MIDWAY 2001 BALAZS

8-15 SEPTEMBER 2001 / Midway II


School GEORGE BALAZS

Grade 8-15 SEPTEMBER 2001

Wide Ruled George Balazs (808) 55-6409

9 3/4 x 7 1/2 in. 100 Sheets

24.76 x 19.05 cm

MIDWAY III

SATurday Sat. 8/15 SEPTEMBER 2001 / a-11 Clyde Coursan
MIDWAY HPA IV

DATA PAGES = P.45-64
NARRATIVE = P.7-

19 captures (7 new)

# CLASS SCHEDULE

DATE

NAME BALAZS SCHOOL

ADDRESS

| PERIOD | MON. | RM. | TUES. | RM. | WED. | RM. | THURS. | RM. | FRI. | RM. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |

(1)

Start 9/01
New Tdbit loggers = #483453 New 9/01 Replaced INNER Harbor TUG PIER
#483457 New 9/01 Replaced Cargo Pier

ISSUED BY

9/8/01

NAME OF PASSENGER
BALAZS/GEORGE

FREQUENT FLYER NUMBER

FROM
HONOLULU

AQ476
9/15

MIDWAY ISLAND

CARRIER
ALOHA AIRLINES INC

CARRIER FLIGHT CLASS DATE TIME
AQ 475 Y08SEP 400P

DATE BOARDING TIME SEAT
330P 12A

THANK YOU FOR FLYING
ALOHA AIRLINES
34

U.S. FISH & WILDLIFE SERVICE

**U.S. Fish & Wildlife Service**

**David B. Ledig**
Refuge Manager
Big Island NWR Complex

Kona Forest Unit
P.O. Box 244
Honaunau, HI 96726

808/328 7366
808/328 7428 Fax
David_Ledig@mail.fws.gov

Midway Manager for 10 days while we were there.

U.S. FISH & WILDLIFE SERVICE

**U.S. Fish & Wildlife Service**

**Midway Atoll**
*National Wildlife Refuge*

Stephanie M. L. Bennett
Park Ranger
USFWS Midway Atoll NWR
P. O. Box 29460, A04
Honolulu, HI 96820-1860

808/599 3914
sbennett@midwayisland.net

+ Naomi Sugimura Volunteer

Clyde Courson
Midway Phoenix Corp.

(2) DAY "ONE" Reef Snorkel inside of Rock Islands.

START Rock Is.

28°16.009', 177°20.532'

1.7 miles

28°16.492'N, 177°21.617'W > 1.2 Miles

- END of snorkel

DAY "two" Reef Hotel

28°16.660N, 177°22.044'W

Date: Sun, 7 Jan 2001 16:11:48 -1000 (HST)
From: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
To: Shawn Murakawa <smurakaw@honlab.nmfs.hawaii.edu>,
Denise Parker <deparker@ucsd.edu>,
Shandell Eames <seames@honlab.nmfs.hawaii.edu>
Subject: Summary of our significant Midway sea turtle findings, 11-18 Nov. ,

FYI.
---------- 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

Need

(4)

(N=6)

Blood DOTS =

MT4

MT65 (PIT 4135783D61)

MT66

MT67

MT72

MT73

Date: Thu, 6 Sep 2001 08:20:21 -1000
From: Marc R. Rice <mrice@hpa.edu>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: Saturday arrive in Honolulu

Participants:

Marc Rice
George Watson
Arjun Clarry
MR Ian Earle
Brian Ruch -student
Oat Wichiencharon -student
Scott Torborg -student
Jill Quaintance -student
Ali Ann Dirga -student
Allison Locatelli -student
--

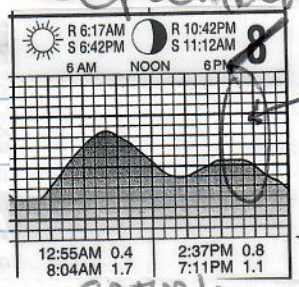
9/8-9/15/01 SAMPLE LIST MIDWAY

MT68 - SKIN BIOPS IN ALCOHOL - seem large
Green Buoy off Turtle Beach - Halophila by SCUBA - Formalin
Inner Harbor - drifting Halophila - Scoop Net - Formalin
CARGO PIER - Beach wash of Halophila (9-11-01) - Formalin
MT67 Mouth sample (Halophila) PIT 4135783778 (9-11-01)
Mike Seki? MT14 Jelly from Mouth (9-11-01)
MT4 Mouth Sample (9-9-01) PIT 424E54174B
MT68 Mouth sample "Algae" (9-12-01) PIT=411F792011

N=8
DNA

MT22 SKIN BIOPSY IN ALCOHOL (9-9-01)
MT71 " " " " (9-14-01)
MT35 " " " " (9-11-01)
MT37 " " " " (9-9-01)
MT67 Whole Blood w/ALCOHOL (9-11-01)
MT65 " " " (9-10-01)
MT73 " " " (9-15-01)
MT72 " " " (9-14-01)

# September 2001




SATURDAY

BASKERS

ARRIVAL MIDWAY ~ 6PM

2 SCUBA MARCT CARGO only 2 small turtles seen.

Reef Explore #1

MARCT SCUBA OUTSIDE Reef NO TURTLES - NO codium seen

Reef Explore #2

Baskers 3PM = 2

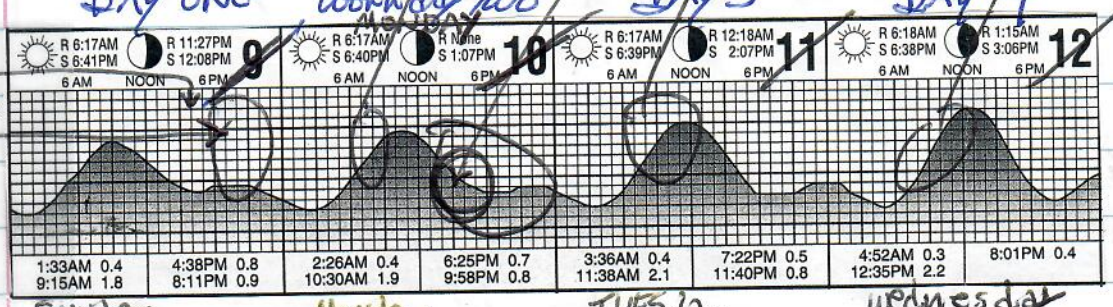
BASKERS =

work DAY ONE

work day TWO

Day 3

work DAY 4




SUNDAY

MONDAY

TUESDAY

WEDNESDAY

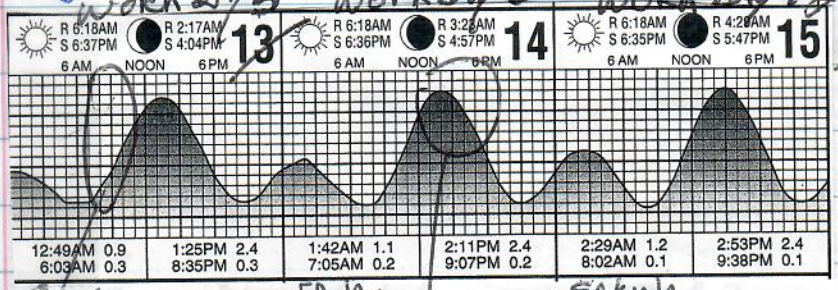
-2 SCOOP NET
-3 bask (2da, 1Night)
(7 BASKING 9PM)

1 BASK AT EASTER Island

WORK DAY 5

WORK DAY 6

WORK DAY 7 Depart 730pm Arrive Honolulu 11:30am (1hr time difference)




THURS.

FRIDAY

SATURDAY

Scuba Tug Pier

Scuba Cargo Pier TO Retrieve and Replace Data loggers.

Reef Explore #3 TO Reef Hotel area

FWS whole crew ARJIN, Marc, me & Jill

6

Midway NMFS/HPA IV

8 September 2001
Saturday Depart Aloha ~430pm Boeing 737 - Divided in half ~40 some people aboard
Clyde - NPC
Dave - USFWS Midway Manager this week - from Kona
Nora McCandless Crow Refuge Ranger
FWS arrival briefing Stephanie Bennett
Mike - Aloha Dive
Checked in Bravo 120
Ate at All Hands Club, Ceiling Tiles - Names painted,
Walked to Turtle Beach - 4 adults basking - None are TMT 31 = Left MK7 "Nancy" + SONIC
Walked to inner harbor outer sea wall.
Dark - No turtles seen.

9 Sept. 2001 Up 6AM - 630AM walked
Sunday to Cargo - Fuel Piers - 2 clean snail near wall (one w/ small flippers). To my eye.
3rd was ~50cm fouled shell. None on basking beach. To Cafeteria Breakfast.
Nora went to beach 530AM - In the Harbor he saw turtles BASKING swimming out to sea.
7 of them very close to inner Harbor wall.

(8) 2 Boxed - Turtle Beach ~ 230pm

9-9-01 ~9PM
Sunday
7 Night-Baskers at Turtle Beach - 1 Boxed
Saw MT 62 ("Prolapsed" Cloaca as per last report).

Earlier today at ~2PM 2 baskers were seen on Turtle Beach - Both boxed -

Drove around alot using scoop net - one caught south side seawall of inner harbor. 2 others seen but not able to scoop. None seen along inner harbor seawall.
Received NOAA boat New July. 25 hp "MTRP" outboard sent up in + 2-50hps Honda Fus boat.

10 Sept 01 6AM Motored New NOAA 16' whaler TO
Monday inner harbor outer seawall. Set up accordian net to pull out when turtle seen. Boat anchored nearby, people standing in the water. Turtles head out veered to deeper water - could apparently see us.
Marc and students drove Cargolies only 2 turtles (small) seen.
afternoon - 2 boats out - to eastern basking turtle picked up by Pier. Tracks of another one seen. Motored along reef edge

need Earth Satellite Corporation
6011 Executive Blvd. Suite 400
Rockville, MD 20852
www.earthsat.com

Sat'l View of Midway 18 March 01
Coral Reef Mapping Proj. NOAA

GPS =

9-10-01 I snorkel inside of eb reef Murday limestone. Numerous smooth calm ledges, where turtles could usg. Tracked by ulva & many fish.
Dinner at French Restaurant
Rain. ~ 7-43 5 turtles large
Reef Explore #1 out basking. at ~ 930pm only 2. following Rain.
checked - None were Nancy.

9/11/01 Woke of to TV sat. news of World Trade Center Tuesday terrorist plane crashing and Pentagon.
Marc & George Watson + Students went out on Scuba dive. I drove to various all sites scoop netting - also collected Holophila that washed ashore by cargo pigs. 2 caught - old MT 13 & 14, Mr. Hall and I worked them up. After Scuba dive charter all of us scoop netted along South sea wall of inner harbor.
830pm Bored are basking turtle of 5 present at Turtle Beach. Watched them all haulout - nearly together shortly after twilight sunset

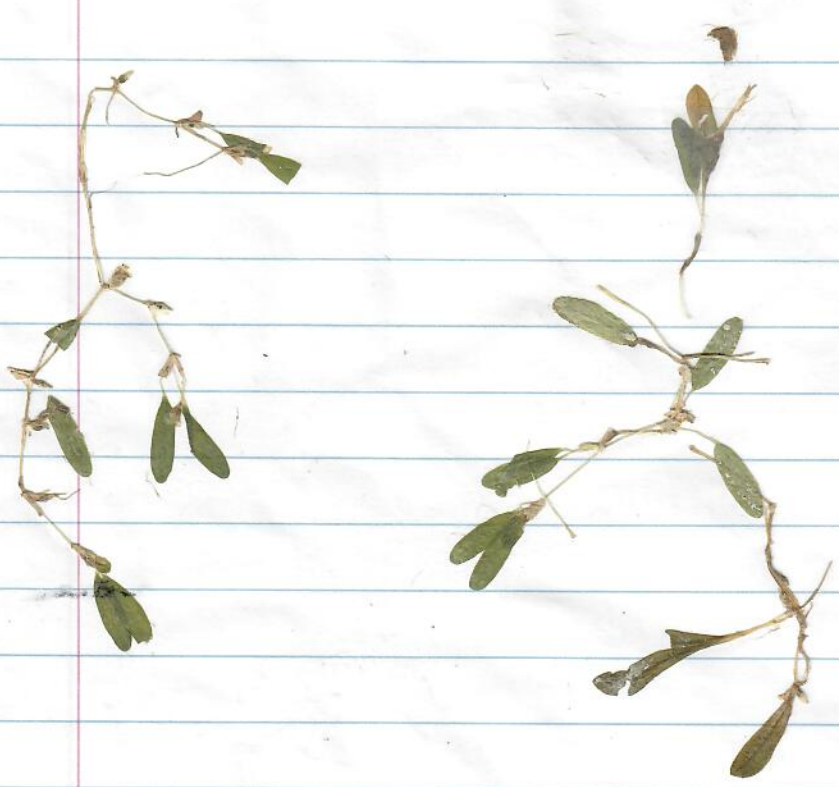
9/12/01 Up ~ 500AM organized for set net 8'×50'
Wednesday Throw ("Fling Thing") from seawall on shallow sand bar - Marc in boat with student laying off. One captured, 619
3 others (2 subadults, 1 juvenile) went

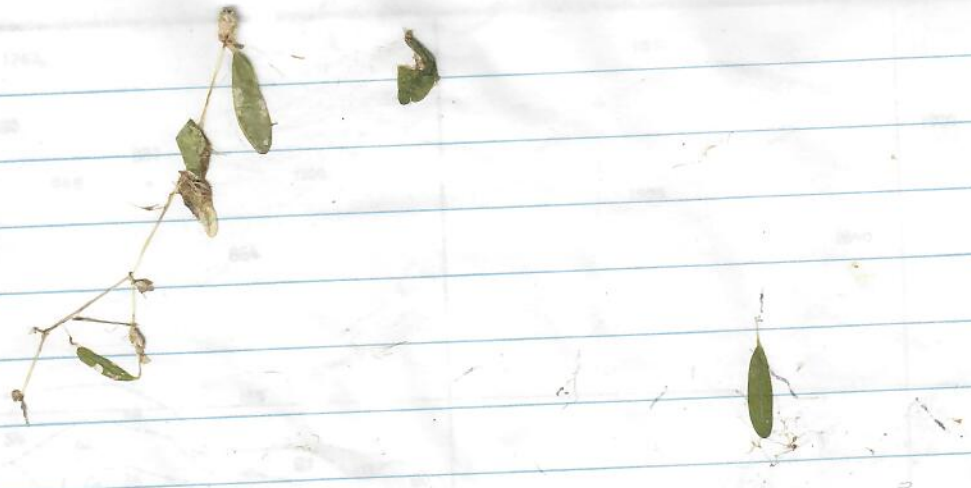
Departed for Reef Exploration #2.
see page GPS= 28°16.009' Sinkhole inside elevated coral limestone
Two yearling green sea turtles seen - one in hole that disappeared - the other dry sleeping.
Returned - slept until 5pm, then set up for set-net throw late pm through sunset & dark. Set to throw to the east from seawall as turtles arrive to enter harbor. 6-8 turtles passed by, most large, none w/ visible mototool. Watch for "Nancy" so no throws on
Quit ~ 8 pm. Ate at all Hands

9/13/01 Up 5AM set up for net throw
Thursday inside over sand bar.
~ 8 turtles went by - some spooked on shallowest part. Threw 3 times all misses.

