

WHITTOU TURTLES

ER LISIANSKI EXPEDITION

(including FFS LAYSAN PH, MIDWAY)

12-27 JULY 1978 LISIANSKI

23 SEPT. - 7 OCT. 1978 - MARO/LAYSAN / PH H / MIDWAY

05.00

TAGGED WOOD RELEASED FOR DRIFT - P. 7  
FFS

G. H. BALAZS



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VERNON ROYAL Long term tag recoveries - LISIANSKI 7/21/78 1018 FG MALE  
 PH 7/21 104 MALE  
 PH 7/21 T207 female  
 KAILUA

COMPOSITION BOOK • 9 1/2 IN. x 7 1/2 IN.

AVAILABLE AS:  
 No. 1130 (09-9130) 60 SHEETS COLLEGE RULED & MARGIN  
 No. 1130-P (09-9132) 60 SHEETS COLLEGE RULED & MARGIN  
 No. 1143-X (09-9134) 100 SHEETS COLLEGE RULED & MARGIN  
 No. 1130-P (09-9132) NUMBERED PAGES, No. 1143-X (09-9134) SECTION SEWED  
 Made in U. S. A.

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28 JUNE  
1978

EASY RIDER/NAFFEL AT LAYSAN IS.  
Returning Johnson's to Laysan - Ruth,  
Marty and Andrew aboard. (I was not aboard)

<sup>1500 hours</sup>  
Basking at Cross Point - taken to boat for  
tagging - released - from ER anchorage

2633 LFL

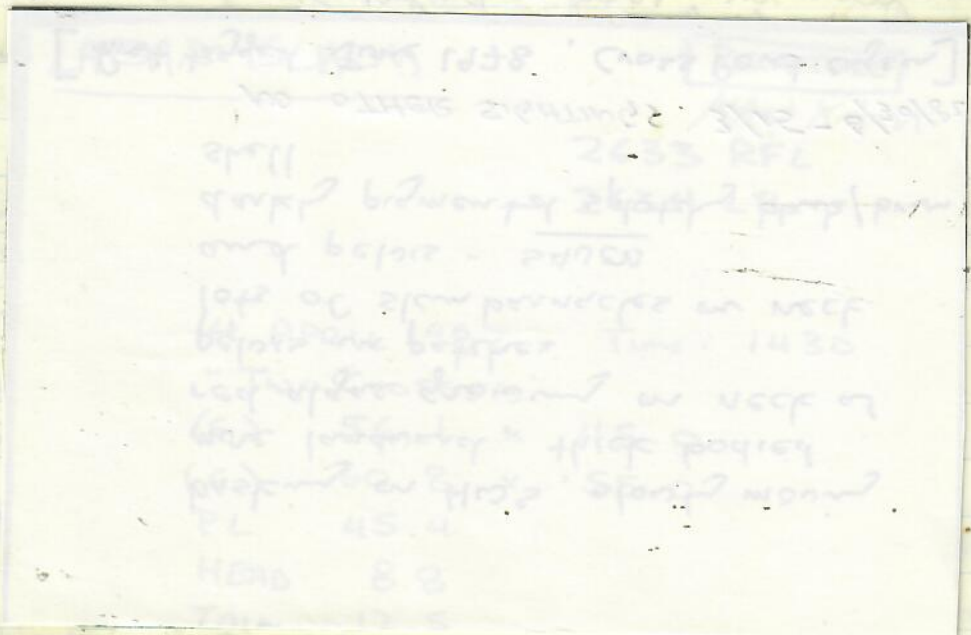
2634 RFL

C - 57 1/2 cm x 52 cm  
(22 5/8") x (20 1/2")

Recovered by Alan Kam at Laysan 1982

See p 100  
for P&H  
Tagging Record

2838-80  
2595-60



P&H Landing 7/24/78 by GHB  
10/5/78 p.93



2634 RFL

C - 57 1/2 cm x 52 cm  
(22 5/8") x (20 1/2")

Recovered by Alan Kam at Laysan  
1982

See p 100  
for P&H  
Tagging/Recor:

2838-980  
2595-60

LAYSAN ISLAND

RECAPTURE

ALAN KAM

2633 RFL

2634 LFL

4 APRIL 1982

Time: 1430

"Two Crosses"

(S) 56.1 x 45.0

(C) 60.8 x 55.0

PL 45.4

HEAD 8.8

TAIL 12.5

basking on HWS, slowly moving  
more landward, thick bodied  
red algae growing on neck at  
pelvis in patches  
lots of slim barnacles on neck  
and pelvis - SAVEN  
darkly pigmented splotchy blue/brown  
shell.

NO OTHER SIGHTINGS 3/15 - 6/30/82

[First tagged June 1978, Cross Point Laysan]



Turtle seen in Kewalo Harbor

12 JULY

DEPART Kewalo Basin / Honolulu Harbor at 1:30 PM

1978

WEDNESDAY

Monk Seal Survey Charter - vessel EBY RIDER -  
 Research party - ① Cliff Fuscus; ② Arnel Johnson;  
 ③ Karl Kenyon; ④ Roger Clapp; ⑤ Elizabeth Cummings;  
 Crew - Ron, Marty, Chip.

13 July

Thursday

6 AM - passing close-by to Lehua -

Smooth channel crossing -

Report from Roger Clapp that - 1) He has lots of  
 turtle data for Phoenix Islands 2) Hull-  
 Phoenix may have largest Sooty tern nesting  
 colonies in the world - also Christmas Is. Is.  
 (13 miles) 3) Bernie <sup>- possible underwater entrance to 4th reef?</sup> used as a bomb target  
 4) Some bird bands are now made of Incoloy,  
 all in Pacific Project were aluminum -  
 last bird bands were put on in 1968 - the  
 last time Clapp was in Seewards.

During August Cromwell trip, Craig and Rick  
 will bring back more Laysan Finches -  
 also have application for - 6 Laysan  
 Ducks - Does this need to appear in  
 Federal Register? Also informed that  
 Newell Shearwater eggs are being trans-  
 ferred to Kikaua Pt. and placed under  
 Wedgetailed Shearwaters.

Craig will take SCUBA course at government  
 expense - as per Brent - job related activity.

12 July

19

with

2831

2832

NOTE  
 PEELING  
 PLATE  
 Release  
 Coconut

with

2831

2833

12/7/

2831A

2832



12 July 1978 MEASUREMENT AND TAGGING OF PBRC WHITTOW TURTLES.  
(on the same day of departure on Lisianski Trip)

Turtle obtained from Lou HERMAN Facility -  
Held for short time at Kewalo ~~Reeds~~ - two tank mates  
were released off Diamond Head -

Whittow PBRC

2831 RFL

S - 30 x 23<sup>5</sup>/<sub>8</sub>

2832 LFL

(76.2 cm x 60.0)

C - 31<sup>1</sup>/<sub>4</sub> x 27<sup>3</sup>/<sub>8</sub>

(79.4 cm 69.5)

HEAD - 4<sup>1</sup>/<sub>8</sub>

serrations to  
marginals

G/S RATIO - 1.159

~~Whittow~~ the ventral fin line.

NOTE

"PEEZING"  
PLATES  
Release from  
Coconut IS IN

1986

Turtle obtained from Waikiki Aquarium at  
the time of a <sup>PREVIOUS BIG</sup> release - possibly 1973;  
weight taken 1974 - 9 lbs.

Whittow PBRC

2834 RFL

S - 27 x 22<sup>1</sup>/<sub>8</sub>

(68.6 cm x 56.2)

2833 LFL

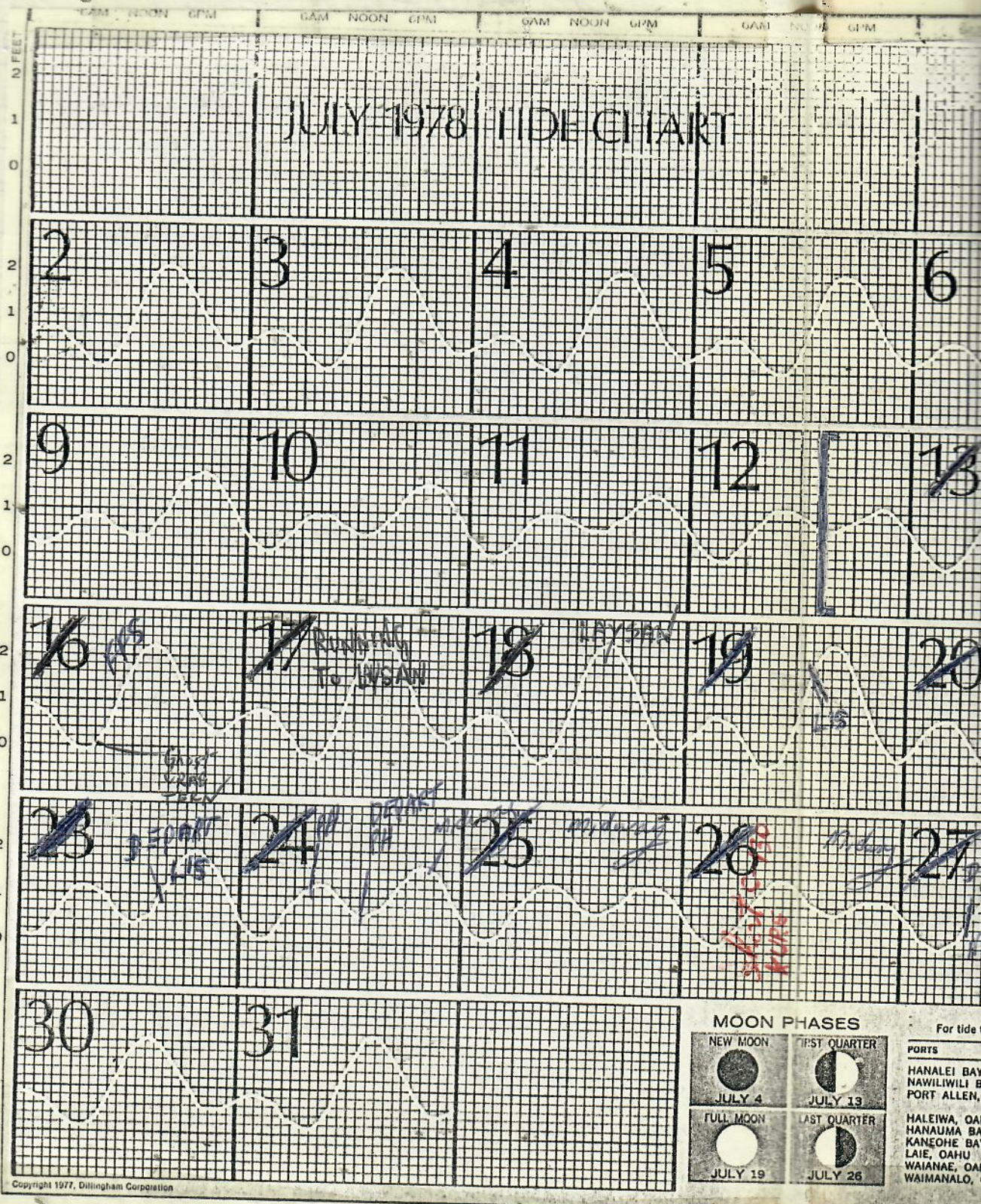
C - 28<sup>1</sup>/<sub>8</sub> x 26

(71.4 x 66.0)

