

Book 2

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GEORGE H. BALAZS

FHS
1978

1978

5-21 JUNE

BALAZS (808) 395-6409

UNIVERSITY OF HAWAII
Hawaii Institute of Marine Biology
Crown Point - P.O. Box 1346 - Kaneohe, Hawaii 96742

5-21 JUNE 1978 (EXP. 21) FFS Book I
(Borrowed of; Harry Clarke Return)

Island PIT COUNTS -	page 80
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3 Turtles recorded on East
subsequently seen at W-S (TC's 4, 32, 43)

1 Turtle recorded on East
subsequently seen at Trig (TC 47)

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1

G.H. BALAZS

JUNE 1978 TIDE CH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
6AM NOON 6PM	6AM NOON 6PM	6AM NOON 6PM	6AM NOON 6PM

MOON PHASES

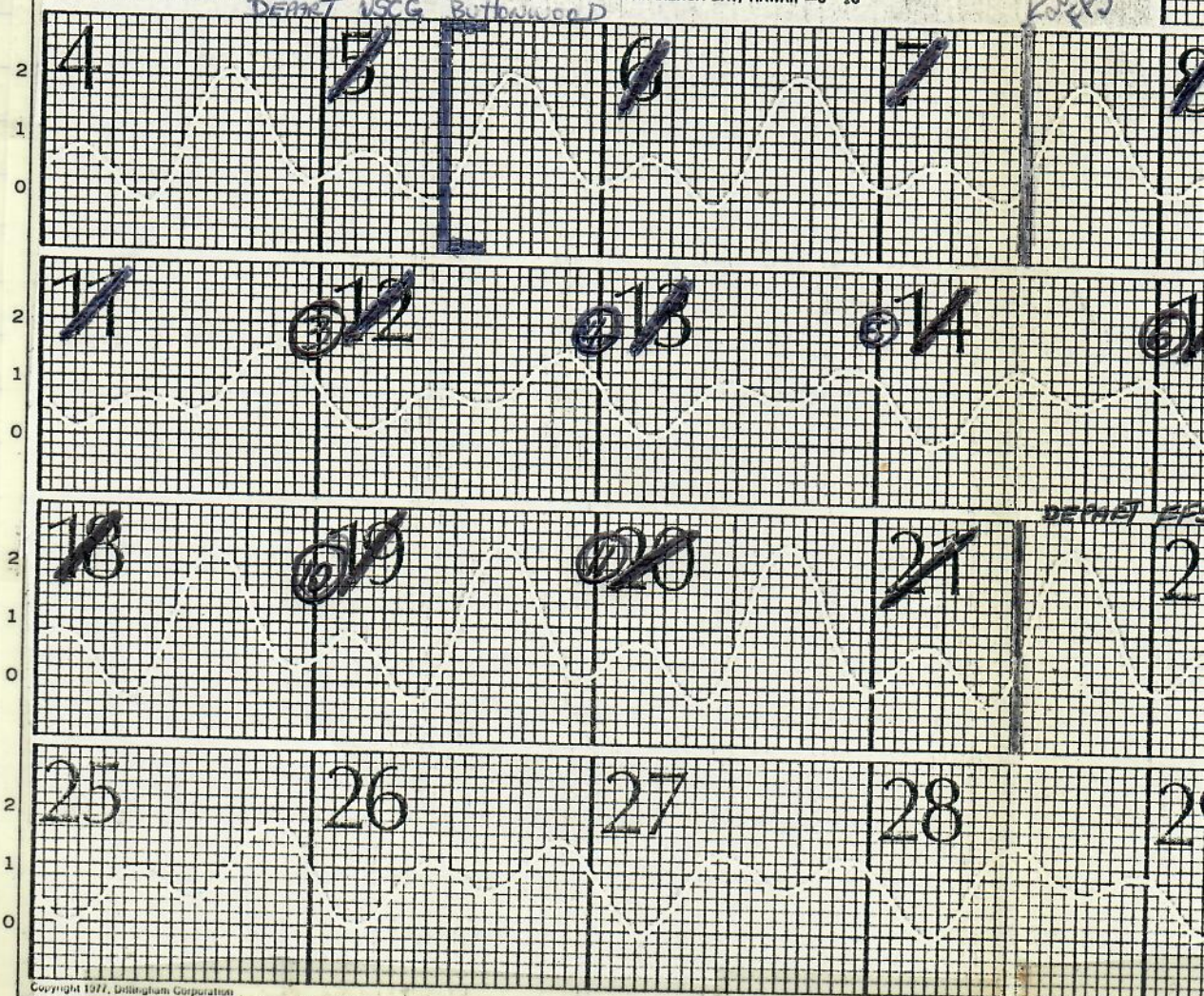


For tide time at following places, add or subtract from Honolulu time.

