BALAZS

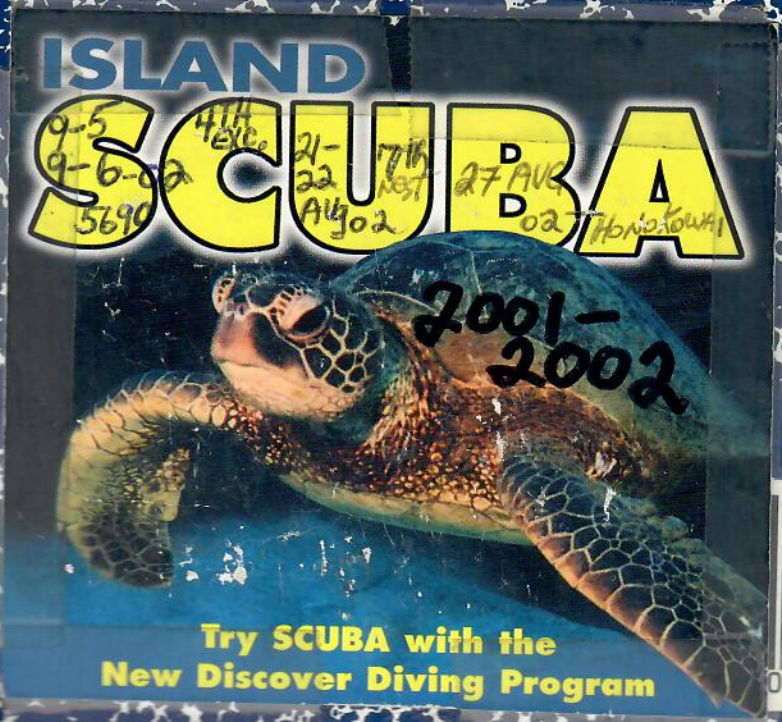
2 of 3

Mead

COMPOSITION

MAUI Book 4

100 sheets • 200 pages • 100 hojas
9¾ x 7½ in/24.7 x 19.0 cm
wide ruled/réglage large/rayado ancho



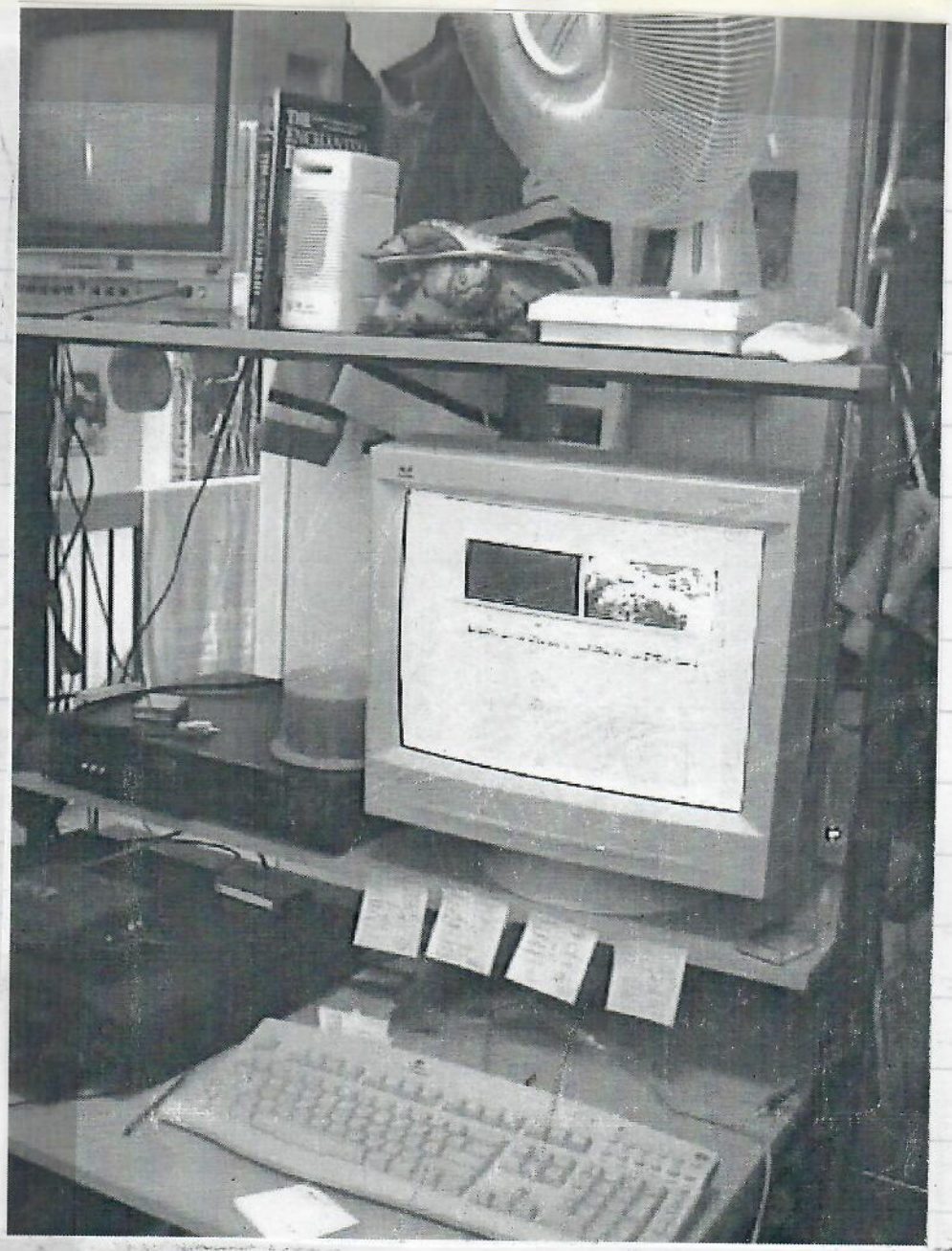
> You're talking well, ultra-detailed. I mean if you want that. Or more
> stylistic like that beautiful design and anything in between.
>
> you could'a told me that before I started. (I was trying to keep it in
the
> range of bearable both body-wise and pocket-wise)
>
> No matter. You'll get some idea of what's been sent. Roughs.
>
> Tell me what you prefer/wish improved. Can start all over again if you so
> wish. Colours if you want them. Whatever.
>
> $1K. WOW.
>
> I think when the smoke cleared mine cost $80. Wouldn't trade it for the
> world though. Mine represents EVERYTHING.
> ----------
> At 04:36 PM 1/15/01 -1000, you wrote:
> >of course. And probably over a $1k. And a couple of sittings. Fine.
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >On Mon, 15 Jan 2001, Ursula Keuper-Bennett wrote:
> >
> > > Next. Looking at what I'm doing? This will require you to be in a
chair
> > > getting inked for a long time. Longer than just a block-and-ink
like my
> > > FFS tattoo.
> > >
> > > Sorry about that.
> > > ----------
> > > At 01:57 PM 1/15/01 -1000, you wrote:
> > > >Both up. I want all to be going in the same direction on the same
course,
> > > >across the unknown sea, to Turtle Heaven!
> > > >

George H. Balazs, Leader
Marine Turtle Research Program
National Marine Fisheries Service
SWFSC Honolulu Laboratory
2570 Dole Street
Honolulu, Hawaii 96822-2396 USA
Tel:(808) 983-5733
Fax:(808) 983-2902
gbalazs@honlab.nmfs.hawaii.edu

---------- Forwarded message ----------
Date: Sun, 14 Jan 2001 21:39:41 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Cc: Peter Bennett <honu@turtles.org>
Subject: Just thinking about that de Silva message

and sometimes I feel I don't thank you enough. You know...about the
importance of mentors and stuff.

<http://www.turtles.org/t991225.htm>



LIVING CORALS

LIVING CORALS
MARINE LIFE
Sea Turtles

Date: Sat, 5 May 2001 13:50:32 -1000
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: ALIGON@aol.com
Cc: William Stohler <benthic@flex.com>
Subject: Re: K-11 Tagged Green Turtle Sighting N of 5 Graves, Maui

Aloha, sorry everything takes longer than one thinks it will! Apologies for my consistent delays in writing back to you for the great information you always supply. Regarding K-11 (=K-12 both tags on the same turtle also with also K-13 and K-14), I'm mailing you (to Alan) our computer output summary. William, if you supply me with your postal address I'd be delighted to do the same and also include some literature (that Alan already has I'm sure).

K-11/K-12 is a fascinating turtle that holds great professional and person interest to me. Russ Miya and I caught and tagged her/him back in July of 1993. Off of 5 Graves. In turtle-time, not all that long ago. Amazingly the turtle measured 41.9 cm straight carapace length when tagged and released. But the current estimates by Alan (and others that report the same turtle to me) are in the neighborhood of 90 cm. How could a turtle in Hawaii grow this fast when so many others grow so very very slow? I don't know for sure, but have some ideas. We need more turtles doing this, assuming that reproductive maturation keeps with with fast body growth. One of these days, and maybe soon, I truly need to see this turtle for myself.

In a separate email I'll send both of you a copy of our short article on turtle 5690, another Amazing green turtle of Hawaii and Maui. Best Regards, George Balazs

Date: Sun, 03 Jun 2001 18:12:18 -1000
From: William Stohler <benthic@flex.com>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Tagged Turtle K-11/K-12/K-14

George-

Thanks for all the turtle info! I've been seeing a lot of juvenile turtles lately (~30cm and under), which is a great thing!

Today, we dove Turtle Valley, and I studied turtle K-11/K-12/K-14. It (she?) was resting in 35 feet of water at 09:30 with 3 adjacent turtles, and I measured its straight carapace length using my arm without touching the turtle (it was from the tip of my fingers to my armpit). The length is actually much closer to 64 cm than 90 (Alan's estimate). Hope this is helpful.

Date: Mon, 18 Jun 2001 20:56:28 -0400
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Fwd: Blurbs

I'm assuming Osha shared this with you. In case he didn't...

(73)

>Delivered-To: howzit@vex.net
>X-Sender: osha@mail.oshadavidson.com
>X-Mailer: QUALCOMM Windows Eudora Version 5.0
>Date: Mon, 18 Jun 2001 14:16:28 -0700
>To: mary davidson <marygraydavidson@yahoo.com>, howzit@TURTLES.ORG,
>   honu@TURTLES.ORG
>From: Osha Gray Davidson <osha@oshadavidson.com>
>Subject: Blurbs
>
>Just when I was worried that we wouldn't have any good blurbs...
>
>Turtles have graced the seas for hundreds of millions of years. What their
>future holds, no one can say. Fire in the Turtle House is an important book
>about this wounded world and the people who are trying to set it right.
>   --Carl Safina, author of Song for the
> Blue Ocean
>
>"A masterful scientific detective story, with abundant human interest thrown
>in for good measure. It is impossible to make the frightening story of green
>turtle fibropapilloma disease simple, but Davidson has made it highly
>readable; furthermore, most of the players in his story are my friends and
>colleagues, and the author has captured their personalities and nuances
>brilliantly. Every turtle aficionado (ital.), professional or amateur,
>whould read this book ... no, make that everybody, period. After all, as
>Ka'ai said, 'we are all children of the sea.'"
>
>-Peter C.H. Pritchard Ph.D.
>Director, Chelonian Research Institute
>
>"Osha Gray Davidson has a brilliant command of all that lives in the
>ocean. As a surfer, diver, and film producer of ocean films, his books are
>my life blood--and they nourish my soul" -Greg MacGillivray, Producer and
>Director of The IMAX Theater films Everest, The Living Sea, and Dolphins
>

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

Historical Information for Turtle Tag K11

Tag Information:

Tag Number	Date	Tag Type	Tag Position
K11	7/28/93	I681	LFL
K12	7/28/93	I681	R34
K13	7/28/93	I681	LHF
K14	7/28/93	I681	RHF

Date	Type of Encounter	Location:	TumorRank:	NestingAct:	Straight Carapace	Since Last Encounter				Overall			
						Interval		Growth-Rates		Interval		Growth-Rates	
						Month	Year	cm/mon	cm/yr	Month	Year	cm/mon	cm/yr
7/28/93	Near Shore	Maui, Makena, Five Caves	0	-	41.9	---	---	---	---	---	---	---	---
8/8/93	Near Shore	Maui, Makena, Five Caves	0	-	---	---	---	---	---	---	---	---	---
9/14/93	Near Shore	Maui, Makena, Five Caves	0	-	---	---	---	---	---	---	---	---	---
10/30/93	Near Shore	Maui, Makena, Five Caves	0		---	2.0	0.2	---	---	3.0	0.3	---	---
4/4/96	Near Shore	Maui, Makena, Five Caves	0	-	---	29.0	2.4	---	---	32.0	2.7	---	---
11/8/99	Near Shore	Maui, Makena, Five Caves, Nahua Point	0	-	---	43.0	3.6	---	---	75.0	6.3	---	---
1/23/00 Turtle Valley													
3/16/00	Near Shore	Maui, Kihei	0	-	---	4.0	0.3	---	---	79.0	6.6	---	---
8/28/00	Near Shore	Maui, Makena, Five Caves, N. Nahua Point	0	-	---	5.0	0.4	---	---	85.0	7.1	---	---
2/18/01	Near Shore	Maui, MAKENA, Turtle Valley	0	-	---	5.0	0.4	---	---	90.0	7.5	---	---
4/7/01	Near Shore	Maui, Makena, Five Caves, Turtle Valley	0	-	---	1.0	0.1	---	---	92.0	7.7	---	---

w SCL = 90cm
estimate ? !

Subject: Fwd: Sent to noaa.gov
Date: Sat, 02 Dec 2000 13:01:52 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George Balazs <George.Balazs@noaa.gov>

>Date: Sat, 02 Dec 2000 12:59:50 -0500
>To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
>From: Ursula Keuper-Bennett <howzit@turtles.org>
>Subject: Sent to noaa.gov
>
>Midway18 and Uwapo (the regression case you sighted resting with Keoki)
>and the one who gently tried to nip you your last dive with us.
>
>Look at the corner of the eye.
>
>See why I thought perhaps Midway18 might be a regression case?

LEyeMidw1100Mt18.jpg	**Name:** LEyeMidw1100Mt18.jpg **Type:** JPEG Image (image/jpeg) **Encoding:** base64

uwapo20000111teyeworked2.jpg	**Name:** uwapo20000111teyeworked2.jpg **Type:** JPEG Image (image/jpeg) **Encoding:** base64

---------- Forwarded message ----------
Date: Sat, 02 Dec 2000 15:16:36 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: I forgot to evaluate some of the Kalokos!

Will do so now.

Kaloko1 -- perfect normal eyes. The kind that will help me determine if there's an FP signature

Kaloko2 Normal with SOME reservation about some subtle veining working through the left. Likely a reflection. But forced to call it? Normal

Kaloko3 Left eye looks funny at the back. But soft focus so I can't call anything with confidence. Right eye normal. I'm calling this one SUSPECT --meaning not thinking it's FP. Just that I'd want another photo of this thing

Kaloko4 Light burn but what I see of either connective tissue. Normal.

Kaloko5 Left eye not normal. Don't know what it is. But it's not normal. Never seen anything like it. Not suggesting FP. Just not normal.

Kaloko6 Left eye has a problem. Am I prepared to say FP VULNERABLE? Sure. (But right eye is normal)

Kaloko7 UNABLE TO ASSESS

TOTAL 11 - 1 UNABLE TO ASSESS = 10

1 FP SUSPECTED.

Problem? what if at Kaloko the inflammation posterior or Koloko6 is as bad as it ever gets?

I can now answer your question from earlier today.

Dunno.

But if that honu was at Honokowai? It'd throw a #1.

(51)

> Left eye draws more concern than right. Not a good pic either one but
> enough there to not call these eyes normal either. And a #1 is planning
> its break right along the corneal edge.
>
>
> Honu53
>
> Whoa! This is the second worst honu you have in the bunch. Me, I'd say
> that right eye is a couple months from having a #1 in it. That posterior
> is screaming FP. In fact one could argue there IS a #1 there and make
this
> honu a TS1.
>
>
> Our count. 1TS1 and four for-sure FP vulnerables. For sure.
>
>
> That makes 3% FP and 14% FP VULNERABLE (and I'm sure).
>
> I know I mentioned 7 FP vulnerables but three are low-confidence calls
> because of pic quality. So if you insist we go with what we can prove, we
> have four.
>
> And of course there's that 18-regression possible. If that dude really is
> one, well, then you've got a 3% regression rate too. About right for
kiddies.
>
> That's how I see it.
>
> Recall we'd theorized the existence of a low-grade/low-level kind of
> FP. Limited to ocular involvement. We called it "getting the
> sniffles" Like a cold sore. Merely a nuisance. Well? Maybe this is it.
>
> And we know it's possible for honu to be non-eruptive in July, develop eye
> tumours by August and be rid of them by July.
>
> Hoa's our best example.
>
> The Sniffles.
>
> And yet with the right co-factors the Sniffles turn into something
> monstrous. An old disease given new opportunities.
>
> I know. I'm reaching. But that hypothesis is based on thought AND
> considerable viral homework.
>
> Four of those TS0's are FP-vulnerable, George.
> ---------------------------------------
> At 05:08 PM 12/1/00 -1000, you wrote:
> >29 turtles this trip. one had it, TS1. First trip in 98, caught 26, none
> >had it. Second trip March 99, just a few days, 12 caught I think (from
> >memory) none had it. Third trip, 9/99, 8 total 4 days only miserable
> >weather but accomplished our objective of getting 3 tdr's out), none with
> >fp. However on that trip I saw a large turtle with smooth #2 golf ball
> >size on right eye.
> >
> >Also, note that in 97 a TS3 case was seen basking at Midway (and tagged).
> >We sent up a jumbo animal carrier and efforts were directed at finding it
> >to catch and send to us here. Remove it from the population (but not
> >terminate it). Turtle never seen again.
> >
> >Note also my write up in first fp symposium has mention of turtle with
> >horrid head tumor seen at Midway in water, no opportunity to tag it. Never

---------- Forwarded message ----------
Date: Sat, 02 Dec 2000 14:20:43 -0500
From: Ursula Keuper-Bennett <howzitéturtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: The Midway honu

OK.

