st</sup> and 2<sup>nd</sup> stomachs (distinct). Appears to be all *Codium* with some black sponges. Intestines are also full, appears to be greater number of sponges further down

C-10 Honolulu Star-Bulletin Thursday, April 12, 1979

## House Seeks Release of Bellows Shoreline

Two resolutions were adopted by the state House yesterday asking the federal government to release the shoreline area of Bellows Field for recreational development. One is a concurrent measure which will go to the Senate for approval.

A 77-acre portion of the 1,500-acre area was returned to the state some years ago and is being developed as a state park.

Another 54 acres next to the park is open to the public on weekends and holidays under an Air Force license to the state. The state subleases this area to the city for a beach park operation.

The rest of the Bellows area is under Air Force control and used for military recreation and training.

THE AIR FORCE has been asked a number of times—most recently in October 1977—to release the rest of

Bellows for public use, the Committee on Water, Land Use, Development and Hawaiian Affairs reported.

However, the committee said the Air Force has replied that the area is needed for Air Force and Marine training.

The resolutions—stressing the public demand for recreational space—are addressed to President Carter, the secretary of defense and Hawaii's congressional delegation.

THE HOUSE also adopted resolutions yesterday asking the city to use surplus funds generated by the Ala Wai Golf Course to improve the course.

Surplus funds from the course totaled more than \$140,000 in 1977-78, a committee report said, adding that it is "shortsighted" to divert the funds for other city projects because the course and its use will deteriorate.

— Mouths of drainage streams are prime habitat for certain kinds of algae—therefore sites serve as aggregation areas—devices for green turtles.

BELLOWS

29 MAY  
1979

TUESDAY

6:45 PM

NETS IN  
WATER

OUT

10:45 AM

16 HOURS

TOTAL

Two sections of net set off Jetty #1, almost at right angles to the North. 3-4 turtles seen feeding - two very close to north side of jetty - possibly feeding on algae growing on rock? Beach cabin visitors report seeing turtles frequently particularly during late afternoon.

No captures made during late afternoon or evening - however, turtles regularly seen. Light winds - mild swell - water is warm, but temperature not taken.

5:30 walk on beach in the direction of Jetty #2 revealed a blue polypropylene strip and numerous fecal pellets.

30 MAY  
1979

WEDNESDAY

Capture made sometime between 2:15 - 4 AM in about the center of second ~~section~~ section of netting.

Recapture

2332 LFL

2333 RFL

2334 RF

expansion carried out

S -  $24\frac{1}{8} \times 19\frac{5}{8}$   
(61.3 cm)

C -  $25\frac{1}{2} \times 24\frac{1}{8}$   
(64.8 cm)

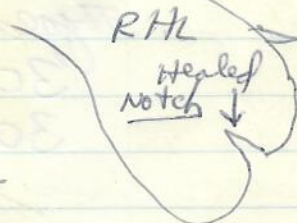
PL -  $19\frac{1}{4}$  (48.9 cm)

HEAD -  $3\frac{3}{4}$

TAIL -  $4\frac{7}{8}$

74 lbs

C/S RATIO: 1.229



6

BELLOW  
30 MAY 79

2332 (continued)

WEDNESDAY

Emerging growth on legs - Small amount of coralline on carapace.

Alga and skin barnacles present.

A few small turtle barnacles on carapace - removed.

Stomach tube used - small amount of blood obtained; Small piece of alga obtained from mouth → retained. GB-486

Photos taken before release - Released by north side of jetty ~ 10:30 AM - it swam out and got caught - low in net. Retrieved and rereleased.

Second capture - sometime between 4:30-5:30 AM

tagged

3090 RFL

S -  $18\frac{1}{2}$  x  $16\frac{5}{8}$ 

3091 LFL

(47.0cm)

C -  $20\frac{1}{8}$  x 20

(51.1cm)

PL -  $15\frac{1}{4}$  (38.7cm)

C/S RATIO: 1.203

HEAD -  $3\frac{1}{8}$ TAIL -  $3\frac{7}{8}$ 

WT 35 lbs

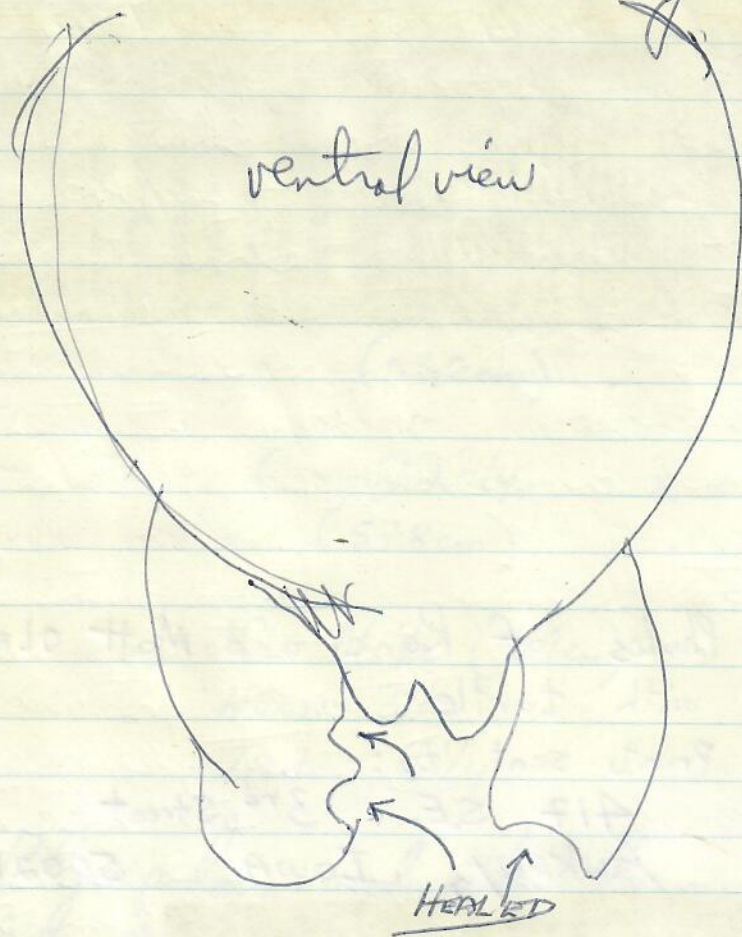
Reminds me of a ridley - because of shell width and shape.

Spiny teeth in jaws -  
photos taken



30 May 79 Food recovered from mouth - stuck on  
roof of mouth; small particles obtained  
in stomach tube sample.  
bellows.  
(continued) Skin is clean and soft - smooth.

Postcentrals are abnormally long.



A-10 Honolulu Star-Bulletin Friday, June 29, 1979

### Bellows Public Use Is Extended

The city and U.S. Air Force have agreed to continue, for five years, public use of Bellows Field for weekend and holidays, acting Mayor Edward Y. Hirata said yesterday.

The beach area has been a popular place for campers and picnickers. The public is allowed to use the

beach from noon Fridays to 8 a.m. Mondays and on all state and national holidays from dawn to 8 a.m. the following day.

Camping permits may be obtained from the city Department of Parks and Recreation or at satellite City Halls.

5/30/79 Photos of Randi and Matt OLESON with turtle -

Prints sent to:

417 S.E. 3rd Street  
ANKENY, IOWA 50021

### Bellows to Erect Property Signs

The Air Force is posting property signs along a ridge that separates Keolu Hills housing and Bellows Air Force Base after two incidents in which boys were injured playing with military ordnance.

Bellows is used by Marine Corps squads which conduct amphibious and helicopter assault training at the northern end of Bellows beach, which is open to the public on weekends and holidays.

Reportedly one boy was injured a month ago when he pounded a cartridge he had found and it exploded. Another was hurt when a booby trap he picked up exploded.

BELLOWS NETTING

9

5 JUNE 79 . Two sections of net in water off  
 TUESDAY Jetty #1 at 5 PM - at right angle to  
 of the north - light wind, reasonably  
 calm seas -  
 Sea water - 26°c 27°c right at the  
 surface.

Noted 2-3 turtles with scum on  
 back feeding - 2 close to N rock jetty.

5:45 PM Capture #1 (badly tangled in net)

3092 LFL

S -  $20\frac{7}{8}$  x  $17\frac{7}{8}$   
 (53.0 cm)

3093 RFL

C -  $22\frac{3}{4}$  x  $21\frac{5}{8}$   
 (57.8 cm)

PL -  $16\frac{1}{2}$  (41.9 cm)

C/S RATIO: 1.209

HEAD -  $3\frac{1}{4}$

TAIL -  $3\frac{1}{4}$

50 lbs

Polysiphonia and skin fragments present -  
 Tap stains in mouth -  
 healed piece missing from left hind limb -  
 Photo No. 3 on 20 exposure roll ASA 64 -

6 PM capture (badly tangled)

5 JUNE 79

3094 RFL

S -  $20\frac{1}{2}$  x  $15\frac{3}{4}$   
(52.1 cm)

3095 LFL

C -  $22\frac{1}{4}$  x  $19\frac{3}{8}$   
(56.5 cm)PL -  $16\frac{5}{8}$  (42.2 cm) C/S RATIO - 1.230HEAD -  $3\frac{1}{4}$ TAIL -  $4\frac{3}{8}$ 

46 lbs

- Link Coralline on ventral margins  
 small Cheliparis on right margin ventral -  
 Small piece of alga saved from mouth -  
 Photo no. 4 GB-440

5 JUNE 79  
TUESDAY

Capture #3  
Photo notes

11:15 PM

3096 RFL S -  $16\frac{1}{2}$  x  $13\frac{1}{2}$   
(41.9 cm)

3097 LFL C -  $17\frac{5}{8}$  x  $16\frac{1}{8}$   
(44.8 cm)

PL -  $13\frac{5}{8}$  (34.6 cm)

C/S RATIO - 1.194

HEAD -  $2\frac{3}{4}$

TAIL -  $2\frac{3}{4}$

$22\frac{1}{2}$  lbs

Pink collagen on ventral margins and  
posterior of sarapose.  
Jelly-like mass taken from mouth -  
Blood from tagging sites!

