

SAMPLES TAKEN FROM ALBATROSS BY  
Lisianski? G.B. JULY 1978

8/28

Weight taken 8/22/78

# of Squid beats

sample #

sample #	Weight	Notes	# of Squid beats
1	mw -	set aside	(mw) mw - mw
2	10.3 gms.		(0) 0 0
3	23.0 gms.		(30)+ 97 157
4	15.6 gms		(114) 22 33
5	27.5 gms		(8)+ 20 27
6	30.7 gms		(31)+ 119 220
7	44.4 gms		(614) 79 127
8	mw -	set aside	(mw) mw - mw
9	29.2 gms		(68+) 176 232
10	mw -	set aside	(mw) mw - mw

Wt. of PLASTIC

Sample #	Weight	Calculation	Result	Notes
1	-	1 <del>mw</del> = -	-	
2	8.9 g	8.9 / 2 = 0	0	
3	5.6 g	6.5 / 2 = 93.5	94	poss. 2.5
4	2.3 g	10 / 2 = 22	22	poss. .5
5	12.9 g	21.6 / 2 = 17.5	18	poss. 2.0
6	8.2 g	9.7 / 2 = 125.5	126	poss. 2.5
7	24.5 g	29.2 / 2 = 94	94	poss. 5
8	-	8, <del>mw</del> = -	-	
9	2.9 g	8.8 / 2 = 150	150	poss. 11
10	-	10, <del>mw</del> = -	-	

paper products  
have fibers

10/20/78

65.6 x 48.8PUMICE STONE, MONOFILAMENT LINE  
PLASTIC BEAD?30.5 x 30.3

KUKUI NOT

43.1 x 29.9

PUMICE STONE

66.7 x 25.6

TOY (SNAIL OR TURTLE?)

L x W

Measurements of Albatross regurgitations

TURTLES ON DISPLAY

36 INCH TURTLE - Green Chelonia mydas

skeleton

plate 1. Front flippers, left + right radius and ulna

plate 2. Left hind flipper, femur - tibia - fibula

plate 3. Right hind flipper, femur - tibia - fibula

Right and Left Scapula, acromial process  
neck vertebrae

Head - skull, gular bones, beak

Pelvic girdle

Tail vertebra

Humerus

Shell

Plastron

Hawksbill Sea Turtle Eretmochelys imbricate  
 from Sea Life Park, fat, metal objects  
 found in intestine + stomach - pop top lid  
 wine

### Skeleton

Plate 1. Right and Left Hind Flipper w/  
 femur, fibula + tibia, tail vertebra  
 pelvic girdle intact

Plate 2. Right and Left Foreflippers w/  
 Radius and Ulna  
 Humerus  
 Skull - upper and lower beak  
 gular bones

Neck vertebrae

Scapula, acromial process

Upper Carapace

Plastron

## Hawkebill

found Kaneohe Bay, caught in net - decomposing  
Bill Cooke, burrowing skin barnacles, buried by  
ash pile Coconut Island

Skull, upper and lower beak, gular bones

2 Humerus

1 Femur

7 Plates saved

Lateral w/ 4 barnacles - a drill hole

9/14/77. test to see if ridges show up if  
plate is sanded & cleaned

Ridges along perimeter of plates

Hawksbill

Sea Life Park

Head preserved w/ formalin, scales intact

Left front flipper - humerus, radius, ulna  
scapula, acromial process

Right front flipper - humerus, radius  
ulna, scapula, acromial process

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PLASTIC BOWL

Hawksbill plates

Green turtle

Kaneohe Bay, found floating on surface by  
Don Redalge, tumors barnacle encrusted

Bones removed from plastron

bones are light, sections of bone missing  
due to tumor intrusion onto the bone  
material

Unidentified

Hawksbill?

