BALAZS

23 July 01 MAUI - BALAZS 2AUG02

12 AUGUST 01 - HONOLULU HAWAI MAKENA

23 AUGUST 01 HONOLULU HAWAI - TWO MK5 TLRS ON!

Mead

COMPOSITION

MAUI Book 4

27th August PM - 29 August AM 01 - HONOLULU HAWAI

6-8 AUG 02 5690

3 SEPT. 2001 - HONOLULU HAWAI 43 TDRS

100 sheets • 200 pages • 100 hojas

9¾ x 7½ in/24.7 x 19.0 cm

wide ruled/réglage large/rayado ancho

09918 © 1995 The Mead Corporation, Dayton, Ohio 45463 U.S.A.

Made in U.S.A./Fabriqué aux États-Unis/Hecho en E.U.A.

9-11 JUNE 2002 5690

10-12 JULY 02 (4809 STM)

21 MARCH 2002 - MAUI ALGAE Collect

13 MARCH 2002 MOC - Release 6

ISLAND SCUBA

9-5 9-6-02 5690

4th Exc. 21-22 AUG 02

7th NST 27 AUG 02 HONOLULU HAWAI

2001-2002

Try SCUBA with the New Discover Diving Program

09918

Check "MAHINA SURF" APARTMENTS for Honokowai 669-6068

Need send

Front desk: Nohi, Amir, Dee Dee, Di Di

CLASSIC RESORTS

CAROL KOEPKE ← Sent
General Manager

Lahaina Shores Beach Resort
475 Front Street
Lahaina, Maui, HI 96761

Tel (808) 661-4835
Fax (808) 661-4696
email ckoepke@classicresorts.com

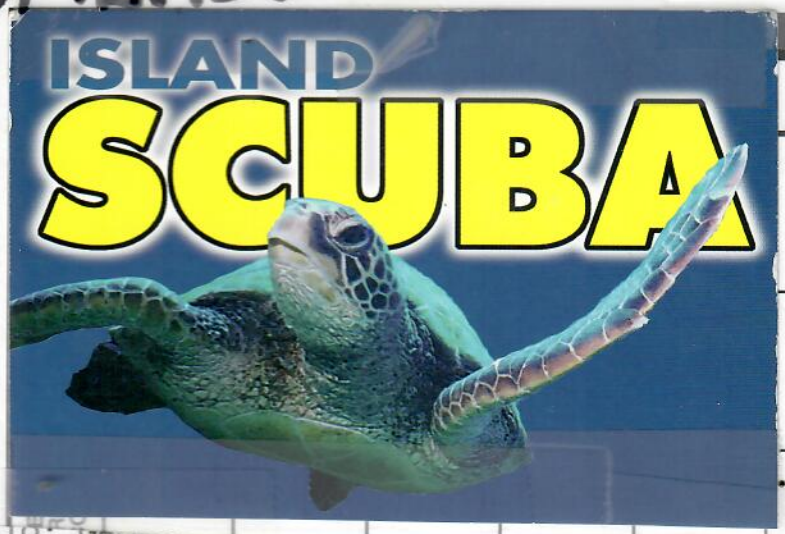
Maui Park Hotel

Eileen Minnig
6316 Mineral Ct.
Carmichael, CA 95608-6744
(916) 961-2566

Honumama

BALAZS

HORAIRE/H



6	7	8

8/27/02 KULEANA APARTMENTS surfer lives there said Turtles seen many with tumors 300 ft from shore

18: George
Subject: LOGGER 483454

Logger 483454 has been deployed at Zeus' Lair, Reef 2 at 2:24 pm. 7

7/29/02 V and P 2002

TH JE JU							
FRIDAY							
SATURDAY SAMEDI SABADO							
SUNDAY DIMANCHE DOMINGO							

Subject: Templogger 2 and 3 deployed

V and P 2002 # 483455 at Mt. Balazs 11:54 am

7/30/02 2002 # 483456 at TheRock 12:20 pm

Honokowai
1/9/01
381363 Exact location unknown

Honokowai 2002

7/20/01
483454 The Rock
483455 Mt. Balazs, North House
483456 Zeus' Lair, Reef 2

RUTH (MR. SASAKI'S DAUGHTER) 12026 EAST 25th Avenue SPOKANE, WA 99206

Granddaughter Christin

HARRY CASAR – 242-6392
The Maui News

MiniDV Sony
GV-D300 NTSC
DIGITAL Video Cassette Recorder

23 JULY 2001 HONOKOWAI, MAUI (P.9)
Monday

Left for U&P
#483454
#483455
#483456

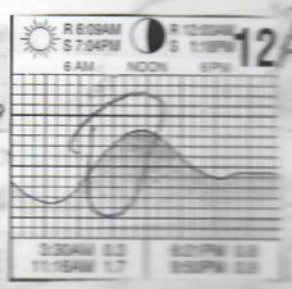
TIDBITS
2 hour sampling.
IN PEV without Lead.

Note: Turtle nested at Fleming
7/22/01 ?
8/13/01 "Second" nesting

"KAPALUA" FORAGING Rest of interesting habitat
for 5690 LC1 20° 58.62N; 156° 40.08W
from ARGOS positions LC1 20° 57.00N; 156° 40.44W

---

12 AUG. 2001 HONOKOWAI, MAUI
1-SCUBA to deploy 2 TDR MK5 IN "BATH STREET"
with velcro-ANKLET
(05-C one velcroed off by male)
(The other on Hoa taken off on pm dive same day by Ursula & Peter - Seen "slipping to knees")



Sept 5-6, 02 P.107
5690 FOUND with Friends

23 AUGUST 2001 Honokowai, Maui
Thursday p. 17

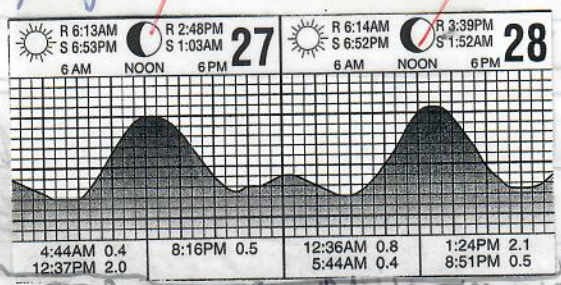
2 - TDR's deployed w/ pouch on adjustable nylon strap dog collar. one on 605-C ♀ left hind (Right front) (my pink?); The other lime Auapoa ♀ left hind.

TDR on Auapo off by Ursula 8/27. = 4 Nights of data

27-29 August 01 Honokowai, Maui
Late Monday PM - Wed AM TO Kahului, Rental car
p. 21 - TO Fleming.

2 Nights/Mornings at Fleming - watch + 1 Scuba

August 2001



Increasing moon → full about 5 days later.

Wednesday - STRANDING Update Training PAULINE = 879-6596
17 JUNE 02 - Lecture TO DIVE TOUR operator NOAA Sanctuary office.
Monday + MOC Turtle meet to tiger p. 43
Stayed at Maui Seaside #69 +
11 am look at Maui Power plant
Titled "SAVING AND SEEING Hawaiian Sea Turtles"

LSBR
8/6 Conf. 733983
LEHANA

①

NOHONANI CONDOMINIUMS
3723 L. HONOAPIILANI RD.
LAHAINA, MAUI HAWAII 96761
Phone: 1-800-822-7368 - Fax: 1-808-669-2388 - Email: ALOHABLU@MAUI.NET
Internet: http://www.choice1.com/nohonani.htm
Reservation Confirmation

3 Sept. 2001 Honokowai (Kapalua) p. 25
Monday "Labor Day" Deployed 3 TDR's w/ dog collars
2 MK5's, 1 MK7 → Unit 3 deploy Aumawelo 8?
MATURING MALE
Unit 1 & Unit 2 MK5
(UWAPO deploy) (605-C deploy). Of the three,
the MK7 Aumawelo and MK5 UWAPO were
recovered by Ursula & Peter. 605-C's (MK5)
not recovered - turtle not seen.

13 MARCH 2002 MAUI Ocean Center
Wednesday to Release 6 Subadult SLP turtles - 2 deployed
w/ VHF transmitters. 5 presumed ♀'s, 1 male p. 138

21 MARCH 2002 KAHULUI MAUI - Algae Collected
Thursday for McDermid Nutritional Analysis study.

Sunday Tuesday
9-11 JUNE 2002 5690 LAHAINA SHORES Beach Resort
5690 nestings eggs on the A.M. of 6/11 (1245-405 PM) p. 29
PICTURES p. 179 TOC CONTINUED PAGE 5

(4) TDR Summary LATE Summer 2001

UWAPO - 9 Nights TOTAL
AMUALA - 4 Nights
605-C - 6 Nights

DAILY "SHALLOW TRANSIT" TIME ~45 MIN

"SHALLOW TRANSIT" 90 MIN

MARCH 11, 2002

Yesterday I went through all video of the TDR stuff and here are exact times I don't believe I ever shared with you. Besides this the other thing that I found helpful is to look at the first time the TDR shows a long resting at 30 feet or so in the first day chart. (To me that shows when George attached the TDR)

MAIN HI = ~1600 km Shoreline

MAIN HI = ~1200 km² benthic available habitat for green turtles

Date: Mon, 25 Mar 2002 09:06:31 -1000,
From: Marc Rice <mrice@hpa.edu>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu
Subject: Re: Sampling protocol for TDR's MK 5 and 7

Sampling Protocol for all TDTR tags,
depth every minute
temperature every three minutes
light (which we don't use) every 10 minutes

This is FYI. Exact times.

AUG23rd FIRST successful deployment 2001

605C attached 1:39 pm
Uwapo attached 1:52 pm

FIRST successful deployment REMOVAL 2001

(1) Uwapo removed Aug27th 11:08am 4 Nights
(2) 605C removed Aug29th 4:16pm 6 Night

SEPT3rd SECOND successful deployment 2001

605C attached 12:50pm (and yes, there were only
Uwapo attached 1:04pm
Amuala attached 1:07 pm (MALE) 3 minutes between the two)

SECOND successful deployment removal:

(3) Amuala removed Sept7 11:26am 2001 4 Nights
(4) Uwapo removed Sept 8th 3:21 pm 5 Nights
605C ---- NOT YET FOUND

W. Maui → Molokai 18km (11 Miles)
(Pailolo Channel)

Isola & Peter – Dive Honokowai since 1989 annually July/Aug average 90-100 dives, (Jan 100 in Residence Summer 2001)

21 MARCH 02
Thursday

MARCH Thursday 21 2002 (3)

Depart Aloha PL 615am for Kahului (2 hrs) to collect algae (specifically Codium) off Kihei. Other potentials = Pterocladia & Hypnea musciformis.

Visited Kahului Power plant ~ 8AM 4 Turtles large – 2+ with very large tumors – head, eye, jaw. Very brown water west of Kanaha Beach Park when drainage channel from airport enters the sea. 9-10AM I walked east from Sewage treatment plant picking up wave washed Codium. Two other people also collecting. 10AM picked up Sara and Brooke from UH Hilo (Kala Nelson mid). ① Codium picked from wave wash likely 2 species ② Hypnea musciformis (very fine) at Rock Point ③ Amansia rhomb beach ④ TO MALAEA UNA and ⑤ BRYOPSIS Right of Way

~ 11AM TO Power plant again ~ 7 Turtles all large => 3 with large eye and jaw tumors.

Depart 420 PM Aloha for Honolulu.