6 JUNE 79  
WEDNESDAY

Capture #4 6 AM

3098 PL

S -  $24\frac{1}{4}$  x  $19\frac{5}{8}$   
(61.6 cm)

3099 PL

C -  $25\frac{5}{8}$  x  $23\frac{1}{4}$   
(65.1 cm)

PL -  $19\frac{1}{4}$  (48.9 cm)

HEAD -  $3\frac{5}{8}$

TAIL -  $5\frac{7}{8}$

C/S RATIO - 1.185

72 lbs

Photo no. 5-6

Pink collagen on ventral margins -  
Small turtle barnacle on right side of  
plastron

Bellows Netting - Balazs A. Kam

6 JUNE 79  
WEDNESDAY

Capture #5 9:30 AM

2-sections of net at night  
16 hours  
7 captures  
13 start #645 pm  
Jetty

3101 RFL S -  $16\frac{7}{8}$  x  $13\frac{5}{8}$   
(42.9 cm)

3102 LFL C -  $17\frac{3}{4}$  x  $16\frac{1}{4}$   
(45.1 cm)

PL -  $13\frac{1}{4}$  (33.7 cm)

HEAD -  $2\frac{5}{8}$

TAIL -  $3\frac{3}{8}$

C/S RATIO - 1.193

24 lbs

Photo no. 7

pink coralline on ventral margins - also  
a large quantity on sarapace (see photo)  
Stomach sample retained GB-439

6 JUNE 79 Capture #6 10 AM

3103 PL S -  $16\frac{3}{8}$  x  $13\frac{1}{2}$   
(41.6 cm)

3104 LPL C -  $17\frac{1}{2}$  x  $15\frac{5}{8}$   
(44.5 cm)

PL -  $12\frac{3}{4}$  (32.4 cm) C/S RATIO - 1.157  
HEAD -  $2\frac{5}{8}$   
TAIL - 3 23 lbs

Photos 7<sup>8-9</sup> - 8

Pink collagen on ventral margins -  
Tar stays in mouth -  
green algal growth on roof of mouth  
Gouge on right anterior of plastron.



6 June 79 Capture #7

10:15 AM

3105 RFL S-19<sup>7</sup>/<sub>8</sub> x 1<sup>5</sup>/<sub>8</sub>  
(50.5cm)3106 LFL (short flap) C-21<sup>5</sup>/<sub>8</sub> x 18<sup>3</sup>/<sub>4</sub>  
(54.9cm)PL-15<sup>3</sup>/<sub>4</sub> (40.0cm) C/S RATIO-1,200  
HEAD-3  
TAIL-3 40/65Pink coralline on ventral margins  
Photo no. 10-11  
algal growth on roof of mouth -  
Stomach sample retained - GB-438

## BELLOWS TORSO RECOVERY (CHELONIA)

19 JUL

19 July 79  
ThursdayTelephone call from Sgt. Tubbs-Bellows  
at 4:06 PM

259-5941 office

1010

259-8062 Residence

Concerning "large turtle washed ashore".

It had been removed from near boat  
house where it washed up at ~ 1500 hours  
(high tide), to an area inland where it  
would be disposed of in a dump.Tom visited Bellows that afternoon but  
couldn't locate it.He returned at ~ 8 AM the next  
morning and recovered it - using canvas-  
for transfer to Coconut Island.

At 11 AM I arrived at C.I. -

Turtle has no head, limbs or tail -  
photographs taken ~ 1-8 ASA 64 20 exp.  
using ELW - dorsal & ventral views.Post mortem performed at NE end of  
island.

Measurements:

C/S Ratio 1.301  
WIDTHS -  $30\frac{3}{4}$ " x  $23\frac{1}{4}$   
(78.1 cm)C -  $32\frac{1}{4}$  x  $30\frac{1}{4}$   
(81.9 cm)PLASTRON -  $24\frac{1}{8}$  (61.3 cm)

19 July 79. Left femur found to be sheared, but other three limbs missing at a socket - right femur not there - same for humeri. Vertebral of neck may have shears -

Anterior area of pectoron has cut areas (should be visible in photos). Gary

W who assisted in post mortem checked carefully for the presence of broken shark teeth - nothing found.

Fold of skin hanging from tail suggested that this may be a male - but inconclusive.

Carcass had some small maggots in limb stumps, but internally very little decomposition was apparent - only some gas in intestines and body cavity - mild friability to flesh - fat looks good.

Stomach and full length of intestines found to be completely full of food material.

Liver lobe only present on right side - seems small.

Heart looks very big - pericardial sac very tough - fibrous. "Back fat" very thick -  $\frac{3}{4}$ " - 1" and very green in color.

Pair of "gonads" found above kidneys (meaning ventral) - right one saved in formalin. - seems to be packed.

with small "tubes" - Probably immature (?),  
male?

19 JULY 79  
Thursday

Yellow-whitish fat "canals" extend  
all through mesenteries of  
GI tract.

Bladder noted - but empty.

First and second stomachs very well  
distinguished - Frozen -  
Yellowish filaments w/ brownish flakes  
seem to be only contents - but  
also sponge pieces.

Cut open areas along entire length  
of intestines - same type of alga all  
the way - and also sponge.

→ Section just before cloaca sectioned  
and frozen.

→ also, some of contents from  
1-2' past second stomach saved  
in formalin.

→ A few skin baracles noted.

Items to be cleaned and retained →

- whole carapace & plastron
- Pectoral bones
- Pelvic bones (spearhead femur)
- Remains of neck and tail

8/7/79 - 156 & 2nd preserved  
separately in formalin -  
large quantities of sponge  
in first -  
but not second!

19 JULY

19 July

Analysis -

Young male attacked by sharks in deeper <sup>offshore</sup> reef area somewhere in the vicinity of Bellows. Turtle may have not necessarily been alive at the time of attack. All four limbs, tail and head were torn off - bites marks in plastron - I need to examine carapace for possible bite marks.

Carapace color - yellowish with brown spots - streaks - brown getting very dark at times  
Plastron - light yellow

See photos for clarification of above.

FIRST & SECOND STOMACHS w/CONTENTS - 4167.0 g  
FIRST STOMACH w/contents - 2340.5 g  
SECOND STOMACH - w/contents - 1826.5

FIRST STOMACH, without contents - 558 61%  
SECOND STOMACH, without contents - 356 39%  
TOTAL TISSUE - 914

First stomach food - 1782.5 54.8%  
Second stomach food - 1469.5 45.2%

Total food - 3252

JUSTIN RUTKA PORTLOCK

HAWAII KAI MORTALITY

373-0067 (home) 548-2885 (work)

occurred approximately mid-june 1979

Portlock Point - Public access trail  
toward Hanalei Bay.

He jumped in and drifted back along  
coast - mask & fins; Shell is at  
~ 10-15' depth, with drop off to  
40-50'.



Noted turtle snagged/tangled in fish  
line, in right front flipper.  
"Slide-bait" technique used along this  
area.

During 5% of dives (1 in 20) he  
sees a turtle along here.

Dissected.

3 AUGUST

. 1979

FRIDAY

S -  $18\frac{3}{8}$ " x

(46.7 cm)

 $14\frac{3}{8}$   
(36.5 cm)c/s width  
RATIO = 1.19C -  $19\frac{1}{2}$  x

(49.5 cm)

 $17\frac{1}{8}$   
(43.5 cm)PL -  $15\frac{1}{8}$  (38.4 cm)HEAD -  $2\frac{3}{4}$  (7.0 cm)TAIL -  $3\frac{3}{4}$  (9.5 cm)

WEIGHT -

32 lbs

14.5 kg

Right front flipper - mid-humerus area appears to have mild abrasions from line - but not cut through skin.

Photos taken E/W of both carapace and plastron.

Polysiphonia on skin. skin barnacles on hind flippers;

Small immature gonads (eggs?) - cut out and preserved.

Measurements - 1st stomach - 6"  
2nd " 18"

Rest of intestines - 25'

total 8.2 meters

SMALL PIECES OF PLASTIC  
FOUND IN STOMACH CONTENTS

RUTKA turtle dissection (continued)

- 1) <sup>1st</sup> Stomach contents retained - preserved
- 2) <sup>2nd</sup> " " " " " "
- 3) Sample taken 2-3' down intestine

Major algal components appears to be Codium edule with black "button" sponges. Also <sup>some</sup> red filaments present.

Noted black <sup>(Hydrogen sulfide?)</sup> in ~ 2' section of intestine just after 2nd stomach - intestinal appears to have decomposed - shed off.

All bones will be retained -  
but carapace alone will be returned  
to Rutka as requested.



14.5 kg total  
 Front flippers-pectoral -  
 R quarter - 1833.5g  
 muscle - 1283.0  
 bone & skin - 516

L quarter - 1911.5g  
 muscle 1340.0  
 bone & skin 560

2623g muscle total = 18.1%

### HINDQUARTERS

Total - 1092.5  
 muscle - 241.5  
 bone & tissue  
 & skin - 843.5

241.5 muscle = 1.6%  
 2864.5g total = 19.7%

7 AUGUST  
79

## RITTERBUSH REPORT 2937

Helfrich telephoned lab indicating that that on Sunday 5 AUG 79 Steve Ritterbush had observed a dead turtle washed up on the beach at Bellows. Tag 2937 was noted, but not taken off due to decomposition. He indicated that had a "gash" ← or "was crushed" probably "from contact with an outboard motor". He thought the turtle was a "hawksbill 6-8 years old".