G/S RATIO - 1.175

12/7/83 Measured and transported to the Waikiki Aquarium  
when it was released. Head lesions from being  
2831 RFL with monk seal. Bryopsis thick on carapace. Wild  
2832 LFL Behavior: S - 78.7 x 60.8 SL -  
C - 83.0 x NT 2.5 cm in  
5 years 5 mo





~~16~~ *US*

~~17~~ *RAVENS  
TO LISIANSKI*

~~18~~ *US*

~~19~~

~~20~~

~~23~~ *US*

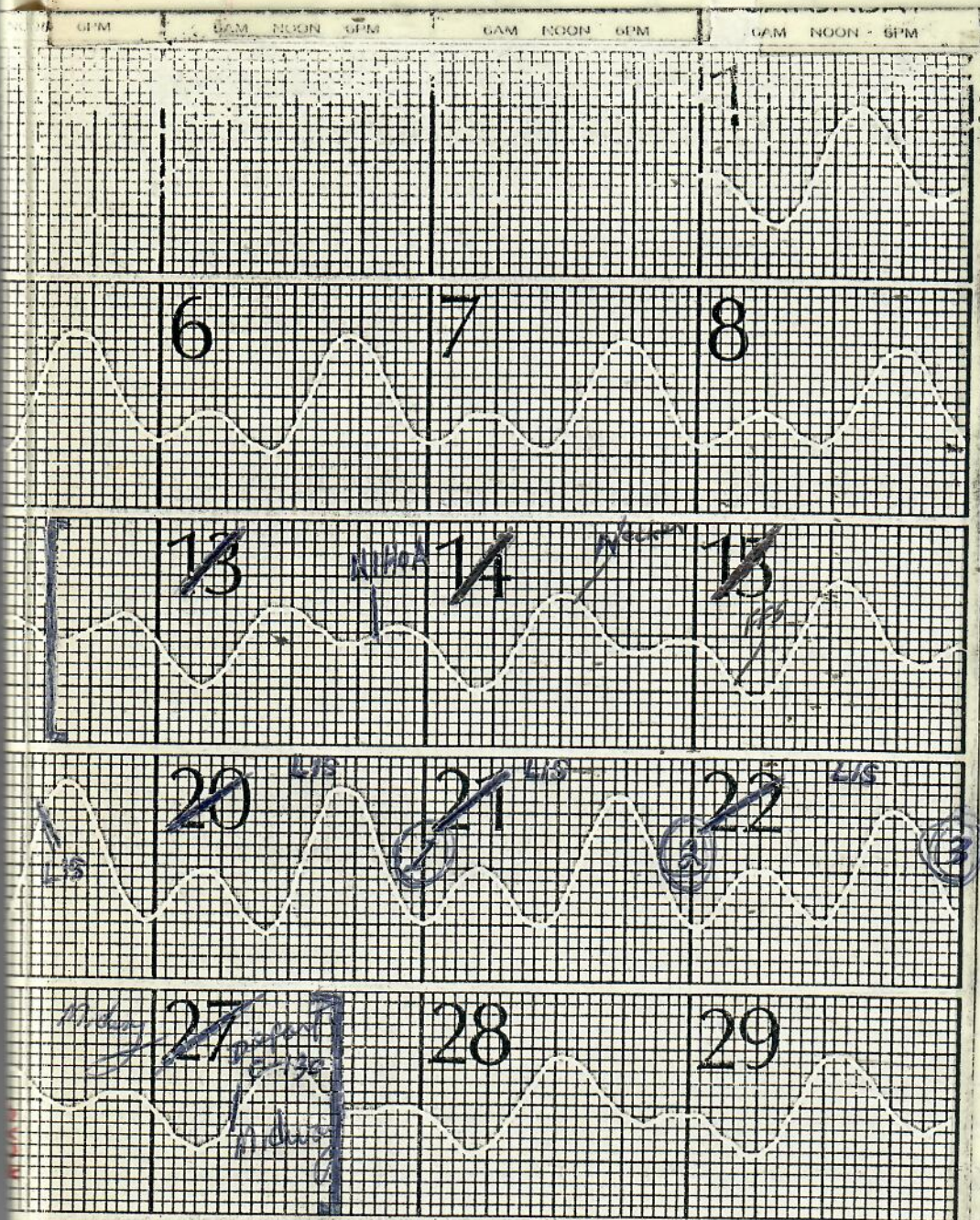
~~24~~ *US*

~~25~~ *US*

~~26~~ *US*

~~27~~





PHASES

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



PORTS	Hrs.	Mins.	PORTS	Hrs.	Mins.
HANALEI BAY, KAUAI	-1	40	KAUNAKAKAI, MOLOKAI	-0	09
NAWILIWILI BAY, KAUAI	-0	32	KAHULUI, MAUI	-1	48
PORT ALLEN, KAUAI	-0	32	KIHEI, MAALAEA BAY, MAUI	-0	14
HALEIWA, OAHU	-1	36	HILO, HAWAII	-0	59
HANAUMA BAY, OAHU	-0	55	HONUAPOO, HAWAII	-0	24
KANEOHE BAY, OAHU	-1	35	MAHUKONA, HAWAII	-0	24
LAIE, OAHU	-1	48	KEALAKEKUA BAY, HAWAII	-0	16
WAIANAE, OAHU	+0	16			
WAIMANALO, OAHU	-1	15			





13 JULY  
1978  
Thursday

Arrive at Nihoa at ~ 7:10 PM, sun  
low in the sky - circled island cliff  
side first - photos on roll 1; Came  
in close to Derby's Landing - counted  
3 seals - one came down the beach, apparently  
responding to presence/sound of boat.

Depart from Nihoa at ~ 7:40 PM -  
Clapp noted birds nesting in cliff - he had  
not seen back side from a boat.

Caught one small rainbow runner along  
back side of Nihoa.

Evening discussions with Skip, Kenyon and Fiscus  
8 PM. Radio contact with Johnson's indicated  
that turtle died ashore two <sup>(NO)</sup> day's ago  
at N. point - 200(?) meters inland - report  
digging activity in area.

Skip reports <sup>turtle</sup> digging by Japanese Shipwreck  
Report most basking by turtles at  
Cross Point and next beach  
South of landing (PROPANE BEACH?).

14 JULY 78  
FRIDAY

Discussion's after breakfast concerning  
research plan/individual activities  
at Necker, French Frigate Shoals,  
Laysan, Lisianski, P. H.

14 July

15 JULY  
SAT.

830

Box 1



14 July 1978 Arrive at Necker approx 12:30 PM - photos from the EAST - also of West Cove. Everyone ashore ~ 1 PM - Fiscus reports 14 seals on ledge and one basking turtle - no sign of dead adult turtle reported by Naftel from May trip. 7 seals reported on ledge with large boulders (Base of Boulder Hill). Depart Necker ~ 5 PM - off island ~ 4:15 - 2 turtles ANNEX BASC, 1 juv. West Cove - 1 BASTER on ledge - possibly dead? TO FRENCH FRIGATE SHOALS

was at Palmer - January meeting of Pacific seabirds - Cliff and Harrison were others. - Possibility of collaboration with Cliff on distribution of turtles in the Phoenix Islands.

15 JULY SAT. Off the north side of Tern at ~ 2 PM - At anchor SW side of EAST IS. at ~ 5:30 AM.

Set single shark line w/ KAKANA 2 F. off of buoy off stem of boat. T 326-400; T 480-499

8:30 AM At Anchor SW EAST IS. - released T 101 - T 175 (with T 126) T 177-196, T 238-239 T 241-242 TOTAL - 200 T 244-250

Box 1

7/24/78 Seal Kitten 1300h

(with T 126) total 200 seals



15 July 1978 ~ 9:30 AM - Team departed in Zodiac w/ 9.5 hp  
 SATURDAY for East. I caught ~ 6' Galapagos -  
 ♀ - young embryo - bait and octopus  
 parts in stomach. beak given to Fiscus

~ 11 AM S 1201 - S 1225 } 25 Total  
 S 1201 - S 1225 }

11:30 AM - Moved ER closer to East

S 1102 - S 1125  
 S 1103 - S 1111  
 S 1113 - S 1123  
 < S 1126 - 1150 > 265 Total  
 < S 1126 - 1150 >  
 < S 1226 - S 1250 >  
 < S 1226 - S 1250 >  
 < S 1251 - S 1275 >  
 < S 1251 - S 1275 > - retained for reference -  
 from Skip 7/29/78  
 < S 1276 - 1296 >  
 < S 1276 - S 1300 >

GRAND Total  
 RELEASED - 490



15 JULY East Island shore party will depart  
 SATURDAY ~ 1145 AM - ER departed for Lakerouse  
 photos of Lakerouse - proceeded to anchorage  
 close to Tern-Carelli and two others  
 came out to meet us in USCG whaler -  
 Ashore to Tern with Roger Clapp -  
 Put gear in quarters and proceeded to  
 walk around coastline of Tern Island;  
 Discussed Nachias - Bill Austin  
 "research" boat stopping at Tern IS.

1:30 PM  
 Went sent letter  
 of entry at the  
 last minute -  
 30 vbs made off  
 Disappearing  
 3:00 PM

July 28th for "rest and recreation".  
 Observed juvenile turtle feeding  
 against North seawall and on rock  
 on bottom; photos taken #15-16 roll 3.  
 Captured with scoop net - mouth sample  
 and stomach sample obtain - injury on  
 right hind limb.  
 Notes second juvenile in same area,  
 but net broke and had to be repaired.

