11-18 NOVEMBER 00 - Mdwy IV

BALAZS Mead 2000

COMPOSITION

MIDWAY II Book

"NAVAL AIR FACILITY"

NAF

George Balazs

395-4409

100 sheets • 200 pages • 100 hojas

9¾ x 7½ in/24.7 x 19.0 cm

wide ruled/réglage large/rayado ancho

Me 429

FRIENDS OF MIDWAY ATOLL NATIONAL WILDLIFE REFUGE

WH6BLQ
George H. Balazs
992-A Awaawaanoa Place
Honolulu, Hawaii 96825

0 43100 09918 5

B-101

MIDWAY

Need 25, 26, 31 & 32

Record of ACC Midway Temperature Loggers ≤ P.163

Nautical chart #19482 Midway Islands

Mead

SQUARE DEAL

cell phone Ken = 75
Katie = 28

National Imaging & Mapping Agency (Geos at FWS Midway Visitors Center)

599-5888
(808) 421-2029

SCHEDULE
HORAIRE/HORARIO

TEMPERATURE LOGGERS DEPLOYED!

	1	2	3	4	5	6	7	8
TIME HEURE HORA	TUG PIER –		TID BIT + 2660016+	STOWAWAY	(2 hours)		in PVC 21 feet	11/17/00
MONDAY LUNDI LUNES	Fuel Pierside CARGO PIER		TIDBIT + 383501/6-00+	STOWAWAY	(2 hours) 224564		in PVC = 22ft	11/17/00
TUESDAY MARDI MARTES								
WEDNESDAY MERCREDI MIERCOLES								
THURSDAY JEUDI JUEVES								

Page 198-200 Cargo & TUG PIER Temp. GRAPHS MARCH THROUGH Sept 1999

			not right. Could be white/pink veining of FP but just can't tell from this angle.	(pink "smoke" through tissue?)

GEORGE H. BALAZS
ZOOLOGIST AND LEADER
MARINE TURTLE RESEARCH
and
Regional Vice Chairman for the Pacific Islands
IUCN Marine Turtle Specialist Group

HONOLULU LABORATORY
SOUTHWEST FISHERIES SCIENCE CENTER
NATIONAL MARINE FISHERIES SERVICE
2570 DOLE STREET
HONOLULU, HAWAII 96822-2396 (808) 983-5733
Email: gbalazs@honlab.nmfs.hawaii.edu Fax: (808) 983-2902
Report turtle strandings: (808) 983-5730

Capture Summary
Page 13

PAGE 97
Growth RATE
Summary

Sample L5 page 101

MIDWAY
11-18 NOVEMBER 00
Data Pages = 36-95

knie thammer@midwayisland.net
Ken Niethammer = 1-808-599-5888 (dial tone) 808-421-3375

sent
SUSAN RICKARDS (REEVE) → SLP 1980
caretaker of 125 FFS hatchlings
68-1815 LINA POEPOE
WAIKOLOA, HI 96738
(808) 883-0006
SREEVE@ALOHA.NET

sent *
Jennifer Schramm = (2nd dial tone) (808) 421-3330
jschramm@midwayisland.net

sent
Matt Parker
15004 24th SW
Seattle WA 98166
parkster22@hotmail.com
thanks!

NOWIEL A. TABO
MIDWAY ISLAND - 23
Box 29460
Honolulu, HI 96820-1860

STOMACH/MOUTH IDS = Pages 110-111

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RON ANGLIN
MIDWAY ATOLL NWR

(2) FACTS FROM FWS Brochures

"MIDWAY NAVAL AIR STATION" → "Midway NAVAL AIR FACILITY"

July 5 1859 Capt Brooks

Tiny ATOLL

Sand 1.8 miles x 1.2 mi = 1200 Acres

Refuge = 1988

Eastern = 334 Acres

Spit = 6 Acres

open 8/96 to visitors

1250 from Hawaii

25-30 M years old (28M)

Commercial Pacific Cable Co. 1903?

1935 Pan Am Seaplane Base

Midway Naval Air Station March 1940 started construction Commissioned 8/1/41

June 4, 42 Major Attack on Midway by Japan

DEW warning Line > WWII

1992 - closed NAVY Base

1996 Midway Phoenix Corporation

"MAY - Oct" = warm, sunny +, cooler nights Air Temp. 70-85°F

Nov - April - drp to 50°F Strong winds

Water Temps = mid 70°s Summer, mid 60°s winter

Annual rain = 40 inches year

Date: Wed, 13 Dec 2000 16:09:32 -1000
From: "Marc R. Rice" <mrice@hpa.edu>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Midway Coordinates

Midway diving site coordinates that I have written in my notebook:

Fish Hole---28 11.838 N, 177 21.761 W
Keoki's Ledge--- 28 12.629 N, 177 25.541 w

---------- Forwarded message ----------
Date: Sun, 7 Jan 2001 16:06:00 -1000 (HST)
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: Ron <ranglin@midwayisland.net>,
Nancy Hoffman <nhoffman@midwayisland.net>
Cc: Marc- HPA Rice <mrice@hpa.edu>,
Ken Niethammer <kniethammer@midwayisland.net>,
Rob Shallenberger <Robert_J_Shallenberger@r1.fws.gov>
Subject: Summary of our significant Midway sea turtle findings, 11-18 Nov. 00

Aloha, In bullet form, here's what we accomplished and learned at Midway during our last 7-day collaborative NMFS/USFWS/Hawaii Preparatory Academy expedition to Midway:

- 29 green turtles were captured of which 20 were newly tagged and 9 were recaptures.

- Size classes of the 29 turtles consisted of 14% adults, 10% subadults and 76% juveniles.

- New visual harmless carapace ID number were applied, starting with 43 and ending with 61. Several of the old carapace numbers from two years ago were found to be, as expected, no longer readable.

- Small blood samples were collected from all new animals for DNA analysis and from all 29 for biotoxin analysis.

- One of the 29 turtles was found to be be mildly afflicted with tumors (fibropapillomatosis). Other cases of this disease have been verified at Midway over the years, in low prevalence.

- Growth in carapace length calculated from our recaptures revealed an exceedingly low rate. Of the nine recaptures, time since last measurement ranged from 14-25 months. 4 displayed absolutely no carapace increase, 4 ranged from 0.3-0.8cm/year increase, and 1 grew 2.7 cm/year. We would like to know the latter turtles secret for success at Midway, certainly it knows something or is doing something better than the other turtles.

- As in all past current turtle work at Midway, all turtles were double PIT tagged in the hind flippers (one in each). There were no loses of PIT tags in the turtles recaptured.

- Stomach samples from gentle stomach flushing were collected from five turtles and a fecal pellet was collected (accidentally) from a sixth. Contents are being analyzed and ID'ed by a Hawaii algae specialist (Dr. Dennis Russell) currently at the UAE Sharjah University.

- An unusual "fishy" odor from many of turtles' mouths was discovered to be from feeding on Lepas goose neck barnacles growing on floating objects floating in from pelagic waters. A sea turtle researcher (Denise Parker) at our NMFS Lab has previous discovered and published findings of Lepas being very important in the diets of pelagic loggerheads of the N. Pacific (including offshore waters of Midway). Lepas can only grow on floating objects, hence at least one positive aspect of marine "debris" such as floats.

- Carapace ID 18, an adult female, was recaptured in the inner harbor. This turtle has originally been marked, PIT tagged and measured on 3/19/97 by Nancy FWS turtle team basking on Turtle Beach (formerly Koral Kings Dive Shop area when I first started working at Midway in the 1970's). Turtle 18 was subsequently documented nesting on the Tern Island South Beach (at French Frigate Shoals) during June of 1999. Her discovery by us now back at Midway (her home when not nesting) completes the RoundTrip Migration (foraging home- to nesting beach- and back home again) that many researchers dream about verifying, but are seldom able to accomplish,

- New longterm seawater temperature recorders were deployed strapped tightly to piling at 20 ft depths on the Cargo and Tug piers.

There is more to tell. But I think that's enough for now, I'll follow up in the near future with some added items. Best Regards, George

George H. Balazs, Leader
Marine Turtle Research Program
National Marine Fisheries Service
SWFSC Honolulu Laboratory
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Honolulu, Hawaii 96822-2396 USA
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gbalazs@honlab.nmfs.hawaii.edu

Summary of species found in these samples:

Chlorophyta

Cladophora sp.
Codium cuniatum
Halimeda sp.
Microdictyon setchellianum

Sea Grass

Halophila hawaiiana

Phaeophyta

Dictyota crenulata
Sargassum sp.
Sphacelaria tribuloides
Zonaria sp.

Rhodophyta

Ceramium sp.
Griffithsia sp.
Galaxaura ?
Hypnea nidifica
Hypnea sp.
Jania capillacea
Laurencia nidifica
Laurencia sp.
Polysiphonia sp.
Spyridia filamentosa

Cyanophyta

Lyngbya majuscula

see p.124

Subject: Significant Midway sea turtle findings

2566 Recovery

2-7-01

See p.9

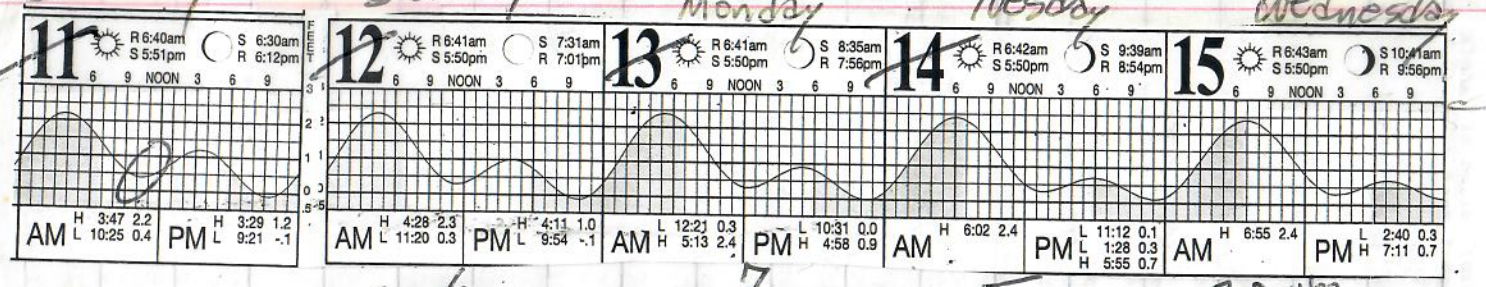
This is a follow-up message to provide you with some added and very interesting, important information on results unfolding for our sea turtle
team research at Midway. Recall that one of the reasons I was eager to renew the work up there, after a 20 year "pause," was to hopefully find some of the turtles we tagged back then with the Koral Kings Dive Club. That goal has been achieved, at least for one animal, as follows.