A telephone call to Fayant Tubbs revealed that he had "heard" of turtle, but couldn't locate it - thought it was on the public side.

Between 5:30 PM - 7 PM Kam walked entire length of beach from Jetty #1 to newly opened park area - saw lots of tracks (people) but no turtle.

2937 originally captured at Jetty #1

9/14/78 - Tag 2937 was in existing hole in PC - also had 2935 and 2936.

10 month  
3 wks  
INTERVAL

6 October 1979 Dissection at Coconut Island  
SATURDAY

Obtained from F & G freezer at Sand Is.  
through Noah Pekelo and Al Stevens.  
Reported mortality from gill net at  
Barbers Point;

S - 74.8 x 57.6 cm

C - 81.2 x 73.8

PL - 56.2 cm c/s ratios - 1.28

HEAD - 11.0 cm

TAIL - 20.8 - from end of plastron - looks  
like female externally

Numerous skin barnacles - some  
coralline on carapace.

Large tumor on left eye - but not  
covering pupil - above it.

Photos ASA 64 - plus close-up of  
tumor.

Internal examination revealed <sup>moderate</sup> full  
1<sup>st</sup> stomach, partially full 2<sup>nd</sup> stomach -  
light fill to intestines.

Contents of 1<sup>st</sup> & 2<sup>nd</sup> stomachs saved  
for D. Russell I.D.

Small, immature testes present -  
Right one saved in formalin.

Green fat abundant - thick.

No decomposition of meat apparent -  
 Ham will 1.) removed hide  
 2.) weight flesh  
 3.) extract all bones

Length of intestines -	29'	(884 cm)
Second stomach -	2'	{ 61 cm }
First stomach -	1'	
	total	32' - (975 cm)

Large liver lobe again present on right side  
 only.

11 October 1979

Thursday

Turtle captured by kam, for tagging  
at Kawelo area - Kareoke Bay  
(oceanside)

S - 60.5 cm x 49.3

C - 65.0 x 58.2

PL - 49.2

TAIL - 11.5

HEAD -

c/s - 1.18

3278

3279

WEIGHT ~ 68 lbs

~ 10 Chelonibia on carapace REMOVED  
 ~ 10-15 on plastron

Possible burrowing barnacles on limbs -  
 sampled for ID.

Returned to capture area and released  
 on 10-12-79

Similar color to captive turtles -  
 Photos not taken

Orange tint to plastron -

12 Oct  
Friday

328

328

Release 13 Oct 79 SAT at capture site.  
 All Bases REMOVED for  
 Carapace and Plastron

12 Oct 79  
Friday

Turtle captured by Kam  
- Kawelo (oceanside) I - Kaneohe Bay

S - 64.8 x 50.3

3280 RFL

C - 69.0 x 62.3

3281 LFL

c/s - 1.24

PL - 52.3

HEAD - 10.0

TAIL - 13.0

NO WT.

Brownish streaks in carapace - some brown areas on flippers.

Photos of Chelonibia & burrowing barnacles -  
→ last of roll from Mexico - Escobilla trip.

Stomach sample taken - red juice & a few small red particles - Amarusia?

Burrowing barnacles removed and saved from femargins of front flippers - also a few present on hind flippers.  
- possible small tumor on left shoulder.

- Chelonibia cluster removed from plastron and saved. Pieces of laminar some naturally with it - these barnacles may not be as harmless as some think.  
Very small barns on skin - just settled (?)  
No large Platylepas present.

Release 13 Oct 79 SAT at capture site.  
All barns removed from carapace and plastron.

12 Oct 79.  
Friday

Turtle captured by Kam  
- Kawelo (oceanside) I - Kaneohe Bay

3280 RFL

S - 64.8 x 50.3

3281 LFL

C - 69.0 x 62.3

c/s - 1.24

PL - 52.3

HEAD - 10.0

TAIL - 13.0

NO WT.

Brownish streaks in carapace - some brown areas on flippers.

Photos of Chelonibia & burrowing barnacles - last of roll from Mexico-Escobilla trip.

Stomach sample taken - red juice & a few small red particles - Awarisia?  
Burrowing barnacles removed and saved from fore margins of front flippers - also a few present on hind flippers.  
Possible small tumor on left shoulder.

Chelonibia cluster removed from plastron and saved. Pieces of laminae some naturally with it - these barnacles may not be as harmless as some think.  
Very small barns on skin - just settled (?)  
No large Platylepas present.

Release 13 Oct 79 SAT at capture site.  
All barns removed from carapace and plastron.

23 November 1979 3 greens at  
NMFS Kewalo dockside -

confiscated from A. Anderson's  
restaurant.

Reportedly captured by a friend of  
Steve Kaisers - locally and  
recently.

3289

S-53.9 x 43.9

3  
3290

C-57.7 x 51.5

3

photos #8-10

photos #11-13  
↓ ↓

3291

S-54.5 x 44.7

3292

C-57.8 x 51.2



3293 S-45.7 x 35.6

3294

C-48.2 x 42.0

All three of the above released from  
the CROMWELL by Paul  
Schioda on ~ 6 December 1979  
"approximately 3 miles out" (?)  
As per Scott Andersen on 12/21/79

18 DECEMBER 1979

Juvenile green captured at Kawelo  
 site, Kaneohe Bay, by Alan  
 Kam - maintained in pen at  
 C.I. until measurement on 21 Dec 79.  
 Returned to approximate site of capture.

3295 LFL S - 53.3 x 41.7

3296 RFL

C - 57.2 x 52.5

PL - 43.6 cm

HEAD - 8.0

TAIL - 10.2

WEIGHT - 51/bs

Roll of zo exposure - ASA 64 <sup>EL</sup>  
 Photos dorsal-ventral; close-up of Chelonia  
 barnacles; skin barnacles  
 Large scale missing near right leg flap.  
 Taken off during capture.

< 25 large barnacles removed from surface -  
 coralline alga also present.  
 17 large barnacles removed from plastron.  
 many skin barnacles present.  
 Kam removed alga from mouth -  
 also collected amphipod from ~~bol~~ <sup>fold</sup> of ~~the~~ neck.

18 DECEMBER 1979

Juvenile green captured at Kawelo site, Kaneohe Bay, by Alan Kam - maintained in pen at C.I. until measurement on 21 Dec 79. Returned to approximate site of capture.

3295 LFL S - 53.3 x 41.7

3296 RFL

C - 57.2 x 52.5

PL - 43.6 cm

HEAD - 8.0

TAIL - 10.2

WEIGHT - 51 lbs

Roll of 20 exposure - ASA 64 EL

Photos dorsal-ventral; - close-up of Chelonia barnacles; skin barnacles.

Large scale missing near right tag flap. Taken off during capture.

25 large barnacles removed from carapace - coralline alga also present.  
17 large barnacles removed from plastron. Many skin barnacles present.  
Kam removed alga from mouth - also collected amphipod from fold of ~~the~~ neck.

12-26-79 . B.P. Museum turtle exhibit -

WEDNESDAY

leatherback  
 "A growth of red algae on this female's neck gives it a pink tinge" (?)

"alive redley shows the six lateral laminae" ( )

"Cylindrolepas sp. - By turning the specimen, you can see how baracles of this genus have burrowed & deeply into this laminae

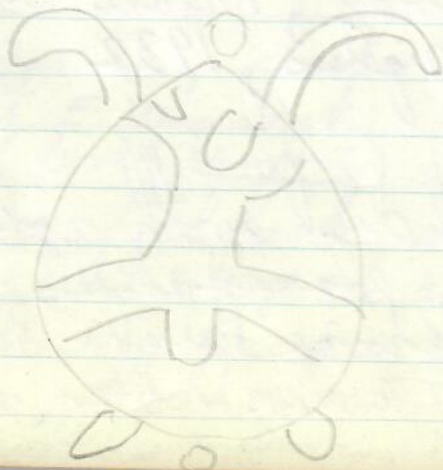
Parasitism  
 "the most obvious are the baracles, with 10 species found exclusively on sea turtles."

Rubbing of a sea turtle petroglyph from Hihina Pali, Hawaii Island

N-10 block - in  
 Atlas of Hawaii  
 Hihina Pali Rd -  
 & Trail -

Volcanoes Nat Park

~ 10" long



"String figure" by Caroline F. Jayne  
(Scribner, N.Y. 1906  
p. 267)



Honu wahine (female turtle)  
from Tahiti



Honu tane (male turtle) from  
Borabora & Mauiti



Honu from Maui & Kauai



"Turtle" from Yap

IN DISPLAY CASE

- 1) Hand "kahili" with turtle-shell  
hondle, Hawaiian Islands  
Lucy K. Peabody, Kalani and  
Edgar Henriquez, 1932
- 2) Turtle-shell dish with gold leaf  
overlay from possessions of  
Princess Bernice Pauahi Bishop.  
It is thought to have been made  
in Japan.

1)  
photo #22

2) P

3)

4)

- 3) [Crown of human bone and carved turtle shell, Marquesas Islands.  
S.T. Alexander, 1897]

"Fishermen after a day of turtle fishing. This photograph was probably taken in Fiji about 1915.

2 Photos on Roll of 36 ELW

- Horizontal display cases -  
Turtle-shell and bone artifacts,  
Hawaiian Islands

Case 1

1) photo #22-24

"Kapa stamps"

The turtle shell is cut to form the diamond pattern & lashed onto a bamboo wand. It is then dipped into dye and the motif is transferred onto a piece of kapa, bark cloth" Seth Andrews Coll., 1898

2) photo

Net Spears, haka kā upena  
Robert F. Van Dyke Coll., 1968  
(bone & laminae)

3)

One-piece fishhook, makau 'ea  
(very thick - large - 6" long)

4)

Scraper, kahi olonā  
Geoffrey C. Davis, 1972 (bone)

loggerhead 30-83" ?