Proceeded around island - counted  
 18 pits along South shore - 4  
 of these look good; many recent tracks;  
 observed Roger tagging birds, orange  
 spray paint on newly banded - He  
 made a few more recoveries - green  
 spots of congestion;  
 Skip brought LIZ to Tern and  
 left with Chip and Marty.  
 Phone patch through Danel to my folks.

5:10 PM



10 10:45 PM

15 July 78

Phone patch to Lin through Ham operators.

Worked on repair of scoop net.  
Walked beach at ~ 11:30 PM - no recent nesting activity.

TO sleep in KWS quarters ~ 1 AM

16 July 78

SUNDAY

16 July 78

SUNDAY

Up ~ 7 AM - walked beach at 7:30 AM  
Counted 361 Ghost Crab holes - Complete at 8:45 AM  
along approximately 3/4 of South Terns (Low Tide) beach. This does not include large sandbar at East end of island.

Ate breakfast and departed for ER at ~ 9:45 AM

~ 3 PM

BACKNOTE - Charlie Knight will send be prints of: 1) me in BW 2) Carotti w/Turtle that nested/attempted to nest in same retainer wall quarter by fuel tanks 3) same turtle under Messersmith's

Proceeded to Shank where shore party spent ~ 1 hour.

Proceeded to the outside of Lakehouse and anchored offshore Bin 1 - Little Bin - shore party ashore.

Backnote - report from LC of turtles causing ~~to~~ disruption to islands - "Noxious Reptiles" "Aesthetically unpleasing"

17 July

1978

MONDAY



16 JULY 78  
 SUNDAY  
 Backnotes - Periwinkles seen on North Tern seawall - Do turtles feed on these?  
 Seabird - "Sea Watch"

Check - Wandering albatross literature - regurgitation  
 - seabird articles in Dutch scientific journal ARDEA. Need to collect specimens from dead birds - for turtles

Note - Longevity records from tagging, like Seabird tag recoveries.

What is Can's oldest tag recovery?

Mine is adult male PH to FFS to JPH(?)  
 Banded by Fishard Game?

~3 PM Skip - Clifford Angel circled Disappearing in Zodiac. No count seals - island is very small - seals concentrated in the center. Report ~21 seals (21 for GN-26IN combined). Report grand total of (195) for FFS - this includes pups born this season. Fi reports that some tag recoveries were made. Boat was landed in some cases right where seals were laying on the beach.

Departed Disappearing for Laysan at ~4 PM.

17 JULY 1978  
 MONDAY  
 Report from weather machine of tropical hurricane-like storms East of the Big Island. FIGO



17 JULY 78  
MONDAY

Report last ~~1~~ night from TUSA that while fishing for albacore they sighted three (3) sea turtles with two ridges on back (presumed to be leatherbacks). Tya stated that typhoon was gathering this information. Ship later reported that they couldn't get very close to turtles - also that size was like "barn door". Are any boats taking them?

Backnote - Karl reports that Gene Krider fought listing of Monk seal as "Endangered".

1500 hours 24° 54.3' N; 169° 40.6' W ER position

Backnote on Pacific Project - DAD funded; Bob Pyle area leader; Johnston virus - article reference needed from Roger.

Naftel reports thatgaard has photos taken ~1946 which shows turtles tied up and on their backs waiting to be flown to Honolulu; Naftel believes that Shinsato and Ohai took turtles in the 1959 FFS case.



17 July  
78  
Monday  
stomach  
samples  
retained

Just before sunset passing 100 F curve  
of Maha Reef - caught 5 KANAKA  
(3 empty stomachs, 2 w/ diodops (1 packed  
full) / per 20 lb yellow fin tuna -  
stomach had diodops and 1 file(?) fish.  
Wine drinks w/ Cliff, Kael, Liz, Roger,  
Skip - Ron.

18 July  
78  
TUESDAY

Arrive Laysan ~ 4:30 AM.

Land ashore 8:45 AM - <sup>clockwise walk</sup>  
(survey) around Is.

one large, one small pit just before cross  
point;  
- Introduced kukus (BIRDS) seem to be all over  
West side - campsite area.  
Lots of house flies.

Found turtle that died 7 July 1978 -  
14 days ago - several photos - turtle was  
heading in direction of NW point of Island.

First seen by Fatie at ~ 2:30 PM,  
still alive - returned ~ 45 minutes later - dead.  
Paced off path taken ~ 800 steps total -  
3 pits, - one just before site of death -  
larger one at the base of a vegetated sand  
dune. photo of area. Emergence site was  
small sandy beach right by only remaining  
mother with pup.

Turtle C length - 38 1/4"  
badly decomposed inside - scooped out rotting  
material - took a decomposed stomach/intestine



## LAYSAN

18 July 78  
Tuesday

4 eggs preserved  
1 contents  
in twist lock  
bags

sample. Turned on back and put all limbs in cavity for further decomposition.

Johnson's report finding 215 larger egg - distinct cutoff with smaller, numerous ones. Some buried for possible incubation.

11:30 AM

Saford rested at Enteromorpha beach rock beach where small turtles were noted last year. <sup>Nothing</sup> ERider offshore to move gear from NE point. Back to Enter beach - 30 min. Noted one pit and J-loop tracks by NE landing supplies. This is only a short distance from where the beachrock starts.

10:3:45

Hauled gear to Zodiac and aluminium boat. <sup>1900d?</sup>

Noted 3 pits just after beachrock starts - one track extends way in toward major vegetation line. (poss. ~400 total in-out).

Note - Copulation observed by Pattie - 25 minutes - close to shore - kept falling off and remounting.

Walked to beach just before shipwreck (Kryo Maru No 25?). noted.



18 JULY  
78  
TUESDAY

This beach has 14 pits <sup>all dug in one night</sup> and 7 pits close together. Beach has a coarse and solid beachrock approach - waves are rolling in; some erosion of sand, but Johnsons report along some exposed rock at this site.

observed Laysan albatross tumbled severely from breaker - seem to be O.K. when it came up.

Noted that water goes under beachrock at "canyon" area along south shore.

BACKNOTE - Johnsons <sup>FALL under FISCUS Delong permits</sup> do not have an Endangered Species permit - <sup>WHY DOES ANYONE NEED ONE? OR IS IT A BY-PRODUCT OF MARINE MAMMAL?</sup> Flies noted on Tern Island. 500 tern toys lost on Laysan.

### LISIANSKI

18 JULY  
10:30 PM

Departed Laysan for Lisianski - 14 hours run.

19 JULY  
78  
WEDNES.

9:00 AM up - on the way to Lisianski - very calm seas - hurricane 150 <sup>mi</sup> <sup>lat</sup> 90 kt winds heading toward major islands.

Running off the N. Point of Lisianski at 12:30 PM - could see iron wood trees at approximately 7 miles out passed in through coral spots <sup>from the west</sup> and came to anchor at ~ 1:30 PM. First landing with team.



19 JULY 78  
WEDNESDAY

and gear at 2:45 PM. Team set up tent while  
Ship and I transferred gear.

Caught 3 large *Ulua* (1 ~ 100 lbs) with hook  
held over the side using corned beef for bait.  
*THROWN BACK.*

Backnote-Johnson have photos of ship holding seal; shark  
eating bird; turtles copulating; select baskets (?)

6 PM

Worked on setting up tent, arranging gear,  
<sup>adult</sup> seal by Zodiac called by ship; looked in Zodiac  
several times - attracted to Naftel.

Proposed to walk all the way around  
the island - in calm water just before  
NW point noted ~ 4-5 juveniles - one  
close to shore - missed with <sup>short</sup> scoopnet.  
Two excavations just before NW point.

Large patches of *Caulerpa racemosa*  
washed ashore along N shore. Observed  
~ 4 juvenile - 1 larger, feeding offshore, at  
6:30 PM. one <sup>Rocky EPSP</sup> gravelly beach just before  
beachrock observed basket - captured,  
tagged, small stomach sample obtained.  
Bluish color shell - photo

Picked up two large glass balls -  
returned to campsite just before sunset -  
seal team was waiting - motor out to  
ER to spend the night. Roger stayed  
on the island -

Team counted 80 seals - 1 pup <sup>still w/ mother</sup>; 86 in May.

TAGS  
1837  
2838



20 July 78

Thursday

UP ~ 7:30 AM;

General initial observations on LISIANSKI -

Fine, white <sup>almost silty</sup> sand beach; vegetation close to water-shoal apparently buffers island; Bunch grass dominates; Ghost crabs that are present are quite small (crawl into tent);

KARL reports MAJOR vegetative change to island - <sup>1966</sup> 1976? 1978 suggests I should investigate.

Yesterday dried carcasses were put ashore - during evening Liz questioned wisdom.

Returned to ER later today.

OMEGA Reads  $26^{\circ} 02.2' N$ ;  $173^{\circ} 58.1' W$  at anchor.

Seal team went ashore ~ 10 PM - I went in ~ 12 noon - Ship called path on KMI - wind blowing in Honolulu but everything appears O.K.

Photo of Ron, Chip, Marty, Liz by tent.

12:45 PM

Proceeded with Marty to the north to catch small turtles. Noted 4-5 small, 3 large, at Site 1 (see map) - also 2-3 small at Sites 3 & 2 for captures see page 80.

Copulation observed ~ 30 mins. off NE beach; No tags seen on male - both seems to have light (green?) coloration to shell.

While wading on reef flat w/ long handled net.



20 July 78 large (~50lb) Ulua swam around me - could  
Thurs. wounds on seals, turtles, people be  
inflicted?

Returned by backtracking at ~7:30 AM  
canned tuna dinner - Sleep ~11 PM.

21 July 78 Up ~ 7:30 AM

observed ~9' tiger in West Cove swimming  
in sand channels

Fried egg and bacon breakfast by Cliff.  
Karl and Cliff report that Seavels was  
abundant in 1976 - not so now.

→ Also, last night they saw large goshawks.  
collected this evening - smaller than NICKER.

Marty was using Karl's casting rod last  
night and hooked lure on coral - line was  
cut and jar hooked to it for retrieve -  
this morning a weaned pup played with  
bottle for long period - got tangled (hook  
on line?) towed for awhile and then  
came loose.

Later Karl hooked a Sooty Tern in flight.  
Just before sunset Marty hooked an adult Gaysan.

10 AM Depart <sup>alone</sup> camp to photograph interior and coast  
of island. Noted lugid tripod and 10-15  
55 gal drums behind camp. Noted  
introduced tubus by drums, and at  
sites where Seavels has died.

