

MAY 14, 2010 OLI capture  
MAY 19, 2010 OLI RETURN  
MAY 26, 2010 ONEULI  
2 hawk, 3 greys  
ONEULI, MAUI

FKRESAT 3 SLPN=12 KREN=1  
TOTAL 16 Mead. SETTE 5-7-09  
P. 35-53  
**COMPOSITION**  
**SEA LIFE PARK**  
**TURTLES** P. 120 V727  
100 sheets • 200 pages P. 80  
9 3/4 x 7 1/2 in / 24.7 x 19.0 cm  
wide ruled ONEULI - P. 81-89 N=4  
SLP RELEASE P. 55 N=4 P. 58  
MeadWestvaco Consumer & Office Products, Dayton, Ohio 45463, Made in Vietnam  
www.mead.com 09910 © 2006 MeadWestvaco Corporation  
MAY 12, 2009 MOCN=61  
P. 68

ONEULI  
HAWKS  
BILL  
MAUI

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

2 of 2

JULY 3-4, 2009 N=6  
P. 89 **Keoki Balazs**  
3/26/2010 - 3/29/2010 N=5 SLP  
Honu Scientist P. 100-105  
PAGES  
Release of  
Sette 5/2010  
AT WAHIMALU  
5-21-2010





See p. 87-88



## 20<sup>th</sup> TURTLE Independence Day

7/3/09 LR & GB 9:15 AM Go flight, Honolulu  
 Friday to KONA. Budget to Mauna Kea Room 56  
 1 pm Preweighing measuring for hotel guests  
 Marc Rice, Meimei AKA HARADA, Nick  
 6 turtle total <sup>all 3 cars</sup> from Meimei growth  
 study, one from other. 3 Females, one male  
 Dinner at PESTOS - KAWAIIA



Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

Hatched: 2006

90

START MAUNA LANI

3 years old

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

7-3-09 MAUNA LANI CAPTIVE  
PERSON RECORDING DATA: HEIHEI

TUMOR SCORE

0

ORAL TMRS EXT:

YES OR NO

-

EMACIATION CODE

0

OLD TAGS:

RH470A114963

LH4709752136

NEW TAGS:

RHF

LHF

MT#

STRAIGHT CARAPACE - LENGTH:

35.8 cm

WIDTH:

28.8 cm

NOTCH LENGTH:

35.6 cm

DB:

L.O.

VB:

L.O.

CURVED CARAPACE LENGTH:

37.5 cm

WIDTH:

34.5 cm

HEAD WIDTH:

6.7 cm

LATERAL1:

15.1 cm

LATERAL2:

13.7 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

11.6 cm

SEX: Male, Female or Undetermined

Male

TAIL LENGTH: T

6.5 cm

C

5.5 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:

6.3 cm

PLASTRON LENGTH:

28.8 cm

WEIGHT:

15.0 lbs #

DESCRIPTIVE REMARKS:

6 centrals

7/4/09 20th Independence Day  
Release off shore  
from Hawaiian Canoe  
fresh from blessing Ceremony  
from Kamehameha AKAKAI

(by Laprassey & To Wilhelms)

tagging.xls



(89)

See p. 87-88



20<sup>th</sup> TURTLE Independence Day

7/3/09 LR & GB 9:15 AM Go flight, Honolulu  
 Friday to KONA. Budget to Mauna Kea Room 56  
 1 PM Preweighing measuring for hotel guests  
 Marc Rice, Meimei ALAKA HARA, Nick  
 Go turtle total <sup>5</sup> from Meimei growth  
 study, one from other. 3 females, one male  
 Dinner at PESTOS - KAWAIIA



Revised 08/21/07

START MAUNA LANI

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

Hatched: 2006

90

3 years old

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE LOCATION AND METHOD:

7-3-09 MAUNA LANI / MAUNALANI  
CAPTIVE  
PERSON RECORDING DATA: HEIMEI  
NAKAHARA  
POST MT M2

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

-

EMACIATION CODE

0

OLD TAGS:

RH470A114963  
LH4709752136

NEW TAGS:

RHF

LHF

MT#

STRAIGHT CARAPACE - LENGTH:

35.8 cm

WIDTH:

28.8 cm

NOTCH LENGTH:

35.6 cm

DB:

L.O.

VB:

L.O.

CURVED CARAPACE LENGTH:

37.5 cm

WIDTH:

34.5 cm

HEAD WIDTH:

6.7 cm

LATERAL1:

15.1 cm

LATERAL2:

13.7 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

11.6 cm

SEX: Male, Female or Undetermined

Male

TAIL LENGTH: T

6.5 cm

C

5.5 cm

(by Laprassey & TeWibbel)

RIGHT FRONT FLIPPER WIDTH:

6.3 cm

SAMPLES COLLECTED:

PLASTRON LENGTH:

28.8 cm

WEIGHT:

15.0 lbs#

DESCRIPTIVE REMARKS:

6 centrals

7/4/09 20 minutes  
Release off shore day  
from Hawaiian Canoe  
fresh from blessing Ceremony  
from Kameh AKAKAI

tagging.xls



91

2

Hatched: 2006

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

3 years old  
Turtle used in previous  
MeiMei study

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

Friday 7/3/09 Manna Lani Captive (PAST MT F3)

PERSON RECORDING DATA: Nick

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

1

EMACIATION CODE

3

MT#

OLD TAGS:

RH 470 A 14 A 18

LH 44 1456 F 44

NEW TAGS:

RHF

LHF

STRAIGHT CARAPACE - LENGTH:

45.3 cm

WIDTH:

35.2 cm

NOTCH LENGTH:

45.0 cm

DB:

0 L.O.

VB:

0 L.O.

CURVED CARAPACE LENGTH:

48.0 cm

WIDTH:

41.0 cm

HEAD WIDTH:

7.4 cm

LATERAL1:

19.4 cm

LATERAL2:

17.0 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

13.7 cm

SEX: Male, Female or Undetermined

Female

TAIL LENGTH: T

9.0 cm

C

6.5 cm

(Vapor Laser Proscopy)

RIGHT FRONT FLIPPER WIDTH:

7.5 cm

SAMPLES COLLECTED:

PLASTRON LENGTH:

36.9 cm

WEIGHT:

29.1 lbs #

DESCRIPTIVE REMARKS:



92

Hatched: 2006

3 years old

Turtle previously used in Meimelei study

Revised 08/21/07

3

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

7-3-09 Mauna Lani Captive SLP

PAST MT #4

PERSON RECORDING DATA: MEIMEI NAKAHARA

TUMOR SCORE

0

ORAL TMRS EXT: YES OR NO

-

EMACIATION CODE

0

OLD TAGS:

LH470C2A223C

RH470B2C4056

NEW TAGS:

RHF

LHF

MT#

STRAIGHT CARAPACE - LENGTH:

44.7 cm

WIDTH:

36.3 cm

NOTCH LENGTH:

44.1 cm

DB:

0 L.O.

VB:

0 L.O.

CURVED CARAPACE LENGTH:

47.5 cm

WIDTH:

42.0 cm

HEAD WIDTH:

7.8 cm

LATERAL1:

18.8 cm

LATERAL2:

16.6 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

14.0 cm

SEX: Male, Female or Undetermined

M

TAIL LENGTH: T

12.0 cm

C

8.5 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:

8.9 cm

PLASTRON LENGTH:

36.5 cm

WEIGHT:

30.6 lbs

DESCRIPTIVE REMARKS:

Released  
20th Annual Turtle Independence Day

by prior LAROScopy

2005/8/1



93

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

7/3/08

PERSON RECORDING DATA:

2008  
2009-DIDNT  
come  
of Boy

TUMOR SCORE

ORAL TMRS EXT:  
YES OR NO

EMACIATION CODE

OLD TAGS:

6<sup>3/4</sup> years old  
Jacob  
SON of  
MT ID  
Regularly

NEW TAGS:

RHF

LHF

MT#

STRAIGHT CARAPACE - LENGTH:

WIDTH:

NOTCH LENGTH:

DB:

L.O.

VB:

L.O.

CURVED CARAPACE LENGTH:

WIDTH:

HEAD WIDTH:

LATERAL1:

LATERAL2:

PPS: YES OR NO OR NE

LATERAL3:

SEX: Male, Female  
or Undetermined

TAIL LENGTH: T

C

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:

PLASTRON LENGTH:

WEIGHT:

DESCRIPTIVE REMARKS:

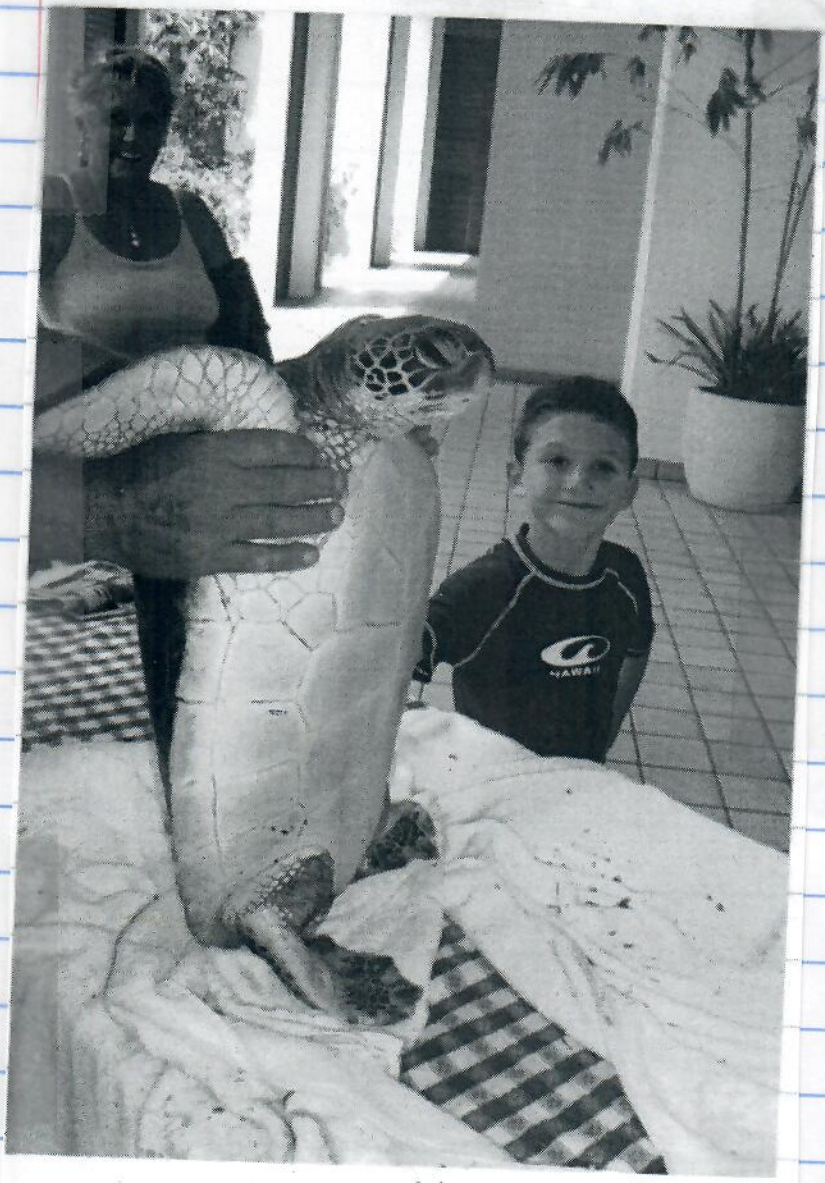
47 in <sup>♂</sup> 119.5 cm height  
almost 4'

tagging.xls

7/3/2008



44 441320181E



3 year old MT "07"