Thankyou to Cayman turtle Farm (?)  
(for photos)

5) - Scribes (bone)  
A.L.C. Atkinson, 1917

photo

### Case 2

1) Chain from possessions of  
Princess Kapiolani

2) Chain from possessions of  
Princess Ke Kaulike

photo

3) Wrist ornament, Kupēe  
(large & small)

Kaumualii, ruling chief of Hawaii 1794  
from Lucy K. Peabody & son  
Edgar Henriques; 1932.

4) Rings - Kalamianakole Coll. (3 total)

5) Bracelets worn by Konia  
and Princess Kūhū (6 total - 3 green?  
3 hawk)

see  
lamina

6) Niau fani  
jew's harp with turtle  
shell vibrator

2)  
7) jewelry box used by  
Queen Emma,  
wife of King Kamehameha IV

photo

- 8). Engraving, after Choris, of a Hawaiian woman wearing a niho palaoa suspended from a lei of human hair. This unusual miniature plate was published in *World in Miniature* (London, Ackermann, 1824).

photo

- 9) Niho palaoa (2)

The incomplete niho palaoa shows how the turtle-shell segments are fastened by pegs to the main shaft of the ornament. Lucy K. Peabody, Kalani and Edgar Henriques, 1932.

- 10) This collection of hymns by William Ellis and Heriam Burgham was the first "book" published in the Hawaiian language. Of the 2,000 copies printed by the Mission Press, only nine are known to have been bound with the turtle-shell covers. A contemporary note inside the cover of one of these copies states "Bound at Oahu by Moku a native of the Sandwich Is."

green?  
laminac

2 copies from first printings in 1823 & 1830.

need to return to record horizontal cases -  
Melanesia - Polynesia & Japan  
(Disassembled, terminated ~ 31 July 1980)



3-4 JANUARY 1980 BELLONS NET  
 Thurs. - Friday JETTY #1

Two sections set nearly parallel to shore at ~ 5:45 AM - Low tide - full moon; Tide due to rise after midnight - high ~ 6 AM.

17 hours  
 Total

At 3:30 AM I walked along beach toward jetty #2 - found 7 fecal pellets, 2 of larger diameter. Also, small Marengus, and a few Janthina. Nets out at ~ 10:45 AM

Capture made at ~ 9:20 AM at net joint - toward floatline. As follows:

Recapture

3094 LFL S - 53.9 cm. x 41.8

3095 RFL C - 58.0 x 50.6

PL - 43.2

HEAD - 8.1

TAIL - 10.5

C/S RATIO:  
 1.211

WEIGHT - 44 lbs

Small pieces of algae recovered from mouth - red filaments appear to be Hypnea. Stomach pumped, but

only small unidentifiable pieces and fluid  
obtained - salty fluid. (not algae)

2<sup>nd</sup> lateral left appears to have marks  
from a 3-prong spear (scabs inside). Two  
large Chelionia barnacles located on 1<sup>st</sup> &  
2<sup>nd</sup> laterals right (removed).

No skin barnacles - pink coralline on  
carapace.

Photos taken (EZ) but battery not in -  
∴ shot at 90 sec (?) 8-11 F.

Released ~ 10:20 AM at river mouth.

Note - Tags had previously been expanded -  
piercing sites were healed -  
pink calcareous present on both  
tags - some cleaned off.

Fresh red algae samples collected  
from lead line of nets - preserved.  
appears to be Hypnea sp.  
Same as filaments collected from  
mouth.

21-22 JANUARY 1980 MONDAY - TUESDAY

Bellows - Seawater  $24.5^{\circ}\text{C}$ , both  
 - at surface & bottom. Virtually no waves,  
 light wind at site, due to westerly direction.  
 Cool air.

Two nets set at Jetty #1 - in at 6 PM.  
 No turtles seen.

Group of 5 fishermen arrived - Man states  
 that turtles in this area are mostly  
 seen during the summer. He has  
 occasionally ~~seen~~ caught turtles - not  
 hooked in mouth, but rather tangled  
 in flippers.

Passer-by stated that last summer (July 1979)  
 his daughter & son-in-law saw  
 man "catch" a turtle from jetty - took  
 "4" hours to bring it in - then released  
 no mention of tag.

Nets taken out at ~ 12:45 PM - photos of  
 Alanham taken by net.

NO captures

NO invertebrates or feces noted on beach.

Stepped on a nail.

18:45  
 Hours  
 total

19:45  
 hours  
 total

28-29 JANUARY 1980 Monday - Tuesday

Bellows NETTING JETTY #1

2 NETS in the water at ~ 6:15 PM.  
Seawater 23.5°C - South<sup>west</sup> wind, very calm seas.

Saw a single turtle at ~ 10 AM - breaths taken ~ 100 m outside of net.

19:45  
hours  
total

NETS out ~ 2 PM - NO CAPTURES.

1/29/80 Surface seawater - 24.5°C  
Bottom - 24.0°C

AMTRAC active on beach & inshore waters.

Possible reasons for no captures:

- 1.) Water too clear - turtles see net
- 2.) Water too calm - deterrent to turtles
- 3.) No food in area - no reason for turtles frequent area. (season)
- 4.) Wrong time of month (tide & or moon)

7 FEBRUARY 1980

## BELLOWS

Thursday

Two nets in the water at jetty #1 ~ 6:<sup>15</sup>PM - Seawater surface 25.3°C. Two fishermen at end of jetty have been there since early afternoon - no turtles sighted. They report that when turtles are seen - fish are caught - and visa versa. One man states that he has caught a number of turtles 15-20 lbs - hooked both in mouth and other areas. High tide ~ 8PM (1 foot).

8 FEBRUARY 1980

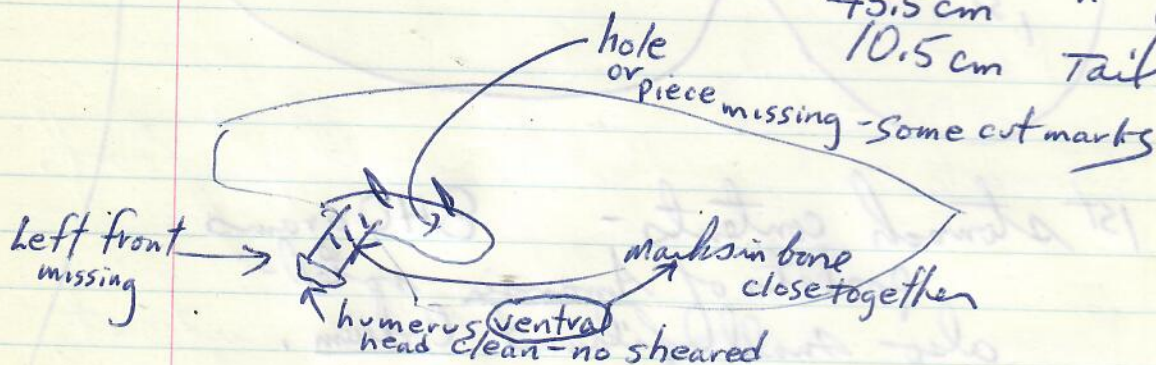
FRIDAY

Winds decreasing - sunny and hot. ANTRACS practicing during AM. Seawater 25.5°C. Two new fishermen claim they saw turtle - not seen by Kam and me. However, on other occasions we both thought we saw turtles - not confirming. Nets out ~ 2PM. Total time - 19:45 hours. 10 minute observations at Jetty #2 - no turtles seen.

BP Bishop Museum salvage from Kahala Beach  
on Les Matsuura  
of Waikiki Aquarium originally called me  
on this case.

Post-mortem with Carla Kishinami - Kam-  
Whittow at Museum 2/20/8 -  
guts inspected at HMB on 2/22/80.

Specimen BP #6737; ~72cm curved length  
45.5cm " width  
10.5cm Tail



reasonably fresh. platylepas skin barocles present - patches  
of skin saved for DeLaney. Polysiphonia  
on skin.

Thickness of fat - mid-carapace .5cm  
Pelvic region 1.5cm - 4cm

Very thin layer of fat at legs -

but fat deposits thicker at  
certain sites between vertebrae.

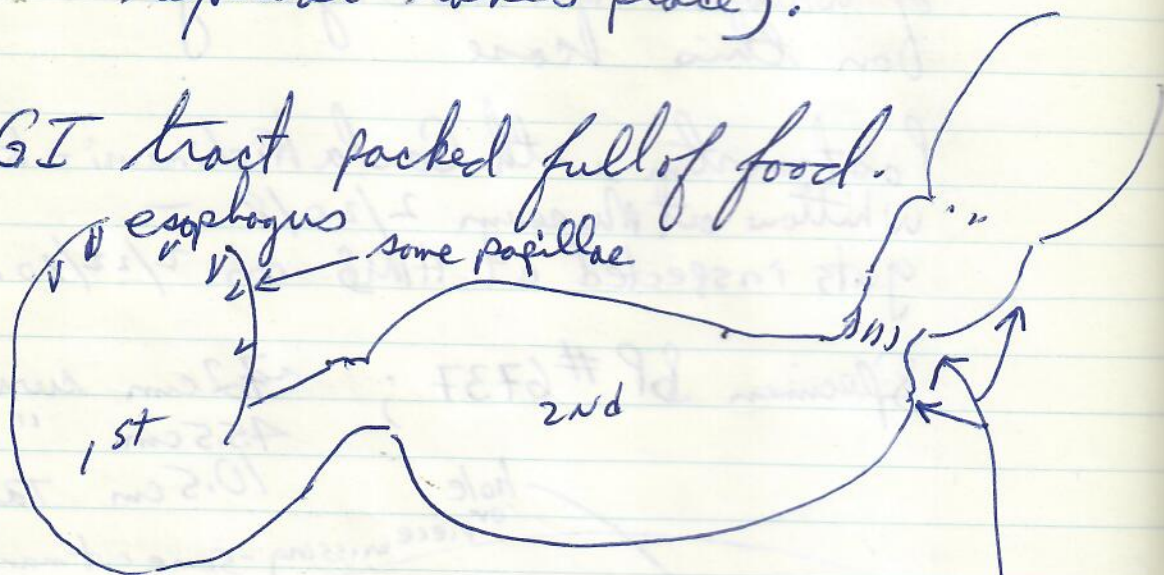
Spine to bridge cut - 21cm

Spine to bridge cut - 28cm

Hard impacted in body cavity through injury.