3 bones

humerus, radius, ulna



Green Turtle

Kailoa Bay, found by NOSC worker  
turtle was butchered near the canal and  
ponds - Mokapo Peninsula

Right + Left Hind - femur, fibula, tibia

Pelvic girdle

Tail vertebrae

Upper shell missing along w/ shoulder  
portion

## Green turtle

Lanai, Shipwreck Beach, north shore  
of Lanai, Ron McComber, turtle  
was washed up on beach - right eye  
missing, whole turtle

Carapace, hind flippers + head attached  
and treated with formalin

Right + Left acromial process, scapula  
Plastron

Right + Left fore flippers preserved  
in formalin for display

Ridley Shell  
from Aquarium  
cracked, need mending

Bones removed from stomach of Tiger shark

Axromial process + Scapula

2 Humeri

Bones eaten by stomach acids

Green Turtle from Midway Islands  
missing upper carapace

Plate 1. Left appendages revealed bones  
with the right side exposed w/ skin  
intact, Pelvic girdle, tail. Right + Left  
Acromial process and Scapula

17 APRIL 1979

Item: GREEN TURTLE      SLP - Bellows Beach  
 10 March 1979  
 HEAD QTRS (fins and pelvis)

★ left hind flipper missing toe nail

Total weight: 28 lbs

tail	-	2790 g.
left flipper	-	3565 g.
right flipper	-	3285 g.
pelvic		2664 g.

Separate flesh from bone

	meat		bone, skin.	
LEFT	1808.0 g	+	1772.0 g	= 3580
RIGHT	1630.0 g	+	1620.0 g	= 3250
PELVIS	1847.0 g	+	762.0 g	= 2609 ?

SAVE IN FREEZER ∴ 2 SKIN PATCHES FROM  
 HEAD FLIPPER - in box 6B  
 ∴ flippers on other SLP -  
 Bellows Hunt qtr

SLP/WAMAZO Greenturtle

10 March 1977 - Weights of flaps from April

flaps

$$LFL = 24 \text{ lb}$$

$$= \frac{16^+ \text{ lbs}}{\text{meat}}$$

$$RFL = 24 \text{ lb}$$

$$= \frac{17 \text{ lbs}}{\text{spring scale}}$$

meat

Loggerhead

Turtle

head

=

$7 \frac{1}{8}$

inches

BONE POLISHING

by AKHKAM

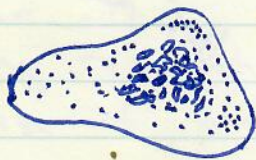
2 JULY 1979

A. Bone sections selected from 'spare-expendable' samples - 1. Canton Island 2. Kau 3.           ?

B. Initial experiment

SERIES

- z-1
- z-2
- z-3
- z-4
- z-5



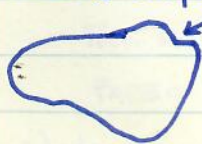
SERIES

- x-1
- x-2
- x-3
- x-4



z-1, z-5 - thin sections, wax extrudes through inner holes of core

\* bone chips along outside edge



because of grinding process and polishing on wheel



z-5 truncated from series because of observational sample LACKS STRONG EXTERIOR DEFINITION; No bands, perhaps polishing would reveal striation.

GRINDING PROCESS

SEARS, ROEBUCK CRAFTSMAN

model 397 19580

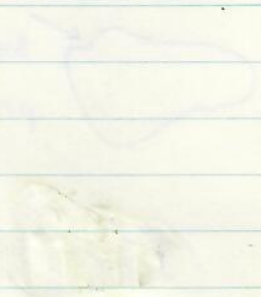
Totally enclosed ball bearing split phase motor

3450 rpm

115 v. 60 cycles 3.5 amps




Be sure to identify the bone you are using for  
the cross-section.