7/3/08



(95)

(4)

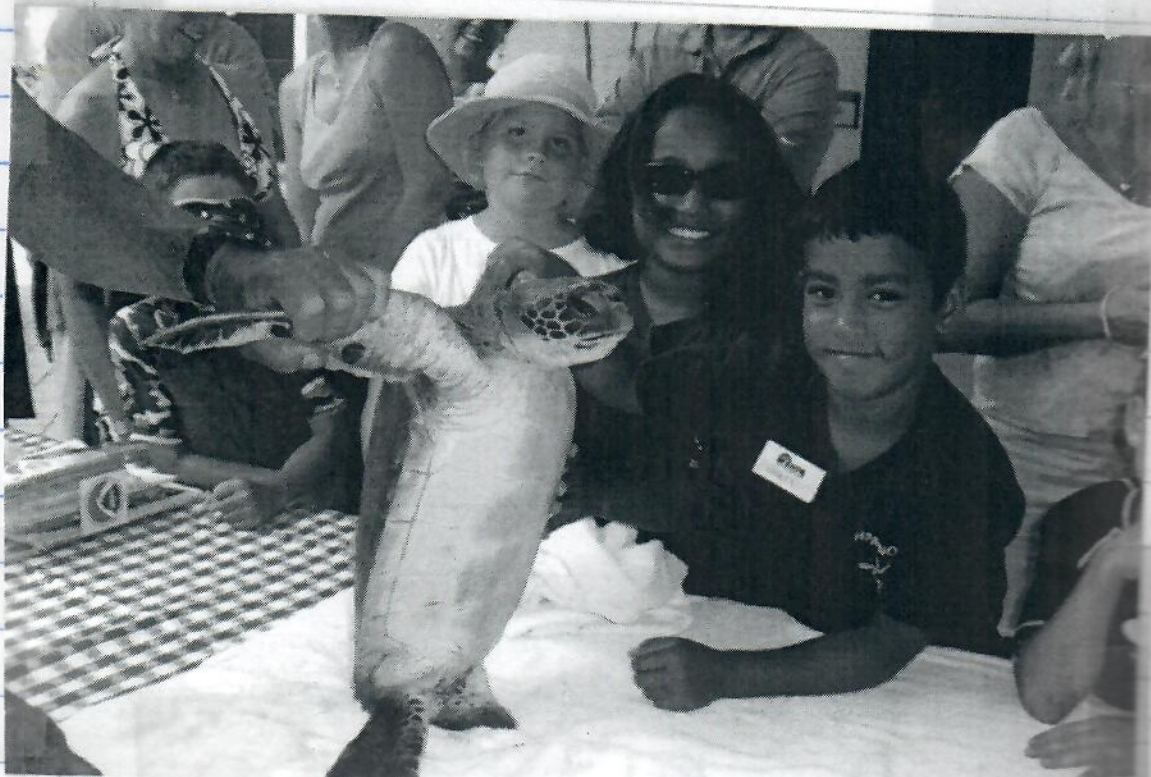
7/3/2008

LH 4414633F5A



7/3/2008

[↑ MT "05" ↑]



LH 4527601D38



96

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

7-3-09 Mauna Lani Capture

PERSON RECORDING DATA: MEI MEI

Turtle previously used in MEI MEI study

PAST MT MI

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

—

EMACIATION CODE

0

MT#

OLD TAGS:

LH470B571641

RH4413191A05

NEW TAGS:

RHF

LHF

STRAIGHT CARAPACE - LENGTH:

42.7 cm

WIDTH:

33.4 cm

NOTCH LENGTH:

42.4 cm

DB:

0 L.O.

VB:

0 L.O.

CURVED CARAPACE LENGTH:

46.0 46.0 cm

WIDTH:

39.5 cm

HEAD WIDTH:

7.3 cm

LATERAL1:

16.9 cm

LATERAL2:

14.9 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

12.4 cm

SEX: Male, Female or Undetermined

Male

TAIL LENGTH: T

10.5 cm

C

7.0 cm

by prior carapace

RIGHT FRONT FLIPPER WIDTH:

7.1 cm

SAMPLES COLLECTED:

PLASTRON LENGTH:

33.2 cm

WEIGHT:

23.4 lbs

DESCRIPTIVE REMARKS:

Released 7/4/09  
20th Annual Turtle Independence Day



### SUMMARY OF MAUNA LANI TURTLE EXAMS JUNE 6, 2009

The quarterly turtle veterinary exams were conducted at the Mauna Lani Resort on June 16, 2009. Six turtles housed in the Honu pond were examined for the July 4, 2009 release. Blood was taken for the CBC and chemistries as part of the screening process. All six turtles appeared in excellent health and the blood results were normal. Their lengths and weights are listed below. All showed increases in length and weight since the last check 5-27-09. (20 days).

Shell #10 (L microchip 639)	53.6 cm	55.9 lb
Shell #F2 (L microchip E27)	44.5 cm	30.7 lb
Shell #F3 (L microchip F44)	40.1 cm	20.9 lb
Shell #F4 (L microchip 23C)	40.8 cm	23.9lb
Shell #M1 (L microchip 641)	38.3 cm	16.0 lb
Shell #M2 (L microchip 136)	32.8 cm	11.1 lb

The remaining eleven turtles in the Atrium pond were also found to be in good health. Some minor biting lesions were noted and were treated with Gentian violet. An increase in the amount of pellets being fed was recommended. The length ranged from 19.8 to 22.7 cm and weights from 2.3 to 4.2 lbs. Some of these turtles will be transferred to the Honu pond after the July 4 release.

Robert A. Morris MS, DVM



Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

Hatched: 2005  
4 years old

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD: SLP

7-3-09 Mauna Lani Captive  
PERSON RECORDING DATA: NICK (tag #10)

TUMOR SCORE <input type="text" value="0"/>	OLD TAGS: LH 45267 C3639 RH 45241 D2D03	NEW TAGS: RHF LHF
ORAL TMRS EXT: YES OR NO <input type="text" value="—"/>		
EMACIATION CODE <input type="text" value="0"/>	MT#	

STRAIGHT CARAPACE - LENGTH:  cm      WIDTH:  cm

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

CURVED CARAPACE LENGTH:  cm      WIDTH:  cm

HEAD WIDTH:  cm      LATERAL1:  cm      LATERAL2:  cm

PPS: YES OR NO OR NE       LATERAL3:  cm      SEX: Male, Female or Undetermined

TAIL LENGTH: T  cm      C  cm

RIGHT FRONT FLIPPER WIDTH:  cm      SAMPLES COLLECTED:

PLASTRON LENGTH:  cm

WEIGHT:  lbs #

DESCRIPTIVE REMARKS: Released 20th Turtle Independence Day 7/4/09



Thane/Jenny  
set photos  
slips etc  
hatchling  
sent  
to Thane  
2006

2006 Hatch - 3 years old

M's and  
F's were  
Meimei  
study

MALE M1  
42.7cm 234 lbs

M2  
35.8cm ~~35.8~~ 15.0 lbs

" LAULIMA "

Female F2 (held by  
Meimei photo)  
49.4cm 42 lbs

F3  
45.3 36.9 lbs

F4  
L 44.7 30.6 lbs



Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

7-3-09 Mauna Lani Captive <sup>SLP</sup> PAST MT FZ

PERSON RECORDING DATA: MEIMEI NAKAHARA

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

—

EMACIATION CODE

0

OLD TAGS:

LH 470B380E27

RH 470A1F1730

NEW TAGS:

RHF

LHF

MT#

STRAIGHT CARAPACE - LENGTH:

49.4 cm

WIDTH:

40.3 cm

NOTCH LENGTH:

49.2 cm

DB:

0

L.O.

VB:

0

L.O.

CURVED CARAPACE LENGTH:

53.5 cm

WIDTH:

47.0 cm

HEAD WIDTH:

7.7 cm

LATERAL1:

~~21.9~~ cm

LATERAL2:

18.7 cm

PPS: YES OR NO OR NE

YES

LATERAL3:

15.2 cm

SEX: Male, Female or Undetermined

female

TAIL LENGTH: T

10.5 cm

C

7.5 cm

SAMPLES COLLECTED:

determined  
prior by Leproscopy  
(tuna  
wibbels)

RIGHT FRONT FLIPPER WIDTH:

8.4 cm

PLASTRON LENGTH:

39.7 cm

WEIGHT:

42.0 lbs

DESCRIPTIVE REMARKS:

Released 7/4/09  
20th Turtle Independence Day

Hatched: 2006

3 years old

Turtle previously used in Meimei study  
Photo with Meimei

Meimei study

end



10B

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

91

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT 03/26/10

CAPTURE DATE, LOCATION AND METHOD:

3-26-2010  
Sea Life Park Captive

PERSON RECORDING DATA: Erica Westly

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

-

EMACIATION CODE

0

OLD TAGS:

STAG 1  
X M10  
(MISSING)

RHF

48514E724C

LHF

483A4C221F

MT#

"10" Temporary Paint

STRAIGHT CARAPACE LENGTH:

38.9 cm

WIDTH:

32.0 cm

NOTCH LENGTH:

38.6 cm

DB:

0

L.O.

VB:

0

L.O.

CURVED CARAPACE LENGTH:

42.5 cm

WIDTH:

37.5 cm

HEAD WIDTH:

6.2 cm

LATERAL1:

16.4 cm

LATERAL2:

13.9 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

11.4 cm

SEX: Male, Female or Undetermined

J

TAIL LENGTH: T

10.0 cm

C

6.0 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:

6.3 cm

PLASTRON LENGTH:

30.1 cm

WEIGHT:

19 lbs.