On April 8, 2000 Nancy and team examined a turtle basking on Turtle Beach that had tag 2566 on it's left front flipper. The turtle measured 70.5 cm in SCL and in good condition. Mototool No. 40 was applied to the carapace. Records show that this turtle was tagged on June 18, 1978 captured in the water near Eastern Island. At that time the turtle 59.4 cm SCL. The slowness of the growth is of course truly astonishing (11 cm in 22 years= 0.5 cm per year). But not inconsistent with the vast majority of other shorter-term recaptures of a year or two made for Midway turtles.

Slowness of growth for juvenile/early subadults at Midway, undoubtedly a reflection of marginal northerly Pacific habitat (including food sources) for green turtles has profound management implication. And this is coupled with what I judge to be high levels of predation by tiger sharks happening at Midway. Little wonder it's taken maybe 20-50 years for some signs of turtle recovery to be showing up (as evidenced by some large turtles there now- something we rarely saw in the 1970's). Former authorized hunting by Navy folks up to about 1972 or so surely had some effect, as did years of impact from indirect military activities.

However, not all things are black and white. Midway is a shear pinnacle in pelagic waters, marginal for green turtles. The man-made infrastructures of the piers and inner harbor clearly provide critical habitat for the animals to subsist at this outlier location as well as they do. It was that way in the 1970's and, to my eye, continues to the present. Aloha, George

NOVEMBER 2000

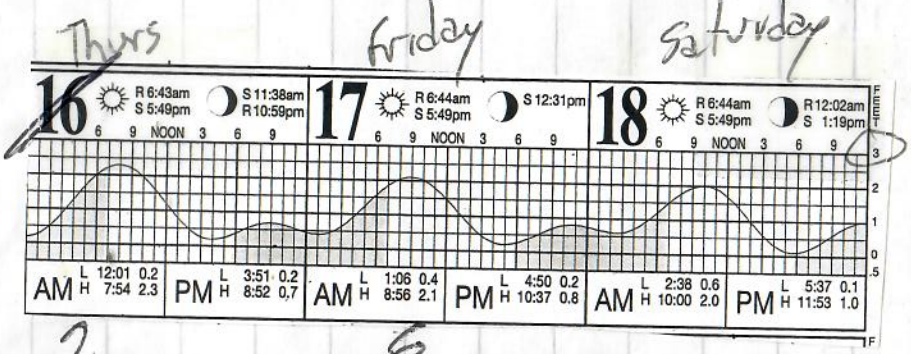


6 (5 scoop 1 BASK)

7 3 scoop 3 scuba 1 net

5 1 net 1 scoop 3 scuba

3 scuba Tug pier



2 1 net 1 scoop

6 3 scoop 3 hand scuba

SCOOP	SET NET	HAND SCUBA	BASK	
13	3	12	1	= 29 total

11 Nov. 00 Saturday
Depart Honolulu for Midway Aloha FL475
~410 PM
w/ Kevin FWS Kilauea Pt (up & back); Norm FWS Midway uses 5 hydrophone tunes

Dinner at All Hands Club. Visited Turtle Beach
saw adult male turtle basking ~ 10 PM.
"1584" password for satellite phone. Cisiewski phone
#36 - Swims unusual as per Nancy (see p. 126)
look Video of island from Aloha Air.
USFWS Biologist
Jennifer Schramm

12 Nov 00 Sunday Sunrise ~ 630am (view Inner Harbor 830-9 AM ne Seawall)
Inner Harbor
720 AM Inner Seawall - 2 Ad H Susan
15 yo 4 dult outside seawall
Notes from FWS talk:
declared
1988 overlay w/ Navy
1996 Oct NWR exclusive by Clinton
Introduction by Ken N.; Katie (MPC) Judy Hebert (Corporation)
Jenn

(TO p. 10)

(8)

11-18 Nov. 00
Midway

OBJECTIVES/GOALS:

(NO) - Recover (2-) TDR's remaining of 3 put out in 1999 - Sonic Location (MAKE W/ DR SCANNER - NO SONIC TRANSMISSIONS)

✓ - Make recoveries of previously tagged turtles - growth/health/status

✓ - Capture untagged turtles - collect blood for DNA, (Plasma NO)

✓ - Health - Screen all turtles for fibromas

✓ - BLOOD DOTS FOR BIOTOXIN.

(NO) - Trace flippers of population differences

✓ - Close up's (DIGITAL) of eyes for anomalies

✓ - Behavioral observations of foraging, resting and movements

✓ - Deploy temp. loggers - inner Harbor cargo pier

(NO) - Halophila/algae observations/mapping

(NO) - " Dino collection

Sand Isl. only ✓ - Basking

(NO) - Inner Reef - haul outs etc.

PARTIAL - Eastern Island - habitat use ✓ (Ken told of basking by pier)

- New MT's for visitor participation in Research

- Need Student at Midway for Turtles.

- Ideas to enhance Turtles - artificial habitats, feeding (bird feeders)

- Resight MT #'s. PAST + THIS TRIP NEW.

See p.4-5

Date: Mon, 12 Feb 2001 15:22:57 -1000 (HST)
From: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
To: Ron <ranglin@midwayisland.net>,
Ken Niethammer <kniethammer@midwayisland.net>,
Nancy Hoffman <nhoffman@midwayisland.net>,
Rob Shallenberger <Robert_J_Shallenberger@r1.fws.gov>,
Marc- HPA Rice <mrice@hpa.edu>
Subject: Re: Another follow-up report on sea turtle studies at Midway

In my last message I summarized the recapture of a 54.9 594 cm turtle we tagged 21.8 years at Midway that exhibited a pitifully slow rate of growth. As an exciting follow-up, I report now a very recent recovery, again by Nancy and Team, demonstrating accelerated growth of a near-adult 80.3 cm individual.

The turtle was PIT tagged and measured on 4/29/99 and assigned MotoTool 22 while basking on Turtle Beach. The straight carapace length at that time was 80.3 cm. 21 months later, on 1/17/01, the turtle was again seen napping on Turtle Beach and remeasured as 85.3 cm. The increase of 5.0 cm equates to about 2.8 cm/yr, an exceeding Rapid Rate, in contrast to the data sent in my last message. And, especially, for such a large turtle, for which most of the published information suggests a considerable slowing of the growth process. Obvious this turtle doesn't fit the "mold," or the mold is wrong in certain cases and new ground is being uncovered at Midway.

Please encourage Nancy to continue devoting her time to turtles- she's clearly on a Winning Streak and I'm eager to see what she turns up next!
Aloha, George

CONTINUED FROM p. 7

(10) (4) Visitor Access Map slide (3) Space shuttle Aerial

Bob?

12 Nov 00 Need (1)
Sunday Jennifer lecture - 1st slide map - H.A. w/ Midway
Need (2) Aerial of Atoll/islands from East.
5 Miles across diameter
1903 Pacific Cable co. telegraph - around towards
July 4, 1903 Took 9 minutes
PAN AM China Clipper - to orient.
DEW 1950s Line Distant early warning
780,000 Laysans; 42,000 Black footed
oldest banding record = 48 years
90,000 Sooty - Eastern; 400 graybeak
Mid 1997 - Rats eradicated
- Limit 100 guests at a time
Cargo Pier - set up bright lights - attract fish

Need BBC "Midway Islands of Life" - Discovery Channel
Turtles feeding on Codium shown in he
Where located? Obtain copy to vi

To page 12

Susan Reported
Mototool #39
seen 1340 hours
by cargo/fuel piers

Aerial View of Midway
Poster - use old photos - get 1970's - Book Store Book
+ Bird photos
DID obtain aerial postcard of Midway TO Digitally Scan.
35mm
- Marca photos and 35 wall photos (Midway House)

Photos needed

+ 35 mm - Midway Refuge Signs
√ - Piers / Inner Harbor
√ - Seawalls
√ - Shots of Historic pictures on the wall - Midway House

"ARTIFICIAL MARINE TURTLE Habitats" (AMTH)

(12) need Midway bones - Skeleton

12 NOV 00 Made arrangements/meeting w/ Ken Nichols
SUNDAY Lenny Goez re: use of vehicles - Van today
then FWS pickup truck. Me in "Midway House" @ O
house "Maids Quarters". MARC FWS
Dead turtle recently found off Turtle Beach -
cut up by Cynthia and Wayne ~~Sleeman~~ Sentman.
~ 11AM proceeded to check seawalls -
INNER Harbor - Marc & Katie Harrington - pickup
Van - everyone else and me, to opposite side
of inner harbor along seawall. Caught one w/ scoop
No others seen. Marc scooped four
by Cargo Pier seawall. Two subadult
seals - one on seaplane ramp, the other
on Turtle Beach. Juvenile green basking
on Turtle Beach - picked it up for
processing. After lunch, worked up 6
turtles in Midway House drive way in back of
pickup truck.