Midway53. Call Thierry (he calls 'm #1's before you or me --we're more
conservative). Tell him to meet you at the Airport tomorrow. Fly to
Midway. Find that turtle. Show Thierry the right eye. He'll call it a #1
in the eye and now you've doubled your FP cases.

re: Kaloko? Let me go and check the pics again. To determine my
confidence level (always associated with how excellent the pic is)

At 08:20 AM 12/2/00 -1000, you wrote:
>So if I schedule a trip back up there in say 6 months, what will I find
>in those turtles? Four month? A year?
>
>Of course it would be cheaper and quicker to go to Kaloko for a day in
>coming months and recatch there to examine, you have some listed as
>vulnerable there also based on photos I sent.
****
>
>On Fri, 1 Dec 2000, Ursula Keuper-Bennett wrote:
>
> > Our court huh? Then let's talk fer-shures only.
> >
> > We agree there is one who's a TS1. Fer-shure.
> >
> > But the following will also are showing evidence of very early
> FP. Fer-shure.
> >
> > Honu27
> >
> > Right eye-posterior does not pass as normal. FP VULNERABLE.
> >
> > Honu45
> >
> > Left eye FP incoming. Pre-eruptive stage. No mistake.
> >
> > Honu51
> >

Re: The Midway honu (fwd)

> > >seen again.
> > >
> > >In the mid to late 1970's I worked with and trained Koral Kings dive club
> > >part of Navy at Midway. Went up there several times, dove tagged etc.
> > >NEVER a turtle with sign of tumors.
> > >
> > >Your court.
> >

---------- Forwarded message ----------
Date: Fri, 01 Dec 2000 23:00:12 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Cc: Peter Bennett <honu@turtles.org>
Subject: Re: The Midway honu

Our court huh? Then let's talk fer-shures only.

We agree there is one who's a TS1. Fer-shure.

But the following will also are showing evidence of very early FP. Fer-shure.

Honu27

Right eye-posterior does not pass as normal. FP VULNERABLE.

Honu45

Left eye FP incoming. Pre-eruptive stage. No mistake.

Honu51

Left eye draws more concern than right. Not a good pic either one but enough there to not call these eyes normal either. And a #1 is planning its break right along the corneal edge.

Honu53

Whoa! This is the second worst honu you have in the bunch. Me, I'd say that right eye is a couple months from having a #1 in it. That posterior is screaming FP. In fact one could argue there IS a #1 there and make this honu a TS1.

Our count. 1TS1 and four for-sure FP vulnerables. For sure.

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---------- Forwarded message ----------
Date: Sat, 02 Dec 2000 08:50:22 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: OOPS! Yesterday's message

Slight error. I gave you percents out of 29. Should be out of 26. There were three turtles I wrote "UNABLE TO ASSESS". All three had one normal eye but the other had glare such that I could not see the posterior tissue and could not make a call.

I'll dig up Honokowai "equivalent" eyes for each of the Midway FP VULNERABLE eyes so you can see why I called them as I did. And of course the one we said was potentially (potentially) a regression case has Honokowai equivalents too.

You wrote, "29 turtles this trip. one had it, TS1."

And I'm saying, "29 turtles this trip. three I can't assess, one is TS1, four are FP VULNERABLE for certain, three others likely have problems too but I'm not as confident calling it FP, there's likely one regression case in there and the rest (17) are normal.

For now.

Re: The Midway honu (fwd)

And of course there's that 18-regression possible. If that dude really is one, well, then you've got a 3% regression rate too. About right for kiddies.

That's how I see it.

Recall we'd theorized the existence of a low-grade/low-level kind of FP. Limited to ocular involvement. We called it "getting the sniffles" Like a cold sore. Merely a nuisance. Well? Maybe this is it.

And we know it's possible for honu to be non-eruptive in July, develop eye tumours by August and be rid of them by July.

Hoa's our best example.

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And yet with the right co-factors the Sniffles turn into something monstrous. An old disease given new opportunities.

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>weather but accomplished our objective of getting 3 tdr's out), none with
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>
>Also, note that in 97 a TS3 case was seen basking at Midway (and tagged).
>We sent up a jumbo animal carrier and efforts were directed at finding it
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>terminate it). Turtle never seen again.
>
>Note also my write up in first fp symposium has mention of turtle with
>horrid head tumor see at Midway. In water, no opportunity to tag it. Never
>seen again.
>
>In the mid to late 1970's I worked with and trained Koral Kings dive club
>part of Navy at Midway. Went up there several times, dove tagged etc.
>NEVER a turtle with sign of tumors.
>
>Your court.

27

Date: Fri, 20 Oct 2000 22:13:39 -1000
From: Steve Williams <williams@mauigateway.com>
To: Allan Ligon <aligon@aol.com>, Angela Plummer <ajplum@aloha.net>,
Barbara Noel <noel@maui.net>, Bill Gilmartin <jarman@aloha.net>,
Brenda Killian <killian@aloha.net>,
Claire Cappelle <claire.cappelle@noaa.gov>,
Diana Lehet <diana.lehet@attws.com>,
Diana Schulte <mdd@mauigateway.com>, Diane Nelson <rrnelson@gte.net>,
Dick Kiligian <dickkili@maui.net>,
Gene Thompson <genejack@mauigateway.com>,
George Balazs <gbalazs@honlab.nmfs.hawaii.edu>,
Gerald Bitnias <hulabear1@juno.com>,
Glynnis Nakai <glynnis_nakai@mail.fws.gov>,
Hannah Bernard <wild@aloha.net>, Jackie Frost <honu@shaka.com>,
Janet Cowan <rcowan@maui.net>, Jean Johnson <dugong@tiki.net>,
Jefff & Jody King <jking@words-and-pictures.com>,
Katie & Diana Lehet <mauikate@aol.com>,
Katy Nicholas <Katynicholas@aol.com>, Marie <zeroimpact@maui.net>,
Pat Ryan <ryan@t-link.net>, Skippy Hau <skippy_hau@exec.state.hi.us>,
Susan Bradford <gsbl@maui.net>, Victoria Smith <u2vnmaui@aol.com>
Subject: Lahaina nest excavation

Beach Patrol,
Nest # 3 in Lahaina was excavated this evening (Oct. 20) I assisted Skippy along with Mary Jane and Amy who have been watching over the nest at night. Here are the preliminary numbers

33 whole (undeveloped or partially developed) eggs
51 empty eggs (yeah!)
2 Live hatchlings

84 total eggs (the two live hatchlings accounted for two empty eggs)

With these numbers the success rate would be 61%

I was surprised at the size of the hatchlings. Hatchlings green turtles are larger (almost double in wingspan) than hawksbills. Their drive to reach the ocean is just as vigorous, their effect on humans is the same... awesome.

Steve

---------- Forwarded message ----------
Date: Sun, 29 Aug 1945 20:02:52 -1000
From: SKIPPY_HAU@EXEC.STATE.HI.US
To: glynnis_nakai@fws.gov, gbalazs@honlab.nmfs.hawaii.edu
Cc: williams@mauigateway.com, smurakaw@honlab.nmfs.hawaii.edu,
wild@aloha.net, maryjanegrady@hotmail.com
Subject: 10/20/00 Nest3 Lahaina Excavation

DRAFT LAHAINA NEST #3
Latitude: 20ø 52' 12" N Longitude: 156ø 40' 40" W
EMERGENCE: 17 October 2000 (Day 56)
EXCAVATION: Friday 20 October 2000 (Day 59)

SUMMARY

Excavation by Steve Williams & Skippy Hau (17:13 - 18:45)
Assistance by Hawaii Wildlife Fund Volunteers (Mary Jane & Amy)

Data Recorded by Steve Williams
Live hatchling found at 26 centimeters depth.
Egg found at 44 centimeters.
Nest diameter about 1 foot;
depth at bottom of nest 65 centimeters;
Excavation completed 18:45.

DRIED FULL & PARTIAL DEV. EGGS	33
EMPTY SHELLS	51
LIVE HATCHLINGS (1 weak hind flippers) (Released on beach after excavation)	2
ESTIMATED TOTAL	84 (51/84=61%)

99

Date: Tue, 17 Oct 2000 14:37:51 -1000
From: Glynnis_Nakai@r1.fws.gov
To: "George H. Balazs" <gb[illegible]zs@honlab.nmfs.hawaii.edu>,
skippy_hau@exec.state.hi.us
Subject: Re: Thanks so much!

Aloha George,

By now you would have received Skippy's updated on numbers for the Lahaina nest #1. Unhatched eggs were intermixed with the empty shells and I didn't get the impression they were localized into one area of the chamber. Skippy, if you think otherwise, please let George know.

Yes, definitely exciting to have that many of the total hatch and emerge! Yippee! It was interesting how the soil "smells" when you're near the chamber. Hard to describe but I know if you smelled it, it would trigger a memory...Can't wait to see what the next Lahaina nests show!

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

DRAFT

LAHAINA NEST #6

Latitude: 20° 51' 59" N Longitude: 156° 40' 35" W

EMERGENCE: 5 November 2000 (Day 58)

EXCAVATION: Sunday 5 November 2000 (Day 58)

Seven hatchlings released on beach; one weak hatchling and one dead hatchling reported by Mary Jane Grady. Decided to excavate after calling Glynnis Nakai.

SUMMARY

Excavation by Mary Jane Grady, Amy Miller & Skippy Hau (09:37 - 11:15)

Data Recorded by Amy Miller
Live hatchling found at 17 centimeters depth.
Second live hatchling found at 16 centimeters entangled in roots.
Egg found at 36 centimeters;
Nest diameter about 28 centimeters;
depth at bottom of nest 59 centimeters;
Excavation completed 11:15.

DRIED FULL & PARTIAL DEV. EGGS	42
EMPTY SHELLS	48
DEAD HATCHLING	2
LIVE HATCHLINGS	2

(Two more released on be[illegible] after excavation)

ESTIMATED TOTAL 90 (46/90=51%)

In good freezer [illegible] side,
(next to sliding door).

Date: Sun, 14 Sep 1945 12:48:53 -1000
From: SKIPPY_HAU@EXEC.STATE.HI.US
To: SKIPPY_HAU@EXEC.STATE.HI.US, glynnis_nakai@fws.gov
Cc: gbalazs@honlab.nmfs.hawaii.edu, williams@mauigateway.com,
smurakaw@honlab.nmfs.hawaii.edu, wild@aloha.net
Subject: Re: 11/5/00 Last Lahaina Nest Excavation

[The following text is in the "ISO-8859-1" character set]
[Your display is set for the "US-ASCII" character set]
[Some characters may be displayed incorrectly]

Glynnis,
The following is a summary for this morning. Possible nests (4) at Kealia (10/27 and (5) Lahaina 10/29) resulted in no eggs found so no summary was made.

DRAFT
LAHAINA NEST #6
Latitude: 20ø 51' 59" N Longitude: 156ø 40' 35" W
EMERGENCE: 5 November 2000 (Day 58)
EXCAVATION: Sunday 5 November 2000 (Day 58)

Mary Jane and Amy observed seven hatchlings crawling on the beach; one weak hatchling and one dead hatchling reported. Decided to excavate after calling Glynnis Nakai. (Message was left for Steve Williams.)

SUMMARY

Excavation by Mary Jane Grady, Amy Miller & Skippy Hau (09:37 - 11:15)

Data Recorded by Amy Miller
Live hatchling found at 17 centimeters depth.
Second live hatchling found at 16 centimeters entangled in roots.
Egg found at 36 centimeters;
Nest diameter about 28 centimeters;
depth at bottom of nest 59 centimeters;
Excavation completed 11:15.

DRIED FULL & PARTIAL DEV. EGGS	42
EMPTY SHELLS	48
DEAD HATCHLING	1
LIVE HATCHLINGS (1 weak hatchling)	3

(Two hatchlings released on beach after excavation)

ESTIMATED TOTAL 90 (47/90=52%)

* Weak hatchling held overnight.

Date: Thu, 26 Oct 2000 19:56:18 -1000
From: Steve Williams <williams@mauigateway.com>
To: Allan Ligon <aligon@aol.com>, Angela Plummer <ajplum@aloha.net>,
Barbara Noel <noel@maui.net>, Bill Gilmartin <jarman@aloha.net>,
Brenda Killian <killian@aloha.net>,
Claire Cappelle <claire.cappelle@noaa.gov>,
Diana Lehet <diana.lehet@attws.com>,
Diana Schulte <mdd@mauigateway.com>, Diane Nelson <rrnelson@gte.net>,
Dick Kiligian <dickkili@maui.net>,
Gene Thompson <genejack@mauigateway.com>,
George Balazs <gbalazs@honlab.nmfs.hawaii.edu>,
Gerald Bitnias <hulabear1@juno.com>,
Glynnis Nakai <glynnis_nakai@mail.fws.gov>,
Hannah Bernard <wild@aloha.net>, Jackie Frost <honu@shaka.com>,
Janet Cowan <rcowan@maui.net>, Jean Johnson <dugong@tiki.net>,
Jefff & Jody King <jking@words-and-pictures.com>,
Katie & Diana Lehet <mauikate@aol.com>,
Katy Nicholas <Katynicholas@aol.com>, Marie <zeroimpact@maui.net>,
Pat Ryan <ryan@t-link.net>, Skippy Hau <skippy_hau@exec.state.hi.us>,
Susan Bradford <gsbl@maui.net>, Victoria Smith <u2vnmaui@aol.com>
Subject: nest excavation

Nest #1 at Kealia will be excavated tomorrow evening (Friday Oct. 27) at 5 P.M. There has been no activity from the most likely nest site which has been watched over carefully . Tomorrow will be day 70.
The excavation is open to interested volunteers.
Meanwhile, if our nesting female is still in the area she may return next week for a fifth nest, we'll be watching .

Steve

(81)

Date: Sun, 05 Nov 2000 20:47:12 -1000
From: Steve Williams <williams@mauigateway.com>
To: Allan Ligon <aligon@aol.com>, Angela Plummer <ajplum@aloha.net>,
Barbara Noel <noel@maui.net>, Bill Gilmartin <jarman@aloha.net>,
Brenda Killian <killian@aloha.net>,
Claire Cappelle <claire.cappelle@noaa.gov>,
Claudine Pauly <Ecepauly@aol.com>, Diana Lehet <diana.lehet@attws.com>,
Diana Schulte <mdd@mauigateway.com>, Diane Nelson <rrnelson@gte.net>,
Dick Kiligian <dickkili@maui.net>,
Gene Thompson <genejack@mauigateway.com>,
George Balazs <gbalazs@honlab.nmfs.hawaii.edu>,
Gerald Bitnias <hulabear1@juno.com>,
Glynnis Nakai <glynnis_nakai@mail.fws.gov>,
Hannah Bernard <wild@aloha.net>, Jackie Frost <honu@shaka.com>,
Janet Cowan <rcowan@maui.net>, Jean Johnson <dugong@tiki.net>,
Jefff & Jody King <jking@words-and-pictures.com>,
Katie & Diana Lehet <mauikate@aol.com>,
Katy Nicholas <Katynicholas@aol.com>, Marie <zeroimpact@maui.net>,
Mary Jane Grady <maryjanegrady@hotmail.com>, Pat Ryan <ryan@t-link.net>,
Skippy Hau <skippy_hau@exec.state.hi.us>,
Susan Bradford <gsbl@maui.net>, Victoria Smith <u2vnmaui@aol.com>
Subject: Lahaina nest

This morning Mary Jane Grady and Amy Miller observed seven live hatchlings on the beach near the last green turtle nest site in Lahaina. One was weak and one dead. After the situation was considered the nest site was excavated by Skippy, Mary Jane, and Amy.
48 empty shells were found out of a total estimated count of 90 eggs. Three live hatchlings were found, one was weak , the other two were released on the beach.
These numbers are of course preliminary but would indicate a greater than 50% success rate for this nest.
Meanwhile a careful eye is being kept on nest site #2 at Kealia. We are near day 60 and could expect activity soon.

Steve

---------- Forwarded message ----------
Date: Sun, 14 Sep 1945 12:48:53 -1000
From: SKIPPY_HAU@EXEC.STATE.HI.US
To: SKIPPY_HAU@EXEC.STATE.HI.US, glynnis_nakai@fws.gov
Cc: gbalazs@honlab.nmfs.hawaii.edu, williams@mauigateway.com,
smurakaw@honlab.nmfs.hawaii.edu, wild@aloha.net
Subject: Re: 11/5/00 Last Lahaina Nest Excavation

Glynnis,
The following is a summary for this morning. Possible nests (4) at Kealia (10/27 and (5) Lahaina 10/29) resulted in no eggs found so no summary was made.

DRAFT
LAHAINA NEST #6
Latitude: 20ø 51' 59" N Longitude: 156ø 40' 35" W
EMERGENCE: 5 November 2000 (Day 58)
EXCAVATION: Sunday 5 November 2000 (Day 58)

Mary Jane and Amy observed seven hatchlings crawling on the beach; one weak hatchling and one dead hatchling reported. Decided to excavate after calling Glynnis Nakai. (Message was left for Steve Williams.)

SUMMARY

Excavation by Mary Jane Grady, Amy Miller & Skippy Hau (09:37 - 11:15)

Data Recorded by Amy Miller
Live hatchling found at 17 centimeters depth.
Second live hatchling found at 16 centimeters entangled in roots.
Egg found at 36 centimeters;
Nest diameter about 28 centimeters;
depth at bottom of nest 59 centimeters;
Excavation completed 11:15.

DRIED FULL & PARTIAL DEV. EGGS	42
EMPTY SHELLS	48
DEAD HATCHLING	1
LIVE HATCHLINGS (1 weak hatchling)	3

(Two hatchlings released on beach after excavation)

ESTIMATED TOTAL 90 (47/90=52%)

* Weak hatchling held overnight.

