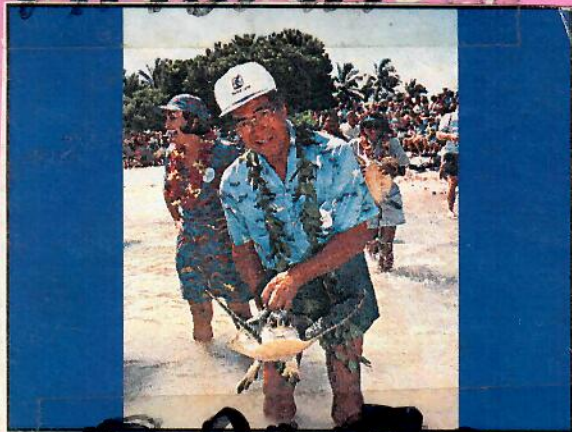


# MAUNA LANI (SLP)



ARGOS  
22270  
R 122

TOC p. 190

ION

## BALAZS

### KAHALUU Beach Park

100 sheets • 200 pages  
9 3/4 x 7 1/2 in / 24.7 x 19.0 cm  
wide ruled • 09918

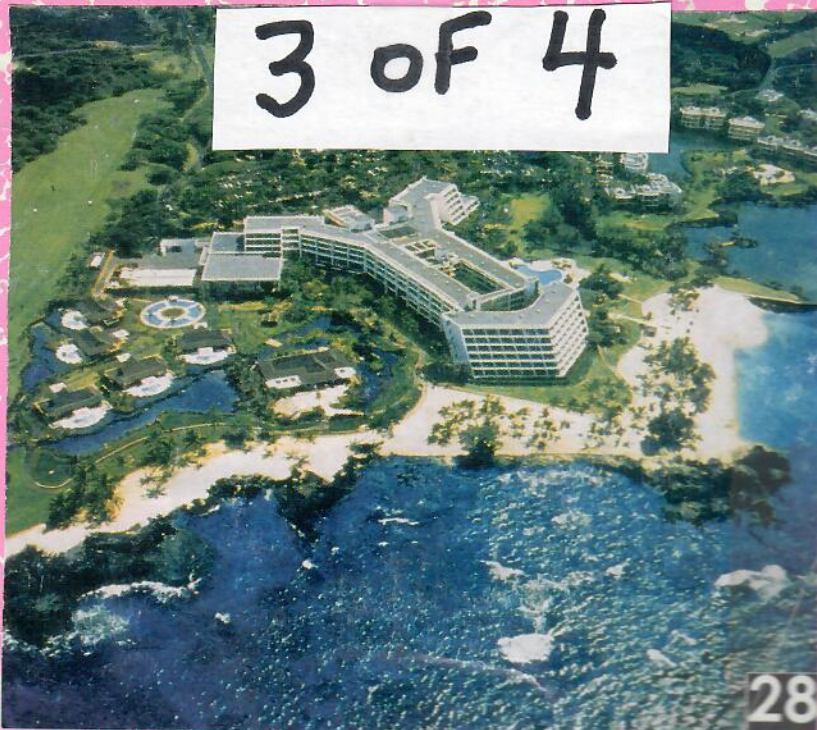
WH6BLQ

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

SAT FAX ID 22270 6/20/02 P. 122

WATSON Cell 987-0707  
Marec Cellular 987-6903

## 3 of 4



28

N 90° 01.7217' 6/20/02  
W 155° 57.540' 22270 ARGOS I.D.

MAUNA LANI BALAZS

Date: Sun, 17 Dec 2000 08:38:51 -1000  
From: "Robert A. Morris" <gturtle@aloha.net>  
To: GEORGE <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Fw: turtles

[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]

For your info --Bob

----- Original Message -----

From: <GLEvineDVM@aol.com>  
To: <makaiclinic@earthlink.net>; <gturtle@aloha.net>  
Sent: Sunday, December 17, 2000 8:34 AM.  
Subject: Re: turtles

- > Dear Bob,
- > Here are the tag numbers of the animals we sampled:
- > I believe the order we did them is:
- > RFF- Right Front Flipper      LFF- Left Front Flipper
- > Group A- Sea Life Park Immatures
- > 1. RFF- 4699
- > 2. LFF-4700
- > Group B- Mauna Lani Immatures
- > 1. RFF- WA89
- > 2. LFF-V725
- > 3. RFF- V738
- > Group C-
- > Higgins
- > V732- not sure which flipper
- >
- > I hope this helps
- > Aloha and happy holidays
- > Gregg

146

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Date: Sun, 17 Dec 2000 13:42:01 -1000  
From: "Robert A. Morris" <gturtle@aloha.net>  
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re: Fw: turtles

[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]

Reduce MB

>From each turtle-throat swab for herpes (sometimes a piece of tissue included in sample); tissue for histology; tissue for EM studies (in special solution ??). Biopsy and virus cultures to Jacobson and histologist assoc. with him. EM to T. Work.

----- Original Message -----  
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
To: Robert A. Morris <gturtle@aloha.net>  
Sent: Sunday, December 17, 2000 8:55 AM  
Subject: Re: Fw: turtles

> Thanks Bob, I guess we're on line at once this sunday morning. my wife  
> didn't have a very good night last night. Anyway she has a scheduled  
> therapy appointment tomorrow 830am.  
>  
> Thanks Very much for sending the data below, will add it to the data base  
> for each. To clarify, each had softpalate biopsies. One each biopsy? or  
> more than one? Solution put into was ..." (name known?). Were any other  
> samples taken? Blood? swabs? or ?

> As soon as I can get my head together, I'll be sending the message of  
> some sort to SLP Mr. Paka (likely several of them), as per what I had  
> discussed with you. Note I now have 368 email messages in my register  
> chronicling th SLP captive turtle fiasco. This week I shall have all of  
> them archived on CD Rom so that they will never be lost through  
> harddrive failure. Mahalo, George

\*\*\*\*\*  
> On Sun, 17 Dec 2000, Robert A. Morris wrote:

> > For your info --Bob

> > ----- Original Message -----  
> > From: <GLEvineDVM@aol.com>  
> > To: <makaiclinic@earthlink.net>; <gturtle@aloha.net>  
> > Sent: Sunday, December 17, 2000 8:34 AM  
> > Subject: Re: turtles

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> > > Here are the tag numbers of the animals we sampled:  
> > > I believe the order we did them is:  
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> > > Group A- Sea Life Park Immatures  
> > > 1. RFF- 4699  
> > > 2. LFF-4700  
> > > Group B- Mauna Lani Immatures  
> > > 1. RFF- WA89  
> > > 2. LFF-V725  
> > > 3. RFF- V738  
> > > Group C-  
> > > Higgins  
> > > V732- not sure which flipper  
> > >  
> > > I hope this helps  
> > > Aloha and happy holidays  
> > > Gregg

RIGHT FRONT FLIPPER (RFF) TAG NUMBERS  
LFF- LEFT FRONT FLIPPER TAG NUMBERS  
GROUP A- SEA LIFE PARK IMMATURES  
GROUP B- MAUNA LANI IMMATURES  
GROUP C- HIGGINS TAG NUMBERS  
V732- NOT SURE WHICH FLIPPER

Date: Mon, 5 Nov 2001 07:41:10 -1000  
From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
To: Marc- HPA Rice <mrice@hpa.edu>  
Subject: Re: K966 (fwd)

Marc- SLP turtle reared ML, let go there 4th of July 1994. One of the bitters, we let it go up at N. Kohala in 99. Note the two dates for 9/7 below are reversed, the ML captive should come before the Keokeo release.

While some growth is shown in these records, they don't tell the story of the body condition of the turtle right now (when you say it yesterday). I guess I ask Sandie to have staff there see how often it's coming up, when etc. Some diagnostic action is needed. Mahalo! Geo.

----- Forwarded message -----

Date: Mon, 5 Nov 2001 07:29:34 -1000  
From: Shawn Murakawa <smurakaw@honlab.nmfs.hawaii.edu>  
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
Cc: Shandell Eames <seames@honlab.nmfs.hawaii.edu>  
Subject: Re: K966 (fwd)

Date	Location	SCL	CCL	Wt
7-15-93	ML Captive	-	-	-
6-20-94	ML Captive	32.9	34.0	12.0
7-4-94	ML	-	-	-
11-29-94	Keawa Nui, S	33.4	34.5	12.0
9-23-98	Keawa Nui	43.9	46.5	27.0
8-19-99	Keawa Nui, ML Beach	44.9	47.5	33.0
9-1-99	Kiholo	45.4	-	-
9-1-99	Keawa Nui, ML Beach	45.4	48.0	-
9-4-99	ML Captive	-	-	-
9-4-99	Keawa Nui, ML Beach	-	-	-
9-7-99	Keokeo Pk, N. Kohala	-	-	-
9-7-99	ML Captive	-	48.0	-
6-26-00	Keawa Nui	46.6	49.0	36.0

-----  
On Mon, 5 Nov 2001, George H. Balazs wrote:

>  
> I have no idea why he didn't phone me. Anyway, Shawn, run a historical  
> for me please for SCL and WT. If missing SCL's then do CCL. Mahalo.  
>

> ----- Forwarded message -----

> Date: Mon, 5 Nov 2001 07:14:06 -1000  
> From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
> To: Marc Rice <mrice@hpa.edu>  
> Subject: K966  
>

> Danny any other resort personnel around? Any contact with any of the  
> staff? I'll get a historical on the turtle in a few minutes from  
> Shawn and get back to you, also will get in touch with Sandie.  
>

> If something like this is encountered again, give me a call on the spot  
> if your circumstances allow, would be of interest in "diagnosing"  
> whether or not plastron was sunken, and how much. Also, mouth, any  
> lesions in the mouth. You're the "stranding-man" there, Marc. Aloha,

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> George  
 >  
 > > We made a dive at Mauna Lani Beach Club on Friday and found a small  
 > > turtle basking on the beach at the club... people walking all around  
 > > it, children sitting by it and watching... quite amazing..  
 > > Jill was able to read LFL metal tag.. K966 without disturbing it.  
 > > Almost everyone that saw the turtle said that "it looks really sick."  
 > > Apparently, it is a regular out on the beach.. interesting.  
 > >  
 > > time was 1600-1715 h when we were there.  
 > >  
 > >

Date: Mon, 5 Nov 2001 07:15:30 -1000  
 From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
 To: Shawn Murakawa <smurakaw@honlab.nmfs.hawaii.edu>  
 Cc: Shandell Eames <seames@honlab.nmfs.hawaii.edu>  
 Subject: K966 (fwd)

I have no idea why he didn't phone me. Anyway, Shawn, run a historical for me please for SCL and WT. If missing SCL's then do CCL. Mahalo.

----- Forwarded message -----  
 Date: Mon, 5 Nov 2001 07:14:06 -1000  
 From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
 To: Marc Rice <mrice@hpa.edu>  
 Subject: K966

Danny any other resort personnel around? Any contact with any of the staff? I'll get a historical on the turtle in a few minutes from Shawn and get back to you, also will get in touch with Sandie.

If something like this is encountered again, give me a call on the spot if your circumstances allow, would be of interest in "diagnosing" whether or not plastron was sunken, and how much. Also, mouth, any lesions in the mouth. You're the "stranding-man" there, Marc. Aloha, George

> We made a dive at Mauna Lani Beach Club on Friday and found a small  
 > > turtle basking on the beach at the club... people walking all around  
 > > it, children sitting by it and watching... quite amazing..  
 > > Jill was able to read LFL metal tag.. K966 without disturbing it.  
 > > Almost everyone that saw the turtle said that "it looks really sick."  
 > > Apparently, it is a regular out on the beach.. interesting.  
 > >  
 > > time was 1600-1715 h when we were there.

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Historical Information for Turtle Tag 11478

Tag Information:				Tag Type		Tag Position		Since Last Encounter				Overall			
Tag Number	Date	Tag Type	Tag Position	Interval	Year	Interval	Year	Growth-Rates	Growth-Rates	Interval	Year	Growth-Rates	Growth-Rates		
				Month	cm/mon	Month	cm/mon	cm/mon	cm/mon	Month	Year	cm/mon	cm/yr		
11478	7/15/93	1681	RFL	---	---	---	---	---	---	---	---	---	---		
1C683709	9/23/98	PIT	LHF	---	---	---	---	---	---	---	---	---	---		
2A597D61	6/20/94	PIT	LHF	11.0	0.9	11.0	0.9	---	---	11.0	0.9	---	---		
3B652A7B	9/23/98	PIT	PIT	---	---	---	---	---	---	---	---	---	---		
K966	6/20/94	1681	LFL	---	---	---	---	---	---	---	---	---	---		
Date	Type of Encounter	Location	TurnorRank	NestingAct	Straight Carapace	Interval	Year	Growth-Rates	Growth-Rates	Interval	Year	Growth-Rates	Growth-Rates		
7/15/93	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	---	---	---	---	---	---	---	---		
6/20/94	Near Shore	Hawaii, Mauna Lani, Captive	0	-	32.9	11.0	0.9	---	---	11.0	0.9	---	---		
7/4/94	Near Shore	Hawaii, Mauna Lani	0	-	---	---	---	---	---	11.0	0.9	---	---		
11/29/94	Near Shore	Hawaii, Keawa Nui, South Kohala	0	-	33.4	4.0	0.3	---	---	16.0	1.3	---	---		
9/23/98	Near Shore	Hawaii, Keawa Nui Bay	0	-	43.9	45.0	3.8	0.2	2.8	62.0	5.2	---	---		
8/19/99	Near Shore	Hawaii, Keawa Nui Bay, Mauna Lani Beach Club	0	-	44.9	10.0	0.8	0.1	1.2	73.0	6.1	---	---		
9/1/99	Near Shore	Hawaii, Kiholo	0	-	45.4	---	---	---	---	73.0	6.1	---	---		
9/1/99	Near Shore	Hawaii, Keawa Nui Bay, Mauna Lani Beach Club	0	-	45.4	---	---	---	---	73.0	6.1	---	---		
9/4/99	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	---	---	---	---	73.0	6.1	---	---		
9/4/99	Near Shore	Hawaii, Keawa Nui Bay, Bay Club	0	-	---	---	---	---	---	73.0	6.1	---	---		
9/7/99	Near Shore	Hawaii, Keokeo Park, N. Kohala	0	-	---	---	---	---	---	73.0	6.1	---	---		
9/7/99	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	---	---	---	---	73.0	6.1	---	---		
6/26/00	Near Shore	Hawaii, Keawa Nui Bay	0	-	46.6	9.0	0.8	---	---	83.0	6.9	---	---		

11/5/01 7:34:21 AM

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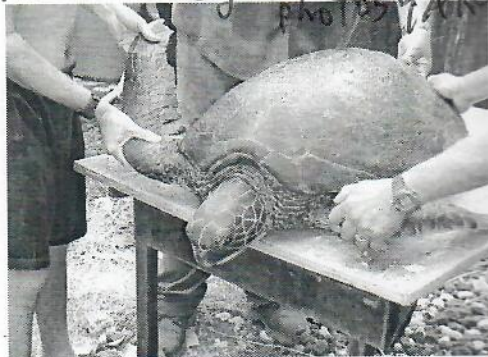
only one released  
7/14/01

Mauva Cani

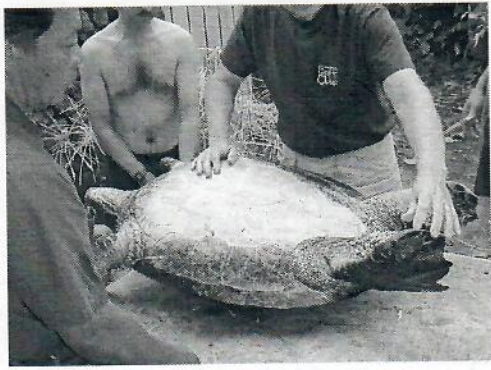
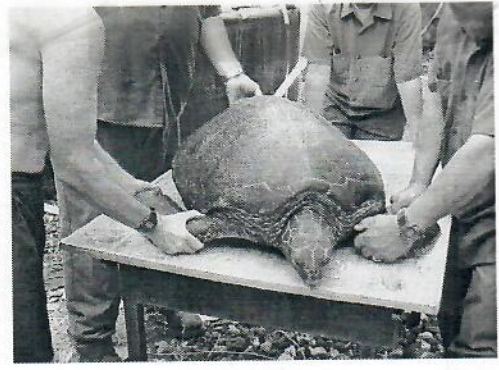
2001 Quelling  
POND turtle



1 of  
Gb was present - Christine  
ogawa went -  
PHOTOS TAKEN



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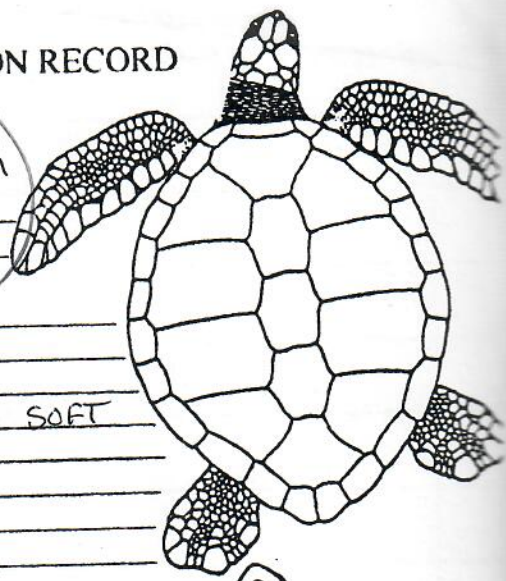