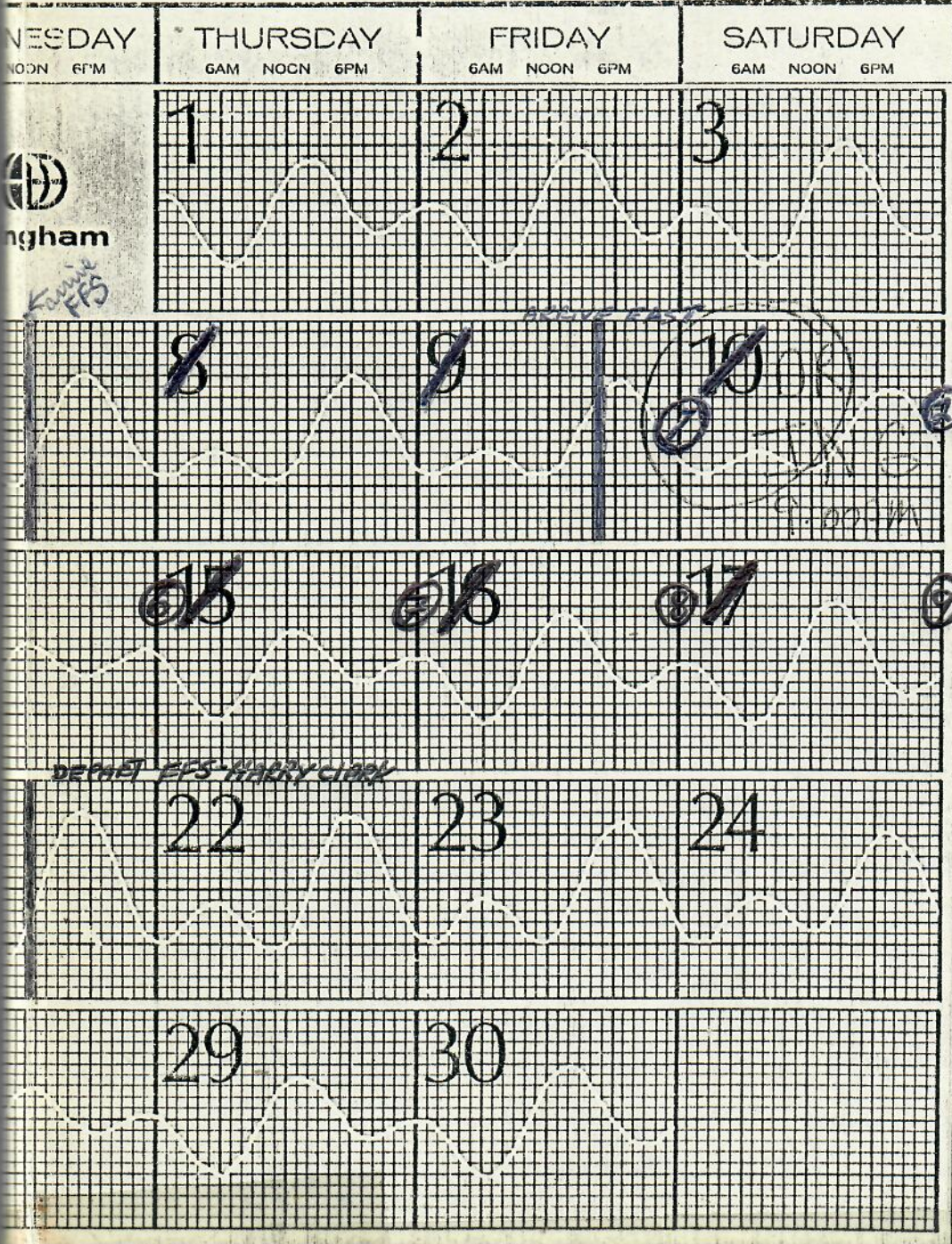
PORTS	Hrs. Mins.	PORTS	Hrs. Mins.
HANAIEI BAY, KAUAI	-1 40	KAUNAKAKAI, MOLOKAI	-0 09
NAWILIWILI BAY, KAUAI	-0 32	KAHULUI, MAUI	-1 48
PORT ALLEN, KAUAI	-0 32	KIHEI, MAALAEA BAY, MAUI	-0 14
HALEIWA, OAHU	-1 36	HILO, HAWAII	-0 59
HANAUMA BAY, OAHU	-0 55	HONUAPO, HAWAII	-0 24
KANEOHE BAY, OAHU	-1 35	MAHUKONA,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



Dillingham



TIDE CHART



ingham
K. H. H. H.

W. 100 ft

DET. H. HARRY CLARK

FEET

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5 JUNE 1978
MONDAY

DEPART FFS at ~ 745 PM

aboard USCG BUTTWOOD no. 306.
Loaded gear at 10 AM, departed
for Teah. Harbor at ~ 1230 PM for
full - took on ~ 18,000 gal @ 1.44 gal.
long weather, calm seas, hot
humid rain during morning hours.
Captain of vessel - Anderson - had
traveled out Leeward Chain ~ 10-12 years
ago (6 Buoy tenders here then?), picked up
many glass balls on islands.
XO Mr. Merrill. Mr. Greene, roommate.
Also aboard - XO of FFS -
Stationed at FFS for 7 months in
1961. PMRF very active at that
time. PMRF only out there when a
shot (overflight) was to take place.
Sometimes delayed 2-3 weeks - they
provided a cook's helper to USCG, all
civilians - happy to be there due to
overtime pay. Nose cones used to
be picked up by C-130's in flight.
C-130 once picked up data by
overflight of Tern (from ground).
lots of different types of aircraft
landed at this time.
on Tern there was a concrete
quonset hut broken up now.
Also they had a saltwater pool,

5 JUNE
1978

5 JUNE
1978

six feet deep in the center I had a juvenile turtle in it. one fellow used to catch reef fish to put in pond - reported that turtle used to chase and eat the colorful ones.

read - "Calcareous Algae" by Steven D. Bach - Sea Frontiers V22 N3 May - June 1976.

Halimeda; Rhiposephalus; Udotea; Pericillium -

IN SEDIMENTS

"filamentous threadlike rhizoids - which bind together the sediment into a firm compact root ball"

ON ROCK

"rootball is reduced in size and acts more like the holdfasts of kelps, binding the plant to the rock surface by a physical attachment of the rhizoids to the rock."

Article Noted -

French Frigate Shoals Rehabilitation
by Lt. J.F. Milbrand
Civil Engineering Branch
Fourteenth C.G. District

Coast Guard Engineer's Digest Oct-NOV-DEC 1973

Saw "All the Presidents Men" in ward room.

6 JUNE
1978
TUESDAY

up at ~ 8 AM; passed Kawai about
3 hours ago; making ~ 1.5 kts.

6 JUN
1978
TUESDAY

100 construction personnel
Morse and Knudtson constructed
Kure LORAN -
FFS XO ^{Klapetzky} arrived at Kure Christmas
Day, 1960 -
Many small ^{war} planes flying to Kure
from Midway - just something to
do.
Contractor had his own planes.
Glass balls found at Kure were
traded for liquor at Midway.
"Holtzman" was C.O. at FFS
in 1960

Ascension Island notes -
CWO KLAPETZKY worked here for RCA
for a few years. No resident native
population - people come from St. Helena.

MAJURO notes → Report that men were stranded
one night on 75' tower islet - 60kt
wind - ate Albatross and Terns.
Butterwood crew saw a number of
dwellings with turtles tied off to

6 June 1978 palm trees in back yard - animals in the water - holding to eat at a later date - 3-4000 people - AR NARU E'AR MIC. 2 Adult shells, 1 SA, 2 juveniles (1 gold) seen in room by STACK - Reportedly bought from Majuro natives.

Lunch - soup, salad, egg salad sandwiches

Reported that radar reflector was at Kure in 1960-61.

^{CO} Lots of sharks at Laysan - many killed - when visited there 10-11 years ago.

xerox page 313 Seafrontiers Sept-Oct 1976

"The Potential of Aquaculture in Australia"
by John L. McLean 1975, Aust. Gov. pub. Service.

Dinner at ~ 4:30 PM Ham and Sweet potatoes.
Will be closest to Necker Bank at approximately 0200 hours 7 June 1978.

Commander Anderson was on BASSWOOD in ~ 1965. KUKUI was a large construction vessel.

Saw three movies -
to bed ~ 0030 hours - Cabin mate H. Greene

7 JUNE
1978
WEDNESDAY

UP ~ 7 AM - fairly calm seas.
Read "Life History Outlines for Reptiles" by Cagle
and _____.