Honokowai

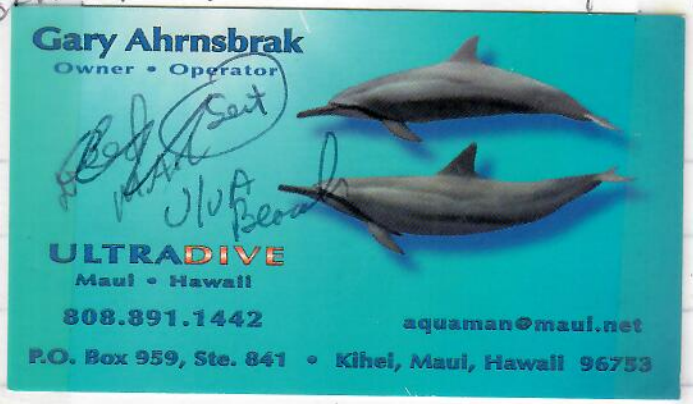
5690 7th Nesting + TDR Retrival + JAN/KAREN DISCUSSION

Wednesday 8/21/02 Kihei/Wi rental car Dollar - Wednesday 730am drove to Sewage treat seaweed sample place, then to Power Plant - New rocks being placed for breakwater - started ~2 months ago. Pictures of new green algae on new rocks. Rocks more in harbor direction have Pteroclodia - look well colored with algae - but said to be new because rock said to be new. Entire rock breakwater is lower than previously

Drove direct to Honokowai Ursula and Peter - discussions about Lyngbyia. No diving because Ursula saw a large shark in the distance yesterday off Reef 9.

Drove to Ulua Beach - met Ed Bolan 2 PM - He scubaed out, Karen & I on snorkle. No turtle (Bilateral large tumor on head) under ledge. Hasn't been seen since Monday. Proceeded further out only one turtle seen. Went to "Turtle Mound" Resting places seen, but no turtles. Tide is high

dives at Ulua Beach - has seen Bi-lateral tumored turtle under ledge. (83)



Wednesday
8/21/02 Ed showed us clumps of alga green color in moderate drifts in sand channels. Turtles seen eating it by Ed Boland.
Proceeded back to Lahaina Shores Beach Resort checked in - Room 311 ocean View,
Met with Alex Chaihorsky "Bio-Vikos
5-6pm company - peptide vaccine. (775) 742-8811
"Medicine Practice of is ½ Science, ½ Shamanism".
The vaccine works - can't explain why though - don't need to.
Drove to Ursula & Peter, picked them up and went to dinner at Outback Steak House.
After dinner Peter, Jan, Karen and I went to Kahului Power Plant. Normal outflow not operating - instead restore down flowing but only a single turtle seen turtle.

TO page 102

Date: Sun, 01 Sep 1945 17:11:40 -1000
From: SKIPPY_HAU@EXEC.STATE.HI.US
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re[2]: 10/23/00 Nest Remains Shipped FedEx

George,
Originally we had them labeled as Lahaina 1,2,3, & 4. I believe I may have mislabeled the nest photos by the walkway. Mary Jane helped correct our mistake before excavating. The first Lahaina nest was furthest south. This third nest that emerged was closest to the walkway. The fourth Lahaina nest was located in the middle of the three nests.

The second Lahaina nest might be a false nest (by the canoe). When making the summary sheets, I decided to label the nests in order of their emergence or excavation. The recent emergence was previously called Lahaina 3. Therefore it was labeled nest 3.

I just left a message for Glynnis for excavating the first hawksbill turtle nest at Kealia on Friday. I'll also talk with Steve about a Sunday excavation. Lahaina will be impossible to work around Halloween. Skippy

==========

Somehow I missed hearing about Nests 3. That's the one right next to Nest 2 by the walk way, correct? I had a good trip to DC. Aloha, George
---
On Sun, 1 Sep 1945 SKIPPY_HAU@EXEC.STATE.HI.US wrote:

> George & Shawn,
>
> Total Weight 10 pounds. Nest remains for nests 2 & 3 from Lahaina.
>
> Friday is day 70 for the first hawksbill nest at Kealia. Will call Glynnis
> and determine if we can excavate that afternoon. (We will be diving all next
> week so I need to get everything done by Sunday).
>
> Aloha,
> Skippy

DRAFT (corrected 10/23 per Mary Jane)
LAHAINA NEST #3
Latitude: 20° 52' 12" N Longitude: 156° 40' 40" W
EMERGENCE: 18 October 2000 (Day 57)
EXCAVATION: Friday 20 October 2000 (Day 59)

SUMMARY

Excavation by Steve Williams & Skippy Hau (17:13 - 18:45)
Assistance by Hawaii Wildlife Fund Volunteers (Mary Jane & Amy)

Data Recorded by Steve Williams
Live hatchling found at 26 centimeters depth.
Egg found at 44 centimeters;
Nest diameter about 1 foot;
depth at bottom of nest 65 centimeters;
Excavation completed 18:45.

DRIED FULL & PARTIAL DEV. EGGS	33
EMPTY SHELLS	51
==========	==========
LIVE HATCHLINGS (1 weak hind flippers)	2
(Released on beach after excavation)	
ESTIMATED TOTAL	**84 (51/84=61%)**

Egg counts

(83)

DRAFT LAHAINA NEST #2
Latitude: 20° 51' 59" N Longitude: 156° 40' 35" W
EMERGENCE: Not seen
EXCAVATION: Monday 16 October 2000 (Day 70)

5690

SUMMARY

Excavation by Glynnis Nakai, & Skippy Hau (17:09 - 18:40)
Assistance by Neighbors and Hawaii Wildlife Fund Volunteers

Data Recorded by Glynnis
Nest found at 18:20.
Nest diameter about 1 foot; depth at bottom of nest 64 centimeters; hatchling found by dog
Excavation completed 18:40.

DRIED FULL & PARTIAL DEV. EGGS	28
EMPTY SHELLS	49
DEAD HATCHLING	1
ESTIMATED TOTAL	**77 ((49-1)/77=62%)**

Date: Tue, 17 Oct 2000 20:08:59 -1000
From: Steve Williams <williams@mauigateway.com>
To: Allan Ligon <aligon@aol.com>, Angela Plummer <ajplum@aloha.net>,
Barbara Noel <noel@maui.net>, Bill Gilmartin <jarman@aloha.net>,
Brenda Killian <killian@aloha.net>,
Claire Cappelle <claire.cappelle@noaa.gov>,
Diana Lehet <diana.lehet@attws.com>,
Diana Schulte <mdd@mauigateway.com>, Diane Nelson <rrnelson@gte.net>,
Dick Kiligian <dickkili@maui.net>,
Gene Thompson <genejack@mauigateway.com>,
George Balazs <gbalazs@honlab.nmfs.hawaii.edu>,
Gerald Bitnias <hulabear1@juno.com>,
Glynnis Nakai <glynnis_nakai@mail.fws.gov>,
Hannah Bernard <wild@aloha.net>, Jackie Frost <honu@shaka.com>,
Janet Cowan <rcowan@maui.net>, Jean Johnson <dugong@tiki.net>,
Jefff & Jody King <jking@words-and-pictures.com>,
Katie & Diana Lehet <mauikate@aol.com>,
Katy Nicholas <Katynicholas@aol.com>, Marie <zeroimpact@maui.net>,
Pat Ryan <ryan@t-link.net>, Skippy Hau <skippy_hau@exec.state.hi.us>,
Susan Bradford <gsbl@maui.net>, Victoria Smith <u2vnmaui@aol.com>
Subject: Lahaina nest excavation

Last evening (Monday Oct. 16) Nest #2 in Lahaina was excavated by Skippy and Glynnis,
I am passing on the preliminary numbers sent to me by Skippy.

total egg count 77

empty shells (presumed hatched) 49
dried full and partially developed 28
dead hatchling 1

the success rate with these numbers would be 62%

Meanwhile the nest watch at nest #1 at Kealia goes on with no signs of activity yet. Hannah tells me that the roadwork has moved north and light interference is less of a problem.

We can assume the tracks found Saturday morning were nest #4 for this turtle, let's hope she stays around for a fifth nest.

>Skippy and Glynnis,
>I am passing on the preliminary numbers sent to me by Skippy.
>
>   total egg count   77
>
>   empty shells (presumed hatched)   49
>   dried full and partially developed   28
>   dead hatchling   1
>
>the success rate with these numbers would be 62%
>
>Meanwhile the nest watch at nest #1 at Kealia goes on with no signs of
>activity yet. Hannah tells me that the roadwork has moved north and
>light interference is less of a problem.
>
>   We can assume the tracks found Saturday morning were nest #4 for
>this turtle, let's hope she stays around for a fifth nest.
>

Hawai'i Wildlife Fund * www.wildhawaii.org
Education * Research * Conservation
P.O. Box 637 * Paia, HI 96779
Phone * (808) 572-7327

2000

5690

Date: Sun, 28 Aug ~~1945~~ 13:16:45 -1000
From: SKIPPY_HAU@EXEC.STATE.HI.US
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Cc: smurakaw@honlab.nmfs.hawaii.edu
Subject: 10/19/00 LAHAINA NEST 2 SUMMARY

    [The following text is in the "ISO-8859-1" character set]
    [Your display is set for the "US-ASCII" character set]
    [Some characters may be displayed incorrectly]

Shawn,

    Tried to send a message with Word'98. See below. Skippy

George,

    Tentative Summary of Nest Remains. Will ship them over next week.

    Skippy
Resent message:

DRAFT LAHAINA NEST #2
Latitude: 20ø 51' 59" N Longitude: 156ø 40' 35" W
EMERGENCE: Not seen
EXCAVATION: Monday 16 October 2000 (Day 70)

SUMMARY

Excavation by Glynnis Nakai, & Skippy Hau (17:09 - 18:40)
Assistance by Neighbors and Hawaii Wildlife Fund Volunteers

Data Recorded by Glynnis
Nest found at 18:20.
Nest diameter about 1 foot; depth at bottom of nest 64 centimeters; hatchling found by dog
Excavation completed 18:40.

DRIED FULL & PARTIAL DEV. EGGS   28
EMPTY SHELLS   49
==========
DEAD HATCHLING   1

ESTIMATED TOTAL   77 ((49-1)/77=62%)

(87)

Date: Sun, 15 Oct 2000 11:06:56 -1000
From: Hannah Bernard <wild@aloha.net>
To: Steve Williams <williams@mauigateway.com>, Allan Ligon <aligon@aol.com>,
Angela Plummer <ajplum@aloha.net>, Barbara Noel <noel@maui.net>,
Bill Gilmartin <jarman@aloha.net>, Brenda Killian <killian@aloha.net>,
Claire Cappelle <claire.cappelle@noaa.gov>,
Diana Lehet <diana.lehet@attws.com>,
Diana Schulte <mdd@mauigateway.com>, Diane Nelson <rrnelson@gte.net>,
Dick Kiligian <dickkili@maui.net>,
Gene Thompson <genejack@mauigateway.com>,
George Balazs <gbalazs@honlab.nmfs.hawaii.edu>,
Gerald Bitnias <hulabear1@juno.com>,
Glynnis Nakai <glynnis_nakai@mail.fws.gov>,
Hannah Bernard <wild@aloha.net>, Jackie Frost <honu@shaka.com>,
Janet Cowan <rcowan@maui.net>, Jean Johnson <dugong@tiki.net>,
Jefff & Jody King <jking@words-and-pictures.com>,
Katie & Diana Lehet <mauikate@aol.com>,
Katy Nicholas <Katynicholas@aol.com>, Marie <zeroimpact@maui.net>,
Pat Ryan <ryan@t-link.net>, Skippy Hau <skippy_hau@exec.state.hi.us>,
Susan Bradford <gsbl@maui.net>, Victoria Smith <u2vnmaui@aol.com>
Subject: Re: turtle tracks

Aloha kakou
Nestwatch did begin last night. We also staked out the whole strip to see if our female came back , and she did not, to our knowledge. The possible nest on Friday night, looked very solid to me.. .. The road construction is not happening in that critical area any more, looks like they're pau there. Thanks for the assistance.
Hannah

> Our nesting female hawksbill returned last night to Kealia. Tracks
>were found by Jeff and Jody King of the beach patrol this morning (Oct.
>14) just north of the pond outlet. Whether she nested is uncertain but
>there is a possible site and we'll wait to see if she returns tonight.
>This will be her fourth nesting crawl (twenty days since nest #3) and
>will mean we will be watching the beach for at least the next few weeks
>to see if there is a fifth, as well as watching for activity from the
>previous nest sites as they are due.
>
> To assist communication between the nighttime nest watch (which I
>think will start tonight) and the morning patrol) we will try to use a
>log which will be left at the nest site. the idea is the night watch
>will make an entry when they leave, and you will be able to read it in
>the morning, you will also make an entry as to what you did or didn't
>observe in the morning.
>Fairly simple an entry by each the night and morning patrol and both
>will know what the other observed. The log will be left in a coffee can
>near the nest site. Look for it and make an entry the next time you
>patrol.

Hawai'i Wildlife Fund * www.wildhawaii.org
Education * Research * Conservation
P.O. Box 637 * Paia, HI 96779
Phone * (808) 572-7327

Date: Thu, 5 Oct 2000 09:18:37 -1000
From: Glynnis_Nakai@r1.fws.gov
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Cc: skippy_hau@exec.state.hi.us
Subject: Re: GT eggs (fwd)

Aloha George,

Yes, I did receive this message okay but really appreciate your checking since we had email problems before. The next nest is the green up at Lahaina, the one that you took a look at with me. Day number 60 is Friday, October 6 according to Skippy. We talked a couple days ago and were looking at October 16 to excavate if they don't emerge before then. The area is certainly with more moisture, as you said. If you have concerns about waiting until day #70, if no signs of emergence then PLEASE let us know!!! You interested in joining us at the excavation?

Aloha, Glyn

~~~~~~
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
~~~~~~

"George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
10/04/2000 04:06 PM

To: Skippy Hau <skippy, Glynnis Nakai <glynnis_nakai@fws.gov>
cc:
Subject: GT eggs (fwd)

I hope that the two of you received this message ok. What the Next Step? Can I help? What date is the first Lahaina nest due? Aloha, George

---------- Forwarded message ----------
Date: Fri, 29 Sep 2000 16:24:17 -1000 (HST)
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: Skippy Hau <skippy_hau@exec.state.hi.us>,
Glynnis Nakai <glynnis_nakai@fws.gov>
Subject: GT eggs

I went through them all this afternoon, will give you later the exact counts
for
each contents. But for now I can say with some confidence that the main issue was infertility. Could have been very early embryonic mortality, but I doubt it. The rootlets were secondary as a problem. The extreme dried nature of the eggs again point to a moisure deficiency issue. Turtle eggs simply don't incubate very well in "desert sands" and that's what you have there- dried blowsand.

Of the dried full eggs (shown as 64 on Skippy's list) 14 had development consisting of 4 early mortality, 4 mid-term mortality and 6 late (nearly full term).

---------- Forwarded message ----------
Date: Fri, 13 Oct 2000 07:18:04 -0400
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: What causes pop eye in a honu?

Well first we saw it on Ho'omau. That's the honu with his right eye eaten out by FP. His left's a pop-eye. But there are others. I'd have to go through the database.

7 out of 462 total so yes, rare. Four seen in 2000 and not through logging all Summer 2000 turtles.

Simply don't have histories on some of those turtles. Seen from distance. Even the four seen this summer. Two we know had FP, the other two, eyes sure look like regression cases but, well, we never got close enough.

Didn't consider oral tumours. Rather some pathology behind the eye, perhaps building up pressure out from the back. Dunno. Thing is I've never seen a pop-eye develop.

Turtle showed with it.

Tube to ear eye salt gland

At 09:35 PM 10/12/00 -1000, you wrote:
>rarely rarely seen., by me anyway. seen a lot by you? how many, what
>prevalence? Does it go away? Maybe some manisfestation (I like that
>word) of oral internal fp's.
>

> **
> * George H. Balazs, Leader *
> * Marine Turtle Research Program *
> * National Marine Fisheries Service *
> * SWFSC Honolulu Laboratory *
> * 2570 Dole Street *
> * Honolulu, Hawaii 96822-2396 USA *
> * Tel:(808) 983-5733 *
> * Fax:(808) 983-2902 *
> * gbalazs@honlab.nmfs.hawaii.edu *
> **

>
>On Thu, 12 Oct 2000, Ursula Keuper-Bennett wrote:
>
> > The eyeball's big, Exaggerated. Stuck out. Like someone had

MAKAI ANIMAL CLINIC

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

(9)

8/2/02 Makena Landing Retrieval of Tunred Shuttle

NOAA Sanctuary volunteer

Bomb disposal Kahoolawe

Robin

Charlene & Robin Sanders

140 Uwapo Road 25 # 102 Kihei

808-891-0231 Cell 280 3115

Sent

Darkness in fear

toward the Sea of Light

11

Darkness in death, Darkness to the Light

(91)

19 RH

ID 8/2/02 MAKENA MAUI

turtle taken from cove - APP Wt 220 lbs

large tumors covering both eyes -

blind - tumors adhere to sclera + cornea

no hope for removal or vision

tumor #2 ½ of mouth + side covering part of

external nares -

blood. 2 awkward tumors #2

tumor vent (R) front flipper #3

Tumors #21 nares (L) side #3

7/4 - slipped to calm

7/4 - 30cc Ester sol IC. blood for GB drug

MAKAI ANIMAL CLINIC

Assisted 8/4/02 by GB

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

2570 Dole Street
Honolulu, HI 96822-2396

Historical Information for

Tag Information:

Tag Number	Date	Tag Type	Tag Position
K11	7/28/93	I681	LFL
K12	7/28/93	I681	R34
K13	7/28/93	I681	LHF
K14	7/28/93	I681	RHF

Date	Type of Encounter	Location:	TumorRank:	NestingAct:	Straight Carapace	Month
7/28/93	Near Shore	Maui, Makena, Five Caves	0	-	41.9	---
8/8/93	Near Shore	Maui, Makena, Five Caves	0	-	---	---
8/14/93	Near Shore	Maui, Makena, Five Caves	0	-	---	---
10/30/93	Near Shore	Maui, Makena, Five Caves	0	-	---	2.0
4/4/96	Near Shore	Maui, Makena, Five Caves	0	-	---	29.0
11/8/99	Near Shore	Maui, Makena, Five Caves, Nahua Point	0	-	---	43.0
1/23/00 Turtle Valley						
3/16/00	Near Shore	Maui, Kihei	0	-	---	4.0
8/28/00	Near Shore	Maui, Makena, Five Caves, N. Nahua Point	0	-	---	5.0
2/18/01	Near Shore	Maui, MAKENA, Turtle Valley	0	-	---	5.0
4/7/01	Near Shore	Maui, Makena, Five Caves, Turtle Valley	0	-	---	1.0

but later NOT verified by another DMV
SCL = 90 cm
estimate ?!