Notes: Gonads - female, but oocytes are very small. Female (under sep reversal takes place).

GI tract packed full of food.



1st stomach contents - 840 grams  
pockets of Amansia noted -  
also small filament Codium.

2nd stomach - 514.5g  
lots of Amansia in "lower" portion -  
note that gut wall is sloughing off  
from decomposition.

Sample of each preserved for D. Russell I.D.

JAN -  
FEBRUARY 1980

Juvenile green confiscated by FWS -  
Kim Wright - had been injected with  
formalin - Source - FIJI

SL - 38.6 cm x 33.6

CL - 40.5 cm x 40.3

PL - 30.2

HEAD - 6.3

Stomach only slightly full of food.

Preserved organs and flesh cut out,  
remainder of specimen saved.

Algae samples from stomachs pressed  
& wet preserved for Dennis Russell ID



26 FEB 1980 • Juvenile Green Given to  
Waikiki Aquarium

by Mr. and Mrs. Hook  
2381 Hauamana Place  
Honolulu 96819  
TEL - 841-2288

(letter of "thanks"  
sent)

Reported recovered from neighbor's gill(?)  
net (Sandy Beach?).

Tagged (inscribed with "reward"  
and "Tel 395-6409")

3301 RFL

(expanded)

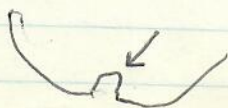
S - 52.9 cm x 41.0

3302 LFL

C - 56.0 x 47.9

Plastron 42.1 cm  
Head 8.3 cm  
TAIL 11.5 cm

Small piece missing from left front  
flap - healed. Possible site of small  
tag?



Also 2-3 cm diameter "plug" of flesh

26 FEB (CONT)

missing from shoulder-ventral area of  
right front flipper. - Cause unknown  
looks like an area cut out with a  
knife. Possibly a fishhook cut out?

Large phylepas present.

Red skin algae present.

Turtle appears slightly emaciated  
above neck and in plastron.

Turtle to be turned loose in front of  
Aquarium tonight at ~8 PM.

## BELLOW'S NETTING, EXPEDITION No. 15

10 APRIL

1980

Thursday

Departed for Bellow at 5PM from Coconut Island -  
Two nets in the water at jetty #1 ~ 6:30PM.  
Water feels warm. Turtle or turtles seen  
near sand/silt area close to shore.

11 APRIL

FRIDAY

At ~ 10 turtles seen shore side of net -  
sandy area.

Large man-o-war found on beach; Alan collected  
a number fecal pellets for processing.

I went to Federal Building from 11:30 - 5:15 PM.

At 3PM Alan removed a capture from the net  
near join. Turtle had been seen on both  
sides of net several times - apparently swam  
under net.

Does water have to be cloudy / or nighttime /  
for captures to occur?

While I was gone, Kam talked to  
local man with throw net (illegal, small size);  
~ 28 years old, thin, long hair, small beard. Stated  
that frogged a turtle in the flipper while  
fishing from jetty - turtle had one tag  
close to the body, - no number was  
recorded - Turtle was carried down the  
beach to "be released".

66

5/16/89 Scuba (Twin Reef Kawelo spot)

11 APRIL 1980  
FRIDAY

3 PM - JETTY #1

72.9

S - 60.3 \* 46.1

①

77.5

2538 RFL C - 64.5 \* 55.2

2539 LFL

PLASTRON - 47.9

HEAD - 8.8

TAIL - 11.3

12.6 cm  
increase  
for 9.08 yr  
∴ 1.34 cm/yr

117.5 lbs

Very small extra plate in breast area of plastron. WEIGHT - 67 lb

Floating cyst-tumor felt just under skin on ventral side of humerus.

A few skin barnacles noted.

one cheleboris noted on plastron; several more on carapace - one is quite large; All collected. -SIZE- cm

Pink coralline on carapace.

Sample scraping taken of algae on "skin" (green)

Right edge of mouth has small injury from biting net.

Red slimy/juicy mass from mouth probably from stomach algae. Nothing present in mouth. NO photos taken.

Released morning of 12 April 1980.

During late afternoon of 11 April -  
 strong winds, cloudy, and rain squalls  
 started. At ~8:00 PM noted that outside  
 anchor of net was dragging slowly.  
 Buoy moving toward jetty - net  
 "ballooning" at mouth of stream.  
 At ~9 PM first noted turtle in  
 net (section one) - turtle retrieved  
 by taking tube out stream. Longshore  
 current (toward Wajwarab) very strong.  
 Turtle tangled tight - had to cut  
 lines around neck. Plastic bag also  
 entangled in netting with turtle.

Net continued to drag throughout night.  
 By 6 AM morning light it was  
 mostly in front of river mouth, partly  
 on <sup>coral</sup> rock. Removed at ~8 AM  
 Total net time - ~36 hours

Depart Bellows ~8:30 AM.

11 April 1980 Bellows - 9 AM capture  
FRIDAY

② S - 51.7 x 42.2

c 2540 PFL C - 54.4 x 49.8

o 2541 LFL  
PLASTRON - 43.3  
HEAD - 7.7  
TAIL - 10.5

Very few skin baracles present. WEIGHT - 48 lbs  
Stomach tube sample taken - red juice  
and red alga particles obtained.  
Faint red alga on skin - green on plastron.  
Net burns on flippers.  
Carapace coloration is brown - with  
clear "bone colored" areas (like turtle with  
plastic around neck). No photos taken.  
Pink scabbing on carapace.  
Edge of mouth slightly broken due to  
self-bite (insertion of rolled tape measure).  
Left hind flipper has healed injured area  
with nail missing. Scales seem  
slightly "shriveled" - deformed.  
see page 65, daily log.  
Released early morning of  
12 April

ventral  
view

nail  
missing

6 MAY 1980 (TUES)  
 Bellows netting at Jetty #1

- two nets in the water at 6:45 PM - 2650  
 tide coming up - peak ~ 9 PM.
- First capture at ~ 7:20, almost dark. 2550

7 MAY 1980  
 (WED)

10:30 AM capture  
 2 PM capture by kam

~ 5 PM single piece of net put  
 across stream mouth. Turtles seen  
 in mouth - slightly up river. Lots  
 of Hydris seen growing on rocks -  
~~also~~ ulva.

Two turtles caught off jetty at ~ 6:30 PM  
 One turtle caught at stream mouth  
 at 7 PM. 6 total

8 MAY 1980  
 (THURS)

All nets out of water at ~ 12:30 AM

TOTAL TIME: 41 hours 45 MINUTES

Fecal pellets seen on beach - one with  
 "hair" collected.

Man-o-war seen on beach - remains  
 noted by large ghost crab holes.

Captures as follows, in order:

6 MAY 1980 - 7:20 PM

①

M - 2650 LFL S - 52.8 x 40.4

Dark. 2550 RFL C - 56.6 x 48.1

PL - 41.6

HEAD - 8.2

TAIL - 9.8

Weight - 44 lbs

Red skin alga - 2 skin barnacles  
 Single barnacle removed from first central -  
 Possible 3-prong spear holes on second  
 central. . .

Pink coralline on ventral surface of  
 marginals and on carapace.

one photo taken - first in Bellows series  
 for this expedition.



72

7 MAY 1980  
Wednesday

10:30 AM capture

②

2542 LFL

S - 44.5 x 35.4

2543 RFL

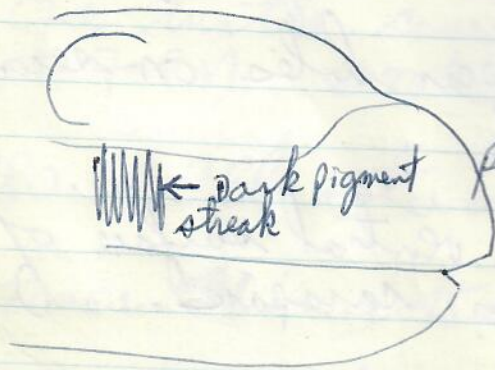
C - 48.0 x 42.8

PL - 35.4

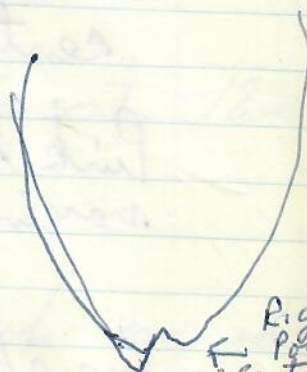
HEAD - 7.2

TAIL - 8.1

WEIGHT - 29 lbs



photos of head



Right Post Central short-part missing

Red skin algae -

pink scum on plastic - abundant on saropale

Stomach sampled - nothing obtained.

- photos - but camera malfunction - slow shutter and frozen. <sup>full body dark #20-21</sup>

7 MAY 1980 2:15 capture - middle of net  
 Wednesday following rain squall - A. kam alone.

③

S-61.6 x 49.5

2544 LFL

2545 RFL

C-65.5 x 58.7

PL-48.5

HEAD-9.2

TAIL-12.3

WEIGHT-78 lbs

Red skin alga -  
 a few skin barnacles noted -  
 pink coralline on carapace -  
 Stomach sampled and retained -

no photos taken - late in  
 afternoon.

light  
 but  
 mostly  
 in  
 shade.