Arrive FFS 12 noon

- ① Steering FWS boat problems
- ② WCG Boston whaler episode

In loaded all my gear and stored
in quarters - met C.O. Heppers.
Carletti still here. Kambic
leaving on tender. Benner still here.
Ocean has undermined base of
fuel tank - taken away part of wall.

Worked on FW whaler all afternoon
and into evening. Steering cable
frozen - plug for drain missing. Regot
that boat was towed back from
East Island - Craig Harrison and CGWren
couldn't get it started; was on
block, took waves over stern -
Took waves while being towed back.
Saltwater inside - probably not
washed down.

Also 2 gas can tops left off -
badly rusted.

→ at ~ 3 PM ^{Jerry} Carletti, helmsman,
took CMDR Andersen and

7 JUN
1978

7 JUNE
1978

lines caught
in prop

two other Buttwood personnel out fishing in direction of Shark Island - later report indicated that at ~ 3:30 PM they were catching fish outside breakers off Shark Reef when wave brought ~ 3" in boat, engine died. Several attempts to start engine (40 hp Johnson) were not successful - boat drifted into breakers. Several hit boat - boat turned over. Engine came off transom, but held on by chain (saftey). Anchors and other gear lost (Buttwood's engine # 250, rod & reel). Boat drifted along - Decision was made to swim for Shark Island after ~ 1:25 in the water.

Carretti had trouble making it - couldn't get boots off.

Radio shorted out right away - he finally dropped it.

Arrived at Shark - saw ~ 6 basking, a pair copulating offshore. Launch from Buttwood found them, went after upside down, whales - towed it back very slowly - in the meantime, Buttwood used anchors and moved toward them - Later on (full dark) came

7 June
1978
Wednesday

back and brought in Carretti and
Station whaler. Damage was not
too extensive.

To bed - midnight - up ~ 7:30 AM

8 JUN
Thurs

8 June
1978

Strong wind early -

Thursday

Worked trying to free steering cable
all morning. MKI JARVIS helped
alot. Unsuccessful. Patched hole
on stern - reported that Harrison
put boat on black at EAST - waves
over stern; lot of waves in boat
during process of towing back
to Terra.

Inspected Tekflex steering mechanisms
in lab.

Constructed wood steering tiller
for engine using heavy duty
hinge.

11:30 AM

Lunch - Rib Steak, mushrooms, salad.
Moved boat to hoist and
load necessary gear. Put on
25 hp back-up motor.

5 PM

Dinner - hotdogs and baked beans.

8 June at ~ 7:15 walked around perimeter
Thursday of Tern, starting at Tide-Gauge/dump.
Fuel barge now tied up by gauge.
Many sooty terns, noddies and a few
gray back along northern as well
as south sides of island.
Very few albatross present.

Report that turtle with partially
missing ^{front} flipper has been (photographed.
Knight) (?) Also from MK1 that
large turtle came up at North
cove and apparently crawled off
embankment - was found on its
back.

Sandbar at the end of Tern (East)
is the most extensive I have
ever seen it. Report from USCG
man that large basking turtle
was seen on there.

I counted 14 depressions along
south side of Tern. Rain (reported
very heavy ^{max depth} _{23" 28" 28"} last week ≈ 7.3 ") has
apparently removed signs of
true ^(at) age. Several sets of
track were still faintly visible.

8 June 78
Thursday

Fuel tanks and retainers wall have seen wave wash. Back side of wall gone. Some iron plates are exposed in this area that I have not previously seen. Water undercut large baren Messersmickii that is visible from FWS quarters. Two seals seen on this beach during daytime.

One weaned pup seen at Ycove beach; one adult at sandbar at East end.

In area the other side of Sears I noted ~15 adult sooty Terns - heads missing in many cases.

Some winddriven rain during afternoon hours.

Walked Tern South beach ~ 1130 AM -
No signs of turtles.
To Bed ~ 1230 AM.

9 JUNE
1978
FRIDAY

Up ~ 7:45, Wind calmed down -
but dark clouds and rain
arrived from the EAST.

Have now spent 2 days on Butterwood
2 days in boat preparation/repair since departure.

9 JUNE
FRIDAY

9 JUNE
FRIDAY
Tried for MARS patch to Honolulu at 8:15 AM - but
MHK said we were ^{or they were too weak.} too weak.

Reference:

The TREE Nobody Liked (Red Mangroves)
Photographs by by Rick Gore
Bianca Lavies
p 668-689

NATIONAL GEOGRAPHIC Vol 151, No. 5
May 1977

"In the Marquesas Keys a downy young frigatebird might I will watching to become an aerial pirate, snatching food from boobies and terns. Also known as the man-o'-war bird, this species established its first U.S. nesting grounds here in the late 1960's"

Notes from MK1 - seeing frigates during morning and afternoon swoop down and flick up - young terns - hold 3-4 seconds and drop. frigates then eat regurgitated fish. He has not seen frigates eat the young terns themselves. Observed large flock of frigates move periodically from La Perouse to Tern.

9 JUNE
1978
FRIDAY

Reference:

The Coast Guard
Small Service with a Big Mission

by William S. Ellis

p. 112-139

National Geographic V 146, No. 1

July 1974 "One such station is on Kure Island, an atoll at the farthest western reach of the U.S. Although it is 1,380 miles from Honolulu, it is nevertheless part of the State of Hawaii. I flew to Kure from Midway. Less than two miles long and half a mile wide, the base islet is enclosed by a lagoon and coral reef. The beaches are white, the bushy growths green and waxy. It is a place of solitude and sunshine. The loran tower on Kure rises to 639 feet, and the signals it sends out reach a thousand miles.

"Of the 25 Coast Guardsmen who are stationed on the island for a tour of duty lasting a year, one told me, 'after a while here, you get very introspective.' He, like most of the others, spends much of his free time swimming, playing softball, and marveling at the annual invasion of Hawaiian monk seals that come to Kure for the birth of their pups."

MONK
SEAL
REFERENCE

9 JUN
1978
FRIDAY

9 JUNE
1978
FRIDAY

Fried seafood (turbot and shrimp) for lunch.
Saw polaroid photo by MK2 Knight - one showed left front bitten ~ 3/4 off - not more than 2 weeks old - taken while attempting to nest on Tern on 31 May 1978 - I plan to make slide duplicate.

Last night a turtle came up on "boat hoist" beach - possible one good - went back to water along iron plate. Could easily have ended up inside retainer wall of fuel tanks, but didn't.

Departed Tern for East at ~ 3:30 PM.

CWO3 KLAPETZKY will call my folks through Daryl (Vassalia, CA) and tell them that everything is fine at FFS.

Arrive at East on 4:20 PM, noted three basking turtles along Sand Point. Unlike Tern, there ~~is~~ not a large number of Sooty Terns on East. Approx. equal to last year (slightly greater in number than last year. (many on ground seen in middle of night))

There appears to be many more Black-footed albatross compared to other years

1973-1978 = 5 years of continuous study, 6 consecutive nesting seasons.

lengthy nesting cycles -OR- high mortality, high recruitment.