Fleming beach August 2001

(93)

an TenBruggencate
VERTISER SCIENCE WRITER

A pile of rotting limu stinks up a beach at Kāneʻohe on Oʻahu, or perhaps at Kahului on Maui.

It's because of pollution, right? Or it's seasonal, or maybe a function of winds and currents.

It could be any of those things and any of several others, say Hawaiʻi's seaweed experts.

"One place is Kanahā Beach Park on Maui. There's always something on the beach there, sometimes rare algae," said retired University of Hawaiʻi botany professor Isabella Abbott, the dean of phycologists — seaweed experts — in the state.

Another Maui location, off Lipoa Street in Kīhei, has an interesting mix of algae that aren't dead. They are drift algae that are always wet and wash in and out with the tides.

"That's a good place for collecting *gracilaria*," the edible seaweed known in Hawaiian as manauea, she said.

The winds and currents are probably the primary reasons these locations have piles of seaweeds. But there are many others.

Botany professor Celia Smith called the business of washed-up seaweed "a pretty complicated scenario."

It certainly is not entirely the fault of human activity, she said.

"Water motion will crop biomass from the reef even in a pristine environment," she said.

For some species, breaking off pieces may be a technique for spreading themselves. It may be that they have evolved to break off in the surf, so the free-floating chunks can "replant" themselves on the reef. Some may be driven ashore, but others may find places on the reef, or be washed off the back of the reef into deeper water.

"Some work out of my lab suggests that self-pruning — we call it fragmentation — is a competitive advantage for weedy species. Even if they tumble off the reef and still are in light, they can make it," she said.

Most seaweeds may be doing this at some level, and some of them have developed unique ways to get their genes spread. The native *Halimeda discoidea* is often bitten by fish, then spit out apparently because it doesn't taste good, and the bite-size pieces can settle and regrow, Smith said.

A few species may indeed react to human effects and the presence of nutrients, such as sewage and agri-

Scientists

HA 9/4/01 B4

THE HONOLULU ADVERTISER SEPT. 4, 200

Many factors con

probing mysteries of sea

ibute to growth

cultural runoff, by growing so aggressively that the next set of big waves breaks them free.

Smith said nutrients may be associated with blooms of the alien red alga *Hypnea musciformis* and the native sea lettuce alga *Ulva fasciata*, whose Hawaiian name is limu pālahalaha. But maybe not.

"Are they more responsive to nutrients? That's an active area of research," she said.

Much about seaweeds remains a mystery.

"We don't exactly know what makes seaweeds bloom," said Karla McDermid, a botanist in the marine sciences department at the University of Hawai'i at Hilo.

A pile of seaweed on the shore means that somewhere, seaweed is growing fast, presumably in response to some environmental condition, she said.

"It's not just nutrients. It might b warm water, long sunny days, o calm waters. Each species has a different suite of features that allows it to grow quickly and reproduce," McDermid said.

Overfishing can also play a role, because some limu may naturally be kept in check by the fish and crustaceans that eat them.

Maui residents have argued that the development of the Kahului Harbor breakwater prevented natu-

weed propagation

ral flushing of the bay there, allowing piles of smelly limu pālahalaha to collect in the corner of the bay.

Ultimately, scientists may not yet have the answers in particular situations. Marine scientists are still trying to figure out exactly why the wispy, green marine alga known as *Cladophora sericea* causes massive blooms every few years off Maui. One such bloom has been under way this summer.

Early theories that nutrients from shore or sewage injection wells are causing the occasional cladophora blooms have been discounted. Maybe it's a particular weather pattern, current, or other feature.

Smith said the seaweed blooms may be messages about changing conditions in the environment.

All three researchers said there is still much to be learned about seaweed and the marine environment. In the past year, experts have located 28 species never before recorded in the Hawaiian Islands, and seven that are entirely new to scientists.

Date: Fri, 05 Jul 2002 09:30:17 -1000
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: The Wahine here

FIRST DIVES for J and P 2002 MAUI book

122c (Tiamat known since 1991) is here. Sighted first dive July 2nd pm at Reef2.

Also 436C resighted July 4th pm dive at Reef2 complex HaleManuII.

Also 612C resighted July 4th pm dive at Reef2 complex HaleManuII.

But Tutu missing. And she's a regular so she's Got to be at East. Other wahine usually take their time to report in so we'll see.

Also. HUGE worry. Zeus not sighted yet!

U & P First Dives July 2002 Hawaii

7/10/02

915pm Turtle up past Volleyball Court — 5690

945pm Turtle back to water in dry sand - Stone wall of Residence

1154pm for 13 MIN - eggs deposited

7/11/02

303 AM — 1259 AM Finished covering of nest

Turtle boxed - ATTACHMENT STARTED

333 AM Box lifted up.

337 AM Released in water

1015 pm Turtle out Right near second nesting site.

Mr. Sasaki
661-8853

ID — ST14

4809

SCL 91.2
CCL 99.0

Telonics No. # 451400
9 on / 3 off

Thursday
7-11-02 430PM
GPS Taken at nest site
N 20° 52.002'
W 156° 40.495'

See page 46

ALAEloA

NApili — Turtle watching

• 7/11/02 7PM Thursday

N 20° 59.316'
W 156° 40.214'
Cliffs

RHF New

4369415B46

Inserted 7/11/02 AM

"Thank you for being a friend"

MAGnet off Transmiter = 1105 Pm 7/10/02
HST — Wednesday

"Once you get past twepin"

98

See Book August 27, 02 WAIHE'E EXCAVATI

Date: Fri, 26 Jul 2002 19:44:27 -1000
From: Skippy_Hau@exec.state.hi.us
To: Peter Bennett <honu@turtles.org>
Cc: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>,
Glynnis Nakai <Glynnis_Nakai@r1.fws.gov>,
Ursula Keuper-Bennett <howzit@turtles.org>
Subject: Update on the Waihe'e Beach Inspection

WAIHE'E Maui Reduce

Peter, Ursula, and others,

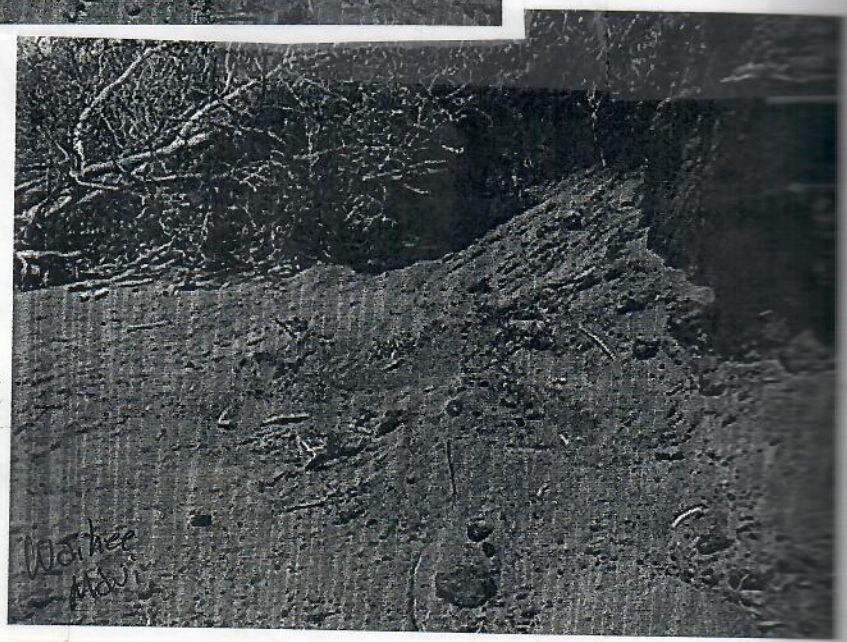
Before leaving the office, just wanted to let you know I went to inspect the Waihe'e shoreline this morning. There were about 21 possible attempts for nesting. I could not find any new tracks but I did meet a man who walks along the shoreline in the morning.

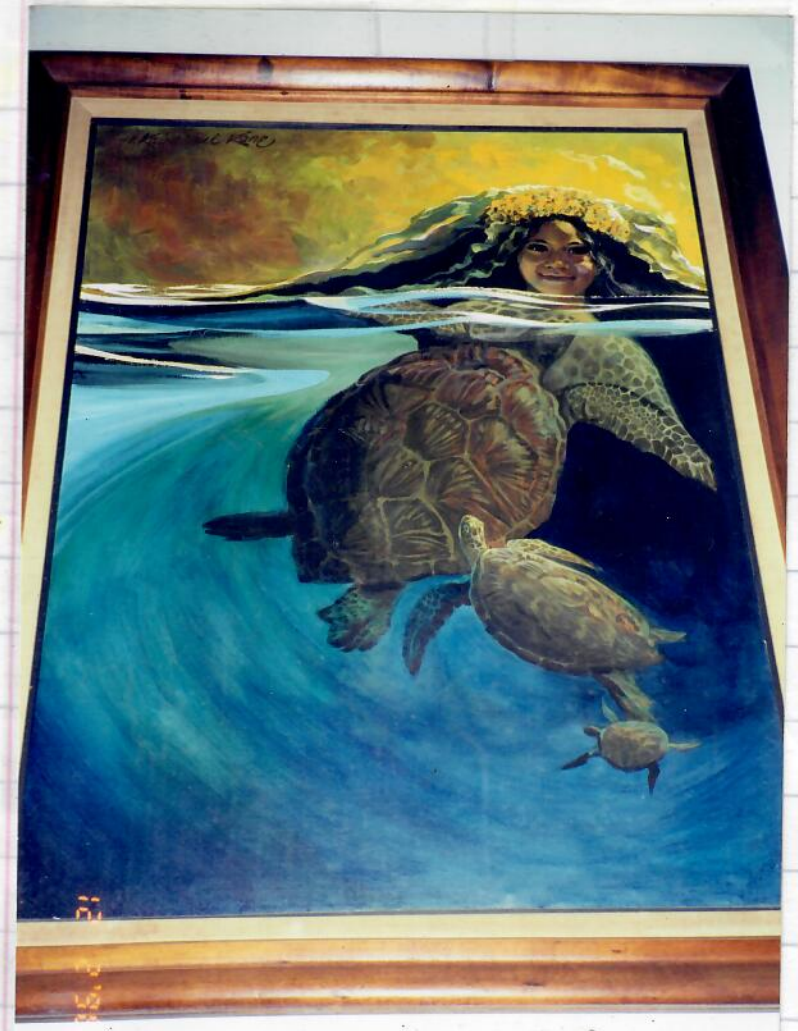
He said he saw 4 big turtles up on the beach (7/22). The one location which I marked was confirmed by him to be an area he believes there was a nest. The others appear to be too unstable with sand likely covering the turtle and any hole she (they) might be trying to nest. I will write later when I contact the first person who called me this weekend.

Possible Nesting Attempts Waihee.

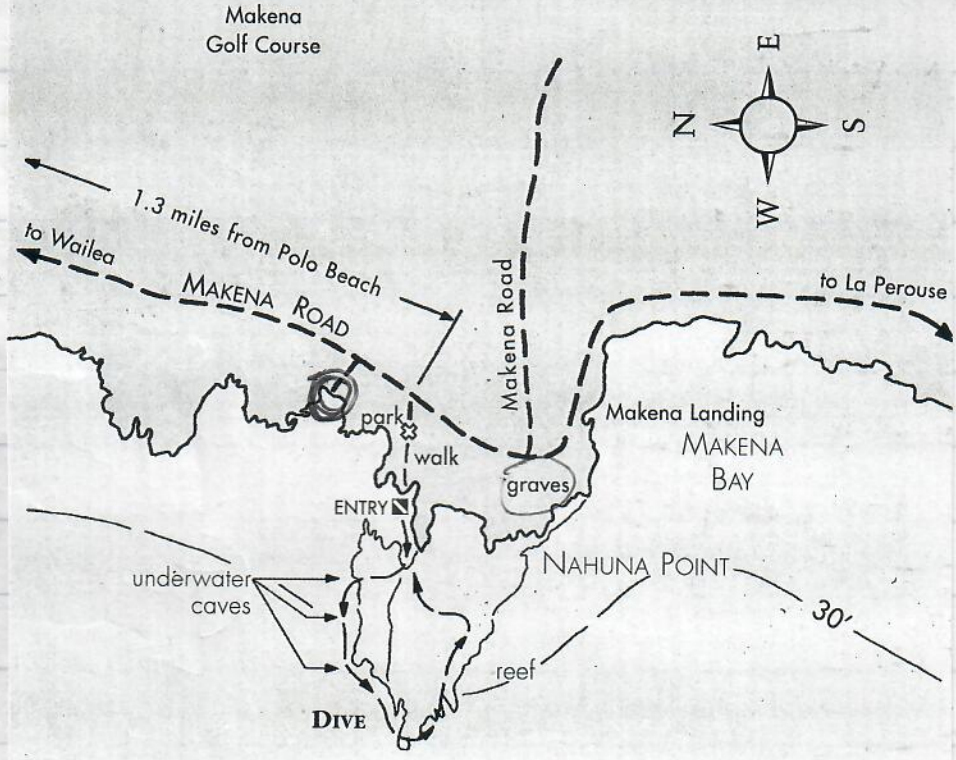
8/2/02 I took a picture of a possible excavation Nothing seen WAIHE'E way of tracks OR TURTLE

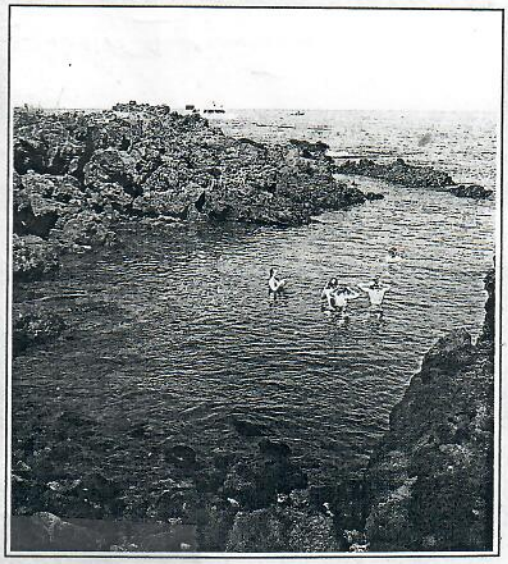
Bob Morris MARC Rice & GB visited this site 8/2/02 3pm walked 200 YARDS TO the left from Beach/Driving Range parking lot. Fisherman said he sees turtles swimming close to shore in late afternoon None on shore seen.





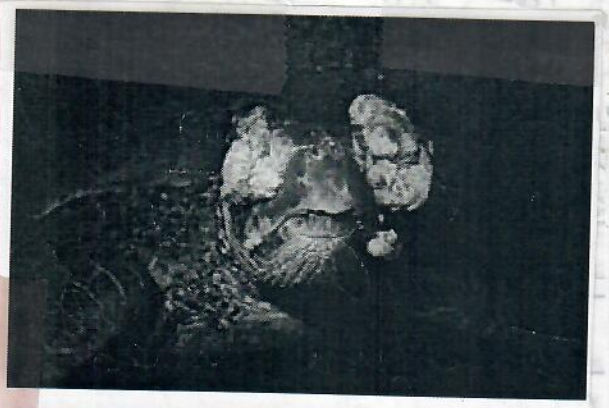
NAHUNA POINT (The Five Graves)





Enter at the small cove at the end of the rock-lined foot path.

* The map does not reflect the recent extension of Makena Alanui Drive. Please refer to the written directions on opposite page to direct you to the site.




"Doing the course with you was the best experience I could imagine."
—Elizabeth Kuh
"Once again you have made our diving experiences more than we expected...it's a treat to be on your dives..."
—Gary & Jane Cooper
(808) 875-0183
octopus@maui.net
OctopusReef.com
All photos: Octopus Reef ©2000

(102) from page 83 * BIOTOXIN ideas — TOXIN of some Algae inhibiting Micro flora hence less digestion absorbs — CRYTO

21 AUGUST 02
Wednesday

one to the left of non-operating outflow rod reversal heads. Outflow not very strong.
Drove back to Nohonani to drop off Peter. Returned to Lahaina Shores — Karen and I walked beach — found fresh tracks up by first house / stone wall. Turtle just finishing chamber excavation. Eggs being deposited 1130pm (~15 min to deposit). 20ft from 6th nesting. Many photos and digital video. "Scratches" of some sort on fiberglass of transmitter attachment. Antenna looks in fine shape.
Turtle back to the water at 136 Am.
22 Aug. 02 Thursday / Slept until ~9 Am. 8/22/02 Thurs.
Went to ACE Hardware for stakes, caution tape, hammer. Put up turtle sign on stake. Two fellows had put temporary barrier around nest site.
Drove to U & P's. Scuba at ~1130 Am 40ft 1hr 15 min — Found "WANNA" TDR #4 (=) in turtle depression Reef 2 — Break-Away cotton diaper "LINK" had torn.