DESCRIPTIVE REMARKS:

Released 3/ /2010



Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

2

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT 03 / 26 / 10

CAPTURE DATE, LOCATION AND METHOD:

Sea Life Park capture 3-26-2010  
PERSON RECORDING DATA: Erica Westly

TUMOR SCORE

0

OLD TAGS:

SIZE 1

NEW TAGS:

ORAL TMRS EXT:  
YES OR NO

1

WH 83

RHF

LHF

470B4A0206

48513E7E0A

EMACIATION CODE

0

MT#

83 Temporary Paint

STRAIGHT CARAPACE - LENGTH:

41.2 cm

WIDTH:

33.7 cm

NOTCH LENGTH:

40.9 cm

DB:

0

L.O.

VB:

0

L.O.

CURVED CARAPACE LENGTH:

44.5 cm

WIDTH:

38.5 cm

HEAD WIDTH:

6.7 cm

LATERAL1:

17.5 cm

LATERAL2:

14.9 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

12.1 cm

SEX: Male, Female  
or Undetermined

U

TAIL LENGTH: T

10.5 cm

C

7.0 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:

7.5 cm

W/ Yoshi and TAKA  
Across reef  
~ 130pm

PLASTRON LENGTH:

32.0 cm

WEIGHT:

23.5 #

Released 3/27/2010 SLP

DESCRIPTIVE REMARKS:

Size 1 tag on R front Flipper  
R3-4S pr WH 83 PLASTRON



102

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

3

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT 03/26/10

CAPTURE DATE, LOCATION AND METHOD:

Sea Life Park 3-26-2010  
captive

PERSON RECORDING DATA: Erica Wehr

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

1

EMACIATION CODE

0

OLD TAGS:

529 WH 38  
MISSING

NEW TAGS:

RHF  
4A3111083C

LHF

4A16004A35

MT#

38 Temporary paint

STRAIGHT CARAPACE - LENGTH:

41.2 cm

WIDTH: 33.5 cm

NOTCH LENGTH: 40.9 cm

DB: 0 L.O.

VB: 0 L.O.

CURVED CARAPACE LENGTH:

44.5 cm

WIDTH: 39.5 cm

HEAD WIDTH: 6.6 cm

LATERAL1: 18.6 cm

LATERAL2: 16.0 cm

PPS: YES OR NO OR NE NO

LATERAL3: 12.9 cm

SEX: Male, Female or Undetermined U

TAIL LENGTH: T 7.5 cm

C 4.5 cm

RIGHT FRONT FLIPPER WIDTH:

7.8 cm

PLASTRON LENGTH: 33.5 cm

WEIGHT: 24.2 lbs

DESCRIPTIVE REMARKS:

prior floster one year ago

Advised from SLT  
Released 3/29/2010  
w/ Yoshi and TAKA



Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

4

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT 3/26/10

CAPTURE DATE, LOCATION AND METHOD:

Sea Life Park captive	3-26-2010
PERSON RECORDING DATA: Erica Westby	

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

—

EMACIATION CODE

0

OLD TAGS:

Size 6

WH43

NEW TAGS:

RHF



4526486B36

LHF



4A1C002E28

MT#

"43" Temporary print

STRAIGHT CARAPACE - LENGTH:

40.5 cm

WIDTH:

30.9 cm

NOTCH LENGTH:

— cm

DB:

0 L.O.

VB:

0 L.O.

CURVED CARAPACE LENGTH:

44.0 cm

WIDTH:

37.0 cm

HEAD WIDTH:

6.2 cm

LATERAL1:

16.5 cm

LATERAL2:

14.2 cm

PPS: YES OR NO OR NE

NO

LATERAL3:

11.3 cm

SEX: Male, Female  
or Undetermined

U

TAIL LENGTH: T

8.0 cm

C

5.5 cm

RIGHT FRONT FLIPPER WIDTH:

6.8 cm

SAMPLES COLLECTED

PLASTRON LENGTH:

30.7 cm

Across 20  
for SLT

WEIGHT:

20.5 lbs

Released 3/2/10

DESCRIPTIVE REMARKS:

R Flipper R3-4<sup>8</sup> WH43  
W/43 3

130 pm  
w/ Yoshi &  
TAKA



104

### DATA ON TURTLES

MAUNA Lani

Date: 6/16/09

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

SHELL #	location	Pit Tag L Hind	Pit Tag R Hind	Weight (lbs)	SLC (cm)	observations
10	Honu	45267C3639	45241D2D03	62.6	55.6	*see veterinarian report
F2	Honu	470B380E27	470A1F1730	40.5	48.8	*see veterinarian report
F3	Honu	4414560F44	470A014A18	28.3	44.8	*see veterinarian report
F4	Honu	470C2A223C	470B2C4056	30.7	44.3	*see veterinarian report
M1	Honu	470B571641	467C291C36 *	22.6	42.1	*see veterinarian report
M2	Honu	4709752136	470A114963	14.7	35.4	- new PIT - RH 4413191A05 *see veterinarian report
SHELL #	location	Pit Tag L Hind	Front metal tag	Weight (lbs)	SLC (cm)	observations
11	Atrium	442167200E	XM 26	9.7	30.2	*see veterinarian report
12	Atrium	44146E4C06	WH 37	7.8	29.1	*see veterinarian report
13	Atrium	4413395714	WH 46	6.8	27.0	*see veterinarian report
14	Atrium	44143A7F6D	WH 57	6.0	25.8	*see veterinarian report
15	Atrium	4414085039	WH 58	6.3	27.2	*see veterinarian report
16	Atrium	4413217F6A	WH 62	6.0	26.9	*see veterinarian report
17	Atrium	4414404C2D	WH 65	7.1	27.5	*see veterinarian report
18	Atrium	441308300C	WH 71	6.2	26.8	*see veterinarian report
19	Atrium	441466484B	WH 75	6.1	26.6	*see veterinarian report
20	Atrium	44142F1A5A	WH 76	7.1	28.1	*see veterinarian report
21	Atrium	441309101B	WH 84	5.4	25.7	*see veterinarian report

\* = missing tag

@ 9:00 am	Temp (C)	Salinity ppt	pH
Honu	25.3	30.0	8.0
Atrium	24.8	30.0	8.0
Q-1	25.1	34.0	8.2
		(refractometer)	



Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

5

105  
end

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT 03/26/10

CAPTURE DATE, LOCATION AND METHOD:

Sea Life Park 3-26-2010  
captive  
PERSON RECORDING DATA: Erica Westry

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

-

EMACIATION CODE

0

OLD TAGS:

SIZE 1

WH67

(MISSING)

MT#

"67" Temporary PAINT

NEW TAGS:

RHF



4525656218

LHF



4A2E256F5F

STRAIGHT CARAPACE - LENGTH:

37.7 cm

WIDTH:

30.2 cm

NOTCH LENGTH:

37.4 cm

DB:

0

L.O.

VB:

0

L.O.

CURVED CARAPACE LENGTH:

42.0 cm

WIDTH:

35.0 cm

HEAD WIDTH:

6.1 cm

LATERAL1:

16.2 cm

LATERAL2:

15.6 cm

PPS: YES OR NO OR NE

Yes

LATERAL3:

10.9 cm

SEX: Male, Female or Undetermined

U

TAIL LENGTH: T

8.5 cm

C

5.5 cm

RIGHT FRONT FLIPPER WIDTH:

6.6 cm

PLASTRON LENGTH:

29.3 cm

WEIGHT:

17.6 lbs

SAMPLES COLLECTED:

Across street from SLP w/ Yoshi & TAKA

Released 3/9/2010

DESCRIPTIVE REMARKS:

6 centrals



Continued 90  
page 108

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

one and only  
\* Hawksbill \*

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

"HOPE"

5/26/10	Oreuli, Maui	Hand/ Snorkel
PERSON RECORDING DATA: SH		(~8ft deep)

TUMOR SCORE	OLD TAGS:	NEW TAGS:
<input type="checkbox"/> $\emptyset$	RA 4A3B484327	RHF
ORAL TMRS EXT: YES OR NO	KA 4A40071E03	LHF
<input type="checkbox"/> -		
EMACIATION CODE		
<input type="checkbox"/> $\emptyset$	MT# . . 2 <sup>nd</sup> LR laterals	

STRAIGHT CARAPACE - LENGTH:	76.2 cm	WIDTH:	60.7 cm
NOTCH LENGTH:	73.8 cm	DB:	$\emptyset$ L.O.
		VB:	$\emptyset$ L.O.
CURVED CARAPACE LENGTH:	83.0 cm	WIDTH:	77.0 cm
HEAD WIDTH:	10.7 cm	LATERAL1:	27.5 cm
		LATERAL2:	26.9 cm
PPS: YES OR NO OR NE	. Y	LATERAL3:	21.7 cm
		SEX: Male, Female or Undetermined	presumed female
TAIL LENGTH: T	14.0 cm	C	10.0 cm
RIGHT FRONT FLIPPER WIDTH:	11.5 cm	SAMPLES COLLECTED:	
PLASTRON LENGTH:	58.0 cm		Fecal Matter
WEIGHT:	128.3 #		

DESCRIPTIVE REMARKS:

Facial Profile Photos.  
"Biter"!

Turtle previously named  
- HOPE -



Date: Fri, 26 Mar 2010 10:55:33 -0700  
From: Jeff Pawloski <JPawloski@sealifeparkhawaii.com>  
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: RE: TurtleData collection

Hi George,

I look forward to seeing you today around 4:00 PM. I can meet you at  
back gate (at Reef Life) to let you park next to the turtles.

As promised I collected the weight data using our electronic scale.

Tag#	weight (lb)
WH38	24.2 ✓
WH43	20.5 ✓
WH67	17.6 ✓
WH83	23.5 ✓
XM10	19.0 ✓

the

14.5      11.0

10.6

19.5

SAMPLES COLLECTED:



107

**T.I.D. HONU NAMES 2009**

- M-1**      **Holo Kai:**      **Sea Traveler** — *caught down well 3-16-2010 at Kiholo*
- F-4**      **Ka Lei Anuenue:**      **The Lei of Rainbows**
- F-3**      **Hoapili:**      **Close, intimate, personal friend**
- F-2**      **Momi o Kai:**      **Pearl of the Sea**
- #10**      **Mahina Poepoe:**      **Round as the Moon**  
(larger 4 yr old)
- M-2**      **Lau lima:**      **Many hand working together**  
(released from the new, koa canoe built with the hands of many people, canoe's name also *Lau lima*)

14.7      10.9      female

SAMPLES COLLECTED:

RIGHT FRONT FLAP PER WIDTH      11.5

FLASTRON LENGTH      58.0

WEIGHT      28.3

SCRIPTIVE REMARKS      From pupae stage 'Biter'      Turfke      previously named Ho PE



108

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

1st  
\* CM \*

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

5/26/10 Oneuli, Maui Hand/Snorkel

PERSON RECORDING DATA: SH

TUMOR SCORE

ORAL TMRS EXT:  
YES OR NO

EMACIATION CODE

OLD TAGS:


4858774B02



LHF 483900436F



MT# "A" 2nd L/R Laterals

STRAIGHT CARAPACE - LENGTH:

62.3 cm

WIDTH:

54.6 cm

NOTCH LENGTH:

61.9 cm

DB:

∅ L.O.