→ try to set  
sample into wax with  
as little overflow as possible, wax tends to overheat  
during grinding thereby sticking  
to the grinding stone 35

Initial process: make selection (based on 'height'  
of bone

1. saw bone into sections ROCKWELL  
Model 14 Band Saw

\* try using a finer toothed saw  to  
obtain sections

2. ~~grind~~ Set bone with 'dopping wax' (jeweler  
wax .52) <sup>Nickle Gum - Lapidary</sup> onto piece of wood

\* try to match up size of wood with the  
size of sample

3. Grind the bone down  
using HMB shop - grinder



4. Look for possible bone streaks  
2-4 first cut

5. WET OR DRY	# 240	(A)
TRI-M-ITE	# 360	(B)
PAPER	# 600	(C)

Waterproof silicon carbide

Carborundum all purpose grinding wheel  
5 in x 1 in. FINE Niagara brand, New York  
Black & Decker 4" Cotton buffs

Divine DICO 'Buffing Compound'  
Divine Brothers Company New York

Emery ES  
Trippoli TCB  
Sturtevant SCR  
Jeweler's Edge JRI

Beck  
 tetracycline  
 coral dating  
 Grenada blasts  
 Bimini  
 Smith - coral dating  
 bone skins  
 dentists

(A)	240	#	2
(B)	250	#	2
(C)	260	#	2

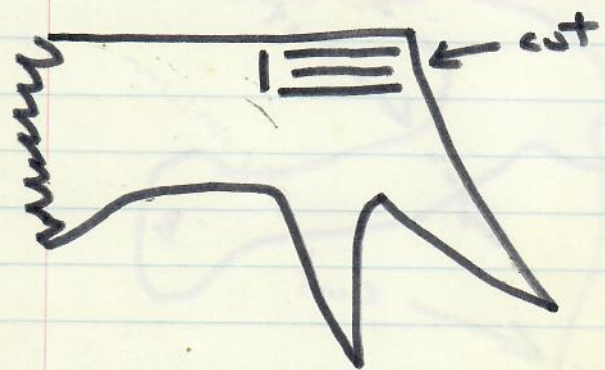
# A) Bone sections used

**Plastron**  
Plastron spine

HYO-  
HYPO-

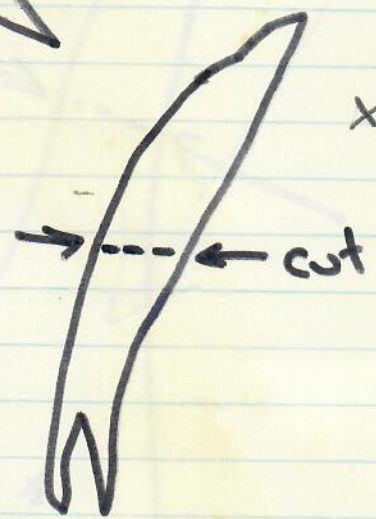


IA  
IB samples



Plastron bone

Xiphoplastron



**Marginal**



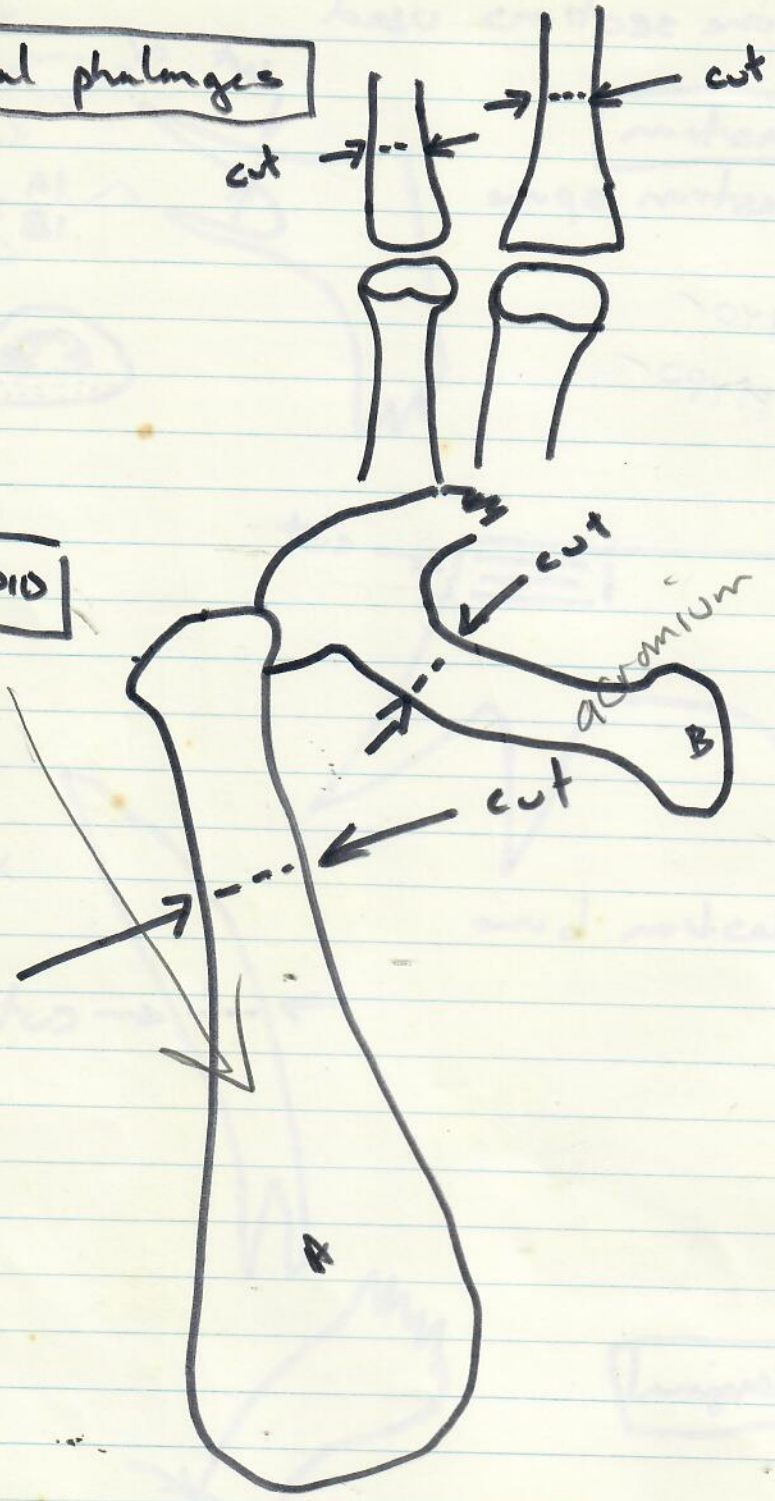
too porous



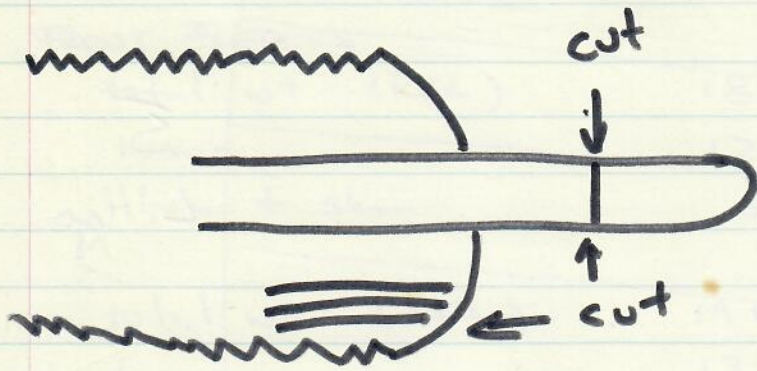
Distal phalanges

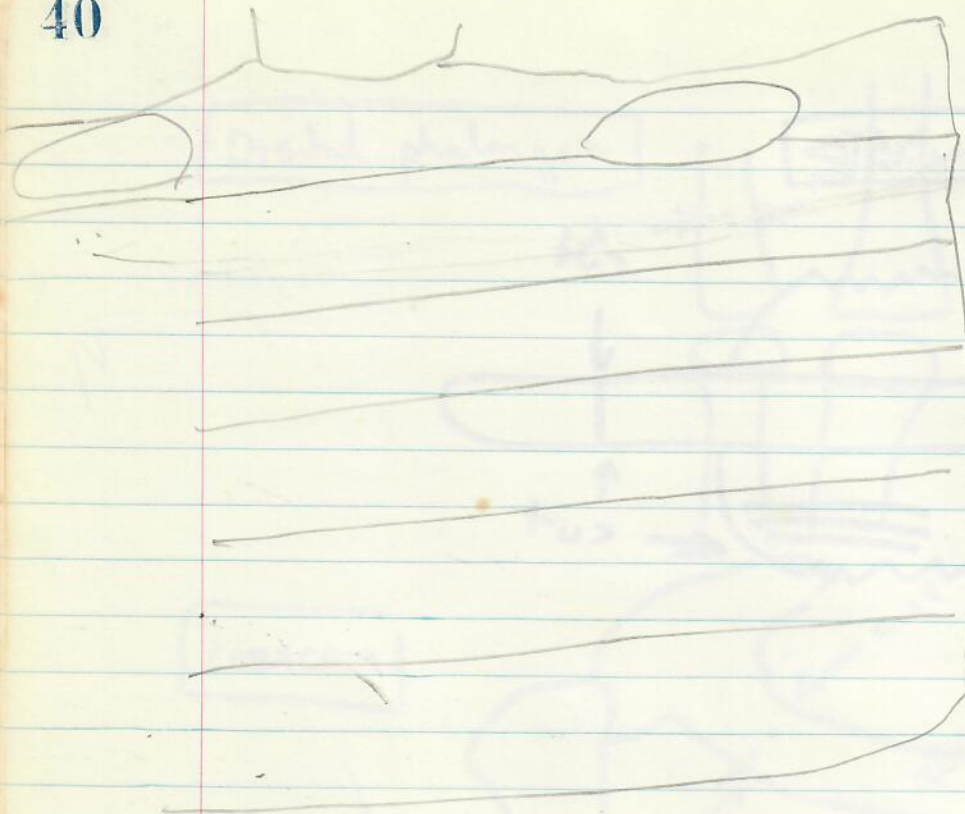
2

CORACOID