-1-NOV-00
Data pages 36-95

Summary of Captured Turtles 11-1-NOV-00

(Recovery Summary p.37)

(3)

No total Summary p.37

DAY	Scoop Net	Hand Scuba	BASK	NET	TOTAL
11-12-00 (1) Sunday	5 (4 Recap, 1 New)	0	1 (1 New)	0	6
11-13-00 (2) MONDAY	3 (1 Recap, 2 New)	3 (1 Recap, 2 New)	0	1 (1 New)	7
11-14-00 (3) TUESDAY	1 (New)	New shark Bite 3 (2 New, 1 Recap)	0 0	1 (Recap)	5
11-15-00 (4) Wednesday	0	3 (all New)	0	0	3
11-16-00 (5) Thursday	1 New	0	0	1 New	2
11-17-00 (6) Friday	3 (1 Recap, 2 New)	3 (3 New)	0	0	6
Methods Totals =	13	12	1	3	29 TOTAL
11-18-00 Saturday no captures	(see page 97)				

SCL Range (N=29)
Weight Range =
N=

9 Recaps, 20 New

(14) Life is difficult * SKKM Need MIDWAY PRINT OUT AFTER 11/00 data has been entered. *
follow up to complete work started
25 years ago:

- Fewer turtles seen under cargo pier on scuba dives
- no night dives made
- only one adult basker at turtle beach was seen
11/11/00 on the night we arrived watch with night scoop
- one juvenile basker, turtle beach, 11/12/00
- few turtles seen surfacing at Halophila beds.
- No turtles seen along east facing seawall: none scooped here

- Turtles quickly adapt to wind direction?
- Turtles seen coming and going to and from direction of main Atoll channel to the south
- Inner Harbor exceedingly important for turtle habitat
- Cargo Pier / Fuel Pier exceedingly important and surrounding
- Turtles very localized to Midway especially islands
- Migrant breeders to FFS & return
- Importance of Goose-neck barnacles
- Seawall IRON importance for juvenile feeding
- Tumor rate 1 out of 39 examined biopsies taken

TRIP 1 =
Trip 2 =
TRIP 3 =

- Growth data - Midway - Mitani analyze / skim SE - work up.

Symposium PAPER

- Slow growth seen 20-25 years ago has been confirmed by more robust recent findings.
- DNA Genetics - / FFS / Hawaiian stock
- 18 year Tag recovery recorded (1) TAG NUMBER = N-20 MT18 Round Rep (3) + PIT tagged FFS #3 A219
- Migration link to FFS
- Tiger shark predation Roy Harrington photo. "Too + Attach in Inner Harbor + Fish Scars
- Juveniles don't forage on Halophila?
- Adults eat Codium
- BASKING now not before eastern (make models)
- Presence now of Adults - Rarely present before
- Continued bias of habitat use focused on Sand Is. / eastern - Inner harbor, Piers, Seawalls.
- EAT MANO WAR - drift / Breath smell? = Gosse wrecked (need ID)
- Smallest-to-largest New Recruit to Adult - nearly all size classes.
- "A219" from FFS dead at Midway T.W. Necropsy + Nancy Necropsy
- No loggerheads - though Tiger at have had one in stomach - (cite)
- cite WCSTC
- Moto tool #18 4/99 by NANCY TO FFS TAGS N20, N21 at Nest Term Recap = back away MT6 [illegible]
- Fewer Turtles seen along Gulf Per [illegible] TAGGED =

(16) Sara Peck

Jim Patton = 808-331-8939

8/00 "Turtle w/tumors?" seen off Kaloko SCUBA

Midway = 5 miles diameter (A pinnacle in pelagic water) Seen

"How slow can they grow"

TSS - "Turtle Startling Stones"

Breath Smell - need Aquarium tubing. Delicate serrated jaw edge + sharp

Still needed Collect - Seawall growth (food)

But Dennis Russell Results should shed light here

~~[illegible]~~

100'x5'

11/13/00 Set net in the morning along inner harbor
Monday Scuba / Cargo Pier ; Mtec Shelf
Kehu - 16 ft Boston Whaler, NOAA

Dinner at French Restaurant

11/14/00 Set new 100'x5' "M12" Monkseal.
Tuesday PM TUG Pier Scuba - saw Mototool 47
Cargo Pier Scuba - saw FP Mototool 330, MT 27,
MT 13.

(18)

Freezer For Midway, 8 watch

16' helm 100'x5' Sea wall

11/15/00 Breakfast 745am. Wind up last night.

Wednesday " " White caps - over Seawall of inner harbor, White water

M26 Monk Seal

Typically Two turtles went by, but not caught.
Turtles drop off edge of sand bar either going into Harbor Channel entrance, or, into Harbor itself.

Regularly Drove to Cargo Pier - only MT 13, 14, later MT 20. for Scoop Netting. To opposite harbor side no turtles seen - rough water.

Ex Navy Marc, John, Kate, Aejun Scuba under Tug Pier. 3 captures - all new.

Bob - Harbor Master
worked up turtles at boat house.

Drove / walked to Pickett Point / Rusty Bucket - no turtles seen.

Lecture "Turtle TALK" by Ken 7PM.
"Point turtle"
"Motherload"

"Mother Load" | Cargo Pier wall — 730am MARC 93m =
MT 14, 27 & 43
845am MT 47 outer seawall of inner harbor.

16 Nov. 00
Thursday Sand Bar in inner harbor Seawall 100X 5

1015 am Net capture - Slide Photos of the action.

P.M. MARC, Watson and some students charted Glacier Bay for scuba - Drifted in pass - Smooth bottom - didn't go along the edges.

11/16 Late pm 415pm to ~630pm I stayed in the seawall. Turtle scoop netted by me 515pm
535pm MT 43 going out along inner side of seawall - watched feedin on algae growth on irons.
Lots of Porties seen (up to 10), mainly large, both going out along seawall, and coming in.

(20) "TSS" STARTING TURTLE STONES

Weather Very Calm

MARC = 35 PT INNER HARBOR

need Bob Wilson map w/ GPS

Marc 10/99 spinning Tu video

11/17/99

Friday Marc & some students ~~out~~ diving this am charter on Glacier Bay. Fish Hole? Those on boat not diving saw ~~turtle~~ surface nearby. G. Watson, Roy Harbington students one set "V" 100x5 along seawall sandbar. 8am - ~930am. No tu Large Ulua. Roy scooped one on outer side of seaw Broke off netting and motored around sea wall w/ set Nehu 16" whaler. When winds, even light wi blow against wall, turtles seem to accuse due to jelly fish (Man-o-war). Saw 3 but unlizable to scoop one to the south of boat ramp. Another under ironwood trees overhanging at northern ~~[illegible]~~ inner harbor pt. seawall.

RC stripped on pilings 21 ft. Rod # 2660

In the afternoon we Scubaed Tug Boat Pier going from inside outward. "SS Midn also at pier. No turtles seen.

Motored around to Fuel Pier - Marc & I alone. Scuba under it (not fa end though). 2 captures.

Then Cargo Pier - one capture.

How slow can they grow?

"If you build it, they will come"

Cement Bass decoy + Artificial Beet for Turtles "AR FT" "Head of Pin in Polaric goes"

see Miller Navi

Scuba Summary

11/12/00 Sunday

11/13 Monday

11/14 TUES.

11/15 Wed.

11/16 Thurs.

11/17 Friday P.M. GB= Tug Pier; Fuel Pier; Cargo Pier

11/18 Saturday

11/17/00 Friday PVC Cargo Pier ~22' deep STRAPPED TO Rod (Left Side) New steps?

has TidBit and Stowaway - once every 2 hours

#383501 6-00 + #224564

11/17 Tugboat Pier AT end, on Rod, ~21' deep

IN PVC inset #266016 + TidBit #

"Can it be true? Where there's one there's two"

11/18/00 Sat. Marc Sawyer Moto # Tool 14 feeding on gooseneck barnS on large plastic floats - photoed Birds up close. see p. 173
Smell of living barns same as "fish" breath
many of the ~~turtles~~ ~~captured~~.
Packed and prepared for evening departure.
Drove around with Marc taking photos
Video of Birds, Midway, etc.

24

Date: Wed, 21 Feb 2001 09:53:16
From: wayne sentman <mangoman37@hotmail.com>
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: Midway Turtles

avoid Nancy

Reduce Midway Book

<html><DIV>
<P>

</P>Dear George, </DIV>
<DIV> </DIV>
<DIV>Thanks for passing on Peter's contact info. I have been crazy busy here as we had a group of 50+ seabird researchers on island last week. Some really great people. I have just been swamped between showing off the island, explaining our work, and trying to prepare to leave this week that it has taken me a few days to catch up. I appreciate your quick response and the connection. It was funny that Peter had worked with OSE to set up the monitoring project, I look forward to talking with him.</DIV>
<DIV> </DIV>
<DIV>In regards to the Midway turtles we are seeing, basically this time of year we see an increase (my perception) in the number of turtles hauled-out on "Turtle beach" here on Sand. During the first two weeks of Feb we were seeing 3 and 4 critters hauled out daily, as well as many larger individuals in the harbor. Interesting to note that our water temp at that time dropped the lowest in the last few months 68 degrees! Also last week I saw the biggest female Green I have ever seen here in the harbor, unfortunatly she was without a number.</DIV>
<DIV> </DIV>
<DIV>Talked with Nancy and she said she had passed on the measurements of a turtle that we resighted on Turtle beach, which when we measured had grown about 5 cm. I just wanted to let you know that we noticed this and remeasured the turtle to make sure that at least the recent measure was accurate. </DIV>
<DIV> </DIV>
<DIV>Anyhow thanks for your help, and we will be monitoring Greens in Suriname as well if you have any interest or ideas please let me know. Anticipating some great times in Suriname and will tell all on my return in May.</DIV>
<DIV> </DIV>
<DIV>Aloha, Wayne</DIV>
<DIV> </DIV>
<DIV>P.S. Thanks for the report passed it on to Cynthia, her e-mail is <A href="mailto:cici55@hotmail.com">cici55@hotmail.com</A></DIV>
<DIV> </DIV><br clear=all><hr>Get your FREE download of MSN Explorer at http://explorer.msn.com
</p></html>

Date: Mon, 5 Mar 2001 10:58:55 -1100
From: Nancy Hoffman <nhoffman@midwayisland.net>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Cc: Marc- HPA Rice <mrice@hpa.edu>
Subject: Re: 3-4 baskers per day on Turtle Beach?