VB:

∅ L.O.

CURVED CARAPACE LENGTH:

67.5 cm

WIDTH:

61.∅ cm

HEAD WIDTH:

9.6 cm

LATERAL1:

25.1 cm

LATERAL2:

22.3 cm

PPS: YES OR NO OR NE

N

LATERAL3:

18.1 cm

SEX: Male, Female or Undetermined

U

TAIL LENGTH: T

14.5 cm

C

11.∅ cm

RIGHT FRONT FLIPPER WIDTH:

10.6 cm

SAMPLES COLLECTED:

PLASTRON LENGTH:

48.3 cm

WEIGHT:

77.5  
11.0

77.5 #

DESCRIPTIVE REMARKS:



Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

110

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

2nd  
Green Turtle

CAPTURE DATE, LOCATION AND METHOD:

5/26/10	Oneuli, Maui	Hand/ Snorkel
PERSON RECORDING DATA: SH		

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

-

EMACIATION CODE

0

OLD TAGS:


NEW TAGS:

483B2B3616

RHF



LHF

48502C654A



MT#

"B" 2nd L/R laterals

STRAIGHT CARAPACE - LENGTH:

40.7 cm

WIDTH:

32.9 cm

NOTCH LENGTH:

40.1 cm

DB:

∅ L.O.

VB:

∅ L.O.

CURVED CARAPACE LENGTH:

43.5 cm

WIDTH:

38.5 cm

HEAD WIDTH:

- cm

LATERAL1:

16.∅ cm

LATERAL2:

13.3 cm

PPS: YES OR NO OR NE

N

LATERAL3:

11.1 cm

SEX: Male, Female  
or Undetermined

U

TAIL LENGTH: T

8.0 cm

C

5.5 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:

- cm

PLASTRON LENGTH:

33.4 cm

WEIGHT:

22.∅ #

Milky white spot

DESCRIPTIVE REMARKS:

Whitish plastron  
not robust, but not flat

Left eye  
posterior  
conjunctiva



112

END ONEULI  
5/26/10

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

Wednesday

SEA TURTLE TAGGING FORM

3rd and LAST  
Green Turtle

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

5/26/10	Oneuli, Maui	Hand / Shorkel
PERSON RECORDING DATA: <u>SH</u>		

TUMOR SCORE

0

OLD TAGS:

RH 452661473D

NEW TAGS:

ORAL TMRS EXT:  
YES OR NO

-

LH 45266641661

RHF

LHF

EMACIATION CODE

0

MT# "C" 2nd L/R laterals

STRAIGHT CARAPACE - LENGTH:

72.0 cm

WIDTH:

~~74~~ 57.2 cm

NOTCH LENGTH:

71.8 cm

DB:

0 L.O.

VB:

0 L.O.

CURVED CARAPACE LENGTH:

78.0 cm

WIDTH:

74.5 cm

HEAD WIDTH:

- cm

LATERAL1:

30.7 cm

LATERAL2:

28.8 cm

PPS: YES OR NO OR NE

Y

LATERAL3:

23.8 cm

SEX: Male, Female or Undetermined

U

TAIL LENGTH: T

21 cm

C

13.5 cm

SAMPLES COLLECTED:

RIGHT FRONT FLIPPER WIDTH:

- cm

PLASTRON LENGTH:

57.9 cm

WEIGHT:

126.8 #

DESCRIPTIVE REMARKS:

146.0  
- 19.2



V727

V727

120





121

V727

Date: Mon, 6 Jul 2009 13:20:01 -1000  
From: rebecca\_most@nps.gov  
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
Cc: Marc Rice- HPA <mrice@hpa.edu>, Sallie\_Beavers@nps.gov  
Subject: Big Mama sighting- 7-6-2009

Aloha George-

We had a sighting of Turtle V727 aka Big Mama today.

Sighting info:

Turtle 727

7-6-2009 11:30am

KAHO- Zone C, North end of Aimakapa

Basking

Observer- KAHO Ranger : Janette Gillespie

will continue to pass these onto to you as they come in.  
Thanks!



V727  
KALOKO

122 ✓

CB1



Blue  
PAINT  
from  
boat  
(bottom  
bar)



123

151

✓ 727  
KALOKO



✓ 727  
KALOKO

Center: 800 546 5 611  
2 72 009 4 4 2



V727

182





V722





127

V777









need PHOTOS 7/4/09  
Description  
Address

Kathleen Craven, 2900 Lovell Ave  
dark hair + blond like Mill Valley CA  
white skirt bay 94941

Ruthy Smith

dark med-lengthy hair "America" navy shirt  
sunglasses on head, sole w/ turtle

14592 W. 61st Place, Golden, CO 80403

Adact Caravacho PO Box 6793 Hilo HI  
"Sister has turtle tattoo" pink tank top G6T20  
glasses in head floral skirt. Thank you's  
1-808-940-3445

Paula Boyer

Mom & 6 yr

Odessa Kytisch

old daughter in wild green/loroxon dress

PO Box 395

Kailua-Kona HI 96745



need PHOTOS 7/4/09  
Description  
Address

Kathleen Craven, 2900 Lovell Ave  
dark hair + blond with white skirt Mill Valley CA 94941

Kathy Smith

dark med-length hair "America" navy shirt,  
sunglasses on head, solo w/ turtle

14592 W. 61st Place, Golden, CO 80403

Gidget Caravacho PO Box 6793 Hilo HI  
"Sister has turtle tattoo" pink tank top 96720  
glasses in head floral skirt. Thank you!  
1-808-940-3445

Paula Boyer } Mom & 6 yr  
Odessa Kytch } old daughter in wild green/coroon dress  
PO Box 395  
Kailua-Kona HI 96745



~~MARC RICE~~

JOANNA <sup>CALLOW</sup> AND BRYAN

- worked for McLean Center

Bryan b@Medleycapital.com  
joanna.callow@fairmont.com

Photos - Thank you so much !!!



137

06

Revised 01/22/08

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

SEA TURTLE TAGGING FORM

Hawksbill  
Rescue

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD

5-14-2010 HAWKSBILL CAPTURE  
FRIDAY MAKENA, MAUI REEF FRONTING  
PERSON RECORDING DATA: MAUI PRINCE HOTEL

TUMOR SCORE

0

ORAL TMRS EXT:  
YES OR NO

—

EMACIATION CODE

0

OLD TAGS:

4A384F705E  
4A1944263B

NEW TAGS:

RHF  
LHF

Released from  
SHORE SAME  
PLACE BY STEVE  
WILLIAMS

Released 5-19-2010 shipped back  
Wednesday to Maui

MT#

STRAIGHT CARAPACE - LENGTH:

35.8 cm  
38.9 cm

WIDTH:

29.3 cm

NOTCH LENGTH:

36.7 cm

DB:

0 L.O.

VB:

0 L.O.

CURVED CARAPACE LENGTH:

— cm

WIDTH:

— cm

HEAD WIDTH:

— cm

LATERAL1:

— cm

LATERAL2:

— cm

PPS: YES OR NO OR NE

—

LATERAL3:

— cm

SEX: Male, Female  
or Undetermined

U

TAIL LENGTH: T

— cm

C

— cm

SPECIES:

EI

RIGHT FRONT FLIPPER WIDTH:

— cm

SAMPLES COLLECTED:

PLASTRON LENGTH:

— cm

WEIGHT:

13.5 lbs

DESCRIPTIVE REMARKS:

11.5  
6/16/09

SAME FOR BOTH DATES  
5/14 & 5/19/10



copy  
LIVE TURTLE EXAMINATION RECORD

138

Date: 5-14-10

Turtle ID: MAUI HAWKS BILL

Comments: web capture - swelling noted on  
neck that seems to be growing @ 13.3 lbs

**PHYSICAL EXAM**

Head and neck: round swelling left side  
of neck approx 3cm diameter

Mouth: normal

Eyes: normal

Front flippers: normal

Shell:

Plastron: normal

Rear flippers: normal

Tail: normal

BODY CONDITION: good

**SAMPLES TAKEN**

PCV      T.P.     

CBC      Chemistries     

Others fluid analysis to IDx (cytology)

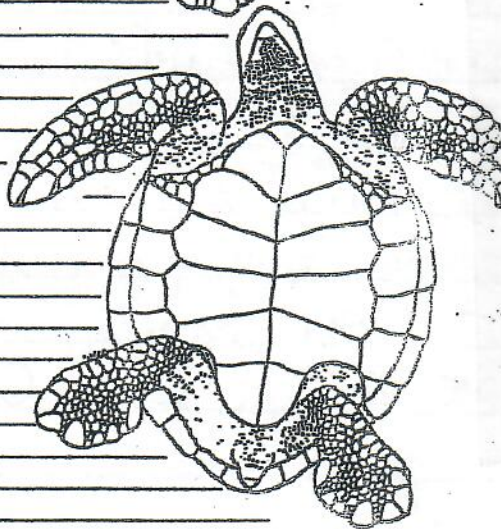
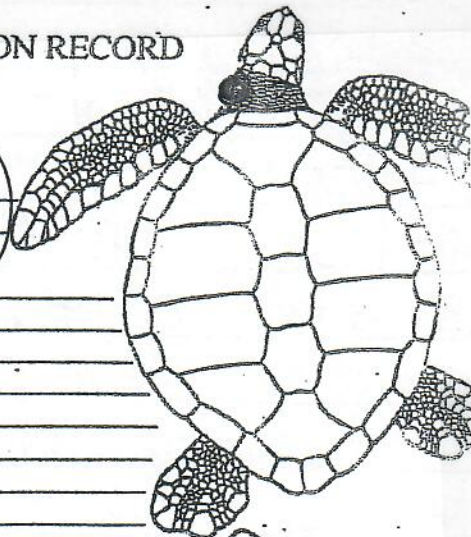
**APPROXIMATE TUMOR SIZE CATEGORIES:**

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

RECOMMENDATIONS: Aspirate of swelling - fluid appears  
like blood - To Dx of hematomas - collect fluid for analysis  
evaluate 5-15 for lack of swelling & neck change -

Signed: Robert A. Morris, DVM

ROBERT A. MORRIS, DVM, 348 ILIAINA ST. KAILUA, HI 96734

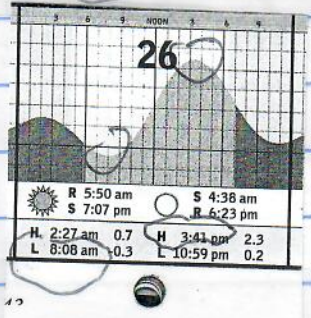




(139) Wednesday  
5-26-2010

ONEULI (Makena Black)

HAWAIIAN AIRLINES  
7:10 AM TO KAHULUI -  
ARRIVE 7:40 AM - Met  
MARC RICE - X-CAB type  
pick up Enterprise #270.



to dive shop in Kihei to buy dive hood to foodland  
for drinks & lunch, to oneuli arrive ~ 9:45 am, Steve Williams  
Safety Kari (Holdings of Sanctuary), Eddie Fuentes, Liz  
Don Bloom Anita Winter.