(4) TiDBit in Sand only #557676/4/02

6-8 AUGUST 2002 3 MK5 TDR's Deployed Honokowai -
Tues. pm Thurs AM 5690 6th Nesting (Lahaina harbor end of beach)

Narrative - p. 157

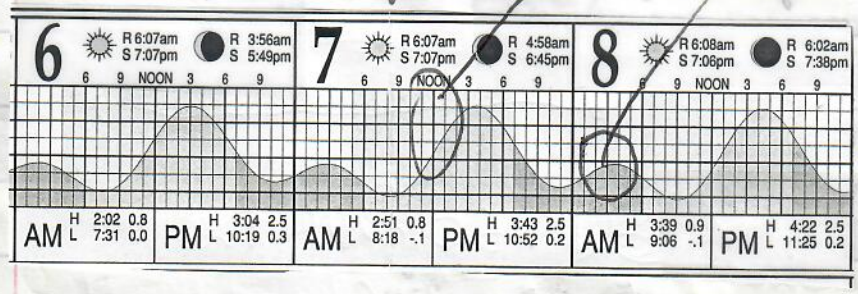
List of TDR's MK5's put out 8/7/02 Wed.
~12 Noon - 1:30 pm Scuba 30-35-40' Reef 2" off
outside Honokowai

No. (1) Dolphin old strap purple = "WANA" LH CCL=104.5 cm ♀
NO Tumors Seen

(2) other old strap = "HO'OULU" LH CCL=111 cm ♀
NO Tumors Seen

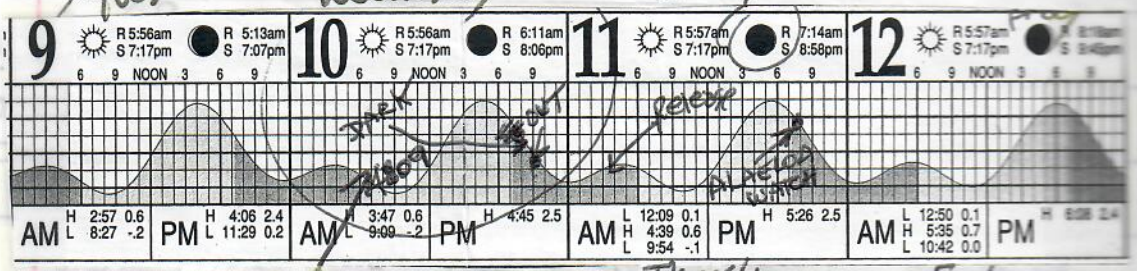
(3) New Black strap (TDR sewn in Brown wash cloth) = NAME =
96.5 cm RH L EYE Posterior # ONE Tumor
R EYE Small #2 Tumor
Both Smooth

TiDBit into 6th clutch = #557685/4/02 in film canister to Block Blinking Light
August 2002 TDR's 6th nest



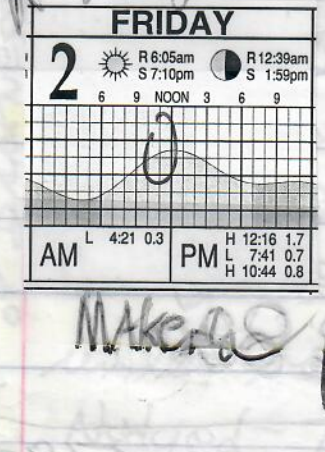
10-12 Friday JULY 2002 "5690" Lahaina Shores
Wednesday p. 46 + p. 97

JULY 2002



Dig out
TRACK, By wall
Seen by Ursula and Peter
Wednesday A.M.

August 2002



August 2, 2002 MAKENA TURNED
Friday Turtle ACQUISITION
Rene UMBERGER, Bob Morris, MARC RICE, S. Emmes, Gab
875-0183 + (V&P)
Waihee - Page 98
Page 7 NARRATIVE
MAKENA page 100-101 Benefitures
of Turnored Turtle
p. 90 - Address

Sent

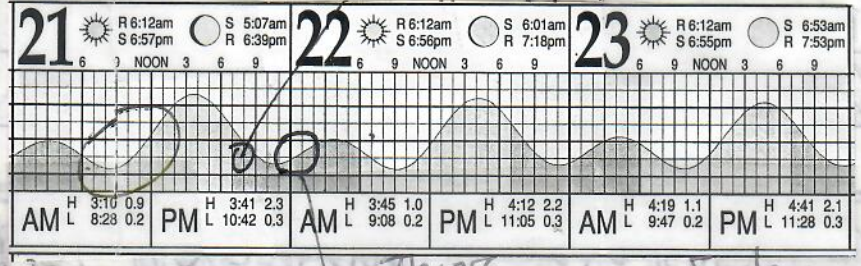
Ron/Pam - house at 6th & 7th Nest
667-5547

Nest by volley Ball Court - 8:15pm Richard McCarty
saw 40-50 hatchlings
8/22/02
281-1595

30 hatchlings Richard McCarty 8/22/02 9:30 pm nurseries by phone

5690's 7th Nest:
GPS 20° 52.124N
156° 40.598

Wed. HATCHLINGS at Volley BALL COURT AUGUST 2002



Thurs. Friday

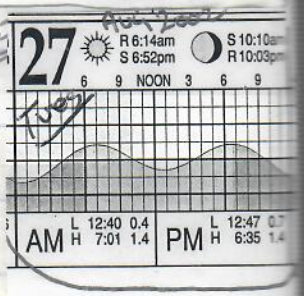
21 AUGUST 02
Wednesday

5690 7th

Fl. 114 625 AM HAWAIIAN AIR TO Kahului, Maui
with Jan Landsberg & Karen Arthur. TO P. 82

8/21/02 - wednesday
8/22/02 11:30pm → 1:36pm 5690 7th Nest
Thursday

TIDE



27 AUG. 02 TUESDAY
HONOKOWAI GO TO Page 106

Rene Umberger
Octopus Reef

FL 541 Kahului to Honolulu

TATTOO fish hook design on ♀ back has turtle in it.

(7)

MAKENA

TUMORED TURTLE

AUGUST 2, 2002

Friday Depart 630 AM Hawaiian AIR FL 116 to Kahului w/ Bob Morris & Shirbell Eames. Budget Truck Rental / Ford F-150

Picked up tube at Aloha Cargo - Mike Rice at Disco

Drove to Sanctuary Office to get large Animal Carrier. Met Charlene and Robin.

Drove to Makena Landing ~ 945 AM met Rene Umberger. Peter and Ursula arrived. Scuba Rice, Balazs and Rene. Rubble land to the right is where LINDA I came ashore ~ 1969 overnight anchored Mahina I-te Pua 30' Tahiti ketch

NEW houses being built along coast.

Cave where turtles stays at ~ 12 AM

Found her, as Rene said, to the right under narrow ledge - sand bottom

Nudged - Tugged her out - no resistance. Brought to surface - very little strength. Swam her to shore - put on back on tube - swam up to truck. Bob Morris arrived -

Tumor in hard palate of mouth likely some blocking

TRAPPED IN HERE ONLY LONELY WORLD OF DARKNESS

GB

15 FT

MIN

2 Aug 2002
FRIDAY Athena

of glottis when mouth closed (but does this make any difference?
Small jaw hitting tumors. Mouth seems crumbly and putrid smelling.
Mild excoriation - but plastron hard.
#3 tumor on each eye - corneal involvement - NO vision detectable.
Lethargic.
Put on back in jumbo carrier - driven to Aloha Cargo - shipped to Honolulu. Left Shandell off at airport. Drove to WAILUKU - had lunch at "TASTY CRUST" restaurant. Visited WAIHEE
See page 98
Departed Hawaiian Air 5PM back to Honolulu

Honokowai

A/L

23 JULY 01 departalore 615am Aloha #110
Monday for Kahului. Apollo Dive Scooter
in Plastic tray as checked Baggage.

Objectives:

1) Dive Honokowai w/ Ursula & Peter for survey of Algae bloom, Polz barrey, Mototool #'s 2001 FFG ~~[illegible]~~ 169, + TMR status / habitat use
2) Examine habitat reported used by 4800 off Maui "drain pipe" (Baby Beach)

Arrive ~ 645am National Car rent #23+
Drove to Power plant - no turtles seen.
Gave "Safe fishing" sticker to 3 pole & line fishermen. Drove to Cahana - next to JODO Mission - "Baby Beach" - Saw 06" pipe exposed in sand going off shore.
Drove to NOHONANI Unit 303
Ursula & Peter unit. cowide
Dive 1 Scuba to "Area 17" - S. of N. Image.
Lots of Cladophora close to shore. Saw turtled turtle - I followed w/ [illegible] to [illegible] tags - No seen. However there - [illegible]

(P)

SKIN Hoomalu

23 JUL 01, Barnacle collected. Photos of me Monday with her. Body looks THICK(er) than last sighting about 10 months ago. Examined right eye and could not see tumor growth.

JACTATOR seem very white (the white of them seems whiter than year ago or January)

TO Reef 2 - numerous turtles. "White" sticks in skin often seen.

Saw large turtle with obvious white bands of barnacles around base of hind flippers. Collected one. J & P say many are dead.

Saw a male w/ no left eye - all healed. This turtle is a regression case.

Turtles look scaly - shelled. J says less fish cleaning seen this year.

Coral whitening seen of Montipora (low encrusting kind) and small heads of Porites. Swim out across sand seaward of reef 2 to coral patch - Turtle ♂ resting head upon a ♀ shell - photo by U.

TO page 12

Needs - Next Trip

- other dive Scooter
- 3-prong spear for JACKFISH
- Small tool to pry transmitter (screw driver?) if 4800 is encountered.

23 July 01
Monday – Collected red fine alga on bottom.
Collected what appears to be Tympria
Dive was max ~ 41 ft. 70 minutes.
Light lunch – watch Mangrove + FL Keys video.

Drove to Baby Beach ~ 1 PM. Snorkeled out shallow – slight break in reef. Easily found trench of drain pipe and followed it seaward. Good turtle resting area under pipe and in under cuts along side. Three turtles seen by me under ledges, 2 have small tumors. "Seaview" large square boat anchored with snorkelers wave toward Nala Wharf.
Acanthophora and some Hypnea m. is shallows. None at Honokawai seen. Graveyard eroding away.
Back to Honokowai. Used Apollo scooter just outside wall. To Syd & P.

(13)

7 4PM
23 July 01 Tide is up and Cladophora is
Monday Thick inside wall - dense also outside
wall, but less so.
Depart for Kahului -
Hawaiian Air Flight 110 to Honolulu
at 715 PM.

7-23-01 A

35'
Lyngbia

7-23-01 B

40' Red slime

" "

Date: Mon, 30 Jul 2001 19:00:59 EDT
From: RussDenn@aol.com
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: Three Maui Samples

Reduce Maui Book

George,

The samples arrived via FedEx and are:

07-08-01 Honokowai, Maui, GB, feces

Pterocladiella capillacea 80%
Melanamansia glomerata 20

07-23-01A Honokawai, Maui, GB, 35 Ft.

Lynbgya sp. 90%
Spirulina sp. 10

07-23-01B Honokawai, Maui, GB

"Red slime" of Ursula's

Melanamansia glomerata 90%
Lyngbya sp. 8
Spirulina sp. 2

That is the contents of the three vials. I will work on finding the species of the Lyngbya and Spirulina before sending you a hard copy of the final results.

Date: Tue, 24 Jul 2001 17:59:23 -0400
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Two loggers set

483455 Mt. Balazs, NorthHouse
483456 Zeus' Lair, Reef2

TID BITS

Videotaped them, wrote them in my fieldbook AND now sent info to you. (Three documentations. These numbers CAN'T get lost now)

Nostriles

8/23/01 View U&P Video Red from NOS Files 605-C Lahaina Maui

Like Fine Strands of This Algae

Date: Tue, 31 Jul 2001 00:40:36 EDT
From: RussDenn@aol.com
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: Re: Three Maui Samples

George,

The Lyngbya sp. was entirely red in color and so was some of the Spirulina sp. It is not unusual to see cyanophytes pink or red and their color range can sometimes be red, pink, orange, yellow, blue, green, brown or black. We don't usually see Lyngbya majuscula as pink, it is more black or deep yellow-brown. That is why I think this is probably a different species. I'll work on that tomorrow.