74

7 MAY 1980 wednesday ~ 6:30PM  
Balazs alone

④

2548RFL S- 41.9 - 2 x 35.3

2549LFL C- 44.1 - 0 x 41.0

PL- 32.4

HEAD- 6.8

TAIL- 7.4

WEIGHT- 2416g

Green algae on plastron  
Clean (new growth?) strips along  
laminae of carapace - interiors had  
scum - fouling.

photos # ~~25~~ 25-27 (25 malfunction)  
27-28-29

one skin barnacle noted -  
faint pink on skin -

7 MAY 1980 wednesday ~ 6:30 - <sup>caught</sup> right after  
removing 2548-49 from net - Balazs alone.

(5)

3323 LFL (395-6409)

S - 53.2 x 42.5

3324 RFL

C - 56.1 x 51.4

PL - 42.4

HEAD - 8.6

TAIL - 10.2

4 lbs

Left hind flipper has deformed, "schiveled"  
notch between 2-3 digit -  
deformed scale.

WEIGHT - 48 lbs

lots of red skin alga -  
pink coralline on ventral surfaces of post  
centrals  
photo #28 & #30

7 MAY 1980 ~ 7PM captured in net set  
across river mouth - Balaysalone

⑥

2546 LFL S- 54.5 x 42.3

2547 RFL C- 57.6 x 50.5

PL- 43.1

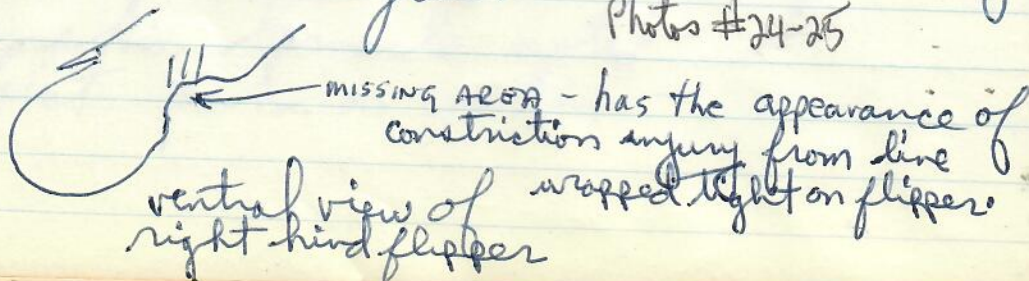
HEAD- 8.5

TAIL- 11.6

WEIGHT- 4916g  
one barnacle on 1st central - left on.

10 barnacles on plastron - removed  
and saved.

Pink coraline present, but very  
little skin algae. Photos #24-25



78

Lots of fishermen present - hook & lines, throw nets,  
 short visit, <sup>long beach seines.</sup> I noted small shark captured by fisherman. on ~16 May during

13 MAY 1980

## BELLOWS NETTING

TUESDAY

40 hours  
total

5/13 Seawater temperature outside river mouth - 26°C

5/15 Seawater temperature to the left of jetty - 27°C

~6:45 PM 2 nets in the water to the left of jetty #1

~7:30 PM - 2 nets to the right - across stream mouth.

I departed for home ~8:30 - 1 AM. At

~11 PM, Kam reports catching <sup>⓪</sup> turtle in left nets - close to body - but turtle got away while untangling - reported large. This was about the bottom of low tide.

14 MAY

WEDNESDAY

No turtles during the night (low-high ~2 AM), but captures made as follows: ① 8 AM - right nets - many barnacles collected ② 8:15 ③ 8:45 ④ 10 (large Platylopus collected - all from right nets apparently stream is pushing out desirable algae to accessible area, even at lower tide levels, i.e. Hypnea, Ulva, Acanthopora?

⑤ 11:30 AM - left net ⑥ 2:15 PM right net

I departed for dinner at ~4 PM

Kam called at ~4:30 PM reported ⑦ small turtle left net - MORTALITY - PROPOSED

Local C  
Barn-walrus

# "R"

14 MAY 1

WEDNESDAY

15 MAY 1980

Thursday

3325 LFC

Tel. 395

3451 RF

(expand

Local (Pacemaker) visitor indicated that "boat-lead" of turtles sank at  
(Born-walwa) Hakiwa - man was greedy. Also, many turtles could be found  
at "Rockefeller" Hotel. Nesting takes place on beach. 79

14 MAY 1980

WEDNESDAY

I returned to Bellows at ~ 5:30 PM  
4<sup>(8)(9)(10)(11)</sup> more captures before Kam's departure  
for dive class at 6 PM. I caught one more  
(tag 2335)<sup>(12)</sup> at dark. Checked hourly all  
night - at 5 AM right net same loose  
(abrasion on buoy) - "wadded" in front of stream  
mouth. Left nets taken out lat ~

15 MAY 1980 10:30 AM

Thursday

① 14 May 1980.

S - 55.4 × 45.4

3325 LFL

(Tel. 395-6409 inscribed)

C - 59.1

× 53.8

3451 RFL

(expanded)

PL - 44.0

HEAD - 8.5

TAIL - 10.1

WT - 52 lbs

Lots of Polysiphonia; 5 barnacles removed  
and saved; only one skin barnacle noted;  
Pink coralline on carapace; stomach  
sampled using flask - Ulva removed from mouth.

TAG 3452 bad application  
removed and retained in  
file.

② 14 May 1980, Bellows

S - 51.0 x 40.9

3453 LFL

C - 53.9 x 47.7

3454 RFL

(expanded)

PL - 42.0

HEAD - 7.9

TAIL - 9.0

WT - 44 lbs

one barnacle on left ventral marginal  
(retained).

Polysiphonia noted.

notch-cut between 3-4th digit  
of right hind flippers

3456

Expan

3455



③ 14 May 1980, Bellows

3456 (expanded) S- 45.0 x 37.1

C- 47.2 x 45.0

3455

PL- 37.2

HEAD- 7.3

TAIL- 8.5

WT-29165

Polysiphonia noted.

no skin barnacles apparent.

Stomach sampled.

pink coralline on marginal, especially post-centrals.

light colored shell - feet scales brown mixed with black.

(4) 14 May 1980, Bellows

3457 LFL  
(expanded)

S - 48.5 x 38.4

3458 RFL

C - 51.5 x 45.0

PL - 38.5

HEAD - 7.6

TAIL - 9.1

wt 32165

Polysiphonia  
skin paracles (retained)  
light-colored shell

⑤ 14 MAY 1980, Bellows  
(left nets)

3459 LFL S - 45.0 x 35.4

3460 RFL C - 47.5 x 40.4  
(expanded)

PL - 36.1  
HEAD - 7.0  
TAIL - 9.1

Wt 29 lbs

Small amounts of Polysiphonia  
and coralline (centrals & ventral marginals)  
no barnacles;  
dorsal

⑥ 14 MAY 1980, Bellows  
(Right nets, 2:15 PM)

3461 LFL  
(expanded)

S - 43.9 x 33.7

3462 RFL

C - 46.5 x 39.3

PL - 35.6

HEAD - 7.2

TAIL - 8.1

Weight - 271bs  
Skin algae - green and red(?) - could  
be green slime (retained in vial) -  
one skin barnacle noted on neck.

⑦ 14 May 1980, Bellows  
(late afternoon capture)

RECOVERY - originally tagged 7 May 1980 - Bellows

3323

3323 LFL

(tel. 395-6409)

Straight length - 53.2 cm

5/7/80 - 53.2

3324 RFL

⑧ 14 May 1980, Bellows

Recapture - originally tagged 30 May 1979  
Bellows

11.5 month  
elapsed time =

.304 cm/month



Right PC slightly shorter than left

3090

S- 50.5 [50.3] x 45.2  
5/30/79 47.5

3091

C- 53.9 [53.5] x 55.1

PL- 41.2

HEAD- 7.8

TAIL- 10.7

WEIGHT - 45 lbs

5/30/79 - 35 lbs

Black pigment in plastron -  
healed injuries to hind flippers -  
smooth soft skin - no skin barnacles  
wide carapace - pointed post-centrals.  
(3090) Right tag - piercing site is close to  
trailing edge - Left tag (3091) expanded.

Photos taken # 5-8

⑨ 14 May 1980 - Bellows

3465 LFL  
(expanded slightly)

S- 41.4 x 32.8

C- 43.5 x 37.7

3466 RFL

PL- 33.0

HEAD- 6.7

TAIL- 7.3

Weight- 211bs

one barnacle on right side  
of plastron (retained).

algae on plastron.

Scum and coralline algae on carapace.

photos taken - #1 & 2

⑩ 14 May 1980 - Bellows

3463 LFL S- 40.4 x 32.3

C- 43.0 x 37.1

3464 RFL

PL- 31.9

HEAD- 6.7

TAIL- 6.9

WEIGHT- 216g

Red and green skin algae -  
red on plastic -  
relatively clean surface

Photos #3-4



⑩ 14 MAY 1980 - Bellows

(my capture alone right at sunset)

RECAPTURE - originally tagged 1 August 1977  
BELLWS

33.5 months elapsed time

0.46 cm/month

2335 RFL (close to edge)

2336

S - 51.6 x 41.0  
8/1/77 46.7

3467 L<sup>F</sup>

(new as of  
this date)

C - 54.5 x 49.5

PL - 42.1

HEAD - 7.9

TAIL - 11.2

Light colored scapulae

two small Chelobornia ~ 4 x 7 mm



WEIGHT - 43 lbs

8/1/77 - 30 lbs

photos of turtle and close-up of tags  
with fouling growth.

Two skin barnacles noted; amphipod  
on hind flippers (retained?); green alga  
on plastron; red and green algae on skin;  
Pink coralline on marginals.