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### LIVE TURTLE EXAMINATION RECORD

Date: 6/1/01  
 Turtle ID: MADDA LAM HOTEL - HAWAII  
 Comments: CAPTIVE TURTLE IN QUELLING POND SINCE 1998 OF UNKNOWN - PHYSICAL EXAM NOW FOR RELEASE  
 Head and neck: NORMAL



Mouth: SEVERAL SMALL RAISED AREAS SOFT PALATE

Eyes: NORMAL

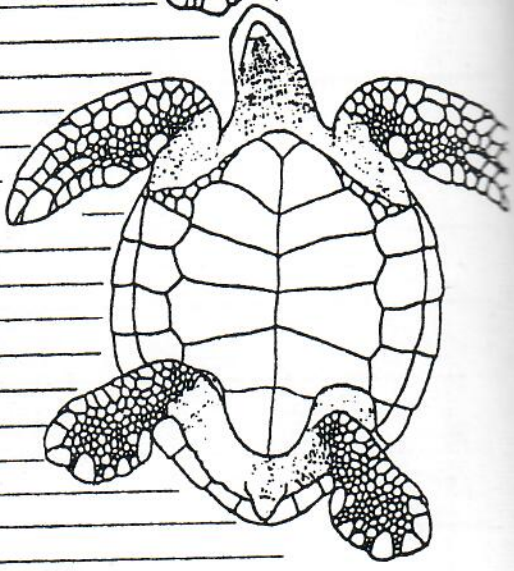
Front flippers: NORMAL

Shell: NORMAL

Plastron: NORMAL

Rear flippers: NORMAL

Tail: NORMAL



BODY CONDITION: GOOD

#### SAMPLES TAKEN

PCV 30 T.P. 3.6  
 CBC \_\_\_\_\_ Chemistries   
 Others \_\_\_\_\_

#### APPROXIMATE TUMOR SIZE CATEGORIES:

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

RECOMMENDATIONS: WEIGHT 144 LBS SOME WEIGHT LOSS SINCE 8/30/00 EXAM (155 LBS) LOSS OF 11 EXAM NORMAL - O.K. FOR RELEASE JULY 4, 01  
 Signed: Robert A. Mather MS, DVM



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

Copy for CBS

MEDICAL HISTORY - CLINICAL RECORD

OWNER NAME MAMNA LANI		ADDRESS			TELEPHONE
ATIENT NAME	SPECIES	BREED	SEX	COLOR AND MARKINGS	
		GREEN TURTLE			
ALTERED ES <input type="checkbox"/> NO <input type="checkbox"/>	BIRTHDATE	SPECIAL INFORMATION	LAB	X-RAY	

DATE	TEMP	DESCRIPTION
6/01/01		<p>History of being in quadding Pond since 1988 on larger weight in 1988 55.5 lbs</p> <p>Rechecked by Dr. Works &amp; George Balys 8/30/00 Weight 155 lbs. In apparent good health</p> <p>Physical exam &amp; blood work up for release to wild July 4, 01.</p> <p>Summary:</p> <ol style="list-style-type: none"> <li>1. Some weight loss noted from 8/30/00 11 lbs</li> <li>2. turtle physical exam: several small raised areas in soft palate - these seen in normal turtles and do not resemble throat lesions seen in SLP turtles</li> <li>3. Blood work up normal</li> <li>4) turtle appears healthy and is O.K. for release to sea.</li> </ol> <p>Robert A. Mours, MS, DVM</p>

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Table 1 --Mean, standard deviation, and range of straight carapace length, weight, and plasma biochemistry values for clinically healthy green turtles (*Chelonia mydas*), Hawaiian Islands, 1991-95.

Variable	Kaneohe Bay, Oahu			MAUKA LAU 6/1/01
	n = 53			
	Mean	±SD*	Range	
Straight Carapace Length	45.3	4.8	37.4-55.2	
Weight	14.1	4.7	7.7-25.4	
Protein (g dl)	4.2	0.6	2.9-5.6	3.6
Albumin (g dl)	1.7	0.4	0.6-2.2	1.3
Globulin (g dl)	2.7	0.5	1.8-4.0	2.3
Albumin:Globulin ratio	0.6	0.2	0.2-1.2	0.6
Total Bilirubin (mg dl)	0.2	0.1	0.0-0.4	
Direct Bilirubin (mg dl)	0.05	0.1	0.0-0.5	
Indirect Bilirubin (mg dl)	0.2	0.1	0.0-0.4	
ALAT* (U l)	3.9	7.0	0.0-50.0	15
ASAT* (U l)	158.4	41.5	1.0-270	163
Alkaline Phosphatase (U l)	33.5	12.2	12-62	
GGT* (U l)	2.7	1.5	0.0-5.0	
LDH* (U l)	203.8	180.4	55-1286	212
Urea Nitrogen (BUN) (mg dl)	5.2	14.1	0.0-64.0	
Creatinine (mg dl)	0.2	0.1	0.1-0.5	0.4
BUN:Creatinine Ratio	25.8	70.7	0.0-320.0	186
Uric Acid (mg dl)	1.3	0.8	0.0-4.5	1.9
Calcium (mg dl)	9.1	1.7	1.1-12.1	9.2
Phosphorus (mg dl)	8.2	1.3	5.9-11.8	4.5 ↓
Cholesterol (mg dl)	140.0	43.0	32-280	586
Triglycerides (mg dl)	124.2	68.7	28-331	
Glucose (mg dl)	114.7	35.0	64-234	55
Iron (mcg dl)	46.3	64.8	9-321	
Sodium (meq l)	158.0	4.0	146-170	155
Potassium (meq l)	5.2	0.9	3.9-8.6	5.3
Chloride (meq l)	115.2	5.7	103-130	

\*Standard Deviation

\*Alanine Amino Transferase

\*Aspartate Amino Transferase

\*Gamma Glutamyl Transpeptidase

CPK

WBC

514

9,400

MAKAI ANIMAL HOSPITAL  
420 ULUNIU ST.  
KAILUA, HI 96734

155  
IDEXX VETERINARY SERVICES  
West Region 800-444-4210  
East/Central/Colorado 888-433-9987

1-808-262-9621 ACCOUNT #: 1303

PATIENT: NANA LANI, 413C510957

REQ #: 3185722  
AGE: SEX:  
SPECIES: REPTILE  
BREED: TURTLE

LAB #: L6281731  
COLLECTED: 06/01/2001  
RECEIVED: 06/03/2001 20:50  
REPORTED: 06/04/2001 03:10

DOCTOR: MORRIS

TEST PROCEDURES

REPTILIAN PROFILE #1

REPTILIAN PANEL #1

	RESULTS	REFERENCE RANGE	UNITS
ALK. PHOSPHATASE	15		IU/L
ALT (SGPT)	2		IU/L
AST (SGOT)	163		IU/L
CK	514		IU/L
LDH	212		IU/L
ALBUMIN	1.3		g/dL
TOTAL PROTEIN	3.6		g/dL
GLOBULIN	2.3		g/dL
BUN	18		mg/dL
CREATININE	0.4		mg/dL
CHOLESTEROL	588		mg/dL
GLUCOSE	85		mg/dL
CALCIUM	9.2		mg/dL
PHOSPHORUS	4.5		mg/dL
POTASSIUM	5.3		mEq/L
SODIUM	155		mEq/L
A/G RATIO	0.6		
URIC ACID	1.9		mg/dL
AVIAN/EXOTIC CBC AND PLASMA PROTEIN			
WBC COUNT	9.4		THOUS.
HCT	30.0		%
HETEROPHILS	58		%
NEUTROPHIL SEG	10		%
LYMPHOCYTES	31		%
BASOPHIL	1		%
ABSOLUTE HETEROPHIL	5452		MM3
ABSOLUTE NEUTROPHIL SEG	940		/uL
ABSOLUTE LYMPHOCYTE	2914		/uL
ABSOLUTE BASOPHIL	94		/uL
THROMBOCYTES	ADEQUATE		
BLOOD PARASITES			
NO PARASITES SEEN			

REMARKS

CELLS DO NOT APPEAR TOXIC OR REACTIVE  
RBC MORPHOLOGY APPEARS NORMAL.

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new mototool  
 1 Turtle "08"  
 7/2/01 capture date  
 7-2-01  
 Mana Lani / ponds / ~~ponds~~ capture / Y #470  
 July @ recorder  
 Released at #470

Indep. Turtle ML  
 location and method of capture

PIT tag bar code

~~to be~~ released 2001  
 July 4, from Mana Lani  
 Christine  
 O'Connell

old tags:

RF 41361510957  
 LH 41361D3008  
 #10559  
 LH 10558

other new tags:


straight carapace length: 80.7 cm. notch: 80.6 cm.

straight carapace width: 58.7 cm.

curved carapace length: 86.8 cm. curved width: 73.5 cm.

sex:  male /  female /  unknown

head width: 11.4 cm.

total cloaca: 24.5 cm. 16.5 cm.

PPS:  YES  NO

weight: 150 lbs.

right front flipper: 13.2 cm.

plastron: 64.8 cm.

samples collected

descriptive remarks

T<sub>s</sub> =  
 T<sub>c</sub> =  
 T<sub>b</sub> =  
 T<sub>e</sub> =  
 one metal tag missing (10557)  
 mototooled (08) - 3<sup>rd</sup> lateral scute.

Reduce 07/02/01 ML CAPTIVE  
for ML Book

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Historical Information for Turtle Tag 10557

Tag Information:

Tag Number	Date	Tag Type	Tag Position
10557	6/30/88	I681	R34
10558	6/30/88	I681	L1
10559	6/30/88	I681	RHF
41361D3008	8/30/00	PIT	LHF
413C510957	8/30/00	PIT	RHF

Date	Type of Encounter	Location:	Tumor/Rank:	Nesting/Act:	Straight Carapace	Since Last Encounter			Overall		
						Interval Month	Year	Growth-Rates cm/yr	Interval Month	Year	Growth-Rates cm/mon
6/30/88	Near Shore	Hawaii, Mauna Lani	0	-	55.7	---	---	---	---	---	---
8/30/00	Near Shore	Hawaii, Mauna Lani, Captive, Quelling Pond	0	-	80.4	146.0	12.2	0.2	146.0	12.2	0.2
7/2/01	Near Shore	Hawaii, Mauna Lani, Mauna Lani ponds	0	-	80.7	10.0	0.8	0.0	156.0	13.0	0.2

Historical Information for Turtle Tag 10557

Tag Information:

Tag Number	Date	Tag Type	Tag Position
10557	6/30/88	I681	R34
10558	6/30/88	I681	L1
10559	6/30/88	I681	RHF
41361D3008	8/30/00	PIT	LHF
413C510957	8/30/00	PIT	RHF

Date	Type of Encounter	Location:	Tumor/Rank:	Nesting/Act:	Weight	Since Last Encounter			Overall		
						Interval Month	Year	Growth-Rates cm/yr	Interval Month	Year	Growth-Rates cm/mon
6/30/88	Near Shore	Hawaii, Mauna Lani	0	-	55.5	---	---	---	---	---	---
8/30/00	Near Shore	Hawaii, Mauna Lani, Captive, Quelling Pond	0	-	155.0	146.0	12.2	0.7	146.0	12.2	0.7
7/2/01	Near Shore	Hawaii, Mauna Lani, Mauna Lani ponds	0	-	150.0	10.0	0.8	---	156.0	13.0	0.6

158  
Date: Mon, 09 Jul 2001 12:37:15 -1000  
From: Christine Ogura <cogura@s360.swfc2.nmfs.gov>  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: report on Maunalani

Dear George,

As requested, here is a summary report of the Turtle Independence Day at the Maunalani:

After being picked up at the airport by Danny Akaka, I joined the preparations for the ceremony beachside at the Maunalani. There was a live band, as well as representatives from Sea Life Park who had set up tables of merchandise (e.g. turtle t-shirts, hats, stuffed animals, etc.) as well as children's activities (e.g. etchings of turtles, balloons blown by a ninja turtle costumed person, face paintings) and educational material (e.g. three panel display of turtle information). There was also a turtle run in the morning. Most people milling around the Sea Life Park activities seemed to be guests of the hotel with their children. There were local people as well, many wearing turtle t-shirts. However, it seemed as if the majority of people were hotel guests. There was a lot of excitement as people asked what time the release was and children had their face painted and participated in the activities.

30 minutes prior to the ceremony, the turtle was placed in a decorated golf cart type of vehicle with flowers and balloons. At that point, I placed the lei on the turtles back and paper money around it in the cart. Many curious guest took pictures and brought their children. There was a good crowd of 40-50 people (adults and children) milling about, excited by the presence of the turtle. Danny Akaka then began the parade down to the beach with children and turtle cart in tow.

The ceremony itself was about 30 minutes. The cart was parked to the side. There was a crowd about 100-200 lining the beach (age range from children to seniors). Senator Akaka gave a brief speech on the importance of turtles, their protection, and the part Maunalani played as an educational partner. There was a halau which conducted some turtle related hula dances. Also present was a princess from Thailand who escorted the turtle down to to the beach for its release. (Sandie informed me that in Thailand it was good luck to release an animal and the princess requested to be part of the ceremony) The actula release went very quickly. Four Maunalnai staffers picked the turtle up and out of the cart and led it into the ocean. (the crowd immediately swarmed around the turtle despite maunalnai staff trying to hold them back). Once they put the turtle down into the ocean, it made a straight bee-line out to sea and disappeared from view in about three seconds. Once the turtle was gone, the crowd pretty much dispersed with a few on-lookers trying to see if the turtle would return.

After that, I enjoyed a nice lunch with Sandie, accompanied her to a blessing of a new spa facility at the hotel, then was driven to the airport where I returned to Honolulu around 2:00pm.

There were several impressions to be made from the event. Mainly, it was great to see the excitement and curiosity of all those involved, from the children to the adults. They all wanted to take pictures of the turtle as well as touch it. From them, one could see how special it was for people to interact with turtles. There were questions by the guests of if the Maunalani had any more turtles. Many staff were aware

of the lesions on the Sea Life Park turtles that had to be sent back last year. Staff expressed sadness at having to let the last turtle go because it played such a valuable educational role (local school groups were brought by to view the turtle) and wondered what would happen with the Turtle Independence Day next year given its long history (all hoped the issue with Sea Life Park would be resolved). Over lunch, Sandie said she had a few ideas for next year's event that she would like you to chime in on (she will tell you about them later).

Overall, it seemd like a successful event where everyone enjoyed themselves.

-Christine

**Subject:** maunalani release  
**Date:** Thu, 5 Jul 2001 00:36:34 -0700 (PDT)  
**From:** Christine Ogura <csogura@yahoo.com>  
**To:** george.balazs@noaa.gov

Hi George,

Just wanted to let you know that everything went very well today. I ended up taking the whole role of film because it was so much fun. Senator Akaka was there as well as a princess from Thailand. Danny Akaka and Sandie Patton were both very gracious hosts. I put the paper money around the turtle in the cart and the lei on its shell per your wishes. As soon as the turtle was let go, it disappeared in three seconds, made a bee line straight out to sea. Hope your day was as enjoyable as mine was - thanks again for the great opportunity!

-Christine

P.S. I'll bring in the role of film next monday (there was also maunalani's professional photographer covering the event so you might want to ask Sandie for any copies of those pictures as well). I also have a gift for you from Sandie. She said that your presence was sorely missed at the event.

**Do You Yahoo!?**

Get personalized email addresses from Yahoo! Mail - only \$35 a year!  
<http://personal.mail.yahoo.com/>



160

Date: Fri, 21 Jul 2000 14:45:12 -1000  
From: "L.G. Eldredge" <psa@mail.bishopmuseum.org>  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Worm

George:

The worm you sent over is a free-living (benthic/sedentary) polychaet annelid; probably something the turtle ate.

Glad to help.

\*\*\*\*\*

----- Forwarded message -----  
Date: Tue, 11 Jul 2000 09:47:32 -1000  
From: Marty Wisner <mwisner@maunalani.com>  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Re: Fecal sample

The first turtle we released was #89, then # 90.....

Bye for now,

Marty

----- Forwarded message -----  
Date: Wed, 05 Jul 2000 07:35:40 -1000  
From: Marty Wisner <mwisner@maunalani.com>  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Fecal sample

*ML box  
Picked up by me  
freeze off at ML  
7-6-00*

Aloha George,

I forgot to give you the fecal sample I kept for you from #89/#90. I also forgot that I will be in Honolulu tomorrow and Friday helping the Monterey Bay Aquarium transport some sharks. Danny can give you the turtle's sample when you are over here on Big Island tomorrow. The sample has been refrigerated ever since I removed it from our quarantine tank. You could just page Danny at (808) 899-4198 and arrange when to have him meet you.

Danny and I are busy with tours today. We will arrange with the Grounds crew to get the third turtle into the quarantine tank the first thing next week. You can contact Danny here at the hotel as he will be covering for me while I am in Honolulu the 6th. and 7th.

No sign of #89 or #90 from shore in front of the hotel this morning.