Aloha, Dennis

Date: Tue, 6 Aug 2002 12:38:28 EDT
From: Sasakidalem@aol.com
To: gbalazs@honlab.nmfs.hawaii.edu, Skippy_Hau@exec.state.hi.us, howzit@turtles.org, Glynnis_Nakai@r1.fws.gov
Subject: 5690 STRIKES AGAIN TO FOOL US

THANKS FOR THE UPDATED MAP SHOWING HER LOCATION, BUT GUESS WHAT, SHE SHOWED UP LATE LAST NIGHT!! THE LAST CHECK I MADE WAS ABOUT 10:45 AND NO SIGNS, BUT THERE WERE HER TRACKS THIS MORNING BETWEEN NESTS 4 AND 5.
ALSO THERE APPEARS TO BE HATCHLING TRACKS AS WELL FROM LAST NIGHT, BUT WITH THE LOOSE DRIER SAND, I AM NOT CERTAIN. THEY GO IN DIFFERENT DIRECTIONS, MAYBE FROM DISTRACTIONS?
DALE SASAKI

Date: Tue, 6 Aug 2002 13:15:15 EDT
From: Sasakidalem@aol.com
To: gbalazs@honlab.nmfs.hawaii.edu, Glynnis_Nakai@r1.fws.gov, howzit@turtles.org, Skippy_Hau@exec.state.hi.us
Subject: (no subject)

Oops, in my haste to e-mail you, I forgot to mention that this was NOT a nesting, but just a landing. She came up, went laterally about 15-20 feet, then back to the ocean. Maybe shel'll be back tonight, so we hope!!
Dale


TURTLE
REEF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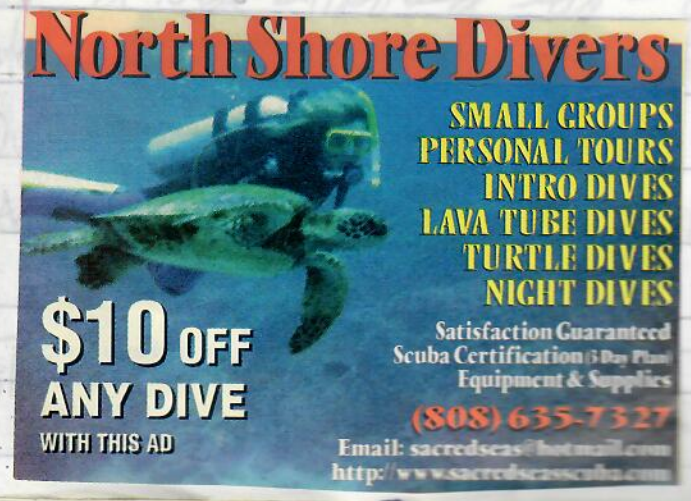
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Hypothetical computation to see if maybe gt nesting 2001 was 5690

5690 had long initial internesting
Kihei → Lahaina, then went on 14 day cycle

2nd nesting

8/13/01 Sat 0

∴ 8/25 = 12th day

1 SUN 8/26 = 13th "

2 MON 8/27 = 14th "

3 TUES 8/28 = 15th

WED 8/29 16

THUR 8/30 17

18

19

20

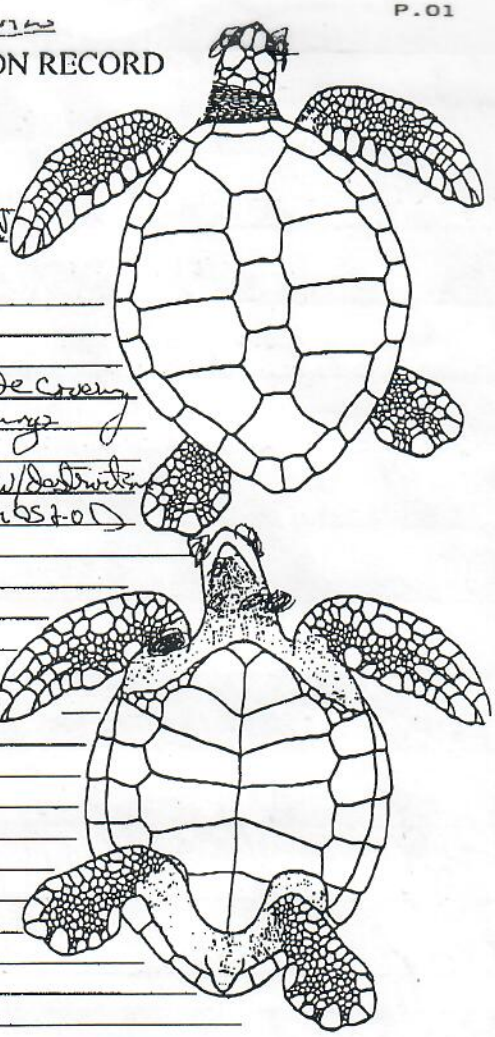
21

Peach - Right angle
Lime - Bevel (for Penguins)

(F)

23 Aug 01 Honokohau - Kapalua
Thursday
Depart Island Air 710AM FZ 1552.
Objectives: (1) Deploy 2 MK5's using "PLAN C"
TDR's seam into bath strap as belt loop - then
adjustable nylon dog-collar for hand flipper attach.
(2) Collect Lyngbia and Aplysia - freeze
(3) Search for 4800 off of Baby Beach near
Mala wharf.
(4) View Lyngbia "bloom"
McDonald's - Then
(5) Examine Fleming nest and talk to life Guards.
~9AM 8/23 Talked to Lifeguard Freddie - All Peds and Cal off today.
Examined nest site - Dug carefully where
U&P said eggs was exposed - found egg mass - turned
and size of green turtles. Other mound
is where lifeguard Carl List said to have
covered and exposed egg - deposited 8/13 likely.
Watched FFS video & dup by Pete & Ursula. 60 min.
Out for scuba at ~115PM - Photo by wall U, P & new tags
on Arms (taken by Daniel 12y.o.) TO Reef 2 area - 60 fsw
Adjusted ballast and
put on LHF.
TO [illegible]
Island Air
510PM Return flight to Honolulu

LIVE TURTLE EXAMINATION RECORD



Date: 6/2/02
Turtle ID: MAKENA, MAU 1
Comments: TAKEN FROM CAVE - REPORTED TO BE BLIND FOR AT LEAST 6 MO. - SUPPOSED OPEN

PHYSICAL EXAM female

Head and neck: 2 Tumors neck area #3

Mouth: Tumor #2 roof of mouth (R) side covering part of internal nares, bilateral #3 - lowlying tumors.

Eyes: Large #3 tumors both eyes, w/ destruction of global both sides - blind both eyes (OS + OD)

Front flippers: (R) #3 tumor

Shell: normal

Plastron: pink - firm

Rear flippers: normal

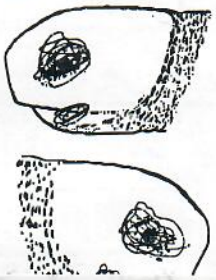
Tail: normal - female

BODY CONDITION: MILD EMACIATION

SAMPLES TAKEN
PCV 15 T.P. 1.6
CBC __ Chemistries ____
Others _____

APPROXIMATE TUMOR SIZE CATEGORIES:

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



RECOMMENDATIONS:
Euthanasia - blind with destructive tumors both eyes; mouth tumor, bilateral lowlying tumors - 8/4/02 -
Signed: Robert A. Morris 30 cc Euthanasia Sol. IC. (Run)

MAKAI ANIMAL CLINIC, 420 Uluniu Street, Kailua, HI 96734

Identifications by Dennis J. Russell (August 17, 2001)

07-27-01 South Pasture: Honokowai, Maui, GHB

Feces

Cladophora sericea	85%
Melanamansia glomerata	10
Pterocladiella capillacea	5
Shell material	

08-04-01 Honokowai, Maui, GHB

Feces

Codium edule	70%
Melanamansia glomerata	30
Gracilaria sp.	Trace
Diatoms	

08-05-01 Nohonani Beach Drift, GHB

green "Clump"

Cladophoropsis luxuriens	100%
Laurencia sp.	Trace

08-05-01 Fleming Beach: Honokowai, Maui, GHB

Feces

Pterocladiella capillacea	100%

LIST OF SAMPLES TO BE SENT TO DR. DENNIS RUSSELL

Maui, N= 4

Date	Contact	Location
7/27/01	GHB	South Pasture: Honokowai, Maui
8/4/01	GHB	Honokowai, Maui
8/5/01	GHB	Nohonani Beach Drift:
		Honokowai, Maui
8/5/01	GHB	Fleming Beach: Honokowai, Maui

KAPALUA NEST #1
Latitude: 21° 00.331' N Longitude: 156° 38.974' W
EMERGENCE: 26 September 2001 (Day 66)
EXCAVATION: Friday 28 September 2001 (Day 68)

Ms. Glynnis Nakai reported tracks from the nest to the beach on Wednesday 26 September 2001.

SUMMARY

Excavation by Glynnis Nakai & Skippy Hau (18:03 - 18:22)

Data Recorded by Glynnis Nakai
At 18:05, first egg found around 20 centimeters.
Nest diameter about 25 centimeters;
Depth at bottom of nest 47 centimeters; boulder at bottom of chamber.
Excavation completed 18:22.

DRIED AND PARTIAL DEVELOPED EGGS		62
EMPTY SHELLS		4
DEAD HATCHLING		0
LIVE HATCHLINGS		0
EST. HATCHLINGS EMERGED ON THEIR OWN		4
ESTIMATED TOTAL	(4/66 = 1%)	**66**

9/28/01 Sh

FLEMING Beach Maui Nest #1

Hatched shells = 1, 3 = 4

EEM = IIII = 4

Mid EM = ~~IIII~~ II = 7

LATE EM = ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ I = 47
1-albino

Hatched/hatchlings = ∅
Emerged 9/26/01; Excavated 9/28/01

No sign of development = ~~IIII~~ = 5

N=34 To Bottom

Excavated 9/28/01

Emerged 9/26/01

67 Total

Diameter, in mm's =
47, 43, 47, 45, 46, 48, 46, 49, 46
47, 45, 49, 48, 51, 47 } = N = 15

MAY 24-25, 02 FIRST NESTING at Right-of-way

HONOKOWAI / Fleming

(7)

27 Aug 2001 Monday 740pm Hawaiian Air flight to Kahului

National Car Rental - drove to PowerPlant outfall - glassy calm/hot humid low discharge of warm water. only 1-2 heads seen in 10 min. TURTLES not there because NE trades aren't blowing strong as store (∴ ambient seawater temp is high?).

Drove to Fleming, met Ursula & Peter at Life Guard stand. Watched for nesting green - I ended up sleep on thermo-rest & sleeping bag all night at egg site extreme NE end of beach. Moon Down ~ 230pm, transiency

8/28 AM TUES dark EXCEPT for light from hotel facility. Light shines right on beach at that end - auto off happened at 6AM. Peter & Ursula went home to sleep the night - Ursula returned w/ coffee for me at ~ 630AM. Small turtle heads seen surfacing right off rocky point (even though head tide) - rocks have Ulva and lots, lots fertilized by stream - seeping water, [illegible]

Returned to Nohonani -

Honokowai / Fleming

8/28 Tuesday Reviewed slides (Pineapple) kit of U & P that I had brought from Honolulu - they selected 5 to submit to CMC contest - Sent US Express mail. TDR from Aviwpo in pouch Fedex to Marc Rice - to get there by 5pm Wednesday the following day.

Daniel and Steven William went out for Scuba.

~1130AM High we went for Scuba -

80min 40ft. Reef 2 and associated areas.

Cladophora is thick inside wall.

Very calm, no trades, no currents.

Relatively few turtles seen compared to last visit when TDR's deployed. Perhaps only 1/3 as many. Aviwpo not seen. 605FC not seen either.