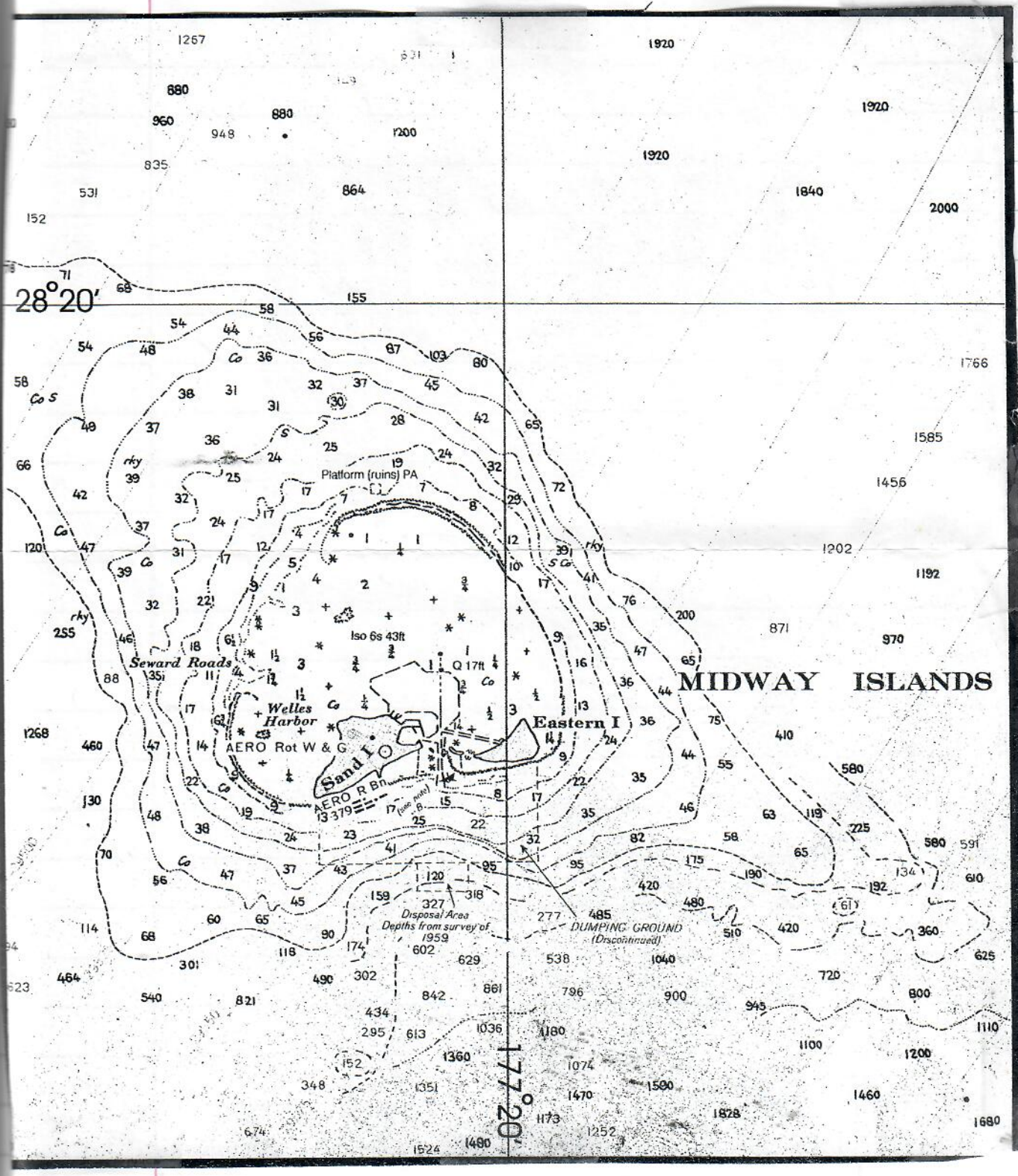
9/13/01 George Watson and some students went out Thursday on Dive Charter. no turtles seen.
Scott, me & Mark.
Scuba Dives under Tugboat & Cargo Piers
~10AM To Retrieve loggers and replace w/new ones.
~30MIN TUG > no turtles seen
~45MIN Cargo > at either location.
~15MIN - near green buoy (closest to shore) to collect Halophila.
PM motored to Reef Hotel - snorkeled inside rock islands and through various small channels leading to outer reef edge. Deep "pot" holes along here. I encountered one such hole with 2 - ~45 cm turtles - one was feeding on red algae while the other turtle was tucked partly under a ledge sleeping (latter based caught U (data page 60).
Collected algae where it was seen feeding (p. 94). No other turtles seen.
Saw Soft Coral and Caulerpa Racemosa.
late PM:

(18)





25 ft depth Midway area
first green buoy off Turtle Beach
9-13-04


MIDWAY ISLANDS
28°20'
177°20'
Platform (ruins) PA
Iso 6s 43ft
Q 17ft
Seward Roads
Welles Harbor
AERO Rot W & G
Sand I
AERO R Bn
Eastern I
Disposal Area
Depths from survey of 1959
DUMPING GROUND
(Discontinued)

(22)

HONOLULU ADVERTISER

# About half of spilled fuel recovered on Midway

APRIL 9, 03 Wednesday B4

By Jan TenBruggencate
ADVERTISER SCIENCE WRITER

Cleanup crews have recovered nearly half of the jet fuel believed to have spilled into Midway Atoll's coral soil in early February.

The U.S. Fish and Wildlife Service reported that about 40,000 gallons have been recovered out of an estimated 82,680 gallons that leaked from a corroded pipe.

A barge with backhoes, a grader and other equipment arrived at the atoll March 16 to assist with the cleanup.

Among the initial tasks was the replacement of two recovery pits with eight newly dug recovery wells. All were dug to about 12 feet deep and packed with gravel to allow the fuel to leach through.

Crews are now pumping fuel from the recovery wells, which are attached to automatic systems that pump intermittently, allowing fuel and water to seep into them between suction operations.

Fish and Wildlife Service spokeswoman Barbara Maxfield said the fuel is being separated from water and sand, and then filtered on Midway. It will be reused in generators and boilers. Contaminated soil excavated from the pumping wells has been spread out on a lined site for evaporation.

Consultant GeoEngineers is preparing a cleanup plan for the Environmental Protection Agency's approval. That plan should cover the treatment of fuel-contaminated soils after flowing oil has been removed.

Maxfield said the contamination area measures about 150 feet by 270 feet, and at its nearest point is about 800 feet from the atoll's lagoon.

# Northwestern Hawaiian Islands/Kure Atoll Assessment and Monitoring Program

Final Report

March 2002

Grant Number NA070A0457

William j. Walsh[1], Ryan Okano[2], Robert Nishimoto[1], Brent Carman[1].

[1] Division of Aquatic Resources
1151 Punchbowl Street Rm. 330
Honolulu, HI 96813

[2] Botany Department
University of Hawai`i Mānoa
Honolulu, HI 96822

9-15-01 MIDWAY
INNER Harbor DRIFT at
Surface
Midway

## INTRODUCTION

The Northwest Hawaiian Islands (NWHI) consist of 9,124 $km^2$ of land and approximately 13,000 $km^2$ of coral reef habitat. They comprise 70% of all coral reef areas under U.S. jurisdiction. This isolated archipelago of small islands, atolls, reefs and banks represent a unique and largely pristine coral reef ecosystem. The islands support millions of nesting seabirds and are breeding grounds for the critically endangered Hawaiian monk seal and threatened green sea turtle. The reefs include a wide range of habitats and support a diverse assemblage of indigenous and endemic reef species, many of which have yet to be described.

Kure Atoll, located at the northwestern end of the NWHI chain (approximately 28° 25' N latitude and 178° 20' W longitude) is the northernmost atoll in the world. The atoll is located 91 km northwest of Midway Islands and nearly 1,958 km northwest of Honolulu. It is a nearly circular atoll with a diameter of 10 km (6mi). The outer reef is continuous

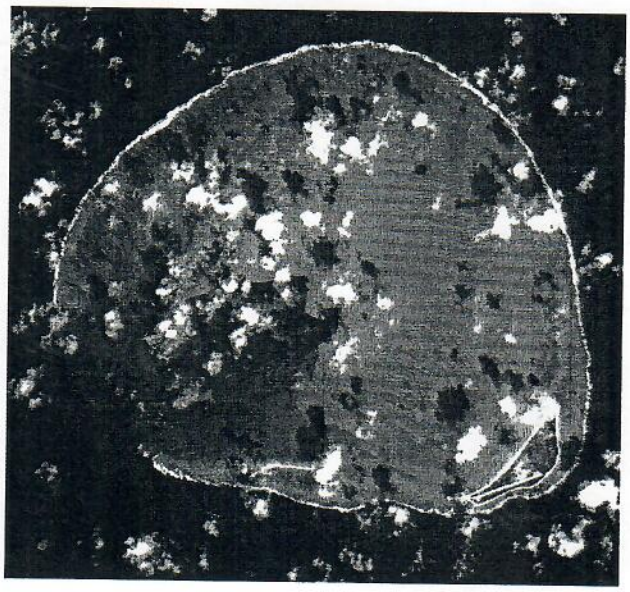


Figure 1. IKONOS satellite image of Kure Atoll

Given the abundance of macro and turf algae at Kure including known food items for the green turtle *Chelonia mydas* (Russell and Balazs 2000, Balazs et al. 2001) it was somewhat surprising to note the paucity of turtles. Only a single turtle was seen at any of the survey sites and only two were noted resting on the beaches. Other researchers have similarly noted the lack of turtles at Kure (Balazs, pers. comm.). Woodward (1972) cites an earlier reference to Kure's turtles by Captain Benjamin Morrell (Morrell, 1841). Morrell reported that "Green turtles were found here in great abundance, and two hawk's bill turtles were seen." Although Morrell's coordinates are inaccurate for Kure, based upon sailing time and direction Woodward states that the island definitely was Kure. If this is accurate, there appears to have been a catastrophic decline of Kure's turtle population from the mid 1800's.

Habitats:

Algal collections and percent cover data reflect the two major habitat types in the lagoon of Kure Atoll. The first habitat type is the stand of patch reefs located southwest of the atoll center. This habitat type was represented by sites 61, 61E, and 61F. Algae species such as *Acetabularia sp., Peyssonnelia inamoena* and *Vanvoorstia coccinea* were detected by the percent cover method (Appendix 3) and collected or observed only at these patch reef sites. Algae species such as *Acetabularia parvula, A.clavata, Ventricaria ventricosa, Antithamnion antillanum, Chondria arcuata, Jania micrarthrodia* and *Monosporus sp.* were collected or observed only from patch reef sites. *Hypnea pannosa* was found on only two of 25 back reef sites but occurred on all three patch reef sites. Benthic coverage of this species was an order of magnitude greater on the patch reefs (0.67% vs. 0.06%) although not quite statistically significant (t-test, P =0.07).

The second more extensively sampled habitat type was the back reef located just inside the atoll's barrier reef. This habitat type was represented by the other 25 sites. Algae species such as *Dictyota acutiloba, Lobophora varigata* and *Turbinaria ornata* were detected by the percent cover method and collected or observed only at sites just inside the barrier reef. *Neomeris annulata, Dictyota divaricata, Sargassum sp., Centroceras minutum, Corallophila apiculata, Crouania sp.* and *Liagora sp.* were only collected or observed at sites just inside the barrier reef. *Microdictyon setchellianum* algal cover was significantly greater on the sites located on the back reef (25%) than on the patch reef

- With the exception of urchins and sea cucumbers, most invertebrates were not visibly abundant at the study sites. *Pinctada margaritifera* were rare and there were no sightings of *Acanthaster planci*.

But comp w/

- Green turtles, *Chelonia mydas* were uncommon even though potential food resources appeared plentiful. Historical records suggest that they may have been much more abundant in the past.