Beardley later mentioned  
that decline of Seavels may  
have been due "scale"

21 July  
FRIDAY

PM

MARTY found note in BOTTLE -  
I brought BAKA netted  
glass



21 July 78  
FRIDAY

PM



Hiked from palms inland to the South - looked for signs of old Japanese camp - nothing. Went by SW Cabuarina and back - juveniles seen along SW - SITE 5. Had gupenuts for lunch and set out to North with Marty to capture juveniles. <sup>~1 PM</sup> 4-5 juveniles at Site 1, also 2 Adults - Site 3 had 3-4 juveniles; Site 2 - 5-6 juveniles - Adult boaker (or) hauled out turco ~ 2:15-3 PM. Tried to fog with 2861 - fog went bad - did not go on. - Tail of this male mostly missing, but healed.

Turtles this afternoon tend to depart rapidly when approached - possibly due to contact/experiences yesterday.

(2 Adults seen right off of rocky area where dead turtle is located - Also 4-6 <sup>Adults</sup> others seen near shore going south along this East shore.

Dead Adult Male - S Length -  $35\frac{3}{8}$ "  
Head -  $4\frac{1}{2}$ "

Skeleton of Carapace and Plastron in very good shape - intact.

Retrieved dried algae from inside. <sup>IN PLASTIC BAG</sup>

Followed coastline and returned to camp about 7:30 PM - <sup>canned</sup> Chili - green beans - fresh green salad for ~~the~~ Dinner -

MARTY FOUND NOTE IN BOTTLE -  
I BLEW IT BACK INTO  
GLASS BALL.



22 JULY Up at 7 AM - several rain showers  
78 during the night.

SATURDAY Saw Tiger shark again at ~ 8:20 AM;  
Eggs and bacon again by Fiscus.

Cliff walked from camp down west coast  
to South Aggregation buoy point. - noted seal with  
penis bone - bleached and sticking out.  
Sat around campsite and then took  
photographs of Fairy Terns and noddies in  
ironwood trees by Camp.

1 PM

Departed to the north to catch turtles with  
Marty - Tried netting at Site 1 - turtles seen  
wise; 2-3 large 4-5 juveniles on dark reef patch  
at outer edge of Site 1; adults come right  
in close to shore to feed. Saw 2 turtles  
at Site 3, but seals are on beach.

Site A seawater in ~ 2-3' = 29.5°C - this  
was by beachrock ledge short distance  
offshore - the site where several juvenile  
haptus have been made. Captured one  
today. Saw several others, but  
could not catch - swam away quickly when  
I got close. Saw several juveniles  
and adults (1 w/ left front missing) at  
Site 4 - caught 2.

Returned to camp by same coastline  
saw feeding abundant only at Site 1;  
gale in afternoon makes observations very hard.



22 JULY Took photos of Roger catching sooty's above camp;  
 78 Dinner - hot dogs, canned beans, salad. Marty  
 SATURDAY went out with Roger to collect food samples.

Backpotes at SITE 4, noted SA ~ 125 lbs  
 with some black in shell.

During first walk around island with Skip, noted  
 three masked boobies regurgitate RED TAILED OPELU.

### General description of Feeding Sites:

SITE 1. Cove just before NW point of island - two  
 coral rubble bottomed area covered with algae  
 separated by narrow sand channel and sand  
 to water edge. Must be deep at low tide.  
 Outer perimeter of Northern patch had 6-7 turtles  
 gathered at ~ 2 PM 7/22/78

SITE 2. Northern end of NE beach - area extends  
 for ~ 50-75 yards. Site starts at north  
 end with a beachrock ledge in shallow  
 nearshore water - several small juveniles  
 have been caught here; area to the  
 southeast of beachrock ledge is patchy -  
 ~ waist deep at low tide

SITE 3. Northwest beach - waist deep reef flat

SITE 4. A round reef flat  $\frac{3}{4}$  of the way to the  
 SE along NE beach.

All 4 AREAS have feeding turtles within 25 yards of shore.



23 JULY 78 EP - 7:15 AM - Roger has already gone  
 SUNDAY up to Tern colony to catch another tag.  
 Returned with a tern with tongue extending through  
 bottom of bill.  
 Cliff saw what he considered a very small juvenile  
 turtle swim in front of campsite.

American Birds - publication of National Audubon -  
 6 times a year.

"if you  
 lose continuity - you are in big trouble."  
 At approximately 10:30 AM - departed with Marty  
 across center of the island. took photos  
 of Marty in grass. <sup>copy sent to Ruth</sup> Took at Fregates  
 with young - photos. I walked  
 to Nesperi midia to get trout netting  
 and hole to part out dried up turtle.  
 noted adult female hauled out on detached  
 rock slab - beachrock  $\approx 30^\circ$ ?  
 Turtle hanging head over the top -  
 flippers to the side; took two photos  
 from as far as I could walk out on  
 "rock ledge" designated in ARB. This  
 is the one that cliff has seen on  
 other days apparently. Wrapped up turtle  
 and carried it across the island.  
 stopped by where Roger was working to  
 have our photo taken. Noted bench marked  
~~2nd~~ reference under wood tripod; 18 rusted  
 out 55 gal gasoline (?) drums nearby.



23 July 78

Sunday

depart  
3:20 PMHurricane  
FICO

Arrived campsite ~ 2 PM - noted ~~FFS~~  
 Riders coming in. Packed gear for departure -  
 Cliff-Karl returned from Census - disassembled  
 campsite - moved turtle further inland.  
 Departed LISIANSKI ~ 3:20 PM -  
 Took photos of personnel on afterdeck -  
 Roll 10. Hurricane FICO reported due  
 to hit FFS - personnel evacuated.

From Angel Johnson - survey 1325-1430 h  
 North Island - 2 males, 2 ♀, 1 I.  
 Basking - 13 nesting excavations

Southeast Island survey 1530-1630  
 1 male; 1 young SA female; 1 female  
 1 male <sup>already</sup> tagged 104 <sup>Flot</sup> 1 female 7207 <sup>Flot</sup>  
 55 nesting excavations all grouped  
 together at SW end - grassy beach.

Backnote - blue fiberglass banding noted  
 in vegetation zone on two occasions.

Backnote - 7/21 Adults seen along  
 East (windward) shore - appears to  
 be a deeper water approach  
 compared to West shore.

Some older Tantheria ashore.

24 JUL

Monday



24 JULY 78  
Monday

Anchored off small boat channel at Pearl and Herbes Reef ~ 7:30 AM -  
Went ashore Southeast Island with Amel, Karl, Liz, Roger and skip - landing at Southern end ~ 9:25 AM. This high end of island is the site of turtle nesting -  
Count 52 excavations total (38 false, 14 possibly good) - <sup>some</sup> diggings and tracks may be as recent as 2-3 days ago.

Basking <sup>small adult</sup> male on southwest shore -  
tagged **2873** RFL. Proceeded to walk around island for photos Roll 10-11; noted stiff, probably introduced plant, lots of beach litter; scarcity of bird life - Kenyon-Johnson transects resulted in estimate of 6-8,000 dead young albatross.

Backnote - Cliff <sup>FISCO's</sup> reports occasional take of green and leatherback in NW area that are brought up by "albacore" current (2° warmer).

Noted <sup>presence of</sup> finches. Tagged an adult (small) male by Refuge sign - turtle <sup>TAIL</sup> was very observant - raised head - apparently saw me at a distance. Right front limb almost completely missing - healed - **2874** LFL - light green shell - blk speckles. <sup>THIS COLOR IS IN PRAZIER.</sup>

Noted a physalis freshly ashore.  
**2874** swam back and forth a shore distance



23 24 July 78  
MONDAY

Deer  
3

Hu  
FI

offshore while skip and I were in the area.

observed juvenile (~50lbs) with silt on back just offshore of Refuge sign - observed in area ~30 minutes. Some green algae washed ashore.

MIDWAY

9:30 PM Arrive Midway Harbor - Jim Guida - Curtis friend on YTB tug duty - Liz and Roger to BOG - same air showers - Called Lin at ~11 PM. Art Blum came over.

25 July TUESDAY  
AM and Liz left on upon Mac flight - sandbags were brought in for runway.

PM -

During the day I visited "rusty bucket" area off sheet range, cargo pier and north edge of inner harbor in search of turtles - nothing seen.

Gene Metts was here with Iversen ~ 2 wks ago to prepare EIS work seal critical habitat - Midway. Bob Weddington and John Ross visited Easy Rides. Leeward Islands chart No.

To be started at BPMS for 2 years starting Sept. 78.

Called Jim  
Dinner with Skip, Blum, Jimmy, Tom, Johnson and wife, Sue, Charlie Brown, Karl, Cliff, Roger

26 July 1978  
Wednesday



26 July  
1978  
Wednesday

Morning went to Coral Kings and got  
turtle records and removed tags -  
tags on card out for members -

Had lunch w/ Art and Skip and Charlie  
~ 1:45 PM USCG C-130 1349 <sup>LTJG's</sup> Bob Grant <sup>R.A.</sup> & <sup>B.R.</sup> Slack <sup>Pilot</sup>  
report of storm at Leach & Hermes <sup>Bob Kuhn - Navigator</sup>  
Now condition 2 for Midway.

Backnote - Art reports over two year period  
helicopters made 3 landings at Leach  
and Hermes Reef - 12 times low level to  
scoop fish falls. no message necessary to  
command if they go low and don't land - only  
file with East-South-West direction for  
flight plan.

Karl says that if you break albatross egg,  
parents will start to dance and soar.  
Captain Hughes 1956 - had house-boy ~~that~~  
kill birds; had groups competing  
to see who could kill the most  
bonin petrels.

## KURE C-130

Landed at Kure 2:35 PM  
Talked to Stark, Jeff Deem. Two  
tigers caught May 31<sup>st</sup>, 1978 from  
Boston whaler 11 PM - 4 PM - first  
caught guy reefs 6' - failed hook and  
caught tigers - towed to shore -  
Catch made by boys off South Point -



# KURE

26 July 78

Wednesday

From sand beach, they were put on truck and taken to pier where photos were taken - large one (w/ turtle parts) measured 13' (to end of tail), other 11 1/2". Jayberg has transparencies. Small one only had bird feathers - bones no whole birds. I found salvaged parts on top of beach shack - jaws of sharks were drying on and under pier. Lower jaw not a green.

Should send turtle parts memo to Stark.