Akibono under ledge across from Polzbarney ledge. Polzbarney ledge being occupied by another turtle - are w/ barrel as before. U & P don't feel that Akibono has grown any.

Aug 28, 01
Tuesday

(2)

BACKNOTE - just after leaving Fleming at ~7am I drove to KAHANA to watch for feeding turtles. TWO large heads seen. No Closure signs posted. 8/25/01 MAUI NEWS had front page w/3 pictures about large tiger seen eating dead turtle Thurs. last Thursday morning.
Drove to Mokuleia - close area of parasail no head seen. drove to Baby Beach - Homeless person w/stuff sleeping on edge of deteriorated grave yard.
NOTE - few (2 per day?) w/TIMES seen
After Scuba slept for awhile at 303 U&P. Watched Cast 13.6/01 digital while copying it.
Dinner at Lahaina Cannery until Night Cowpokes carry out window - Pete's Birthday
16 ~830pm went to Fleming set up watch in Life Guard Tower. Stayed until
since presumed 2nd nesting ~1230pm. Returned and slept 303 until 6am

KEN - Midway 599-3914

29 Aug. 01 Wednesday

~630AM Drove back to Fleming for A.M. chek. NO vestig signs death. Departed Hanakapai ~7AM for Kapuwi - Aloha Flight at 825AM to Honolulu.

Seen during Flight
Astonishing Recently
Blue Hole on reef ~
1 mile west of Kihei Pier

(75)

Honokowai

3 September 01 2001
Monday Labor Day

Depart Honolulu Island Air 10AM Aloha Pass

Objectives: Deploy 3 TDRs on Honokowai Turtles for Ursula & Peter to retrieve Sept 8 (∴ 4 nights of data)

ON UWAPO 9-3-01 left wing pouch 115 pink w/ black & blue

- Unit #1 - MK7 First time used at Honokowai Cove
  New sewn pouch
  Nylon clip dog collar w/ cotton diaper, breakaway link
- Unit 2 - MK5 originally on Uwapo
  green pouch with black purple collar. ON 605-C left wing 9-3-01
- Unit 3 MK5 originally on 605-C (had a 43M depth offset error (correctable).
  orange pink pouch w/ emerald/green collar.

Arrive ~ 10:30AM - Lunch at MacDonald
Scuba entered water at 12:20AM
Current strong north-to-south.
over Halawai flats to ridge reef - 2nd reef is reef 2. First Turtle seen - 605-C
deployed above "unit 2" left wing.
Second turtle UWAPO - deployed unit 1 above left wing

HONOKOWAI

AMUALA

9-3-01 Third turtle found (by URSULA)
Monday "Amowelo" (sp?) maturing male,
Deployed UNIT 3 (above) left hind
~130pm
Lots of Honu, only one seen with
prominent tumors.
Back to shore.
To Compadres for late lunch (late my celebration
of Peter's Birthday).

Returns on Island Air flight 1561
510pm, but 40 min late.

Date: Mon, 29 Jul 2002 06:52:12 -1000
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: Fwd: Re: Lyngbya update

Regression
Howzkow41

Well, now wait. I don't know if regression Incidence is any higher than in the past. That would demand rigorous analysis and I haven't done that since our 1997 regression paper.

re: this year?

Reduce

I'm being real cautious here because I haven't done video analysis past July 4th dive but it seems to me honu are taking longer to get the disease and once they have it, it's low level, confined to ocular for the most part.

Best example is resighting Nibblets, a tiny kiddie back in 1996 who showed up the other day --still no FP. Admittedly she isn't a regular --usually seen once a summer --but still.

Ho'omalu, Amuala and Akebono were all supposed to be Overall1's this year but so far their eyes still only show swelling. Little difference from last summer. That isn't true for all. A couple honu shot from "FP suspected" to Overall2's.

But for the most part, it's encouraging.

And note, a least one Lyngbyatoxin is actually a tumour suppressor.

At 10:58 PM 7/28/2002 -1000, you wrote:
>Keeping in mind you're seeing more regression this year than you did in
>the past.

Date: Sat, 27 Jul 2002 14:35:55 -1000
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Regression

is considerably higher than we figured back in '97 when we wrote our paper. We just resighted a honu who was a bad Overall2 in '98 and we figured it for a goner.

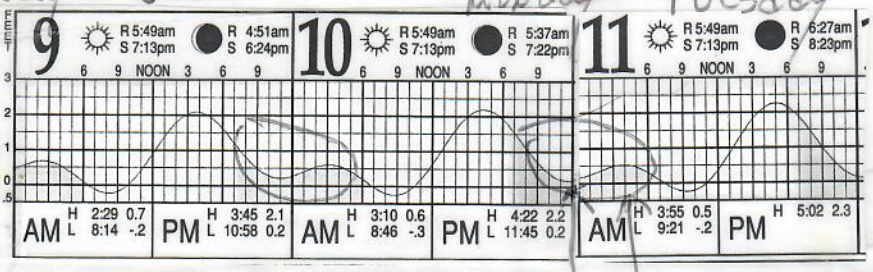
Reduce Maui

Not only is it better (eyes clear, body tumours browned) but the honu's turned male and well --what with his squeaky clean shell there's every indication he's newly back from FFS.

What we're seeing here is not only do Overall1's have a decent chance of regression, so do Overall2's. The situation on a population level isn't nearly so grim.

In fact, it's encouraging because if we're seeing this here --in a high FP site-- it means honu are faring better in a whole lot of other places.

Sunday JUNE 2002 Monday Tuesday



5890
eggs up
12:45am

Return to water
4:05am

JUNE 10, 02

06-17-02

Dear George -

Thank you for sending the stickers, pamphlets and the picture of us to me. I really appreciate your thoughtfulness.

So far, only a couple of waves washed over the turtle nest. I'll keep an eye on it for you and will let you know if anything happens. Saichi Sasaki

661-8853

Saichi Sasaki
459 Front St
Lahaina HI 96761-1114

Tag 5690

Lahaina Shores Beach Resort

Carol Koepke
General Manager
475 FRONT STREET 96761

9 JUNE 2002

Sunday Depart HA Flight 544 415pm

for Kahului after receiving email from Cheryl King in Florida saying turtle up beach was seen Saturday 6/8/04 night by a friend of hers. Scared off purportedly by 2 drunk tourists.

www.lahaina-shores.com 661-4835

FAX (808) 661-4696 1-800-628-6699

Budget rental car -

Shopped at Costco, drove to Lahaina checked in at ~ 6pm Room 518.

Walked to next and meet current owner of main bldg "John" Napoly took over from "Bud the Birdman" from Zeus, Dog - "Flat coat" Black Lab "AKA".

Friend/renter living there "Matt" works at Japanese "dome" algae culture at Kihei.

Man that lives across street is "Dave".

Turtle had nested ~ 24th May, by coconut tree by right of way. Some wart wash in lower part of body pit. Stakeposts around it with yellow flagging tape. John has

S252K1 = 459 Front St.

Width of Beach front =
Distance to reef fringe = where nesting occurring
ADDRESS of Property = 465 Front St. JOHN 9.62
turtle come back a record night previously
Unknown if this was day before, or day after
Skippy called me.

June 9, 02 Sat on Beach w/ Matt & John - beach
Sunday chairs/furniture very dark - many stars
but no moon. Security light on corner
of LSBS toward rightofway, but vegetation
pretty much blocks illumination. Corner
apartments give light when lights are
on in units. Small point lights of
ships/tour boats anchored outside of
fringe reef.

Turtle up and slap-slapping at
835 pm - had come up just to
left toward adjacent property -
Has fence and some grassy cut area
outside of fence. Turtle digging
under hull of hobey cat catamaran.
Turned and going down beach about
908 pm - gave up for no apparent reason
I approached and scapped (finger nail) and read 1-2
all 4 numbers "5690" in/between scales

need - Look for "living tag" MARK.
I Examined all of carapace 6/11 AM - NO graft mark.

LH =

423637666F

(31)

June 9, 02 - measured 99 CCL as she lay Sunday still on the beach. Photo taken from posterior as she continued to crawl to the water. Did not startle. Noticed some "angular" nature to scutes. Also coloration more like SUBADULT - a reflection of being "young" (and captive rare effect?).

~3:30pm walked toward Cabrera Harbor, then back to Right of way continuing east - Seawall with vacant property - continued on and noted lots of front yards w/o walks - instead sandy areas equal to Right of way property. I turned and walked back and found turtle 5690 just coming out of water by walled vacant property. I stayed still by wall - she continued to come up - no hope of nesting wet sand of tide goes right to stone wall. She turned to go back down at which time I put a PIT tag into left hind. Did not startle, just moved a little. Verified tag with Scanner (92 [illegible])

~3:55pm

"Lahaina" means "no parking" in Hawaiian :) JOHN

9 June 02 Sunday - Came back to site and ~11Am went out to lunch nearby Pizza

Was told by Matt + Fenala (Reading teacher at Kam III School in Lahaina) that turtle had come up again by neighbors fence property and crawled to area by behind catamaran. Could hear noises of brush (piles of dried branches). John sang w/video camera and light and scared her back down. Back up again ~ 11:30am

Tuy came earlier ~11:45 am

At ~ 11:45 am we watched her return to the water - not caused by anyone. I stayed in chair until ~ 12:0 am then to apartment and bed.

June 10, 02 Monday went to site ~ 9am. No sign of her having come out again. Took night pictures.

need sent

Met elderly man "Sike" Sasaki (sent)
459 Front Street 96761
808-661-8853

cotton balls

Lived there 50 years. His house + Lahaina Shores BR built on filled "Swamp land" (old fishponds). Sand

Need - Mototool = large "" for Lahaina on each side.

Accomplished 6/11 AM 3rd Lot left 2nd Lot right — dirt is short distance

6/10/02 Brought in Monday underneath. He never heard of turtles nesting along here in his 50 years. Has young grandchildren in Georgia. Daughter in Georgia. Coming soon.

Shoreline (distance to water) has not changed. INK, STOMP TOOL SAND TOOL

ATL GA

Back to apartment - TO KAHANA MARSH to ~~work up~~ notes.

JOHN MALLORY Cell phone (808) 385-8503

MATT works at HI Tech Park MATT JAPAN algae (808) 281-1588

Monday 7 year old Great Granddaughter MACKENZIE

6/10/02 ~ Noon

Monday Drove to Fleming Beach - Lots of large rocks exposed on the right (last years nesting place) from sand erosion.

Drove to Kahului - Costco to develop roll of film, buy more film and alcohol.

Visited Kahului Power plant warm water discharge. No turtles seen.

Drove back to Kahana overlook. ~5pm Fish up. No heads of turtles seen.

Need Idea - rent a place east of Kahana in order to have ocean access at new Pierce view for feeding inshore. Visited with

Rent another at Honokowai Marina?

5690

6/10/02 PM Blu Robinson at Nohoani – no
Monday algae on beach – not much seen growing on lines
Back to Lahaina Shores.
out to Beach about 730 PM – are beach
chairs, table and the small catamarin (Coul our presence inhibiting "Ed") her crawling/digging at out (highest) area?
beer drinker, talked about all manner of
things – if he were rich he would launch
sent 50 satellite and "control the weather".
need From yesterday are Laura CAITO
indylaura@hotmail.com
need Reading School teacher (quit now) at Kam III elementary
coloring Books school. Going to Thailand vacation
sent P.O. Box 12369, Lahaina, HI 96761
Right of way 203
3rd Lot. left has "L"
2nd Lot. Right has "L"

Donna Brown arrived ~ 830 PM – stayed
until ~ 1030 PM. walked Beach – Nothing seen. went to Safeway
got food, went to room ate and watched TV
6/11/02 for awhile. Back to beach chair ~ 1245
Tues. and almost immediately saw turtle at ~

5690 → 9 shoe lengths from fence corner to clutch. (35)

vesday
6/11/02 edge. Turtle proceeded up beach to dig at corner of fence of Mr. Sasaki's property. Photos. ~2 AM eggs deposited - all normal including cover up (though maybe she didn't drag herself as far forward - and eggs may be <100 clutch. Verified CH pit tag again. Back into water at 4 AM. Barnacles SKIN for DNA picked off with thumb and forefinger.
To bed up ~ 8:45 am call from Mr. Sasaki. Parked out then examined site, talked to people. Bought "Caution" tape at Ace Hardware.