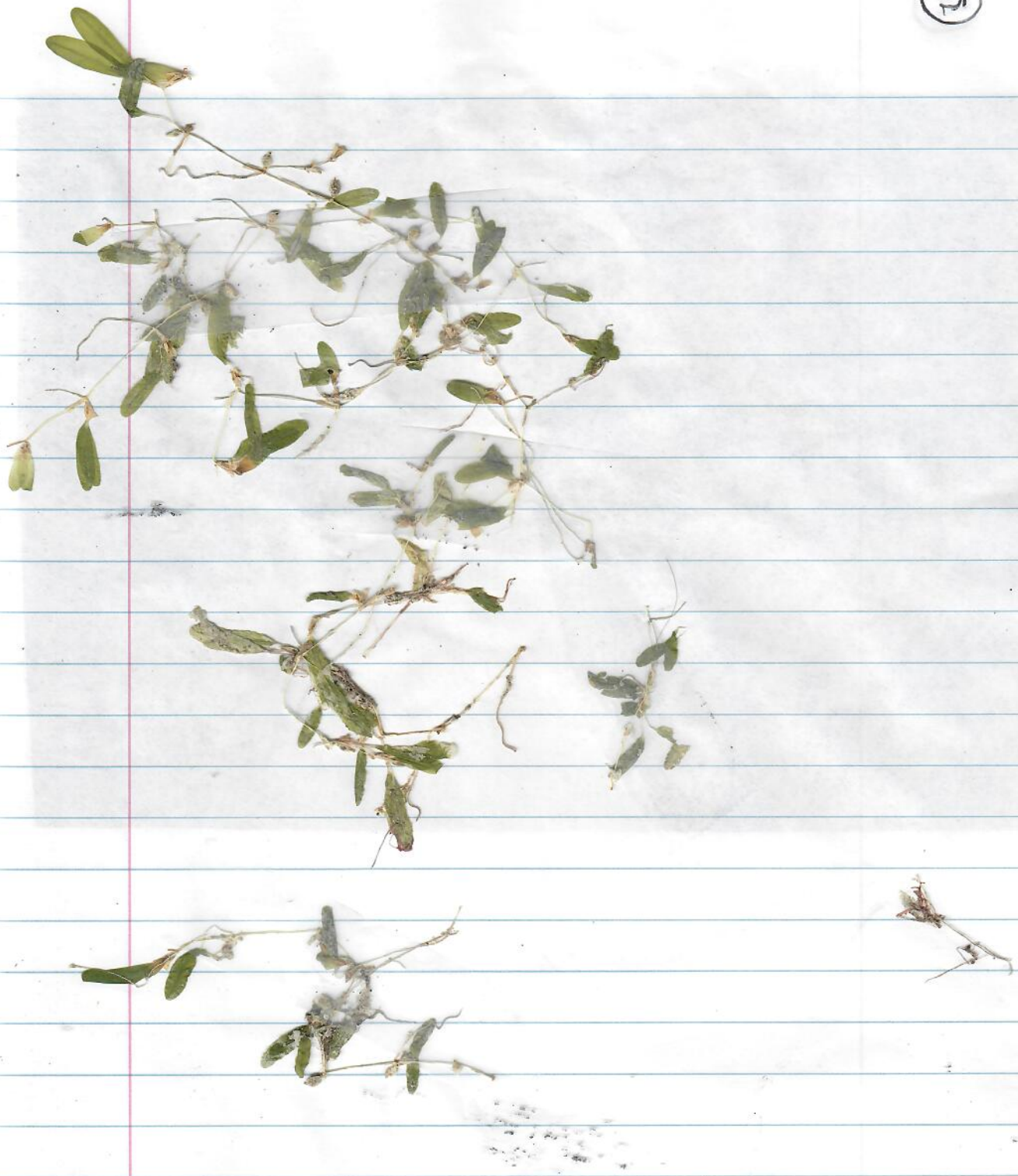
- Fish populations were diverse and robust especially considering the emphasis placed on the shallow, low relief, shelter-poor, wave stressed back reef habitat. Overall biomass was dominated by a small number of species and biomass density was higher than most MLCDs on Oahu.

- Endemic species were an especially important element of the fish fauna being disproportionately represented in terms of the numbers of species, adult fish, recruits and biomass. No introduced species were present.

- Herbivores and benthic invertebrate feeders predominated among the most abundant fish species. In contrast to other NWHI sites, piscivores were not a dominant element of the fish fauna.

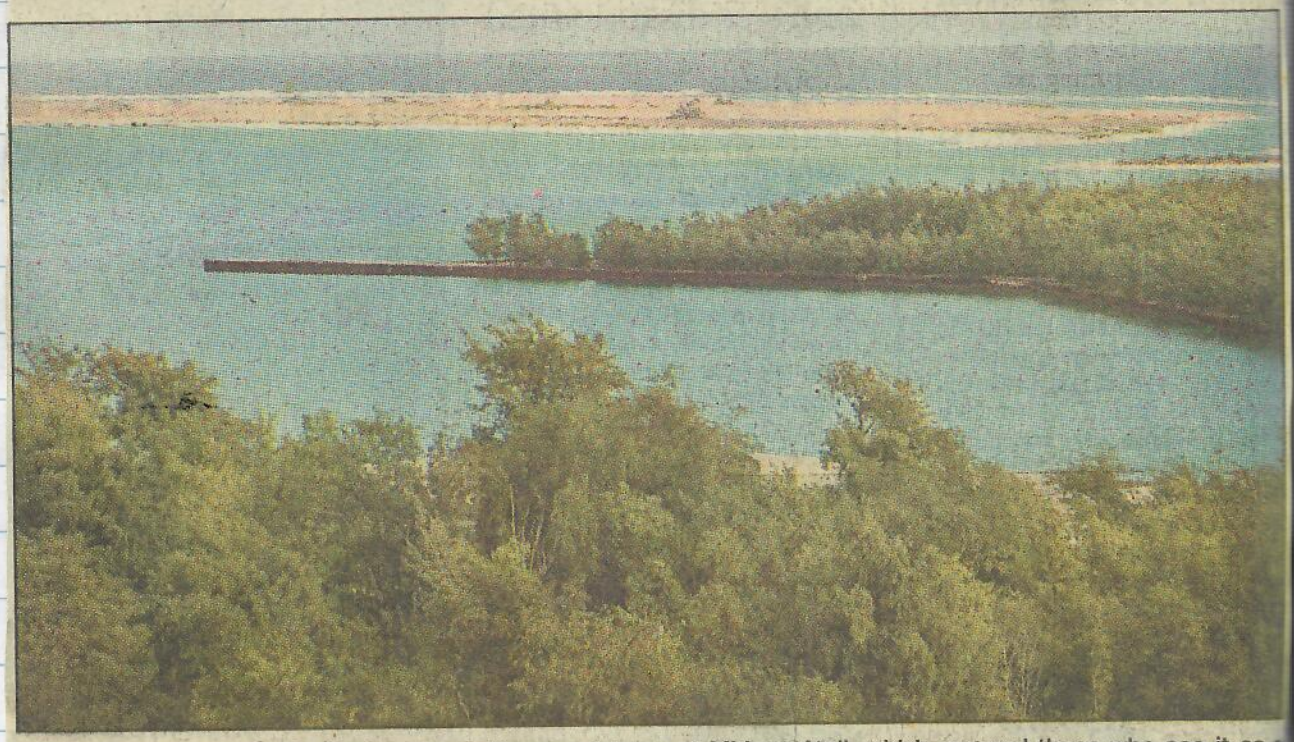
- Relatively few individuals of the White Ulua, *Caranx ignobilis* were observed within the lagoon. A high proportion of them (17%) exhibited evidence of encounters with fishing gear. Other large piscivores were uncommon.

- A number of fish species including carangids, labrids and kyphosids exhibited a clear tendency to be attracted to and aggregate around divers. In the main Hawaiian Islands this behavior has been attributed to feeding of fish by humans but it is now appears to occur even without such influence. *Some* carangids will follow a moving boat. *C. ignobilis* will do so for at least 0.8 km. The tendency of certain fish to congregate around divers may lead to an overestimation of their overall abundance.



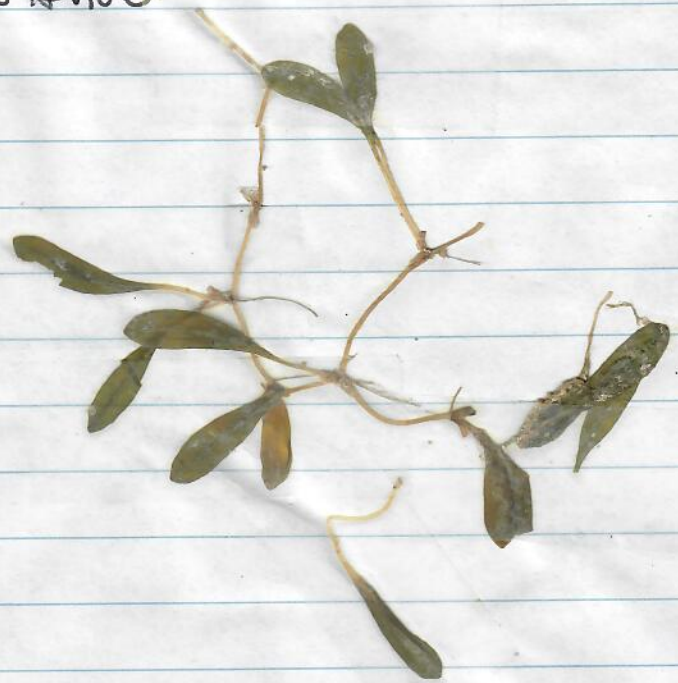
N. KOHAZA ~80'
9-1-01 By Rice & Watson
Bottom Collection

# Many fear a remote paradise soon may be inaccessible



The U.S. Fish and Wildlife Service cleared ironwood trees at Midway Atoll, which angered those who see it as a move to denude the site. The agency says it wants to improve ground nesting habitat and restore native vegetation.

9/01 OFF TURTLE Beach, North Shore of Sand Island, Midway ~25 ft deep near green buoy closest to shore.



## New faces on Midway...

• We would like to welcome back our returning Green Sea turtle researcher, George Balazs, and his cadre of Hawaii Preparatory Academy students. They will be tagging and monitoring the sea turtles on Midway.

• We also have a new volunteer on Island. Her name is Billie Wagner and she is coming from Florida by way of Australia, where she spent many months of quality time studying river crocodiles and cassowaries. Cassowaries are large, flightless birds that live in the rainforest. They are an endangered species, with only a couple thousand left in the northeastern part of Australia. Look for upcoming announcements to see slides of her Australian adventures.

U.S. Fish & Wildlife Service
Midway Phoenix Corporation
Midway Island Station
P.O. Box 29460
Honolulu, HI 96820-1860

Midway Phoenix Corporation web site:
www.midwayisland.com

U.S. Fish & Wildlife Service web site:
www.midway.fws.gov

Oceanic Society Expeditions web site:
www.ocean-society.org

Destination: Midway web site:
www.fishdive.com

G. BALAZS 9-24-01

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

FEDEX #8249-7221-9706

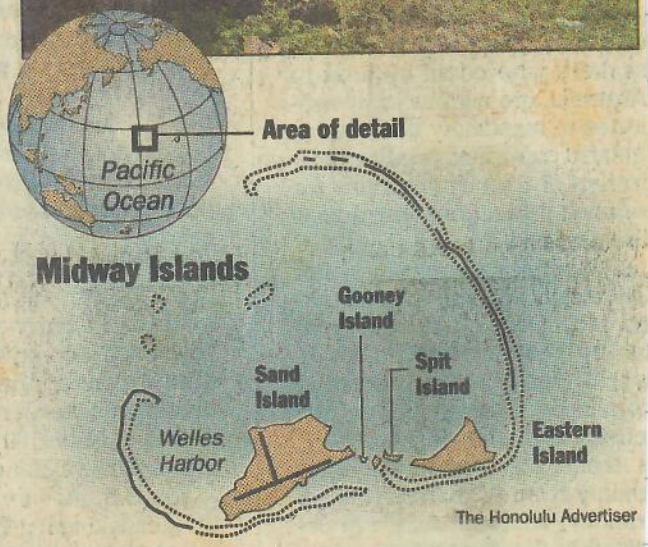
TO Dennis Russell Sharja UAE

9/8-9/15/01 SAMPLE LIST MIDWAY

1. Green Buoy off Turtle Beach - Halophila by SCUBA - dilute formalin
2. Inner Harbor - drifting Halophila - Scoop Net - dilute formalin
3. CARGO PIER - Beach wash Halophila (9-11-01) - dilute Formalin
4. MT67 - Mouth sample (Halophila) PIT 4135783778 (9-11-01) dilute Formaln
5. MT4 Mouth Sample (9-9-01) PIT 424E54174B dilute Formaln
6. MT68 Mouth sample "tigger" (9-12-01) PIT=411F792011 dilute Formalin

7. N. Kohala Soft. Dept. 9-1-01 Halophila Dilute formalin

# Service cuts at Midway Atoll raise protests




**By Jan TenBruggencate**
ADVERTISER SCIENCE WRITER

Midway Phoenix Corp.'s announcement that it will stop providing airport, utility and tourism services on Midway Atoll has raised a firestorm of criticism — most of it aimed not at Midway Phoenix but at the U.S. Fish and Wildlife Service.

Many appear to fear that the company's departure will mean the end of public access to Midway. The Fish and Wildlife Service, however, insists that it is committed to continued public use of the site.

The agency will find another operator or multiple operators to run facilities if Midway Phoenix leaves, but the company has not said it is pulling out, said Rob Shallenberger, deputy project leader for the Hawaiian and Pacific Islands National Wildlife Refuge Complex.

Midway Phoenix executive vice president Bob Tracey said the company has stopped flights to the atoll, is no longer accepting reservations for visitors and "we're demobilizing our operation as we speak."

See MIDWAY, A7

# Little hope seen for salvaging Midway access

3/26/02 A2 HSB

*A Georgia contractor and a federal agency remain at odds over the isle's management*

**By Jeffrey McMurray**
Associated Press

WASHINGTON >> Another Battle of Midway, this one between a Georgia company and a federal agency, appears certain to cloud the 60th anniversary of the World War II confrontation that turned around U.S. fortunes in the Pacific.

Many observers hoped the upcoming June anniversary would inspire Midway Phoenix Corp. and the Fish and Wildlife Service to mend their differences over management of the island. Even Congress has tried to intervene, with little success.