[The following text is in the "iso-8859-1" character set]
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Hi all! Yes, we do at times have more then one turtle basking on turtle beach. One day last year we had seven! So, we go and check them all out with bino's and see which turtle has numbers and not. If we find a turtle with no number we tag and measure! It is not a daily occurrence, but it does happen pretty often with a couple of turtles and a seal or two. Number 62 was tagged and measured and returned to the same beach in 1.5 days! So much for adverse effect on their psyche! Hope the symposium was good and you are full of new information and ideas! Thanks for the note of support on the turtle project. We will continue on as long as I am here at the refuge, no worries! got to go! later, Nancy

>
> Aloha Nancy, I'm just now back from the symposium, Marc went on to
> another meeting in Boston sure hope he's not snowbound until Spring!
>
> I have an email from Wayne Sentman saying that right now 3-4 turtles are
> a basking daily on Turtle Beach. Wow! If still happening, what a
> wonderful opporunity for you/us. Go Get Them, Nancy! Tag and measure,
> Tag and measure, Tag and measure. And saw off the sonics and TDR's if
> present. OK? How can we help? Aloha, George

Middlebrook Islands Discovered

(From The *Polynesian,* August 13, 1859)

THE Hawaiian bark *Gambia* having been fitted by her owner, B. F. Snow, Esq., for a sealing and exploring voyage, left Honolulu April 26, under the command of Capt. N. C. Brooks, bound on a cruise among the islands to the westward of this group (Hawaiian Islands). After an absence of about eight and a half months, she returned on Sunday last, August 7, and we are pleased to learn that her voyage was entirely successful. * * *

The *Gambia* visited Necker Island, French Frigate Group, Maro Reef, Laysan, Lisansky, the Pearl and Hermes Group and Ocean Island; passed over Long's Shoals (the discovery of which was noticed in our issue of March 19), and a shoal thirty miles West by North from French Frigate Group. About forty miles to the northward and westward of the Pearl and Hermes Group, discovered a shoal not laid down on the charts. In Latitude 28 degrees, sixteen minutes, North, Longitude 177 degrees twelve minutes West, discovered an extensive reef, enclosing two islands and a number of islets and rocks. If either of the islands or reefs on the charts is intended for this, the calculation is very erroneous, and as there is none laid down in that position, this was considered a new discovery, and the group received the name of *Middlebrook Islands.*

* * *

Having completed a general outline of the cruise, we will now give the results of Capt. Brooks' surveys of the various islands and shoals, together with such information in regard to each as may be useful or interesting.

* * *

1859

Middlebrook Islands and Shoal * * * were discovered on the 5th of July last, by Capt. Brooks, of the *Gambia.* There are two islands, from four to five miles long, two and a half miles wide, and forty feet high, one of which is entirely barren, while the other is covered with vegetation. Besides these there is a small island. The whole are encircled by a reef of about forty miles circuit, covered with heavy breakers, outside of which there is good anchorage in from nine to twelve fathoms water. Inside the reef is a very fine smooth lagoon, where a vessel may approach within hailing distance of the beach with perfect safety; but the best anchorage is about half a mile from shore, in four or five fathoms water. The entrance to the lagoon is on the west side, but the reef may be approached boldly from any direction, there being no danger beyond the line of heavy breakers.

Inside the reef, on the north and south sides, and about a cable's length from the line of breakers, there is a natural sea wall four feet high, perfectly level and wide enough for a carriage way. On the west side of one of the islands lies an old trunk of a redwood tree, five feet in diameter. There are, also, the remains of what was probably a raft, which must have drifted to the island years ago, there being no indication of any person ever having been there before. An extensive deposit of *guano* was found on one of the islands, possession was taken of the group and notices left to that effect. Dug a well and found good water at a depth of ten feet. At the distance of a cable's length West by South from the well, erected a thirty foot flag-staff. The waters of the lagoon abound with fish and turtle of superior quality; birds are numerous—in fact there appears to be millions of them in the neighborhood, and the islands are so covered with eggs and young birds that it is difficult to walk without treading on them.

With the exception only of Honolulu, these islands possess advantages for a coaling depot superior to any other place on the line from California to China. * * *

KE ALOHA MAU LOA

(*Love and Devotion*)

By ROSE COMPTON DAVISON

E Ke aloha mau loa
Love and devotion
Lia wau ia oe
I dream of thee
I ka hola o ke ahiahi
In the hours of twilight
Ahi loko ua anoano
When all is still
Mai hoopoina oe i ka nani
Do not forget
I ka pua o ka lanalana.
The langlang flower.
Lana oe nei kamanao
Fond memories arise
I ka wai o Hiilawe
For the Waterfall of Hiilawe.

Paradise of the Pacific October, 1936 48(10)
p.23 OCT. 1936 PARADISE OF THE PACIFIC

26

Date: Fri, 2 Mar 2001 17:05:03 -1100
From: Nancy Hoffman <nhoffman@midwayisland.net>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>,
Ron <ranglin@midwayisland.net>,
Ken Niethammer <kniethammer@midwayisland.net>,
Rob Shallenberger <Robert_J_Shallenberger@r1.fws.gov>,
Marc- HPA Rice <mrice@hpa.edu>
Subject: Re: Another follow-up report on sea turtle studies at Midway

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George, thanks for the note. I saw the difference in the measurements after we measured the turtle this last time on the beach. We re-measured the carapace and our measurement was the same. SO, this time I know the measurement was right-on. I only hope the first measurement last year was correct! Thank you for your encouragement. later, Nancy

Rod

----- Original Message -----
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: Ron <ranglin@midwayisland.net>; Ken Niethammer <kniethammer@midwayisland.net>; Nancy Hoffman <nhoffman@midwayisland.net>; Rob Shallenberger <Robert_J_Shallenberger@r1.fws.gov>; Marc- HPA Rice <mrice@hpa.edu>
Sent: Monday, February 12, 2001 14:22
Subject: Re: Another follow-up report on sea turtle studies at Midway

MIE

>
> In my last message I summarized the recapture of a 54.9 cm turtle we
> tagged 21.8 years at Midway that exhibited a pitifully slow rate of
> growth. As an exciting follow-up, I report now a very recent recovery,
> again by Nancy and Team, demonstrating accelerated growth of a near-adult
> 80.3 cm individual.
>
> The turtle was PIT tagged and measured on 4/29/99 and assigned MotoTool 22
> while basking on Turtle Beach. The straight carapace length at that time
> was 80.3 cm. 21 months later, on 1/17/01, the turtle was again seen
> napping on Turtle Beach and remeasured as 85.3 cm. The increase of 5.0 cm
> equates to about 2.8 cm/yr, an exceeding Rapid Rate, in contrast to the
> data sent in my last message. And, especially, for such a large turtle,
> for which most of the published information suggests a considerable
> slowing of the growth process. Obvious this turtle doesn't fit the
> "mold," or the mold is wrong in certain cases and new ground is being
> uncovered at Midway.
>
> Please encourage Nancy to continue devoting her time to turtles- she's
> clearly on a Winning Streak and I'm eager to see what she turns up next!
> Aloha, George
>

(36)

N = 29 SCL range 39.7 - 91.9 cm

N = 25 weight range 17 - 165

(14%) = 4 ADULTS
(10%) = 3 SUBADULTS
(76%) = 22 Juveniles

SCL	WT.
49.4 J	32
45.7 J	25
45.5 J	23
48.3 J	33
41.6 J	19
44.8 J	26
83.1 Adult	NT
41.1 J	21
44.9 J	28
43.4 J	25
83.4 Adult	NT
39.7 J	16
45.1 J	28
91.9 Adult	NT
40.6 J	18
39.7 J	18
53.2 J	56
74.7 SUB	110
61.9 J	71
77.3 SUB	111
48.2 J	32

SCL	WT.
86.2 Adult	NT
50.1 J	36
44.4 J	2[illegible]
38.0 J	17
38.6 J	1[illegible]
50.4 J	3[illegible]
58.0 J	5[illegible]
77.2 SUB	14[illegible]

Next is #62

Mototool Numbers Applied =

START – Mototool #43

end – Mototool #61

43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61 19 new mototools
+ new Shark Bite
Not mototooled
+ 9 Recoveries
Before mototool

Conclusions –

- Mototool turtles that do some growing loose their marks sooner than non-growers/slow growers.

Title

"Green Turtle Foraging & Resting Habitats at Midway Atoll: Significant Findings over 25 years, 1975-2000"

(36) (x) New Moto tool #43

CAPTURE DATE, LOCATION AND METHOD: 11-12-00 Sunday Sand Is. Midway Bash Turtle Beach 12 noon

PERSON RECORDING DATA: Arjun Clary

OLD TAGS:

NEW TAGS: ~~RFL~~ LH 413E3A4763

~~LFL~~ RH 4135321942

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 49.4 cm WIDTH: 39.5 cm

NOTCH LENGTH: 49.4 cm DB: L.O. VB: 1.5 cm ~~L.O.~~

CURVED CARAPACE LENGTH: 52.5 cm WIDTH: 46.5 cm

Collected

HEAD WIDTH: 7.7 cm SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE: Y

TAIL LENGTH: T 10.5 cm C 7.0 cm

RIGHT FRONT FLIPPER WIDTH: 8.0 cm SAMPLES COLLECTED:

PLASTRON LENGTH: 40.3 cm

WEIGHT: 32 lbs.