Bye for now,

Marty

Date: Thu, 13 Jul 2000 14:19:07 EDT  
From: RussDenn@aol.com  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Yellow Sponge

*Reduce  
ML Book*

Dear George,

I have been looking at the fecal sample today and it consists mainly of masses of yellow encrusting sponge, full of simple spicules and silicaceous skeleton material. I am making simple drawings of them for you to show to a zoologist to identify to species. All they normally need for ID are spicule structures.

The sponge is full of the wiry gelidium-like species we have been finding in other samples, plus a small Cladophora and Ulva. There are a lot of diatom species present and something that reminds me of Carteria (a single celled flagellated green alga).

Yellow encrusting sponge is the main food item present in the sample.

I'll be on this for the next few days and will have a written report for you, probably by Monday.

161

Reduce  
ML

----- Forwarded message -----  
Date: Mon, 24 Jul 2000 20:00:14 -1000 (HST)  
From: Martin & Karen Wisner <MWISNER@webtv.net>  
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re: The Third Turtle- Important

Yes we're also feeding this turtle more ulva, but he does not eat nearly as much as the Kalahuipua'a turtles we released. Those two were apparently very hungry..

Aloha, Marty

----- forwarded message -----  
Date: Mon, 24 Jul 2000 20:31:17 -1000 (HST)  
From: Martin & Karen Wisner <MWISNER@webtv.net>  
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re: The Third Turtle- Important

ML

Aloha again. Yes the quelling pond always used to have so much ulva algae growing in it that it took 2 men all day to clean out excess each month. Since placing that turtle in the pond, we have not needed to clean out algae in 4 years. There is still some ulva in the pond but nothing like before.

Before placing the turtle in quarantine, I did a cursory examination of the inside of its mouth and it appeared to look just like the two turtles we released this July 4th. Hopefully this can be confirmed when you thoroughly examine him on your next visit. Bye for now, Marty

I have drawings completed of the very greenish...

...A & B were present in various amounts...

...was a single small branch...

...was found in first few years, each year...

...was "extremely" sparse. I understand that certain species...

I have been looking at the Great...

...I am making single egg...

The species is full of the very greenish...

162

----- Forwarded message -----  
Date: Tue, 18 Jul 2000 08:59:56 -1000  
From: Sandie Patton <spatton@maunalani.com>  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Bungalow Turtle

George,

I know that you are away this week...but I just wanted to let you know that we did manage to catch the remaining Mauna Lani turtle (from the overflow pond at the Bungalows) yesterday (7/17/00).  
We have relocated him to the quarantine tank...and Marty will keep him there, on a limu diet, until you return.

According to Marty, turtle is estimated to be 150+ pounds.  
Aloha,  
Sandie

163

**Food Items Identified from One Green Turtle Fecal Sample, July 15, 2000  
From Dennis J. Russell**

To: George Balazs

07-01-0 Mauna Lani Fishpond, fecal pellet from Green Turtle held at Mauna Lani Fishpond for >12 years.

**Yellow encrusting sponge 100%**

The mass of the fecal pellet was not made of algal material, but of sponge. I have included drawings of all the various spicules, scales and other siliceous structures found in the sample. This drawing can be used by a zoologist to help identify which species of sponge this might be. The sponge consisted mainly of dense clusters of simple needle-like spicules held together by a thin protein matrix. Eating sponge is like eating fiberglass.

- Wiry gelidium-like red** Trace (definitely the dominant alga in the sample)
- Cladophora sp. A** Trace
- Cladophora sp. B** Trace
- Polysiphonia sp.** Trace
- Ulva fasciata** Trace
- Dark Brown terrestrial plant material**
- Many different species of pennate diatoms were present**
- One mite (400 µm diameter)**

I have drawings completed of the wiry gelidium-like species, but will have to do more work to find a species name for it. All the macroalgae identified here were living on, attached to, the sponge.

*Cladophora* A & B were present in minute amounts and were extremely small, fine filaments (30-60 µm diameter and less than 10 mm long).

*Polysiphonia* sp. was a single small branch.

*Ulva fasciata* was found as three tiny pieces, each piece being about 10 mm<sup>2</sup>.

Sponge material has been found in a lot of samples in the past, but this is the first fecal pellet that was "entirely" sponge. I understand that certain species of sponges are chemically irritating and some are mildly poisonous.

Dennis

----- Forwarded message -----  
 Date: Thu, 13 Jul 2000 14:19:07 EDT  
 From: RussDenn@aol.com  
 To: gbalazs@honlab.nmfs.hawaii.edu  
 Subject: Yellow Sponge

ML Redund

Dear George,

I have been looking at the fecal sample today and it consists mainly of masses of yellow encrusting sponge, full of simple spicules and siliceous skeleton material. I am making simple drawings of them for you to show to a zoologist to identify to species. All they normally need for ID are spicule structures.

The sponge is full of the wiry gelidium-like species we have been finding in other samples, plus a small *Cladophora* and *Ulva*. There are a lot of diatom species present and something that reminds me of *Carteria* (a single celled flagellated green alga).

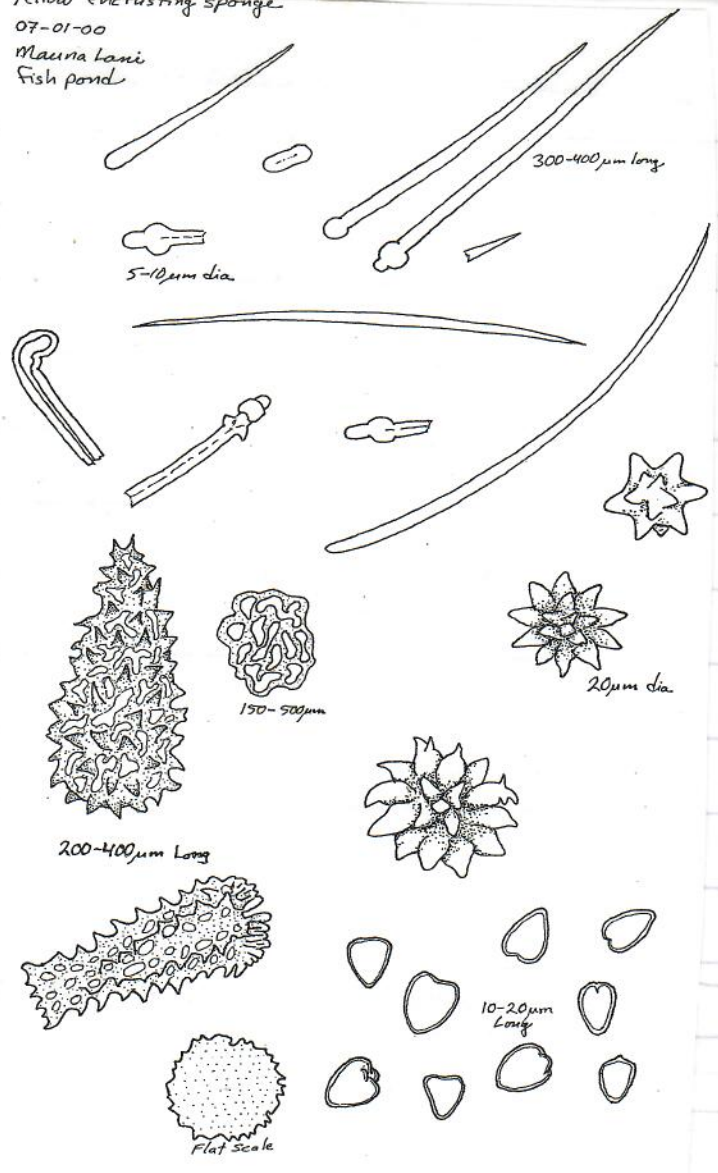
Yellow encrusting sponge is the main food item present in the sample.

I'll be on this for the next few days and will have a written report for you, probably by Monday.

164

163

yellow encrusting sponge  
07-01-00  
Mauna Lani  
Fish pond



D.J. Russell  
July 15, 2000

----- Forwarded message -----  
 Date: Wed, 26 Jul 2000 12:55:19 -1000  
 From: Sandie Patton <spatton@maunalani.com>  
 To: gbalazz@honlab.nmfs.hawaii.edu  
 Subject: Security Report re Turtle

*Reduce ML* *SKAM*

165

Hi George,

This is just an FYI and it may be "nothing", but I really don't know if Marty communicates this sort of thing to you.

I receive copies of our Resort Security Miscellaneous Report Logs. Today, I just read the log report for 7/23/00 and noticed the following entry:

\*\*\*\*\*

7/23/00, 1612 HRS

MISC ASSIST: Report of a stranded turtle in the area of shipwreck beach at Pauoa Bay. The report made by a passerby. Upon arrival, a man named Phil CHAUBET, Terrace Condo guest D-103 said he help the turtle back into the ocean, but the turtle kept coming back. MLBH Security also came to assist. Marty WISNER, MLBH was contacted to help with the turtle that appeared to be sick. Marty requested to check the right side of the turtle to see if it contained a tag. The turtle's tag number 0-589 and it belong to the government and not MLBH. The turtle left the area and headed out to sea

CLOSED: 7/23/00, 1650 HRS.

\*\*\*\*\*

I typed this verbatim from the Security log--just so you know that my English is really NOT that bad!

It's not clear from this report whether or not Marty actually went to the site or merely asked the Security officer to check the tag. It almost sounds like he asked for a tag check and, once he determined that it was a "government" turtle, didn't get involved. (I will confirm this...). This makes me very uncomfortable.

I would like to immediately formalize our procedures on how all turtle "incidents" should be handled. Our security officers (both at the hotel and the resort) need clear instructions in this regard. Also, it seems to me that it would be desirable to have some sort of regular reporting of these incidents--no matter how minor. Do you agree?

Will you help me?

Mahalo,  
 Sandie

Historical Information for Turtle Tag 11512

Information:

Tag Number	Date	Tag Type	Tag Position
11512		I681	R5
A556961	6/13/96	PIT	PIT
Q589		I681	RFL
YE62		M1	LFL

Date	Type of Encounter	Location:	Tumor/Rank:	Nesting Act:	Straight Carapace	Since Last Encounter				Overall			
						Interval		Growth-Rates		Interval		Growth-Rates	
						Month	Year	cm/mon	cm/yr	Month	Year	cm/mon	cm/yr
7/1/94	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	---	---	---	---	---	---	---	---
7/4/95	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	9.0	0.8	---	---	9.0	0.8	---	---
7/3/96	Near Shore	Hawaii, Mauna Lani, Captive	0	-	35.2	11.0	0.9	---	---	20.0	1.7	---	---
7/1/97	Near Shore	Hawaii, Mauna Lani, Captive	0	-	45.6	14.0	1.2	0.7	8.7	34.0	2.8	---	---
7/3/98	Near Shore	Hawaii, Mauna Lani, Captive	0	-	52.9	10.0	0.8	0.7	9.1	45.0	3.8	---	---
7/4/98	Near Shore	Hawaii, Mauna Lani	0	-	---	---	---	---	---	45.0	3.8	---	---

*7/23 Ashore Pauoa Bay Mauna Lani*

166

Released 7-4-01 M2

Weight 55.0 on 8-30-88

SCL=55.7 on 6-30-88

(7)

CAPTURE DATE, LOCATION AND METHOD: CAPTIVE

083000 Oueling Pond, Maina Lani Hotel  
PERSON RECORDING DATA: CEM

OLD TAGS: [ ] NEW TAGS: RI LH 41361D3008  
LJ [ ] OTHER NEW TAGS: RH 413C510957

STRAIGHT CARAPACE-LENGTH: 80.4 WIDTH: 58.1

NOTCH LENGTH: 80.4 DB: [ ] L.O. [ ] VB: [ ] L.C. [ ]

CURVED CARAPACE LENGTH: 87.0 WIDTH: 73.0

HEAD WIDTH: 11.6 SEX: MALE, FEMALE OR UNDETERMINED M

PPS: YES OR NO OR NE yes

TAIL LENGTH: T 22.0 c 15.5

RIGHT FRONT FLIPPER WIDTH: 13.3 SAMPLES COLLECTED:

PLASTRON LENGTH: 64.0 6 blood dot  
5.6 cc LIQ

WEIGHT: 155.0 7 cc blood sample  
for hematology

DESCRIPTIVE REMARKS:  
Metal tags = (B-3-4) 10557 by T.W.  
(LIS) 10558  
RH 10559

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

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

167

Released  
 (Finally!)  
 7-4-01

LISA  
 DAVID  
 CHARLES DINA  
 GENE MITCHELL

6/30/88 MANNA LANI POND

HOTEL  
 MAX 111  
 MANAGER

+ Norman AHI

TAG #  
 10551 RFL  
 10552 LFL  
 10553  
 K-front 3-4  
 Turtle #1

Turtle #2

TURTLE #3

Position 55.6  
 head 9.6  
 tail 19.5 (likely 0.7)  
 Rt front flip 11.6  
 wt 104 lbs

54.7  
 10.0  
 12.5  
 10.7  
 88 lbs

44.9  
 8.2  
 10.8  
 8.7  
 55.5 lbs

SL-66.6  
 65.9

S-67.2 SW 54.2  
 N-67.0

S-55.7 SW 42.9  
 N 55.2

SW- 52.9

C- 73.5 x 67.0  
 Tag # 10554 (through partial hole)  
 10556 w/ front (3-4)

C 61.0 x 53.0  
 Tag # 10557 rt front 3-4

C 71 x 65.5

10555 right (3-4)

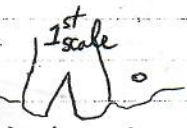
Robert pleuron.

NOT Robust

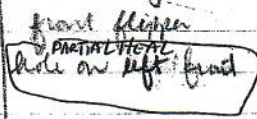
Tag # 10558 left front fl (ex)

Now measured

3/8/92  
 SL = 66.9 x 51.8  
 CL = 71.0 x 65.0  
 weight = 100 lbs  
 TAIL = 27.5 (18.0)



escape vt. e.l. RIGHT  
 tear & tag hole on right



ventral  
 rt front likely tag  
 tear

KIHALO-TAGGED TURTLES  
 THAT COOPER TAKE TAGS  
 OUT OF?

4th TURTLE IN POND NOT ABLE TO CAPTURE.  
 Lecture at Manna Lani.

6/30/88

These 2 Released  
 7/4/00



168

FAX 973-0797

Date: Wed, 28 Jun 2000 07:29:43 -1000 (HST)  
 From: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
 To: Darrel Metzger <dmetzger@atlantisadventures.com>  
 Cc: Thierry Work <thierry\_work@usgs.gov>, Paka-SeaLifePark <SLPPAKA@aol.com>,  
 Brian Joseph <PhinneyPin@aol.com>, Gregg Levine <GLEvineDVM@aol.com>,  
 Bob Morris <gturtle@aloha.net>, Bob Braun <rbraun@lava.net>,  
 Sandie Patton <spatton@maunalani.com>  
 Subject: Emergency Situation- SeaLifePark turtles/Mauna Lani (fwd)

Page 1 of 2

Dear Mr. Metzger: I have been advised that you oversee critical operations at Sea Life Park. While I don't believe we have ever met, I want to take this opportunity to forward you a message sent yesterday regarding the urgent vital need for responsible positive action to be taken in ensuring that 1) No SLP turtles currently of very questionable health status are released from the Mauna Lani Resort; and 2) That the turtles at the Mauna Lani Resort be immediately brought back to SLP and placed in quarantine, along with other similarly ill turtles already in quarantine there.

Once the turtles are back at SLP, veterinary resources must be directed at resolving the health questions of the oral lesions of these turtles. The diagnostic and treatment efforts are, of course, the responsibility of SLP, led by your two chief veterinarians, Dr. Levine and Dr. Joseph. However, as an NMFS researcher of Hawaiian sea turtles for 25 years in Hawaii, I can assure you that expertise and other forms of professional assistance from my program will be fully available to focus energies in resolving this new and exceedingly troubling health issue. Not only does the problem potentially jeopardize all Hawaiian sea turtles, it also places into serious question the entire future of SLP's fine educational turtle loan problem conducted successfully, until now, over the past 10 years.

Sincerely, George Balazs  
 Cell Phone 286-2899  
 (My full contact agency address appears below)

6/28 12:15 PM  
 Thank you  
 for your assistance

*Handwritten signature: G. Balazs*

----- Forwarded message -----  
 Date: Tue, 27 Jun 2000 08:44:55 -1000 (HST)  
 From: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
 To: Slppaka@aol.com  
 Cc: makaiclinic@earthlink.net, gturtle@aloha.net, dakaka@maunalani.com, spatton@maunalani.com, rbraun@dolphinquest.org, rbraun@lava.net, mwisner@maunalani.com, PhinneyPin@aol.com, GLevineDVM@aol.com, thierry\_work@usgs.gov, mrice@hpa.edu, MOELOE@aol.com, Rostrata@earthlink.net  
 Subject: Emergency Situation- SeaLifePark turtles/Mauna Lani

Based on firsthand examinations, and discussions, with Drs. Work and Morris yesterday at the ML Bay Hotel, it's crystal-clear that 17 or the 18 turtles have a prominent disease/abnormal condition of some unknown nature that constitutes, in my opinion as a NMFS researcher, an Emergency Situation for Hawaiian Sea Turtles. I am urgently recommending that:

- 1) None of these turtles be released into the wild until the condition is fully resolved with regard to hazards to the wild Hawaiian population; and
- 2) That all 18 turtles be immediately- within the next three days and preferably sooner- be returned to SLP and placed in strict quarantine along with the other turtles now quarantined there that have similar

6/30/00

2020/09/08  
 00/11/17

EMERGENCY

unresolved oral lesions. I deem this point (immediate return) to be absolutely essential in order to lessen the possibility of pathogen transmission into the wild (assuming it has not already occurred), or additional transmission, via seawater discharge and/or accidental or unauthorized release by vandals. The tumor-free Kona/Kohala Coast is at risk/has been at risk and extra-ordinary precautionary measures need to be taken against this new disease/abnormality condition, that appears to be directly linked to SLP captive turtles.