Depart Kure 3:25 PM Midway 3:55

Some additional parts brought to me by Naughton Mid Nov 1978 - HE WAS up there w/ Navy people - 4 lb explosives - Bomb found out by bow wreck sticking out of water - It was dud - blew it anyway - Naughton GRABBED TURTLE THERE. Medium size - NO TAGS

Cook Baldwin

Agalar

Jayberg

KK at Midway returned on flight.

Also, during 2-3 days there he saw several turtles along E end reef - NO TAGS NOTED

Talked to KK McKinnon NAW FAC

Left most of gear on C-130 - transferred some to Easy Rider - now storm condition 2 due to Hurricane condition 2 "FICO" reported at Pearl and Hermes.

→ Pat Shaw 2nd class visited on ER.

Went to USO show at station theatre

"The Oklahomans" 5 couples -

saw only last two numbers.

Went to consolidated club - Karl, Cliff and Roger. Karl drunk again (still is), totally obnoxious.

26 July  
Wednesday

27 July  
Thursday

10 AM

Report that large bomb was recently found in lagoon - MIDWAY Navy EOD notified



# MIDWAY

29

26 July 78 Wednesday  
Accused me of: superficial, advancing myself etc. "Fourflusher" described for Carlton Ray; Rayon called "stupid"; "I am twisting facts" i.e. entanglement in line. "Personal and Profession intertwined"  
→ Send my booklet to: <sup>"HOSTILE"</sup> (Husband RM2)

MRS. GAY TODD

Box 19, US Naval Station

Midway Islands FPO S.F. 96614

Note that in spite of known problems for Kure-M, Midway personnel, there has been no effort by seal people to initiate conservation-education programs of any sort. Agalar said that people just don't know. Need to be informed. Also that Deery has pellet gun - kills birds, others touch-disturb seals and birds.

~1:30 PM moved gear from ER to quarterdeck - with the help of Baldwin using USCG truck.

27 JULY

Thursday

At 1 AM condition 1 Hurricane warning put into effect due to FICO.

Slept in transient bunk in building until 6:15 AM - CG starts engine on - Depart for Honolulu at 7:45 AM.

Passed over large vessel MING LEADER in rough white-capped seas at 9 AM - tanks on deck. White caps all over.

10 AM over Lisianski and ~~THE~~ NEVA - Photos remainder of Roll 11 - seas in shoals look calm.



July 27, 78  
Thursday

over Laysan, talked to Bryan at 10:40 AM - report that some of nest preparations by Japanese were washed away by southerly surf - one day after we left (19 July?) a very large nest was dug high on beach into vegetation in the same general area - Could this be a Hawkbill, as it had to go over very rugged beachrock strip in the intertidal zone?

Proceeded to at 1600' Doggie intersection (1:40 PM); I did not see any other islands; to 21,000' direct to Oahu.  
2:30 PM LAND AT BARBER'S POINT.

Backnote - Cousteau's mention of -  
"The last place to study the oceans is on a ship. They're slow, costly, inefficient, and subject to the nature of the surface, which is extremely capricious to say the least" Better approaches would involve submarines, airplanes, satellites, or swimmers. OCEAN WORLD p17 vol 1 no 1 Jan. 1978.

8/1/78 Sent tags 2901-2925 to McKinnon,  
NAVFAc, MIDWAY



Questions to ask seal researchers - possibly at  
7-9 September 78 Scientific Advisory MMC Meeting, to  
be held in Honolulu, includes (discussion of  
Critical Habitat proposal for monk seal.

Should contact Fiscus, Harry, Johnson(?) for copy to  
determine exactly what proposal states.  
Not necessarily in the following order:

1. "Excessive predation on pups at kure"
2. "Former range entire H. A."
3. Natural population fluctuations - Historical counts
4. Basis for belief of former larger population instead of
5. Kinder's opposition to endangered status - Threatened  
(also Walker)
6. Conservation - Ed. program at sites ID'd in 1976
7. Value of existing research program - COST  
vs Benefits
8. Low opinion of workers in Hawaii State
- 9.

-TWISS-

Attended meeting - Reef Hotel, Kalia Rd.

Patchy  
Sand  
11/7



Midway Forwarding Addresses:

Adm  
11/3/79

Chris Baircuther  
VF152  
Naval Air Station  
Miramar

Partly  
Adm  
11/3/79

ETC  
Roger Schmeltz  
DATC FMA&  
Box 106  
San Diego 92136

Dr. Kerry C. Bierman  
3125 N. Terry  
Portland, Oregon 97217  
wife - Joann

### University of Hawaii at Manoa

#### MEMORANDUM

August 7, 1978

George Balazs:

Dr. Beardsley called (2:00 p.m.) re the  
identification of the specimen from L.~~ISLAND~~ Lisianski Island.  
It is the Long-horn grasshopper, Euconocephalus  
nasutus; author Thunberg. It has been present on the  
main Hawaiian Islands for the last eight years.

9/78 - Also reported by Johnsons to be present on Laysan IS.

9/78 - note small Cockroach-like insect (flying) on Lisianski

Mary.

948-8261

8/17/78 as per Steve Montgomery - "Electric Wire Grasshopper"



10/2/78 293807



Figure 2. Aerial photograph of Lisianski Island, January 1966. U.S. Navy photograph.

rocky  
→

10/2/78 for feeding

10/2/78

10/4-Dug -  
But found  
nothing

23 SEPT - OCT 78 EXPEDITION





Figure 4. Aerial photograph of Laysan Island, January 1966. Official U.S. Navy photograph.

nest ex no. A, B and C

Revent broods

SEPT-OCT 1978 EXPEDITION





EDWARD W. SHALLENBERGER PH.D.

**MANTA CORPORATION**

THE MANTA · PIER 202, KEWALO BASIN · 261 · 4959  
OR 272 SOUTH KALAHEO ST., KAILUA, HAWAII 96734



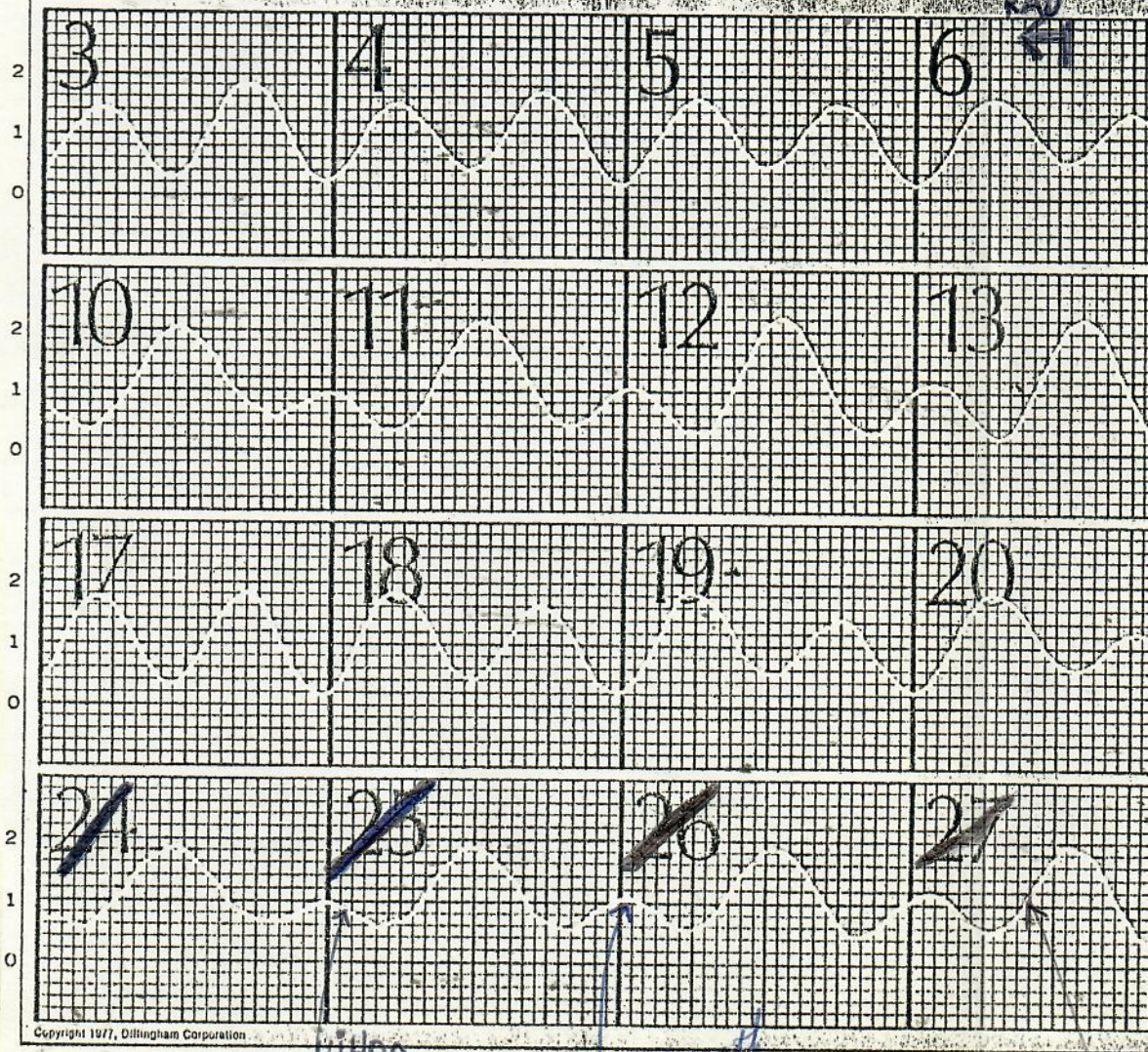
<b>SUNDAY</b> 6AM NOON 6PM	<b>MONDAY</b> 6AM NOON 6PM	<b>TUESDAY</b> 6AM NOON 6PM	<b>WEDNESDAY</b> 6AM NOON 6PM
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**MOON PHASES**