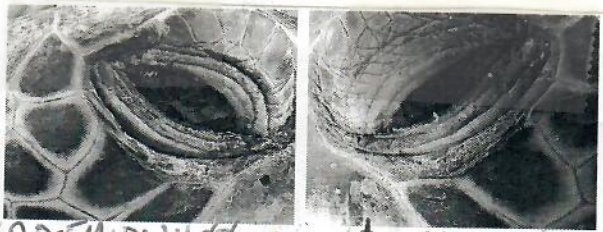
DESCRIPTIVE REMARKS:

1:7 LIQ Blood Dots & DNA Blo

multiple bumps - soft palate

axial: 17.9 cm; lateral 17.7 cm - PLASTON a little flat

disk photo #1 - right eye, #2 left eye; 35mm print photo #1 - full body



REYEMIDW11ØØMT43 ✓ LEYEMIDW11ØØMT43

43LT	EXC	HI	Left eye normal. Zero concerns.	NORMAL
43RT	AVE	MED	I'd classify right eye as having a lump but because the corneal edge is sweet and flat and there's no white veining anywhere this honu's ok. But should be watched the next year. In our database when I see something like this I write "something gray posterior" and that's it.	"something gray posterior"

CAPTURE DATE, LOCATION AND METHOD: (2) Moto tod # 14 (recap)

11-12-00 Midway Scoop Net Sand Is. ~ 1230 pm Cargo Pier Sea Wall

PERSON RECORDING DATA: Arjun

OLD TAGS: LFF 2071E2219 LHF 1F7031D51

NEW TAGS: RFL

LFL

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 45.7 WIDTH: 35.6

NOTCH LENGTH: 45.5 DB: L.O. VB: L.

CURVED CARAPACE LENGTH: 48 WIDTH: 41

HEAD WIDTH: 7.6

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE: Y

TAIL LENGTH: T 9.5 C 6

RIGHT FRONT FLIPPER WIDTH: 7.4

SAMPLES COLLECT

PLASTRON LENGTH: 37.4

WEIGHT: 25 lbs.

DESCRIPTIVE REMARKS: Redid Mototool Numbers 14

Blood dots

plastron a little flat axial: 16.0 cm lateral: 16.1 cm

3 bumps in mouth soft palate

R eye Risk photo #3; left eye #4 print photo #2 - full body

Tagged by
Nancy Hoffman
4-4-99
SCL=45.5cm
CCL=47.0
WT.

✓ REYEMIDWØØMT14

✓ LEYE .... MT 14

14LT	POOR	LO	Cnnective tissue has no detail. What there is of it appears normal.	NORMAL
14RT	AVE	MED	Shine off the posterio but no hint of warping, white veining so likely no problems	NORMAL

CAPTURE DATE, LOCATION AND METHOD: (3) (New Moto #44)

11-12-00 scoop net ~1230 PM cargo pier wall Midway Sand Is.

PERSON RECORDING DATA: Arjun

OLD TAGS:

NEW TAGS: ~~RFL~~ RH 4136332938

~~LFL~~ LH 407A45387B

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 45.5 WIDTH: 36.5

NOTCH LENGTH: 44.3 DB: L.O. VB: 1-1cm L.O.

CURVED CARAPACE LENGTH: 48 WIDTH: 42.5

HEAD WIDTH: 7.0 SEX: MALE, FEMALE OR UNDETERMINED: collected

PPS: YES OR NO OR NE: Y

TAIL LENGTH: T 8 C 5.5

RIGHT FRONT FLIPPER WIDTH: 7.0 SAMPLES COLLECTED:

PLASTRON LENGTH: 36.0

WEIGHT: 23 lbs.

DESCRIPTIVE REMARKS:

left PC broken and healed. blood dot 5 + DNA 0

1.7 liq. 1 bump ~~in mouth~~ soft palate

axial: 16.1 cm lateral: 15.7 cm - plastron a little flat

print photo #3 - lateral view, #4 full body | disk photo 5-R. eye, 6-L. eye

	Pic	Conf	Comments	
44LT	POOR	LOW	Connective tissue is pulled back and there's a shadow as a result. But this eye looks fine	NORMAL
44RT	POOR	LOW	This eye has either a flash glare or sun glare right where I need to see. Can't call this eye	UNABLE ASSESS

✓ REYE MT44

✓ LEYE MT44 ✓

Subject: Re: Midway Mototool 44

LEyeMidw1100Mt441.jpg

Connective tissue is pulled back and there's a shadow as a result. But this eye looks fine.

REyeMidw1100Mt441.jpg

This eye has either a flash glare or sun glare right where I need to see. Can't call this eye.

So I can't call this turtle.

CAPTURE DATE, LOCATION AND METHOD: (4) ~~[illegible]~~

11-12-ØØ scoop net ~1230 pm cargo pier seawall Midway Sand Is.

PERSON RECORDING DATA: Argum

OLD TAGS: LH 411C67ØA23 / LFF 4149120ØØE

NEW TAGS: RFL / LFL

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 48.3 WIDTH: 39.6

NOTCH LENGTH: 47.5 DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 51 WIDTH: 45

HEAD WIDTH: 8.1

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE: Y

TAIL LENGTH: T 10.5 C 7

RIGHT FRONT FLIPPER WIDTH: 8.9

SAMPLES COLLECTED:

PLASTRON LENGTH: 8.4

WEIGHT: 33 lbs.

20LT	AVE	MED	I can't see the detail in the connective tissue but it looks normal especially along that corneal edge	NORMAL
20RT	AVE	MED	Posterior very back looks a tad lumpy but no white like a tumour threatening and nothing to suggest any other possibility	NORMAL

DESCRIPTIVE REMARKS:

tip LFF, RFF ~~cut~~ MISSING + healed

abnormal erosion TO Notch

~~no trace of Moto, redone (former~~ MOTO DUPLICATE #20 ERRONEOUSLY engraved

blood dots soft palate

lateral: 17.3 cm axial: 18.7 cm bump ~~in mouth~~

digital photo #7-8 left eye; #9 right eye; print photo #4 full body

print photo [illegible]

10-18-98
SCL 46.7
CCC-49.0
wt 31

LEYE... MT "20"

LEYE 2 .... MT "20

REYE .... MT "20"

Subject: Re: Midway Mototool 20

<file://c:\howzit\attach\LEye2Midw1100Mt201.jpg>LEye2Midw1100Mt201.jpg<file://c:\howzit\attach\LEye2Midw1100Mt201.jpg>

<file://c:\howzit\attach\LEyeMidw1100Mt201.jpg>LEyeMidw1100Mt201.jpg<file://c:\howzit\attach\LEyeMidw1100Mt201.jpg>

I can't see the detail in the connective tissue but it looks normal especially along that corneal edge.

<file://c:\howzit\attach\REyeMidw1100Mt201.jpg>REyeMidw1100Mt201.jpg<file://c:\howzit\attach\REyeMidw1100Mt201.jpg>

posterior right eye looks good.

I'd call this honu just fine.

CAPTURE DATE, LOCATION AND METHOD: (5) END DAY 1

11-12-00 Sunday | scap net | cargo pier seawall 12:30pm | Midway Sand Is.

PERSON RECORDING DATA: Dylan

OLD TAGS: LH 411D677877 | ~~LF 411D6 77~~ | LF 411F1C507B

NEW TAGS: RFL | LFL

OTHER NEW TAGS:

TUMOR SCORE: 0

STRAIGHT CARAPACE-LENGTH: ~~40.6~~ ~~74.6~~ 46.6 WIDTH: 34.5

NOTCH LENGTH: ~~40.4~~ ~~74.4~~ 41.4 DB: L.O. VB: L.

CURVED CARAPACE LENGTH: 44.5 WIDTH: 40.5

HEAD WIDTH: 6.9

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE: NO

TAIL LENGTH: T 7.5 C 5

RIGHT FRONT FLIPPER WIDTH: 6.9

SAMPLES COLLECT

PLASTRON LENGTH: 33.2

WEIGHT: 19 lbs

DESCRIPTIVE REMARKS:

Moto Tool #13 Moto of Redan REYE.....MT13 LEYE.....MT13

Photo #6 of Moto Tool #13 Photo #7 - Full Body

Axial - 15.4 Lateral - 15.4

Digital Photo #9 right eye / #10 left eye

5-27-99
40.7 SCL
CCL-44.5

HONU	PIC	CONF	COMMENTS	CALL
13LT	EXC	HI	Connective tissue looks flawless	NORMAL
13RT	EXC	HI	Shot at wrong angle but I can see enough to not see anything worrisome there. I'd give this eye a cautious ok	NORMAL

CAPTURE DATE, LOCATION AND METHOD: (6)

11-12-00 Sunday scoop net 12:30pm cargo pier Midway Sand Is.

PERSON RECORDING DATA: Dylan

OLD TAGS: RH 4136201E57

LH 413533 0A3F

TUMOR SCORE: 0

NEW TAGS: RFL

LFL

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 44.8 WIDTH: 37.7

NOTCH LENGTH: 44.4 DB: L.O. VB: L.

CURVED CARAPACE LENGTH: 47 WIDTH: 42.5

HEAD WIDTH: 7.4

SEX: MALE, FEM UNDETERM

PPS: YES OR NO OR NE NO

TAIL LENGTH: T 9.5 C 6.5

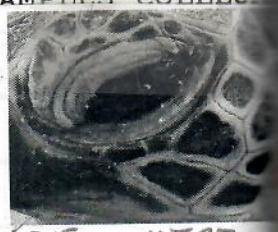
✓REYE..... MT

RIGHT FRONT FLIPPER WIDTH: 8.2

SAMPLES COLLECT

PLASTRON LENGTH: 35.9

WEIGHT: 26 lbs



✓LEYE.... MT27

DESCRIPTIVE REMARKS:

Existing Moto Tool #27 - Axial - 16.9 Lateral - 16.9

PCA on Carapace growing in Moto Tool #27

#27 Moto Tool redone. Digital Photo #11 right eye; #12 left eye

PLASTRON - Little Flat

Full Body Picture #9

9/23/99
SCL/44.5
CCL=47.5

CAPTURE DATE, LOCATION AND METHOD: (7) Day 2 START

11/13/00 Monday Net, inner side of harbor seawall 1130 pm

PERSON RECORDING DATA: Arjun

OLD TAGS:

TUMOR SCORE: 0

NEW TAGS: 41363F315B LH

413E2D6650 RH

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 83.1 WIDTH: 66.4

NOTCH LENGTH: 82.5 DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 88.5 WIDTH: 81.5

HEAD WIDTH: 12.6

SEX: MALE, FEMALE OR UNDETERMINED: F

PPS: YES OR NO OR NE: Y

TAIL LENGTH: T 26.5 C 18.5

RIGHT FRONT FLIPPER WIDTH: 14.5

SAMPLES COLLECTED: blood & scut + DNA

PLASTRON LENGTH: 67.3

WEIGHT: NT

DESCRIPTIVE REMARKS:

REYED .... MT45 ✓

leech eggs on RFL, LFF ~~ventral~~, ventral neck, left jaw h

→ scraped off - collected + frozen

digital photo 13,14,15 - left eye 16,17 - right eye slide film 19,20

new Moto # 45

first central + first lateral left healed cuts

✓REYE.... MT45 ✓

45LT	EXC	HI	White of FP threatening. Looks to be two #1's working near corneal edge. White veining begun and so have tissue warping	FP [illegible]
45RT	AVE	LOW	Angle shot wrong. Needed angle towards posterior. Lump appears posterior but can't make it out.	UNABLE TO ASSESS

Different Haplotype?