MT dots  
Surfheld area - calm no swell. Saw larger  
hookbill within 30 min. Marc I caught and brought to  
shore. See page 105. Worked up on beach, then  
back to water, over 2 hours caught 3 green turtles.  
Gave MTs A, B, and C.

Need  
PIT Road to  
to Will  
Settle  
Waipuhani -  
Kihei -  
Liz & Anita Fuentes  
TRACTOR  
to remove up  
washed up  
HYPER  
MUSCULIFORMIS



(171)

Coli

CLINICAL TURTLE RECORD

TURTLE I.D. MAUI HAWKSBILL 5-14-10

DATE	
5-15-10	<p>c. neck swelling getting larger over past weeks            (observation in wild) - captured &amp; shipped to Oahu -</p> <p>s. initial thought was hematoma - swelling has thick capsule -</p> <p>X-Ray area - <del>no</del> no FB seen -            initial bloody like aspirate did not clot            no plasma deposition when spun down            stain slide - red like smears noted with clumps of WBC's            smear + fluid sent to IDEP for cytology &amp; analysis -</p> <p>A) abscess - bloody -            P. local drainage tube to drain open swelling &amp; drain + fluid w/ heparin sol. plus penicillin stain            start on Amoxicillin .15 cc (37mg) BID            refluid wound in PM            Re v 5-16 + evaluate how long to keep tube            PM - Reduced tube inclusion -            advice - don't pull fluid w/ tube -            pass w/ triple AB out</p>
5-16-10	<p>NEXT AB used 5-18            .15cc AMUKACW (37mg) BID            waiting on cytology report            Re v at clinic            advice - alert</p> <p>A) (1) fluid area            pass w/ triple AB out            150 cc normal saline IP            AB Tubes out 1: PM</p>

Rm

Am

Rm

shipped back to MAUI Released  
5/19/10 3PM



141

Revised 08/21/07

NOAA Fisheries  
Pacific Islands Fisheries Science Center  
Marine Turtle Research Program  
2570 Dole Street  
Honolulu, HI 96822-2396

SEA TURTLE TAGGING FORM

DATE FORM FILLED OUT / /

CAPTURE DATE, LOCATION AND METHOD:

[Empty box for capture date, location and method]

PERSON RECORDING DATA:

TUMOR SCORE

[Empty box for tumor score]

ORAL TMRS EXT:  
YES OR NO

[Empty box for oral tumor score]

EMACIATION CODE

[Empty box for emaciation code]

MT#

OLD TAGS:

[Empty boxes for old tags]

NEW TAGS:

RHF

LHF

[Empty boxes for new tags]

STRAIGHT CARAPACE - LENGTH:

[Empty box for straight carapace length]

cm

WIDTH:

[Empty box for width]

cm

NOTCH LENGTH:

[Empty box for notch length]

cm

DB:

[Empty box for DB]

L.O.

VB:

[Empty box for VB]

L.O.

CURVED CARAPACE LENGTH:

[Empty box for curved carapace length]

cm

WIDTH:

[Empty box for width]

cm

HEAD WIDTH:

[Empty box for head width]

cm

LATERAL1:

[Empty box for lateral1]

cm

LATERAL2:

[Empty box for lateral2]

cm

PPS: YES OR NO OR NE

[Empty box for PPS]

LATERAL3:

[Empty box for lateral3]

cm

SEX: Male, Female  
or Undetermined

[Empty box for sex]

TAIL LENGTH: T

[Empty box for tail length T]

cm

C

[Empty box for tail length C]

cm

RIGHT FRONT FLIPPER WIDTH:

[Empty box for right front flipper width]

cm

SAMPLES COLLECTED:

[Empty box for samples collected]

PLASTRON LENGTH:

[Empty box for plastron length]

cm

WEIGHT:

[Empty box for weight]

#

[Empty box for weight]

DESCRIPTIVE REMARKS:



JULY 4, 2009 MAUNA LANI

201

Date: Mon, 06 Jul 2009 09:42:16 -1000  
From: William.Connor <William.Connor@noaa.gov>  
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Re: First thing Monday

George,

Unfortunately, I am unable to find much in regards to this event. There was a notice in the "West Hawaii Today" event calendar which I have copied below. The caveat is that both Big Island newspapers have limited online browsing options unless you pay for an e-subscription.

Turtle release slated for Friday

Since 1989, Mauna Lani Resort has received juvenile honu (Hawaiian green sea turtle) from Oahu's Sea Life Park and raised them in the saltwater ponds of the hotel. The honu are cared for until they grow to a size and weight that are deemed appropriate for release into the wild. This release occurs every July 4th, Turtle Independence Day, at the ocean's edge fronting the hotel.

Mauna Lani Resort will be hosting an 8:30 to 11:30 a.m. educational celebration and family fun on Friday. Sea Life Park and National Marine Fisheries will be present to raise awareness and help educate the public about the Hawaiian green sea turtle. Families are invited to join the festivities, which include live entertainment; games, balloon animals and canoe rides for the children; educational displays about green sea turtles; Hawaiian hula performance and picnic fare available for purchase

There is no charge for the event.

For more information, contact Mauna Lani Resort at 885-6622 or visit <http://www.maunalani.com>.

Two of the Mauna Lani Bay Honu. These turtles were recaptured along the Kaula 45-50 km from the Mauna Lani Bay. Honu #1 and Honu #2. Another turtle was recaptured in the major foraging habitat of Honu #1. Oahu, distance of 170 km (Figure 2).

Survival analysis of 1000 simulated 0-2.5 years old turtles (1)

were alive. Necropsy of the former revealed that one was severely emaciated, and the other

habitat on the island of Lanai, 150 km from Mauna Lani. The four live strandings included

one with a severe propeller injury to the carapace. This live stranding was

small fibrous blocks externally and one internally as revealed by x-ray. All four live strandings



## 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



167

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 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

- Balazs, G. H. 1996. Behavioral changes within the recovering Hawaiian green turtle population. In J. A. Keinath, D. E. Barnard, J. A. Musick, and B. A. Bell (comps.), Proceedings of the Fifteenth Annual Symposium on Sea Turtle Biology and Conservation, February 20-25, 1995, Hilton Head, South Carolina, p. 16-21. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-SEFSC-387.
- Balazs, G. H., M. Rice, S. K. K. Murakawa, and G. Watson. In press. Growth rates and residency of immature green turtles at Kiholo Bay, Hawaii. Sixteenth Annual Symposium Addendum in the Proceedings of the Eighteenth Annual Symposium on Sea Turtle Biology and Conservation.
- Bourke, R. E., G. Balazs, and E. W. Shallenberger. 1977. Breeding of the green sea turtle (*Chelonia mydas*) at Sea Life Park, Hawaii. Drum and Croaker (New England Aquarium), October, p. 4-9.
- Davis, E. E., M. R. Rice, K. A. Harrington, and G. H. Balazs. In press. Green turtle diving and foraging patterns at Puako, Hawaii. Proceedings of the Nineteenth Annual Symposium on Sea Turtle Biology and Conservation, March 2-6, 1999, South Padre Island, Texas.
- Harrington, K. A., M. R. Rice, and G. H. Balazs. This volume. Habitat use of mixohaline fish ponds by green turtles at Kiholo Bay, Hawaii. Proceedings of the Twentieth Annual Symposium on Sea Turtle Biology and Conservation, February 29-March 4, 2000, Orlando, Florida.
- Rice, M. R., D. K. Kopra, G. H. Balazs, and C. G. Whittow. This volume. Ecology and behavior of green turtles basking at Kiholo Bay, Hawaii. Proceedings of the Twentieth Annual Symposium on Sea Turtle Biology and Conservation, February 29-March 4, 2000, Orlando, Florida.



121

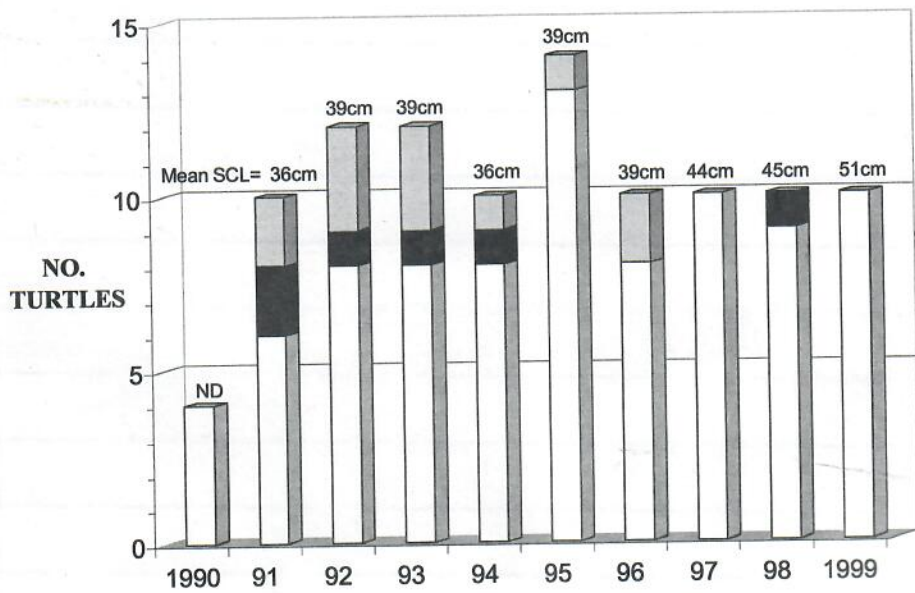
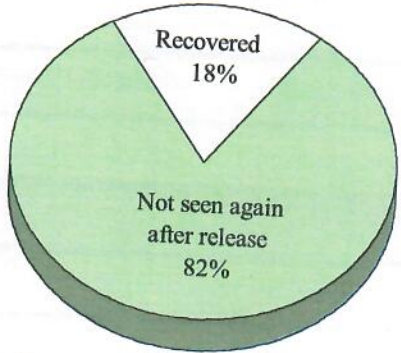


Figure 1. Captive-reared green turtles released annually at the Mauna Lani Bay Hotel. Gray indicates the number recaptured in each year-class during in-water research. Black indicates the number stranded.