However, the two sides appear determined to part paths on May 1, and earlier this month they officially severed their 5½-year-old contract. Now the key Coast Guard refueling base and one of few emergency landing spots for commercial airliners between the United States and Japan has been thrown into a state of limbo.

"It is my understanding they have reached an irreconcilable difference," said Rep. Bob Barr, a Georgia Republican who has tried unsuccessfully to broker a compromise.

Since signing a government contract in 1996, the Cartersville company has inhabited Sand Island — the largest of the chain 1,200 miles northwest of Honolulu. It built a resort around the former Navy base and, with about 150 employees, has operated the airfield, harbor and power plant — all critical for the Coast Guard.

But that has all changed. Public access to the island has already been cut off, and the company plans to abandon the other services May 1, due to some Fish and Wildlife regulations it claims are burdensome.

"We're not accepting any transient airplanes for fuel because Fish and Wildlife won't let us refuel," said Bob Tracey, spokesman for Midway Phoenix Corp. "We're out of the hotel business, and we've closed the restaurants. We're leaving completely."

Tracey says the company has lost $15 million on the island, primarily because of federal regulations. The agency constantly restricted public access and required the shortening of street signs and removal of shade trees not native to the soil, he said.

He contends Fish and Wildlife officers have also abused an agreement requiring Midway Phoenix to pay their salaries and fly them and their families back and forth to Honolulu.

"They portray themselves as altar boys, but there are some pretty serious charges here," said James D'Angelo, president of the International Midway Memorial Foundation.

D'Angelo has been trying to get Congress to take the unusual step of removing the Fish and Wildlife Service from the island and replacing it with the

IKONOS SATELLITE / AUGUST 2001

**Midway Atoll, with airstrips visible on Sand and Eastern islands, was the focus of a colossal naval battle in June 1942.**

parks department. A few lawmakers have signed on, but with the May 1 deadline approaching, that goal has been elusive.

"That would be a highly unusual approach, but all options are being considered," said Paul Cardus, spokesman for U.S. Sen. Daniel Akaka (D, Hawaii).

The agency has defended its practices, claiming that in addition to being a historic battle site, Midway Atoll is a National Wildlife Refuge, home to nearly 1 million Laysan albatrosses, 14 other species of migratory seabirds and the endangered Hawaiian monk seal. There are also various other historic buildings and sites not related to World War II, said FWS spokeswoman Barbara Maxfield.

"We operate under the same federal laws the federal park service does, and we take those responsibilities very seriously," Maxfield said.

Interior Department spokesman Hugh Vickery says the regulations should not have come as a surprise to Midway Phoenix.

"The restrictions they're complaining about were clearly spelled out in the cooperative agreement," he said.

Vickery insists the real issue was a refusal by Midway Phoenix to reimburse the government for $1.5 million in fuel it borrowed and then sold. That debt has now been forgiven under the severance agreement, Maxfield said.

With irreconcilable differences now apparent, the federal government is planning to maintain the island on its own for a while, then open it up to bids from outside companies. Tracey predicts there won't be any takers, and even if there are, he contends they won't operate the island at the level Midway Phoenix does.

"They're not in the guest business," Tracey said of the Fish and Wildlife Service. "When they run a refuge, they put a fence around it, and you can't come in. When the heat dies down, it'll all just fade away, and everybody will forget about Midway. And that's what I think they want."

# Summary of Turtle Captured

(43)

| | | Scoop Net | Basking | Net Throw | Totals |
|---|---|---|---|---|---|
| 8 Sept 01 | | | | | |
| 9 Sept 01 Sunday | work DAY 1 | 2 | 3 | – | 5 |
| 10 Sept 01 Monday | workday 2 | – | 1 | – | 1 |
| 11 Sept. 01 Tues | workday 3 | 5 | 1 | – | 6 |
| 12 Sept wed. | workday 4 | – | – | 1 | 1 |
| 13 Sept. Thursday | | | | | |
| 14 Sept. Friday | | | | | |
| 15 Sept. saturday | | | | | |

Date: Thu, 10 Apr 2003 21:49:27 -1000
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: Tim_Bodeen@r1.fws.gov
Subject: Nancy the Turtle

Tim, John and Liona have been searching for that turtle for some time on my behalf to retrieve a valuable TDR and the even more valuable data we hope is still inside of it. The turtle would need to be restrained for a short time (20 min) using the box made for such purposes that should still be in the FWS building. A hack saw should be used to saw through the fiberglass, one cut on each of the 4 sides low close to the shell (there white silicon under the unit to saw into, take care not into the TDR body itself.

You asked about needs to do turtle work up there. The greatest need is reliable air transport to permit a 7-10 day stay at a decent price. And lodging/food/pickup truck/small boat availability. It's was pretty excellent when Phoenix was there from the standpoint of providing these items (in concert with FWS). I'm afraid we got spoiled somewhat. Best Regards, George

On Sat, 5 Apr 2003 Tim_Bodeen@r1.fws.gov wrote:

>
> Tell me about what your research needs are.
>
> I last saw Nancy, last summer (August) on turtle nestled up a very large
> turtle with a concaved shell.
>
> Tim
>
> Tim Bodeen
> Refuge Manager
> Midway Atoll NWR
> P.O. Box 29460
> Honolulu, HI 96820
> 808-674-8237 ext 102
>
>
>
>
>
> "George H. Balazs"
> <gbalazs@honlab.nmfs. To:
<Tim_Bodeen@r1.fws.gov>
> hawaii.edu> cc:
> Subject: Re: Satellite
tracking of loggerhead released from
> 04/03/03 04:26 PM San Diego SeaWorld
>
>
>
>
>
>
> Tim- To my knowledge and understanding, there's on reliable air
> transportation in and out, and infrastructure of support services on
> site. For 5-8 of us. As you'll read in the short paper I sent, we used
> high school students for field assistants in recent years. Have I
> misunderstood the situation/conditions up there?

Reduce
Midway book

① (45)

WORKDAY 1

DATE FORM FILLED OUT 9/9/01 Sunday MT 4 ①

CAPTURE DATE, LOCATION AND METHOD:

9-9-01 Midway Inner Harbor Seawall Scoop net

PERSON RECORDING DATA: Jill

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: Ø

OLD TAGS: LH 414B3E6E3D; LFF 414B2D3663

NEW TAGS: RH 424E54174B; RFL; LFL

STRAIGHT CARAPACE - LENGTH: 48.3 cm WIDTH: 39.2 cm

NOTCH LENGTH: 47.9 cm DB: Ø L.O. VB: Ø L.O.

CURVED CARAPACE LENGTH: 51.Ø cm WIDTH: 45.5 cm

HEAD WIDTH: 7.6 cm AXIAL: 19.3 cm LATERAL: 19.3 cm

PPS: YES OR NO OR NE: no

SEX: Male, Female or Undetermined: ✓

TAIL LENGTH: T 8.Ø cm C 4.5 cm

RIGHT FRONT FLIPPER WIDTH: 8.4 cm

PLASTRON LENGTH: 39.9 cm

WEIGHT: 32 lbs #

SAMPLES COLLECTED: Mouth small green algae sample collected with this sample #

424E54174B

DESCRIPTIVE REMARKS: blood dots

old mt=4 (fant)

new mt:4

DIGITAL Photos (digital #1: Left eye #2: Right eye

NAD - nice and pleated

(2 of)

WORK Day 2

MT65

(only turtle DAY TIME Today)

DATE FORM FILLED OUT 9/10/01 MONDAY

CAPTURE DATE, LOCATION AND METHOD:

MIDWAY - Eastern Island - by pier basking @ 1:00 pm

PERSON RECORDING DATA: Allison

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

OLD TAGS: None

NEW TAGS:

RI 41357E3D61

LF 4136295960

MT 65

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

STRAIGHT CARAPACE - LENGTH: 56.8 cm WIDTH: 40

NOTCH LENGTH: 56.6 cm DB: Ø L.O. VB: 2

CURVED CARAPACE LENGTH: 60.5 cm WIDTH: 53

HEAD WIDTH: 8.9 cm AXIAL: 23.5 cm LATERAL: 22

PPS: YES OR NO OR NE

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 13 cm C 8.5 cm

SAMPLES COLLECTED

RIGHT FRONT FLIPPER WIDTH: 10.4 cm

PLASTRON LENGTH: 45.7 cm

WEIGHT: 55 #

New MT-65 (I duplicated an earlier MT 65 Much larger turtle basking Beach)

DESCRIPTIVE REMARKS:

LIQ 3.0 digital photo {Left eye #5 Right eye #6

Blood Dots & Blood - DNA

(3)

(2) workday 1

old MT 39
Redone

DATE FORM FILLED OUT 9/9/01 Sunday

CAPTURE DATE, LOCATION AND METHOD:

9-9-01 245pm basking on turtle beach

PERSON RECORDING DATA: Jill

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: —

| OLD TAGS: | NEW TAGS: |
|---|---|
| RFL N-30 | RFL |
| LFL N-29 | LFL |
| LH 411E7C3E7B | |
| RH 4149124554 | |

STRAIGHT CARAPACE - LENGTH: 82.9 cm WIDTH: 72.3

NOTCH LENGTH: 82.6 cm DB: — L.O. VB: —

CURVED CARAPACE LENGTH: 90.5 cm WIDTH: 85.2

HEAD WIDTH: 12.0 cm AXIAL: — cm LATERAL: —

PPS: YES OR NO OR NE: —

SEX: Male, Female or Undetermined: F

TAIL LENGTH: T — cm C — cm

SAMPLES COLLECTED

RIGHT FRONT FLIPPER WIDTH: cm

PLASTRON LENGTH: cm

WEIGHT: #

DESCRIPTIVE REMARKS:

old mt. 39
redone

workday 1

(4) (49)

DATE FORM FILLED OUT 9/9/01 Sunday

old MT 22 Redone (3)

CAPTURE DATE, LOCATION AND METHOD: 0

Midway turtle beach 1515 Basking 3PM

PERSON RECORDING DATA:

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: Ø

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: Ø

OLD TAGS:
LH 411C3D1C4E
RH 411C710056

NEW TAGS:
RFL
LFL

STRAIGHT CARAPACE - LENGTH: 87.3 cm WIDTH: 70.1 cm

NOTCH LENGTH: 86.3 cm DB: Ø L.O. VB: Ø L.O.

CURVED CARAPACE LENGTH: 93.Ø cm WIDTH: 87.Ø cm

HEAD WIDTH: 12.Ø cm AXIAL: — cm LATERAL: — cm

PPS: YES OR NO OR NE: —

SEX: Male, Female or Undetermined: ~~M~~ Apparent F

TAIL LENGTH: T — cm C — cm

RIGHT FRONT FLIPPER WIDTH: — cm

PLASTRON LENGTH: — cm

WEIGHT: — #

SAMPLES COLLECTED: skin sample biopsy from LH into Alcohol

DESCRIPTIVE REMARKS: old mt: 22 redone LFL - healed (head slit) old tag loss.

(5)

Workday 1 MT 20

(4) DATE FORM FILLED OUT 9/9/01 Sunday

CAPTURE DATE, LOCATION AND METHOD: Inner Harbor (near boat house)

Midway Boat house Sea Wall Scoop Net

PERSON RECORDING DATA: Ian Earle

IAN EARLE

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: —

OLD TAGS:
LFF41491 2048E RH
LH411C670A23

NEW TAGS:
RH 4135687559
LFL

STRAIGHT CARAPACE - LENGTH: 48.9 cm WIDTH:

NOTCH LENGTH: 47.9 cm DB: Ø L.O. VB:

CURVED CARAPACE LENGTH: 51.0 cm WIDTH:

HEAD WIDTH: 8.0 cm AXIAL: 18.6 cm LATERAL:

PPS: YES OR NO OR NE: Y

SEX: Male, Female or Undetermined

TAIL LENGTH: T 10.0 cm C 6.5 cm

SAMPLES COLLECTED

RIGHT FRONT FLIPPER WIDTH: 8.5 cm

PLASTRON LENGTH: 38.8 cm

WEIGHT: 34 lbs #

Photo
Digital 3 Rt eye
Digital 4 Left eye

DESCRIPTIVE REMARKS:

Old MT # 20 Redone

2 oral plaques on soft palate in ribbing

(6) (5)

5 TOTAL

END DAY 1

WORKDAY 1

MT 37

[old Motorboat 37 NOT recorded] (5)

DATE FORM FILLED OUT 9/9/01 Sunday

CAPTURE DATE, LOCATION AND METHOD:

Turtle Beach/Night Basking w/ 6 others all Adults 8:12 PM

PERSON RECORDING DATA: Ian Eccle

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS:
LH 407A5545 3D
RH 414513775F

NEW TAGS:
RFL N —
LFL N —

STRAIGHT CARAPACE - LENGTH: 89.2 cm

WIDTH: 71.2 cm

NOTCH LENGTH: 89.2 cm

DB: — L.O.

VB: L.O.

CURVED CARAPACE LENGTH: 96.3 cm

WIDTH: 89.5 cm

HEAD WIDTH: 12.1 cm

AXIAL: — cm

LATERAL: — cm

SEX: Male, Female or Undetermined: F

PPS: YES OR NO OR NE: —

TAIL LENGTH: T — cm

C — cm

RIGHT FRONT FLIPPER WIDTH: — cm

PLASTRON LENGTH: — cm

WEIGHT: — #

SAMPLES COLLECTED:
LH SKIN Biopsy for DNA into Alcohol

DESCRIPTIVE REMARKS: Small hard "scale" protrusion FROM neck

work DAY 3 9/11/01 Terrible Tuesday (7)

(1)

DATE FORM FILLED OUT 9/11/01 Tuesday MT 14

CAPTURE DATE, LOCATION AND METHOD:

Midway Cargo Pier Seawall Scoop net 645am

PERSON RECORDING DATA: Ia Bayle

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: Ø

ORAL TMRS EXT: YES OR NO: ~

EMACIATION CODE: Ø

OLD TAGS: LH 1F70031D51 / LF 2007 1E2219

NEW TAGS: RFL / LFL

STRAIGHT CARAPACE - LENGTH: 46.Ø cm WIDTH: 35.7 cm

NOTCH LENGTH: 45.8 cm DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 48.Ø cm WIDTH: 41.Ø cm

HEAD WIDTH: 7.3 cm AXIAL: — cm LATERAL: — cm

PPS: YES OR NO OR NE: Yes

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 8.Ø cm C 5.Ø cm

RIGHT FRONT FLIPPER WIDTH: 7.3 cm

PLASTRON LENGTH: 37.6 cm

WEIGHT: 28 lbs #

SAMPLES COLLECTED: Jellies from mouth saved in formalin.