"Migration" paper written with data through early (Jan?) 1975?

9 JUNE
FRIDAY

Set up small tent at regular site -
unloaded all gear.

Walked around island at 5:30 PM (1730)
for standard inspection/sensus.

BACKNOTES-

At Tern I noted a number of Sooty Terns
sitting on eggs in water -

10-15 adult sootys chopped-up.

Canetti to C.O. Heggens
observed small juvenile with scum on
back feeding(?) in shallow water along
North seaball just before North Cove beach.

Need - Paper on nesting cycles of
FFS greens

NOTE:

George Hughes paper "Irregular nesting cycles"
Question - Is the word "irregular" consistent with
his definition of "cycle" in blue journals?

10 JUNE 78
SATURDAY

Up ~ 1030 AM - slept since ~ 430 AM -
rain all morning -
Listened to Belmont stakes horse race
on KUAI - winners ① Afem, ② ALAZAR

10 JUNE
SATURDAY

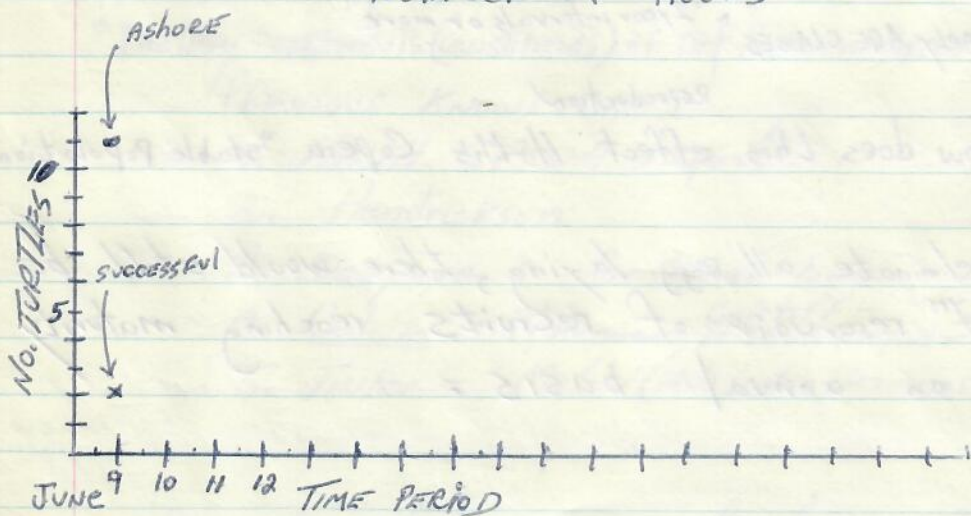
10 JUNE 78
SATURDAY

Several weeks of rain at FFS have made soil very moist - this should be helpful to nest Depreciation: fewer false nests, high "successful" rate - assuming substrate quality is a significant factor, and not "unreadiness" of eggs or female.

FREE booklet offered on KUAI - MORMON CHURCH GENEALOGY

8/2/78 [FAMILY TREE
SALT LAKE CITY, UTAH 84150

Number of Days at French Frigate Shoals -
Number of hours -



EAST ISLAND

DOES SUCCESS RATE INCREASE AS SEASON PROGRESSES?
CHANGES IN NO. ASHORE AND SUCCESS RATE
THROUGH SEASON OF NESTING?

THEORETICAL - Commence - Terminate

10 JUNE 78
SATURDAY

Kindler/BATES - "Age of Sexual Maturity
in the Hawaiian Monk Seal, Monachus Schauinslandi"
"Sexual Maturity in the Hawaiian Monk
Seal, Monachus schauinslandi"

1. Observation made on Round Island
 2. Tag 212 on Whale-Skate
 3. Tag 787 on East - June 1978
- "Reproductive age in the Hawaiian Monk Seal"

10 JUNE
SATURDAY



How does this effect Hirth's Copeia "stable population" paper?

If eliminate all egg laying, there would still be a
20⁺ reservoir of recruits reaching maturity
on an annual basis.

- CONSIDER - Total number of Females I have
tagged since 1973, + total number tagged
previously by FWS - FG.
My ♀ total -
FWS-FG total (FFS) -

5 PM

~ 4 PM

10 JUNE 78 → Carr attributes low return of nesting turtles at
SATURDAY to ^{Portuguese} high mortality by turling on Mosquito Cays.

EXPLANATION

ASSUMING LOW ADULT MORTALITY -



Higher % loss over longer time period may be obscuring this.

"Food Sources of the Hawaiian Green Turtle"

"DIETARY COMPONENTS (CONSTITUENTS) OF THE HAWAIIAN GREEN TURTLE"

PREVIOUS KNOWLEDGE -

1. HIRTH SPIDA report
2. Hendrickson
3. Doty or ? for "Turtle" Limu
4. Codium at Pe'Hermes ^{Galstoff -} ^{Kridler trip report -} ARB's ?
5. Tinker - Melin (photo caption - "Browsing on vegetation")

5PM - Bored - lonesome - stuck in the 5'x5'
tent all day due to drizzling rain.

~4PM observed Frigate carrying ~ 8" long Frigate or Booby
chick - manipulated (pin) for awhile - then
swallowed it. The chick was dead and
appeared beat and old.

10 JUNE 78
SATURDAY During 1830h walk around island, I noted two juveniles swimming close to shore areas 10-11 heading East. An adult turtle overtook one juvenile and appeared to chase it off. Juvenile turned and swam in opposite direction for a short distance.

"Occurrence of Elephant Seals in the Northwestern Hawaiian Islands"

"Supplement to Bibliography of the Hawaiian Monk Seal"

11 JUNE 78 → Note that NEP - Areas 8-9 have a
SUNDAY very steep sand bank - possibly undesirable for turtles.

~ 4 basking turtles on Spout from < 1030 AM.

Seal with pup by tent moved sometime between 7 AM - 1030 AM

Moist substrate does not seem to be aiding in nesting success rate.

^{white} Light noted on horizon to East, stationary, from sunset to sunrise 6/10 - 6/11 (SAT-SUN). Report to CG the next morning.

11 JUNE 78 1600 hours - pair copulating at surface in
SUNDAY West Cove.

Large, dense bait school noted by boat and large
juvenile turtle passing by seemed to chase
after fish for a short time.

→ about 1630 h they washed ashore on Sand Point
for short period - separated. Male swam after
female at very rapid speed. She held him off
by continually facing him head on. He circled
rapidly several times. When he attempted
to mount, she raised a front flipper to prevent
this. After short period, he successfully
mounted. During this activity, there were
several violent splashes.