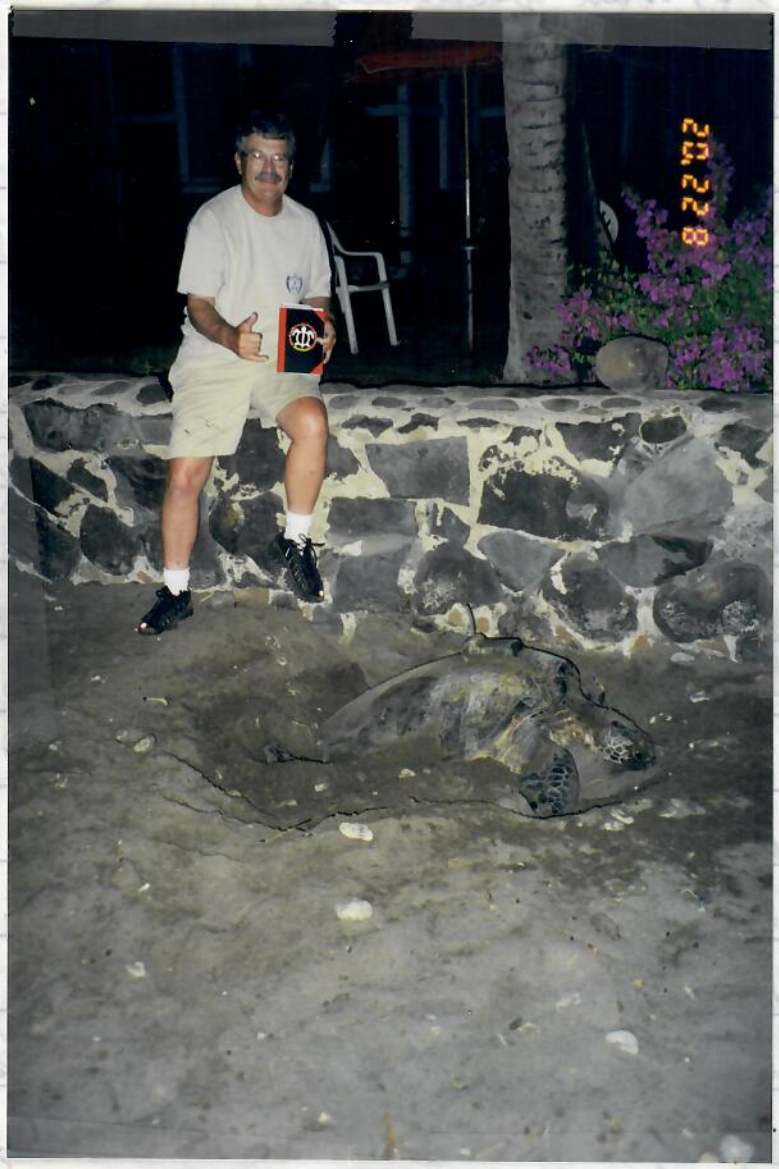
Saw man and 2 boys chase Turned Turtle that O&P have been seeing. It was on top of reef o

22 AUG 02 Snagged? or bitten by another turtle?
Thursday

Male with TDR not seen.
Afternoon discussion at apartment about Lyng byiz.
5 pm drove to Calvina Shoes - checked out - walked to Volley Ball Park area to look for hatchling tracks - Richard McCarty (P.6) reported 8:15 pm 8/21/02 Phone Interview with him 8/23 Friday A.M.
510 hatchling crawled to canoe shed - meeting they were having (Hawaiian Cultural). Some seen coming out of site by Beach Morning Glory - mound. est. 40-50 total.
Departed Waikiki 8:42 pm Hawaiian Air to Honolulu

8/24/02 EXCavation by Glynnis & Skippy 6 pm
Sat. (79 hatch)

7th Nesting Cohaina 8/22/02 1AM



Date: Sat, 31 Aug 2002 02:33:28 EDT
From: Amdevilish@aol.com
To: GBALAZS@honlab.nmfs.hawaii.edu
Subject: KULEANA TURTLES

[Part 1.1, Text/PLAIN 12 lines.]
[Unable to print this part.]

Reduce MAUI

ALOHA,
MY NAME IS BRYAN I HAD TALKED TO YOU IN LAHAINA WHEN YOU WERE SETING UP THE CAUTION TAPE FOR THE RECENT EGG LAYING. I HAD JUST GOT DONE SURFING. I AM CONCERNED ABOUT MY TURTLES HERE WHERE I LIVE IN HONOAKAWAI (KULEANA). A FEW OF THE TURTLES HAVE HAD MANY TUMORS. I BELIEVE THAT IS WHAT THEY ARE, IS IT LIFE THREATENING? IS IT POLUTION? SOME OF THEM EVEN HAVE THEM AROUND THE EYES. I AM AN AVID DIVER AND UNDERWATER PHOTOGHRAPHER THAT WOULD LIKE TO LEARN MORE AND IF YOU NEED ANY VOLUNTEERS HERE ON MAUI LET ME KNOW I WOULD LOVE TO BE OF ASSISTANCE. HERE ARE A FEW PHOTOS OF MY TURTLES.[IMAGE][IMAGE]MAHALO,
BRYAN WAGGONER
808-665-0311 HOME
AMDEVILISH@AOL.COM

105

8/02

Dear George,

How can I thank you enough for your generosity & hospitality during my stay. It has been such a pleasure meeting your family & exploring your beautiful islands. Watching your "daughter" 5690 nest on our doorstep was an absolute highlight of my visit!!

I know that Myles (and I) also wanted to thank you for giving him the opportunity to visit and for introducing him to the world of honu!! I look forward to hosting you in Australia in January and to working with you long into the future. Thank you. With much love,

Karen (and Myles)

Place Postage Here
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Printed in Hong Kong

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Endangered sea turtles are making a dramatic comeback in Pacific waters. It is now a more familiar sight to diving enthusiasts. *Photo: M.J. Furnia.*

AUGUST 31, 2002

```
04809 Date : 31.08.02 04:18:53 LC : 3 IQ : 66
 Lat1 : 20.993N Lon1 : 156.667W Lat2 : 26.843N Lon2 : 129.305W
 Nb mes : 008 Nb mes>-120dB : 000 Best level : -126 dB
 Pass duration : 500s NOPC : 3
 Calcul freq : 401 650628.0 Hz Altitude : 0 m
 165 07 901 23
 00 01

04809 Date : 31.08.02 05:15:00 LC : 3 IQ : 68
 Lat1 : 20.997N Lon1 : 156.664W Lat2 : 15.502N Lon2 : 179.815E
 Nb mes : 009 Nb mes>-120dB : 000 Best level : -124 dB
 Pass duration : 548s NOPC : 4
 Calcul freq : 401 650628.4 Hz Altitude : 0 m
 165 05 901 23
 00 01

04809 Date : 31.08.02 05:59:06 LC : 2 IQ : 58
 Lat1 : 20.994N Lon1 : 156.668W Lat2 : 16.466N Lon2 : 177.312W
 Nb mes : 008 Nb mes>-120dB : 000 Best level : -125 dB
 Pass duration : 659s NOPC : 4
 Calcul freq : 401 650629.9 Hz Altitude : 0 m
 165 13 901 23
 00 00
```

AU NAPILI BAY

SEPT 2, 2002

```
04809 Date : 02.09.02 04:48:08 LC : 1 IQ : 50
 Lat1 : 20.991N Lon1 : 156.672W Lat2 : 18.377N Lon2 : 168.083W
 Nb mes : 007 Nb mes>-120dB : 000 Best level : -125 dB
 Pass duration : 664s NOPC : 3
 Calcul freq : 401 650634.4 Hz Altitude : 0 m
 164 14 370 55
 00 01
```

```
 00 00
```

September 1, 2002

```
04809 Date : 01.09.02 04:59:54 LC : 3 IQ : 68
 Lat1 : 20.997N Lon1 : 156.667W Lat2 : 17.022N Lon2 : 174.125W
 Nb mes : 006 Nb mes>-120dB : 000 Best level : -124 dB
 Pass duration : 359s NOPC : 4
 Calcul freq : 401 650631.1 Hz Altitude : 0 m
 164 12 982 21
 00 00

04809 Date : 01.09.02 05:36:15 LC : 3 IQ : 68
 Lat1 : 20.997N Lon1 : 156.663W Lat2 : 18.944N Lon2 : 166.106W
 Nb mes : 011 Nb mes>-120dB : 000 Best level : -124 dB
 Pass duration : 587s NOPC : 4
 Calcul freq : 401 650631.4 Hz Altitude : 0 m
 164 22 982 21
 00 00
```

"The ecology of green turtles at Honokowai, Maui, Hawaiian Islands" Helicopter Survey

HONOKOWAI

* USE SONIC TAG IN ANKLET – ONE ON EACH HIND FLIPPER

27 AUGUST 2002 ARRIVE 740AM FL1550 Island Air TO Kapalua-alone

Tues.

objectives: 1) Scout location of 5690 using GPS; 2) Bring back fecal samples, 2.) Floater TUBE; 3) Video dup 4.) obtain Recovered TDR MK5 from Male; 5) Collect PTS 6/02 Plot for Mel by Ursula & Peter – Also Donna Brown so I could give her Pager Maui 2. TO McDonalds in KAHANA breakfast & discussions. Drove toward Honolua Bay in LCD using GPS to look for interesting habitat of 5690 Coordinates =

Drove north on old Honopiilani Hwy - spotted at coast sites along the way. found 21 54 MIN N just a short distance past Flemmy beach turn off. Walked along road and up an berm to look down. Low tide but Pterocladia on rocks below. offshore (200M) 5 or 6 turtle surfacing seen. Earlier we drove to past Honolua Bay - lookout along road. Nakalele is just past here. Went to lookout just south of Slaughter Beach (still within LCD). Climbed along on rocks to watch for turtles. U & P saw 2 a ways out. New house under construction

4 -- -C seen/photed by U&P Returnee 8/26/02 Dive. First known Return from FFS to Honokowai

27 August 02 numerous "roofs" to it.

Tuesday Drove back to Honokowai - lunch at diner. TO Nohonani - prepared for dive - out ~1:15pm - TO reef 2 with flowers for turtles - Goodbye dive for U&P. I took paper money and small old vial of sand from East Island. Return ~3:45pm to apartment - relaxed in pool for awhile.

Discussions, then packed - to Kapalua airport Depart 5:40pm for Honolulu.

---

5 September 02 Thursday

Depart HA FL.196 5:38pm ALONE for Kahului - Dollar Car Rental to Cahana Shores Beach Resort - Rm 603 #138 w/TAX Sunset was about 6:45pm or so. Walked 7:15pm beach and noted waves/tide had come up very high - to wall for nests 6 & 7. To base of coconut tree for nest 5 by Right of way. Light is out at Park. Viewed Polynesian dance-dinner show. Wash-out line to first pole of volleyball net. No sight of nesting turtles. Went to dinner Bubba Gump Shrimp

(108)

Photo Rose-Marie Receptionist at Lahaina shores.

5 September 02 Thursday

DAVE LANG lives at JOHN Mallory house. www.bubbagump.com

restaurant in Lahaina. Returned about ~930p. No sign of tracks. Examined closely nest site 4 - dug sand - found 7 old dried dead hatchlings at surface being eaten out by red ants. Collected. There is an upward slope from emergence site before downward slope to ocean.

Continued to walk beach at intervals until ~3am. Nothing seen.

6 September 02 Friday — Sleep ~ 330am-9-

wrote email to Skippy, Glynnis, steveW. about dead hatchlings and wash-over. Walked beach

9-1-02

```
04809 Date : 01.09.02 09:26:43 LC : 3 IQ : 58
Lat1 : 20.995N Lon1 : 156.666W Lat2 : 17.630N Lon2 : 171.652W
Nb mes : 008 Nb mes>-120dB : 000 Best level : -123 dB
Pass duration : 465s NOPC : 4
Calcul freq : 401 650634.4 Hz Altitude : 0 m
163 26 55 339
00 00
```

WARIII 5690

~1PM drove to Kapalua & Napili Bays, Kahana area. Was appalled to see/find wall-to-wall apartments, hotels blocking beach access. Beach right-of-ways exist, but difficult to locate and when found, minimal car park exists. Two Rights of way (216 & 217?) found to Napili - but down from different roads - and latter is not marked -

see p. 162

Sept 2002

THURSDAY 5	FRIDAY 6
R 6:16am S 6:44pm	R 6:16am S 6:43pm
R 4:47am S 6:11pm	R 5:52am S 6:57pm
6 9 NOON 3 6 9	6 9 NOON 3 6 9
AM H 2:43 1.1 L 8:14 0.1	AM H 3:28 1.3 L 9:05 0.1
PM H 3:15 2.5 L 10:03 0.2	PM H 3:53 2.4 L 10:34 0.1

Beach walks

5690+ others feeding at Napili

met ALEXANDER GONZALES

Napili shores security guard.

9/6/02 Friday - The cove by Napili Shores isn't posted. walked to south point of Napili Bay - rocky point with cement steps leading down from small "Gazebo" restaurant of Napili Shores. Several turtles immediately spotted surfacing close to rocks - foraging. After just a few minutes the antenna of 5690 was spotted. Watched her, and ~20 others most her size for 2 hours - video + some paint pictures. No algae on rocks actually seen, but presume Pterocladia is there covered due to higher tide. no algae seen higher on rocky or steep slope beach. Most significant factor besides finding her for the very first time was seeing her feeding amongst so many others of her kind. Could some be from 1980-81 nesting? Her "mates"? Waves sets became larger making it

2PM

5690 in the sea

Friday
6 September 2002

impossible to snorkel out to see her underwater. As waves crested turtle could be seen in green center - turn to escape the crash. Does transmitter affect 5690 ability under these conditions? Once or twice I thought I saw a turtle turned all the way over in green of breaking wave. If this did happen then potential damage upon impact on bottom - rock would be very great.

~4 PM Kids - body boarders - started using the same area/adjacent as turtles, the turtles left - moved out. This seemed to coincide with first boarders that surfed a wave over the turtles' feeding site.

Drove back to LAHAINA Shores cleaned up and checked out ~ 5:30 p walked beach again, met Stiffy Fe and Joani Morris at vest #4 for excavation - Dave Lang likes John Mallory house assisted. Also kids that live down the way.

Sat Tag attach no. #4

Friday
Sept 02 Tiani Barbie (13) and Cody Miller (11).
Five live hatchlings found that would have died, if not excavated.

Departed 8:17 PM Hawaiian Air.

Aug. 21, 2002

Mrs. Thomas Conklin
12026 E 25th Ave
Spokane, WA 99206

Dear George,

Well, we h[illegible]
into a routine back in Spokane. We took my Dad to Seattle to see the Yankees play the Mariners. He has been fortunate to have seen the Yankees play in quite a few stadiums and this was an added treat.

We thank you for the picture of my Dad + Kristen. I will also make copies of ~~the~~ the info packets you sent for my brother + niece. We really appreciate your thoughtfulness. My Dad (over) talks to everyone he can, about the turtles + what

you have done. He'll be back to Maui on Oct. 1 and will miss the rest of the hatchings, but he has been thrilled by all that has taken place. Thank you, again, for your patience + generosity.

Aloha,
Ruth Conklin

BIRD OF PARADISE
Mahalo Card

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808 • 487 • 7299

Item # 27810
Original Artwork
by Yuko Green

113

FLEMING 22 JULY 2001 nesting

Date: Wed, 25 Jul 2001 16:13:04 -1000
From: SKIPPY_HAU@EXEC.STATE.HI.US
To: WILLIAM_S_DEVICK@EXEC.STATE.HI.US
Cc: gbalazs@honlab.nmfs.hawaii.edu, Margaret.Dupree@noaa.gov,
JEFFREY_S_WALTERS@EXEC.STATE.HI.US
Subject: 7/25/01 Turtle Nest D. T. Fleming Beach

call #s - MAUI book

DIVISION OF AQUATIC RESOURCES - MAUI
DEPARTMENT OF LAND & NATURAL RESOURCES
130 MAHALANI STREET
Wailuku, Hawaii 96793
Phone # (808) 243-5834
July 25, 2001

Night of Sunday 22 July

To: Bill Devick, Administrator

From: Skippy Hau, Aquatic Biologist

Subject: Green Turtle Nest Reported at D.T. Fleming Beach, Honokahua Bay

On Monday, 23 July 2001, Dr. Steve Williams called and left a message on my phone recorder. Van received the original call and informed Dr. Williams because I was on vacation. He was unable to find a volunteer to check the shoreline. Ms. Glynnis Nakai, Refuge Manager, was busy in the field at Kealia Pond NWR. Mr. Edwin Ayudan(Ph.#661 3701) reported a nesting turtle. I returned in the afternoon and contacted Mr. Ayudan. I explained I would be coming to check the shoreline area between 15:00 and 15:30.

I inspected the north side of the beach and could not find any tracks. I checked with the lifeguard, Wyllie (Ph.#669-6246) who said they had found the tracks in the morning but covered it up so people would not be able to find the nest. As he pointed in the direction where he saw the tracks, a camper was waving his arms to try to get our attention. He noticed I was checking the beach. I went back to that area with the lifeguard.

22 July 2001

Mr. Emy Aguinaldo (1-800-679-7566 pager) was camping on the beach. He said the turtle came up around 21:00. He watched as the turtle tried to dig a nest. It would hit a rock and it would move to another location. After a while, he went into the tent and the turtle at one time began trying to dig under their tent. The turtle finally nested and returned to the ocean. He described it as a large green turtle over three feet long. He did not notice any tags.

I took photos of the nest and surrounding shoreline. There appeared to be one nest site.