DESCRIPTIVE REMARKS: Print photo of MT13 & MT14 in truck

Old mt #14 - Still a deep groove but no paint

WORK DAY 3 (2) (8) (53)

DATE FORM FILLED OUT 9/11/01 Tuesday MT 13

CAPTURE DATE, LOCATION AND METHOD: Midway Cargo Pier Seawall Scoop net 815am

PERSON RECORDING DATA: IAN EAGLE

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS: LH 411D677877; LFF 411F1C507B

NEW TAGS: RFL; LFL

STRAIGHT CARAPACE - LENGTH: 42.3 cm WIDTH: 34.5 cm

NOTCH LENGTH: 42.1 cm DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 45 cm WIDTH: 40.5 cm

HEAD WIDTH: 7.0 cm AXIAL: — cm LATERAL: — cm

PPS: YES OR NO OR NE: N

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 7.5 cm C 5.0 cm

RIGHT FRONT FLIPPER WIDTH: — cm

PLASTRON LENGTH: 34.1 cm

WEIGHT: 25 lbs #

SAMPLES COLLECTED:

DESCRIPTIVE REMARKS: Print Photo of MT13 & MT14 in truck

old mt # 13 - Still a deep groove but no point portion of Jelly seen in mouth.

work DAY 3 (9)

(3)

DATE FORM FILLED OUT 9/11/01 MT12

CAPTURE DATE, LOCATION AND METHOD:

9-11-01 Scoop Net INNER HARBOR - South Seawall

PERSON RECORDING DATA: Arjun Clarry

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS:
RH 414A352C30
LFF 411F28223C

NEW TAGS:
RH ~~RFL~~ 500F244F09
LFL

STRAIGHT CARAPACE - LENGTH: 47.3 cm WIDTH: 38.8 cm

NOTCH LENGTH: 47.0 cm DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 50.5 cm WIDTH: 46.0 cm

HEAD WIDTH: 7.5 cm AXIAL: ~~19.6~~ 18.9 cm LATERAL: 18.7 cm

PPS: YES OR NO OR NE: N

SEX: Male, Female or Undetermined:

TAIL LENGTH: T 10.5 cm C 7.5 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH: 8.1 cm

PLASTRON LENGTH: 38.2 cm

WEIGHT: 30 #

DESCRIPTIVE REMARKS:
3 ORAL BUMPS, RIBBING

OLD MT 12, FAINT ON RIGHT
MT REDONE

LIQ? DAY 3 (10) MT66 (55)

(4)

DATE FORM FILLED OUT 9/11/01

CAPTURE DATE, LOCATION AND METHOD:

9-11, Midway Inner harbor south sea wall, scoop net

PERSON RECORDING DATA: Jill

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: Ø

ORAL TMRS EXT: YES OR NO: –

EMACIATION CODE: Ø

OLD TAGS:
LH 1F7572871
LFL 1F6D662A64

NEW TAGS:
RFL RH 41362D7129
LFL

STRAIGHT CARAPACE - LENGTH: 47.7 cm WIDTH: 39.3 cm

NOTCH LENGTH: 47.4 cm DB: Ø L.O. VB: seven 7 L.O.

CURVED CARAPACE LENGTH: 51.Ø cm WIDTH: 46.5 cm

HEAD WIDTH: 7.9 cm AXIAL: 19.9 cm LATERAL: 19.8 cm

PPS: YES OR NO OR NE: no

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 11.Ø cm C 7.0 cm

RIGHT FRONT FLIPPER WIDTH: 8.4 cm

PLASTRON LENGTH: 37.1 cm

WEIGHT: 36 lbs #

SAMPLES COLLECTED:
Ø
blood dots.

DESCRIPTIVE REMARKS:
VBs all ~2-3cm in diameter.
(6 oral bumbs (ribbing))

work DAY 3 (11/2) MT 67

DATE FORM FILLED OUT 9/11/01 (5)

CAPTURE DATE, LOCATION AND METHOD: MIDWAY Scoop net 330PM INNER Harbor South Seawall

PERSON RECORDING DATA: ALLISON

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS: None

NEW TAGS:
RFL LH 4135783778
LFL RH 413E4B4826

STRAIGHT CARAPACE - LENGTH: 44.9 cm WIDTH: 35.9 cm

NOTCH LENGTH: 44.1 cm DB: Ø L.O. VB: Ø L.O.

CURVED CARAPACE LENGTH: 47.5 cm WIDTH: 41.5 cm

HEAD WIDTH: 6.9 cm AXIAL: 18.4 cm LATERAL: 18.1 cm

PPS: YES OR NO OR NE: Y

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 9 cm C 6 cm

RIGHT FRONT FLIPPER WIDTH: 7.8 cm

PLASTRON LENGTH: 35.5 cm

WEIGHT: 27 #

SAMPLES COLLECTED:
- Halophia from mouth
- 4 oral bumps in nibbling
- Blood Dots 2CC for DNA

DESCRIPTIVE REMARKS: Likely new recruit

digital photo - Left Eye? Right

New MT-67 → eyes GREEN

DAY 3 Turtle 6 (12) (57) END Day 3

DATE FORM FILLED OUT 9/11/01 MT35 1 of 5 Basking at 8:25 pm

CAPTURE DATE, LOCATION AND METHOD:

9-11-01, Turtle Beach basking 8:25 pm 4 beside her

PERSON RECORDING DATA: Jill

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: Ø

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: Ø

OLD TAGS: LA LH449460141 88 RH413D286DØA

NEW TAGS: RFL / LFL

STRAIGHT CARAPACE - LENGTH: ~~88.2~~ 87.7 cm WIDTH: 69.9 cm

NOTCH LENGTH: 87.6 cm DB: Ø L.O. VB: Ø L.O.

CURVED CARAPACE LENGTH: 93.Ø cm WIDTH: 91.Ø cm

HEAD WIDTH: 12.4 cm AXIAL: — cm LATERAL: — cm

PPS: YES OR NO OR NE: —

SEX: Male, Female or Undetermined: F

TAIL LENGTH: T — cm C — cm

RIGHT FRONT FLIPPER WIDTH: — cm

PLASTRON LENGTH: — cm

WEIGHT: — #

SAMPLES COLLECTED: Biops ~~tissue sample~~ taken from left hind for DNA

DESCRIPTIVE REMARKS: old mt: 35 - faded right Reclone left gone

(13)

WORK DAY 4

Only Turtle captured this date. MT 68

DATE FORM FILLED OUT 9/12/01 (wednesday

CAPTURE DATE, LOCATION AND METHOD: 9/12/01 Midway Inner Harbor Seawall The "Fling Thing" Throw set net 619 Am

PERSON RECORDING DATA: Ali Ann D.

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 1

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS:
LF 411F792011
LH 413B610D79

NEW TAGS:
RH 41357F5367
LFL

STRAIGHT CARAPACE - LENGTH: 73.0 cm WIDTH: 57.8 cm

NOTCH LENGTH: 73.0 cm DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 79.5 cm WIDTH: 75.5 cm

HEAD WIDTH: 11.6 cm AXIAL: 34.4 cm LATERAL: 34.2 cm

PPS: YES OR NO OR NE: Yes

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 20.0 cm C 13.0 cm

RIGHT FRONT FLIPPER WIDTH: 12.4 cm

SAMPLES COLLECTED: 2 oral bumps

PLASTRON LENGTH: 58.5 cm

WEIGHT: 140 #

Small pieces mouth sample collected

DESCRIPTIVE REMARKS: • new moto rool #68

digital photo: #7+8 right eye
#9 left showing tumor
10, + 11
one — #1 pink protrusion presumed tumor
plastron pic. photo 12 roll #2

WORK DAY 5 mt ~~68~~ 69 (14 ⓝ)

(59)

DATE FORM FILLED OUT 9/13/01

CAPTURE DATE, LOCATION AND METHOD:

9-13-01, East Island 2:24 pm basking

PERSON RECORDING DATA: Jill

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: Ø

ORAL TMRS EXT: YES OR NO: –

EMACIATION CODE: Ø

OLD TAGS: none

NEW TAGS:

~~BFL~~ LH50191B4D63

LFL RH500E1B000C

STRAIGHT CARAPACE - LENGTH: 58.4 cm WIDTH: 47.9 cm

NOTCH LENGTH: 57.2 cm DB: Ø L.O. VB: Ø L.O.

CURVED CARAPACE LENGTH: ~~60.63~~ Ø cm WIDTH: 58.5 cm

HEAD WIDTH: 8.4 cm AXIAL: 22.2 cm LATERAL: 22.3 cm

PPS: YES OR NO OR NE: yes

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 12.Ø cm C 8.5 cm

RIGHT FRONT FLIPPER WIDTH: 9.8 cm

PLASTRON LENGTH: 48.1 cm

WEIGHT: 62 lbs # 4g-3c

SAMPLES COLLECTED: barnacles taken preserved in 99% Alcohol

Sent to Bill Newman 10/2/01

DESCRIPTIVE REMARKS:

~~DUE F1~~ mt ~~68~~ 69 right hind bit bleed alot

5 oral bumps (ribbing) w/ white bumps

digital photos 12, 14 & 15 right eye and left eye white discoloration in photo

Moto #70

(15)

DATE FORM FILLED OUT 9/13/01 Thursday

CAPTURE DATE, LOCATION AND METHOD:

Reef Hotel – 1545hr – hand capture/snorkel near rock island by GB

PERSON RECORDING DATA: Rice

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS:

NEW TAGS:

RFL

LFL

LH 424D6E5821

RH 423F20266B

STRAIGHT CARAPACE - LENGTH: 44.3 cm

WIDTH: ~~44.2~~ 34.4 cm

NOTCH LENGTH: 44.2 cm

DB: L.O.

VB: L.O.

CURVED CARAPACE LENGTH: 46.7 cm

WIDTH: 41.3 cm

HEAD WIDTH: 7.4 cm

AXIAL: 17.5 cm

LATERAL: 17.7 cm

PPS: YES OR NO OR NE: Yes

SEX: Male, Female or Undetermined

TAIL LENGTH: T 10 cm

C 7 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH: 7.1 cm

PLASTRON LENGTH: 36.3 cm

WEIGHT: 27 #

DESCRIPTIVE REMARKS:

MOTO Tool #70

(16)(N) New MT 71 2nd Cat L&R (61)

DATE FORM FILLED OUT 9/14/01 Friday

CAPTURE DATE, LOCATION AND METHOD: Midway / Inner harbor seawall / Throw Set Net 745Am

PERSON RECORDING DATA:

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS:

NEW TAGS:

RFL: LH 41361970C21

LFL: RH 41356B2852

STRAIGHT CARAPACE - LENGTH: 85.4 cm WIDTH: 68.2 cm

NOTCH LENGTH: 84.7 cm DB: 0 L.O. VB: 0 L.O.

CURVED CARAPACE LENGTH: 92.0 cm WIDTH: 83.6 cm

HEAD WIDTH: 12.1 cm AXIAL: 35.5 cm LATERAL: 35.5 cm

PPS: YES OR NO OR NE: —

SEX: Male, Female or Undetermined: ~~Female~~ F

TAIL LENGTH: T 16 cm C 9 cm

RIGHT FRONT FLIPPER WIDTH: 13.2 cm

PLASTRON LENGTH: 69.0 cm

WEIGHT: — #

SAMPLES COLLECTED: LH skin biopsy for DNA

DESCRIPTIVE REMARKS: 2 print photos #2 Bumps soft Pobie w/ Jill

Sol 62
12 4 Inner Harbor S. Seawall

(17)

MT 8

DATE FORM FILLED OUT 9/14/01 FRIDAY

CAPTURE DATE, LOCATION AND METHOD: Scoop net 11 AM

INNER HARBOR S. Seawall

PERSON RECORDING DATA: BALAZS

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS: LH-411F237B7A; ~~LFF 3/0~~; LFF 4Ø774BØA3C

NEW TAGS: RFL; LFL

STRAIGHT CARAPACE - LENGTH: 46.0 cm WIDTH: 37.9 cm

NOTCH LENGTH: 45.6 cm DB: 0 L.O. VB: 1 L.O. 2.5cm

CURVED CARAPACE LENGTH: 48.5 cm WIDTH: 44.0 cm

HEAD WIDTH: 7.3 cm AXIAL: 17.9 cm LATERAL: 17.9 cm

PPS: YES OR NO OR NE: Y

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 8 cm C 5.5 cm

RIGHT FRONT FLIPPER WIDTH: 7.9 cm

PLASTRON LENGTH: 39.4 cm

WEIGHT: 30 #

SAMPLES COLLECTED: Left Digital photos eye 2-1 " Right eye 1-

DESCRIPTIVE REMARKS: OLD MT 8 Row of 3 oral bumps. Left JH 2 small leeches - Removed (Redone)

(18)(N) (63)

MT 72

DATE FORM FILLED OUT 9/14/01 Friday

CAPTURE DATE, LOCATION AND METHOD: Inner Harbor S. Seawall 1045 AM Scoop NET

PERSON RECORDING DATA: Allison

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS: None

NEW TAGS:
RFL 4135711116 LH
LFL 4136790415 RH

STRAIGHT CARAPACE - LENGTH: 60.5 cm WIDTH: 51.4 cm

NOTCH LENGTH: 60.2 cm DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 65.0 cm WIDTH: 62.0 cm

HEAD WIDTH: 9.7 cm AXIAL: 25.1 cm LATERAL: 25.0 cm

PPS: YES OR NO OR NE: NO

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 12 cm C 9 cm

RIGHT FRONT FLIPPER WIDTH: 10.0 cm

PLASTRON LENGTH: 49.7 cm

WEIGHT: 77 #

SAMPLES COLLECTED:

DESCRIPTIVE REMARKS: New MT 72 1 oral bump (anterior of ribbing) 3.6 LIQ Blood for DNA Blood Dots

END of MIDWAY (HPA IV) (19) (N) MT 73

DATE FORM FILLED OUT 9 / 15 01 Saturday

CAPTURE DATE, LOCATION AND METHOD:

INNER HARBOR SOUTH SEA WALL
SCOOP NET 10:54 AM

PERSON RECORDING DATA: GEORGE WATSON

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: 0

OLD TAGS:

RFL 502E583307

LFL 500F275358

STRAIGHT CARAPACE - LENGTH: 43.8 cm WIDTH: 37.1 cm

NOTCH LENGTH: 43.2 cm VB: 1 2.9cm L.O. Long axis RVB: L.O.