LEYE.... MT45

/LEYE2.... MT45 / LEYE3.... MT45

Subject: Midway Honu45

LEyeMidw1100Mt45.jpg isn't all that good for telling much of anything. I think you knew that because you then photo'd the eye two more times.

LEye3Midw1100Mt45.jpg and LEye2Midw1100Mt45.jpg are excellent and show an abnormality that I would say is FP coming in. And I'm as certain as I can get on that based on this photograph. Looks to be two tumours threatening near the corneal edge.

REye2Midw1100Mt45.jpg --the angle's wrong. I need to see the posterior and this is shot from the front. So even though this looks like an obvious lump I'm not prepared to say much about it.

But put together with the left eye "veining" this honu'd get an "FP suspected"

And now remember I don't get to see the whole body here --but I'd say it's FP incoming.

CAPTURE DATE, LOCATION AND METHOD: (8) MT 46

11-13-00 Scoop Net outside INNER HARBOR seawall

PERSON RECORDING DATA: Jilly

OLD TAGS:

NEW TAGS: ~~RFL~~ RH 4135090963

~~LFL~~ LH ~~LRH~~ 41363E6766

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 41.1 WIDTH: 34.4

NOTCH LENGTH: 40.5 DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 43.5 WIDTH: 40

HEAD WIDTH: 7.2 SEX: MALE, FEMALE OR UNDETERMINED: U

PPS: YES OR NO OR NE: yes

TAIL LENGTH: T 8 C 5

RIGHT FRONT FLIPPER WIDTH: 7.2 SAMPLES COLLECTED:

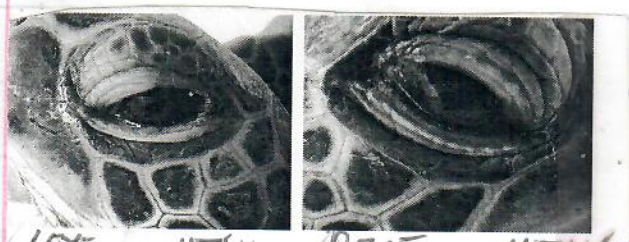
PLASTRON LENGTH: 31.6

WEIGHT: 21 lbs

DESCRIPTIVE REMARKS:

Axial = 16.2 cm
Lateral 15.7 cm
1.0 liq
Moto #46

19 ~~10~~ - left eye digital
~~R~~ 20 right " "
Arjun - R
Katie - L
Print Photo #21
Pit insertions



LEYE.... MT46 ✓REYE.... MT46

46LT	AVE	MED	Can't make out detail but connective tissue looks ok	NORMAL
46RT	AVE	LOW	Flash/sun something white going posterior making it difficult to assess but looks ok	NORMAL

Starting this turtle – PPS defined different ← 19 print ① film

CAPTURE DATE, LOCATION AND METHOD: See digital and print

11-13-00 Scoop net inner harbor, outer side sea wall (9)

PERSON RECORDING DATA: Jilly Quintance

OLD TAGS: none

NEW TAGS: LM ~~RFL~~ 413E2D0127 RH ~~LFL~~ 41362B3D67

TUMOR SCORE: 0

OTHER NEW TAGS:

Moto Tool #47

STRAIGHT CARAPACE-LENGTH: 44.9 WIDTH: 36.9

LENGTH: 44.6 DB: L.O. VB: 1(2cm) ~~L.O.~~

CARAPACE LENGTH: 48 WIDTH: ~~48~~ 44.5

IDTH: 7.9 SEX: collected MALE, FEMALE OR UNDETERMINED

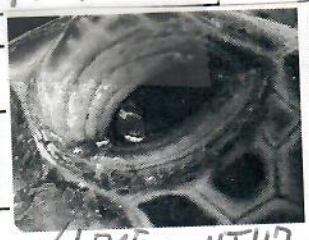
ES OR NO OR NE: Yes

ENGTH: T 10 C 6.5

FRONT FLIPPER WIDTH: 7.9 SAMPLES COLLECTED:

ON LENGTH: 36.7

: 28 lbs



✓LEYE....MT47 ✓REYE....MT47

	NORMAL	NORMAL (with reservations)
	Connective tissue looks flawless	There's white at the very back but no detail so I can tell whether it's just normal sloughing or maybe very early eruption the back
	HIGH	LOW
	EXC	FAIR
47LT 47RT		

DESCRIPTIVE REMARKS:

Axial – 18.9 cm Disc#2 – 2 – left eye / Thick Scutes

Lateral – 18.5 cm Disc#2 – 3 – right eye (Abnormal Count – 5 Laterals on Left)

– Only 5 blood dots / ~~RNA~~ DNA

(Moto Tool #47) Print Full Body Photo #20 on 19

Note- Integral somewhat rigid part of plastron.

CAPTURE DATE, LOCATION AND METHOD: (10)

11-13-00 Scoop net inner harbor outer inner sea wall

PERSON RECORDING DATA: Dylan

OLD TAGS: LFF 4104227317 LH 4104134854

NEW TAGS: R L

TUMOR SCORE: 0

OTHER NEW TAGS: VBARSMIDW11ØØMT/6

F

STRAIGHT CARAPACE-LENGTH: 43.4 WIDTH: 35.9

NOTCH LENGTH: 43.2 DB: L.O. VB: off 4 ~~L.O.~~

CURVED CARAPACE LENGTH: 46. WIDTH: 40.5

HEAD WIDTH: 7.3

PPS: YES OR NO OR NE Yes

SEX: MALE, FEMALE OR UNDETERMINED

TAIL LENGTH: T 8.5 C 6

RIGHT FRONT FLIPPER WIDTH: 7.7

SAMPLES COLLECTED: 2nd DNA

PLASTRON LENGTH: 34.9

WEIGHT: 25 lbs

DESCRIPTIVE REMARKS:

4 preserved in Alcohol

3.3, 2.9, 3.5, 3.0 cm 2 bumps in Mouth Blood Dot Taken

- Digital Disc #2 - Plastenal Barnacles Photo #3 Axial: 17.5 cm

- Old Moto Tool #16 - Redone Moto Tool Lateral: 17.1 cm

Full Body - Print Photo #20 / Digital Photo Disc #2 - #5 left / #6 right

10-16-98
SSL = 42.5
CCL = 44.5
wt. 20lbs

LEYE .... MT/6 ✓REYE MT/6

16LT	EXC	HI	Connective tissue looks flawless	NORMAL
16RT	GOOD	HI	Connective tissue looks	NORMAL

CAPTURE DATE, LOCATION AND METHOD: (11)

11/13/00 SUBA hand capture @ cargo ~~Day~~ Pier ~3PM

PERSON RECORDING DATA: Jilly

OLD TAGS: LH 4077597E29 RH 414B673632

NEW TAGS: RFL LFL

OLD MOTOTOOL 33

OTHER NEW TAGS:

TUMOR SCORE: 1

STRAIGHT CARAPACE-LENGTH: 83.4 WIDTH: 63.0

N 83.4 DB: L.O. VB: L.O.

C E LENGTH: 89.5 WIDTH: 88.0

E 11.7 SEX: MALE, FEMALE OR UNDETERMINED: M

D OR NE yes

T 37 C 28

LIPPER WIDTH:

PLASTRON LENGTH: 67.1

WEIGHT: NT

SAMPLES COLLE

1#1 from C

1#1 from right sh

the tumors were cut in

1 to be frozen 1 put in formaldehyde

DESCRIPTIVE REMARKS:

1#1 5cm from RFL

½ formalin ½ frozen

cloaca 1 number #1

biopsy

removed left eye 2#1's

right eye 2#1's

1#1 right shoulder

blood dots, DNA tube

RJH - 1#2 multi-lobe

#89 - digital of jaw bridge

#101 digital of left eye

(1 is ridge lower eyelid)

12,13 - right eye

Digital

NO

NOTO RE DONE #33

Reye... MT 33 / Reye2... MT 33

"99-10-8"
SCL 83.3
CCL 88.5cm

33LT	EXC	HIGH	Intresting is the extent of the tumour when you really force the exposure. Works right to corneal edge. But didn't erupt from there.	FP
33RT	EXC	HIGH	No anterior involvement. Hot tumour	FP

CAPTURE DATE, LOCATION AND METHOD: (12) MT 48

11-13-00 Monday SCUBA hand capture at Cargo ~~Bay~~ Pier ~3PM Midway Sand Is.