6/11/02 Tuesday
Depart Maui FL 177 Hawaiian 2 PM

Date: Thu, 18 Jul 2002 18:49:29 -1000
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: Glynnis_Nakai@r1.fws.gov, gbalazs@honlab.nmfs.hawaii.edu
Cc: skippy_hau@exec.state.hi.us, Peter Bennett <honu@turtles.org>
Subject: Re: 5690 tonight

Aloha Glynnis.

I don't really know what incubation day it is. George figured that stuff out.

(Hi Skippy!)

Your directions are clear --and we'll follow them to the letter.

Note it's also a relief to know you'll be available when the time comes. Other than it'll be really good to see you again (and here East Island lore) I'm certain the hatchlings need some expertise when it's Show Time.

At 09:59 AM 7/18/2002 -1000, Glynnis_Nakai@r1.fws.gov wrote:

> What incubation day do you have for tonite-7/18 (e.g., I have it as tonight being 54 days since laid)? Ursula and Peter, depending on the substrate, you may see a slight depression in the sand where the egg chamber is located. This is a sign that the eggs are hatched and hatchlings are moving their way towards the surface. This can serve as identification of what is going on down there, but is usually apparent as they are close to the surface.
>
> Skippy is on Oahu all week, and possibly the weekend. So Please, yes, give me a call (day or night) if you see evidence of hatchling emergence (actual sight or tracks). Sometimes, the emergence occurs over a couple nights. My home phone number is 878.3269 and if not there I have my cell phone on 280.0264. Even if it's early in the morning, that's ok - I'm usually up by 5am.
>
> It was really good to see you both, and sharing a great experience with you too!

Date: Thu, 18 Jul 2002 10:03:50 -1000
From: Glynnis_Nakai@r1.fws.gov
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: what fun!

Aloha George,

I just wanted to say thanks for everything. It was so much fun to work to be out "in the field" with you again. It always brings back memories of your training me on East Island, and your ham radio! I will always have such fond memories of you and turtles, and truly value all you've taught me (and still teach me) and especially the times we've shared talking turtles.

I thought of you often while at French Frigate Shoals, and I want to thank you for the touching message you sent to me up there. This is so much fun and I'm so looking forward to "seeing" 5690's travels!