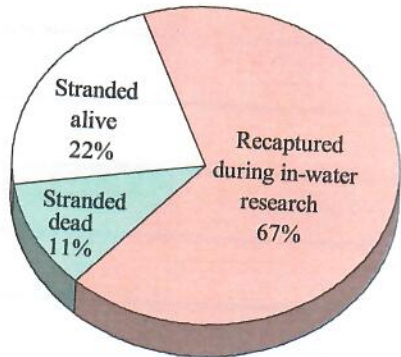


169

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



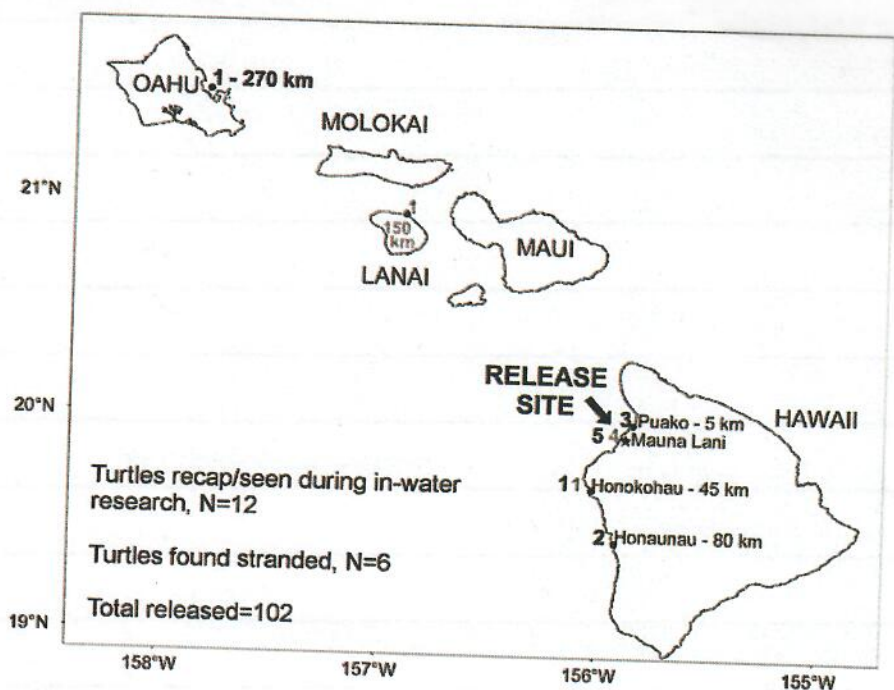


Figure 3. The main Hawaiian Islands. Recapture locations and distances from the Mauna Lani release site.

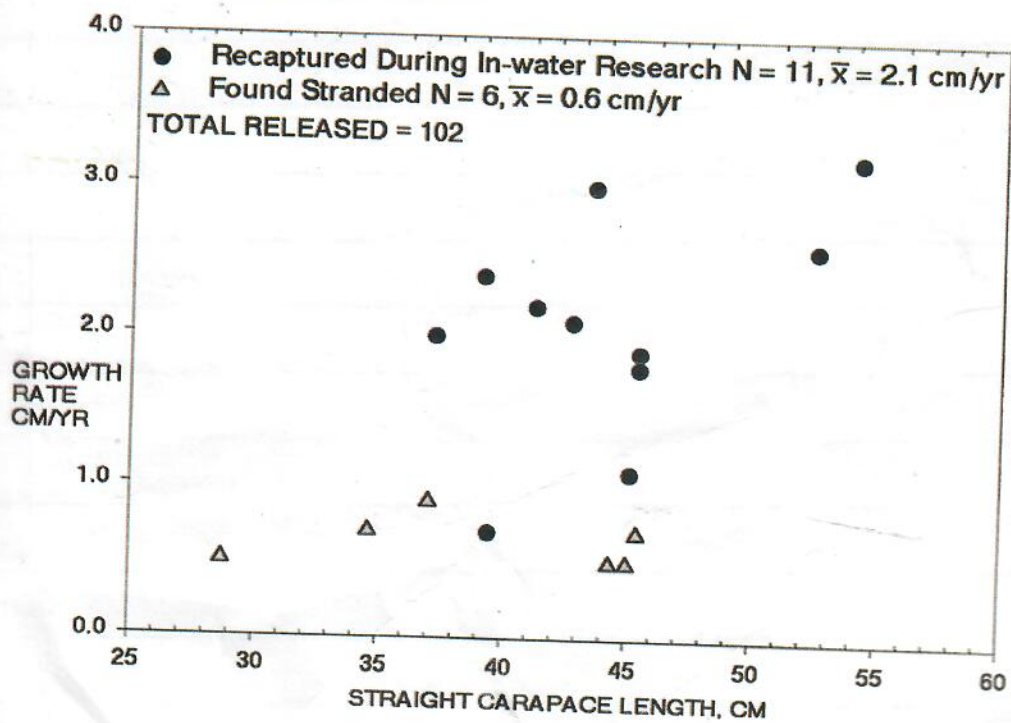


Figure 4. Growth rates in the wild of recaptured turtles released at Mauna Lani.



(17)

TURTLE LOG  
Honu - Chelonia mydas  
MAUNA LANI RESORT - SEA LIFE PARK PROGRAM

Self: 79

From Pii 6/09

Date Rec'd.	Date Released	Right Flipper Tag	Left Flipper Tag	Comment
8/2/99	SLP 6/30/00	Z516 <del>lost tag</del>	V741	Hatched July 8, 1998 - all 3 backs contaminated Jackie
9/2/99	SLP 6/30/00	Z518		marks contaminated Larry
9/12/99	SLP 6/30/00	Z560 <del>Z569</del>	V744	marks contaminated Jason
10/6/98	SLP 6/30/00	<del>V738</del> <del>Z569</del>	V721	marks tagged on arrival 13 3/4 Long Coyote Point Museum used by vet
10/6/98	SLP 6/30/00	Z569	V722	marks tagged on arrival 13 3/4 Long Coyote Point Museum used by vet
10/6/98	SLP 6/30/00	V722	V723	Waikala Aquarium 12/7/94 Thrtle mostly tagged on arrival used by vet
11/17/98	COSMOS club 7/1/99	V727	V726	Length 57 1/2 cm / wt 200 g MIN 7 yrs old / DALLAS ZOO length 59 1/2 cm / wt 101 g Hatched 95
11/17/98	7/1/99	V728	V729	min 7 yrs old / Dallas ZOO



1/2	1/30/99	MUSKOGEE	7/Δ/99	11537	11536	APP HAD LENGTH 47 CM. / DALLAS AQUARIUM
1/2	1/30/99	ARK BENE HP	7/Δ/99	PH 11534 11534	ADUGB 11535	APP HAD LENGTH 46 CM. / DALLAS AQUARIUM
1/2	3/11/99	MAGNUM	8/6/99	V732		BYR. APPROX 75CM 180LB BROOKFIELD ZOO/CHICAGO
1/2	3/11/99	MAGNUM	7/Δ/99	V733		BYR. APPROX 75CM 180LB BROOKFIELD ZOO/CHICAGO
1/2	2/1/99	SLP	6/20/00	V728	V747	OKLAHOMA ZOO m. V748/V747 by OKLAHOMA ZOO
1/2	2/1/99		7/Δ/99	V729		OKLAHOMA ZOO
1/2	2/1/99		7/Δ/99	V730		OKLAHOMA ZOO
1/2	6/1/99		7/Δ/99	11A90	nine	APPROX 150 LBS. + MINNESOTA ZOO

→ Turtle 123 Magnum sent back to Sea Life Park 8/6/99



173

SEA TURTLE TAGGING FORM

3/19

CAPTURE DATE, LOCATION AND METHOD:

7/3/99 Mauna Lani Captive Dallas  
PERSON RECORDING DATA: Natalie Moore

OLD TAGS: ~~117~~  
NEW TAGS: RFL  
TUMOR SCORE:   
V726 (Ring) L1-2  
V727 R OTHER NEW TAGS: LRF LFL  
4136173A4A  
4103750200

STRAIGHT CARAPACE-LENGTH: 60.7 WIDTH: 49.1

NOTCH LENGTH: 60.3 DB: L.O. VB: L.O.

CURVED CARAPACE LENGTH: 64.5 WIDTH: 56

HEAD WIDTH: 9.8 SEX: MALE, FEMALE OR UNDETERMINED

PPS: YES OR NO OR NE YES

TAIL LENGTH: T 16 C 11

RIGHT FRONT FLIPPER WIDTH: 10 SAMPLES COLLECTED

PLASTRON LENGTH: 48.1 Block

WEIGHT: 79 lbs

DESCRIPTIVE REMARKS: Dallas Zoo "Cassius Clay"