PERSON RECORDING DATA: Jilly

OLD TAGS: none

TUMOR SCORE: 0

NEW TAGS: ~~RFL~~ LH 41356E0318

~~LFL~~ RH 4135282A74

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 39.7 WIDTH: 33.1

NOTCH LENGTH: 38.9 DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 41.5 WIDTH: 37

HEAD WIDTH: 6.6

PPS: YES OR NO OR NE: yes according to Ray

SEX: MALE, FEMALE OR UNDETERMINED: U

TAIL LENGTH: T 7 C 4.5

RIGHT FRONT FLIPPER WIDTH: 6.9

SAMPLES COLLECTED: 15 dots Blood and DNA

PLASTRON LENGTH: 31.7

WEIGHT: 16 lbs

DESCRIPTIVE REMARKS: very little + cute

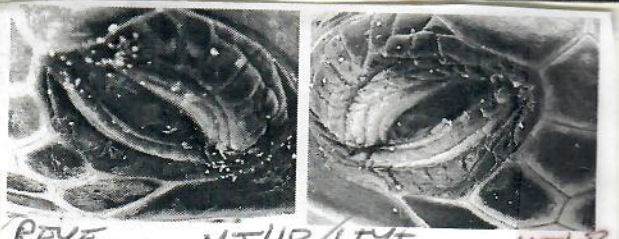
DISK2 digital pics #14-R eye #15-L eye

~~photo 28~~ moto: 48

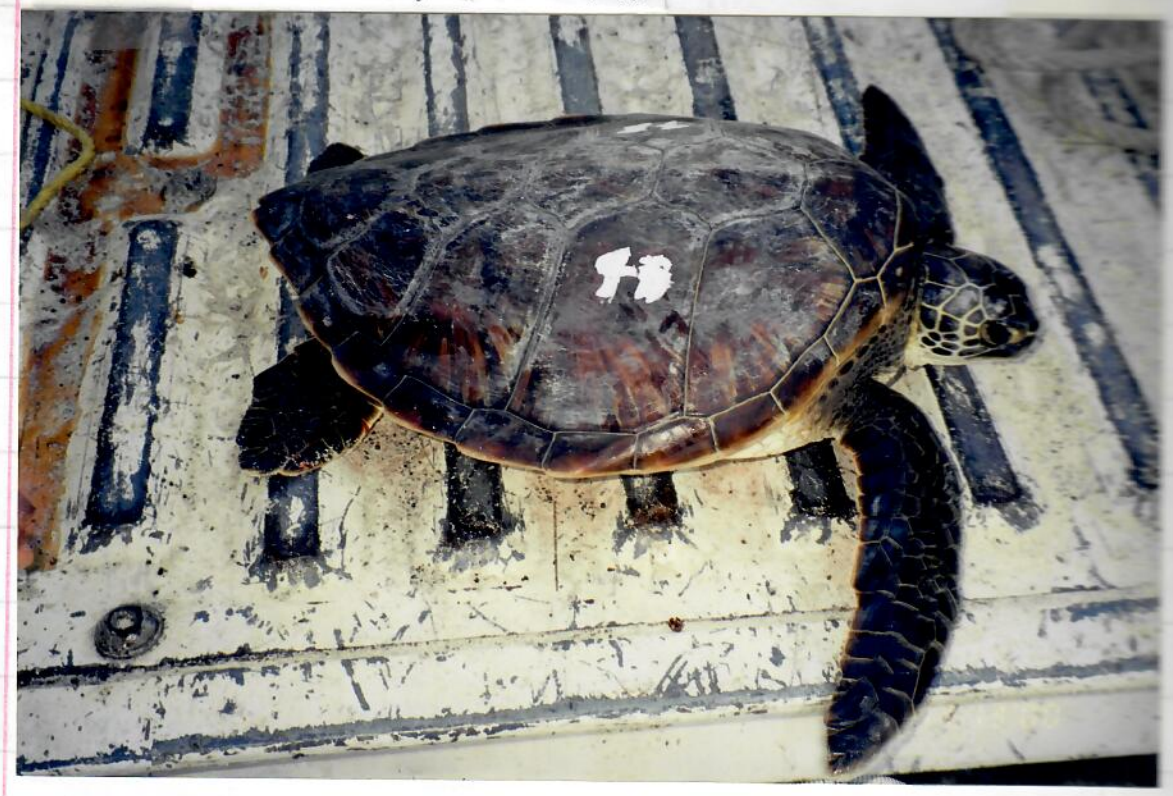
liq 1.5

Axial-14.3cm
Lateral-13.6cm
a little flat.

PRINT photo - full body =



REYE .... MT48 / LEYE MT48



48LT	EXC	HIGH	Connective tissue looks fine. Even gray and good detail showing no problems	NORMAL
48RT	FAIR	MED	Beautiful angle but soft forus means I can't make out that very subtle white veining. Is that white veining or sun/flash. Still the tissue ridges are flat so no problems in immediate future	NORMAL

CAPTURE DATE, LOCATION AND METHOD: (14) See page 200 FFS Recov

11/14/00 Monday Net inside of inner Harbor Seawall 830am

PERSON RECORDING DATA: Dylan NT 18

OLD TAGS: RH 413B26476C

LH 414B005762

TUMOR SCORE LFL 21

0 RFL N20

NEW TAGS: RFL

LFL

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 91.9 WIDTH: 72

NOTCH LENGTH: 91.9 DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 97 WIDTH: 90

HEAD WIDTH: 12.9

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE Yes

TAIL LENGTH: T 23 C 16.5

~~RIGHT~~ Right FRONT FLIPPER WIDTH: 13.7

SAMPLES COLLECTED: Blood dot & and DNA

PLASTRON LENGTH: 73

WEIGHT: —

DESCRIPTIVE REMARKS:

Digital Photo Disc #2 = #18 left eye / #20 right eye #19 left eye

LFL Tag Photos #15,16 - Print Film

Moto Tool #18 Redone Full Body Print # 1N Bos Wh

Brownish carapace w/ black speckles

4/12/99 - Not to tool marked
Navy Recap
Navy
SCL = 91.5
CCL = 97.0

3/19/97
N21 N20
TURTLE
BEACH -
BASKING
ROB
CCL = 950 cm

6/99 see 2000
Tern PTS
nesting
Vanessa + Julie

Different Haplotype?

REYE MT18

LEYE MT18

LEYE2 .... MT18

18LT	GOOD	MED	Angle is a tad wrong and I don't get to see posterior detail but if I have to call this I'd say this eye's had a tumour in it. See corner of eye. Several of our regression cases have that "potato".	POSSIBLE REGRESSION
18RT	GOOD	MED	Good shot bad angle. But again, the corner has a "potato" (very small one) and the lower lid looks pushed back a tad like a tumour moved it away from eyeball and then retreated. That's my call anyway (HUGE disadvantage though because I can't see the posterior!)	POSSIBLE REGRESSION

CAPTURE DATE, LOCATION AND METHOD: (15) MT 50

11-14-08 TUESDAY Scoopnet Inner Harbor Southside 1145am

PERSON RECORDING DATA: KT KH

OLD TAGS:

TUMOR SCORE: 0

NEW TAGS: LHF 413E330054

RHF 413578465F

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 46.6 WIDTH: 34.8

NOTCH LENGTH: 46.0 DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 43 WIDTH: 40

HEAD WIDTH: 6.5

SEX: MALE, FEMALE OR UNDETERMINED: U

PPS: YES OR NO OR NE: N

TAIL LENGTH: T 7.5 C 4.5

RIGHT FRONT FLIPPER WIDTH: 6.9

SAMPLES COLLECTED: Blood Dots + DNA

PLASTRON LENGTH: 32.2

WEIGHT: 18 lbs.

DESCRIPTIVE REMARKS:

Axial 15.3cm
Lateral 15.3
Photos D3
Left #1,2
Right #3

(rototooled #50)
Liq - 1 cc
full body pic. - #20 - print

B

LEYE ..... MT50/LEYE2 .... MT50 / REYE MT50

Photo CONF

50LT	EXC	HIGH	Tissue normal –no problems. The white at the corner is that stuff they slough off and he's sure sloughing a lot!	NORMAL
50RT	POOR	LOW	Eye shadowed and no amount of over-exposure brings out detail. Nothing obvious white so…	NORMAL

CAPTURE DATE, LOCATION AND METHOD: (16)

TUES 11-14-00 Hand Scuba Inner Harbor (feeding on 2:00pm North se

PERSON RECORDING DATA: Dylan

OLD TAGS:

NEW TAGS: ~~RFL~~ RH 413640050E

~~LFL~~ LH 4135796E0E

TUMOR SCORE: 0

OTHER NEW TAGS:

Moto Tool #51

STRAIGHT CARAPACE-LENGTH: 39.7 WIDTH: 33.6

NOTCH LENGTH: 39.1 DB: L.O. VB:

CURVED CARAPACE LENGTH: 42.5 WIDTH: 39

HEAD WIDTH: 6.9

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE NO

TAIL LENGTH: T 7.5 C 5

RIGHT FRONT FLIPPER WIDTH: 7.1

SAMPLES COLL

PLASTRON LENGTH: 32

WEIGHT: 18 lbs

DESCRIPTIVE REMARKS:

Small Anterior Plastron Gash. 3 Bumps in Soft Pallette

1.0 LIQ (Algae Mouth Sample) / Leeches Frozen #4

Digital Photo Disc #3 / #3 left eye right eye

Axial: 15.2 cm Lateral: 14.6 cm Print Film #20

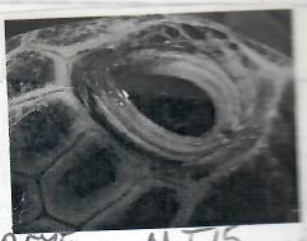
11-14-00 Midway Atoll, #4135796E0E, MT #51, mouth sample

Spyridia filamentosa	All

11-16-00 Midway Atoll, #414B682450, MT #56, stomach flush

Halophila hawaiiana	95%
Spyridia filamentosa	3
Zonaria sp.	2
Hypnea sp.	1
Centroceros clavulatum	Trace
Cladophora sp.	Trace
Sargassum sp.	Trace
1 micromollusc snail	
1 amphipod	

LEYE.....MT51



REYE....MT15

51LT	GOOD	HIGH	Posterior has a problem. That white showing right at the corneal edge. With a pinprick of white dead center where the hotspot is.	FP VULNERABLE
51RT	AVE	LOW	Too far away and a bit soft focus. Can't make out details of posterior. But. As with left eye there appears white playing through the corneal edge (as good as I can tell from this)	"something happening posterior"

CAPTURE DATE, LOCATION AND METHOD: (17)

TUESday 1F14 Ø0 Hand Scuba under Tug Pier

PERSON RECORDING DATA: Dylan

OLD TAGS: LF 1F71572178

RH 1F6D676D2Ø — D2Ø

TUMOR SCORE: 0

NEW TAGS: RFL

LFL

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 53.2 WIDTH: 45.2

NOTCH LENGTH: ~~[illegible]~~ NT DB: L.O. VB: collected 3.1

CURVED CARAPACE LENGTH: 58.5 WIDTH: 53

HEAD WIDTH: 9.1

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE Yes

TAIL LENGTH: T 14 C 9.5

RIGHT FRONT FLIPPER WIDTH: 10.2

SAMPLES COLLECTED: Small piece of skin from Mouth

PLASTRON LENGTH: 46.5

WEIGHT: 56 lbs

Blood dots 2nd DNA

DESCRIPTIVE REMARKS: Axial: 22.0 cm Lateral: 22.2 cm

Print Film # 21 Digital #9 Old + New Moto Tool #15

Digital Photo #5 Disc #3 Ventral / Photo #67 left eye / #8 [illegible]

Shin Barns and VB Chelonia collected into Alcohol

Old Mototools #15 unreadable - just peeled spots. New #15 2nd Lot L&R

10-18-98
SCL = 47.6
CCL 52.0
WT = 43 lbs

4-4-99
SCL = 48.0
CCL = 51.5

FAST GROWER!

