

BALAZS

MOLOKAI

2 OF 2

MOLOKAI 3

1985-1987

19 JULY 85
FRIDAY

63

Pakanaka, Molokai 7-19-85

<u>Lyngbya majuscula</u>	90%
<u>Acanthophora spicifera</u>	10

→ Abundant "wooly" brown Alga present
on shallow reef-flat off PAKANAKA

Departed on Air Molokai DC-3 at 6:30 pm -
Van in parking lot for us.

17 SAMPLES SENT TO Dennis Russell
on 7/22/85

	AMANSIA & Small diameter filaments (SIF??)	STOMACH CONTENTS - MOLOKAI
8539	AMANSIA	STOMACH CONTENTS - MOLOKAI
8547	AMANS. & Small fila.	" "
8549	Small fila. & Halophila	" "
8543	" "	" "
8541	" "	" "
7828	Small fila. + Amphipod	" "
7825	Small fila. + AMANSIA	" "
7829	Small fila.	" "
7831	AMANSIA & Small fila.	" "
7893	Small fila. + Brown stalk	" "
7921	all small fila. (like most others - greenish in color)	" "
8628	Small fila.	" "
7833		7-18-85 Translucent pinkish red filaments + brown particles
7835	Small filaments	" "
8543		one patch ~ 3cm dia. SIFEL SCRAPING
7917		Seams of scutes. " "
"Pakanaka"		"wooly appearance" Shallow reef flat - Molokai

lost for several days in
shipment, arrived Thursday

Nine whole blood samples collected from Hawaiian green turtles captured alive from the Palaaau, Molokai, foraging pasture on July 19, 1985. Shipped frozen to Dr. Sylvia Galloway on December 17, 1985 by George H. Balazs.

Tag No. and vial No.	Straight carapace length (cm)
7829	46.7
9421	44.1
9436	48.5
9438	53.4
9440	55.9
9442	48.8
9448	46.5
9452	42.9
9466	66.9

Nineteen (9) Hawaiian green turtle blood samples sent frozen
to Dr. Sylvia Braddon Galloway on August 5, 1985.

Sample ID		Date	Straight carapace length (cm)	Origin (foraging pasture)
Vial No.	Tag No.	1985		
(1)	8521	7/16	39.7	Palaau, Molokai
(2)	8519	7/16	49.0	Palaau, Molokai
(3)	8523	7/16	44.3	Palaau, Molokai
(4)	8525	7/16	44.7	Palaau, Molokai
(5)	8527	7/16	44.8	Palaau, Molokai
(6)	8529	7/16	46.5	Palaau, Molokai
(7)	8531	7/16	58.7	Palaau, Molokai
(9)	8537	7/16	54.7	Palaau, Molokai

8 Green turtle blood and fat samples sent frozen to Dr. Sylvia Brodgen Galloway, on September 17, 1985.

Sample ID	Date 1985	Straight carapace length, (cm)	Weight (kg)	Origin (foraging pasture)
<u>Blood</u>				
7815	7/17	66.3	--	Palaa, Molokai
8547	7/17	53.6	--	Palaa, Molokai
7833	7/18	63.4	--	Palaa, Molokai
7893 (2 tubes)	7/18	51.9	--	Palaa, Molokai
7835	7/18	68.6	--	Palaa, Molokai
7921	7/18	71.3	--	Palaa, Molokai
7798	7/17	62.9	--	Palaa, Molokai
7837	7/18	71.8	--	Palaa, Molokai
<u>Fat</u>				
Kahala (2 vials)	3/11	82.5	--	Kahala, Oahu
Kawela (2 vials)	3/29	55.1	--	Kawela, Oahu
Kahaluu (2 vials)	6/28	58.9	--	Kahaluu, Oahu

* for Cholesterol analysis

***** TURTLES TAGGED ON MOLOKAI *****

*Probably all.
RELEASED AT = K'K Dock
AS PER DIANE 8/7/85
Tel. conversation*

Date Tagged: July 11, 1985

Location Caught: Palaau, Molokai

Method of Capture: Fisherman's Nets

Number	Curved Length (cm)	Curved Width XXXXXX (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
1	76.5 (71.5)	68.0 (55.0)	8830	8831
2	75.5 (70.0)	68.5 (55.0)	8832	8833
3	38.0 (36.5)	36.5 (31.5)	8834	
4	58.5 (54.5)	53.0 (43.0)	8835	
5	68.0 (63.5)	60.5 (50.0)	8836	
6	76.0 (69.0)	70.0 (58.0)	8837	8838
7	53.5 (49.0)	47.0 (40.0)	8839	
X 8*	87.0 (81.0)	76.0 (61.0)	8840	8841
9	60.0 (56.5)	51.5 (45.5)	8842	7/9-11/90 S.T.E.F

(Z119)

10	80.0 (73.5)	68.0 (57.5)	8843	8844
11**	52.5 (49.0)	48.0 (42.0)	8845	
12	50.5 (47.0)	44.5 (38.5)	8846	
13	72.0 (67.0)	63.5 (53.5)	8847	8848
14	45.0 (42.0)	39.5 (33.5)	8849	
15	45.0 (43.0)	41.0 (36.5)	8850 (End of Strip)	

RECOVERYRECOVERY***RECOVERY***

16 68.0 (62.0) 62.0 (51.0) 6420 6421, 6422

#16 originally tagged ^{34 MONTHS} 2 years, 10 months ago on 9/3/82 in the same general area. Since then it has increased its curved length by 5.0 cm and its curved width by 6.5 cm.