Page 2 of 2

I am not writing on behalf of Drs. Work and Morris, but strictly on my own. However, I have every reason to believe they concur with what I have said here based on the day we spent together yesterday with the burden of this issue. This message will also be faxed to SLP and to ML in a short time to ensure that it is received and that my opinions are known. I acknowledge here the full and open cooperation, and deep expressions of concern, to do what is best for wild turtles, expressed to us yesterday by MLR VP Sandie Patton and colleagues. Mahalo, George Balazs

SEA TURTLE TAGGING FORM

5  
DATE FORM FILLED OUT 6/20/02

TO Be Released 7/4/02

CAPTURE DATE, LOCATION AND METHOD:

CAPTIVE

6/20/02, Mana Lani, ~~near the piers~~, handicap.  
PERSON RECORDING DATA: Jill Q

TUMOR SCORE

0

ORAL TMRS EXT: YES OR NO

-

EMACIATION CODE

0

OLD TAGS:

PH 4233572155  
UH 4234794646

NEW TAGS:

RFL  
LFL "ML 5

STRAIGHT CARAPACE - LENGTH: 46.5 cm

WIDTH: 35.9 cm

NOTCH LENGTH: 46.0 cm

DB: 0 L.O.

VB: 0 L.O.

CURVED CARAPACE LENGTH: 49.5 cm

WIDTH: 42.0 cm

HEAD WIDTH: 7.7 cm

AXIAL: 19.7 cm

LATERAL: 19.3 cm

PPS: YES OR NO OR NE Yes

SEX: Male, Female or Undetermined U

TAIL LENGTH: T 11.5 cm

C 8.0 cm

Blood by Dick Morris

RIGHT FRONT FLIPPER WIDTH: 7.8 cm

PLASTRON LENGTH: 36.5 cm

WEIGHT: 35.0 lbs #

SAMPLES COLLECTED  
3rd Lateral "ML 5"  
Right 4th Lateral "ML 5"  
Left "ML 5"

DESCRIPTIVE REMARKS:

Reddish ML 5  
1/8 missing

170

In Press. Proceedings of the Twentieth Annual Symposium on Sea Turtle Biology and Conservation, February 29 - March 4, 2000, Orlando, Florida.

**ADAPTATION OF CAPTIVE-REARED GREEN TURTLES RELEASED INTO HAWAIIAN COASTAL FORAGING HABITATS, 1990-99**

George H. Balazs<sup>1</sup>, Shawn K. K. Murakawa<sup>2</sup>, Denise M. Parker<sup>2</sup>, and Marc R. Rice<sup>3</sup>

<sup>1</sup>National Marine Fisheries Service, Southwest Fisheries Science Center, Honolulu Laboratory, 2570 Dole Street, Honolulu, Hawaii 96822-2396 USA

<sup>2</sup>Joint Institute for Marine and Atmospheric Research, 2570 Dole Street, Honolulu, Hawaii 96822-2396 USA

<sup>3</sup>Hawaii Preparatory Academy, 65-1692 Kohala Mountain Road, Kamuela, Hawaii 96743-8476 USA

Green turtles obtained from Hawaiian waters by Sea Life Park on Oahu in the 1960's have nested and produced hatchlings on an artificial beach every year since 1976 (see Bourke et al., 1977). Most of these hatchlings were released into the wild shortly after emergence. However, starting in 1989, a few were retained each year for an educational loan program to facilitate the display of small turtles less than about 40 cm in straight carapace length (SCL) at qualifying aquaria in Hawaii, Canada, and the mainland USA. Steve Kaiser, the program's originator, called this novel outreach the "Hawaiian Sea Turtle Ambassador Program." Steve's rationale, shared by many, was that live sea turtles, especially small ones, are their own best advocates for conservation when viewed up close by the public. The end-point of each carefully conducted loan occurred when the turtles reached the carrying capacity of their display tanks and were certified healthy for release into Hawaiian waters. "Head-starting" has not been the purpose of the program, although at times this aspect has been given inappropriate emphasis by the news media and others. The program's ongoing fundamental goals, currently being accomplished with distinction, are the enhancement of public awareness and conservation education on behalf of sea turtles.

For the past decade, most of the turtles in the Sea Life Park program have been released as part of the July 4th "Turtle Independence Day" celebration at the Mauna Lani Bay Hotel on the South Kohala Coast of the island of Hawaii (20°N, 156°W). This coastline constitutes rich underwater foraging and resting habitats for an abundance of naturally occurring green turtles. Terrestrial basking also takes place along this lava rock shoreline. Investigations of the biology, ecology, and life history of these turtles have been underway since the 1980's by the National Marine Fisheries Service (NMFS), in partnership with the Hawaii Preparatory Academy (Balazs, 1996; Balazs et al., In press; Davis et al., In press; Harrington et al., This volume; Rice et al., This volume). These research activities have provided excellent opportunities to recapture and evaluate turtles originating from Sea Life Park. Since 1993, all turtles released at Mauna Lani have been measured, weighed, and positively identified by NMFS using Inconel flipper tags and PIT tags. Herein we provide a summary of the results of tag recoveries made to date.

**RESULTS**

From 1990-99, 102 captive-reared green turtles ranging from 25.5 - 68.0 cm SCL (mean = 40.7 cm) were released at the Mauna Lani Bay Hotel (Figure 1). Twelve turtles (11.7%) have been recaptured/resighted from 1-5 times by hand, net or (in one instance) a visual tag reading during in-water research (Figure 2). Elapsed times from initial release to the most recent recapture ranged from 2.3 - 7.3 years. Eight of the 12 turtles were encountered within 5 km of the Mauna Lani Bay Hotel. Three others were recaptured along the coastline 45-80 km to the south at Honokohau (1), and Honaunau (2). Another turtle was recaptured in the major foraging habitat of Kaneohe Bay on Oahu, a distance of 270 km (Figure 3).

Six other turtles (5.9% of 102) were found stranded 0.8 - 2.4 years after release (Figure 2). Two were dead and four were alive. Necropsy of the former revealed that one was severely emaciated, and the other in good body condition with no indication of the cause of death. This turtle stranded 2.4 years after release along green turtle foraging habitat on the island of Lanai, 150 km from Mauna Lani. The four live strandings included three emaciated and/or excessively buoyant turtles, and one with a severe propeller injury to the carapace. This latter turtle also had two small fishing hooks externally and one internally as revealed by x-ray. All four live strandings required considerable veterinary treatment and captive rehabilitation by NMFS before being released a second time.

As shown in Figure 4, the SCL growth rates of the 11 turtles recaptured and remeasured during in-water research ranged from 0.7 - 3.2 cm/yr (mean = 2.1 cm/yr). The Kaneohe Bay recapture displayed the most rapid rate of growth (3.2 cm/yr). A small fibropapilloma was recorded on the eye of this turtle. Growth rates for the 11 turtles compare

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favorably and are consistent with data obtained over the past 25 years for naturally occurring green turtles in a wide array of foraging habitats throughout the Hawaiian Islands. However, three of the 11 turtles are known to have been fed pelleted fish food and lettuce by tourists and others during their post-release residency near the Mauna Lani Bay Hotel. The growth rates of the six stranded turtles ranged from only 0.5 - 0.9 cm/yr (mean = 0.6 cm/yr). These data suggest the failure of the turtles to adapt to the wild and thrive.

#### CONCLUSION

Nine of the 18 captive-reared turtles encountered have successfully adapted to natural Hawaiian marine habitats. The other nine did not adapt (6 stranded and 3 being fed in the wild). Eighty-four turtles have thus far not been seen again. The two PIT tags used to identify each animal should help ensure longer term recognition if or when the turtles are recaptured during coming years or decades.

#### LITERATURE CITED

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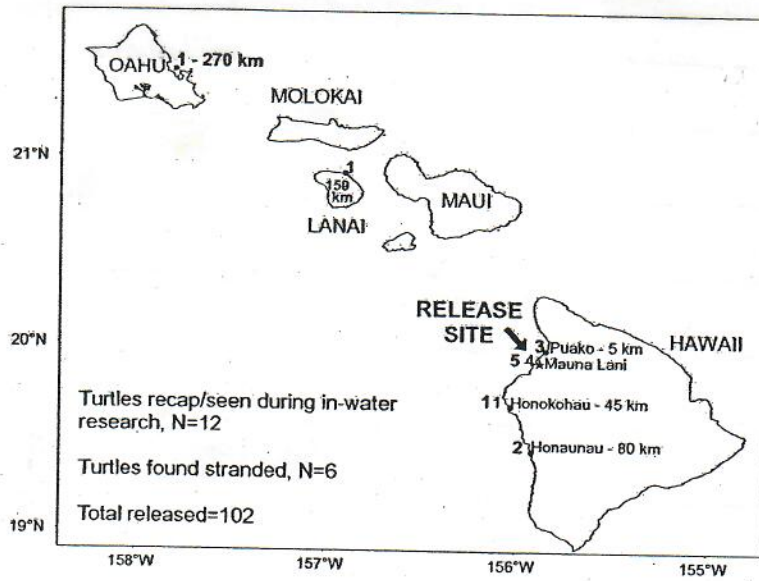


Figure 3. The main Hawaiian Islands. Recapture locations and distances from the Mauna Lani release site.

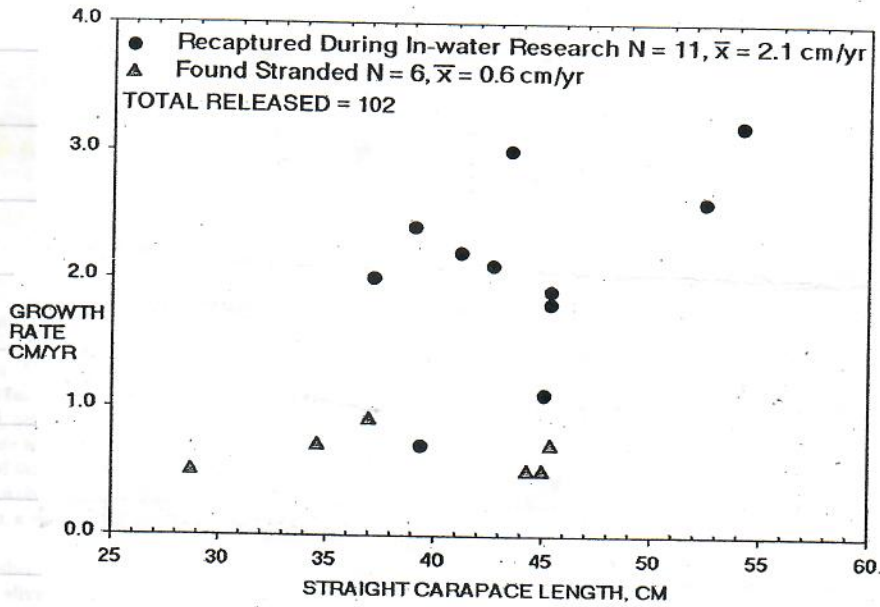


Figure 4. Growth rates in the wild of recaptured turtles released at Mauna Lani.

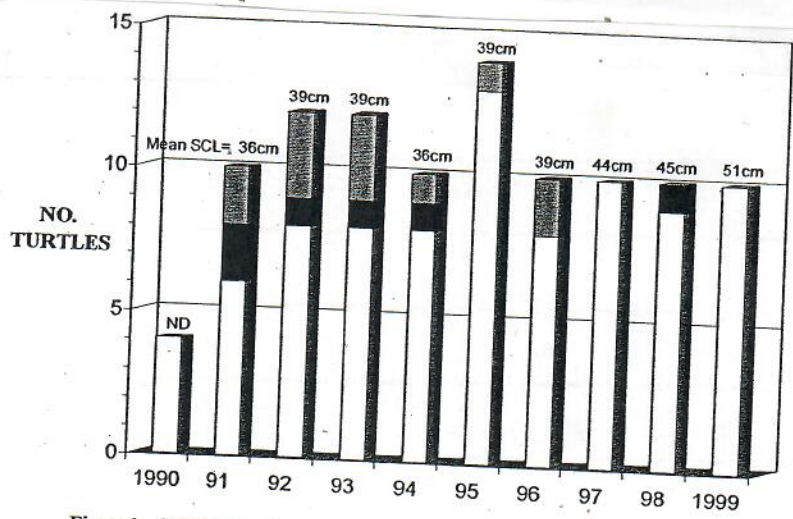
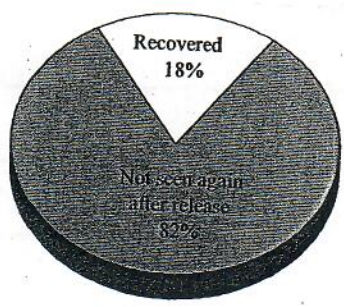
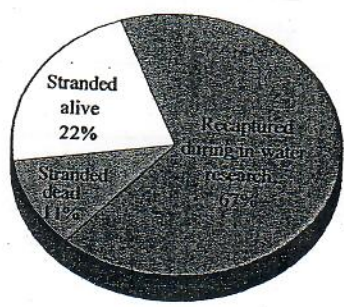


Figure 1. Captive-reared green turtles released annually at the Mauna Lani Bay Hotel. Gray indicates the number recaptured in each year-class during in-water research. Black indicates the number stranded.

Figure 2. HAWAIIAN GREEN TURTLES: OUTCOME OF A DECADE OF CAPTIVE-REARING AND RELEASE FOR EDUCATIONAL DISPLAY



Outcome of green turtles released into the wild at the Mauna Lani Bay Hotel  
N = 102



Circumstances of recoveries  
N = 18

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Date	Type of Encounter	Location	Tumor Score	Nesting Activity	Straight Length	Since Last Encounter				Overall			
						Interval Month	Year	Growth-rates cm/mon cm/yr		Interval Month	Year	Growth-rates cm/mon cm/yr	
06/15/93	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	45.1	11	0.9	1.0	12.7	23	1.9	---	---
07/04/93	Near Shore	Hawaii, Mauna Lani	0	-	---	---	---	---	---	24	2.0	---	---
03/11/94	Near Shore	Hawaii, Mauna Lani	0	-	---	8	0.7	---	---	32	2.7	---	---
04/07/94	Near Shore	Hawaii, Mauna Lani	0	-	---	---	---	---	---	33	2.8	---	---
05/19/94	Near Shore	Hawaii, Mauna Lani	0	-	45.7	1	0.1	---	---	34	2.8	---	---
05/15/95	Near Shore	Hawaii, Mauna Lani	0	-	---	11	0.9	---	---	46	3.8	---	---
05/17/95	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	---	---	---	---	---	46	3.8	---	---
07/04/95	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	45.3	1	0.1	---	---	48	4.0	---	---
03/15/96	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	48.5	8	0.7	0.4	4.6	56	4.7	---	---
03/21/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	56	4.7	---	---
04/04/96	Near Shore	Oahu, Kawaikui Beach Park	0	-	48.8	---	---	---	---	57	4.8	---	---

Tag Number	Date Tagged	Tag Type	Tag Position
11003	07/03/91	1681	R23
11285	04/04/96	1681	LHF
11287	04/04/96	1681	RHF
7F5D7E38	06/15/93	PIT	PIT
J20	06/15/93	1681	LFL

Historical information--

Date	Type of Encounter	Location	Tumor Score	Nesting Activity	Straight Length	Since Last Encounter				Overall			
						Interval Month	Year	Growth-rates cm/mon cm/yr		Interval Month	Year	Growth-rates cm/mon cm/yr	
07/03/91	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	---	---	---	---	---	---	---	---	---
07/04/91	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	21.4	---	---	---	---	---	---	---	---
07/04/92	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	33.7	12	1.0	1.0	12.3	12	1.0	---	---

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SEA TURTLE ~~NECROPSY~~/TUMOR FORM

NECROPSY DATE: 04/04/96 STRANDING ID, DATE AND LOCATION:

DAN AKAKA/ MAONA LANI I

PERSON RECORDING DATA:

DESCRIPTIVE REMARKS: NMFS VEF (captive) 3-15-96 to 4-4-96  
Released @ Kawaiiki Beach Park by 4-4-96 by DME/LG  
Tag 11286 not used ~~Oahu~~  
11287  
→ ~~11288~~ RHP  
NEW → 11285 LHF (not scaled completely)  
~~11289~~ LHF

Recovered

TAGS: 11003 R2-3  
→ 11220 LFL  
PIT 7F7FSDTE38

SEX: MALE, FEMALE OR UNDETERMINED  
DB: 0 VB: 0

STRAIGHT CARAPACE-LENGTH: 48.8 WIDTH:

NOTCH LENGTH: 48.4 PPS (Y/N): 4

CURVED CARAPACE LENGTH: 52.0 WIDTH:

HEAD WIDTH:

TAIL LENGTH: T C

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH: Blood taken for

PLASTRON LENGTH: Plasma bottles

WEIGHT:



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----- Forwarded message -----  
Date: Fri, 18 Aug 2000 14:01:07 -1000  
From: Danny Akaka <dakaka@maunalani.com>  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Fwd: RE: What a blessing!