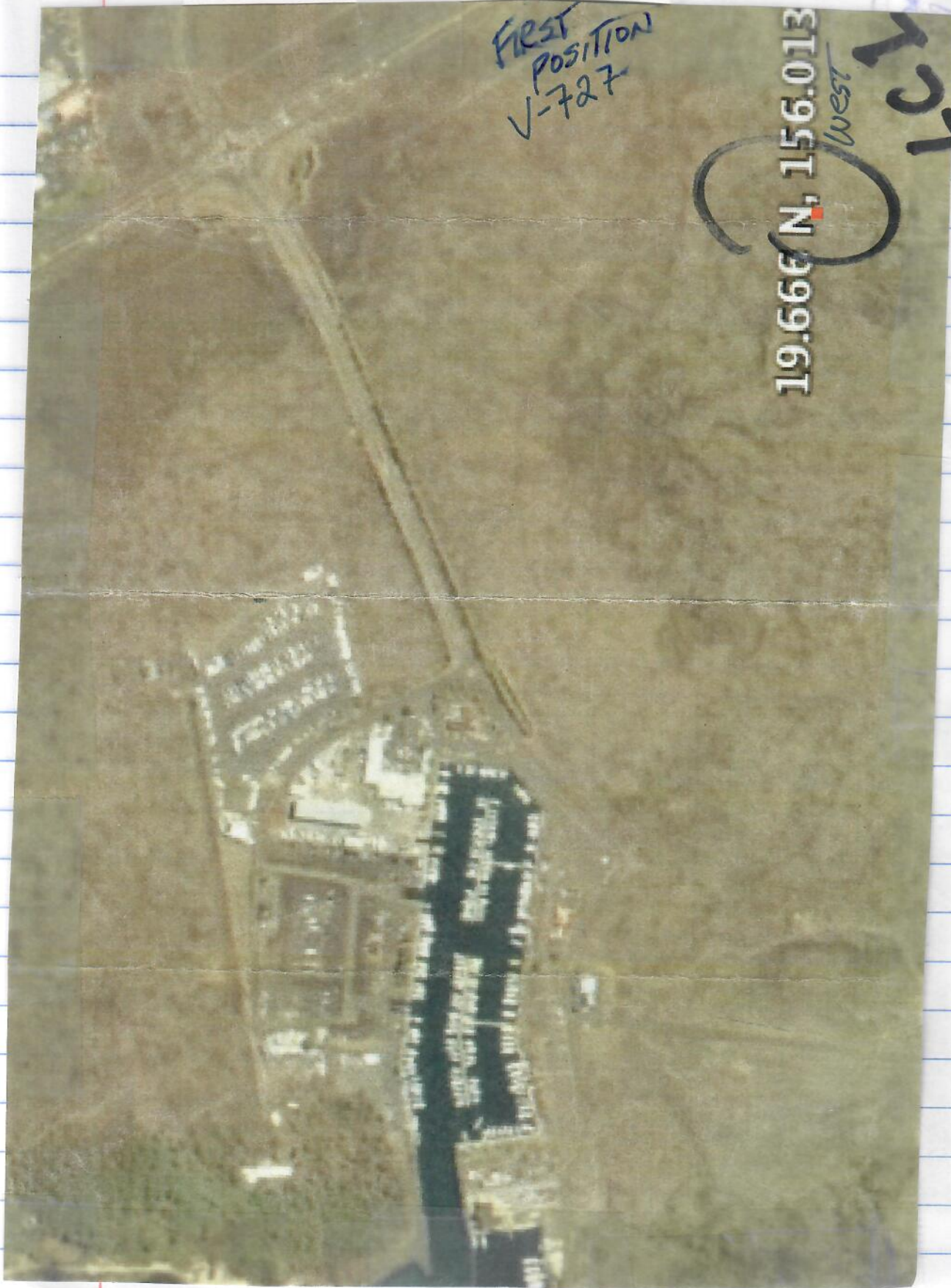


First  
position  
V-727

19.666 N, 156.013

West

101





**Oneuli Beach**, also called Black Sand Beach, lies between Puu Olai (background) and the Maui Prince Hotel. A long expanse of relatively shallow, flat reefs seems to appeal to both green sea and hawksbill turtles. Another draw: A turtle spa run by cleaner wrasses who pick parasites off the turtles.

The Maui News  
AMANDA COWAN  
photo





174

6/24/09 MAUI NEWS

# Group wrangles up hawksbills for scientific tagging, samples

By HARRY EAGAR  
Staff Writer

A band of professional and amateur turtle wranglers accomplished a record roundup of hawksbills for scientific tagging this month at Oneuli (Black Sand) Beach near Puu Olai in Makena.

The record haul was three, but considering how rare the hawksbill turtle is, worldwide and in Hawaii, it was a notable haul, according to Stacy Hargrove, a marine turtle biologist at the National Marine Fisheries Service Pacific Islands Fisheries Science Center in Honolulu.

George Balazs, a green sea turtle specialist at the center, said that of 5,000-plus turtle strandings logged in the Marine Turtle Research Program since 1982, only 79 were hawksbills. "There is such a small number," said Hargrove, and open ocean captures for tagging are even rarer: only a dozen until last week.

However, Steve Williams, one of a number of Mauians who keep an eye on turtles, kept encountering the same three hawksbills at Oneuli,



Pacific Islands Fisheries Science Center photo

**A juvenile hawksbill turtle stands up for a mug shot for research files.** Hawksbills are rare everywhere and very rare in Hawaii, but three regulars who hang out at Oneuli were captured, pictured, sampled, tagged and released last week by researchers.

which is a favorite hangout for both greens and hawksbills.

Hawksbills can be identified from photographs of their head scales.

It seemed a good opportunity to up the total of tagged turtles. Besides tagging, samples were taken of mitochondrial DNA, and the turtles were released.

The turtle cowboys were Marc Rice of Hawaii Preparatory Academy, Cheryl King of the Hawaii Wildlife Fund and several helpers.

Hargrove said the turtle wrestling technique isn't easy, and she didn't want to reveal it, lest it encourage nonscientists to harass the animals, which

are protected. And, in any case, she said: "They bite."

However, once the secret technique is used, the turtle is placed upside down on a floating lab table — a piece of plywood in an inner tube — for measurements and samples.

Then the animals are turned loose. Two of the three corralled on June 16 were adolescents with shell lengths of 70 and 71 centimeters (27 inches). The other was a juvenile of 36 centimeters. Even at that size, hawksbills are a handful for snorkelers trying to move them around, Hargrove said.

Having three turtles of steady habits was a boon for researchers, because they are so rare that finding them in the open water "is like finding a needle in a haystack," Hargrove said.

At Oneuli, the hawksbills seem to like the flat reefs that stretch out a good distance. They feed on sponges and algae.

A recent paper published in Pacific Science reveals much about the hawksbills' habitats in Hawaii.

**See TURTLES**  
on the next page



## Turtles

Continued from Page A3

The co-authors — Balazs, King, Denise Parker, William Gilmartin and Larry Katahira, analyzed the movements of nine Hawaii hawksbills that had satellite trackers attached since 1998. Most hawksbills nest on the Big Island, but a few nest on Maui and even fewer on Molokai and Oahu.

In other parts of the world, hawksbills travel more than a thousand miles from their birthplace to feed, but Hawaii hawksbills are comparative homebodies. They are almost unknown in the Northwest Hawaiian Islands, where most of the green turtles nest.

Instead, hawksbills seem to prefer leeward beaches on the main islands for nesting. Then, the tracking shows, they travel around to the windward side, staying close to shore, before settling down to forage. The Hamakua coast of the Big Island is the preferred spot, but Kahului waters also are used.

On Maui, hawksbills nest from Kealia Pond National Wildlife Refuge down to, at least, Makena.

The Dawn Patrol organized by the Hawaii Wildlife Trust, monitors beaches for nesting activity, which begins in the spring and extends to the fall.

The turtle research team plans to visit Maui within a few months to try to recapture the Oneuli Three to measure how fast they are growing.

■ *Harry Eagar can be reached at [heagar@mauinews.com](mailto:heagar@mauinews.com).*



179



See p. 83



# Honu nesting; be cautious — Kauai biologist

WAILUA, Kauai (AP) — The state's aquatic biologist on Kauai is calling on people to watch out for honu, or green sea turtles, nesting and hatching on the beach.

It's currently nesting season for the honu, a threatened species protected by both state law and the U.S. Endangered Species Act.

People driving trucks on the beach are the greatest threat to turtles nesting in the Wailua area, he said.

*We want happy fishers and happy campers. But we also want happy and healthy honu.*

"The weight of the truck will compact the sand to a degree that the baby turtles will not be able to dig their way up and out of their sandy nest," said Don Heacock of the state's Division of Aquatic Resources.

Heacock was recently at Wailua Beach, trying to establish a perimeter around a honu nest. He could see fresh tire tracks from an off-road vehicle less than a foot away.

Motorists should avoid driving on or over any coastal beach vegetation, particularly beach morning glory, or pohuehue and naupaka, Heacock said.

— Don Heacock  
state Division of  
Aquatic Resources

Most green sea turtles nest in these plants.

Heacock was also troubled to find dog tracks, both large and small, crisscrossing the turtle tracks. He saw evidence that one dog had begun digging out a nest created by the honu.

During the nesting season — which lasts from about June to September — female green sea turtles come ashore at night when there's high tide at a full moon.

A turtle will spend the night digging a nest and depositing about 100 eggs, before covering the nest with sand and re-turning to the ocean.

Eggs usually hatch in 59-61 days, depending on the weather, Heacock said.

When the baby honu hatch, they remain in the nest until they sense the cool of the night. They then all dig out and upward at the same time, working together to climb to the surface and make a run to the ocean.

Each clutch of eggs is laid about 12-14 days apart in the same general area.

Bright lights and fires are another threat to hatching honu. Heacock told of an incident when a security guard called him after discovering baby honu in the restrooms at Nukolihi on Kauai's east shore.

"When I got there, I noticed the lights in the bathrooms were on," Heacock said. "Honu that are hatching on beaches at night are attracted to bright lights or fires, and if these are present when they come out of the sand, they will become confused and might actually run directly into a bonfire on the beach and may die."

Heacock shut off the bathroom lights and placed a flashlight in the water to lead the honu hatchlings into the water.

"We want happy fishers and happy campers," Heacock said. "But we also want happy and healthy honu."



181

Historical Information

Tag Information:

<u>Tag Number</u>	<u>Date</u>	<u>Tag Type</u>	<u>Tag Position</u>
410375020D	7/3/1999	PIT	RHF
4136173A4A	7/3/1999	PIT	LHF
V726		1681	L12
V727		1681	R12

<u>Date</u>	<u>Type of Encounter</u>	<u>Location:</u>	<u>TumorRank:</u>	<u>NestingAct:</u>	<u>Straight Carapace</u>
7/3/1999	Near Shore	Hawaii, Mauna Lani, Captive	0	-	60.7
7/4/1999	Near Shore	Hawaii, Mauna Lani	0	-	---
3/16/2007	Near Shore	Hawaii, Kaloko, Zone C - Basking	0	-	---
5/2/2007	Near Shore	Hawaii, Kaloko, Basking	0	-	87.5
9/5/2008	Near Shore	Hawaii, Kaloko, Zone C (Aimakapa Beach)-Bask	0	-	---

Historical Information

Tag Information:

<u>Tag Number</u>	<u>Date</u>	<u>Tag Type</u>	<u>Tag Position</u>
410375020D	7/3/1999	PIT	RHF
4136173A4A	7/3/1999	PIT	LHF
V726		1681	L12
V727		1681	R12

*Cassio Dall'As 20 1995*  
*7 years*

<u>Date</u>	<u>Type of Encounter</u>	<u>Location:</u>	<u>TumorRank:</u>	<u>NestingAct:</u>	<u>Curved Carapace</u>
7/3/1999	Near Shore	Hawaii, Mauna Lani, Captive	0	-	64.5
7/4/1999	Near Shore	Hawaii, Mauna Lani	0	-	---
3/16/2007	Near Shore	Hawaii, Kaloko, Zone C - Basking	0	-	---
5/2/2007	Near Shore	Hawaii, Kaloko, Basking	0	-	---
9/5/2008	Near Shore	Hawaii, Kaloko, Zone C (Aimakapa Beach)-Bask	0	-	---



387

Historical Information

Tag Information:

<u>Tag Number</u>	<u>Date</u>	<u>Tag Type</u>	<u>Tag Position</u>
410375020D	7/3/1999	PIT	RHF
4136173A4A	7/3/1999	PIT	LHF
V726		I681	L12
V727		I681	R12