Mahalo nui loa, always,
Glynnis

~~~~~~

Glynnis L. Nakai, Refuge Manager
Maui NWR Complex
P.O. Box 1042 808 875.1582
Milepost 6 Mokulele Hwy. 808 875.2945
Kihei, HI 96753 glynnis_nakai@fws.gov

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In Press. Proceedings of the Twenty-first Symposium on Sea Turtle Biology and Conservation, February 24-28, 2001, Philadelphia, Pennsylvania.

YEAR 2000 NESTING OF A CAPTIVE-REARED HAWAIIAN GREEN TURTLE TAGGED AND RELEASED AS A YEARLING

George H. Balazs[1], Glynnis L. Nakai[2], Skippy Hau[3], Mary Jane Grady[4], William G. Gilmartin[5]

[1]National Marine Fisheries Service, Southwest Fisheries Science Center, Honolulu Laboratory, 2570 Dole Street, Honolulu, HI 96822-2936 USA
[2]Maui National Wildlife Refuge Complex, U.S. Fish and Wildlife Service, P.O. Box 1042, Milepost 6 Mokulele Highway, Kihei, HI 96753 USA
[3]Department of Land and Natural Resources, Division of Aquatic Resources, 130 Mahalani Street, Wailuku, HI 96793 USA
[4]Hawaii Wildlife Fund, 120 Hui F Road J6, Lahaina, HI 96761 USA
[5]Hawaii Wildlife Fund, P.O. Box 70, Volcano, HI 96785 USA

THE AMAZING STORY OF 5690 - First Known Nesting of a Headstarted Green Turtle: During September of 1980, 235 newly emerged and vigorous hatchling green turtles (*Chelonia mydas*) were collected at French Frigate Shoals in the northwestern segment of the Hawaiian Archipelago (Figure 1). Located at 24°N, 166°W, this remote site hosts the principal breeding colony for the discrete population of green turtles inhabiting the 1500 mile long Hawaiian chain (Balazs, 1976, 1980; Bowen et al., 1992; Niethammer et al., 1997). Within a few days of capture, the hatchlings were flown by chartered aircraft 500 miles to Honolulu for an experiment to evaluate the use of "living tags" as a permanent and safe means of identification. Living tags on hatchlings involve tiny grafts of contrasting pigmented tissues, exchanged between the carapace and plastron, that will hopefully grow with the animal and be visible for life. The originators of this novel idea for sea turtles, Lupe and John Hendrickson, conducted the pioneering living tag research in Hawaii under contract to the Honolulu Laboratory of the National Marine Fisheries Service (Hendrickson and Hendrickson, 1980). The hatchlings were subsequently reared for 12 months in seawater tanks on a diet of squid and fish under contract to a commercial oceanarium, Sea Life Park on Oahu. At the conclusion of the evaluation period there were 175 or 75% surviving yearling turtles. The mortality that occurred in captivity was not statistically related to the graft tests when compared to a control group of non-grafted hatchlings incorporated into the study. Overall, about 80% of the turtles grafted resulted in a living tag that was recognizable at the end of one year.

During August and September 1981 the turtles were weighed, measured, determined to be in good health, and tagged with a single Inconel alloy 681C tag (Balazs, 1999) applied through a proximal scale on the trailing edge of a front flipper. The turtles were released at several coastal locations on the islands of Oahu, Kauai, Maui, and Hawaii. In addition, 10 of the turtles were returned for release at French Frigate Shoals. The 25 turtles taken to the island of Hawaii by U.S. Coast Guard aircraft were released by Balazs on September 11, 1981 at the Richardson Ocean Center, Hilo Bay (Fig. 1). One of these turtles had the flipper tag 5690, but no living tag. This turtle weighed 2.7 kg and measured 22.0 cm in straight carapace length.

Nineteen years later, during the summer of 2000, turtle 5690 was identified by a confirmed tag resighting while nesting on Maui, about 125 miles from the release site of Hilo Bay. Three of the turtle's four known nestings were clustered at a location in West Maui next to the Lahaina Shores

Niethammer, K.R., G.H. Balazs, J.S. Hatfield, G.L. Nakai, and J.L. Megyesi. 1997. Reproductive biology of the green turtle (*Chelonia mydas*) at Tern Island, French Frigate Shoals, Hawaii. Pac. Sci. 51(1):36-47.

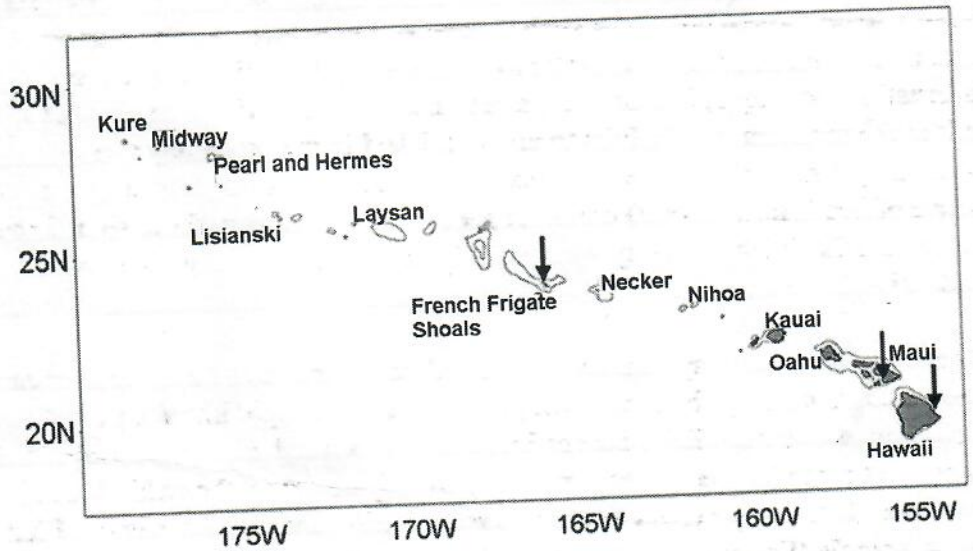

Figure 1. Hawaiian Islands showing, from left to right: the green turtle nesting colony where hatchlings including 5690 were collected in 1980; Maui where 5690 nested in the summer of 2000; and Hilo Bay, Hawaii, where 5690 was released in 1981 as a 22cm yearling.

Beach Resort (Fig. 2). These nestings took place on August 7, 23 and September 9, 2000. Another nesting, presumably 5690's first for the season, occurred on July 17, 2000 at Kihei, Maui, about 15 miles east of the Lahaina location. The nest at Kihei contained 94 eggs, of which only 14% resulted in hatchlings, possibly due to very dry sand conditions. The three nests at Lahaina contained 76, 76 and 88 eggs, respectively, of which 63%, 57% and 55% resulted in live hatchlings. All nests were left in place and estimates of success were calculated from the excavation of clutch remains after natural incubation, hatching and emergence. Tag 5690 was read on August 23 by co-author Mary Jane Grady and verified by another beach observer. The tag was clean, legible and securely attached to the flipper. The turtle was described as large, maybe 200 lbs., and healthy looking with no tumors. Assuming 5690 had a carapace length of 85-90 cm, she would have grown a robust 3.3 cm/year or more during her 19-year life in the wild. This estimated rate of growth generally exceeds that of naturally occurring green turtles tagged and recaptured throughout the Hawaiian Islands (see Balazs et al., 1998, In press).

A few hawksbills (*Eretmochelys imbricata*) have been recorded nesting on Maui during recent years (Mangel et al., 2000). However, similar documentations of nesting on this island are not known for green turtles. The year 2000 nestings on Maui by 5690 may be the first for this species in modern times. In June 1981, the following statement appeared in a report outlining the anticipated ocean release of the 175 green turtles (Balazs, 1981):

> "No turtle from a headstarting project has as yet been recovered as an adult, but this may be due in part to the loss of identification tags placed on the turtles at the time of release. The recovery of such a turtle as a breeding adult will be an encouraging sign. However, in order to be considered a valid and proven conservation technique, headstarting must (in the author's view) be shown to 1) result in the recruitment of adults to an established breeding colony at a significantly higher rate than would occur under natural conditions or in the absence of head starting, or 2) create a new breeding colony without significantly reducing the established colony where hatchlings were originally obtained for headstarting."

Confirmed nesting during coming years of other headstarted green turtles in the Hawaiian Islands, and additional nestings by 5690, will provide further insight into the potential value of headstarting as a means to establish new nesting sites. It should be noted that the amazing part of this story is not that a headstarted green turtle successfully nested in the wild. There's no reason to believe one wouldn't, if it survived to grow to maturity and eventually mated. What is amazing is that a single flipper tag applied to such a small turtle stayed on for so many years making it possible for the success of 5690 to become known.

ACKNOWLEDGMENTS - We appreciate the contributions and assistance of Hannah Bernard, Imme Brueshaber, Claire Cappelle, Peter Dutton, Shandell Eames, Ted Gruenhoff, Cindy Hylkema, Matthew Johnson, Robin LeRoux, Amy Miller, Shawn K. K. Murakawa, Joylynn Oliveira, Denise M. Parker, Steve Williams, the U.S. Coast Guard, the U.S. Fish and Wildlife Service (caretakers of French Frigate Shoals a component of the Hawaiian Islands National Wildlife Refuge), and the numerous individuals that were involved in the release of the yearlings.

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Figure 2. Location on Maui near the Lahaina Shores Beach Resort where 5690 successfully nested on August 7, 23 and September 9, 2000.

CATE - "MAINLY 1960's" WEATING ATMOSPHERE LECTURE - PAULINE Severns

Maui Dive Tour Industry

(43)

6/17/02 1215pm HA flight to Kahului. Checked in Maui Seaside B&B

Monday - Drove to Maui Ocean Center

Hannah Bernard / Jim - Shark feeding. John Gorman off today. Shark show underway - UW Master speaker. 7' tiger there reported for 2-3 months - caught at little beach (or baby beach). Fed whole mackerel. Hasn't eaten for 2 day - but this morning at a whole fish when making aggressive move at divers.

OBJECTIVE: 1) preliminary feed to see if it will accept turtle muscle/fat in preparation for

2) feeding shell/scute material to measure regurgitation times - vital to determining feeding rate on turtles.

About 1 lb of muscle/fat - 5 pieces taken into tank w/ some blood. Tiger + other sharks seemed to show some interest - but after several attempts none ate any.

4PM drove to Whale Sanctuary - Joy

Heacock
Kauai small hawksbill skeleton to Joy - need skull

JUNE 17 had prepared turtle stranding
Monday booklet - Donna Brown & Liz Hannon
there. 4 others. At ~ 445pm to
MacDonalds to prepare for lecture - Buffett
545pm return to Sanctuary office - food
Lecture 615 - 815pm Q&A's.
Maybe 40 people present + Skippy.

"LU" IN recent weeks, turtle w/ "LU" on
both sides sighted 20' deep at
need Oowalu by DIANN MULKEY
email: diannmulkey@AOL.com
Another person told about alga in
front of Maui Prince "DERBESIA" - Large
round baseball size green - turtles eating
it.

5 year old 26 June Birtuday
KRISTEN ROSIER
P.O. Box 828 Kihei, HI 96753

TO Maui Seaside. 11 pm went to
powerplant. 10 min observe. Impression
that less hot water being pumped than years ago
Moderate numbers seen (heads) - AS IN 1980's.

June 18th wrote up notes at MacDonalds –
Tuesday B1 section of Advertiser has color
photo of Sheryl Barretto getting turtle stranded
at Magic Island (EV case).

LAHAINA SHORES BEACH RESORT
5609 4th nesting

10 JULY 02 2:30p HA FL. 184 Depart 2:30pm
Wednesday alone - Peter and Ursula showed me
sporting track and dig last night toward sea
harbor (from Lahaina Shores). Days 15 &
should have been 7/11 & 7/12.
Reflynnis & MATT information - She was
up for 3rd nesting 25th June - Shallow
false dig by Volley Ball net in sand, Hawa
bank - exactly where Canoe was in year
2000 and false nest was dug there.
Best information indicated that Clutch No. 3
is in exact same area as Clutch
Matt saw her there digging for 2 hours
description sounded like covering.

"Turtle came to people people didn't go to turtle"

7/10/02 Arrive Lahaina Shores - bought resin