Female basker seen at end of Sand Point
before noon is still there at 1700. Buried
partially in sand - wave wash periodically.

Noted seal 905 SA^{area 12} - left eye out - appears as
if "cookie cutter" hit area - photos taken roll 2.

→ Many baskers today at SEP⁽¹⁴⁾ - NEP⁽²¹⁾ -
apparently many came out at noon or
before. Are these large numbers due to
weather change to no rain, warm,
sunny, that took place today?

→ observed turtle "sand flipping" - When water

11 JUNE 78
SUNDAY

washed in, this seemed to stimulate turtle to "flip". Resulted in wet sand on back.

Consider possibility of higher rate of tag recoveries on Males; explanation could be lower mortality in males. Female-biased sex ratio may exist to compensate for such an occurrence.

12 JUNE 78
MONDAY

Tidal ^{watch} wave ~~activity~~ occurred at ~ midnight - canceled shortly thereafter. 7.7 on Richter scale Honshu Island ~ 60 ^{miles} from Tokyo, 22 killed. Report came over my radio from Honolulu commercial station. DUE TO NO MOON, or weather?

Many seals seem to be out at night - should make a day/night comparison count - some pups way up INTO SOOTY TERNS -

FOCUS THIS EXPEDITION - MALES

Bird noise as an indicator of turtle movement.

Last night a nesting turtle crawled over young frigate ~~tree~~ - seriously injured or dead.

- Saw copulating turtles in West Cove shortly after sunrise

Returned TO Tern about 10:45 AM -

Lunch (corned beef - cabbage - potato salad)

MARS patch to Lin on NCS through

NHK
MKI ^{JARVIS} showed me polaroid photo of copulating turtle that came ashore during the

12 JUNE
MONDAY

12 JUNE 78

MONDAY

night on North shore beach of Tern -
 reported that they stayed for ~ 1/2 hour - then
 left still together. Temple in photo
 had barnacles on left side; left
 front limb missing just past claw,
 but appeared completely healed.

Heggens reports that 2-3 weeks ago
 the Tahai Maru was right off
 North reef - They motored out and
 boarded it thinking it was a
 Jofan Sampan. They were bottom
 fishing - had chopped up a shark
 on deck (for bait). Captain
 reported they were boarded by Tern
 Island C.P. on previous occasion -
 told they couldn't fish outside.
 Heggens informed them fishing O.K.
 as long as they don't go inside -
 they said they knew that. Captain
 indicated many boats would
 be fishing in area this summer.

Anchor light that I saw the
 other night may have been one of
 these vessels.

~ 2:30 PM departed for Trig - Big rainbow
 occurred ~ 1 PM - strong wind; calm at departure.

June 12, 78
Monday

Trig - 1515 hours Sand islet is attached to
main Trig. Noted 10g(?) a short distance
inside main reef. A medium size ^{society} Tern colony
exists - juvenile plumage - advanced considerably -

TO W-S 1630h. No juvenile turtles when
motoring into W cove. On land there seem
to be a lot of Masked Boobies w/ young;
also appear to be more Black-footed, like EAST.
LARGE, RUSTED Booby(?) ashore at SE end.

Noted Mother and pup swimming near shore with
school of fish following - like when I am in
the water.

In West Cove near shore (more to north) I
watched copulating pair w/ 3 males around. Photos
taken w/ 105mm Roll 3. - Could attendant males be "sacrificial GOATS"?

Noted that some of West banks are
steep - notably north (skate) and South (whale).

Many glass balls - The most basking turtle
I have ever seen at one time.

Noted SA dried carcass with small plastic bag
tied through vertebrae.

Synthetic lines noted on shore - one was a loop O.
Also noted adult seal with scar around neck.
Why doesn't Kenyon et al. address international
problem? - also problem of copper wire on EAST.

12 JUN -
TU

12 NO

12 JUN - 13 JUNE. Shortly after midnight I noted a very large
 Tuesday pregnant seal hauled up in area 2 - appears to
 be a new arrival. note - Many scared and
 tagged seals are not seen for entire expedition's
 Shark and Disappearing Islands?

Many turtles ^{seem} to return to water after hard
 rain.

Is all of this false nesting really necessary?
 what survival value?

Consider Amerson ECOLOGY paper - effect of
 turtles on birds/vegetation - ELEPHANT note.

Most of the sooty Terns on East do not appear
 to be with eggs or young.

What about turtles that are never recorded
 successfully nesting? 1) MISSED? 2) another
 Island? 3) never successfully nest? 3a) practice
 nesting for another season 3b) dump eggs in
 the water 3c) get eaten/die in between days

Greens feed together, migrate together (sleep together),
 Bask together, nest together. RETALL NICKLIN
 TERN IS. BORGE UW) RECOVERIES.

12 noon Two seals by boat mooring - one of glassy
 left eye - right eye stays $\frac{1}{2}$ closed a lot -
 goose-neck barnacles collected from tail
 area. Another seal came up and attacked

13 June 78
TUESDAY

first male - biting from side to side at neck - small amounts of blood drawn.

1300h - Cut out some of the copper wire in areas 11-12.

- TAG RECOVERIES by OTHER PERSONS should include INSCRIPTION IN ORDER TO MAKE PROPER IDENTIFICATION

1500h School of fish breaking surface working bait right off reef in the direction of La Perouse (from tent).

Several ~~days~~ ago while sitting on Bronze rockery at South Point, a frigatebird roosted on my head (hat was on).

At 1800h, two unmarked females were observed just coming out on the beach - nesting?

14 June
78 wed.

- Kauai Radio - 24 information number for safety of fishermen and boaters - offered by Pacific Missile and Range Facility and Dynalectron Corp.

Consider Whitton's heat studies on weaned pups.

Last night a hard rain occurred ~ 10-11PM. Undisturbed sand was very noticeable afterwards due to light surface color. Apparently organic darker material gets rinsed down.

Between 0200-0500h two males were at water's edge in area 7. Tried to tag one at 0500, but not successful.

14 JUNE
WEDNES

15-160

14 June 1978 Along time last night (~0200-0500h), there were 5 nesters
WEDNESDAY on the Sand Point close to one another.

Up about 1015 AM - Mail drop made at Tern by
USCG 1348 ~ Noon. Scoop netted three juveniles on
East Reef - took a long time to process. Two larger
tern recoveries - where have they been? - hibernating?
Is codium present year round on East Reef?

"ECOLOGICAL ASPECTS OF MALE HAWAIIAN
GREEN TURTLES"

Note - check with surgeon(?) to learn effects
of issue/bone rejection of metal used in the
body, i.e. artificial joints - plates.

15-1600h Laid on ground again at NEP and watched
baskers at close range.