<u>Date</u>	<u>Type of Encounter</u>	<u>Location:</u>	<u>TumorRank:</u>	<u>NestingAct:</u>	<u>Weight</u>
7/3/1999	Near Shore	Hawaii, Mauna Lani, Captive	0	-	79.0
7/4/1999	Near Shore	Hawaii, Mauna Lani	0	-	---
3/16/2007	Near Shore	Hawaii, Kaloko, Zone C - Basking	0	-	---
5/2/2007	Near Shore	Hawaii, Kaloko, Basking	0	-	---
9/5/2008	Near Shore	Hawaii, Kaloko, Zone C (Aimakapa Beach)-Bask	0	-	---



183

Date	LeftPitTag	RightPitTag	Marking	Zone	Behav
20080905	4136173A4A	410375020D	V727	C	Basking
20090301	4136173A4A	410375020D	V727	C	Basking
20090413	4136173A4A	410375020D	V727	C	Basking
20090413	4136173A4A	410375020D	V727	C	Basking
20090414	4136173A4A	410375020D	V727	C	Basking
20090414	4136173A4A	410375020D	V727	C	Basking
20090415	4136173A4A	410375020D	V727	C	Basking
20090415	4136173A4A	410375020D	V727	C	Basking
20090418	4136173A4A	410375020D	V727	C	Basking
20090418	4136173A4A	410375020D	V727	C	Basking
20090422	4136173A4A	410375020D	V727	C	Basking

Tag Information

Tag Number	Tag Type	Tag Position
410375020D	PIT	RHF
4136173A4A	PIT	LHF
V727	1061	L12
	1062	R12

*Handwritten notes:*  
 1/27/09  
 Cassio Dallas 1995  
 JAWS

History of Encounters

Date	Location	TurnerRank	NestingAct	Curved Carapace
7/3/1998	Near Shore Hawaii, Mauna Lani, Captive	0		64.5
7/4/1999	Near Shore Hawaii, Mauna Lani	0		
9/10/2001	Near Shore Hawaii, Mauna Lani, Zone C - Basking	0		
5/2/2007	Near Shore Hawaii, Mauna Lani, Basking	0		
10/2/2008	Near Shore Hawaii, Mauna Lani, Zone C (Alakahele Forest Park)	0		



28/17

et	Comments
12:00:00 PM	spotted by Shelby Campbell, basking in sand in Zone C in front of Aimakapa. This turtle was originally hatched at Sea Life Park, then was transferred to Dallas Aquarium, and then transferred to Mauna Lani and released to the wild.
11:00:00 AM	Has been seen often during the past month. V727 is still very large (fat rolls over flippers)
11:30:00 AM	sighted by Jon Joki and Chris; photographer taking photos
1:00:00 AM	Seen on North Side of Aimakapa
10:50:00 AM	
11:23:00 AM	Spotted Basking, observed it head back into water.
12:30:00 PM	seen by visitor
12:00:00 PM	Len Losalio reported V727 in the North end of Beach in front of Aimakapa (near log).
2:00:00 AM	
11:47:00 AM	half in tidepool
1:00:00 AM	



185

DATE: 4/19/09  
CASE#: A-105  
PERSON(S) RESPONDING: James and Craig Lippert  
CONTACT: David Northup, 385-0196

CALL REC'D 6:45 AM

LOCATION : Waipuilani Park Kihei, Maui  
STATUS: ALIVE  
SPECIES: Green Sea Turtle  
GPS Reading: 20° 45' 17.88"N, 156°27' 34.31" W

CCL: Aprox 36" length  
TAGS: none  
TUMORS: none

DESCRIPTIVE REMARKS:

Turtle was basking. Reports of turtles fighting the night before so we assume they were mating. This female appeared to be in good health and spent about 14 hours resting on the beach. We taped off an area around the turtle to keep people away and sat with her for a couple of hours while using this opportunity to answer questions from bystanders. Turtle went back into the ocean about 11PM



75

Date: Mon, 15 Jun 2009 11:54:38 -1000  
From: Dale B. Bonar <dale@mauicoastallandtrust.org>  
To: Skippy.Hau@hawaii.gov, 'CHERYL KING' <shezking@yahoo.com>, 'Glynnis Nakai' <Glynnis\_Nakai@fws.gov>, George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>  
Subject: Turtle nesting at Waihe`e.

Skippy, Cheryl, Glynnis, George 6/15/09

Last night our Waihe`e caretaker saw a very large (300 # he says) turtle nesting and laying eggs. Right by the "falling-down-doctor's house", which is where we've seen so much activity before.

Scott, James and all our Americorps interns are working at Waihe`e during the week, so they'll be doing the morning beach walks all summer and can fill you in on further info if you need.

Cheers,

Dale

Dale B. Bonar, Ph.D.  
Plans  
Maui Coastal Land Trust  
POB 965  
Wailuku, Maui, HI 96793  
808-244-5263

Make No Small

For they have no Magic  
To stir men's souls.  
(Daniel Burnham)

Subject: Forward message  
Date: 6/28/09  
Time: 11:54 AM  
From: Dale B. Bonar <dale@mauicoastallandtrust.org>



Subject: new hawksbill??

4/28/09 STEVE WILLIAMS  
 April 18. Don Bloom captured  
 We saw this small hawksbill near the Maui Prince. This turtle is definitely smaller than the other two juveniles often seen a little further south off black sand beach. It matches well with the photo Anita Whitner took in the same place on February 23 of a hawksbill the same size. Esten and I, as well as Anita and others have been swimming this coast often enough for years to say confidently that this is a new arrival. Now that he or she has been seen there at least twice I think we can say this may be home (at least for now). This may be a relocation from somewhere else along the coast or maybe, only maybe a new arrival to our inshore waters.

A documentation of a juvenile hawksbill arriving in the islands?? Could be.

This morning (Tuesday) Barbara Noel called to tell me about 2 green turtles mating, within 10 feet of the beach, in less than a foot of water at Kawililipoa, south of beach access 120. She called again 6 hours later to say they were still there, still engaged. They may still be there as I write this. We did not see any flipper tag, but didn't want to approach and disturb their intimacy. I will forward photos when I get them from Barbara

[ Part 2, Image/JPEG 614KB. ]  
 [ Unable to print this part. ]



Subject: forward message re: lovers from Barbara Noel

This morning, 4/28/09 on my morning walk, at about 7 am, I came upon this sight! They were about 6 feet from the shoreline. There was no movement except for the gentle rocking of the surf. Even more remarkable, at 1:30 pm they were still at it, in the same spot! Shortly thereafter, they seperated, had a cigarette, and hung around for a little while, before they swam off.  
Barbara Noel

AMATING

Steve Williams  
MSA1

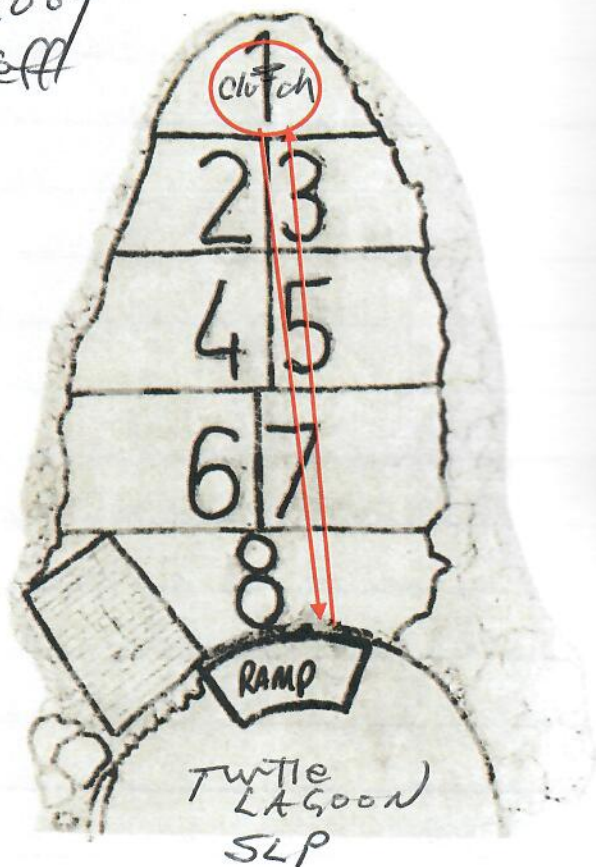
[ Part 2, Image/JPEG 220KB. ]  
[ Unable to print this part. ]

(18)



189

5-Jun 2009  
From Jeff  
Hatch  
~ 5 August 09



Turtle Identity = "Nui"





HILTON / ALA WAI HARBOR AREA  
APRIL 2010





START 11/08  
EVENING  
BASKING



Handwritten notes on the right side of the map, including the word 'HONOKOWAI' and some illegible scribbles.



193

6/9/09 Tuesday



Honokohau Harbor - KONA  
Channel entrance - South side - foraging  
and resting - 8-10 turtles seen



MULTIPLICATION TABLE



mg  
1g  
1g  
1g  
0g  
0g  
0g

- 2. **VERB**—an action word
- 3. **ADJECTIVE**—describes a noun or pronoun
- 4. **ADVERB**—describes a verb, adjective, or another adverb
- 6. **PREPOSITION**—connects a noun to another part of the sentence
- 7. **CONJUNCTION**—connects words or ideas
- 8. **INTERJECTION**—an exclamation

- Some verbs need helpers.

**INCORRECT**

I be / You be  
I ain't / You ain't  
I got to  
I seen  
I done

**CORRECT**

I am / You are  
I am not / You are not  
I have to  
I have seen / I saw  
I have done / I did

- Its is possessive. It's means "it is" or "it has."  
Your is possessive. You're means "you are."

O'NEILI 5-26-10  
BO PETTY  
KERRI ALLEN  
(HOLLINGS WORA)

- Which word do I use?

*Lay or Lie?*

To "lay" is to place an object. To "lie" is to recline.

*Affect or Effect?*

To "affect" is to influence. To "effect" is to cause.

- Punctuation

A **comma** is used to group words and phrases that belong together. It is also used to denote a slight pause, as with items in a series and interjections.

A **colon** is used prior to a list or other elements that rename or restate what has been previously stated.

A **semicolon** is used to separate independent clauses or to divide a series of longer phrases.

An **apostrophe** is used to indicate the possessive case of nouns, to form a contraction, and to form the plural of a letter or number.

A **hyphen** divides one word into syllables or joins multiple words.

**Quotation marks** are used around the exact words someone spoke. Use with titles of songs, short stories, chapter titles, short plays, episodes of television programs, magazine articles, and poems.

**Underlining** is used with the titles of books, movies, newspapers, television programs, magazines, and long plays.





PARK