5 JUNE 1980 Juvenile green  
Thursday afternoon Release from captivity at  
the Waikiki Aquarium

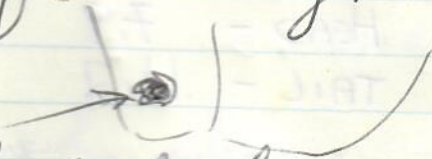
C- 19  $\frac{1}{8}$  x 17  $\frac{1}{8}$   
48.6 cm 43.5

3326 LFL

3327 RFL

2<sup>nd</sup> old "3-prong" (?) marks in  
central

Healed hole clear through left  
post central



Possibly tethered at this site.  
Anonymously turned in to the  
Aquarium about month ago.

Released because harbor seals are  
starting to bite turtle.  
Third flippers & end of front flippers  
have skin peeled from bites.  
Reported that this turtle has hauled  
out to totally dry position in  
display tank island - happened several  
times.

30-31 July 1980  
Wed.-Thurs.

BELLOWS NETTING  
(EXPEDITION 18)

2 nets in water at Jetty #1 ~ 5PM -  
no fishermen present -

High tide will be ~ 5:15PM Moon 2-3  
nights past full. Water very warm, but  
temperature not taken.

Caught two turtles 5:15-5:30PM -  
one while we were still straightening the  
net.

Both "worked up" and released  
on the opposite side of drainage ditch  
before dark. Considerable concern  
expressed by passer-bys -  
"Denise" and others.

Captures were as follows:

30 July 1980 wednesday

3680 LFL

S - 43.7 x 35.3

3679 RFL

C - 46.8 x 42.0

PL - 34.4

HEAD - 6.9

TAIL - 7.6

Weight - 27 lbs

- green alga on plastron
- no barnacles (skin or carapace)
- pink coralline on carapace
- light colored areas on carapace

no photos taken

30 July 1980 Wednesday (Bellows EXP 18)  
 ~ 5:30 PM capture

RECOVERY originally tagged 5/6/80 S-52.8 x 40.4 wt-44g

2550 RFL S-53.7 x 41.5

both already expanded - clean

2650 LFL C-58.2 x 49.1

PL- 42.8

HEAD- 8.1

TAIL- 9.4



WEIGHT- 49.1g

- small amount of green algae on plastron
- only noted one skin barnacle  
 no photos taken

- Tiny pieces of Uva noted in both
- hook <sup>RETAINED</sup> found in right dorsal skin surface - humerus section - black necrosis in skin noted
- noted "three-prong" injury in carapace

31 July 1980 Thursday  
 Captured - 4:00 - 4:30 AM

RECOVERY originally tagged 8/2/77; Recovered 5/30/79  
 21 months 28 days 14 months  
 S - 63.3 x 51.7 S - 61.3  
 wt - 74 lbs

C - 67.2 x 64.3

2332 LFL - (tag close to edge - hole enlarged but healed) CSW - 1.24

2333 RFL (on good, but some swelling of tissue - I expanded it further - (almost a ring))

2334 <sup>RF</sup> (beam on scales)

3681 (L through 3<sup>rd</sup> scale)

PL - 50.7

- Moderate number of skin barnacles
- Polysiphonia, particularly ventral pelvic skin
- pink coralline on carapace

no photos taken -  
 Released at stream mouth - 8 AM

30-31 July 1980 Bellows (Expedition 18)  
Wed-Thursday

From ~ 6<sup>PM</sup> - sunset, and dark, we observed 2-3 turtles foraging (surfacing frequently) right along side of jetty, to the north. Turtles were, at times, in very shallow water right up near rocks - presumably feeding on algae growing on these rocks. On one occasion, a turtle almost got completely turned over.

Note - that none of these turtles got caught in the nets. Two possible explanations:  
1.) swam under net as the bottom is ~ 3 feet above the ocean bottom  
2.) turtles swam to the north, out and around net.

Of course, a ~~third~~ third possible might be that they sleep along side jetty - (seems unlikely).

At ~ 4:30 AM a sting ray was noted in net. After taking turtle by 2332 out of net, we proceeded to inspect ray. ~~at sunrise~~ <sup>at sunrise</sup> ray got barb in left forearm. Proceeded to Castle Emergency room for treatment. Arrived ~ 7 PM.

31 July 1980 Bellows

I returned to ~~the~~ measure turtle and release it. Also took nets out of the water - released ray by cutting net when on the beach. Returned to get Kam, and returned to Bellows to disassemble campsite. - 10 AM completed.



17 September 1980 (Wednesday)

Marshall Is. (origin) green turtle  
 at Waikiki Aquarium - returned from SLP  
 1-2 weeks ago - was in turtle pond  
 but Steve Kaiser felt it was biting other  
 larger turtles. Turtle was originally  
 given to Waikiki Aquarium by <sup>commercial fishery</sup> pilot  
 came from Likiep (?) Atoll, Marshall Is.  
 (check other record books).

3288LFL S - 62.2cm x 50.3

3650RFL (new) C - 65.5 x 58.0  
 SSW Ratio = 1.15

TAIL - 10.5cm

PL - 51.2

Ends of front flippers partly broken,  
 apparent from flapping around  
 during transport. Carapace, head and  
 dorsal flippers are reddish in color -  
 Shape of carapace is more like a  
 "loggerhead" - appears flat - PC  
 short and blocky



Turtle to be released tonight off beach  
 in front of the Aquarium. NO - released 9/22/80  
 GRABBED BY TONGANS, BUT RELEASED AGAIN.

17 AUG 1980 recovery of juvenile green turtle  
mortality from Kaialoa Bay - spear hole.

Processed at Coconut Is. on 19 AUG 80 -  
from John Topliss  
148 Kuuhae - friend of John Naughton

S - 41.7 cm x 33.1

C - 44.5 x 40.3

PL - 33.4

HEAD - 7.0

TAIL - 9.5

CSW - 1.22

24 lbs

WEIGHT - 10.9 kg

6<sup>th</sup> marginal of carapace is deformed - indented  
but healed. "Spear" hole in 3<sup>rd</sup>  
lateral right - goes all the way through  
plastron.

Coralline alga on postcentral right.  
Drawings by Kam in daily log -  
incisions present just anterior of PL  
and above right third flipper, but  
these were made by John Topliss for  
possible tapidermy.

Carapace returned to Topliss at his request  
via John Naughton - other bones extracted  
and retained during January 1981.

Body weights taken by Alan Kam are as follows:

Total weight of turtle - 10,900 g

Front quarter (head, neck pectoral-flippers) 4179  
 Hindquarters (flippers-pelvic girdle) 1089

Plastron 605 g (5.6%)  
 Carapace 1635 g (15.0%)

Stomach & Intestines 2537 (23.3%)

Head & neck 722 (6.6%)

Lungs 155 (1.4%)

Organs (?) 278 (2.6%)

Fat from carapace 295 (2.7%)

	WHOLE	MEAT	SKIN-BONE
Left front flipper	1734	1260	431
Right front flipper	1715	1228	458
		2488	(22.8%)

Hindquarters, meat - 224 (2.1%)  
 Bone-skin 733

GI tract:

Length - upper stomach <sup>5" or 12.7cm</sup> to end - 22' or 5.6m

Upper stomach - w/ contents - 374

Stomach - 79  
Algal contents - 295g (2.7%)

Second stomach (13" or 33cm) - 310

Stomach  
Algal contents - 86  
224g (2.1%)

Samples preserved for ID by Dennis Russell -  
pressings made.

30-31 OCTOBER 1980  
(Thursday - Friday)

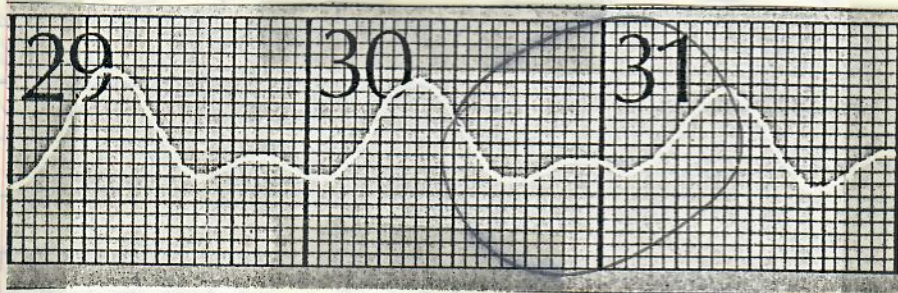
BELLOWS EXP. 19

10/30

6:15 PM

Two nets set parallel to shore to the left of jetty #1 - Sun has set - almost dark.

Water warm - but temperature not taken. No turtles seen, none caught. Tide as below:



Checked net at ~ 30 minute intervals all night long. Established "watches."  
Turtle caught at ~ 6:30 AM 10/31 - in first half of net closest to jetty. A second turtle subsequently seen repeatedly surfacing inside net area. Net pulled in close by jetty, but turtle apparently departed before we started ~~procedure~~ procedure. Net removed from water at 11:30 AM

TOTAL TIME - 17 hours

10/31/80

NO. 45 in  
Gray BookTAG  
RECOVERY

S- 54.5 x 41.9

2650 LFL

C- 58.5 x 50.0

2550 RFL

PL- 43.0

HEAD - 8.4

TAIL - 10.5

WT. - 47 lbs

- Stomach pumped, but only a few pieces of Ulva obtain - not saved.
- Small quantities of red and green algae on periphery of carapace.
- Lots of pink coralline on carapace -  
Photos - #1-2
- 3 "prong" spear marks noted
- no skin, barnacles present
- Amphipod found while pumping stomach -  
not retained

"AUTOPSY REPORT"  
POST-MORTEM REPORT

JUNE 1980 EAST IS. ADULT

MALE Mortality

Dissection 9/14/80:

COCONUT IS.

HIMB.

Photos taken at East on  
beach, and on cement at

S- 87.8cm x 70.0

C- 93.0 x 86.0

PL- 68.7

S/CWRatio - 1.229

HEAD- 12.0

TAIL- 38.0

WEIGHT- 165<sup>lbs</sup>

75kg

Eyes extracted whole and frozen.