→ SEAL PUP born AREA 15-16 between 1745-1845 -
Mother "nosed" pup in direction of nipples;
- kept looking to see if it was suckling.
1906h - pup by mother face (much blood stain on mother's face) - much nuzzling
and facial contact. Frigatebird came low and pup batted at it!

→ Groups of clusters (345) of turtles seem to
bask together - is this random or selective?
What are the effects of basking on large barnacles?

14 JUNE 78 when males haul out to bask their tails
 WEDNESDAY extending straight out behind them. However,
 when they come to rest, the tail curls.

(Whitton should examine thermal aspects of
 weaned pups. Today there appeared to be
 a silver pup belly up on the sand point
 in virtually the same position from at
 least ~1000h till > 1800h.

Noted female basker at NEP go into water.
 A patrolling/passing male immediately swam up
 to her and bit her neck - she stayed "head
 on" with him. Noted that reef
 extending to SE from SEP/NEP is probably
 where turtles sleep (under ledges or
 on sand-pocket bottoms).

Bare Island prominent at Medium tide -
 Mullet was gone - has not been up this trip.
 Walking to south shore from tent, I noted that
 SEP w/ turtles is visible - Do not recall this in
 previous years - has island extended at tent end, or
 has South shifted?

Noted that tag piercing appears to hurt
 far less than tag clinching.

Noted that during colder rain periods
 the pups lie parallel and right next
 to mother.

15 JUNE
 THURSDAY

"white
 as pe
 Bill
 Cooke

15 June 78 . Two male night boaters last night -
 Thursday 20100 - approx. 0330 [one tagged, both
 departed (A9 and SEP)].

Tagging turtles inflicts injuries to taggers
 feet, ankles - also hands and arms.

TO TERN ~ 1030h - noted that shark line
 has ~ 8-10' Tiger live and swimming on cable.

Had lunch at USCG - roast beef - cucumbers.

1500h Called Lin at work via Darrell, VISALIA, CA.
 Tried calling folks, but no answer.

Gave glass balls to CG. Arn Heggers
 noted that in Aug 1977, Tern LORAN went off
 the air (generators) for 19 hours - district sent a
 C-130 out. I told him about National Guard. C-7
 Bill Stevens runs the exchange.

Departed Tern about 1545h - TO W-S

Dead red-footed Boobie band No. 568-71277/

(Rubber) target

Plastic "bomb" location indicates to me that
 W-S get washed all the way over from East at times.

"white crab"
 as per
 Bill
 Cooke

Collected small crustacean on SE shore.
 - noted a dead seal at S end with DeLong note in
 bottle.

TO EAST - shark fin caught just down
 from buoys - shark still very much alive.

[GO TO PAGE 74]

30

TC-1 //

TAGS - ~~2603 LFL~~
~~2604 RFL~~

02 MAY 2002

S - $35\frac{1}{2} \times 27\frac{1}{2}$
98.2 // 69.9 //C - $37\frac{1}{4} \times 37$
94.6 // 94.8 //

DATE/TIME	AREA	Activity	REMARKS	DATE/TIME
6/9/78 2230 FRI	1 //	N //		6/9/78
6/10 2330 SAT	1 //	N //		
6/11 1030	S Point	BASKING	1145 departed and swam around in west cove	
6/11 2330h SUN	7 //	slapping. N thought she laid!	- started to come out by boat anchorage	
6/12 0130h MON	7 //	N	still up - did not nest - RFL bleeding	

5/26/81 - East - N // NO. 114

TC-2

TAG NOS -

31

S-13-G

C-

DATE/TIME AREA
6/9/78 2230 13

Activity
N

REMARKS
Head facing toward ocean -
Saw lightning flashes
RHY2 off Healed
LHY8 off

32

02 MAY 2002

TC-3 //

S - 37 1/2 x 28 1/4
95.3 // 71.8 //TAG NOS -
2608 RFL
2609 FLC - 39 1/2 x 36
100.3 // 91.4 //

DATE/TIME	AREA	Activity	REMARKS	DATE
6/10 ²¹⁹ 0100	S point	N		6/10/02
6/11 ⁶¹⁰ 0130 ^{SW}	SP	N		6/11
6/11 ~ 1500h	NEP	BASKING		6/11
6/11 ~ 1830	#7	BASK		6/13
6/11 2330h	16	N		6/17
6/12 0130h	16	N - LAY		
6/15 0100	#4	N	?	
6/16 ^{FRI} 1300h	NEP	B		

S - - 0

C - - 2

<u>DATE/TIME</u>	<u>AREA</u>	<u>Activity</u>	<u>REMARKS</u>
6/10/78 0100	3	N	
6/11 Sun 0130	1	N	
6/11 1800h	7	crawled up to veg zone, and crawled back to ocean	
6/13 Tues 1800h	7 NEP	B	
6/17 ~1400h	TW-S westshore	OFFshore	"4" faded

34 TC-5

02 MAY 2002

TAG NOS - 2576 L.F. MAP

S-

C-

DATE/TIME	AREA	Activity	REMARKS	DATE/TIME
6/9/78 2230	SEP	Basking	large male w/ trailing edges of front flippers	6/10/78
6/10 0100	SEP	B	tagged - departed	"

6/16/80 6/16/80 ERST (new 582)

TC-6

TAG NOS.

35

S-

C-

DATE/TIMEAREAActivityREMARKS

6/10/78 0100

NEP

N?

TRIED TO CRAWL UP
STEEL BANK OF NEP

" 0230

NEP

still laying on
BEACH

Laying on beach

36
02 MAY 2002 TC-7 /
NO. 165

S-

TAG NOS - 01 /
2591 RFL
2812 LFL
C-

DATE/TIME	AREA	Activity	REMARKS
6/10/78 0100 6/11	NEP	N?	TRIED TO CRAWL UP STEEP BANK OF NEP - Laying on beach. 1/2 off FRESH RHL
6/10/78 2330	7	N	left front 1/2 off but healed
6/11 0600 Sun	13	N	Returning to water -
6/13 1300h - 1800h Tues	NEP	BASK	Scabs on right eye like kure!
6/14 1600h WED	NEP	B	
6/15 0100h WED	9	N	
6/15 2200h MON	13	B-N (?)	
6/19 1200h Tues	10	B	
6/20 0030 - Tues	5P	N	2812 put on