Remarks: 8* = possibly male; 11** deformed; see attached sheet #1.
284 turtles tagged to date with 25 recoveries.

Rec'd 7/19/85
pa. 1000
see p. 46

0.64 TAGGED
by Bill

0.15 cm/mo

1.76 cm/YR

0.7 inch/YEAR

27 inch to 96 inch

Date Tagged: August 25, 1985Location Caught: KawelaMethod of Capture: Fisherman's nets, incidental catch

Number	Curved Length (cm)	Curved Width XXXXXX (cm)	Tag Number On	
			Left Front Flipper	Right Front Flipper
1	45.0 (42.5)	41.5 (34.5)	9395	9396

Remarks: Released same area. 286 turtles tagged to date with 25 recoveries.

Date Tagged: August 15, 1985

Location Caught: Kawela

Method of Capture: Incidental catch in fisherman's nets

Number	Curved Length (cm)	Curved Width Length (cm)	Tag Number On	
			Left Front Flipper	Right Front Flipper
1	60.0(51.0)	49.0(40.5)	9393	9394

Released same area. 285 turtles tagged to date with 25 recoveries.

Revised
Post 1985



Date Tagged: August 30, 1985Location Caught: Panahaha Fishpond, outsideMethod of Capture: Fisherman's nets, incidental catch

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>87.5 (81.0)</u>	<u>80.0 (62.0)</u>	<u>9397</u>	<u>9398</u>
<u>2*</u>	<u>49.5 (46.0)</u>	<u>36.5 (32.5)**</u>	<u>9399</u>	<u>9400</u>
<u>3</u>	<u>42.5 (40.0)</u>	<u>38.5 (34.0)</u>	<u>9476</u>	<u>9477</u>
<u>4</u>	<u>43.0 (41.5)</u>	<u>38.0 (33.0)</u>	<u>9478</u>	<u>9479</u>
<u>5</u>	<u>40.5 (38.0)</u>	<u>36.0 (31.5)</u>	<u>9480</u>	<u>9481</u>

All turtles released at same area of capture. 291 turtles tagged to date with 25 recoveries.

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: October 3, 1985
 Location Caught: Palaau, Molokai
 Method of Capture: Incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width Length (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>76.0 (71.5)</u>	<u>63.5 (51.0)</u>	<u>9482</u>	<u>9483</u>
<u>2</u>	<u>71.0 (66.0)</u>	<u>62.5 (50.5)</u>	<u>9484</u>	<u>9485</u>
<u>3</u>	<u>61.5 (57.0)</u>	<u>54.5 (46.0)</u>	<u>9486</u>	<u>9487</u> ^{7/88}
<u>4</u>	<u>69.5 (65.0)</u>	<u>62.0 (51.0)</u>	<u>9490</u>	<u>9491</u>
<u>5</u>	<u>68.0 (64.0)</u>	<u>60.5 (50.0)</u>	<u>9488</u>	<u>9489</u>
<u>6*</u>	<u>63.5 (58.5)</u>	<u>57.5 (46.5)</u>	<u>6393</u>	<u>6394 RECOVERY!</u>
<u>7</u>	<u>58.5</u> <u>44.0 (41.5)</u> ^{54.0}	<u>41.0 (35.0)</u>	<u>9492</u>	<u>9493</u>
<u>8</u>	<u>41.0 (39.0)</u>	<u>36.5 (32.0)</u>	<u>9494</u>	<u>9495</u>

7/5/89

9	49.5(46.0)	44.0(37.5)	9496	9497
10	73.5(68.5)	63.0(52.5)	9498	9499
11	68.0(63.0)	60.0(47.5)	9500	9501
12	66.0(61.5)	54.5(47.0)	9502	9503
13	42.0(39.5)	39.0(35.0)	9504	9505
14	67.0(62.5)	59.0(47.5)	9506	9507
15	80.0(76.5)	72.5(58.5)	9508	9509
16	77.5(72.5)	70.5(57.5)	9510	9511
17	74.5(69.0)	68.5(55.0)	9512	9513
18	79.5(75.5)	70.0(59.0)	9514	9514
19	79.5(74.0)	73.0(60.0)	9515	9516
20	60.0(56.5)	52.0(45.0)	9517	9518

only one tag on FL flipper

Remarks: *Turtle #6 was originally tagged 3 years 1 month ago in the same area. It has increased its curved length by 7.5 cm. 310 turtles tagged to date with 26 recoveries.