<b>NEW MOON</b>  SEPT 2	<b>FIRST QUARTER</b>  SEPT 9
<b>FULL MOON</b>  SEPT 16	<b>LAST QUARTER</b>  SEPT 23

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

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



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NIHOA

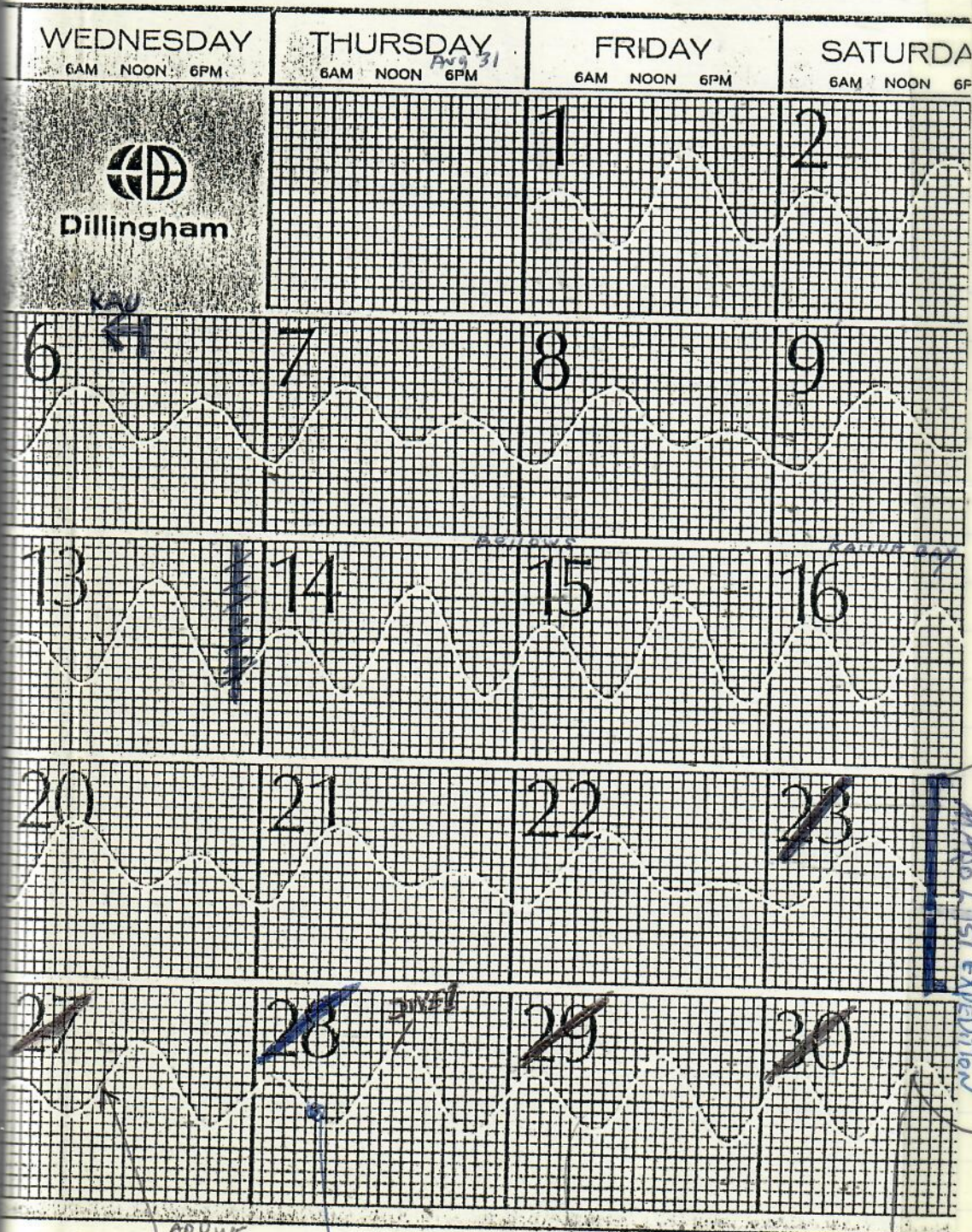
Just north of PPS

APR MAR

NE ex  
EXPOS



# BER 1978 TIDE CHART



10:30 PM depart

MARDI ISLE EXPEDITION

DNEQ

ARRIVE MARDI REEF NE end by exposed rock

Moved to SW Anchorage

SW Anchorage MARDI

Moved to NW anchorage MARDI

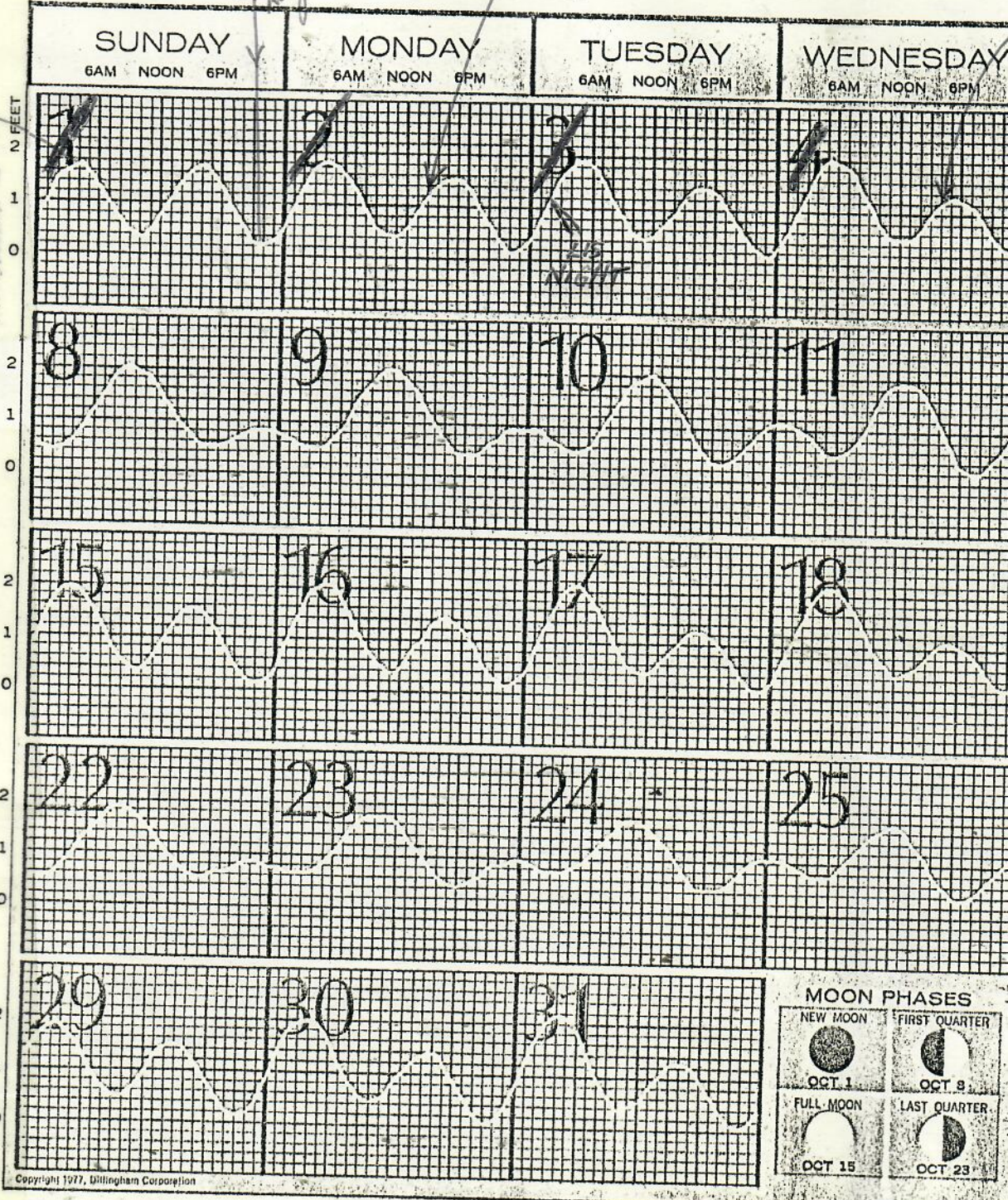


OCTOBER 1978 TID

ARRIVE LISIANSKI

DEPART LISIANSKI

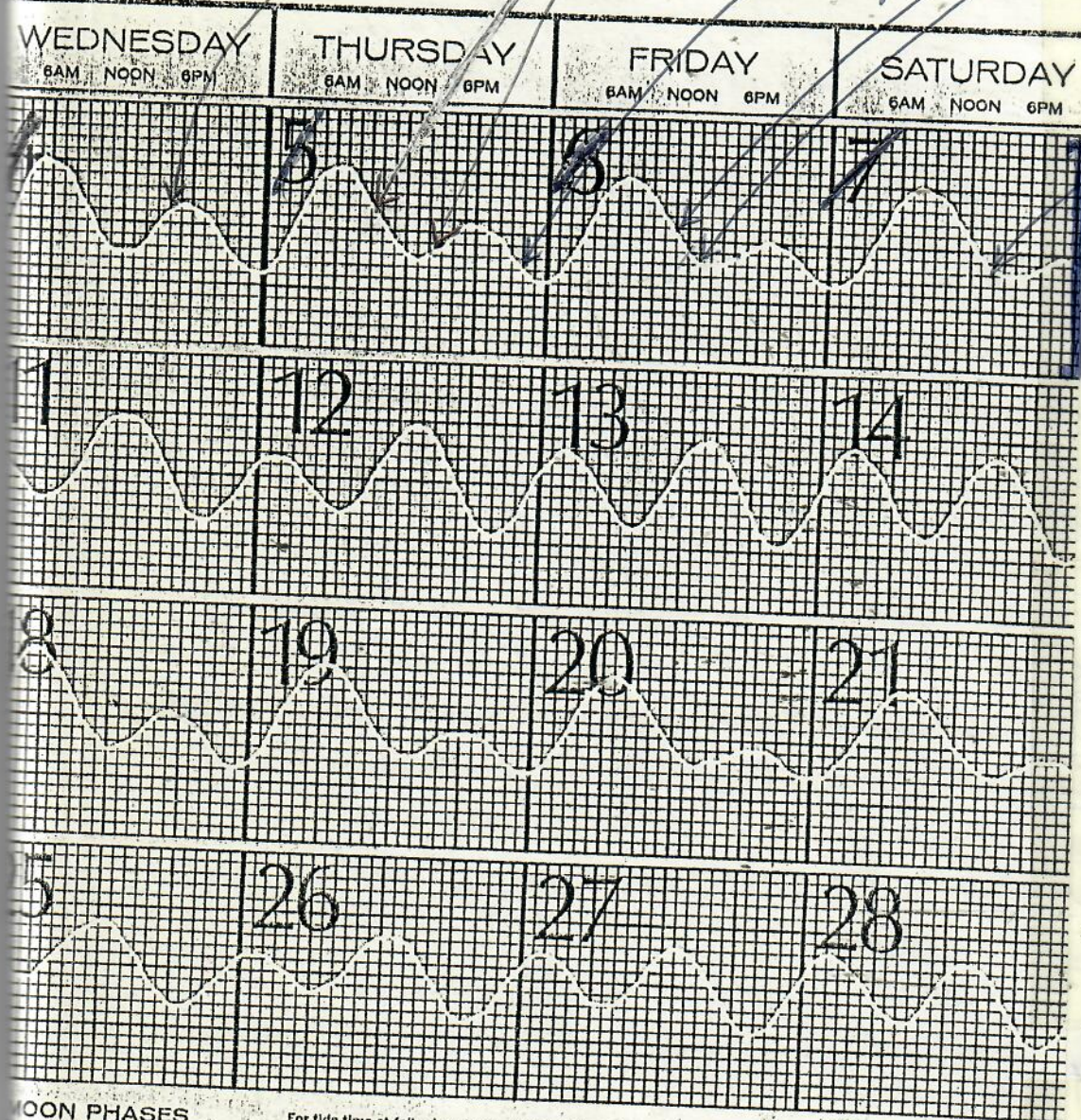
ARRIVE LISIANSKI





# R 1978 TIDE CHART

*Depart Lisianski*  
*Ashore of SE Islands Pt Reef*  
*ARRIVE Midway*  
*Eastern Is. - Spits*  
*INNER HARBOR SCUBA*