Reduce  
ML

Aloha George,

I'm sorry that this information is getting to you so late but I've tried e-mailing this without much success. Mahalo for your patience. One day I'll learn how to do this. Please see attached for the letter with the addresses of the hula dancers.

----- Forwarded -----  
From: dakaka@maunalani.com at EXTERNAL  
To: Gbalazs@honlab.nmfs.edu at EXTERNAL  
Subject: Fwd: RE: What a blessing!

ATTACH03. Name: ATTACH03.  
Type: unspecified type (application/octet-stream)  
Encoding: base64

----- Forwarded -----  
From: ronuhiw@ksbe.edu at EXTERNAL  
To: kahsing@maunalani.com at EXTERNAL  
Subject: RE: What a blessing!

July 7, 2000

Hi Kaniela!

Thank you for your uplifting thoughts. What a joy and pleasure to relive the memories through your words. The highlight of our time at Mauna Lani, for me, was touching the male honu, and being allowed to pray over and escort the female honu to the bay for release. The chant, "Lua Moku" is about the two honu, Kaiaka (male) and Eaea (female). For that reason, I call honu number 89, Kaiaka and honu number 90, Eaea. I shared my concern with Kumu and the ladies that it's a shame to send the honu off without names. So when I go to prayer before the Lord I remember to ask for His safekeeping over Kaiaka and Eaea.

It is encouraging to know that Mr. George Balazs was touched by the presentation of the hula honu. Kumu John's mission is to educate and

----- Forwarded message -----  
Date: Fri, 11 Aug 2000 10:29:03 -1000  
From: Danny Akaka <dakaka@maunalani.com>  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Re: Honu Deposit

ML

Aloha George,

Just wanted to update you about our honu which was returned to the quelling pond. Her (?) right front flipper tag is no. 10557; the curved carapace length is 86.0 cm.; curve width is 28.5 cm.; weight is 156.5 lbs. We weighed her on the loading dock scale which is very accurate.

That's as much as we have for now and so please let us know if any thing else needs to be done.

Aloha a hui hou,

Danny

>>> "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu> 08/09/00 01:28PM >>>  
Thanks very much, Danny. I presume now that the turtle has been put back into the quelling pond. Is that correct? That's good if it has.  
Aloha, George

On Wed, 9 Aug 2000, Danny Akaka wrote:

- > Aloha George,
- >
- > Marty has just informed me that we have about a 4 cm. fecal sample from our honu in quarantine. Sorry it's taken so long but we have been checking every day and this is the first sample that we have been able to obtain. It is presently in the freezer. Mahalo for the report on the analysis of the turtles we've released. Please advise us as to your next visit or if not how you would like us to handle this.
- >
- > Mahalo once again for your help,
- >
- > Kaniela
- >

E: What a blessing! (fwd)

ML Book

Redone

enlighten his haumana as well as those we meet along the way. It is clear that his mission was accomplished that day. I feel everyone present was touched by the day's events.

Here are the names and addresses that you requested:

Mr. and Mrs. John Kaimikaua  
92-622 Newa Street  
Makakilo, Hawaii 96707

Ms. Elsie Ryder  
95-085 Waihonu Place  
Mililani, Hawaii 96789

Ms. Chelsea "Kalei" Nihipali  
410A Bates Street  
Honolulu, Hawaii 96817

Mrs. Robyn Kaapana Nu'uhiwa  
575A Keolu Drive  
Kailua, Hawaii 96734

Mahalo, once again, for everything. I can't express my gratitude enough for the superb service that was given us. May the Lord bless you all and may He bring you joy and peace. Until we meet again.

Aloha no!  
Robyn Nu'uhiwa

> -----Original Message-----  
> From: Kina Ah Sing [mailto:kahsing@maunalani.com]  
> Sent: Friday, July 07, 2000 11:47 AM  
> To: ronuuhiw@ksbe.edu  
> Subject: Re: What a blessing!

> Aloha kua e Robyn,

> I would personally, as well as on the behalf of everyone here at  
> the Mauna Lani Bay Hotel & Bungalows, like to express our deep  
> gratitude to you, as well as your hula sisters and Kumu Hula,  
> John Ka'imikaua and Ka'oi, for your participation in our 11th  
> Annual Turtle Independence Day. Your beautiful hula honu brought  
> about a new spiritual dimension to our Independence Day,  
> something that has never been done before. We were all mesmerized  
> by the hula which seemed to have been created for our 2 adult  
> honu who are now at breeding age. The story seemed to match these  
> 2 honu who are now ready to go to out and start a new life. I  
> truly believe that it was your halau('s) performance of this  
> special hula that made the release such a great success. In fact,  
> George Balazs, the National Marine Fisheries head of the turtle  
> research program in Hawai'i, was so deeply impressed, after  
> seeing the hula, that he asked me to get all of your names and  
> mailing addresses so that he can personally thank you all. For  
> him, seeing the hula honu really made his day and it also  
> fulfilled his dream of seeing that hula performed. A few days ago,  
> I've asked John for that information but just in case he hasn't  
> gotten to do that please e-mail me with your names and mailing  
> addresses so that I can send it to George.

> Mahalo nui for your beautiful e-mail message and hope to see you  
> all again soon.

> Nou me ka ha'ah'a,  
>  
> Kaniela

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Tag Number	Date Tagged	Tag Type	Tag Position
11471	07/09/92	I681	RFL
7F51677F	06/15/93	PIT	PIT
J10	06/15/93	I681	LFL
V662	01/04/96	I681	LHF

Historical information--

Date	Type of Encounter	Location	Tumor Score	Nesting Activity	Straight Length	Since Last Encounter				Overall			
						Interval		Growth-rates		Interval		Growth-rates	
						Month	Year	cm/mon	cm/yr	Month	Year	cm/mon	cm/yr
07/09/92	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	23.5	---	---	---	---	---	---	---	---
06/15/93	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	36.1	11	0.9	1.1	14.0	11	0.9	1.1	14.0
07/04/93	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	---	---	---	---	---	11	0.9	---	---

Date	Type of Encounter	Location	Tumor Score	Nesting Activity	Straight Length	Since Last Encounter				Overall			
						Interval		Growth-rates		Interval		Growth-rates	
						Month	Year	cm/mon	cm/yr	Month	Year	cm/mon	cm/yr
06/20/94	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	44.7	11	0.9	---	---	23	1.9	0.9	11.2
07/04/94	Near Shore	Hawaii, Mauna Lani	0	-	---	---	---	---	---	23	1.9	---	---
01/04/96	Near Shore	Hawaii, Mauna Lani	0	-	45.4	18	1.5	---	---	41	3.4	0.5	8.4
01/19/96	Near Shore	Hawaii, Mauna Lani, Captivity	0	-	---	---	---	---	---	42	3.5	---	---
01/22/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	42	3.5	---	---
03/21/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	1	0.1	---	---	44	3.7	---	---
03/29/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	45.1	---	---	---	---	44	3.7	0.5	5.8
04/01/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	44	3.7	---	---
04/03/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	44	3.7	---	---
04/18/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	45	3.8	---	---
04/25/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	45	3.8	---	---

Date	Encounter	Location	Score	Activity	Straight Length	Since Last Encounter				Overall			
						Interval		Growth-rates		Interval		Growth-rates	
						Month	Year	cm/mon	cm/yr	Month	Year	cm/mon	cm/yr
05/06/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	45	3.8	---	---
05/13/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	46	3.8	---	---
05/16/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	46	3.8	---	---
05/20/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	46	3.8	---	---
06/10/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	45.1	---	---	---	---	47	3.9	0.5	5.5
06/18/96	Near Shore	Oahu, Kewalo Basin, Captivity	0	-	---	---	---	---	---	47	3.9	---	---
06/24/96	Near Shore	Oahu, Kaneohe Bay	0	-	45.4	---	---	---	---	47	3.9	0.5	5.6

# Pseudo Penis Growth Shsun

Shsun  
was ~~born~~  
really on cartilage  
in this one?

note &  
return  
plans

SEA TURTLE ~~DATE~~ TUMOR FORM

DATE: 6/24/96 STRANDING ID, DATE AND LOCATION:

DATE: 6/24/96	STRANDING ID, DATE AND LOCATION:
PERSON RECORDING DATA: DAN Akaka	01-19-96 Keawenui Big Is.
DME	

DESCRIPTIVE REMARKS: Former mauna Lani Captive.  
KRF captive 1/19 - 6/24/96

Dr. Morris examined, took blood for ~~PL~~ Pack Cell count.  
Gave 1/2cc iron injection. Took slide photos of pseudo penis. was released at Laenani DP. B.A.  
Took off after initial disorientation. Swimming well  
Under water breathing well.

projecting

TAGS:	RFL 11471	SEX: MALE, FEMALE OR UNDETERMINED	M
	LPL J10	DB: <input type="checkbox"/>	VB: <input type="checkbox"/>
	LH V662		

PIT 7F7FS1677F 6/24/96  
STRAIGHT CARAPACE-LENGTH: 45.4 WIDTH:

NOTCH LENGTH:  PPS (Y/N):

CURVED CARAPACE LENGTH:  WIDTH:

HEAD WIDTH:

TAIL LENGTH: T  C

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:  Blood for plasma

PLASTRON LENGTH:  banking. ~~GAB~~

WEIGHT: 30 # Photos of pseudo penis (print film).

(8)

Date: Mon, 15 Jan 1996 14:47:48 -1000  
From: Marc Rice <mrice@hpa.edu>  
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re: Forwarded mail.....

i just this morning spoke with Francis and he is very pessimistic about the surf. He feels that it will be coming up on Friday. I guess we will just have to wait and see. Unfortunately, the tide is not high until 1330 hrs or we could go kahaluu. We probably can only work the inner bay if the surf is up so it would have to be rising/high tide when we worked it. I didn't quiz Francis about the shark as it was not quite the right moment - he wasn't real thrilled about my request to launch the boat there! The buoyant turtle remains in the harbor and seems about the same. I just spoke with Robbie Hind and he told me a tail of a couple of potential shark sightings at Kiholo. He would probably not be uncomfortable with a small fishing expedition -  
More later,  
Marc

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Date: Wed, 10 Jan 1996 08:31:22 -1000  
From: Marc Rice <mrice@hpa.edu>  
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re: Forwarded mail....

Thanks for the info. I am glad 94 came back up. I am flying to HNL today for a meeting at 1400 so I may miss your call. I'll get back to you tomorrow if we miss connection today.  
I am really sorry to hear that this whole mess may continue- I wish things could get settled so we could get back to work.  
I spoke with a fellow that dives a lot at Puako and Mauna Lani and he mentioned that they have, over the years, relieved several Puako turtles of entangling line, etc. Interesting that this one should show up now. Was it one of our tagged animals? Danny and he both mentioned that there was an eye witness to a tiger shark turtle predation off of Mauna Lani. I asked Danny to see if he could get more information on the incident. I also asked them if they new of any "tumored" turtles and they indicated that they hadn't seen any- even in the area where the one was reported by Ocean Sports Waikoloa. They did mention that they knew of one animal that they see regularly that has a very swollen neck- no tumors apparent, just a fat neck.  
I ask the fellow if we could have a video shot of the animals and he said it was possible. I think I will have to remind him if we really want it. I will call them this morning to see how the little turtle is doing...  
More Later,  
Marc

=====  
Marc R. Rice  
Hawaii Preparatory Academy  
Kamuela, Hawaii 96743  
mrice@hpa.edu  
=====

Date: Wed, 10 Jan 1996 20:41:18 -1000  
From: mrice@hpa.edu  
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re:Thanks For Lunch

George,  
Thanks for the great lunch. It was great to get to talk to you and get caught up on all the gossip - nice pictures (I must be getting old). I will get on the phone tomorrow morning and see what Francis has to say. I will also get some options for you to select from for next week (I imagine we could pull off a trip on Wed., Thurs., or Friday). I will confirm possible dates tomorrow.  
I will take you up on the offer for a trip to Kaneohe but only after your trip to S.D. and only if you don't get thrown out of your office again....  
Let me know what possible dates are (using a PMA).  
More tomorrow....  
Thanks,  
Marc

Date: Thu, 4 Jan 1996 21:44:38 -1000  
 From: mrice@hpa.edu  
 To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
 Subject: Re: Forwarded mail...

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George,

The turtle in question is not the same as the one that they have been feeding there - This is a new one that showed up only 5 days ago.

Francis didn't really have any suggestion about what he thought should be done. I think he was just trying to be helpful, and he really does seem to like the turtles. I told them when I was there that in most cases it was best to let nature take its course, and that nothing could be done without your approval/consent. I don't, of course know if the lettuce caused the problem, but Francis said that the new-comer was oddly buoyant when it first arrived. The truth of the matter may never be known. I agree that feeding like this is not appropriate.

My thoughts are to let the critter try and work through the problem in the wild since it is not in immediate danger. I can keep in touch with them down there to see how things are going (and to let them know that 'we' are concerned and interested) and, if things get obviously worse, then you could make a decision about how to handle it.

Don't get caught sneaking into your office?!

Best,  
 Marc

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT 6/20/02

~~TO BE RELEASED~~  
~~7-4-02~~

CAPTURE DATE, LOCATION AND METHOD:

6/20/02 Mama Lani turtle pool, hand capturing  
 PERSON RECORDING DATA: Jill Q CAPTIVE

TUMOR SCORE

0

ORAL TMRS EXT:

YES OR NO

-

EMACIATION CODE

0

OLD TAGS:

UH 422A3A2B0A

RH 42374A3360

3807 (1, R2-2)

NEW TAGS:

RFL

LFL

11  
 11 ML - 17  
 11 ML

STRAIGHT CARAPACE - LENGTH:

38.3 cm

WIDTH: 28.7 cm

NOTCH LENGTH: 38.1 cm

DB: 0 L.O.

VB: 0 L.O.

CURVED CARAPACE LENGTH:

41.0 cm

WIDTH: 33.5 cm

HEAD WIDTH: - cm

AXIAL: 15.0 cm

LATERAL: 14.9 cm

PPS: YES OR NO OR NE yes

SEX: Male, Female or Undetermined U

TAIL LENGTH: T - cm

C - cm

RIGHT FRONT FLIPPER WIDTH: - cm

PLASTRON LENGTH: - cm

WEIGHT: 16.515 #

SAMPLES COLLECTED:

Blood by Dr. Morris

DESCRIPTIVE REMARKS:

int. redone "M7" on 3rd last left  
 and "ML7" 4th lateral RIGHT

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Date: Thu, 4 Jan 1996 16:09:56 -1000  
From: Marc Rice <mrice@hpa.edu>  
To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re: Forwarded mail....

George,  
Don't know if you will get this or not but I will try.

I went down to Mauna Lani and caught the turtle at around 1300 today. 1/4/96

It was in the harbor there right up against the edge northeast (rocks) sort of washing back and forth in the surge. Francis said that it has been in the harbor for 5 days behaving similarly (even at night). He threw a couple leaves of lettuce down into the water and the animal immediately ate them. He stepped down into the water right next to it and picked it up and handed it to me. It didn't struggle much and when I put it on the grass to measure it tried to crawl away but not vigorously. A towel on the head quieted it down and it just laid there for the next 10-15 minutes. (1330 hrs to 1345 hrs).

Old Tags: RFL = 11471  
LFL = J-10  
New Tag: LH = V662

7-4-92	Mauna Lani Capt.	SL=23.9	
0-15-93	"	"	SL=36.1, CL=38.5
7-4-93	"	"	
6-20-94	"	SL=44.7, CL=47.5, SW=36.8, CW=42.9	
7-4-94	Mauna Lani	SL=44.4, PL=35.9	Head=35.9

MEASUREMENTS:  
CURVE LENGTH 48.8 CM.  
CURVED WIDTH 43.6  
STRAIGHT LENGTH 45.4  
NOTCH 45.2  
STRAIGHT WIDTH 37.1

The animal is robust (appearing well fed) and there were no apparent injuries anywhere on the external surface or in the mouth (it was somewhat difficult to see in the mouth because of all the lettuce inside!) The eyes seemed to be "dull" and unusual but it seems that it can see fine because it picked lettuce out of the water easily. No tumors evident. All in all, a very docile creature.

When I put the animal back into the water it swam off vigorously and actually submerged itself for a short period of time- 20 seconds - then it returned to the surface and floated over near the southwest breakwater of the harbor. It floats rather oddly with the posterior half of the carapace sticking up out of the water (you actually see the back edge of the shell out of the water).

The little fellow is definitely not acting "normally," but it doesn't seem to be in dire straights either. I spoke with Danny and he said that he would be able to accommodate it in an isolated pond if you wanted him to. Seems he has another one (a Mauna Lani release/returnee) in there now and would set it free if necessary because he thinks it is ok now. I will call the boat house tomorrow and see what is happening. I'll let you know what is happening as soon as I hear something.