PLEURAL PLATES





#1414

5

L. Hygo

## HAWAII - KAI MORTALITY (found by J. Rutka)

## FRONT FLIPPERS

total wt. (RFL)	1833.5	g
tissue	1283.0	g
bone + skin	516.0	

total wt. (LFL)	1911. <sup>5</sup> <del>8</del>	g
tissue	1340.0	g
bone + skin	560.0	g

## HIND QUARTER

total wt.	1092.5	g
tissue	241.5	g
bone, tail, skin	843.5	g



observable bands (+)  
marginal visibility (-)

INVENTORY OF BONE SECTIONS

1. Distal Phalanges (random Kaw) -

2. Coracoid (random Kaw) -  
2 samples A+B



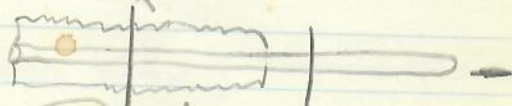
3. Marginal bone (random Kaw) -



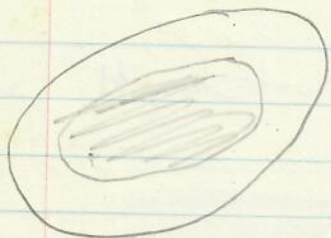
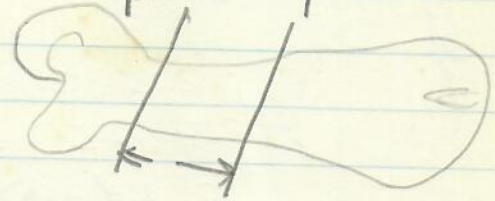
4. Plastron spine (random Kaw) -



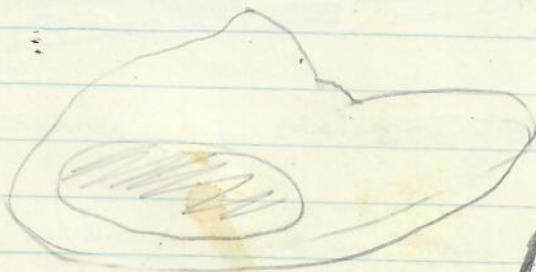
5. Pleural plates (TRIG ♂)