*Depart Midway MAC*  
*Return Honolulu*

## MOON PHASES



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

PORTS	Hrs. Mins.	PORTS	Hrs. Mins.
HANAIEI BAY, KAUAI	-1 40	KAUNAKAKAI, MOLOKAI	-0 09
NAWILIWILI BAY, KAUAI	-0 32	KAHULUI, MAUI	-1 48
PORT ALLEN, KAUAI	-0 32	KIHEI, MAALAEA BAY, MAUI	-0 14
HALEIWA, OAHU	-1 36	HILO, HAWAII	-0 59
HANAUMA BAY, OAHU	-1 05	HONUAPO, HAWAII	-0 24
KANEOHE BAY, OAHU	-1 35	MAIUKONA, HAWAII	-0 24
LAIE, OAHU	-1 48	KEALAKEKUA BAY, HAWAII	-0 16
WAIANAIE, OAHU	+0 16		
WAIMANALO, OAHU	-1 16		





23 Sept  
1978

SATURDAY

9 Total  
aboard

Depart Kewalo Basin aboard RV Easy Rider -  
at ~ 10 PM.

aboard is Leighton Taylor for Maro Reef  
top-survivor studies (Sea Grant - 7 days  
charter time); me for turtle work at Lisianski  
(3 days charter time); Laura - cook, chip - crew,  
Ron - engineer, Jerry - engineer, Ed Schellenberger,  
crew, Alan, Kays.

Seas are fairly calm - good smooth  
crossing of the Nohokai channel -

24 Sept

SUNDAY

at ~ 08 AM just approaching lee of Kauai -  
at 6 PM just losing site of Nihoa

Reviewed index of Ridgeway's Marine Mammals of  
the Sea Book - only three mentions of predation -  
1) killer whales on porpoise; 2) whiteshark tooth in Seacatter  
3) sharks eating young of south African fur seals.

25 Sept  
Monday

passed by Nihoa about 0100 hours.

UP ~ 7 AM - going with seas - nice  
sighting but wind is up some.

at ~ 930 AM sighted white-tailed tropicbird  
position from Omega 400  $22^{\circ} 31.8' N$ ,  $162^{\circ} 47.0' W$ .

Early afternoon, another one sighted - 4 distinct  
black bars seen on dorsal surface of  
wings -  $22^{\circ} 32.8' N$ ,  $163^{\circ} 13.8' W$ .

25 Sept

7

Monday

Oceanic  
white-t



25 Sept  
78  
Monday

Reviewed publication of Leighton's entitled  
Sharks of the east coast of southern  
Africa. 1. The genus Carcharhinus  
(Carcharhinidae)  
by A.J. Bass, J.D. D'Aubrey and N. Kistnasamy  
August 1973

Durban, South Africa  
South African Association for Marine Biological  
Research - Oceanographic Research Institute  
Investigational Report No. 33  
2 West Street, Durban  
Republic of South Africa

Address correspondence to:

The Librarian

Oceanographic Research Institute  
P.O. Box 736, Durban, S.A.

SEE page 43

and the following

Oceanic  
white tip

C. longimanus - p. 111

"a young 26cm green turtle"

Photos of teeth - p. 169

drawing - p. 138

common name - "oceanic white-tip shark"

C. leucas - p. 101; 107-108

(1) marine turtle (no ID) out of (101) sampled

Teeth - p. 159

drawing - p. 133

common name - "Zambezi or bull shark"

Afternoon and evening - worked on monk seal-shark article.



26 Sept  
78  
TUESDAY

Up ~ 7 AM - passed N of FFS about an hour ago - 8 AM skip made a radio check with Term IS. Could hardly read them.

Very calm seas - 5-10 kt winds - clear skies. Mentioned idea of State Refuge for NEVA SHOALS - around LISIANSKI IS. Cracks are present in hull of ER - fore sections - seen before departure.

At 10 AM, starting to approach St. Rogatein Bank 17 - ~ 25 fathoms on bank.

Brooks Banks will be slightly south of us. Talked to Johnsons, last night - given the decision of breaking camp now and going on to Lisianski, or waiting.

In latter - permit, why didn't Brent mention or consider conflict possibilities of two project - mine and theirs.

Also, note that 1976 FISCUS trip report describes how LISIANSKI is unsuited for non-disturbing studies.

Skip previously mentioned that many Laysan albatrosses were seen above P<sup>o</sup>N<sup>o</sup>. ON albacore fishing grounds; birds seen included puffins;

At ~ 1715 hours, passed onto bank extending south of Gardner Pinnacles - could not see pinnacles. Very calm water. Just before sunset we passed off the bank - caught several kawakawa

Few  
Birds seen

26 Sept  
Tuesday

27 Sept  
WEDNESDAY



26 Sept.  
Tuesday

and a rainbow runner.

Weather was excellent for observing large or small turtles on the surface. This is a good time of the year for turtles basked at RFS.

Consider possibility that edges of banks have upwelling - are food-rich waters (perhaps vertically migrating at night) - appropriate site for young turtles to aggregate. - but how do they stay over these areas - problems from current - wind - etc.

Also, recall that (Romwell) cruise - Tom Hga - made a turtle sighting approx 58 NMiles Northwest of Nihoa - size?

27 Sept.

WEDNESDAY

At 8:20 AM saw many shearwaters -  
25° 18.2' N, 170° 01.4' W. Seas are even calmer than previous days - light wind out of the northwest.

at 10 to 10 - 25° 22.4' N, 170° 13.3' W -  
almost at Maro Reef.

Have seen Bottlenose dolphin on the edges of almost every bank.

Noted a medium size whale breach twice -  
baleen? - no ID possible. Noted red specks plankton(?) in area.



27 Sept  
78  
WEDNESDAY

"Conversion Tables" - write to  
Sillcocks - Miller Sales Co.  
Box 223  
Berkeley Heights N.J. 07922

### MARO REEF

At about 1230, saw breakers off to the left - noted 2' bar spot recorded on charts - green, turbid area all around reef. Position  $25^{\circ}31.3'N$ ,  $170^{\circ}23.6'W$   
~ 18 Fathoms - (note Omega off by ~ 3 miles).

Proceeded to set lobster traps - completed at 3 PM - motored back to just off rock and anchored.

Hard lined for whys - school of large ones in the area - also sharks.  
Caught ~ 7 galapagos - only small fish head in stomach. Caught 24 *G. ajis* and 1 *G. melanopygos*. about  $\frac{1}{3}$  empty remainder had partially digested fish, small lobster, other crustacea.  
Leighton took movies and still from in the water near Zodiac.

Before sunset we proceeded back to area of lobster traps and set two 16 hook long lines of shark gear baited with Kawakawa, Abu that we had caught looking when arriving at Maro. Anchored nearby, completed working up top carnivores.

Consider capture of  
~ 15" turbot (flour?)  
in lobster fish trap set  
in relatively shallow  
water

27 Sept  
Wed.

28 SEPT  
Thursday

DIVE 1



# MARO REEF

47

27 Sept  
Wed.

28 SEPT  
Thursday

About midnight, end of one shark long line got pulled over to anchor line of ER, possibly by large tiger shark. Had to pull in section - had ~5 galapagos sharks - one ~7'. After sunrise, we pulled rest of shark gear - had 14 sharks total. Each line had 16 hooks. Sharks were mostly large galapagos, but also C.a. (gray reef) and limbatus. Many empty stomachs, but also small octopus, and some fish parts.

Recorded many measurements, looked at reproductive state, and sampled jaws for tooth reference collection. About 10 AM departed for southwest anchorage. Also last night we caught a 58 lb ulua on the shark long line.

Anchored in close to line reef -

Depart from ER ~ 1:30 PM to survey line reef and SCUBA dive - aboard - Ed, Alan, Brighton, Whip and me. Anchored right at the west end of line reef -  $25^{\circ}27'N$ ,  $170^{\circ}42'W$  from Maro Reef chart 4174. SCUBA dive -

DIVE 1

I went in the water after everyone else had been in for ~ 10 minutes - photos looking directly east along line reef. I went in water after large ulua and one small gray seemed to disappear. Caught up with group - depth 15-45', with many going on down deeper. Gray reef sharks everywhere - 2-6' in length. also large schools of ulua, parrot fish (few).



28 Sept also Kawakawa (not seen by me). Saw two  
 Thursday schools of 15-20 each great barracuda  
 ~3' each. Alan collected some algae -  
 looks like *Laurencia* (like Kahoolawe).  
*Caulerpa serrulata*, and others.  
 Explored undercut hole - is there  
 Casalt here? Invertebrates are all  
 dug in tight - this means that large  
 waves come through here. They do!  
 After dive, we motored along S edge  
 of reef line, heading east. Noted flocks  
 of common noddies feeding right in white  
 waves. Returned to ER about 4 PM.  
 Stowed gear, write-up notes.

QUESTION = If only or mostly Top-level  
 Carnivores are present, what is holding them  
 up - what are they feeding on?

Taylor indicated that sharks can go a long time  
 without eating due to large liver.

-> 5 PM - Set 2 strings of lobster traps -  
 SW Maro - also done 16 hook line  
 close to SW reef. Will set 16 hook  
 at 5 AM.