Anything else that might be done?

Danny said to say hello-

Best,  
Marc

Released Odhu  
6/24/96  
Kaneohe Bay



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Living with a Difference - We Care



# DIVE MAKAI CHARTERS

POST OFFICE BOX 2955  
KAILUA-KONA, HAWAII 96745  
(808) 329 2025 (phone & FAX)

Capt. Tom Shockley

Capt. Lisa Choquette

4/13/95

Hi, George -

Thank for all the info - love my bumper sticker. For your info: 1 of our sharp eyed clients saw

DPS please	Turtle	L 523 - Pt. Front	@ Kahului's
		R 22 - left rear	Beach Park
			on 4/8/95 around 2:30 p.m.

Also, @ turtle towers on 4/5 - large (30" shell at least) turtle w/ LR flipper missing!  
Way down the coast on 4/7 (near Au Au Water) young turtle w/ LF flipper missing - looked like a bite!!  
Both seemed A-OK -

Lisa

Living with a Difference - We Care



# DIVE MAKAI CHARTERS

POST OFFICE BOX 2955  
KAILUA-KONA, HAWAII 96745  
(808) 329-2025 (phone & FAX)

Pt. George Balaya

Capt. Tom Shockley

Capt. Lisa Choquette

5/16/95

Hi, George,

Had an awesome dive @ Turtles Fri. a.m. Could just look around & count at least 8 in view at any given time. We stayed & stayed - & so did they!

Saw NO tags (where were all our tagged friends???)

Measured 2 that were sleeping/being cleaned mutually on top of 1 another - I carry a plastic sewing meas. tape in my B.C.

1 = 29"  
1 = 31"



1 - definitely short tail!!  
Other had everything tucked under & lying on it!!

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KITHOLO #18 11-12 JANUARY 94 \*SONIC 447 4 456  
P-  
NARRATIVE Mead SNORKEL ONLY Deployed Previously Sonic 348  
21 greens (9 new) + 2 hawksbills (recaptures) H282- H283 y102 y103 y104

PUAKO 26 JAN. 94  
#13 A TOTAL  
(9 New, 10 recapture)

SQUARE DEAL

TAGS USED =  
K334-K350; K627-K6  
BAD K336, K338, K342, K346  
K626

TAGS used K351- K384 K676-K685

KITHOLO #19 8-10 FEBRUARY 1994  
NAME ADDRESS K401-K421

SCHOOL 929-9741  
Day 1 = 35 (16 new) Day 2 = 24 (3 new) ONE HAWK RECAP K426-448  
K449- K467

TIME	FROM TO...	PERIOD 1	PERIOD 2	PERIOD 3	PERIOD 4	PERIOD 5	PERIOD 6	PERIOD 7	PERIOD 8
		SUBJECT							
ROOM									
INSTRUCTOR									
SUBJECT									
ROOM									
INSTRUCTOR									
SUBJECT									
ROOM									
INSTRUCTOR									
SUBJECT									
ROOM									
INSTRUCTOR									
SUBJECT									
ROOM									
INSTRUCTOR									

Notes to G. BALAZS  
Call 808-943-1221

Emergency 5469  
conservation 62  
MUNICIPALITY  
DANNY'S WORKERS  
KUHARA  
James

KITHOLO #18  
59 TOTAL (58 greens / hawk)  
19 new - all greens  
JAMIE PERRY  
(Cell) 929-9741

Tom Friel PAGE = 598-7927  
cellular = 286-8000

15 MAY 94 KAHALU'U #2 TAGS USED =  
Sunday  
+ 4 turtles reached (5 captures) K546, K717-1  
Resig. no beached (4 new, 1 Y23/Y24) K803-K806  
K808-K818

19 MAY 94 Keawanui #10 TAGS USED = K732-  
Thursday DNA Blood samples = 11 K759  
Hard Scuba = 11 (6 new recoveries) ONE of recoveries was Mauna Lani (517)  
Danny Akaka throw det = 2 (1-520 7/14/93 Release (New))

17 JUNE 94 KEAWANUI #11 TAGS USED =  
FRIDAY HARD SCUBA = 8 (zero new recoveries) K952-K955  
6 DNA Blood (2 are dupz of 5/19/94) (517 Mauna Lani)

20 JUNE 94 MAUNA LANI CAPTIVITY TAGS USED = K956  
Monday w/para B.M.B. 14 DNA Blood collected 13 PITS inserted. 2 direct present K974  
Range scl = 43.4 to 72.4 cm

14 JULY 94 KALOKO #1 ("DINE MAKAI" LISA/TOM SITE)  
THURSDAY 10 captures - all new. 9 DNA Blood. TAGS USED =  
- Dive #1 48ft 52 minutes J482-J500  
- Dive #2 50ft 42 minutes J426-J446

30 MARCH 95 KAHALU'U #3 TAGS USED =  
15 CAPTURED B573-  
B309.

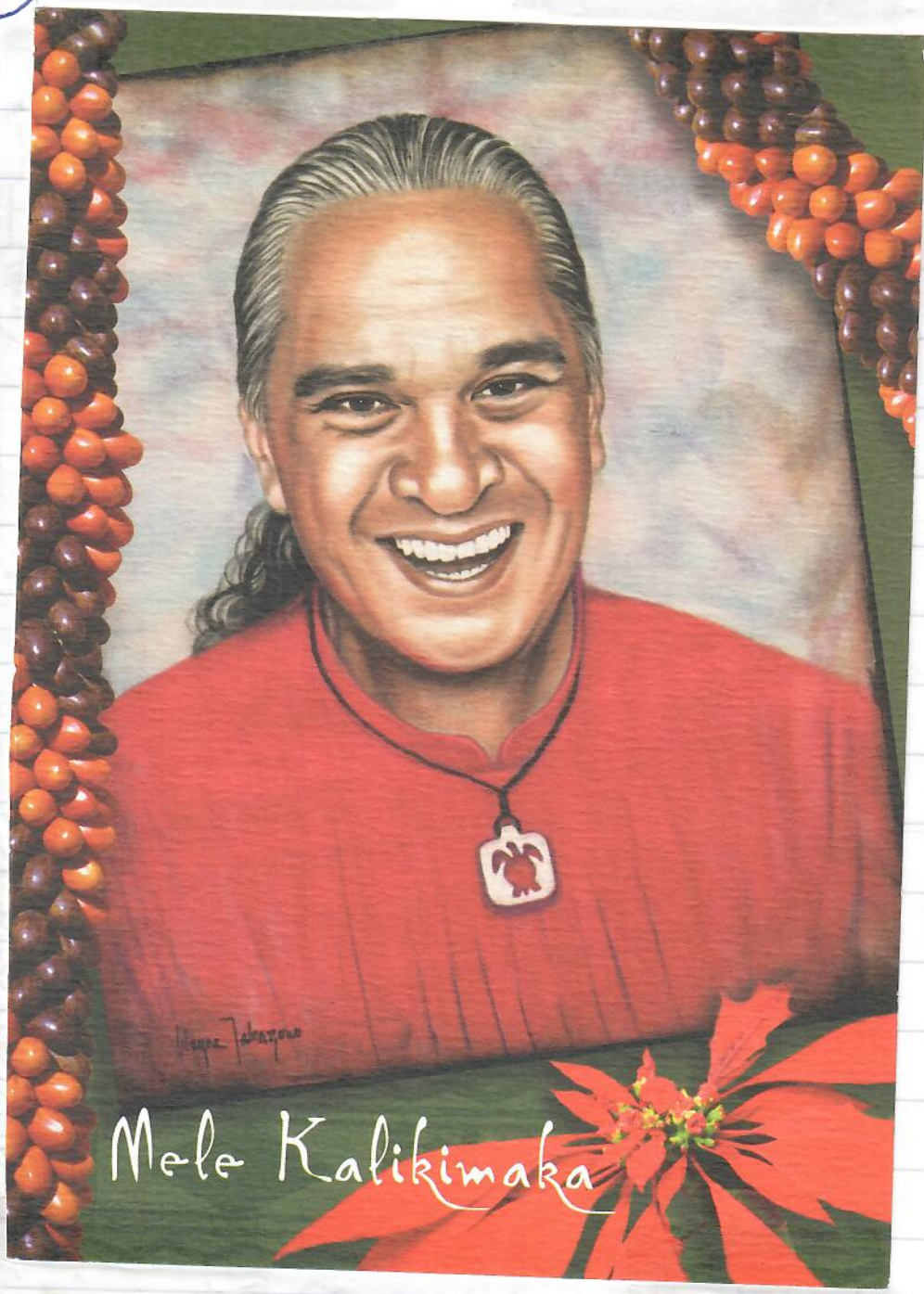
9 new, 6 recaptured (including 199-97 H26 = 1/89 orig. K. hole)

Kahalou #4 = 4 New

Kahalou #2 & 3 = 13 "new"  
All new #1 #4  
TOTAL =

188

188



Mele Kalikimaka

1st  
12/24/80

12/24/80

1

1

12/24/80

From Moe:

*The magic of the holidays and the celebration of aloha make Hawai'i a very special place. The staff at the Sheraton Waikiki Hotel and I wish our friends throughout the world a Mele Kalikimaka and Hau'oli Makabiki Hou.*

*I am proud to be a part of the Sheraton Waikiki Obana (family). Each night, we showcase some of Hawai'i's most celebrated entertainers. I personally enjoy sharing our Hawaiian culture with Malabini (visitors) and Kama'aina (local residents). We invite you to share in Hawai'i's unique holiday spirit and enjoy the beautiful island music.*

*We wish you a joyous holiday season and much success in 2002!*



SSS

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TABLE OF CONTENTS  
CONTENTS CONTINUED FROM P. 189

MAUNA LANI 8-9 AUGUST 97  
Friday/Saturday

new TAGS Applied V710 - V716 (from Danny AKA TAG KIT) + ALL PIT3

8/8/97 (12) Turtles Measured, tagged, examined 3-5 pm with Paul Balazs, Mike Rice, Marty Weisner, others assistance (Noni et.)

(10) Released 8/8/97  
Photos w/ Paul Breeze, Sen. Ak...

3-4 July 98 overnight w/LIN  
See P. 93-108 10 released

3 JULY 1999 PAGES 109-120  
Saturday

Sue Jin Hwang & GHB

Geo. & Sandy Watson + 3 HPA students  
Greg Lerner + Bob & Bonnie Braun

(Noni & Nona (granddaughter) pickup at Airport  
12 Noon - 630 pm

20 JUNE 2002  
Thursday) Mauna Lanii

4 to be Released 7/4/02. 22270  
3 to be kept AT ML. = N:8

7/4/02 Release Page "D" Data P. 4, 5  
P. 122 (22270 ST18 12/48)  
P. 169, P. 182  
7-4-02 Release x P. 189

(191)

The Project Home Project literature address

6/16/95 Kahaluu #4

Sent

Sue LoGuercio  
5750 FRIARS Rd #207  
San Diego CA 92110

Literature Sent

VICKI Khisley  
3105 Courthouse Dr. #1C  
West Lafayette, Indiana 47906

Thanks!  
will write me a letter re: great  
to see turtles. in file

Jul-13-08 11:20am From-Mauna Lani Bay Hotel Front Office +18098951444 T-513 P.01/08 F-070

- 1 517E
- 2 7476
- 3 194B
- 4 7B5F
- 5 4924
- 6 6961
- 7 2662
- 8 130A
- 9 3058
- 10 5406

PIT TAG #'S  
OF 7/4/98  
TURTLE  
RELEASE  
AT  
MAUNA  
LANI

GEORGE,  
HERE'S THE  
RECORDS -

MARY  
JULY  
4 1998

7/4/01 Quelling pond Turtle Release P.166  
Mauna Lani



Kahalun #4 6/16/95  
Summer School Students

192

Erin Worth Lake High  
Standley  
Westminster Colorado

Tish O'Toole  
Heather Howard

Darin Butterfield

Beth Justice  
Michelle Welch  
Tammmy Fume

Jenny Jeffers

Kevin Hann

Bonnie Reichwein  
Columbine High  
Littleton CO 80123

Malia Haber

Ajuna Clarry

Scott Linds

# Useful Information

298 on rocks back low tide in front of ML 6/02  
 See by Marty Wiesner

Date: Tue, 23 Jul 1996 08:21:27 -1000  
 From: Marc Rice <mrice@hpa.edu>  
 To: "George H. Balazs" <gbalazs@honlab.nmfs.hawaii.edu>  
 Subject: sighting at Kahalu'u

**KAHALA BEACH UUPARK**  
 Assumed an engineers reading.

George, Alan Boyd (former HPA employee) read tag K105 on 7/14 between the hours of 1200 and 1400. Animal looked normal to him at the time. It was in shallow water near the area where all the tourists swim on the south end of the bay.  
 Marc

668cm K102-K105 9/30/93 KBY DOOD 42-42 TIME=1

TABLE

Pass duration : 050s NOPC : 1  
 Calcul freq : 401 651901.2 Hz Altitude : 0 m  
 171 1844 1189 18  
 00 00

22270 Date : 20.06.02 21:48:01 LC : 0 IQ : 66 *Release*  
 Lat1 : 19.982N Lon1 : 155.924W Lat2 : 24.260N Lon2 : 171.248W  
 Nb mes : 004 Nb mes>-120dB : 001 Best level : -118 dB  
 Pass duration : 135s NOPC : 2  
 Calcul freq : 401 647806.6 Hz Altitude : 0 m  
 5192 5192

22270 Date : 20.06.02 23:52:27 LC : 0 IQ : 56  
 Lat1 : 19.929N Lon1 : 155.989W Lat2 : 21.217N Lon2 : 150.187W  
 Nb mes : 010 Nb mes>-120dB : 000 Best level : -122 dB  
 Pass duration : 450s NOPC : 3  
 Calcul freq : 401 647714.3 Hz Altitude : 0 m  
 1276 1276

22270 Date : 21.06.02 01:33:00 LC : 0 IQ : 57  
 Lat1 : 20.045N Lon1 : 155.976W Lat2 : 10.424N Lon2 : 161.327E  
 Nb mes : 004 Nb mes>-120dB : 000 Best level : -133 dB  
 Pass duration : 340s NOPC : 3  
 Calcul freq : 401 647895.4 Hz Altitude : 0 m  
 2716 2716

22270 Date : 21.06.02 02:19:09 LC : A IQ : 08  
 Lat1 : 20.003N Lon1 : 155.920W Lat2 : 24.411N Lon2 : 135.745W  
 Nb mes : 003 Nb mes>-120dB : 000 Best level : -125 dB  
 Pass duration : 159s NOPC : 2  
 Calcul freq : 401 647916.1 Hz Altitude : 0 m  
 2777 2777

22270 Date : 21.06.02 03:09:55 LC : 0 IQ : 55  
 Lat1 : 20.004N Lon1 : 155.931W Lat2 : 26.267N Lon2 : 127.879W  
 Nb mes : 007 Nb mes>-120dB : 000 Best level : -123 dB  
 Pass duration : 455s NOPC : 3  
 Calcul freq : 401 647925.3 Hz Altitude : 0 m  
 2910 2910

22270 Date : 21.06.02 03:31:58 LC : A IQ : 50  
 Lat1 : 20.014N Lon1 : 155.924W Lat2 : 30.412N Lon2 : 105.234W  
 Nb mes : 003 Nb mes>-120dB : 000 Best level : -133 dB  
 Pass duration : 099s NOPC : 2  
 Calcul freq : 401 647925.3 Hz Altitude : 0 m  
 2958 2958

22270 Date : 21.06.02 03:57:26 LC : 1 IQ : 68  
 Lat1 : 19.959N Lon1 : 155.951W Lat2 : 0.469N Lon2 : 0.005E  
 Nb mes : 004 Nb mes>-120dB : 000 Best level : -130 dB  
 Pass duration : 282s NOPC : 4  
 Calcul freq : 401 647946.4 Hz Altitude : 0 m  
 3145 3145

22270 Date : 21.06.02 04:50:35 LC : 1 IQ : 58  
 Lat1 : 19.976N Lon1 : 155.951W Lat2 : 15.370N Lon2 : 176.018W  
 Nb mes : 007 Nb mes>-120dB : 000 Best level : -126 dB  
 Pass duration : 521s NOPC : 4  
 Calcul freq : 401 647940.4 Hz Altitude : 0 m  
 3325 3325

1 sq. yd. = 1 sq. rod  
 30% sq. yds. = 1 sq. rod  
 160 sq. rods = 1 acre  
 640 acres = 1 sq. mile  
 An acre measures 208.71 ft. on each side.  
 A section of land is 1 sq. mile.  
 A quarter section is 160 acres.  
 A township is 36 sq. miles.

LITERS	PINTS	QUARTS	GAL.
1.000	2.113	1.057	.264
.473	1.000	1/2	1/8
.946	2.000	1.000	1/4
3.785	8.000	4.000	1.000

August 31, 2004

Sandi Patton  
Mauna Lani Hotel

Dear Sandi:

I have completed our site inspection report of the Mauna Lani Hotel honu program based upon the inspection visit that Mike Osborn and I conducted on August 7, 2004.