This afternoon, I contacted Wyllie the lifeguard who reported no other turtle tracks.

c: DOCARE - Maui

email copies:
Jeff Walters
George Balazs, NMFS
Margaret Dupree, NMFS

Date: Tue, 24 Jul 2001 12:19:38 -1000
From: Shawn Murakawa <smurakaw@honlab.nmfs.hawaii.edu>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re:Name and phone# (fwd)

RE: Maui nesting info from Van

---------- Forwarded message ----------
Date: Tue, 24 Jul 2001 09:46:04 -1000
From: VAN_NESS_P_DACANAY@EXEC.STATE.HI.US
To: Shawn Murakawa <smurakaw@honlab.nmfs.hawaii.edu>
Subject: Re:Name and phone#

Fleming

Good morning,

okee dokee...here's the scoops...Edwin Ayudan (#661-3701) was the caller, I referred him to Steve Williams, who in turned call Skippy(who happened to be on vacation)...I told him I wasn't going to call Skippy because he was on vacation...anyways, by the time Skippy get's the call and shows up at our office it's around 2:30 pm and he comes in to p/u his gps and goes out to Flemings Beach in the Kapalua Beach area. Around 3:10 pm I get a call from a County lifeguard saying that a camper had a turtle come into his tent and so he got the turtle out of the tent then the turtle went on the side of the tent and dropped eggs. To make this long story short, It happened to be the same nest area that Mr. Edwin Ayudan called about...so now we have 2 people seeing the same turtle nest (I think) at different times. Skippy says the camper saw the turtle around 1:30 am (Monday morning). I'm still working on some of the details and will get back to you on that later...any questions, call me. Van ;-)

100%.

That MEANS something.

I'm a student of FP. I told Peter the other day it used to be I worked hard for the turtles. But it isn't that any more. It's the disease and this powerful need to beat it back. Get just one step closer to knowing about it.

I want to know the true global play of this disease. Is there is low-grade low level "cold sore" version of FP?

I want to know that. I want to know ancestral FP to better understand this evil version.

And they eyes might tell us that.

What mark did I get?

At 08:26 AM 2/8/01 -1000, George H. Balazs wrote:

>And someone could very well ask it. I have some answers, but first want
>to hear maybe what you would answer. Because this really ought to be
>included in the paper, it isn't know, not in any direct clear way.
>
>So What? Why is it important? What good is it all?

Subject: Fleming report (fwd)
Date: Tue, 24 Jul 2001 20:19:21 -1000
From: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
To: George Balazs2 <gbalazs@s360.swfc2.nmfs.gov>


```
**************************************
*       George H. Balazs, Leader     *
*   Marine Turtle Research Program   *
*  National Marine Fisheries Service *
*      SWFSC Honolulu Laboratory     *
*         2570 Dole Street           *
*   Honolulu, Hawaii 96822-2396 USA  *
*         Tel:(808) 983-5733         *
*         Fax:(808) 983-2902         *
*    gbalazs@honlab.nmfs.hawaii.edu  *
**************************************
```


Fleming

---------- Forwarded message ----------
Date: Tue, 24 Jul 2001 19:48:51 -0400
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Fleming report

Saw the nest (see pics). Saw a fairly large subadult/small adult just in the breakers bobbing up and down. Same place as where nest was. Might mean nothing.

Next most important. Some fishers laid a long net out just a few feet from the rocks jutting out (see pic) It's long enough to trap a honu.

4.6 miles
high energy beach (I'd be too chicken to go in the water)
She chose the quiet side of the beach (darkest)
Lookout on a cliff if you parked there you could see whole beach.

That's about it.

Here are the pics including a comparison with one you shared with us.

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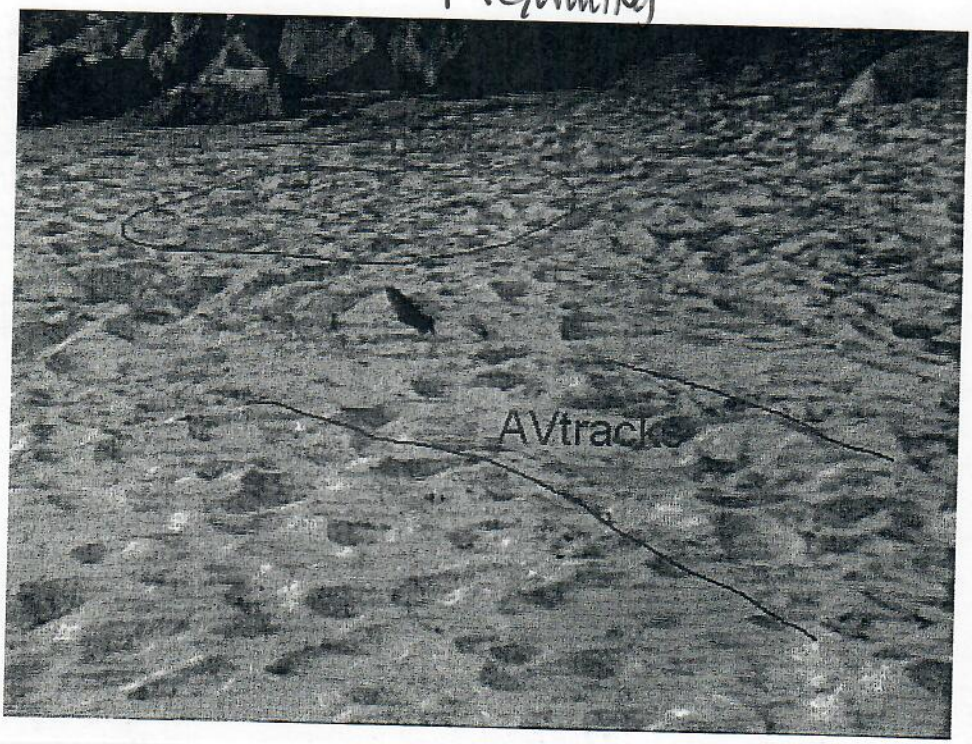
nestavtracks.jpg	**Name:** nestavtracks.jpg **Type:** JPEG Image (IMAGE/JPEG) **Encoding:** BASE64

nestcomparison.jpg	**Name:** nestcomparison.jpg **Type:** JPEG Image (IMAGE/JPEG) **Encoding:** BASE64

fishnet1close.jpg	**Name:** fishnet1close.jpg **Type:** JPEG Image (IMAGE/JPEG) **Encoding:** BASE64

JPEG image 640x480 pixels

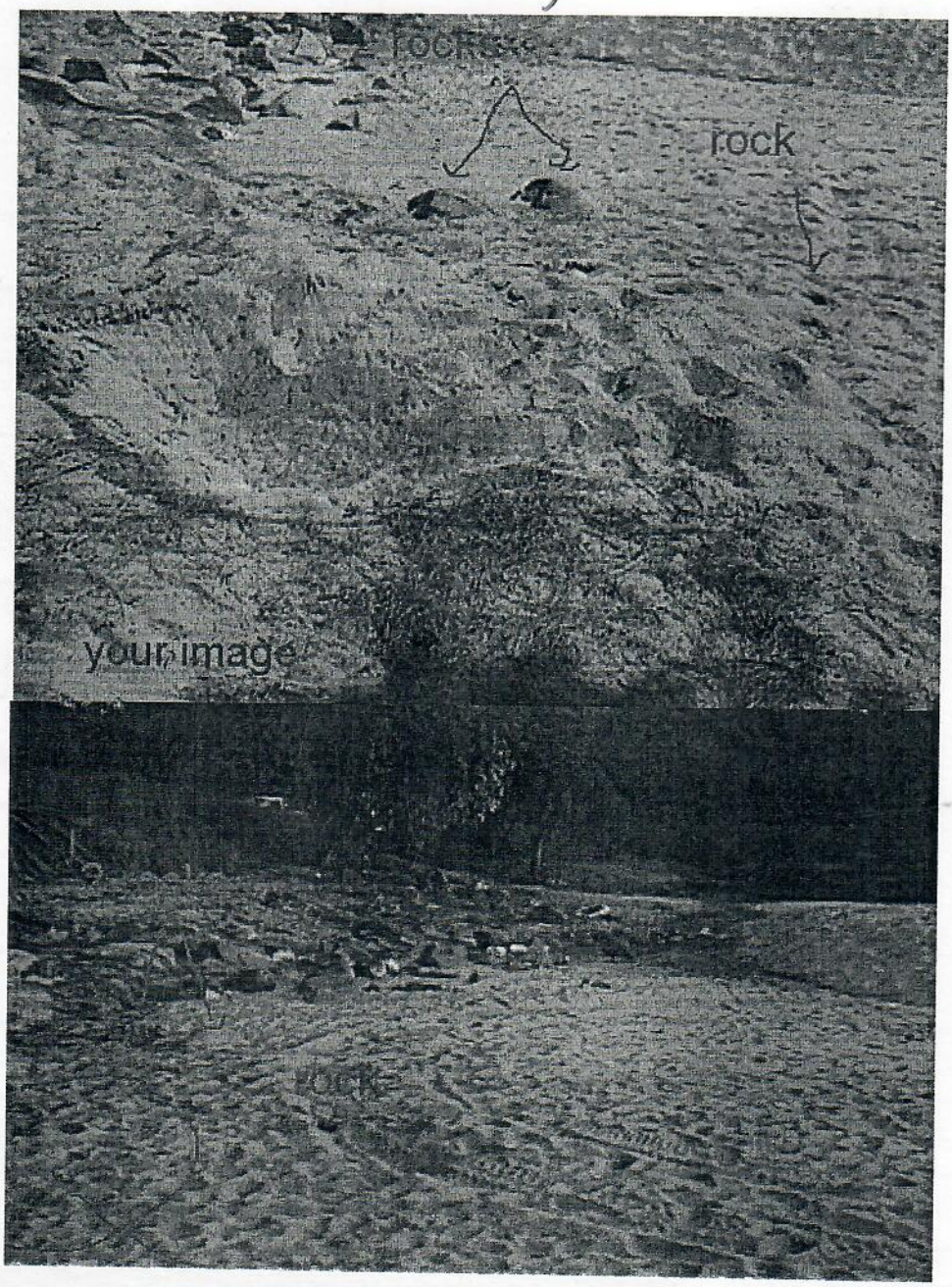
Flemming



JPEG image 640x960 pixels

FLEMING

117



Fleming

---------- Forwarded message ----------
Date: Tue, 24 Jul 2001 15:55:18 -1000
From: SKIPPY_HAU@EXEC.STATE.HI.US
To: gbalazs@honlab.nmfs.hawaii.edu
Subject: 7/24/01 DT Fleming Beach North

---------- cc:Mail Forwarded ----------
From: skippy hau AT ~DLNR_AQUATIC_RESOURCES
Date: 06/02/2046 10:29 AM
To: glynnis_nakai@fws.gov AT StateHiUS
To: williams@mauigateway.com AT StateHiUS
Subject: 7/24/01 DT Fleming Beach North

Glynnis and Steve,

FYI

Photos of the last nest. She attempted to nest about 5 times according to a camper who was right there. She even tried to dig under their tent. It was a green turtle over three feet.

Nest Date 7/23/01 between 12:00 to 1:00 am.

Skippy

Fleming

---------- Forwarded message ----------
Date: Mon, 12 Feb 2001 06:58:41 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Cc: Peter Bennett <honu@turtles.org>
Subject: Re: Since you've got nothing else to do...

I just went to retrieve something for you and the site on BON from Australia has been pulled! Considering I wrote these people for more information I don't like this (might suggest some of their information was incorrect).

However the two original sites where I got my initial information are still there.

Importantly, "The common name for bovine ocular neoplasia, also known as ocular squamous cell tumors, is cancer eye."

If you go here to University of California Veterinary Ophthalmology Service.:

<http://trc.ucdavis.edu/vet_eyes/eye_slide_list.html>

and scroll to "squamous cell carcinoma" you will see several examples, three of which say "conjunctiva, cornea, cow" or "conjunctiva, cornea, horse" and one on the horse is the same pic as the BON site from University of Nebraska where I got my intro to BON at the University of Nebraska site.

<http://www.ianr.unl.edu/pubs/animaldisease/g1184.htm>

I'll only believe info on .edu and .gov sites and won't use from .org or .com

Anyway I can't tell you whether it arises from the conjunctiva but can tell you the neoplasms grow there. I still don't know if the very earliest FP signs are conjunctiva signs or scleral signs showing through the conjunctiva.

At 05:04 PM 2/11/01 -1000, George H. Balazs wrote:

>WHy is there not a single mention in here of Conjunctiva? This doesn't
>worry me at all with regard to our paper/work. But it does make me
>curious. Maybe in cows it just doesn't arise from the conjunctiva. Geo.

G93-1184-A

NebGuide

Published by Cooperative Extension, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln

Bovine Ocular Neoplasia

This NebGuide will aid in the early identification and proper management of bovine ocular neoplasia, commonly known as cancer eye, including appropriate veterinary care.

L. J. Perino, Beef Cattle Herd Health Veterinarian
D. D. Griffin, Feedlot Veterinarian
D. G. Rogers, Veterinary Pathologist

Previous Category | Catalog | Order Info

- BON -- The Condition
- Management/Treatment
- References

The common name for bovine ocular neoplasia, also known as ocular squamous cell tumors, is cancer eye. The term cancer eye is not entirely accurate and carries negative connotations. As we will explain in this NebGuide not all of these growths are cancerous. The scientific term for a cow is "bovine," the medical term for the eye is "ocular," and the medical term for these new and abnormal growths is "neoplasia." Thus, the term bovine ocular neoplasia or BON is more accurate and less objectionable.

Bovine ocular neoplasia (BON) includes a variety of benign and malignant skin tumors of the eyeball and eyelids. Benign tumors are growths that do not spread to other parts of the body and do not tend to grow into surrounding tissues. They can cause local problems with eye function, but do not affect the rest of the body. Malignant tumors are growths of cells that spread to other parts of the body and tend to invade surrounding tissues. Because cancerous tissue (tumor) is not acceptable for human consumption, any affected part of the animal's body will be condemned and an animal with evidence of a tumor that has spread to another part of the body is totally condemned.

Cattle with BON are condemned if the eye has been destroyed, if there is extensive infection, if the animal is in poor condition, or if there is evidence of the cancer spreading to other parts of the body, including the body structures around the eye. Cattle with small, localized lesions may pass inspection after condemnation of any affected parts and a thorough inspection is completed for any of the aforementioned conditions.

standpoint. Failure to deal with cows with BON in a timely manner can result in economic loss to the owner, unnecessary suffering for the animal, and negative public perceptions. This type of poor management is inconsistent with sound quality assurance.

Clearly, it is in the cattlemen's best interest from an economic, humane, and public perception standpoint to treat or market cattle with BON as soon as practical.

BON -- The Condition

The cause of BON is not known; however factors such as breed and environment have been shown to contribute to the development of BON.

Exposure to ultraviolet light from the sun is a possible contributing factor. Increased incidence of BON is associated with increased annual hours of sunshine, increased altitude, and decreased latitude.

Nearly all breeds are susceptible, however, Hereford cattle are most often affected. Susceptibility to BON is heritable in Hereford cattle. Heritability estimates vary widely, but range from 17 to 66 percent. BON is also seen in Simmentals and occasionally in Holstein-Frisians but rarely in other breeds. BON appears to affect cattle that have non-pigmented skin, especially around the eye.

The peak age for BON is between 7 and 8 years of age. It occurs infrequently in cattle less than 3 years of age, although the condition has been reported to occur in younger cattle.

Other factors associated with BON have been examined. A relationship between a high level of nutrition and an increase in BON has been demonstrated in Hereford cows. Viruses have also been associated with the disease but not proven to be a cause. Infectious bovine keratoconjunctivitis (pink eye) has not been shown to be involved. The tumors occur at an equal rate in males and females.

BON can develop on different parts of the eye with differing frequencies. The most common site (83 percent) is the limbus, or the junction of the clear part of the eyeball (cornea) and the white part of the eyeball (sclera) (*Figure 1 a*). Sixty-seven percent occur at the junction on the outer part of the eye and 16 percent occur at the junction on the nasal side of the eye. The remaining 17 percent occur on the eyelids, including the third eyelid (*Figure 1 b*), particularly at the angle closest to the nose and occasionally at other sites. Nonpigmented (white) regions of the eye are more predisposed to BON because of reduced protection from ultraviolet sunlight. Growths on the clear part of the eyeball (cornea) are less prone to spread to other parts of the body (metastasize) than tumors on the white part of the eyeball (sclera). When checking eyes, you should carefully examine the entire eye, but pay special attention to the more common sites and unpigmented areas.

Figure 1a. Growth at the limbus, or the junction of the clear part of the eyeball (cornea) and the white part of the eyeball (sclera). (21K JPG)

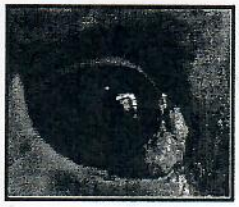


Figure 1b. Growth on the third eyelid. (10K JPG)

There are four stages of development for BON as shown in *Figure 2*. These include plaques (stage 1);

keratoma, or keratoacanthomas (stage 2); papillomas (stage 3); and carcinomas (stage 4). Plaques, keratomas, and papillomas (stages 1, 2, and 3) are benign. Carcinomas (stage 4) are malignant.

Plaques appear as small, white, elevated areas (*Figure 2a*). Keratomas occur more frequently on the lower eyelid. They are skin growths coated with eye secretions and debris (*Figure 2b*). Papillomas may have a wart-like appearance (*Figure 2c*). Carcinomas are more irregular and nodular and may have a pink color due to an increased blood supply (*Figure 2d*).

Figure 2a. Plaque (stage 1) (16K JPG)

Figure 2b. Keratomas (stage 2) (11K JPG)

Figure 2c. Papilloma (stage 3) (11K JPG)

Figure 2d. Carcinoma (stage 4) (11K JPG)

Rapidly growing tumors may be ulcerated and easily damaged (*Figure 3*). These rapidly growing tumors invade the surrounding tissue and/or spread to other parts of the body. Cattle must be treated or marketed before this occurs.

Figure 3. Carcinoma showing irregular, nodular, easily damaged character. (23K JPG)

There are several things that make BON difficult to manage. It is difficult to visually distinguish between benign and malignant tumors early in development. As discussed above, malignant BON may look different than benign, but not always. Dermoid cysts (little patches of skin) may also be confused with tumors. Your veterinarian can conduct further diagnostic tests if the animal's value justifies it.

Also, at any stage, the body may destroy the tumor and it will disappear. This is called regression. Around 30 percent of benign tumors regress completely without any treatment. However, the more advanced the lesion, the less likely that regression will occur and the greater the chance that the animal will be condemned. Malignant tumors rarely regress.