CURVED CARAPACE LENGTH: 46.5 cm WIDTH: 42.0 cm

HEAD WIDTH: 7.3 cm AXIAL: 17.9 cm LATERAL: 18.2 cm

PPS: YES OR NO OR NE: Y

SEX: Male, Female or Undetermined: U

TAIL LENGTH: T 8.5 cm C 5.5 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH: 8.0 cm

PLASTRON LENGTH: 36.3 cm NEW M.T. #73

WEIGHT: 27 #

DESCRIPTIVE REMARKS:
BLOOD DOTS & BLOOD FOR DNA

PRINT Photos wash turtle + weighing + IN BRA ROOM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

PERSON RECORDING DATA:

Marine Turtle Research
NMFS HONOLULU LAB
2570 Dole Street
Honolulu, HI 96822-2396

TUMOR SCORE

ORAL TMRS EXT: YES OR NO

EMACIATION CODE

OLD TAGS:

NEW TAGS:

RFL

LFL

STRAIGHT CARAPACE - LENGTH: cm WIDTH: cm

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

CURVED CARAPACE LENGTH: cm WIDTH: cm

HEAD WIDTH: cm AXIAL: cm LATERAL: cm

PPS: YES OR NO OR NE

SEX: Male, Female or Undetermined

TAIL LENGTH: T cm C cm

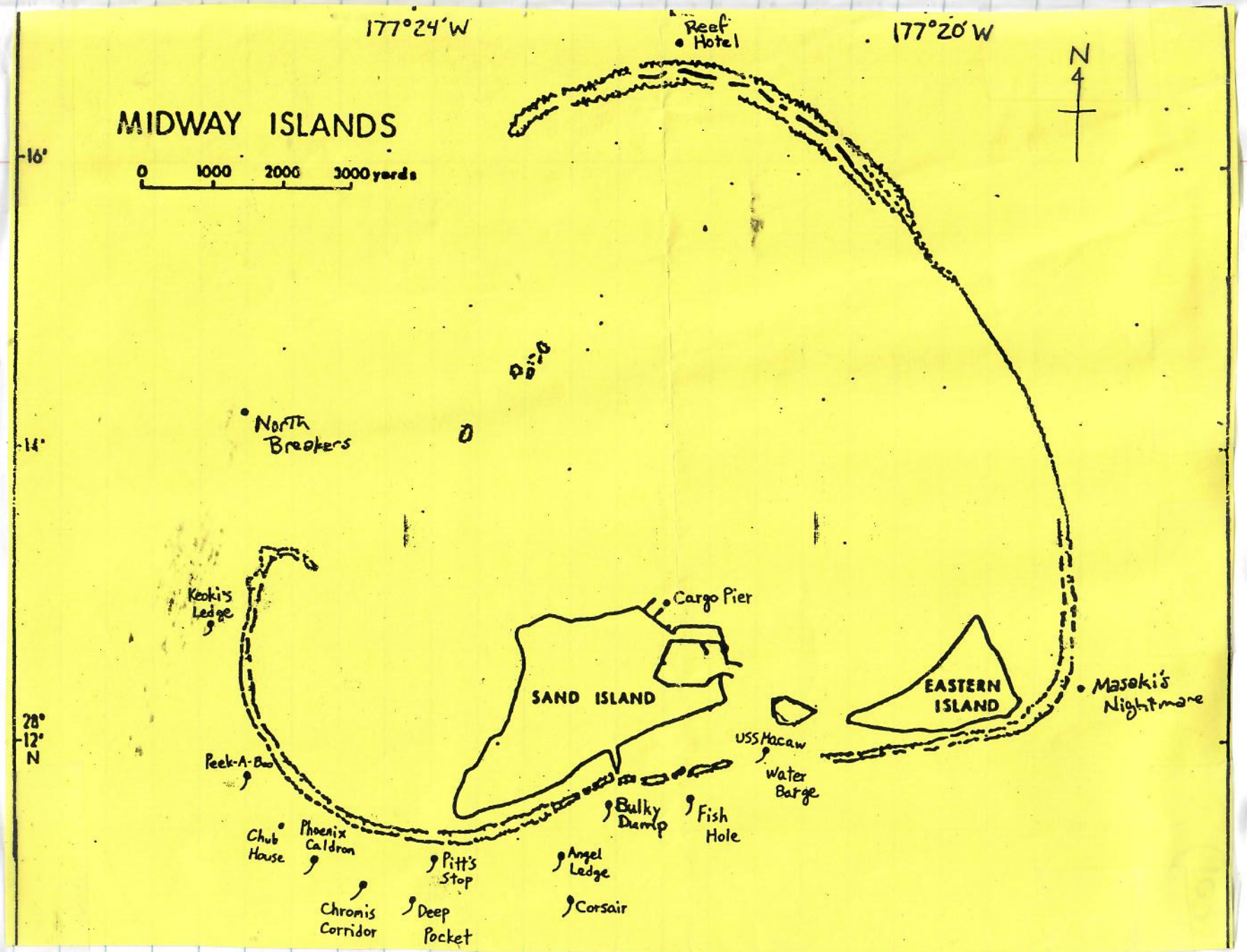
SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH: cm

PLASTRON LENGTH: cm

WEIGHT: #

DESCRIPTIVE REMARKS:


MIDWAY ISLANDS
0 1000 2000 3000 yards
177°24'W
177°20'W
N
16'
14'
28°
12'
N
Reef Hotel
North Breakers
Kooki's Ledge
Cargo Pier
SAND ISLAND
EASTERN ISLAND
Masaki's Nightmare
USS Macaw
Water Barge
Bulky Dump
Fish Hole
Peek-A-Boo
Chub House
Phoenix Caldron
Pitt's Stop
Angel Ledge
Chronis Corridor
Deep Pocket
Corsair

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

Dear George,

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.

FEBRUARY

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.

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.

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.

105

Date: Wed, 18 Apr 2001 10:45:37 -1000
From: Sandra Abbott-Stout <Sandra.Abbott-Stout@noaa.gov>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: Midway

Hi George,

I've come up with a several totals.

>From Encyclopeadia Brittanica: "stretches in a 1,500 mile crescent from Kure Islands in the west to the Island of Hawaii in the east"

>From Atlas of Hawaii 2nd ed. "Hawaii comprises 132 islands, reefs, and shoals stretching 1,523 miles (2,451 kilometers) southeast to northeast"

>From Atlas of Hawaii 3rd ed.
Nihoa - Kure = 1,091 miles (1,757 km)
Nihoa - Hon. Int'l Airport = 283 miles (455 km)
Ka Lae (S. Point) - Hon. Int'l Airport = 221 miles (356 km)
TOTAL Kure to Ka Lae = 1595 miles (2,568 km)

Is this good enough?
Sandra

"George H. Balazs" wrote:
>
> Mahalo Sandra, very much appreciated! Also, can you tell me what it says
> for the Length of the Hawaiian chain- Kure to S. Point? What WOULD I do
> with out you? A lot more of my own work, and take far longer doing it,
> is the answer!
>
> On Tue, 17 Apr 2001, Sandra Abbott-Stout wrote:
>
> > Hi George,
> >
> > I'm still working on this but thought I'd give you what I found so far
> > seeing the request was urgent.
> >
> > Info from "Atlas of Hawaii" 3rd ed. Statistical tables
> > Airline distances (Great Circle distances between Honolulu International
> > Airport and :
> > Midway 1,309 statute miles 2,100 km
> > Japan (Tokyo) 3,847 statute miles 6,190 km
> > San Fransico 2,397 statute miles 3,857 km

Date: Sat, 28 Apr 2001 15:19:57 -1000
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: Nancy Hoffman <nhoffman@midwayisland.net>
Cc: Ron <ranglin@midwayisland.net>, Marc- HPA Rice <mrice@hpa.edu>,
Ken Niethammer <kniethammer@midwayisland.net>,
Rob Shallenberger <Robert_J_Shallenberger@r1.fws.gov>
Subject: Planning for a Midway seaturtle study trip

Marc and I met on Thursday to discuss and schedule future efforts in our various collaborative sea turtle research projects. High on both of our lists was to get back out to Midway for a week, this time during the (we hope) warmer and calmer season. We both decided that early September would work for us, Marc's students are back in school and class scheduling can be adjusted for the trip. This would be our fourth one together in about 3 years.

Our little paper on Midway drew quite a bit of positive attention at the symposium and we were all quite proud of the accomplishment. There's just not many in-water site-specific sea turtle projects that have a 25-year historical dimension to them! Thank you all again for making this possible, especially to Rob who laid the vital ground-work starting at a luncheon we had in Kaimuki nearly four years ago.

What we would like to focus on now at Midway is the outer fringes of the atoll, both in the lagoon, and on the sandbars and coral rock where turtles have often been reported to bask. Also, on Eastern island nearshore reef, as appropriate and congruent with the nesting birds (and of course seals) present in early September. Do do this, we will need to rent or borrow a vehicle, and two boats, of the Boston Whaler 16ft size. One could be the NOAA Nehu, and indeed if the forthcoming Cromwell cruise is going all the way to Midway, then I can send a somewhat new 30hp outboard up there for it. I'd need to know about that soon, however.

The objective right now is to do the scoping with all of you. Does this early September time-frame sound doable to you? Are there any obstacles? At present, we envision 10 paying persons, Marc and I and eight others, likely 7 students and one other adult. Please advise.
Aloha and Mahalo, George

107

Date: Mon, 16 Jul 2001 21:13:44 -1000
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: wayne sentman <mangoman37@hotmail.com>
Subject: Re: Leatherback Photos

Very good news, Wayne, that means the unit (a TDR MK-7, long and narrow) is still attached. Maybe we'll get lucky and she'll bask when we're there. Yes, the night basking is known by us, saw it several times, we would always take a quick check at night- and look for tracks in the a.m. Seven is a goodly number though. They say there's safety in numbers and certainly if in close contact while basking it's a better Alarm System then with just one there alone!

I spoke at length by phone with Nancy, right after she got back, so all is known to one another. We'll just have to see how in unfolds- roll with the punches. And opportunities. Thanks for your offer and if the circumstances are proper I look forward to any help you can provide. Note I've sent (c/o Nancy) my nearly new 25hp Evinrude up on the Cromwell (left Honolulu today). It's for the Nehu but she will store the motor for us until we arrive so it not all "used" when we get there.

I'm hoping the weather will let us work turtles on the inside of the reef fringe while there- an hope they are exhibiting their haul outs, like photos you and Cynthia have shown us (told us about).

Best to Both of You, Aloha, George

On Tue, 17 Jul 2001, wayne sentman wrote:

>
> Dear George,
>
> Thanks for the response. Like your site as well. Things have been busy
> here at Midway, lots of Oceanic groups and in two weeks I will be
> co-instructing a marine mammal class with Karla McDermid for a U of H
> field class. I am excited at the opportunity and have lots (of what I
> think) of good ideas.
>
> By the way Cynthia has seen your transmiter turtle (Nancy ?) 3 times now
> swimming by the buoy off of turtle beach. We keep checking the beach but
> so far no luck. Probably could net it out of the water if one sat there
> long enough. Anyway there is hope that the transmitter can be recovered.
>
> Another interesting thing is that lately turtles have been sighted hauled
> out on turtle beach at night, as many as 7 turtles, and as late as 9:00
> PM. I am not sure if this has always happened and no one was looking or
> if this is new. Cynthia and I are going to try and make some late night
> lookouts and see what we find.
>
> Glad you will be back in Sept. It sounds like Nancy and Bruce will be
> leaving on the 8 Sept. just as you arrive. Maybe she will stay an extra
> week if she knows that is the week you will arrive. At any event I will
> be here at that time and have no OS responsibilities so if you could use
> an extra hand I would be happy for the apprenticeship, also I took the
> DOI boat saftey training so I can at least drive the boat if you need an
> extra hand. Let me know your plans and keep me in mind if I can be of any
> help.