~4pm catalyst and shovel at Ace Hardware.
Met Peter and Ursula at Thai rest
for Dinner. Turtle boys picked up to
them at Kapalua Airport. Proceeded
to Lahaina Shores - met Skippy
and Glynnis later. Sat at Bird Residen

NO MOON

Sunset =

(47)

Wednesday July 10, 02 walked ~9 pm toward Lahaina Harbor - Glynnis showed up false dig in grass, where carol was year ago. Woman (homeless) sleeping nearby. Very short distance later people were sitting there - turtle was up by stone wall same as last time by U.R.T. throwing rare stare. - been there ~15 MN. Cheryl King and Alostair arrived. 15 MN later turtle crawled undisturbed down to waters edge - I walked from behind, brushed sand from shell to confirm Matotool "L" (=5690). We then split in two groups - I went back to original site Bird house, with J&P

Spoken with Forward Lights

Headstart, if you want to start was nesting colonies; perhaps need to release at small size like 5690.

of Maui Releases - See if smallest of release were to ones more likely to be tag-recovered.

Milani - density dependence not in effect on Maui? At present, no means to check. And/or not in effect for large size classes

Matt and I talking - Akt the Pack

July 10, 02 FALSE crew/ P & Ursula

Matts slide June 10, 2002 was not the

July 10, 02, Peter and By Ursula

wed.
7/10/02 "Dog pointed" at turtle behind house right (next to Mr. Sasaki's property) on side edge of fence. Had crawled under dried branches there - digging created "snapping" of branches. Dug body pit here under branches and got right down to business with egg chamber, 1 [illegible] est. 60-70 eggs
See p.97 for Timings. Video taken.
At completion of cover up we based here - mellow behavior in box -
Thursday 7/11 AM Proceeded to put on ST 14 ID 4806 9/3 - Elastomer + 3 coats/layers of cloth & resin with Castro + backfill on non-antenna side. Resin over "L" not bad.
Into water at 337 AM - Swam out fine.
Brush/branches put back over Body pit. Next Day Mr. Sakai put up "Caution" tape. Video to Mr. Sakai.

Biologically, The Hawaiian population of green turtles can no longer be considered "Threatened" GB 7-12-02

Marjorie Deigert
West Maui Garden Academy
#667-0422 wk

Sent

553 Wainee St
Lahaina, HI 96761

---

20 Alaeloa #29
Lahaina, HI 96761
#669-0250 HM
283-1221 cell

Gate Code - *1680
For manager #08

Sent

TIMOTHY B. WEST
Manager
(Tim & Dolly)

Alaeloa

Telephone (808) 669-6259 / FAX (808) 669-2563
20 Alaeloa, #8 • Lahaina, Maui, Hawaii 96761
Cellular (808) 870-7124

5690
NAPILI
ALAELOA

(5)

July 11, 02 Slept 445AM - 830AM
Thursday, when Stippy called re about
entanglement report at Napili Cove
need "Royal Napili Beach Resort" —
(Kalani) Drove to Alaeloa - met manager -
Hawaiian man 30 years old) he to us to cliffs - rocky cove - low
tide lots of Pterocladia and Hypnea growing
intertidal - large (>80cm) turtle dead
Ahuwai on Fishing Said me
white from rot - all scutes missing. Too
dangerous to get down to closely examine -
though it is possible. Manager told of
seeing many turtles close to shore late
afternoon. While we were standing there
~930-1000AM numerous turtles could be
seen surfacing 300-400 yards from shore
at a particular spot. Manager told
of diving and seeing lots of turtles.
On road to apartments I saw at least
two signs shaped like sea turtles.
Arrangements made to return in late afternoon
to view - given code to Security Gate.
Returned at 630PM - ~8PM leaving.

HARRY EGAES - 242-6392 The Maui News

Send video TO Cheryl ALASTAIR SKIPPY GLYNNIS

July 11, 2002 Drove up Pineapple Hill road
Thursday new gate condo community on top of hill. Road dead ends in abandoned old building boarded-up "NO TRESPASSING" - Is this former Pineapple Hill Restaurant that "sold to death" so many turtles?

Returned to Lahaina Shores (Room 405) (Kamaaina $175 w/ TAXES oceanfr.)
Visited Peter and Ursula. Picked them up 615
drove to Unit 30 Alaeloa - Met Majorie has 3 year + one of her teachers in unit 29 - runs a private school. Has kyaks. Told about turtle sculpture several feet high along trail to cove - placed there by widow who believed human became a turtle when he died.

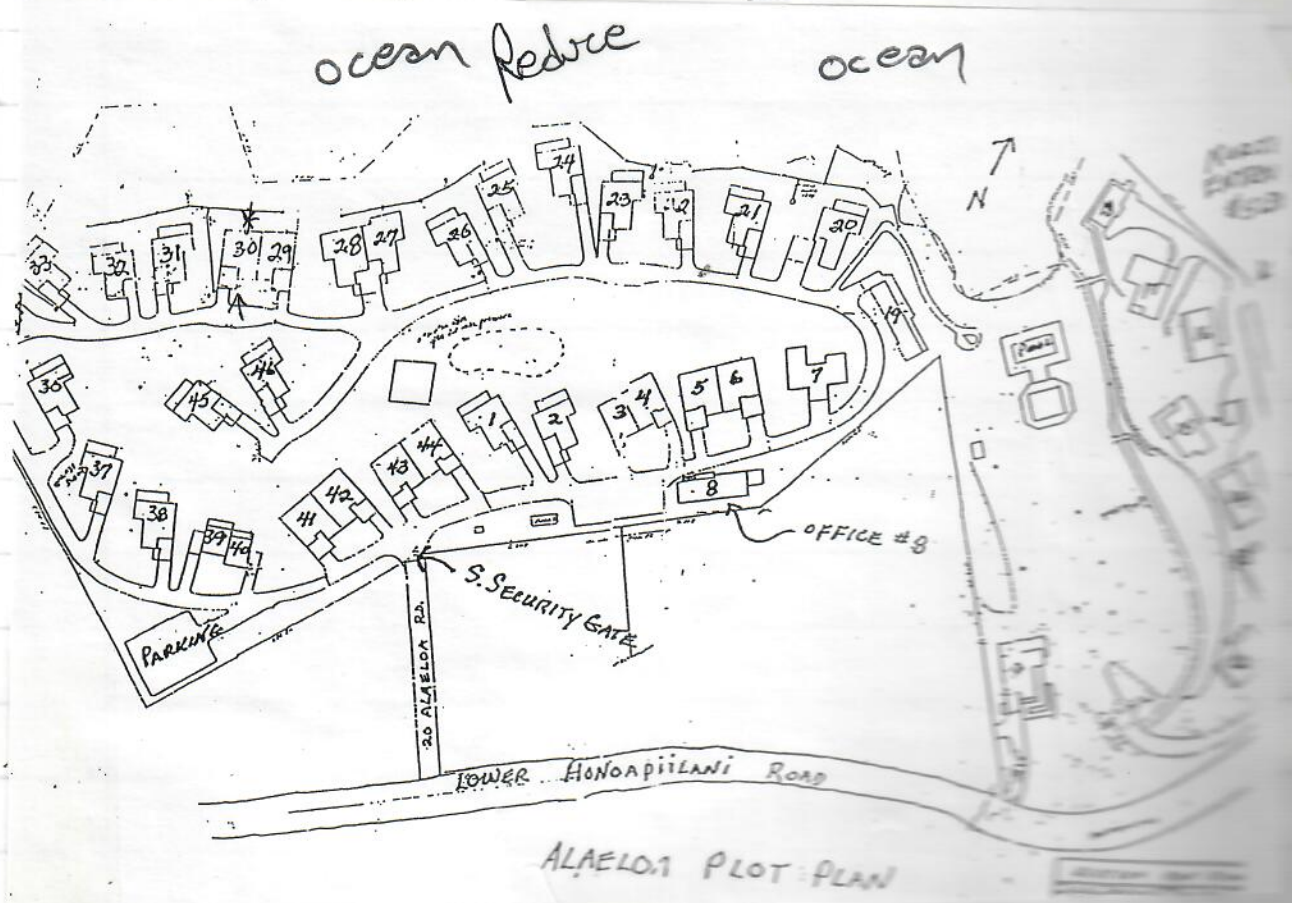
TOOK BOAT TO Island Air "EPA" Also works at Lahaina Shores.

Need

Turtles seen at dusk, but not in great numbers - most "small" - a few adults. Quick up-down breathing behavior! Need to survey underwater during the daytime for numbers. Turtle with tumor Kalani said "25-50%". Said Hawaiian families would take what they need (1 a month) would not take tumored turtles.

Dinner at COMPADRES - Cannery Shopping Ce

Thursday
July 11 2002 - 11 PM Walked Beach, Examined for offending security light corner of building - Discussed earlier this day w/ Manager Carol Kopeke - 1890 improvement - light not larger glares over vegetation hedge along right-of-way, light new light put in + aiming down on grass where needed (Bailique gear protected).



ALAELOA PLOT PLAN

Revised 04/04/01

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

Released from Richardson ocean Center, Hilo as a yearling.

for shawn

9/81

SEA TURTLE TAGGING FORM

Nesting

DATE FORM FILLED OUT 6/12/02 1245 – 405AM Eggs Deposited

CAPTURE DATE, LOCATION AND METHOD: LAHAINA SHORES Beach Resort Lahaina, Maui

PERSON RECORDING DATA: 6/12/02 GAB

TUMOR SCORE: 0

ORAL TMRS EXT: YES OR NO: —

EMACIATION CODE: Ø

OLD TAGS: 5690 R1-25

NEW TAGS: LH RFL 423637666F LFL New Left Hind

STRAIGHT CARAPACE - LENGTH: 91.2 cm WIDTH: — cm

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

CURVED CARAPACE LENGTH: 99.0 cm WIDTH: — cm

HEAD WIDTH: — 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

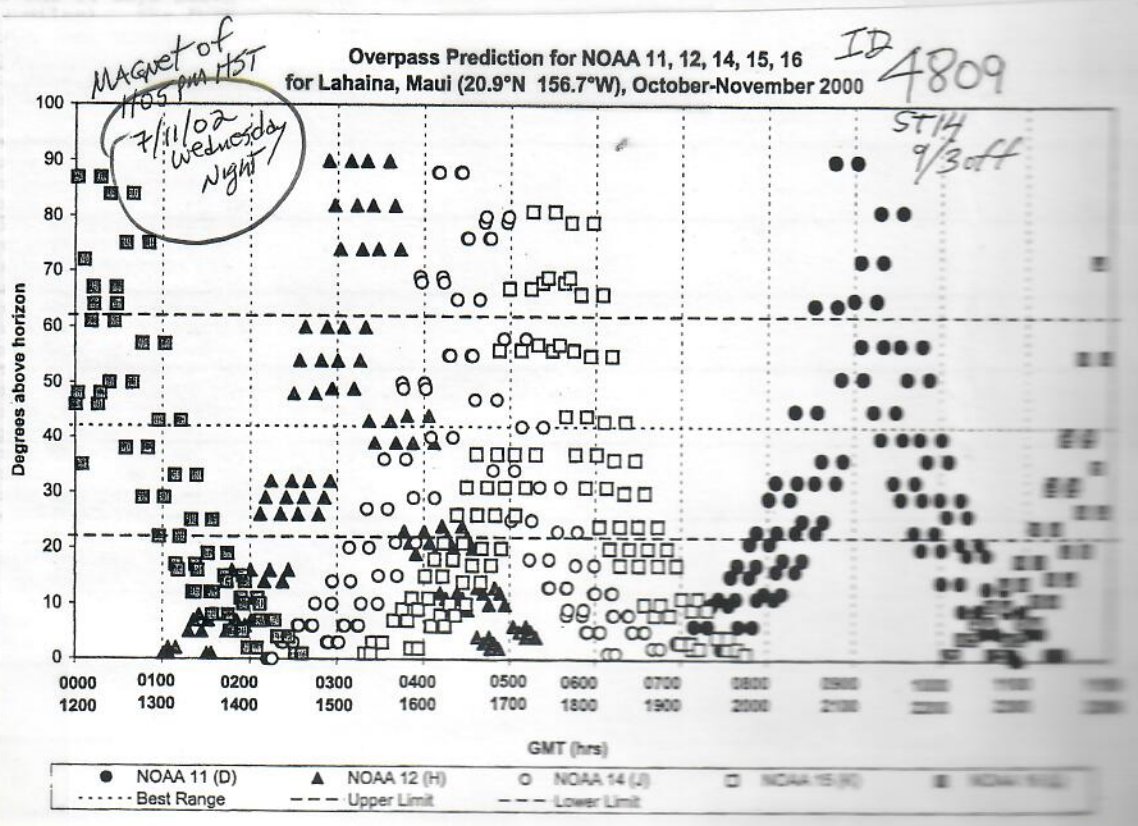
WEIGHT: ~ #

SAMPLES COLLECTED: Skin Biopsy for DNA

DESCRIPTIVE REMARKS: New Moto tool "L" on left and right carapace.

Captive reared 1990-91 from a hatching collected at sea. May not have been saved.

forms/tagging.xls


Overpass Prediction for NOAA 11, 12, 14, 15, 16
for Lahaina, Maui (20.9°N 156.7°W), October-November 2000
MAGnet of
1105 pm HST
7/11/02
Wednesday
Night
ID 4809
ST14
9/3off
Degrees above horizon
100
90
80
70
60
50
40
30
20
10
0
0000
1200
0100
1300
0200
1400
0300
1500
0400
1600
0500
1700
0600
1800
0700
1900
0800
2000
GMT (hrs)
NOAA 11 (D)
NOAA 12 (H)
NOAA 14 (J)
Best Range
Upper Limit
Lower Limit

Date: Sat, 27 Jul 2002 11:30:21 -1000
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: Donna Brown <donnabro@hawaii.edu>
Subject: Re: good turtle news

Excellent Information, Donna, thanks for sharing it! I've just sent you a short paper of related interest. Indeed on July 18th Skippy and I went to Alaeloa to investigate the stranding I wrote to you about (large, rotten and down a cliff inaccessible unless one took high risk- which we didn't). The manger of the condo (Tim) told us of his sightings and we ourselves in the a.m. saw dozens of turtles surfacing at a relatively small location 2-300 yards offshore. I'm sure it was a restings place and would love to dive off there sometime (but not from shore-- too far. A kyak or small boat would be needed). Travel safe, Aloha, George

On Thu, 25 Jul 2002,
Donna Brown wrote:

Maui ALAELOA Reduce

> George,
> All has been quiet here as far as strandings go. None in the past 2
> weeks. I just hope it stays that way while I am gone.
>
> By the way, I was snorkeling with Athlene Clark and Dave Pence when they
> came over a couple of weeks ago. We went out off of my house and swam up
> north to the next bay, Alaeloa. Outside the bay, we saw about 30
> turtles. Only one with tumors that I could see. Athlene was so excited,
> that she went back to Honolulu and started talking about making this a
> protected area. The long line fishermen are suing the state because they
> made them stop fishing because of turtle deaths. So they are saying that
> the state isn't protecting the turtles near shore from gill netters. So,
> the state is looking to designate more protected areas. Anyway, I would
> love to show you this spot. It is a long swim out and I don't go that
> far by myself. I had always wondered why I saw so many turtles early in
> the morning and when I snorkeled later in the day there weren't any
> around. I guess they go offshore to rest. There was one sand channel
> with 9 turtles just lazing around.
> Aloha, Donna
>

---------- Forwarded message ----------
Date: Wed, 24 Jul 2002 21:58:24 -1000
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: I guess The Five

weren't the advance team but the stragglers. We both fell asleep at 4am and slept an hour with neither of us watching. But by 5 there was no change, no tracks.

They did not scoot past us last night.

Or the previous when one of had our eyeballs on that crater from the time we arrived to left early morning.

Still. We don't care. We were just so happy and relieved --elated, to see so many empty shells, it didn't matter at all.

And then so sad the three dead. People were groaning. But then when Glynnis pulled out two live, you should have heard the people. I think that's the best part of the whole thing.

The audience and how Skippy and Glynnis did public education with them. Let them touch the empty shell and stuff. And the little kids were the best part of all.

I went over and asked Matt what Edward drinks (Edward added on to the moat we made this afternoon) and then sat and watched til we got there (high tide) to make sure everything was all right. So tomorrow we'll drop by with a 24 of Heineken for those surfing dudes.

And yesterday we bought a whole package of beef stew chunks from Safeway for Aka. Matt barbequed them up and Aka had a tasty supper.

And here are a few video freezeframes. They're called hatching1 and hatchling2. But it'd be nice if you named them. A HUGE update will be written about our babysitting experience for Trax this Saturday and it'd be nice if the two very lucky rescued youngsters have names.

You can name them in English and I can hit a Hawaiian dictionary...

Last. Zeus was that small once. That is just SO AMAZING.

57

Date: Fri, 26 Jul 2002 08:11:15 -1000
From: Glynnis_Nakai@r1.fws.gov
To: Ursula Keuper-Bennett <howzit@turtles.org>
Cc: gbalazs@honlab.nmfs.hawaii.edu
Subject: Re: My favourite photo

Reduce Maui

Ursula and Peter,
Thank you so much for the photos!!! And especially, thank you so much for being "you". As always and forever, I will always have a special place in my heart for sea turtles and will STILL get excited to see them, hatchling or adult, on water or land, even photos in a magazine. Those of us that share this true affinity tend to latch on to the friendships that develop from such experiences and I will always value those (especially George, my mentor and trainer). I am really glad to have the opportunity to work with both of you and share these wonderful memories!