Finally, malignant BON can arise spontaneously without the early stages. In other words, cattle may not develop plaques or papillomas prior to carcinoma formation.

Management / Treatment

You can reduce the incidence of BON in your herd by selecting breeding stock with dark pigmentation or color around the eyes and by culling affected animals and their offspring from the breeding herd.

Check eyes whenever cattle are gathered for other routine procedures, especially breeds known to be commonly affected and cattle over 2 years of age.

Treat or note and recheck cattle with early lesions every two to six months. The earlier the treatment, the better the chance for success.

Sort away cattle with lesions for veterinary evaluation and treatment. Veterinary treatments include surgery, cryosurgery (freezing), hyperthermia (heating), or combinations of these. The success rate, if treated early, approaches 90 percent. Affected animals should be culled from the herd if regression or medical treatment at early stages fails to eliminate the growth. Given the genetic susceptibility of this condition, you may elect to cull affected cattle rather than treating them. Considerations may also be given to culling offspring of animals with ocular neoplasia.

Cattle with advanced lesions that have spread to other parts of the body or invaded the local tissues around the eye should be humanely destroyed and not transported to market. If presented, they will be condemned. Presence of cattle with BON at the market could create negative public perceptions.

References

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Anderson, David E. and Philip E. Skinner. "Studies on Bovine Ocular Squamous Carcinoma ('Cancer Eye') XI. Effects of Sunlight." *Journal of Animal Science* 1961;20:474-477.

Anderson, David E. "Studies on Bovine Ocular Squamous Carcinoma ('cancer eye') X. Nutritional Effects." *Journal of Animal Science* 1960;19:790-799.

Russell, W. C., Brinks, J. S., and R. A. Kainer. "Incidence and Heritability of Ocular Squamous Cell Tumors in Hereford Cattle." *Journal of Animal Science* 1976;43:1156-1162.

File G1184 under: ANIMAL DISEASES
A-31, Cattle
Paper version issued September 1993; 3,000 printed.

Electronic version issued January 1996
pubs@unl.edu

---------- Forwarded message ----------
Date: Sat, 27 Jan 2001 21:14:03 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: new turtle (fwd)

No sir. It is what I say. I am attaching the actual photo, as it was scanned (except it is rotated 90 degrees clockwise --Hoa was looking down).

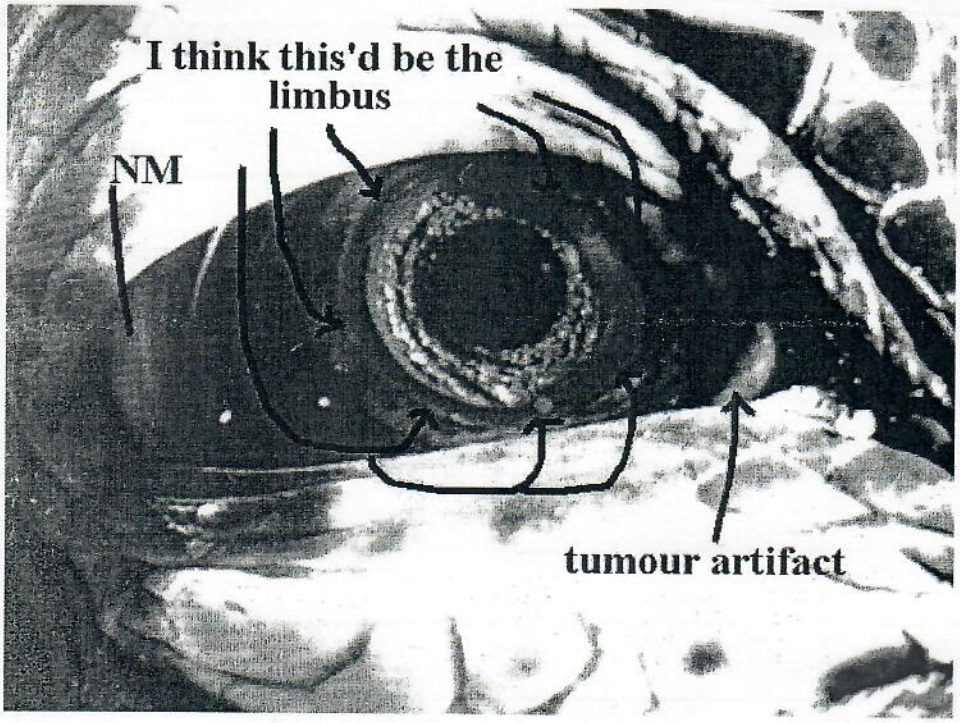
I am resending the first one, this time showing where I think the limbus is. Recall the limbus is the line between the cornea and the sclera. That's my best guess.

I shared this with you because of how amazingly clear the shot was. Of course it's been doctored --gamma'd about 250% to bring out the eye details. Your optometrist would shine a bright light into your eye to check out the detail also.

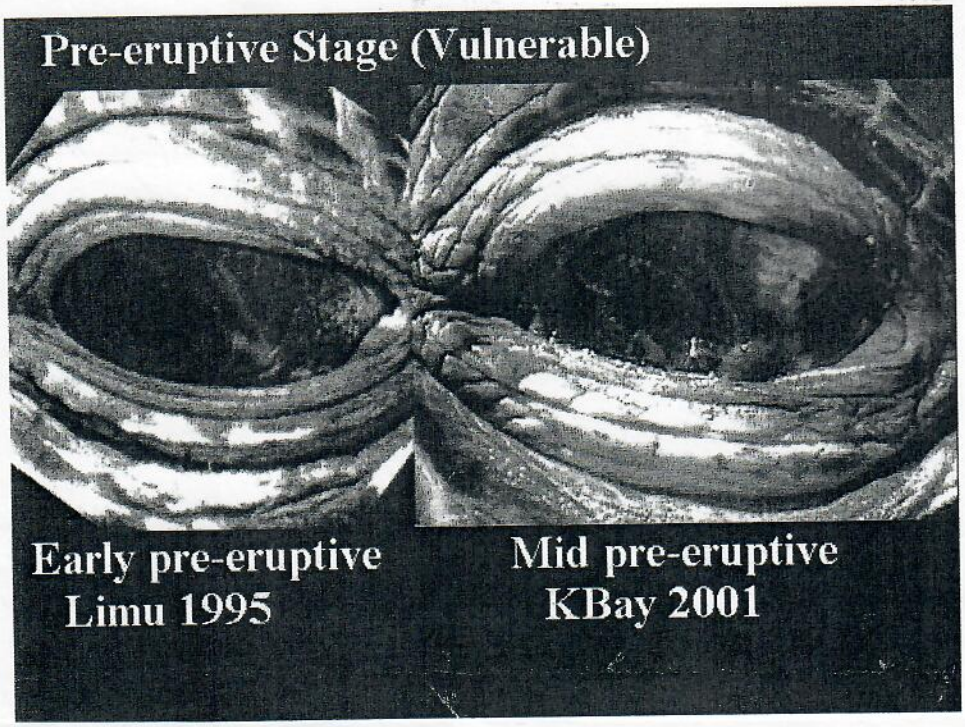
Hoa had a #1 posterior the eye and regressed. All that's left is a tumour artifact. True documented regression case. Very lucky turtle.

Note. I'd never trick you. It's very important that you always trust me. Important you never question the veracity of our images. No doctoring, just deliberating over-exposing to bring out the eye details.

At 03:50 PM 1/27/01 -1000, you wrote:
>diseased very diseased pathologic abnormal not right! Or, more than
>likely, totally computer doctored .....by you.
>
>Ain't no fool, George



JPEG image 640x480 pixels



---------- Forwarded message ----------
Date: Thu, 08 Feb 2001 19:09:39 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Honokowai/KBay pre-eruptive comparison

I hope you can now see why your KBay shot blew me away yesterday. The photo on the left shows the earliest I've been able to trace a lump back. Your shot shows the same anomaly what's got to be a few weeks later.

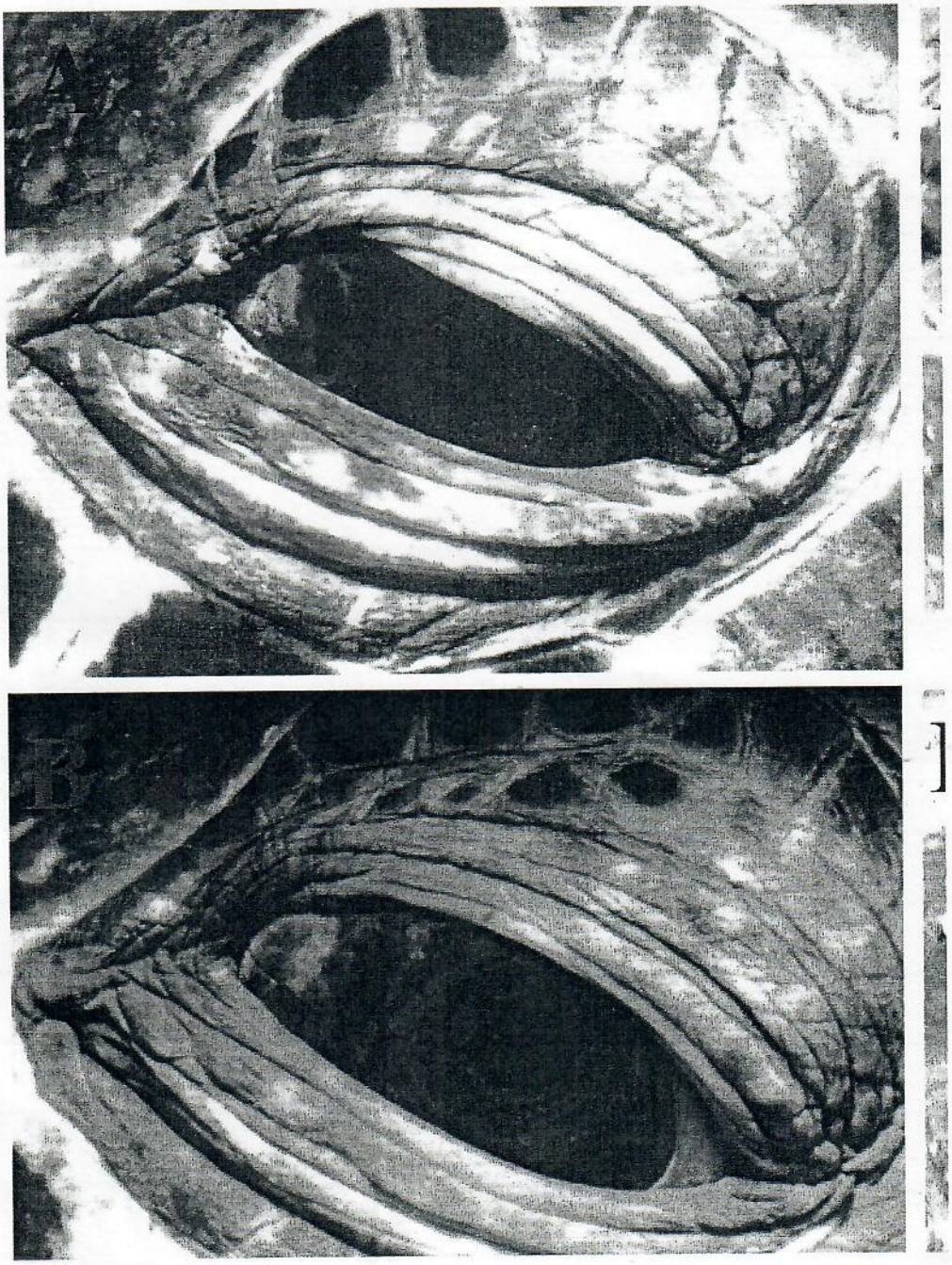
Notice both your honu and Limu show white along the corneo-scleral junction (real subtle) and a lump threatening from that region (Limu's is real real subtle but he broke out in a tumour for 1996 and even this summer he's still got it.

Mahalo so much for filling in a missing link here.

What's incredibly interesting is your honu doesn't show the folds in the conjunctiva. Now I don't know if that's because your photo's a tad soft in the focus or they lose the folds early because the conjunctiva swells... I don't know.

But remember I mentioned "white veining" or "white wisps"? That's what's playing through the conjunctiva on your honu. I'd sorely love to see an intermediate stage. But your honu if you look carefully at the white you'll see two potential hotspots (more white than surrounding white) and I suspect another few weeks and the honu will be showing lumps there also.

Anyway. Back to work work work.


A
B

927

Date: Thu, 08 Feb 2001 15:40:15 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>,
Peter Bennett <honu@turtles.org>
Subject: Re: DEVIL'S ADVOCATE question. US$64,000 one.

We've anticipated this one. Long time ago.

Examining the eyes is important in two FP theatres. In Hawaii --and everywhere else.

For Hawaii the application is obvious. The Work/Balazs tumour scoring (WBTS) is very accurate and you can't go wrong with it. But it limits you to the here and now and the what can be proven.

You have a no-history honu and it's tumour-free. It's a TS0 under the WBTS and that's all you know.

But examine the conjunctiva and you'd know if it were a true TSO (never had FP) or a regression case (TSOR). Further, by examining the conjunctiva you could give that honu a clean bill of health or if it's showing FPharbingers you know FP's incoming.

That allows you to predict the number of new lumpy cases the next season.

Examining the eyes allows prediction of new cases. Not the 100% correctness but close --close and with time, more study, we'll get 95%+ accuracy.

And it is ONLY through eye examination that you can get a decent read of an ohana. Not just the tumoured turtles but also the BREAKDOWN of those without. Those in perfect ocular health. Those with FP threatening (precursors) and those that are regression cases.

And the true beauty is if you REALLY get good at it you won't need recaptures. You can just tell FP dynamics --how the disease works on through--by the eyes (that's the goal).

Application for other areas?

Certainly FLA where there ARE ocular tumours. Does FP come knocking the same way it does in Hawaii? With most of it at the posterior conjunctiva?

Conversely regression. As you know, you can have a turtle that was a TS2 lotsa lumps and yet it can regress completely so just looking at it you'd think it was clean. Tiamat is like that. But look at her eyes and FP's carved its initials in her conjunctiva.

And we believe that "signature" is there forever. God's gift to researchers that is.

In addition eye exams should be given loggerheads, ridleys as well just to see the amount of ocular involement there. If they have none that might be a clue when honu have 100%!

But most intriguing to us is our "cold sore theory". We believe that there is a low-grade FP out there... likely the background FP. Limited to the eyes and as a result unnoticed by workers who expect ugly body lumps.

I think it's there in J's population for example.

What the ocular involvement in Moreton? All important. If FLA and Moreton are different from Hawaii that's a CLUE also.

At Honokowai where do the jactators' bite? Posterior conjunctiva --exactly where tumours erupt. Could be another clue? Dunno. But sure can't ignore that.

See for yourself. Go and get any 20 KBayers you've worked that were TS0's firt time vou worked 'em and TS1 or 2's the very next year. They'll ALL

---------- Forwarded message ----------
Date: Fri, 02 Feb 2001 17:46:48 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: ho boy

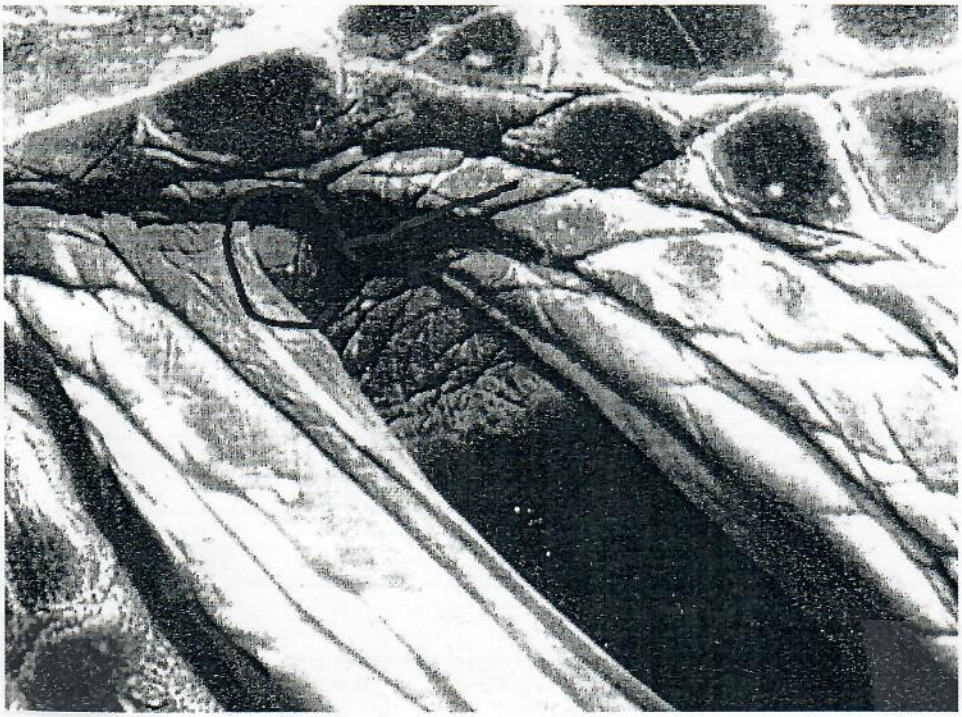
I've "lived" with this image for months and only noticed something this evening.