Date: Mon, 20 Aug 2001 23:19:02 +0000
From: Nancy Hoffman <njhoff@hotmail.com>
To: gbalazs@honlab.nmfs.hawaii.edu
Cc: kniethammer@midwayisland.net
Subject: Re: George and Marc at Midway

George, Your housing is still available, as of today. You and Marc will have housing and Ken will make sure you get to your rooms. If something changes, Ken will notify you. I have completed the "transfer of property" for the gray whaler to NMFS starting on 8 September. The transfer will dissolve at the end of November after the marine debris cruise ends at the atoll. Ken has a copy of the document and I have put a folder on my desk with a copy for you and a brief note on where to locate the turtle gear. I have also told Christina, a FWS volunteer, where everything is located. She can help you if you need help. Please remember you will be responsible for fuel, any damage you cause to the gray whaler, and filling out a float plan for EVERY trip you take from land with a boat. Please let Ken know where you will be working this year (Eastern? Reef? Sand?). We are still seeing the turtle with the sonic tag and TDR hanging out along the seawall near the cargo pier. I'm sorry I will not be able to capture turtles with you. Sometime on Oahu, maybe? later, Nancy

NANCY

Date: Thu, 23 Aug 2001 02:50:29 +0000
From: Nancy Hoffman <njhoff@hotmail.com>
To: gbalazs@honlab.nmfs.hawaii.edu
Cc: mrice@hpa.edu, kniethammer@midwayisland.net
Subject: Re: George and Marc at Midway

EVINRUDE "MTRP"

Hi George! Answers to your questions: >
1) storage location of the 25hp I sent up for our
>use on the Nehu NOAA whaler, IT IS LOCATED IN THE BOATHOUSE, INSIDE THE FWS LOCKER.....

2) use of pickup truck, vital to our work, I THINK IS IS OK, KEN IS THE MAN TO ANSWER THIS QUESTION
3) I understand that shark researchers used the Nehu recently, to
>your knowledge is it still operation (i.e. they didn't have any
>breakdowns or do damage to it)? THE SHARK GUYS HAD NO PROBLEM WITH THE BOAT THAT I HEARD ABOUT. KEN, YOU MIGHT WANT TO ASK BRUCE IF HE KNOW OF ANY PROBLEMS BECAUSE HE WAS HELPING THOSE GUYS WHILE THEY WERE AT THE ATOLL. LATER YOU ALL! NANCY

109

Date: Tue, 21 Aug 2001 09:08:39 -1000
From: Marc R. Rice <mrice@hpa.edu>
To: kniethammer@midwayisland.net
Cc: gbalazs@honlab.nmfs.hawaii.edu
Subject: Thanks For All Your Help

Dear Ken,

I received a copy of the message that Nancy sent to George regarding the housing and the gray whaler. Thank you very much for your generous support of our program at Midway. I know that we caused some trouble last time, and I assure you that I/we will be more conscientious this time.. float plans and constant communications at all times!

Our goals during the our stay will be to:

1. try and recapture the TDR turtles that have eluded us thus far
2. capture and tag green turtles
3. assess the health of the green turtle population
4. explore the interior of the lagoon for unknown/suspected turtle habitat and reef basking areas
5. I would like to explore GIS mapping of the sea turtle pop on Midway with you folks.: do you have any GIS types working with you on Midway?

In addition, I would like each of my team members to participate in some volunteer activity with FWS- I am thinking that the reef debris cleanup would be most appropriate- if you think that is possible. Any suggestions would be appreciated. I hope that you might be able to do your turtle talk again.. everyone really enjoyed it last year!

[BTW- One of my colleagues from HPA (Howard Hall and his family) had an absolutely wonderful time last month on Midway. They apparently helped to band birds and do reef cleanup.. they loved it.]

Some of our team members will also go out with MP diving on days when they have room.

Date: Tue, 04 Sep 2001 21:52:06 +0000
From: Nancy Hoffman <njhoff@hotmail.com>
To: gbalazs@honlab.nmfs.hawaii.edu
Cc: kniethammer@midwayisland.net
Subject: boat use

George, how's life? I just got off the phone with Mary Donohue regarding marine debris clean-up at Midway. I wrote the "transfer of property" to include both you and Mary, for a duration of three months. However, Mary's team will not be coming to Midway to help with clean-up, thus she will not need the boat. Would you PLEASE destroy the agreement on the day you leave the atoll! (Ken!! please destroy the copy I gave you also!). On my old desk, in the bio office you will find two folders, one for your work and one for Mary's work. The folders are located on the top left corner of the desk in a wire file holder. There is a note in your file for you regarding the location of all the turtle gear. This boat may be used after you leave the atoll and I do not want NOAA to be liable for anyone using the boat after you leave the Refuge. Thanks George! if you have any questions just phone me: 637.6330, ext. 27
later, Nancy

----- Original Message -----
From: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Date: Friday, September 7, 2001 10:10 am
Subject: Re: Good News! Midway green turtle dna samples

> Do you have the sample numbers for me?
>
> On Fri, 7 Sep 2001, Robin Leroux wrote:
>
> > Hi George,
> >
> > I just went up to the lab and it turns out that the samples were run
> > last night! I have sequences for 4 out of the 5 samples. All 4
> > samples are haplotypes that are common in your population. The only
> > one I don't have is sample #4135330A3F.

Date: Fri, 07 Sep 2001 10:18:24 -0700
From: Robin Leroux <Robin.Leroux@noaa.gov>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: Good News! Midway green turtle dna samples

Samples 41360F591C, 41345F0004, 413643195F and A219...

On Fri, 7 Sep 2001, Robin Leroux wrote:
> >
> > > Hi George,
> > >
> > > I sequenced one of the samples back in December (sample A219,
> > Necropsy,> 10/31/99, Haplotype B). The rest are waiting to be run

9/8/01

George,

Look forward to your visit. No one has seen "Nancy" around for awhile but we haven't spent as much time in that area lately. Have seen a few turtles off the pier at Eastern, a few on Spit, and one basking on the emergent reef, all without visible numbers.

Unfortunately our weather has taken a turn for the worst but maybe all will be better by tomorrow.

Talk with you soon, Wayne Sentinel

(111)

**Subject: Midway dive data (fwd)**
**Date:** Thu, 1 Feb 2001 12:49:37 -1000 (HST)
**From:** "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
**To:** George Balazs2 <gbalazs@s360.swfc2.nmfs.gov>

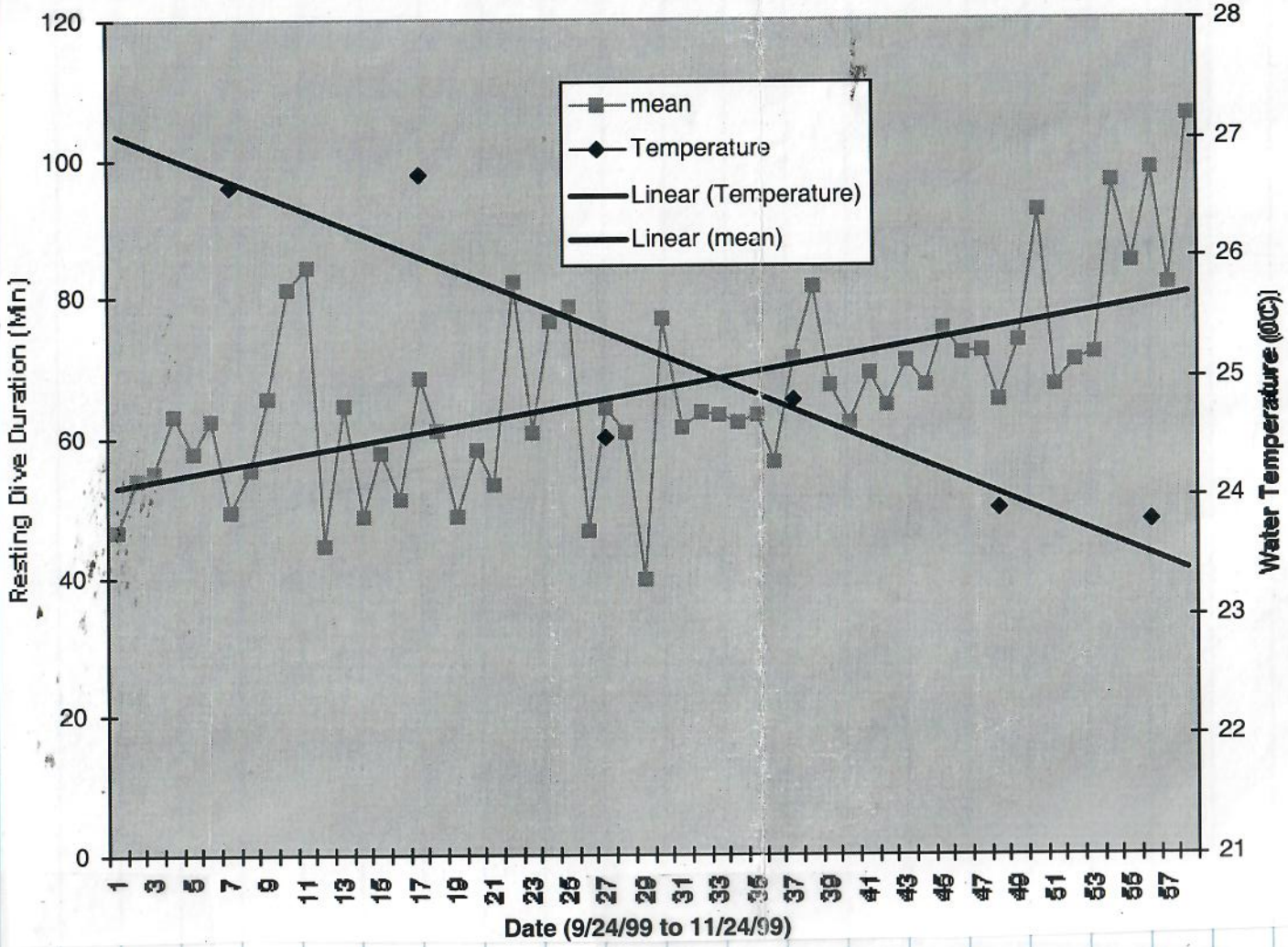
George,
Here is a quick stab at the diving data for #25Š let me know what you think.

Turtle 25 was captured and tagged on 9/23/99 with a Wildlife Computer MK5 TDR and a Sonotronic sonic tag. First full day of data was taken on 9/24 and recording continued until 11/23, a total of 58 full days of data. The partial days of data on either end of the monitoring period were ignored. Data from days 11/14 and 11/19 were lost in the data download.

This turtle made an average of 17 (s.e.=3.3) "*resting dives" per 24 hour period over the 58 days of sampling. The resting dives lasted an average of 67 (s.e.=1.8) minutes with a range of 17 to 120 minutes. An average of 1152 (s.e.=23.5) minutes per day were spent on resting dives (range from 553 to 1389 minutes).
This time represents 82% of the 24 hour day. While it is not possible to determine if periods of non-resting behavior represents foraging or movement from one area to another, the graphical data suggests that between 10 and 15% of the remaining 18% of the day was spent in foraging activity. Work done on sub-adult turtles at Puako, Hawaii (Davis, et.al.1999) showed one turtle spending 50%+ of its day exhibiting foraging behavior, a wide departure from that of #25. Another similar study of a sub-adult green turtle in Hawaii (Rice et.al. 1998) showed foraging behavior occurring for an average of 37% of each day.
This may be a case of sub-adult vs. adult foraging needs or it may be a result of some other factor(s) like environmental or health conditions. The water temperature did drop from 25.6 0C at the end of September to 23.8 0C at the end of November.

A resting dive is defined as any dive made to a constant depth (+ or - 0.5 m) of at least 10 minutes duration.

**Figure 1. Comparison of resting dive duration and water temperature for Midway turtle #25 over a two month period.**



N = 16

5–11 MONTHS – 5
12–19 months – 5
24 MONTHS – 4
years – 1

4 symbol + colors

Compare w/

| | SCL | Interval | CM/YR |
|---|---|---|---|
| 1 | 42.5 | 2.0 (24) | 0.5 |
| 2 | 53.3 | 0.4 (5) | 0.3 |
| 3 | 45.3 | 2.0 (24) | 0.2 |
| 5 | 80.3 – 85.3 | 1.8 (21) 1.7 (20) | 2.8 |
| 6 | 46.7 | 2.0 (24) | 0.8 |
| 7 | 73.6 | 0.9 (11) | 1.9 |
| 8 | 40.7 | 1.6 (19) | 0.6 |
| 9 | 44.3 | 0.4 (5) | 0.5 |
| 10 | 46.2 | 0.4 (5) | 0.5 |
| 12 | 59.4 | 21.8 (262) 10.5 11.1 | 0.5 |
| 13 | 44.5 | 1.1 (13) | 0.3 |
| 14 | 38.0 | 1.1 (13 | 0.0 |
| 16 | 50.3 | 0.4 (5) | 1.0 |
| 10 | 83.3 | 1.1 (13) | 0.1 |
| 13 | 47.6 | 2.0 (24) | 2.8 |
| | 80.3 NANCY Recent | 1.8 (21) | 2.8 |

MT #22

115

0.5cm/year — 1566 June 18, 1978 21.8 years 59.4 cm SCL Eastern Is. in water
(MT40) April 8, 2000 Basking - Sand
70.5 cm

MT22 4/29/99 21 months 1/17/01 Bask T.B. 2.8 cm/yr
80.3 SCL 85.3
Bask SCL
Turtle Beach

OCT 28, 99 A219 Seen by Cargo Pier Midway
Subsequent Dead
To Hono T.W. Necropsy

Historical Information for Turtle Tag 413619091C

Tag Information:

| Tag Number | Date | Tag Type | Tag Position |
|---|---|---|---|
| 413619091C | 6/21/99 | PIT | LHF |
| 413E400209 | 6/21/99 | PIT | RHF |

| | | | | | | Since Last Encounter | | | | Overall | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Interval | | Growth-Rates | | Interval | | Growth-Rates | |
| Date | Type of Encounter | Location: | TumorRank: | NestingAct: | Straight Carapace | Month | Year | cm/mon | cm/yr | Month | Year | cm/mon | cm/yr |
| 6/21/99 | Nesting | East | 0 | C | 97.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 6/23/99 | Nesting | East | 0 | P | 97.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 9/26/00 | Near Shore | Midway Island, Sand Island, Turtle Beach | 0 | - | 97.5 | 15.0 | 1.3 | 0.0 | 0.4 | 15.0 | 1.3 | 0.0 | 0.4 |