29 SEPT. ~ 5:30 AM Set 16 hooks more offshore -  
 FRIDAY Back to bed and up ~ 7:30.  
 Picked up close set shark line.  
 2 Tigers, one *limbatus*. Smaller tiger



29 Sept still alive - Leighton used MS-22 like  
 78 compound on gills to stun - brought aboard  
 FRIDAY and hose stuck up anus in attempt to back  
 flush stomach. no luck.

Photos of Skip and Laura measuring sharks.  
 Tigers each had sections of small gray  
 jaws removed - apparently tigers had been  
 traveling together - both fed on the same  
 gray (dumped ~ 5 miles out).

Two Tropic -  
 one fairly  
 Tern seen

Tigers (one of tigers) had spines of puffer, and  
 jaw, lobster, turbot, other fish. Many of the  
 sharks that Skip worked up yesterday had  
 octopus or squid.

I saw it  
 at surface  
 5x in  
 60 minutes  
 1-3 min  
 each

~ 1230 PM went in to same Scuba dive site.  
 Leighton, Alan, Ed and Chip dove and I stayed  
 in Zodiac. Saw large, brown, adult monk  
 seal at surface off end of reef. Ed and Chip  
 saw it underwater - took photographs. Report  
 that large undercut caves are present. Leighton  
 did fish counts. Returned to FR - went  
 out to pull lobster gear - caught and  
 broke one end - started pulling at the other  
 end. Caught at about #15 trap - Ed and  
 Leighton went down 107 feet to free it.  
 Finished pulling, and proceeded to pull  
 daytime (SAM) set shark gear. Many  
 hooks still had blue heads and traps  
 bait. Brought up 12' 7" Tiger - stomach  
 eaten out. also small (~6") Tiger  
 with whole blue head in stomach. also

offshore



29 Sept. limbatus head - remainder eaten.  
 Friday ~ sunset - Set another line of shark gear -  
 lead got caught in prop - ship dove down  
 and took it off. This line has lobsters,  
 shark meat and ulua.

30 Sept.  
 Saturday  
 1978

"A Research and Fishing Expedition (to)  
 Leeward Hawaiian Chain"  
 Up about 7 AM - Glassy weather - had  
 breakfast and <sup>9:30 AM</sup> ~~no break~~ <sup>at</sup> Feighton puff  
 Chp to SW "shark hole" - they dove  
 SCUBA for another fish count, and to fish  
 ulua and small sharks -  
 We proceeded to pull shark gear that  
 was set yesterday evening - hooks 1) nothing  
 2) coral chunk and de-meat lobster tail  
 1) nothing 2) whole lobster 3) ulua w/ bite 4) lobster whole  
 5) nothing 6) shark meat <sup>SMW</sup> whole 7) SMW 8) SMW  
 9) whole lobster 10) ulua whole 11) shark head  
 (5') body bitten off 12) empty hook 13) 7'  
<sup>WE</sup> galapagos 14) ulua whole 15) SMW  
 16) ulua whole ~~SMW~~

shark had bivalve, octopus-beak, fish  
 parts, coral chunk.

Proceeded to pull string of lobster traps - ~ 160 <sup>legals</sup>  
 ~ 80 traps -

Noted Lynobia floating on glassy water surface.

30 SEPT  
 1978  
 SATURDAY

DIVE  
 2

4 PM



30 SEPT ~ 1 PM motored back to pick up  
1978

SATURDAY

JD, docent rampant - employees  
each other

TOP Carnivore team.

They had seen sharks again - seemed aggressive. Caught a 103 lbs Hua + others.

Proceeded from anchorage toward emergent rock - bearing magnetic North. <sup>hour</sup> set up a sea watch for ~ 6:15 minutes - glassy sea - i.e. assumed that, if turtles lay in the area they might come to the surface.

~ 3 PM anchored off rock -

Took Zoeliac in with Laura, Ed, Skip Jerry and Alan - anchored slightly to the SE - SCUBA - 15' under boat -

Channel off to NE drops to ~ 40' - cracks with lobsters (counted ~ 40) - photos with ASA 200 DIKONOS III.

No sharks seen, however large jellyfish followed us for awhile. Ed and Skip went to dip off - was 80'.

Photos of rock and in boat while returning to ER.

4 PM

Pulled anchor and departed for Laysan Island.

DIVE  
2



10/1/78 Arrived Laysan - West anchorage - 7 AM -  
 SUNDAY Some swell out of North -

10 Oct 7  
 SUNDAY

Back to bed and up at ~ 7:30 -

Johnson's came <sup>from</sup> ashore for breakfast.  
 Ashore - 9:45 AM - hot, very little wind.  
 Went to Johnson's campsite for briefing on  
 turtle situation - saw brass casing of  
 artillery shell(?).

At cross point, noted no name on one  
 cross and "Adam Schlemmer" on the  
 other.

Noted lots of Laurencia washed up on shore.

Proceeded to nest dug by dead turtle  
 in sand dune by Palm Trees - Ghost  
 crab disturbance noticeable at surface -  
 photos; Excavated nest at 1100 hours

Many O. laevis throughout digging  
 and among remaining eggs. Sand very  
 moist and fine - like lower depths of  
 East Island sand point

NEST A (Sand Dune, from dead turtle) 33" TO bottom

Successfully hatched (from shells) -	50	<sup>90</sup> 57
Partially developed eggs -	12	14
No apparent development -	25	29
Hatched but dead -		?

- 1 B/K SCALE; ?  
 nothing else observable

Noted that hatchlings can't see ocean from nest site  
 Johnson's noted tracks all going in right direction - distance =

TOTAL

(87)



1 Oct 78 SUNDAY Proceeded to salvage some of the bones from dead turtle - several skinks observed and photos taken.

Dictionary definition of NOVEZ -

Proceeded to Entomorphia beach - 20-25 mins of observations - no small feeding turtles seen - no signs of vellets, pysalris.

Proceeded to an excavation site by Northeast landing; noted small tracks of hatchling in area - Johnsons reported

photos that some of these tracks went inland - one was found by Bryan in a ghost crab hole - excavated site - again, considerable crab disturbance at surface - This site is approximately 65 meters from the ocean. From tracks - it is possible that hatchlings came out last night, or the night before.

## NEST B

Successfully hatched	-	25	70
Partially developed	-	26	31
NO Apparent	-	20	24
Hatched but dead (Crab mortality ??)	-	13	15

TOTAL - (84)

one of the hatchling was close to the surface - still alive, but weak. Released it at water's edge - when it shallow water, Thalassoma wrasse attacked it - apparently did quite a



# 54 LAYSAN

10 OCT 78  
SUNDAY

bit of damage - went limp - could not retrieve - waves were washing it back and forth, <sup>but</sup> I had my boots on.

10 Oct 78  
SUNDAY

NEST C

at NE landing, just a short distance before the beginning of beachrock - Nest depth - 30"; again, disturbed surface sand.

Successfully hatched	- 42	20
Partially developed	- 33	52
No apparent	- 6	41
Hatched but dead	none observed	7

perhaps not more than 15 meters to sea - TOTAL - (81)

Proceeded along East shore - at 4:10 PM took a swim in beachrock pool. Saw wrasses JW - Lighter mentioned that these fish sleep at night buried in the sand.

At Japanese ship wreck, noted that fairly fresh tracks - 2 up downs with 2 shallow scratchings. Johnsons had not noted anything PM at this site. I noted mild disturbance by one - two scoops with



## LAYSAN

55

10 Oct 78  
SUNDAY

hand revealed 2-3 hatching heads at the surface - covered them up quickly. apparently a complement ready to emerge this evening. Noted sand cover a good section of beachrock that was previously exposed in littoral zone.

13 diggins total in this area - 3 are good. proceeded to south-southwest area beachrock, photos of area - no turtles seen.

Noted 35 Laysan Ducks in beachrock seawater pool. photos roll 4.

Proceeded to southwest "landing" (iron refuge sign bay) noted weaned pup AC beachway. - proceeded to propane beach - no hatching turtles seen, but Johnsons report occurrence in recent times. possible pregnant female noted. Recall that Craig - Elizabeth gave Johnsons verbal permission to eat coconuts - etc.

Proceeded back to landing where wood junk from camp was being burned - ~~took~~ <sup>photos</sup> by refuge sign, took a swim - returned to Easy Rider and departed for Lisianski - 10:30 PM

Note fromighton Taylor - He came to Lisianski with Kiddle, C.O. of Midway, aboard Lannara double motor cutter - stockpiled fuel at Reap and Hermes Reef - Camped at Southeast shore - see report -



2 Oct 78  
Monday

Male turtle hauled out with chopped off tail - died on beach - Kriller cut out shell and presented it to CO of Midway as a gift.

## LISIANSKI

Anchor at LISIANSKI at ~ 2 PM - reasonably calm seas - light trade blowing.

Ashore ~ 3 PM with Johnsons - set up <sup>same as July</sup> camp site - SKIP, Feighton and Jerry came ashore -

Proceeded to N shore - noted one adult, two juveniles at Site 1. One fled when it saw me walking out on reef flat. Proceeded to Site 3 - saw two juveniles - feeding behavior does not appear to be strongly present.

at 4:35 PM tagged an adult male with tail recently chopped off at Site 2 Beach - 2938 RFL

Shortly thereafter noted an up-down set of tracks not more than a week old with one excavation - possibly good.

Noted lots of dried turbinaria on the beach. at Rocky ledge, near where dead turtle was found, I observed a sub-adult female washing back and forth - photo taken R5

20 Oct  
Monday

5:

615

620



- 20 Oct 78 Monday Green alga (Enteromorpha ??) growing on sloping ledge - turtle appeared to be feeding on this material - sample taken. An adult swam by, arrived at area of offshore coral slab - no baskets, but Leighton saw one on it in 1972 or 73.
- 5:45 Observed an adult in the water - feeding - a ledge with deeper water exists just south of slab. at sandy East beach - observed a subadult basket & very black shell - picked her (?) up and measured, tagged, etc. 2939 LFL  
slow return to the water when released - smooth beachrock pieces at shoreline noted.
- 6:15 PM Tagged a Blk shelled adult female basket just before Messersmidt's tree  
2942 RFL 2943 LFL - turned, but did not return to water!
- 6:20 PM noted two adults by rocky v.w. area - both moved off in opposite directions. Saw redwood stump - greatly eroded. Noted a Triton shell on beach, also two globules along south beach. Dark clouds fasted by - Johnson report light rain - they have been ahead of us all the way around. Along the West shore noted Turbinaria and a fine red alga (Gelidiales) washed ashore. Red also seen at other beaches. Sunset ~ 7:30 PM - arrived back at same site about that time - had C-rotor