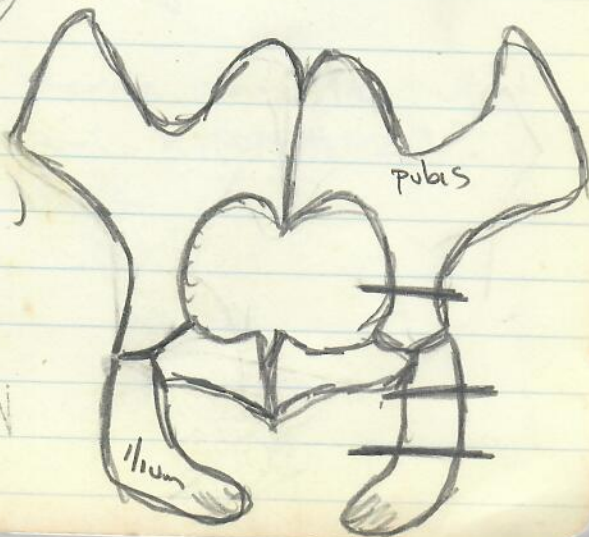
+ 6. Humerus (random Kaw)



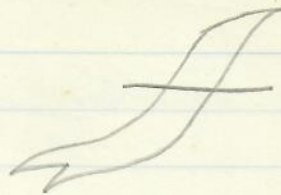
banding  
density - color  
(1) Alizarin stain 1:100 (acetone clear)



7. Ilium (Canton 6/77)



+ 8. Xiphoplastron (random Kau)



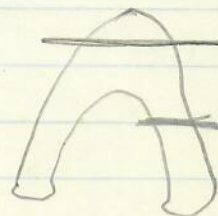
+ 9. Femur (random Kau)



10. Spinal vertebra (TRIG ♂ 1974)  
very little density on margins



11. Jaw mandible (random Kau)  
too porous





+ 12. Hypoplastron (random Kau)



inner edge realizes banding when cut and polished

- band diverge and become two, as it enters inward toward HYPOPLASTRON, the lines become fewer

13. Xiphiplastron - Left A   
 Hyoplastron - Left B  
 - Midway mortality
14. Femur (Sept - Oct 1978  
 (adult Lisianski mortality)  
 count - 4
15. Hyoplastron (adult Green)  
 Xiphiplastron
16. Humerus - Left A  
 Xiphiplastron - Left B  
 Hyoplastron - Left C  
 Hyoplastron - bias cot D  
 (# 1414 F#S)
17. Femur - Left - [skewed]<sup>\*</sup> A  
 Xiphiplastron. Left B  
 Hyoplastron - Left C  
 (18 July 1979, BAPS mortality missing head  
 all flippers;<sup>\*</sup>)
18. Hyoplastron - Right A (captive # 347)  
 Xiphiplastron - Right B

19. Hypoplastron - Left A  
 Xiphoplastron - Left B  
 (stuffed Ridley - cleaned)
20. Humerus (random Kau)  
 acetone clean, no stain, bias cut
- 
21. Humerus (from shark stomach <sup>tiger</sup> NWHI?)  
 acetone clean
22. Hypoplastron - Left A  
 Hypoplastron - Right B  
 Femur - Right C  
 Humerus - Left D (2 sizes)  
 acetone clean, -Alizarin stain  
 (Manuata Bay, Oct 1979)
23. Hypoplastron - Left A  
 Xiphoplastron - Right B  
 (Hawkebill, Kaneoke Bay mortality - dug up)

BARBERS POINT mortality-net  
 Fish and Game, confiscation - Al Stevens

FRONT Qtr (head and flippers) - 42<sup>+</sup> lbs  
 HIND Qtr - 14 lbs

HIND Qtr 14 lbs

Tissue 2330 g

Bone/~~skin~~ 2330

Skin - salted and saved

FRONT Qtr 42<sup>+</sup> lbs Left = 13 lbs Right 14 lbs

Left - tissue 4487 g

bone 1419 g

Right tissue 4813.5 g

bone 1428 g

Skin saved and frozen

15-18 - October 1979