TC 3

6/24/82

East - N

DATE /
6/10/78
6/10/78
6/11
6/11
6/14
6/16
6/18

TC-8 ✓

TAG NOS - 2577 RFL ✓ 37

NO. 166

S-35 x 28 1/4
88.9 ✓ 71.8 ✓

02 MAY 2002
C-37 1/2 x 35
95.3 ✓ 88.9

DATE/TIME	AREA	Activity	REMARKS
6/10/78 ✓ 0200 ✓ Sat ✓	S point ✓	N ✓ 2 pits?	knotty "callouse" felt N ✓ LFL
6/10 ✓ 2330 ✓	Sand point	N ✓	
6/11 ✓ 0130 ✓ Sun ✓	SP ✓	N ✓ another pit	
6/11 ✓ 0330-0530 ✓	SF ✓	N ✓ another pit - N	POSS LAY 2577 had rotated
6/14 ✓ WED 1600h ✓	SEP ✓	B ✓	
6/16 ✓ FRI 1300h-1800h ✓	SEP ✓	B ✓	
6/18 ✓ SUN 1830h ✓	SEP ✓	B ✓	

6/16 - East - N

NO. 111

38

02 MAY 2002

TC-9 ✓

TAG NOS - 2578LFL

2579RFL

S-35¹/₄ x 27¹/₈
89.5 ✓ 68.9 ✓C-37¹/₄ x 36¹/₂
94.6 ✓ 92.7 ✓

DATE/TIME	AREA	Activity	REMARKS	DATE/TIME
6/10/78 ✓ 0200 ✓	S point ✓	N ✓ 2 pits ✓	observed ✓	6/10/78 ✓
" ✓ 0415 ✓	SP ✓	✓	observed ✓ returning to water	6/10/78 ✓
			moved forward when fogged - nest may be low	6/11/78 ✓
				6/19/78 ✓

TC-10

TAG NOS
02 MAY 2002 2584RFL 39
2585LF

S-38 1/4 x 29 1/2
97.2 74.9

C-40 x 37
101.6 94.0

DATE/TIME	AREA	Activity	REMARKS
6/10/78 0230 ^{FRI}	S point	N	
6/10 2330 ^{SAT}	Sand point	N-LAY	
6/11 1500h	NEP	Basking	
6/19 1200h	NEP	B	

6/81 - East B no. 112

40

02 MAY 2002

TC-11

TAG NOS - 2587 LFL

2588R
webbingS-34 x 27 1/4
86.4 69.2C-35 1/4 x 33 1/4
89.5 84.5

DATE/TIME	AREA	Activity	REMARKS	DATE/TIME
6/10/78 ^{Fri} 02300 6/10	11	N	LARGE BARNACLE ON 2nd MARGINAL Right - some gold color in shell	6/10/78
6/10 2330 ^{Sat}	16-17	N		6/13
6/11 0130 ^{Sun}	16-17	N		6/12
6/11 0330	16	N-LAY	FLIP gone on right - 2588 placed in webbing	6/13
6/11 ~ 1500h	NEP	BASKING		6/13
6/11 1830h	15	OFFSHORE		6/18
6/13 ^{Tues} 1300h	NEP	B		6/19
6/14 ^{Wed} 1600h-1800h	NEP	B		also
6/19 ^{Mon} 1830h	SEP	B		

6/10 181 - East-B NO. 113

TC

LFL
2
ing
4

TC-12

TAG NOS-2580 REF 41

NO. 161

S-39 x 31 1/8
99.1 79.1

2581 LFL 2007 MAY 20

C-41 1/8 x 38 1/2
104.5 97.8

page 2

DATE/TIME	AREA	Activity	REMARKS
6/10/78 0400	5	N-LAY	Very Big-long hind flippers - watched her dig
6/13 ^{Tues} 1300h - 1800h	NEP	B	knotty callouses felt in Both flaps
6/12 1600h	NEP	B	
6/13 ^{FRI} 1300h	NEP	B	
6/18 ^{SUN} 1830h	NEP	B	
6/19 1200h also at 1830h	NEP	B	

TC 11 6/20/82 - East, N

42

TC-13

TAG NOS -

S-

C-

DATE/TIME
6/10/78 2330^{sat}

AREA
2

Activity
N

REMARKS
no old tags

DATE

6/10

6/11

6/11

6/12

6/14

6/16

6/17

6/19

6/19

6/20

TC-14 //

TAG NOS - 43
2607 RFL -

02 MAY 2002

S - 37³/₄ x 29¹/₄

95.9 // 74.3 //

C - 40¹/₄ x 36

142.2 // 91.4 //

DATE/TIME	AREA	Activity	REMARKS
6/10 2330 Sat	5	N	returning to ocean
6/11 0200	3	N	
6/11 2330h	17	N	
6/12 Monday 0130h	17	N - Lay	Big knot in LFL
6/14 WED 1600h	NEP	OFFshore	
6/16 1300h; Wed	NEP	B	
6/17 SAT 1100h	NEP	B	
6/19 1200	NEP	B	
6/19 MON 1830h	SEP	B	
6/20 TUES 1200h	NEP	B	

6/17/81

EAST - N //

NO. 116

44

TC-15

TAG NOS-

S-

C-

<u>DATES/TIME</u>	<u>AREA</u>	<u>Activity</u>	<u>REMARKS</u>
6/10/78 2330 SAT	SEP	apparently basking	sprayed TC 15
6/11 0230 SUN	SEP	Bask (?)	
6/11 0500	SEP	Bask (?)	
6/11 ~1500h → 1830h	NEP	Basking	
6/13 1300h	NEP	B	
6/14 wed	SPOINT	OFFSHORE	
6/14 1600h	NEP	B	
6/16 1300h	NEP	B	

DATE/

6/11 CA 10 D

6/11 2

TC-16 //

S-37 1/8 x 28

94.3 // 71.1 //

TAG NOS -

260 RFL ~~45~~

2602 RFL -

C-39 x 35 3/4

99.1 // 90.8 //

02 MAY 2002

DATE/TIME	AREA	Activity	REMARKS
6/11/00 0030 Sun	Sandpoint //	N //	
6/11/00 2330h	X	N-Lay	

46

TC-17

02 MAY 2002

TAG NOS - 2589 LFL

2590 RFL

S-37 1/2 X 27

95.3 // 68.6 //

C-39 X 35 3/4

99.1 // 90.6 //

DATE/TIME	AREA	Activity	REMARKS	DATE
6/11/78 ^{SUN} 0200	2 //	N //		6/11/
6/11/ 0530	3 //	N-Lay	split in right flip - I may have done this	6/11/
6/11/ ~1500h	NEP	BASKING		6/14/
6/20/ 1200h	NEP	B //		

6/29/80

16-2 (center) East-N TC48
(new 3677 R 2nd scale)

Photos by young frigates

NO. 84

~~RFL~~
~~RFL~~

TC-18 ~~07~~

TAG NOS - 47
2586

NIGHT 2

S-

C-

DATE/TIME	AREA	Activity	REMARKS
6/11/78 0200	6	Basking Male	no new areas - tagged 2586 RFL - default
6/11 1830	7	BASKING	
6/14 ^{WED} 1600h	8	B	