Date: Fri, 26 Jul 2002 11:36:33 -0700
From: Denise Parker <Denise.Parker@noaa.gov>
To: heagar@mauinews.com, ghb <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: Lahaina Turtle, 5690

Another tidbit of information you may find worthwhile - while it took Turtle 5690, 8 days to reach her furthest distance from Lahaina, which was near Oneloa Bay - it only took her 13 hours to return to Lahaina once she decided to nest (during that time she was traveling at 1.5 km/hr or 1 mph).

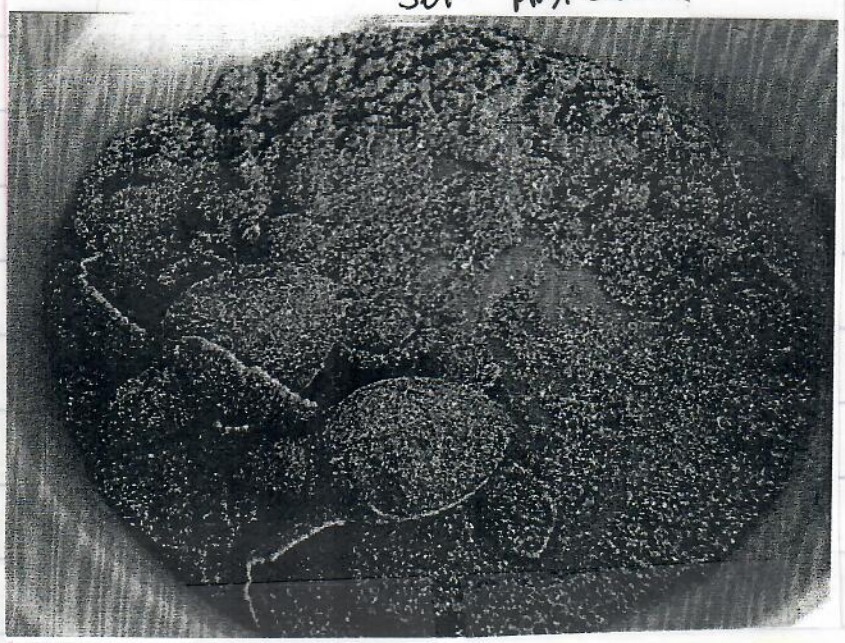
Denise Parker wrote:
5690 Reduce Maui
>
> Aloha Mr. Eagar -
>
> I'm including some additional information about her travels here: During
> the 14 days between nesting Turtle 5690 traveled at total of 60 km (37
> miles). The furthest distance it traveled from Lahaina was 20 km (12
> miles) north.
>
> Mahalo
> Denise
>
> Denise Parker wrote:
> >
> > Aloha Mr. Eagar -
> >
> > My name is Denise Parker and I'm writing in behalf of George Balazs who
> > is currently working in the field. He asked me to forward to you some
> > information regarding the Turtle 5690 tracking.
> >
> > George wanted me to mention to you that while he mentioned to you in
> > your 7/16 article that the turtle would probably not return to nest, he
> > was delighted to be proved wrong in this case as turtle 5690 did return
> > and nested a 5th time on Wed 7/24. He mentioned if we knew everything
> > there was to know about sea turtles we could close the book, but this is
> > one of the major reasons why we continue our research and put satellite
> > transmitters on sea turtles - to learn more about their movement and
> > behavior. We learn something different each time.
> >
> > The previous map that George sent you shows Turtle 5690's internesting
> > (between nesting) foraging areas rather than her post-nesting migration
> > route, but we are continuing to monitor her signals and unless she
> > decides to return for yet another nesting (her 6th) we are hoping to
> > follow her movements to her "home".
> > George should be back in the office on Monday if you have any other
> > questions.
> >

Date: Fri, 26 Jul 2002 07:58:10 `-1000
From: Glynnis_Nakai@r1.fws.gov
To: Ursula Keuper-Bennett <howzit@turtles.org>
Cc: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: 5690 pics from this morning

Yup, looks to me like she nested successfully for the 5th time! thanks for sending the photos. It will be interesting to see the satellite tracking info on her when George pulls it up. She was right on the 14th night! 60 days for nest #2 is August 10th. Incubation time for Nest 1 was approximately 57 days to give you an idea on when to keep an eye out. If she comes up for a 6th nest, fourteen days would be ~~Sept.~~ Aug 4th.

640x480 pixels

5690 First clutch



age 640x480 pixels

Maui Redone 5690

59

Reduce Mr. Sasaki

Glynnis

Skippy

8/2/02 Report Night 20+ hatchling tracks from nest 2 at Ahawa (nest at corner of Sasaki Property.

Date: Sat, 3 Aug 2002 11:53:38 EDT
From: Sasakidalem@aol.com
To: gbalazs@honlab.nmfs.hawaii.edu, howzit@turtles.org,
Skippy_Hau@exec.state.hi.us, Glynnis_Nakai@r1.fws.gov
Subject: 5690 2ND NEST SITE

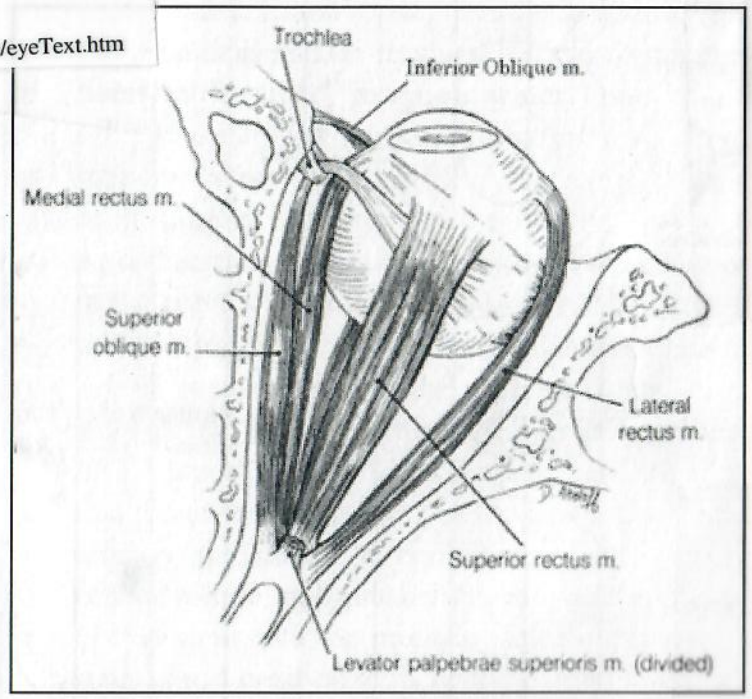
I COULDN'T REALLY BELIEVE IT, BUT AT 5:30 THIS MORNING, I WENT DOWN TO THE BEACH AND THOUGHT HOW STRANGE THAT SOMEONE RAKED OVER THE NESTING SITE. IT LOOKS LIKE ABOUT 6-10 TRACKS HEADING TO THE SEA!! IT COULD BE MORE IF THEY WENT OVER THEIR OWN TRACKS. I GUESS HER CHILDREN ARE AS SURPRISING AS 5690 IS!! JUST THOUGHT YOU'D LIKE THIS NEWS!!

DALE SASAKI

Theory of Eye Motion and Neurological Testing

The Eye Muscles

http://cim.ucdavis.edu/Eyes/eyeText.htm



The image shows the extraocular muscles of the right eye viewed from above. The lateral and medial rectus muscles are the easiest to understand. The lateral rectus muscles abduct the eye (away from the nose) and the medial rectus muscles adduct the eye (towards the nose). The lateral and medial muscles move the eye only in the horizontal plane.

The vertical motion is a little more complex. Four muscles (superior rectus, inferior rectus, superior oblique and inferior oblique) control the vertical motion.

The easiest way to understand the action of these muscles is to isolate the superior/inferior rectus from the superior/inferior oblique. When the right eye is fully abducted (away from the nose), only the superior and inferior rectus muscles can elevate and depress the eye. This is purely a mechanical property due to the axis of the eye lining up perpendicular to the superior/inferior muscles.

When the right eye is fully adducted (towards the nose), only the inferior and superior oblique muscles can elevate and depress the eye. This is again due to mechanical properties of the attachment of these muscles. On the image of the eye, it is possible to picture how the superior oblique muscle will depress the eye when the eye is looking at the nose. The inferior oblique will elevate the eye.

What happens when the eye is neither fully abducted or adducted? All four of the muscles contribute a percentage of the vertical motion depending on the position of the eye. If the eye is looking straight forward, about 50% of vertical motion is due to the inferior/superior oblique muscle combination and 50% is due to the superior/inferior rectus muscle combination.

The Cranial Nerves

There are three right cranial nerves (III, IV, and VI) involved in innervating the right eye muscles and three left cranial nerves (III, IV, and VI) involved in innervating the left eye muscles. Cranial nerve III innervate four muscles (medial rectus muscle, superior rectus muscle, inferior rectus muscle, and inferior oblique muscle). Cranial nerve IV innervates the superior oblique muscle. Cranial nerve VI innervates the lateral rectus muscle.

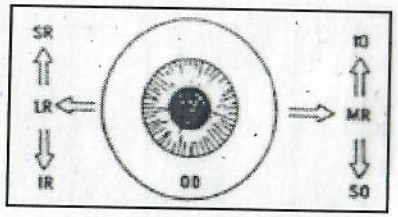
Cranial Nerve III	medial rectus muscle, superior rectus muscle, inferior rectus muscle, inferior oblique muscle
Cranial Nerve IV	superior oblique muscle
Cranial Nerve VI	lateral rectus muscle

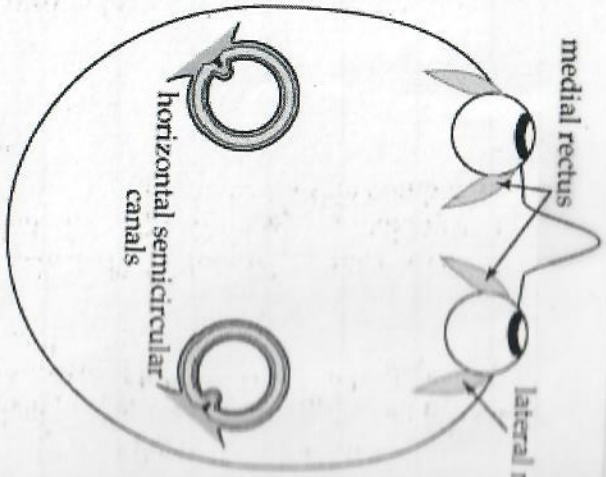
A damaged cranial nerve will produce the same symptoms that would occur if the associated eye muscle is damaged. For example if cranial nerve VI is damaged, the eye will have the same motion as when the lateral rectus muscle is damaged. If cranial nerve III is damaged, the symptoms will be the same as if the four eye muscles controlled by CN III is damaged.

A damaged cranial nerve III has an additional characteristic that affects the eye. The parasympathetic nerve innervating the pupillary sphincter travels with CN III. If CN III is damaged, the eye pupil will dilate.

Best Method to Test Eye Motion

The best method to test eye motion is ask the patient to follow your finger drawing a large H pattern in the air a few feet from their face. The two legs of the H will isolate and test the motion of the superior/inferior rectus pair and inferior/superior oblique pair. The center part of the H will test the medial and lateral muscles.





Date: Mon, 19 Feb 2001 00:47:22 EST
From: ALIGON@aol.com
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: Fwd: K-12

Hi George,

Another report of Green turtle K-12 from a friend of mine (message below). Sighted at same location as reported the last 3 or 4 times, Turtle Valley, Maui (Makena area). I gave you lat/long for the shoreline in that area previously. If you need that Position again I can look it up.

Allan Ligon
336a Ailana Place
Kihei, HI 96753
(808) 874-3911
aligon@aol.com

In a message dated 2/18/2001 7:14:12 PM Hawaiian Standard Time, benthic@flex.com writes:

> Subj: K-12
> Date: 2/18/2001 7:14:12 PM Hawaiian Standard Time
> From: benthic@flex.com (William Stohler)
> To: aligon@aol.com (aligon)
>
> Aloha! Turtle report.
>
> Turtle K-12. Turtle Valley. 37'. Resting (with legs folded under).
> 09:20 on 2/18/01. Rather sleepy.
>

[Part 2: "Included Message"]

Date: Sun, 18 Feb 2001 19:15:18 -1000
From: William Stohler <benthic@flex.com>
To: aligon <aligon@aol.com>
Subject: K-12

Aloha! Turtle report.

Turtle K-12. Turtle Valley. 37'. Resting (with legs folded under).
09:20 on 2/18/01. Rather sleepy.

67

Date: Thu, 12 Apr 2001 16:23:57 EDT
From: ALIGON@aol.com
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: K-11 Tagged Green Turtle Sighting N of 5 Graves, Maui

Hi George,

Enjoyed your talk at MOC - thanks for sharing your time with us here on Maui.

As I mentioned briefly, I saw a green turtle on Saturday, April 7, 2001 at around 8:45am with "K-11" metal flipper tag on front left flipper. I could not see tags on the other 3 flippers, but did not have an excellent view of the right side. The approximate straight carapace length was about 90 cm, GROSSLY measured using my arm and chest above the turtle without actually touching it. The depth was about 38 feet and it was within 50 ft of the ledge that I have reported seeing "K-12" in the past. There were about 7 other turtles within 100ft radius of "K-11", I did not notice any of those others to have tags.

Yes, it is curious that two turtles in sequence were seen in the same area. But I am absolutely certain of the tag numbers that I sighted personally: "K-12" on 1/23/00 and at least one other occasion?, and this sighting of "K-11". The other sightings were reported to me as being "K-12", but I did not sight these myself, so cannot comment on the certainty.

Again, all of the sigthtings of K-12 (around 4 or 5) and this one of K-11 was at a location we call "Turtle Valley", which is immediately N of 5 Graves in S Maui, perpindicular shoreline location is approximately: N 20.65722, W 156.44263. If you ever want to look at this site, I can set you up with some folks who can take you directly to the exact location.

Also, just for your information, I will be on FFS with Brenda Becker and Suzanne Canja this summer doing monk seal work, so will be glad to visit with you there if you happen to stop by this season.

PS: One report form suggestion. This day and age, it may be simpler/more convenient if you have a website form for observers to fill out any sighting info - basically have a blank electronic form that observers can click on a link and fill out sighting info or fill out an electronic form (excel spreadsheet?) and e-mail to you. I think with this method of reporting and some help in distributing/advertising the link, you may get more response than from filling out a paper form and mailing in. Anyway, just a suggestion...

a hui hou,

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