We have some serious concerns about the care of the honu at the Mauna Lani Hotel based upon the mortalities associated with bristle worm infestation. Drs. Morris and Work have thoroughly investigated these mortalities and bristle worm infestation is the common thread. We are concerned that the Mauna Lani has not taken their recommendations seriously enough, placing the remaining honu at risk of bristle worm infestation and, possible, death. These mortalities have occurred over a protracted period and we did not see evidence that recommendations were undergoing implementation.

It is important that the Hotel understand the seriousness of this problem. The honu belong to the State and the people of Hawaii. They represent a cultural link to the Hawaiian culture. We feel very fortunate to care for these animals and believe it is a privilege for the Mauna Lani Hotel to maintain these honu for the enjoyment and education of its guests. We know that you feel the same.

If Dr. Morris's recommendations are not immediately implemented as well as the recommendations contained in our report we will be gravely concerned. Any further deaths due to bristle worm infestation, which can be prevented, will cause us to reconsider housing honu at the Mauna Lani Hotel. I am sorry to be so blunt, but this is a serious, protracted problem that must be immediately addressed.

Concurrently, we wish to commend the efforts of Pi'i. He is providing excellent care and oversight for the honu, but lacks the necessary staff and capital support to correct the bristle worm problem without further resources.

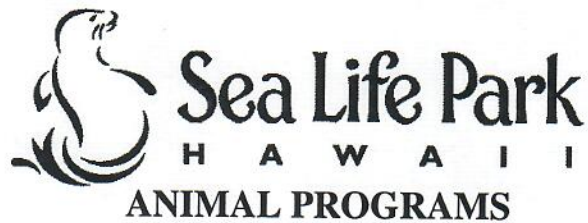
Please contact me if I might offer any further information. We look forward to assisting you in solving this problem and look forward to your response.

Thank you for your consideration.

Sincerely,

*Brian E. Joseph, DVM*

Brian E. Joseph, DVM  
Senior Veterinarian  
Sea Life Park Hawaii  
(530) 515-2001



## GREEN SEA TURTLE SITE INSPECTION

Date of Inspection: August 7, 2004

Inspected by: Brian Joseph, DVM & Mike Osborn

Accompanied by: Pi'i Laeha, Loko I'a Manager, Mauna Lani Hotel

### WATER QUALITY

1. Temperature – Ideal temperature 77 – 80 F  
Maximum range 70 – 83 F  
Facility water T 80.96 F (27.2 C)

- Water temperature be measured weekly and recorded on the monthly water quality report? Water temperature is measured daily.

Comments: Water temperature is constant.

2. Salinity - 28 – 32 ppt facility salinity 31 ppt  
Review of salinity records salinity is constant

- Salinity measured and recorded monthly in a closed system? NA
- Open system? Yes.

Comments: Salinity is measured weekly. One pump only is normally run. If the second pump is run, salinity drops to 17 ppt, but flow increases. Sea Life Park personnel approved running the second pump in an attempt to decrease salinity and decrease bristle worm infestation. This will provide the additional advantage of decreasing water temperature slightly through faster water turnover.

*Recommendation: Run second pump.*

*Recommendation: Install flow meters to accurately correlate determine water flow rate and correlate with degree of bristle worm infestation.*

**3. Total Coliforms Bacteria Counts, Chlorine and Ozonation.**

**A. Open System. Yes**

**Flow rate: unknown, but believed inadequate.**

**Coliforms are tested twice yearly.**

**Comments: Coliform and fecal coliform test results from 10/7/03 and 3/17/04 were reviewed and were within normal limits.**

**It is believed that the low flow rate coupled with the increase in pellets has resulted in more food for invertebrates and, subsequently, increased bristle worm populations. It is believed that an increase in flow will flush out the organic debris from the pellets and decrease the bristle worm population.**

**B. Closed System – total chlorine must be kept at < 1 ppm NA**

**Chlorine? NA**

**Chlorine Range NA**

**Ozone tested monthly? NA**

**Comments: NA**

**ENVIRONMENT**

**1. Lighting.**

**Outdoor? Yes**

**2. Beach – No**

**3. Foreign Objects and Substrate**

**Pool substrate? Sand & Concrete (dependent upon pool)**

**Rocks smaller than 4 cm in diameter? No**

**Foreign bodies present? None seen**

**Comments: Pools contain numerous medium sized rocks, too large for the turtles to ingest. These rocks provide habitat for bristle worms and the rocks will be removed as per previous agreement between Dr. Bob Morris and Pi'i.**

#### 4. Tank Mates

**Species:** A variety of reef fishes cohabit the sea turtle environments.

**Quarantine:** Quarantine tanks are located adjacent to the primary honu pool. The largest quarantine tank is currently inhabited by several honu while bristle worm treatments are performed in the main pool.

**Comments:** The fish pose no risk to the honu.

### NUTRITION

1. Fish - Fish can not be utilized as a type of feed for the turtles on loan. We are concerned that feeding the turtles fish will make these animals more likely to get caught in fishing traps and fishing hooks following release.

Fish used in diet? Yes

**Comments:** Small amounts of smelt and shrimp have been offered every other week on the advice of Dr. Bob Morris in an effort to alleviate low serum calcium and low serum hemoglobin that have been seen in some of the honu at the time of their physical examinations.

2. Pellet Diet - Complete turtle pellet diet from the Melick Aquafeed Company.

Melick Aquafeed pellets used? Yes

The following amounts are fed to the honu:

Hau Tree	1/2 cup each tid
Quarantine	1/2 cup each tid
Atrium	1 cup each tid

Melick Aquafeed Pellets were discontinued on 7/4/04 due to concern that animal deaths might be related to their use. Pi'i will inquire if pellet feeding can be resumed.

The above quantities translate to approximately 5 % of each turtle's body weight on a daily basis.

The type of pellet we recommend feeding is based on straight carapace lengths (SCL) of the individual turtles:

Average Straight Carapace Length: \_\_\_\_\_ cm

- SCL less than 15 cm should be fed exclusively developer pellets – Yes \_\_\_\_\_ No \_\_\_\_\_

- SCL greater than 15 cm, but less than 35 cm should be fed exclusively starter pellets – Yes \_\_\_\_\_ No \_\_\_\_\_
- SCL 35cm to 50 cm - Feed a 50:50 mix of starter to finisher pellets – Yes \_\_\_\_\_ No \_\_\_\_\_
- SCL 50cm and over - Feed exclusively finisher pellets – Yes \_\_\_\_\_ No \_\_\_\_\_

Recommendations for quantity of pellets to feed individual turtles are based on individual turtle weight.

- Turtles that have a SCL less than 15 cm should be 5 % of their weight in developer pellets daily
- Turtles that have a SCL greater than 15 cm, but less than 35 cm should be fed 4 % of their body weight in starter pellets daily.
- Turtles that have a SCL greater than 35cm, but less than 50 cm should be fed 3% their body weight in a 1:1 ratio of starter and finisher pellets daily.
- Turtles that have a SCL greater than 50 cm should be fed 2 % of their body weight in finisher pellets daily.
- It is recommended that the feeds be broken up into at least two feeds per day.
- Number of pellets per 10 grams:
  - Developer = 26
  - Starter = 20
  - Finisher = 12

Calculated amount of pellets that should be fed per day in g = approximate body weight of turtles x appropriate % of bw =

Comments: Only two people care for the turtles. This is probably not enough staffing to accomplish all that is necessary for adequate care of the turtles.

*Recommendation: Consider increased staffing to care for the turtles.*

#### 1. VEGETABLES – Are vegetables offered? Yes

What vegetables? Broccoli or ulva are fed twice weekly. The ulva has the advantage of remaining green while the broccoli turns white in the water.

### RECORDS / LOGS / REPORTS

1. Daily feeding and behavior records/logs – Are logs available? Yes  
Are records/logs up to date and complete? Recent records are up to date, but previous records are incomplete.

Comments: It appears that record keeping is a recent innovation.





pelleted feed. The increase in pelleted feed likely results in an increase in small invertebrate herbivores which serve as prey for the fire worms.

Efforts to reduce the number of fire worms: Pi'i recognizes that the fire worm population must be reduced, although it probably can never be driven to zero since their larvae likely enter through make up water. However, Pi'i's investigations suggest that fire worms preferentially inhabit cover provided by rocks within the ponds. The rocks were placed in the various ponds under the instruction of a previous hotel general manager. Pi'i plans to remove the rocks, but a rate limiting step is a shortage of available staff. Pi'i has a single associate that regularly helps with the care of the turtles. Additional assistance will be necessary to complete this task.

A second step in reduction of fire worms will be treatment of individual ponds with freshwater. Freshwater causes the fire worms to die from exposure to an inappropriate osmotic gradient. Limited experimentation has been successful although it is also apparent that some fire worms survive in sediment where they are subjected to a less unfavorable osmotic gradient. A challenge in the implementation of this method is that all of the ponds are linked. It is very difficult to isolate individual ponds for freshwater treatment. All cohabitating fish must be removed to initiate this treatment

The third step under consideration is increasing water flow through use of the second pump which will also lower salinity from 31 ppt to 17 ppt. This will likely not have an adverse effect on the turtles, but probably provides insufficient salinity for the survival of the bristle worms. This level of salinity will provide the Mauna Lani the continued opportunity to maintain brackish water fishes with the turtles. However, this effort requires the removal of sharks and other species that have more narrow salinity tolerances prior to implementation.

*Recommendation: It is strongly recommended that Dr. Morris's recommendations are implemented immediately. This requires that the Mauna Lani Hotel dedicate sufficient personnel to implement these changes before additional honu mortalities occur.*

5. Any change in health status must be immediately reported to Sea Life Park Hawaii

Have changes in health status been reported immediately to Sea Life Park Hawaii? No

Comments: Inadequate communication from the Mauna Lani to Sea Life Park did not occur during the period of time that Marty Weisner managed the honu program. Quarterly reports, gross necropsy and histopathological results were not submitted to Sea Life Park during this time. Pi'i was not oriented by Marty that this was a requirement of the turtle loan program. Sea Life Park was lackadaisical in that it did not adequately follow up the lack of reports from the receiving institutions.

It was made very clear during the site visit that this reporting must improve. Pi'i understands the importance of forwarding this information to Sea Life Park Hawaii and informing Sea Life Park of any changes in the health status of the turtles.

**Mauna Lani Honu Inventory**

Turtle ID	Hatched	Transferred	Died	Released	Comments
1/WI 14/WC 02	8/02	7/2/03		7/4/04	
2/WI 16/WC 16	8/02	7/2/03		7/4/04	
4/WC 01/WI 22	8/02	7/2/03			Transferred NMFS 11/12/03 satellite tracking
5 WC 22/WI 24	8/02	7/2/03		7/4/04	3/04 abnormal swimming, amikacin
6/WC 21/WI 20	8/02	7/2/03		7/4/04	4/04 fireworm part in mouth
7/WC 20/WI 15	8/02	7/2/03		7/4/04	9/03 plaques on back of throat, peeling epidermal scales; 3/04 hard time swimming, amikacin
8/WI 17/-	8/02	7/2/03		7/4/04	
9/WC 07/WI 18	8/02	7/2/03		7/4/04	
10/WC 24/WI 23	8/02	7/2/03	3/16/04		2/25/04 neck abrasions, mouth lesions
11/WC 03/-	8/02	11/7/04		7/4/04	
12/WC 27/-	8/02	11/7/04		7/4/04	
13/WC 10/-	8/02	11/7/02		7/4/04	
14/WC 16/-	8/02	11/7/02		7/4/04	
15/WC 12/-	8/02	11/7/02			11/12/03 transferred NMFS for satellite tracking
16/ WC 19/-	8/02	11/7/02		7/4/04	4/28/04 fire worm in mouth, ruggated palate
17/ WC 15/-	8/02	1/7/02		7/4/04	
18/WC 08	8/02	11/7/02	2/24/04		
19/	8/02	11/7/02		7/4/04	
20/WI 30	9/2/03	1/9/04			Baytril in April for plaques on tongue & palate; bite wounds in May
21/WI 32	9/2/03	1/9/04			Mild bites in February
22/WI 33	9/2/03	1/9/04			Deceased
23/WI 36	9/2/03	1/9/04			Bite wounds in May
24/WI 37	9/2/03	1/9/04			
25/WI 39	9/16/03	1/9/04			Bites in May
26/WI 40	9/16/03	1/9/04			Amikacin, baytril, erythematous mouth
27/WI 44	9/17/03	1/9/04	2/15/04		Deceased
28/WI 46	9/17/03	1/9/04			Bites on rear flippers May
29/WI 48	9/17/03	1/9/04			
30/WI 51	9/2/03	1/9/04			Ruggated palate April, bites May 04
31/WI 64	10/2/03	1/9/04			
32/WI 66	10/2/03	1/9/04	4/2/04		Deceased
33/WI 67	10/2/03	1/9/04	7/21/04		April baytril and amikacin; necropsy report not currently available
34/WI 68	10/2/04	1/9/04			Baytril, plaques in April 04
35/WI 69	10/2/03	1/9/04	3/14/04		
36/WI 73	10/2/03	1/9/04			
37/WI 75	9/17/03	1/9/04			
38/WI 93	7/15/03	1/9/04			
39/WI 94	7/15/03	1/9/04			



ML Book

**SUMMARY OF MAUNA LANI TURTLE EXAMS  
FEBRUARY 27, 2009**

The quarterly turtle veterinary exams were conducted at the Mauna Lani resort on 2-27-09.

Eleven new turtles from Sea Life Park arrived on February 25, 2009. These turtles hatched during the summer of 2008. All 11 turtles were found to be in good physical condition. The straight carapace lengths averaged 21.2 cm with a range of 19.8-22.7 cm. The average weight was 3.0 lbs with a range of 2.3-4.2 lbs. A microchip was inserted in the left rear flipper of all 11 turtles. The 11 turtles were housed in the inside atrium pond.

Six turtles continue to reside in the outside Honu pond. All were found to be in good physical condition. Five ranged in length from 32.8-44.5 cm (SCL) and had a weight range of 32.8-44.5 lbs. The remaining year older turtle measured 53.6 cm and weighed 55.9 lbs. All turtles had adequate increases in length and weight.

The ponds continue to be monitored for bristle worms and are on a regular cleaning schedule.

Robert A. Morris MS, DVM  
Kailua, Hawaii 96734

ML Book

DATA ON TURTLES

Date: 2/27/09

Technicians: Dr. Bob Morris, Pi'i  
John Pilande

SHELL #	location	Pit Tag L Hind	Pit Tag R Hind	Weight (lbs)	SLC (cm)	observations
10	Honu	45267C3639	45241D2D03	55.9	53.6	*see veterinarian report
F2	Honu	470B380E27	470A1F1730	30.7	44.5	*see veterinarian report
F3	Honu	<b>4414560F44</b>	470A014A18	20.9	40.1	*see veterinarian report new left hind PIT tag: <b>4414560F44</b>
F4	Honu	470C2A223C	470B2C4056	23.9	40.8	*see veterinarian report
M1	Honu	470B571641	467C291C36*	16.0	38.3	*see veterinarian report
M2	Honu	4709752136	470A114963	11.1	32.8	*see veterinarian report
SHELL #	location	Pit Tag L Hind	Front metal tag	Weight (lbs)	SLC (cm)	observations
11	Atrium	442167200E	XM 26	4.2	22.7	*see veterinarian report
12	Atrium	44146E4C06	WH 37	3.4	22.3	*see veterinarian report
13	Atrium	4413395714	WH 46	2.9	20.9	*see veterinarian report
14	Atrium	44143A7F6D	WH 57	2.7	20.4	*see veterinarian report
15	Atrium	4414085039	WH 58	2.7	20.6	*see veterinarian report
16	Atrium	4413217F6A	WH 62	2.9	21.1	*see veterinarian report
17	Atrium	4414404C2D	WH 65	3.6	22.7	*see veterinarian report
18	Atrium	441308300C	WH 71	2.6	20.2	*see veterinarian report
19	Atrium	441466484B	WH 75	3.3	21.9	*see veterinarian report
20	Atrium	44142F1A5A	WH 76	2.8	20.8	*see veterinarian report
21	Atrium	441309101B	WH 84	2.3	19.8	*see veterinarian report

\* = missing tag

@ 12:00 pm	Temp (C)	Salinity ppt	pH			
Honu	24.9	27.0	7.9			
Atrium	24.7	27.0	7.9			
Q-1	24.6	32.0	7.8			
		(refractometer)				



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2009: June 28; Jul 12, 26; Aug 9\*

\*Port order varies. Ship will not overnight in Barcelona.