6/99 EAST → 9/26/00 TURTLE BEACH

N20/N21 5/97 MIDWAY BASH — MIDWAY 4/99 BASH → NEST June99 Tern → 11/14/00 MIDWAY Dunn Harbor

6/99 EAST 413E4477B A219 → MIDWAY 10/31/99 Dead TS1 TW Necropsy

MIDWAY turtles that have had Liquamycin injections

prepared for 9/2001 TRIP

| Date caught | Pit tag number | Other tags | SCL (cm) | Method | Place caught | Specific |
|---|---|---|---|---|---|---|
| 10/17/98 | 1F68771270 | 1F72532C70 | 54.7 | Throw setnet | Sand Island | Inner seawall |
| 10/17/98 | 1F6C012F45 | 2007094907 | 50.0 | Hand/Snorkel | Eastern Is. | South Shore |
| 10/17/98 | 1F6D5B6039 | 1F6F47416A | 56.2 | Hand/Snorkel | Eastern Is. | South Shore |
| 10/16/98 | 1F6D662A64 | 1F71572871 | 44.2 | Hand/Scuba | Sand Island | Boat ramp |
| 10/18/98 | 1F71572178 | 1F6D676D20 | 47.6* | Throw setnet | Sand Island | Outer seawall |
| 10/18/98 | 1F75236A5F | 1F690F3039 | 41.0 | Scoop net | Sand Island | Outer seawall |
| 10/17/98 | 1F75366F47 | 1F694D3E6D | 70.6 | Hand/Scuba | Sand Island | Cargo pier |
| 10/16/98 | 20071E2219 | 1F70031D51 | 45.3 | Scoop net | Sand Island | Cargo pier |
| 10/17/98 | 2008257C37 | 1F6D1C4117 | 47.8 | Hand/Scuba | Sand Island | Cargo pier |
| 10/21/98 | 40774B0A3C | 411F237B7A | 44.3 | Scoop net | Sand Island | Cargo pier |
| 11/12/00 | 407A45387B (LHF) | 4136332938, MOTO44 | 45.5 | Scoop net | Sand Island | Cargo pier |
| 10/16/98 | 4104160C2F | 4104180D30 | 53.3 | Scoop net | Sand Island | Outer seawall |
| 10/16/98 | 41041A0725 | 41037A7E7D | 42.4 | Scoop net | Sand Island | Outer seawall |
| 10/16/98 | 4104227317 | 4104134854 | 42.5 | Scoop net | Sand Island | Outer seawall |
| 10/19/98 | 411C726819 | 4144330940 | 83.5* | Hand/Scuba | Sand Island | Cargo pier |
| 10/20/98 | 411C73127B | 414B1E5328 | 77.2 | Hand/Scuba | Sand Island | Fuel pier |
| 10/18/98 | 411C770209 | 414B53240F | 47.1 | Hand/Snorkel | Sand Island | Cargo pier |
| 10/20/98 | 411F027D57 | 411F19485B | 73.6 | Hand/Scuba | Sand Island | Cargo pier |
| 10/18/98 | 411F111E25 | 411C4C130B | 71.5 | Boat/Dive | Sand Island | KK Halophila |
| 10/18/98 | 411F481120 | 414B3F7B6E | 39.4 | Hand/Snorkel | Sand Island | Cargo pier |
| 10/18/98 | 411F792011 | 413B610D79 | 65.3 | Hand/Scuba | Sand Island | Cargo pier |
| 11/15/00 | 4135087C4A (LHF) | 413643695B, MOTO53 | 77.3 | Hand/Scuba | Sand Island | Tugboat pier |
| 11/17/00 | 41351A476D (LHF) | 41360E471E, MOTO59 | 50.4 | Hand/Scuba | Sand Island | Fuel pier |
| 11/17/00 | 41351F5D79 (LHF) | 41360C6077, MOTO58 | 38.6 | Scoop net | Sand Island | Inner Harbor Seawall |
| 9/25/99 | 41351F753C (LHF) | MOTO32,SON456 B | 58.0 | Hand/Scuba | Sand Island | Tugboat pier |
| 11/13/00 | 4135282A74 (LHF) | 41356E0318, MOTO48 | 39.7 | Hand/Scuba | Sand Island | Cargo pier |
| 9/23/99 | 4135330A3F (LHF) | 4136201E57, MOTO27 | 44.5 | Hand/Scuba | Sand Island | Cargo pier |
| 11/15/00 | 4135663E4D (LHF) | 4136327743, MOTO54 | 48.2 | Hand/Scuba | Sand Island | Tugboat pier |
| 11/15/00 | 4135747E3F (LHF) | 4136012807, MOTO52 | 61.9 | Hand/Scuba | Sand Island | Tugboat pier |
| 11/14/00 | 4135796E0E (LHF) | 413640050E, MOTO51 | 39.7 | Hand/Scuba | Sand Island | Inner Harbor Seawall |
| 9/24/99 | 4136061C1F (LHF) | 4136411A2F, MOTO30 | 51.3 | Hand/Scuba | Sand Island | Cargo pier |
| 11/14/00 | 4136134509 (LHF) | 4136053C6F | 74.7 | Hand/Scuba | Sand Island | Cargo pier |
| 11/13/00 | 4136374431 (LHF) | 4136241E5B, MOTO49 | 45.1 | Hand/Scuba | Sand Island | Cargo pier |
| 11/17/00 | 413639640E (LHF) | 413E486F5B MOTO60 | 58.0 | Hand/Scuba | Sand Island | Fuel pier |
| 9/25/99 | 41363C2156 (LHF) | 4136257B0C, MOTO31, SON469, TDR99421(MK7) | 88.8 | Net | Sand Island | Outer seawall, inside Inner Harbor |
| 11/13/00 | 41363E6766 (LHF) | 4135030963, MOTO46 | 41.1 | Scoop net | Sand Island | Inner Harbor Seawall |
| 9/23/99 | 413643195F (LHF) | 4136231F07, MOTO28 | 48.3 | Hand/Scuba | Sand Island | Tugboat pier |
| 9/23/99 | 41370C237D (LHF) | 41360F591C, MOTO29 | 38.0 | Hand/Scuba | Sand Island | Tugboat pier |

| | | | | | | |
|---|---|---|---|---|---|---|
| 10/18/98 | 413B085951 | 414B31336D | 61.4 | Hand/Snorkel | Sand Island | Cargo pier |
| 10/20/98 | 413B186211 | 413B706D7B | 48.4 | Hand/Snorkel | Sand Island | Tugboat pier |
| 10/18/98 | 413B6E3815 | 414A486806 | 50.3 | Hand/Snorkel | Sand Island | Cargo pier |
| 11/17/00 | 413E0E0254 (LHF) | 4135772C7F, MOTO61 | 77.2 | Hand/Scuba | Sand Island | Cargo pier |
| 11/14/00 | 413E330054 (LHF) | 413578465F, MOTO50 | 40.6 | Scoop net | Sand Island | Inner Harbor, Southside |
| 11/17/00 | 413E374C7D (LHF) | 4136243F7B, MOTO57 | 44.4 | Scoop net | Sand Island | Inner Harbor Seawall |
| 11/12/00 | 413E3A4763 (LHF) | 4135321942, MOTO43 | 49.4 | Basking | Sand Island | Turtle Beach |
| 10/18/98 | 414912040E | 411C670A23 | 46.7 | Hand/Snorkel | Sand Island | Cargo pier |
| 11/16/00 | 414B0D7334 (LHF) | 414B682450, MOTO56 | 50.1 | Scoop net | Sand Island | Inner Harbor Seawall |
| 10/18/98 | 414B623004 | 200C784D0F | 83.6 | Hand/Scuba | Sand Island | Cargo pier |
| 10/18/98 | 414B6C432B | 411F4D576F | 46.2 | Hand/Snorkel | Sand Island | Cargo pier |

Date: Fri, 16 May 2003 10:53:34 -1000
From: George Balazs <George.Balazs@noaa.gov>
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: [Fwd: Midway turtles]

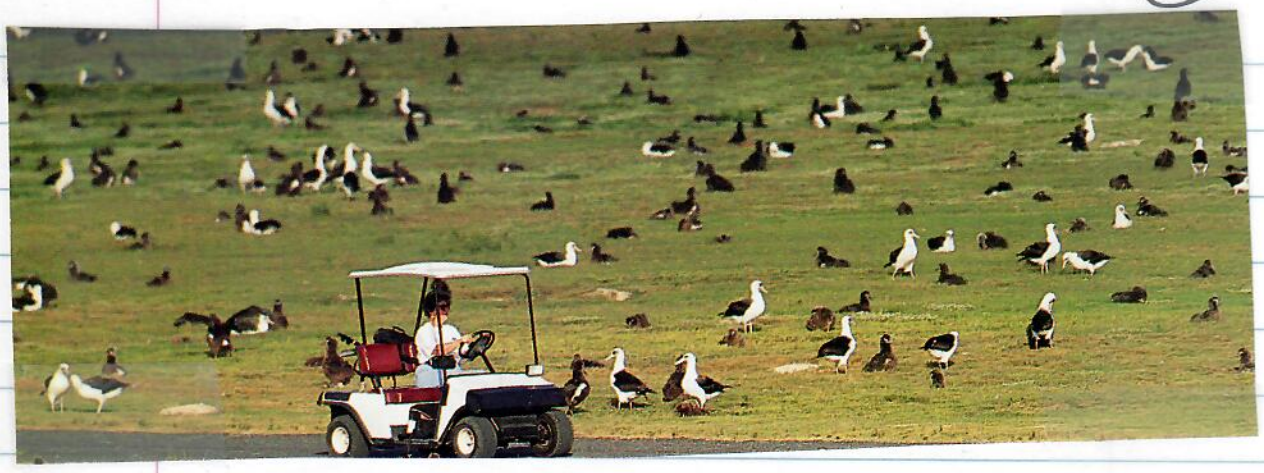
Reduce

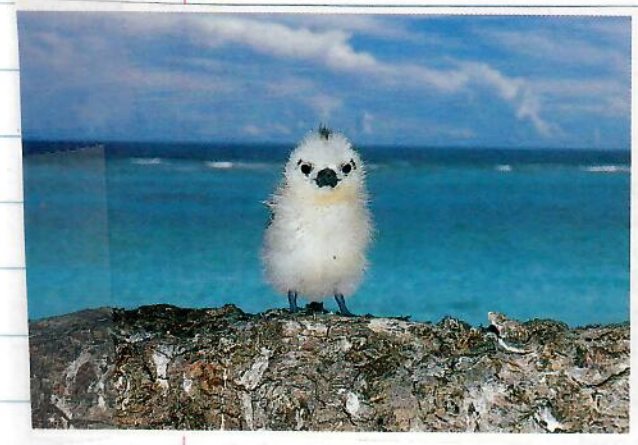
[ Part 2: "Included Message" ]

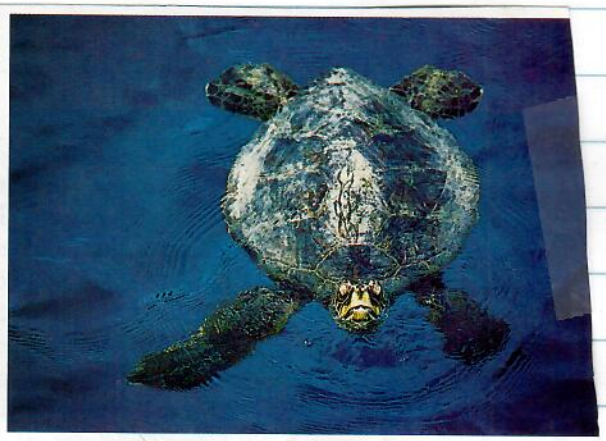
Date: Fri, 16 May 2003 10:49:29 -1000
From: George Balazs <George.Balazs@noaa.gov>
To: Tim_Bodeen@r1.fws.gov
Subject: Re: Midway turtles

Tim, such FANTASTIC news!! This means she will be basking more very likely in coming days (evening nights also are a possibity). Is Leona and John there now? Do you or your staff have time to devote to checking for her and Taking Firm Action to restrain her with the box so the tag can be taken off? This will take resolve, but the pay off can be very large to elevate status of knowledge about Midway turtles (if we can get the unit undamaged and get the data downloaded)?
Can you call me to discuss? Aloha and Mahalo! George
286-2899 (day or night).

Tim_Bodeen@r1.fws.gov wrote:
>
> Hi George,
>
> I saw "Nancy" today at 2:15 P.M. shuffling her way back into the waves from
> our turtle beach. The transmitter is still attached to her shell on the
> left side (looking forward from her aft end).
>
> Tim Bodeen
> Refuge Manager
> Midway Atoll NWR
> P.O. Box 29460
> Honolulu, HI 96820
> 808-674-8237 ext 102







## LOCATION, SIZE, AND NUMBER OF TUMORS

| | #1 | #2 | #3 | #4 | TOTAL | REMARKS |
|---|---|---|---|---|---|---|
| RIGHT EYE | | | | | | |
| LEFT EYE | | | | | | |
| MOUTH | | | | | | |
| NECK | | | | | | |
| RFF | | | | | | |
| LFF | | | | | | |
| RHF | | | | | | |
| LHF | | | | | | |
| CLOACA / TAIL | | | | | | |
| SEAMS / SCUTES | | | | | | |
| INTERNAL | | | | | | |
| TOTAL | | | | | | |

ORAL TUMORS VISIBLE EXTERNALLY: YES OR NO

OTHER INFORMATION:

TUMOR SCORE:

APPROXIMATE TUMOR SIZE CATEGORIES:

#1 = DETECTABLE PATCH TO 1cm DIAMETER
#2 = >1cm TO 4cm
#3 = >4cm TO 10cm
#4 = >10cm

**Marine Turtle Research**
**NMFS HONOLULU LAB**
**2570 Dole Street**
**Honolulu, HI 96822-2396**