Lots of green fat along margins  
and pelvic area.

Red algae on skin; large skin  
barnacles on hind quarters.

Right front flipper missing -  
Ulna and radius intact (check for  
shark tooth remains).

~ 7" laceration in tail.

Lacerations - "sliced" on both  
sides of left hind flipper.

Second marginal on left shows old  
injury - healed.

Examinations into skin and muscle

entered 1/2

at anterior margin of plastron revealed  
4 roundish pieces of lead.

Barracle in plastron removed that  
could be Stephanolepis.

1st & 2nd stomachs and upper intestine  
taken to lab - preserved & passed.  
Large pieces of Turbinaria noted.

Examined by Nancy Withers for  
siquantizing agent - none found, see  
report in "algae file".

All body fat saved for Nancy.

Bones & shell to be extracted  
and cleaned. Accomplished -  
data as follows:

entered 1/27/81

Carapace -	<del>20</del> lbs	(13.3%)
plastron -	6 lbs	(3.6%)
Lungs -	1250 grams	(1.7%)
Heart -	200g	(.27%)
Liver -	1310 g	(1.7%)
FAT -	2640 g	(3.5%)
Misc pieces of fat and flesh -	1755g	(2.3%)

Head - neck -

GI Tract -

- continued -



## EAST IS. MALE MORTALITY (CONT.)

Right front flipper - 9410 g

MEAT 7360 (9.8%)  
 Scap./Acrom. Process - 590  
 Humerus, radius, ulna, other - 1460

LEFT front flipper - 10,440 g

MEAT 7500 (10%)  
 Scap./Acrom. Process. 640  
 Humerus, radius, ulna, phalanges 2290

RIGHT HIND flipper - 3000 g  
 Meat 1220 (1.6%)  
 bone, skin 1780

LEFT HIND FLIPPER 2675  
 MEAT 975 (1.3%)  
 bone, skin 1800

TAIL - 3750 (5%)

Organs in pelvic region - 456 (0.6%)

Pelvis 4000  
 bone 2480  
 Meat 1510 (2.0%)

DECEMBER 10 1980

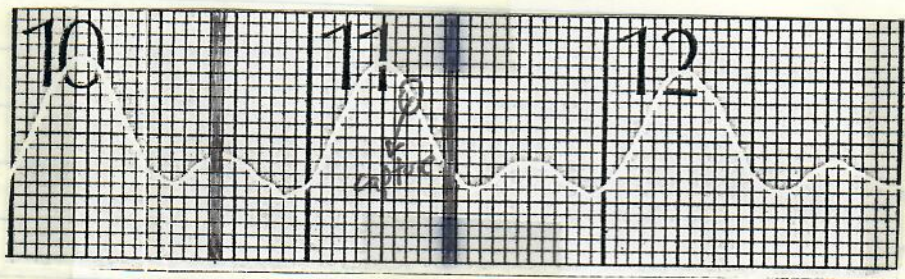
EXPED. 20

BELLOW'S

5:30 PM two nets site #1 left side

6:15 PM <sup>- sunset</sup> one net - right side.

No turtles seen, but visitor said he saw "some" at 3-4 PM.



Seawater temperature - 26-27°C

Turtle captured on left (inside joint) at 8:20 AM.

No moon. Kona weather - calm seas, clear skies, cold night.

Nets taken out at ~ 11 AM

Dec 11, 81  
Thursday

26.5°C seawater

S-52.8 x 41.6

3515 RFL

3516 LFL

C-56.0 x 51.0

PL- 42.1

HEAD- 8.3

TAIL- 8.6

WT- 45 lbs

Brown "central" areas to carapace plates, but anterior portions mostly white.

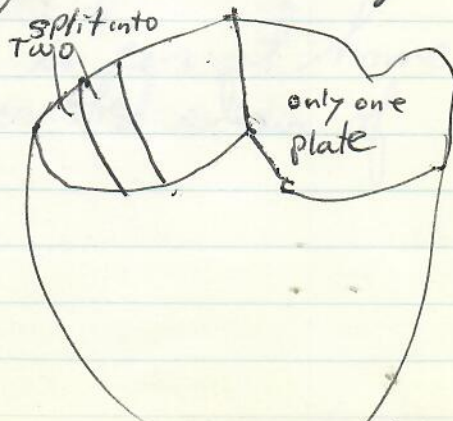
Pink scalling on seams of plates <sup>under sides</sup> of margins.  
Red skin algae mostly on pelvic region; Green on plastron.

Only 2-3 skin barns.

Stomach pumping - only fluid; red alga removed from mouth.

Plastron orangish.

Very soft skin.



PLASTRON

5 JANUARY 1981 <sup>Reportedly found by kids</sup>

"DRAINAGE-DITCH" juvenile, turned in to Waikiki Aquarium - reportedly held in people's backyard - neighbor reported to DOW CARE officer - Held at Aquarium since approximately 22 DECEMBER - 1980, eating fish & squid - but pectoral sunken and atrophy to shoulder muscles.

Released at BELLOWS site #1 at ~11 AM 1/5/81  
Swam toward reef - surfacing at regular intervals.

Tagged	S - 38.8	x	32.8 cm
3727LFL			
(only)	C - 41.2	x	37.0 cm

HEAD - 6.2  
PL - 31.2  
TAIL - 7.2

Small piece of scute missing from 4th septal  
Held overnight 1/4 - 1/5/81 in car at home.  
Shell, head, and skin scrubbed clean of heavy algae growth.

6 JANUARY 1981 WAIMANALO JUVENILE  
 turned in to SLP 1/5/81 -  
 reportedly found "on the beach with kids" at  
 beginning of Bellows.  
 Released ~ 10 AM at Bellows site #1 - swam  
 out vigorously.

3728 RFL

S - 49.0 x 38.5 cm

5109 LFL

C - 52.0 x 45.0 cm

PL - 39.6 cm

Fecal matter collected from holding tank  
 at SL Park.

2-3 skin barnacles noted -

Small amount of white coralline algae  
 on carapace -

Clean body - light brown, radiating  
 carapace almost no algae on body.

6 JANUARY 1981  
TUESDAY

SLP largest adult female 14 JAN  
Release

S - 107.9 cm x 84.0 cm

5107 RFL C - 112.8 cm x 105.0 cm

5108<sup>FL</sup> (Through scale)

3726 LFL

HEAD - 16 cm

Very light "bleached-out" color to carapace, head, and flippers. Right hind flipper is bitten up into a stub. Margins on right posterior side are missing - have been ever since I first saw this turtle many years ago. This turtle could possibly have been in captivity since 1965 - (see early data sheets). Shoulder areas, particularly left anterior, is bitten and scabbed. Turtle dumped off truck off Makai Pier ~ 10 AM. Swam rapidly out underwater - surfacing (not seen, although we watched for ~ 15 minutes). Scabby flakes in water where turtle hit with force.

3081-

3497R

5051R<sup>FL</sup>

14-15  
Wednesday

-6PM

14 JANUARY 81 - Released Tuamotu turtle at Bellows, Site #1 ~ 3 PM.  
Trapped for a short time by rock of breakwater - swimming slowly out when last seen.

2081 - removed from left distal flipper, where dorsal knobby growth occurred.  
Reapplied through 4th scale, right front flipper.

2497 RFL S - 56.7 cm x 46.2

5051 <sup>new</sup> RFL C - 60.4 cm x 53.5

PL - 46.0 • HEAD - 8.5 • TAIL 11.5 • WT 54 lbs  
LIGHT yellow plastron, and orange carapace (PHOTOS).  
Old FROEN "BURN" created depigmented area on left hind dorsal flipper.

14-15 JANUARY 1981 BELLOWS NETTING  
Wednesday - Thursday

HIGH		LOW	
Time	Hr.	Time	Hr.
12:00 a.m.	1.5	6:13 a.m.	0.6
WED. 10:44 a.m.	1.0	5:23 p.m.	-0.2
15 12:56 a.m.	1.8	7:45 a.m.	0.5
THU. 12:00 m.	0.8	6:11 p.m.	-0.2

Waianalo -1:17 -1:12 \*0.92 \*0.92

-6 PM 2 sections of net laid out somewhat parallel to site #1 jetty - calm seas.

A 10:30 AM 1/15/81 Alan saw a turtle for a short time ~ 150' out from end of jetty.

During AM a small plane circled offshore while 2 boats motored in circles, setting nets apparently for a hula (?). Also, row boat in tow. Drainage canal water is brown, obviously from digging/construction work occurring at highway.

Nets taken out at 12:30 PM.  
No jetty fish or turtle feces seen on the beach.  
Very cold night with dew - sunny and calm with some southerly wind on 1/15/81.

Total time - 18.5 hours

- 30-31 OCTOBER 1980 BELLOWS (EXPED. 19) . . . . . p. 104-105  
(17 hours) (1 capture - a recovery)
- June 1980 East IS. Adult Male Mortality -  
Dissection at lab 9/14/80 . . . . . p. 108
- 10-11 DEC 80 BELLOWS (EXPED. 20) . Total time 17 hours p. 112-113  
(1 capture - new) 3325; 3451
- 5 JANUARY 1981 "DRAINAGE-DITCH" Turtle GIVEN TO Waihiki Aquarium . p. 115  
(Bellows Release)
- 6 JANUARY 1981 Waimanalo juvenile to SLP (Bellows Release) . . . . . p. 116
- 6 JANUARY 1981 Largest adult Female - (Makai Pier)  
Released from Sea Life Park . . . p. 118
- 14 JANUARY 1981 Release of Tuamotu turtle . . . . . p. 119  
(2497, 2081, 5051)
- 14-15 JANUARY 1981 (EXPEDITION 21) . . . 18.5 hours . . . . . p. 119  
(no captures)