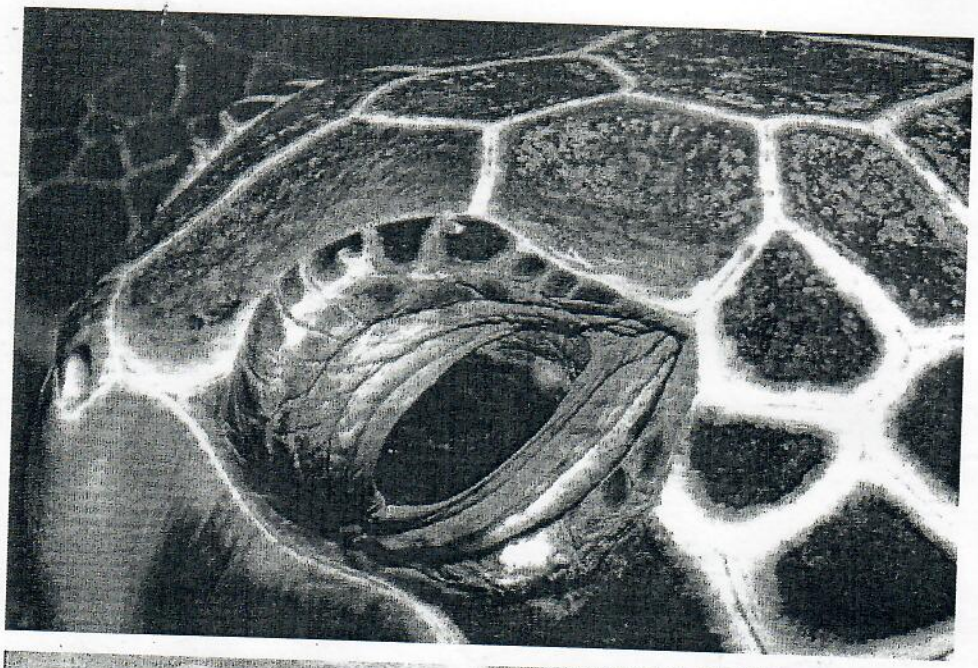
That ball-bearing posterior... is that normal? Do all honu have that?

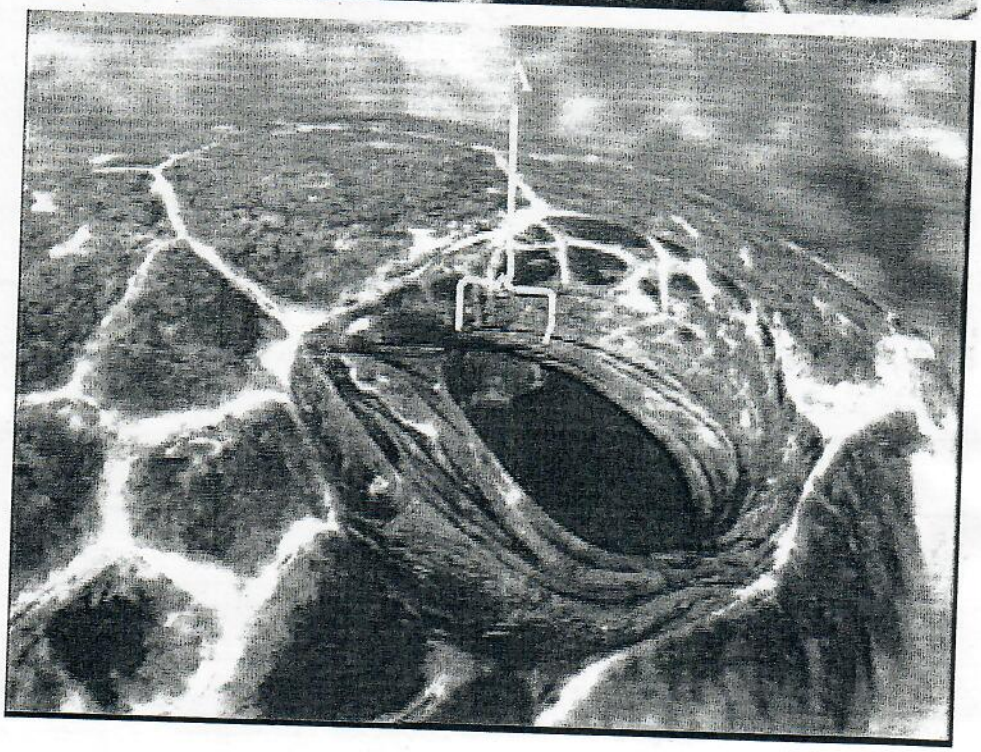
This honu is early pre-eruptive left eye and this right, shows only the subtlest white veining along the corneo-sceleral junction. We've classed the honu as FP-vuierable.

Now is that ball-bearing in all honu or part of FP --a precursor of a tumour erupting of the outer canthus?

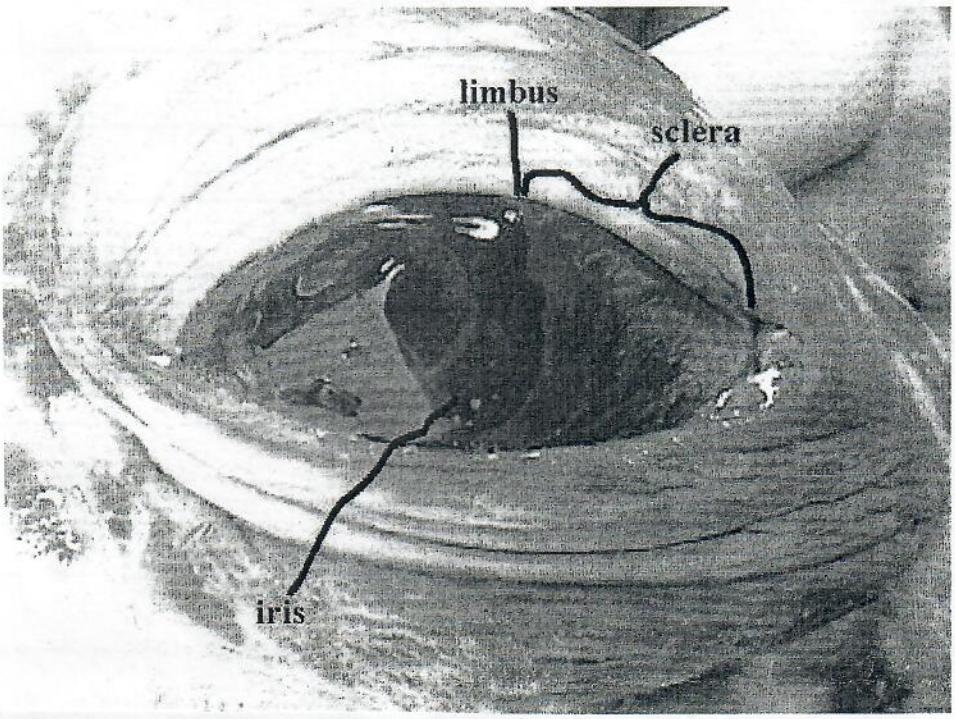
JPEG image 640x480 pixels







JPEG image 640x480 pixels



---------- Forwarded message ----------
Date: Thu, 25 Jan 2001 07:50:18 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Headshot

This is pretty good for a FILM camera (exampleofshot). I can tell (as I bet you can) what's happening to this young honu's eyes. She's got the beginning of that white edging and there's a hotspot at the limbus.

She'll have tumours in 2001.

And your Mavica, because the resolution won't be as good has to be in closer than that. Here's a video capture as an example.

" D:\TEMP\examplemavica.jpg;" is 2000 Turtle 64. First year sighted. Zero tumours. But the eyes suggest it's a regression case. HAD FP. Of course we can't ever prove. And see my shot? It wasn't close enough either.

If I were to get a really close shot of Zone A, I'd know ever better. Because that's almost certain to be an "FP signature".

---------- Forwarded message ----------
Date: Fri, 26 Jan 2001 07:10:28 -0500
From: Ursula Keuper-Bennett <howzit@turtles.org>
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Try this

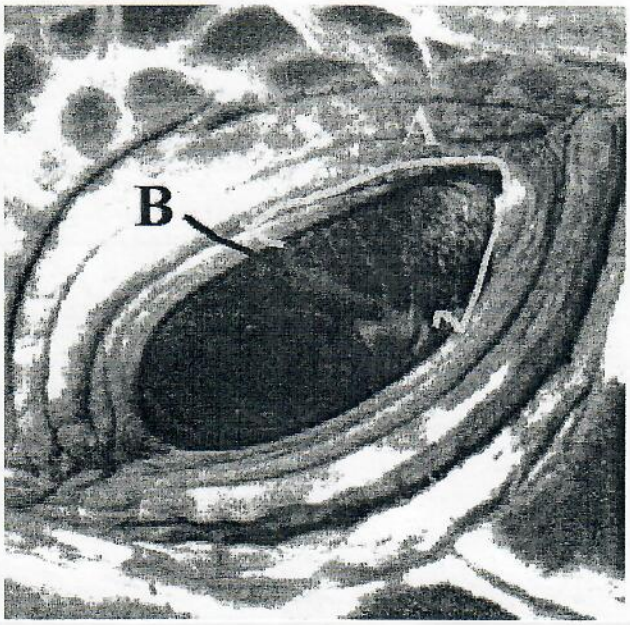
The B-line is a common eruption site. I need to know the name.

Area A also.

I believe you call Area A "conjunctiva". I agree in part. I think it's the conjunctiva showing through the sclera.

But thinking isn't knowing.

131



Mahalo for this image, Dr. Morris. It's a new one for me. All the parts though are exactly where I learned they were to be. So all in line with what I've been reading.

I've just created a large image weaving your jpg with three eye pics George shot at Midway. Right eyes to match the right eye on your send.

Yes. the limbus is that dividing line in vertebrate eyes. In every animal I've seen so far it's fairly obvious line. Humans also. Transition zone between cornea and sclera and also marks the point where the conjunctiva ends.

What I've done with George's three honu eyes (all normal eyes by the way) is match what I think the limbus (red A), sclera (blue B) to the eye you've kindly provided.

There's one catch.

I also see another possible structure (purple line) that could be the limbus (Notice in your image the iris stops and right away there's the limbus?).

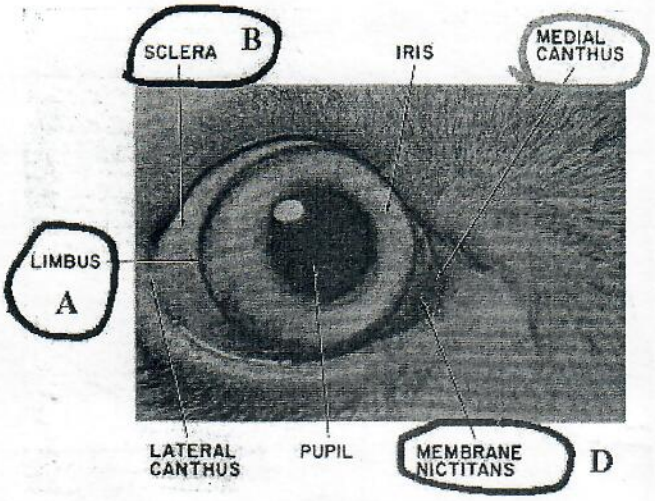
Ultimately, I need the correct scientific name for the Red A-line and the Blue B-area in the three honu images. Our paper refers to those two structures repeatedly.

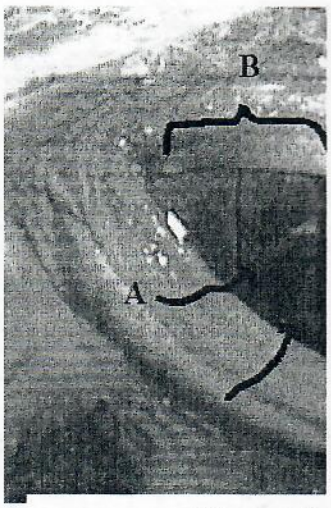
Mahalo again for your time.

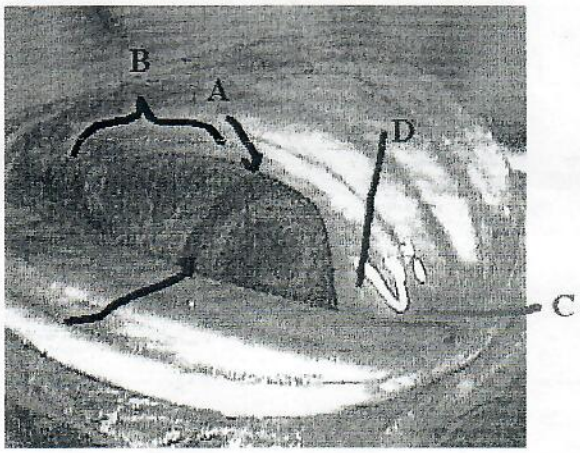
At 06:21 PM 1/25/01 -1000, Robert Morris wrote:

> not sure what they are seeing?? limbus could be line--other area is where sclera should be-covered with conjunctiva?? maybe I am missing something??

JPEG image 871x678 pixels







W048 W0429-LEFT EYE
Kelly Roberts UCF

WO437 W0438-LEFT EYE LEECHES
Kelly Roberts UCF

Date: Sat, 2 Mar 2002 10:52:11 -1000
From: severns@mauigateway.com
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: "D"737 and 787

[Part 1, Text/PLAIN 38 lines.]
[Unable to print this part.]

Ah.... OK.

So far Andy has benignly photographed 82 different turtles (between Kamaole Beach Park #2 and Pu'u o'lai) and that does not include many sites along the coast. He says with all the computer work (comparing and downloading photos, etc.) it is now a second full time job! I don't have firm numbers yet, but I would say less than 10% of those have evidence of tumors.

Maui and Kona Algae / Seagrass Identifications

By Dennis J. Russell

October 26, 2001

09-01-01, North Kohala, Big Island, Hawaii, GHBalazs, 80 ft. depth, reef sample.

Halophila decipiens **(all, with fruits, seeds, big, healthy plants)**

08-15-01, Lahaina side, reef, Maui, GHBalazs, fecal sample (highly macerated, digested)

Underwater collection U&P

Melanamansia glomerata	50%
Pterocladiella capillacea	40
Cladophora sericea	10
Laurencia nidifica	Trace
Sargassum sp.	Trace
Turbinaria ornata	Trace

08-16-01, PM, Male #16, Maui, GHBalazs, fecal sample (highly macerated, digested)

Underwater collection U&P

Cladophora sericea	60%
Pterocladiella capillacea	30
Melanamansia glomerata	10
Sargassum sp.	Trace

HOOULA

08-16-01, PM, "Hibuus", Maui, GHBalazs, fecal sample (highly macerated, digested)

Underwate collection U&P

Cladophora sericea	60%
Pterocladiella capillacea	40
Hypnea musciformis	Trace

08-16-01, Flemming Beach, Maui, GHBalazs, fecal sample (highly macerated, digested)

Collect on the beach intertidal GB

Pterocladiella capillacea	60%
Melanamansia glomerata	40
Codium edule	Trace
Sargassum sp.	Trace

08-23-01, Amauala, Maui, reef 2, GHBalazs, fecal sample (highly macerated, digested)

Underwater collection U&P

Cladophora sericea	50%
Pterocladiella capillacea	50%

08-24-01, Maui, reef 2, GHBalazs, fecal sample (highly macerated, digested)

Underwate collection U&P

Melanamansia glomerata	95%
Cladophora sericea	5

Date: Mon, 1 Oct 2001 12:06:24 -1000
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
To: Dennis Russell <drussell@aus.ac.ae>
Subject: Fedex #8249-7221-9717 - 8 fecal samples from Maui

Aloha Dennis, I hope that by now the Halophila samples with Karla's manuscript have reached you by Fedex. Tomorrow I'm going to send another small package containing fecal remains, 7 collected at Honokowai, Maui, 20-40ft depth offshore (green turtle resting area- <www.turtles.org>), and one at Fleming Beach, Maui (foraging area). Your sample list is as follows (taken from writing on vials):

-8/23/01 Amuala, Reef 2 Honokowai, Maui

-8/15/01 Reef 1 Lahaina side, Honokowai, Maui

-8/16/01 Male 1996 #16 Honokowai, Maui

-8/24/01 Reef 2 Honokowai, Maui

-9/3/01 Reef, Honokowai, Maui

-8/26/01 South Pasture, Honokowai, Maui

-8/16/01 Fleming, Maui

-8/16/01 "Hibulus" Maui

1a RM MAKENA Removal

ID

8/2/02 MAKENA MAUI

turtle taken from cove - WT/Est 220 lbs

large tumors covering both eyes -

blind - tumors adhere to sclera & cornea

no hope for removal or vision

tumor #2 - 1/2 of mouth & side covering part of

external nares -

blood drawn, tumors #2

tumor vent (R) front flipper #3

Tumor #21 nose (L) side #3

7/4 - dipped to color

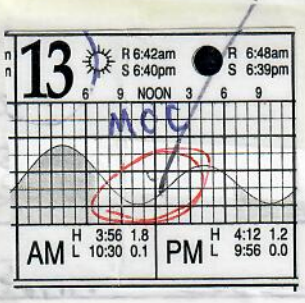
7/4 - 30cc Ringers sol IC. blood for GB drawn

MAKAI ANIMAL CLINIC

Assisted 8/4/02 by GB

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

MARCH wednesday 13



2002

Release of 6 SLP MOC yr Turtles - My 2 w/ VHFs for Radio Tracking.

Depart Aloha 615am SE & GB + Heather and Tammy Arrive Kahului 7AM.

sent
Heather Doyle
47-437 Lulani St
Kaneohe, HI 96744
808-239-1163
beluga974@hawaii.rr.com

sent
Tammy Langer
249 Windward Passage
Clearwater, Florida 33767
(727) 638-6036 - wk cell #
turtletrax@hotmail.com

> Clearwater Marine Aquarium

13 March 2002 Wednesday
Alamo Rental car to Kahului Power plant - ~4 turtles in discharge - 3 w/ bad turtles eyes. TO Maui Ocean Center.
Met Gregg Levine - Bill Gilmartin was arrived
Measured all 6 5-6 years old. 1 male, 1 presumed female (Moto "5" and "6") VHF put on with

3-13-02 PVC "protectors" for antenna, A116
Wednesday Released past Makena ~ 1PM border
of AHiHi preserve. Many photos -
VHF monitoring from shore - both boat
until ~ 1030pm when Troy left. took
boat thru 3/14 listened but
nothing heard.

Return 3/13/02 420pm flight Aloha.