REYE ..... MT5N ✓BARMIDW 11 ØØMT1K ✓LEYE .... MT15 ✓LEYE2 .. MT15

15LT	EXC	HI	Posterior looks fine	NORMAL
15RT	EXC	HI	Posterior looks fine. EXCEPT. There's the slightest hint of white at the corneal edge. No way I'd call it anything other, I don't like seeing ANY white/pink there.	NORMAL

11-14-00 Midway Atoll, #1F6D676D20, MT #15, mouth sample

Hypnea nidifica	Trace
Dictyota crenulata	Trace

CAPTURE DATE, LOCATION AND METHOD: (18)

11-14-00 TUESDAY Hand Scuba Cargo Pier (End Day 3)

PERSON RECORDING DATA: Dylan

OLD TAGS:

NEW TAGS: ~~RFL~~ RH 4136053C6F

~~LFL~~ LH 4136134509

TUMOR SCORE: 0

No Mototool Applied

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 74.7 WIDTH: 60.3

NOTCH LENGTH: 74.6 DB: L.O. VB:

CURVED CARAPACE LENGTH: 81.5 WIDTH: 77

HEAD WIDTH: 10.2 SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE NO

TAIL LENGTH: T 14.5 C 10

RIGHT FRONT FLIPPER WIDTH: 11.7 SAMPLES COLLE

PLASTRON LENGTH: 59.2 Blood Dots,

WEIGHT: 110 lb Estimated from overspring of scale

DESCRIPTIVE REMARKS:

Digital Photo Disc #3 - #10 left eye #11 rish

Curvilinear Plastron Curvatural Slashes Bone Deep Healing 25 cm width

Print Photo #22, 23, 24 (left, right side) 70 LIQ (Overdose intentional)

Carapace Left Side: 16x14 cm Right Side: 26x12 cm Injured areas bone de from multiple slashes

see also page 173

eyes etc.

CAPTURE DATE, LOCATION AND METHOD: (19)

11-15-00 Hand Scuba under Tug Pier Midway Sand Ks. 12:30pm

PERSON RECORDING DATA: Dylan

OLD TAGS:

TUMOR SCORE: 0

NEW TAGS: ~~RFL~~ RH 4136012807

~~LFL~~ LH 4135747E3F

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 61.9 WIDTH: 51.3

NOTCH LENGTH: 61.5 DB: L.O. VB: 1 (2.8 cm) collected

CURVED CARAPACE LENGTH: 66.5 WIDTH: 59.5

HEAD WIDTH: 9.3

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE Yes

TAIL LENGTH: T 14 C 8.5

RIGHT FRONT FLIPPER WIDTH: 10.1

SAMPLES COLLE

PLASTRON LENGTH: 50.8

6 Blood Dots on Share

WEIGHT: 71 lbs

DNA Taken

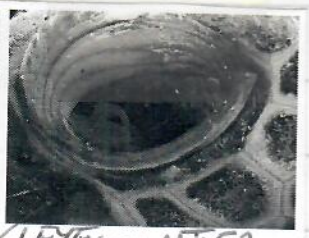
DESCRIPTIVE REMARKS:

Print Film#

Digital Photo Disc #3 #12 1 ventral / #14 left eye #13 right

Moto Tool #52 3.6 LIQ

Axial: 24 Lateral: 23.6



✓BARN ..... MT52 ✓REYE ..... MT52 ✓LEYE ..... MT52 ✓

52LT	EXCH	HIGH	The tissue has wisp of pink/white running ever so subtle. But more telling is the roughness down by lower lid near corner. Taken together with right, I'd call this a problem eye	"something happening posterior"
52RT	EXC	HIGH	There's the barest hint of a pinprick starting near upper lid. Very very early. Earliest I've ever seen.	FP VULNERABLE

CAPTURE DATE, LOCATION AND METHOD: (20)

11-15-00 Hand Scuba under Tug Pier Midway Sand Fs. 1230pm

PERSON RECORDING DATA: Dykin

OLD TAGS:

NEW TAGS: ~~RFL~~ RH 413643695B

~~LFL~~ LH 4135087C4A

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 77.3 WIDTH: 59.6

NOTCH LENGTH: 77.2 DB: L.O. VB: 4 (3.6, 3.5, 3.9, 3.6 collected)

CURVED CARAPACE LENGTH: 83.5 WIDTH: 76

HEAD WIDTH: 10.8

SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE Yes

TAIL LENGTH: T 18 C 12.5

RIGHT FRONT FLIPPER WIDTH: 13.3

SAMPLES COLLE

PLASTRON LENGTH: 61.5

~~NO BLOOD DONE~~

WEIGHT: 111 lbs

Blood for DNA Taken

DESCRIPTIVE REMARKS:

Print Film #9

Digital Photo Disc #3 #15 ventral / #16 left eye #17 right eye

Axial: 29.8 / Lateral: 30.2 5.6 LIQ

Barnacles + Embedded in LFF into Alcohol

Moto Tool #53

VBARNS.....MT53

Different Haplotype?

LEYE....MT53 / REYE....MT53

53LT	AVE	MED	Wrong angle so I can't see posterior. Also a tad soft focus. But connective tissue looks like it has white working through it and the "folds" are bumpy/unven. A problem that looks like FP coming	FP VULNERABLE
53RT	EXC	HIGH	FP tumour threatening to bust out right at corneal edge. Classic eruption point	FP VULNERABLE

CAPTURE DATE, LOCATION AND METHOD: (21) END DAY 4

11-15-00 WEDNESDAY Hand Scuba under Tug Pier Midway Sand Is.

PERSON RECORDING DATA: Dylan

OLD TAGS:

NEW TAGS: RFL LH 4135663E4D

LFL RH 4136327743

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 48.2 WIDTH: 38.3

NOTCH LENGTH: 47.9 DB: L.O. VB: 2.3cm 1 ~~L.O.~~ collected

CURVED CARAPACE LENGTH: 51.5 WIDTH: 46.0

HEAD WIDTH: 7.8 SEX: MALE, FEMALE OR UNDETERMINED: U

PPS: YES OR NO OR NE: Yes

TAIL LENGTH: T 9 C 5

RIGHT FRONT FLIPPER WIDTH: 8.7 SAMPLES COLLECTED: DNA Collected

PLASTRON LENGTH: 40.1

WEIGHT: 32 lbs

DESCRIPTIVE REMARKS:

Print Film #11

Digital Disc #3 Photo #18 1 Ventral / #20 left eye #19 right eye

Axial: 18.1 Laterial: 18.3 1.7 LIQ

Moto Tool #54

LEYE.....MT54

VBARN.....MT54

/REYE.....MT54

54LT	EXC	HIGH	Tissue normal –no problems	NORMAL
54RT	EXC	HIGH	Tissue normal –no problems	NORMAL

CAPTURE DATE, LOCATION AND METHOD: (22) NT55

11-16-00 Net Inner Sea Wall - INSIDE 10:15am

Midway Sand Island

PERSON RECORDING DATA: Dylan

41363A2858

OLD TAGS:

NEW TAGS: ~~RFL~~ RH ~~LFL~~ LH 4136342335

TUMOR SCORE: 0

OTHER NEW TAGS:

STRAIGHT CARAPACE-LENGTH: 86.2 WIDTH: 62.4

3.7, 4.2, 4.0, 4.8, 4.5

NOTCH LENGTH: 85.8 DB: L.O. VB: 8

3.8, 4.3, 3.4 cm

CURVED CARAPACE LENGTH: 93.5 WIDTH: 83.0

HEAD WIDTH: 11.9 SEX: MALE, FEMALE OR UNDETERMINED F

PPS: YES OR NO OR NE NO

TAIL LENGTH: T 21.5 C 15.5

RIGHT FRONT FLIPPER WIDTH: 13.8 SAMPLES COLL

PLASTRON LENGTH: 69.2 DNA Taken (Tiss Blood

WEIGHT: NT

DESCRIPTIVE REMARKS: Fecal Sample by MARC RICE

Print Film# 19 Ventral only?

Digital Photos Disc #4 / Ventral #1,2 / #3 left #4,3 right

Moto Tool #55

Axial: NT Lateral: NT

MOTO TOOC 55

81

11-16-00 Midway Atoll, #4136342335, MT #55, fecal samples

Halimeda sp.	Trace
Lyngbya majuscula	Trace

Terrestrial vegetation (trace)
Spong spicules, masses and major bulk of sample contents
Turquois blue paint chips

Reye ...MT 55

55RT	GOOD	HI	There's no detail to the tissue but there's that white veining. Taken together with left eye can't give this a normal	FP VULNERABLE

55LT	AVE	MED	Eye shot from wrong angle. Other shot of same eye –I can't assess. Something	UNABLE TO ASSESS

RBARN5 .... MT55 RBARN2 .... MT55 LEYE .... MT55 REYE2 .... MT55