5/81 East-B no. 62

des

48

TC-19

TAG NOS-

S-

C-

DATE/TIME
6/11 2330h

AREA
SEP

Activity
BASK ♀

REMARKS

DATE/TIME
6/12 ^{MON}

5/11-
197

TC-20

TAG RECOVERY OFF
1029 LFL/HMB

987

TAG NOS-
2505 LFL
2506 RFL

49

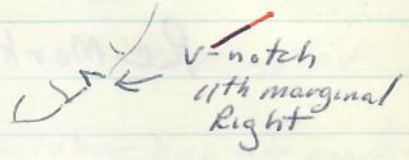
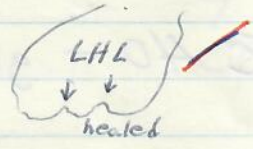
MAY 2002

S-37⁵/₈ x 27¹/₄
95.6 / 69.2

C-39¹/₂ x 36¹/₄
104.3 / 92.1

DATE/TIME	AREA	Activity	REMARKS
6/12 Monday 0100	17	N-Lay	copulation scabs noted on shoulders

Hard "knot" at site where tag was removed -
TAG 1029 LFL/HMB OFF, end in pieces.



5/21-7/24
1975

N/F East TC1 (also had applied)
987² HMB

S-37 x 27¹/₄
94.0 / 69.2

C 39¹/₄ x 37
99.7 / 94.0

6/11 181 East=N NO.51

NIGHTS

50

03 MAY 2002

TC-21/

TAG NOS- OFF
2610 RFL

S-

C-

NO. 10

DATE/TIME	AREA	Activity	REMARKS
6/12 0430 ^{MON}	SAND POINT	N - presumed L ₂	Apparently not

Re-Marked TC 40 - go to page 69

DATE/TIME
6/12/02
6/13/02
6/13/02
6/14/02
6/16/02

TC

TAG NOS - 51

03 MAY 2002

~~265~~ RFL
~~267~~ HFL

TC-22

NO. 162

S-34 1/4 x 26 1/4

~~87.0~~ 66.7

C-36 1/2 x 32 3/4

~~92.7~~ 83.2

DATE/TIME	Activity	AREA	REMARKS
6/12 mon 2345h	N-LAY?	Sandpoint	[1/4 did not lay this date]
6/13 Tues 1300h	B	NEP	
6/13 1800h	OFF	9	
6/14 wed. 0200	N-LAY	Spoint	2671 applied
6/16 1800	N-LAY	13	Just above high tide mark - This may not have been TC 22 - Poss TC 23? Not able to tag - returned immediately.

TC 2 6/2A/82 east-N

S-

C-

<u>DATE/TIME</u>	<u>AREA</u>	<u>Activity</u>	<u>REMARKS</u>
6/13 TUES 0030	3	N	
6/14 1600h MON	NEP	B	
6/19 1830h	SEP	B	

DATE

6/15

6/13

6/13

6/15

6/15

6/16

6/19

TC-24 ✓

S-36 x 28 1/4
91.4 ✓ 71.8 ✓

TAG NOS 53

2733 LFL ✓

2734 RFL ✓

10 MAY 2002

C-37 3/4 x 35 1/2

95.9 ✓

90.2 ✓

DATE/TIME	AREA	Activity	REMARKS
6/15 ^{W/T} Tues 0050h	14 ✓	N ✓	
6/13 ^{W/T} 0200 ✓	3 ✓	N ✓	
6/13 ^{W/T} Tues 1800h	NEP ✓	B ✓	
6/15 ^{W/T} 0100 ✓	3 ✓	N ✓	
6/15 ^{W/T} Thurs 2200h	3 ✓	N ✓	
6/16 ^{W/T} 0030-0400h	2-3 ✓	N - LAY ✓	
6/19 ^{W/T} Mon 1830h	NEP ✓	B ✓	

10 MAY 2002

TC-25 ✓

TAG NOS - 2690 LFL

2691 RFL

^{presumed wrong}
~~S-35 1/8 x 26 5/8~~
~~S-38 1/4 x 32 1/8~~
 97.2 ✓ 81.6 ✓

C-41 x 42

104 ✓ 100.7 ✓

DATE/TIME	AREA	Activity	REMARKS
6/13 ^{TUES} 0630 ✓	4 ✓	N ✓	
6/13 1800h ✓	Spout	B ✓	
6/14 1000h-1400h ✓	Spout	B ✓	
6/15 0100h ✓	17	N-LAY ✓	Apparently stayed right through hard rain of 9-12 midnight
6/19 1300h ✓	Spout	B ✓	

6/14 & 6/24/80

A2 & A3 EAST ✓ TC ✓
 only tag 2690 present
 (new 359 RFL, 366 L 3rd scale)

NO. 82

DATE/TIME
 6/13 0630 ✓
 6/13 1800 ✓
 6/13 1000 ✓
 6/14 1000 ✓
 6/14 1400 ✓
 6/15 0100 ✓
 6/19 1300 ✓

~~LFL~~
~~RFL~~

TC-26

TAG NOS
2740 LFL 10
2741 RFL
55
10 MAY 2002

S-35 x 26
88.9
66.0

C-36³/₄ x 35³/₄
93.3
90.8

DATE/TIME	AREA	Activity	REMARKS
6/13 TUES 11:00-3:00	5	N	RH2 Miss as well as part of adjacent carapace
6/13 1300h	10	offshore	
6/13 2345	8	N	
6/14 WED 1600h	8-NEP	B	
6/17 SAT 0100	10	N-Lay	Result in an "egg onlett" - like photo taken Areal in previous season!

6/8 East N NO. 126

56

10 MAY 2002

TC-27

TAG NOS -

2652RFL

S-35³/₄ x 27

90.8

60.6

C-37¹/₂ x 34³/₄

96.2

80.3

DATE/TIME

AREA

Activity

REMARKS

6/13 TUES

6/13 0200

6/13 0445

6/16 FRI

1300h

5

6

3

SEP

N

N

N-LAY?

B

Large fat rolls in hind

quarters

Left Flap has small

TMR ON VENTRAL SURFACE,

Right next to TC 29

6/24/80

12 EAST

TD-1

NO. 81

(new 3772, 3683)

DATE/TIME

6/13 TUES

6/13

6/14

6/18

6/19

6/20

TC-28

S-

C-

<u>DATE/TIME</u>	<u>AREA</u>	<u>Activity</u>	<u>REMARKS</u>
6/13 TUES 0030h	5	N	
6/13 TUES 1300h	NEP	Bask	
6/14 wed 0200h	5	N	
6/18 SUN 1430h	NEP	B	Small TMR RFL's fresh injury in carapace plate.
6/18 1830h	NEP	B	
6/19 1200h	NEP	B	
6/20 1200h	NEP	B	