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2009: May 24



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2009: May 16



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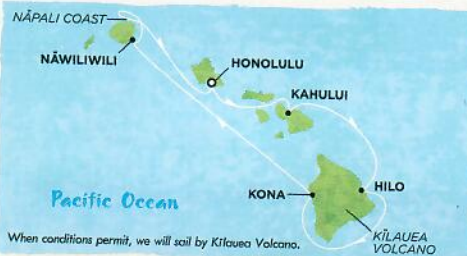
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##### Volcanoes National Park

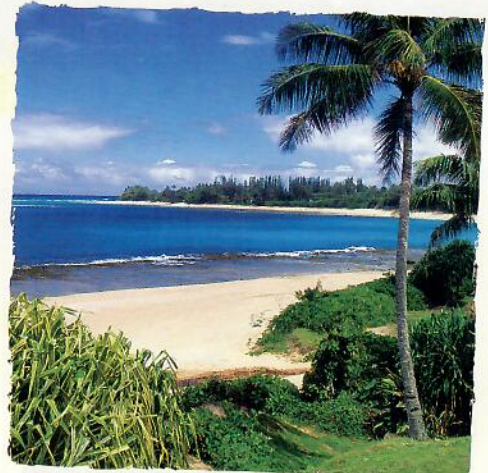
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Date: Tue, 5 Oct 2004 14:43:26 EDT  
From: PhinneyPin@aol.com  
To: gbalazs@honlab.nmfs.hawaii.edu  
Subject: Fwd: Green Sea Turtle growth data

[ Part 1.1, Text/PLAIN 8 lines. ]  
[ Unable to print this part. ]

Here is some interesting information for your consideration.,

Brian E. Joseph, DVM  
10349 Maddelein Lane  
Palo Cedro, CA 96073  
530 549 3245 home phone  
530 549 3845 fax  
530 515 2001 cell phone

[ Part 2: "Included Message" ]

Date: Tue, 5 Oct 2004 14:40:59 -0400  
From: "Brittsan, Mike" <Mike.Brittsan@columbuszoo.org>  
To: SLPMOSBORN@aol.com, pawloski@hawaii.rr.com, jimhorton2000@yahoo.com,  
PhinneyPin@aol.com  
Cc: "Gerold, Tracy" <Tracy.Gerold@columbuszoo.org>  
Subject: Green Sea Turtle growth data

I know that we have been sending you guys allot of information lately. The attached is growth data on your animal that we have kept over the years. You will find it interesting.

The data is in an excel file.

Mike Brittsan M.Sc.  
Curator Columbus Zoo and Aquarium  
9990 Riverside drive  
Powell, OH 43065  
614 724-3580  
Mike.Brittsan@columbuszoo.org

<http://www.columbuszoo.org>

[ Part 2.2, "Sea Turtle Data.xls" Application/VND.MS-EXCEL 27KB. ]  
[ Unable to print this part. ]



"Mavi"  
Columbus Zoo & Aquarium

Seawater temperature =  
Size of tank =  
Diet = composition and amount

Green Sea Turtle - 983001

DOB 8/24/97

Date of Birth

Yearling from  
SLP

Date	SCL		CCL		SCW		CCW	
	inch	cm	inch	cm	inch	cm	inch	cm
5/26/1998	9.55	24.257	9.56	24.2824	7.49	19.0246	7.651	19.43354
9/4/1998	11.25	28.575	11.813	30.00502	11.75	29.845	9.336	23.71344
10/5/1998	13.456	34.17824	13.5	34.29	11.995	30.4673	11.05	28.067
3/5/1999	15.93	40.4622	17.214	43.72356	13.11	33.2994	15.6	39.624
11/10/1999	19.47	49.4538	20.3	51.562	15.965	40.5511	18.433	46.81982
3/29/2000	20.71	52.6034	21.969	55.80126	15.528	39.44112	19.857	50.43678
12/8/2000	23	58.42	25	63.5	19	48.26	22	55.88
5/23/2001	24.2	61.468	25.61	65.0494	19.263	48.92802	23.348	59.30392
6/7/2002		?						
11/29/2002								
1/27/2003	27.5	69.85	30	76.2	22.5	57.15	27.2	69.088
7/28/2003	29.5	74.93	31.5	80.01	22.5	57.15	29	73.66
7/26/2004	32.3	82.042			24.8	62.992		

6 years

= 7 years old

?

HW		Weight (kg)	
inch	cm	lbs	kg
1.478	3.75412	4.125	1.875
1.785	4.5339	6.8464	3.112
2.057	5.22478	11	5
2.523	6.40842	19.8	9
3.075	7.8105	38.5	17.5
3.2	8.128	35.31	16.05
3.63	9.2202	61.05	27.75
3.692	9.37768	73.15	33.25
		92.4	42
		112.2	51
4.6	11.684		
5	12.7		
3.9	9.906	176	80

# Animal Data Transfer Form

Animal keepers information on a new arrival

Copy for keepers caring for this animal

Copy for zoo files and/or veterinarian

Date: October 5, 2004

Common Name: Green Sea Turtle

Scientific Name: Chelonia mydas

	Individual Name	Sex	Birth Date*	Weight*	Vendor Specimen# (ISIS#)	Zoo ID	Studbook #
1.	Maui	F	8/24/97	80Kg	983001		
2.							
3.							
4.							

\*note if it is actual or estimated

**Diet:** Present diet and supplements, favored items, problem foods, feeding procedures:  
Meat (smelt, scallops, squid, capelin roughly 200 grams/day total). Mazuri gel diet 150 grams/day. Romaine lettuce, broccoli, cucumber, zucchini.

**Brief Reproduction Record:** Relative data, introduction techniques, behavior toward young, specific concerns.

None

**General Medical History and Physical Conditions:** Usual response to medicine, including immobilizing agents and their successful mode of administration, recurring physical problems and symptoms.

Turtle in excellent condition!

**Enclosure, Enrichment and Maintenance Data:** General exhibit description, cage mates, considerations to avoid abnormal behavior, cleaning and disinfecting procedures.

Housed in 100,000 gallon exhibit with other fish and elasmobranchs no other turtles.

**Personal comments:**

Present institution: Columbus Zoo and Aquarium

Previous institution: sea life park

Future institution: \_\_\_\_\_

Form completed by: Mike Brittsan Title: Curator

Telephone: 614 724-3580

# DIAGNOSTIC CASE REPORT

U. S. GEOLOGICAL SURVEY-BIOLOGICAL RESOURCES DIVISION  
NATIONAL WILDLIFE HEALTH CENTER-HONOLULU FIELD STATION  
P. O. BOX 50167, 300 ALA MOANA BLVD., Rm. 8-132  
HONOLULU, HAWAII 96850  
808-792-9520, FAX 792-9596, thierry\_work@usgs.gov

Case # 17762

Epizoo #

**Submitter:**

Mr. George Balazs  
NOAA-NMFS-SWFC  
2570 Dole Street  
Honolulu, HI 96822-2396

**Specimen description/identification:**

1 green turtle carcass

**Date Submitted:** (11/07/2003)  
(mm/dd/yy)

**Date Collected:** (10/19/2003)  
(mm/dd/yy)

**Date Examined:** (11/07/2003)  
(mm/dd/yy)

**Location:** Honokohau Bay

**County/Site:** Hawaii

**HISTORY:** This animal was found dead on the beach of Honokohau Bay on Hawaii. This was a captive animal at Mauna Lani in 1991 and later released. It was captured and tagged several times over the years. The turtle was frozen and shipped to Honolulu for necropsy. Other identification: 11007, LFF tags - 7F7D103635, J17; RHF - 423B3FOA2C, K732; LHF - 4136417F6C, K734. MTRP identification number is 101903. Body measurements (cm): SCL-69.5, CCL-76.0, TTL-14.0. **This is MTRP ID 10-19-03.**

**SIGNIFICANT FINDINGS:** This was an subadult female in fair body condition with no significant gross or microscopic lesions indicative of cause of death.

**DIAGNOSIS:** Undetermined.

**COMMENTS:** No lesions indicative of cause of death were seen.

**MANAGEMENT:** None.

\_\_\_\_\_ Preliminary Report ( / / ) \_\_\_\_\_ X \_\_\_\_\_ Final Report (08/11/2004)  
date date date

Necropsy report is: X enclosed \_\_\_\_\_ available upon request.

\_\_\_\_\_: Copies of this report sent to:

If you have questions regarding this case, contact Thierry M. Work MS, DVM, MPVM at 808-792-9520. Include above Case Number. Diagnostic findings may not be used for publication without the pathologist's knowledge and consent.

NATIONAL WILDLIFE HEALTH CENTER  
NECROPSY REPORT

Submitter's Name, Affiliation Address  
Mr. George Balazs  
NOAA-NMFS-SWFC  
2570 Dole Street  
Honolulu, HI 96822

Case: 17762  
Accession: 001  
Collected: 10/19/2003  
Exam Date: 11/07/2003  
Pathologist: T.M. Work  
Prosector: T.M. Work

Species: Green turtle Specimen: Carcass  
Bandtype: (Z) Ref/Band No: (4136417F6C) Euth: (N) Weight (Gm): (49091)  
History Summary: This animal was found dead on the beach of Honokohau Bay on Hawaii. This was a captive animal at Mauna Lani in 1991 and later released. It was captured and tagged several times over the years. The turtle was frozen and shipped to Honolulu for necropsy. Other identification: 11007, LFF tags - 7F7D103635, J17; RHF - 423B3F0A2C, K732; LHF - 4136417F6C, K734. MTRP identification number is 101903. Body measurements (cm): SCL-69.5, CCL-76.0, TTL-14.0.

EXTERNAL/INTERNAL OBSERVATIONS - LABORATORY RESULTS

External: No remarkable lesions are seen.

Internal: There is moderate atrophy of the pectoral muscles. Approximately 4 liters of fluid are found in the coelomic cavity. The liver is firm, smooth, and homogenous purple-brown. The heart is firm, smooth, homogenous red-pink and otherwise unremarkable. The lungs are spongy and homogenous pink. The tracheal lumen is smooth and tan. The spleen is firm, smooth, and homogenous red-brown. The kidneys are firm, smooth, and homogenous brown. The ovaries appear very black. The brain is smooth, firm, and homogenous tan-pink. The esophageal mucosa is smooth and homogenous tan. The stomach contains fish remains. The small intestines are smooth and homogenous tan. No lesions are seen in the brain, pericardial sac, heart valves, tracheal lumen, gall bladder, gastrointestinal mucosa and serosa, adrenal and thyroid glands, pancreas and superficial and cut surface of liver, heart, kidney, spleen, and lungs.

Preliminary Diagnosis: Undetermined Exam Type: (GO)  
Sex (F) Age (B)/( ) Body Cond. (F) Postmortem State (G) Giz. Lead ( )/( )  
Samples saved:

1. Histo: Brain (A); lung (B); kidney (C); liver (D); heart (E); heart, spleen (E); thymus, salt gland, adrenal (G).

HISTOPATHOLOGY

All tissues: No remarkable lesions are seen.

Comments: No lesions indicative of cause of death were seen.

Final Diagnosis (in order of importance)

- |                        |          |        |          |          |         |      |
|------------------------|----------|--------|----------|----------|---------|------|
| 1. <u>Undetermined</u> | topog.   | morph. | etiol.   | funct.   | disease | link |
| 2. _____               | (T00010) | ( )    | (E00040) | (FY3500) | ( )     | ( )  |
| 3. _____               | ( )      | ( )    | ( )      | ( )      | ( )     | ( )  |
| _____                  | ( )      | ( )    | ( )      | ( )      | ( )     | ( )  |

Diagnostic findings may not be used for publication without the pathologist's knowledge and consent.

COD (01)

Historical Information for Turtle Tag 11007

Tag Information:

Tag Number	Date	Tag Type	Tag Position
11007			
4136417F6C	8/19/1999	PIT	LHF
423B3FOA2C	8/10/2001	PIT	RHF
7D103635	6/15/1993	PIT	PIT
J17	6/15/1993	I681	LFL
K732	5/19/1994	I681	RHF
K734	5/19/1994	I681	LHF

*Marine Turtle Research  
NOAA NMFS PIFSC  
2570 Dole Street  
Honolulu, Hawaii 96822*

Date	Type of Encounter	Location:	TumorRank:	NestingAct:	Straight Carapace	Since Last Encounter				Overall					
						Month	Year	cm/mo	cm/yr	Month	Year	cm/mo	cm/yr		
7/3/1991	Near Shore	Hawaii, Mauna Lani, Captive	0	-											
7/4/1991	Near Shore	Hawaii, Mauna Lani, Captive	0	-	23.9										
7/4/1992	Near Shore	Hawaii, Mauna Lani, Captive	0	-	34.7	12.0	1.0	0.9	10.8	12.0	1.0	0.9	10.8	12.0	1.0
6/15/1993	Near Shore	Hawaii, Mauna Lani, Captive	0	-	44.6	11.0	0.9	0.9	11.0	23.0	1.9	0.9	11.0	23.0	1.9
7/4/1993	Near Shore	Hawaii, Mauna Lani	0	-											
5/19/1994	Near Shore	Hawaii, Keawa Nui, South Kohala	0	-	45.5	10.0	0.8			24.0	2.0			24.0	2.0
6/17/1994	Near Shore	Hawaii, Keawa Nui, South Kohala	0	-	45.5					34.0	2.8			34.0	2.8
10/27/1997	Near Shore	Hawaii, Keawa Nui Bay	0	-	57.3	40.0	3.3	0.3	3.6	35.0	2.9	0.3	3.6	75.0	6.3
8/19/1999	Near Shore	Hawaii, Keawa Nui Bay, Near Mr. Ruddle's pier	0	-	60.4	21.0	1.8	0.1	1.7	97.0	8.1	0.1	1.7	97.0	8.1
8/10/2001	Near Shore	Hawaii, Kaloko, Honokohau, Zone B	0	-	62.5	23.0	1.9	0.1	1.1	121.0	10.1	0.1	1.1	121.0	10.1
6/6/2002	Near Shore	Hawaii, Kaloko, Zone A	0	-		9.0	0.8			131.0	10.9			131.0	10.9
6/6/2002	Near Shore	Hawaii, Kaloko, Zone A - Basking	0	-	62.9					131.0	10.9			131.0	10.9

Date	Type of Encounter	Location:	TumorRank:	NestingAct:	Straight Carapace	Since Last Encounter				Overall			
						Interval	Year	Growth-Rates	Interval	Year	Growth-Rates	Interval	Year
						Month		cm/mo	cm/yr	Month		cm/mo	cm/yr
10/4/2002	Near Shore	Hawaii, Kaloko, Zone A	0	-	65.4	3.0	0.3	0.8	8.3	135.0	11.3	---	---
8/13/2003	Near Shore	Hawaii, Kaloko, Basking	0	-	---	10.0	0.8	---	---	145.0	12.1	---	---
10/19/2003	Stranding	Hawaii, Honokohau Bay	0	-	69.5	2.0	0.2	---	---	147.0	12.3	---	---

Historical Information for Turtle Tag 11007

Tag Information:

Tag Number  
 11007  
Date 8/19/1999 8/10/2001 6/15/1993 6/15/1993 5/19/1994 5/19/1994  
Tag Type PIT PIT PIT I681 I681 I681  
Tag Position LHF RHF PIT LFL RHF LHF  
Marine Turtle Research  
NOAA NMFS PIFSC  
2570 Dole Street  
Honolulu, Hawaii 96822

<u>Date</u>	<u>Type of Encounter</u>	<u>Location:</u>	<u>Tumor Rank:</u>	<u>Nesting Act:</u>	<u>Weight</u>	<u>Since Last Encounter</u>				<u>Overall</u>			
						<u>Month</u>	<u>Year</u>	<u>lbs/mo</u>	<u>lbs/yr</u>	<u>Month</u>	<u>Year</u>	<u>lbs/mo</u>	<u>lbs/yr</u>
7/3/1991	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	---	---	---	---	---	---	---	---
7/4/1991	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	---	---	---	---	---	---	---	---
7/4/1992	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	12.0	1.0	---	---	12.0	1.0	---	---
6/15/1993	Near Shore	Hawaii, Mauna Lani, Captive	0	-	---	11.0	0.9	---	---	23.0	1.9	---	---
7/4/1993	Near Shore	Hawaii, Mauna Lani	0	-	---	---	---	---	---	24.0	2.0	---	---
5/19/1994	Near Shore	Hawaii, Keawa Nui, South Kohala	0	-	26.0	10.0	0.8	---	---	34.0	2.8	---	---
6/17/1994	Near Shore	Hawaii, Keawa Nui, South Kohala	0	-	29.0	---	---	---	---	35.0	2.9	---	---
10/27/1997	Near Shore	Hawaii, Keawa Nui Bay	0	-	60.0	40.0	3.3	0.8	9.4	75.0	6.3	---	---
8/19/1999	Near Shore	Hawaii, Keawa Nui Bay, Near Mr. Ruddle's pier	0	-	68.0	21.0	1.8	0.4	4.4	97.0	8.1	---	---
8/10/2001	Near Shore	Hawaii, Kaloko, Honokohau, Zone B	0	-	80.0	23.0	1.9	0.5	6.3	121.0	10.1	---	---
6/6/2002	Near Shore	Hawaii, Kaloko, Zone A	0	-	---	9.0	0.8	---	---	131.0	10.9	---	---
6/6/2002	Near Shore	Hawaii, Kaloko, Zone A - Basking	0	-	---	---	---	---	---	131.0	10.9	---	---



Date	Type of Encounter	Location:	TumorRank:	NestingAct:	Weight	Since Last Encounter				Overall			
						Interval Month	Year	lbs/mo	Growth-Rates lbs/yr	Interval Month	Year	lbs/mo	Growth-Rates lbs/yr
10/4/2002	Near Shore	Hawaii, Kaloko, Zone A	0	-	92.0	3.0	0.3	---	---	135.0	11.3	---	---
8/13/2003	Near Shore	Hawaii, Kaloko, Basking	0	-	---	10.0	0.8	---	---	145.0	12.1	---	---
10/19/2003	Stranding	Hawaii, Honokohau Bay	0	-	108.0	2.0	0.2	---	---	147.0	12.3	---	---