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: October 16, 1985

Location Caught: Palaau, on reef just west of house

Method of Capture: Fisherman's nets

Number	Curved Length(cm)	Curved Width XXXXXX (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
1*	77.5(72.5)	68.5(57.0)	9519	9520
2	59.0(56.0)	55.0(46.0)	9521	9522
3	84.5(78.0)	80.0(61.0)	9523	Note: <u>Heavily infested with tumors. Pictures taken.</u> Only one tag on FL flipper
4	75.0(69.0)	70.0(57.0)	9524	9525
5	60.0(56.0)	52.5(44.0)	9526	9527
6	86.5(80.0)	79.0(63.5)	9528	9529
7	48.0(45.5)	42.0(36.0)	9530	9531 (3 barnacles knocked off shell)
8	76.0(71.5)	72.0(57.0)	9532	9533
9	50.0(47.0)	45.0(38.0)	9534	9535

RHF MISSING
HEAVY

applied

10 71.0(66.5) 65.5(52.0) 9536 9537

****4 RECOVERIES****4 RECOVERIES****4 RECOVERIES****4 RECOVERIES****

11 79.5(74.0) 73.0(60.0) 9515 9516

Initially tagged 2 weeks ago in same general area. No changes.

* 12 83.5(77.5) 72.5(58.0) 7867 7868

Initially tagged 5 months 3 weeks ago and released at K'Kai Wharf.
0.5 cm increase in length.

* 13 70.5(65.0) 62.5(51.5) 6448 6447

Initially tagged 3 years & 6 weeks ago in same area.
17.5 cm increase in curved length. 2nd recapture for this animal.

* 14 64.0(59.0) 57.0(46.0) 6393 6394

8.0 cm increase in curved length.
Also 8.0 cm increase in curved width.
Initially tagged 3 years & 6 weeks ago in same area.

Remarks: 1* = See attached sheet #1.
320 turtles tagged to date with 30 recoveries.

9/3/82 6a x:53.5 TAGS 6448 6447

9/3 Bill - Misread and used data for 6446 6390 53 x 48

Date Tagged: January 6, 1986Location Caught: Outside Kanoa FishpondMethod of Capture: Fishermen's nets

Number	Curved Length (cm)	Curved Width Depth (cm)	Tag Number On	
			Left Front Flipper	Right Front Flipper
1	43.5 (41.5)	38.0 (32.5)	9538	9539
2	55.0 (52.0)	48.5 (41.5)	9540	9541

Remarks: Both turtles released at site of capture. Straight measurements in parenthesis. 322 turtles tagged to date with 30 recoveries.

- 960.

- Ed M. mentioned

- that few turtles in net these days.

- Suspect cold cold

- H₂O might have some-
- thing to do w/it. (P)

Date Tagged: March 5, 1986

Location Caught: Palau (just east of natural harbor)

Method of Capture: Fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width XXXXX (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
1	87.5 (79.5)	86.0 (64.5)	9542	9543
2	91.0 (84.5)	78.0 (62.0)	9544	9545
3	72.5 (68.0)	70.0 (55.5)	9546	9547
4	71.0 (66.0)	66.0 (54.0)	9548	9549
5	80.0 (74.0)	68.0 (56.0)	9550	9551
6	64.0 (59.5)	57.0 (46.5)	9552	9553
7	60.0 (55.5)	49.5 (42.0)	9554	9555
8	65.0 (61.0)	58.5 (48.0)	9556	9557
9	56.0 (51.5)	49.0 (40.0)	9558	9559

engraved
L101
NESTING
1991
SUMMER
FFS EAST

3-5-86, CONTINUED

STRAIGHT

curved

10	41.0 (38.5)	35.5 (31.0)	9560	9561	
*11	9/13/82 CL-70.5 77.0 (72.5)	68.0 (58.0)	6402	6403/4	2nd recovery! Originally tagged 9-3-82 #11 A
12	72.0 (67.5)	62.5 (53.5)	9562	9563	
*13	5/16/84 DID NOT MEASURE CURVE S (43.5)	(35.0)	7239	tagged right flipper with 9564	
14	77.0 (71.5)	69.0 (56.5)	9565	9566	1st recovery originally tagged 5-16-84 #13
15	45.0 (43.0)	40.0 (34.5)	9567	9568	
16	63.5 (59.5)	60.5 (50.0)	9569	9570	
*17	12/20/83 C-46.0 S-43.0 52.5 (49.5)	48.0 (42.0)	7293	7294	1st recovery; ori- ginally tagged 12- 20-83 (#17)
18	74.0 (69.0)	66.0 (54.0)	9571	9572	
19	64.0 (60.0)	56.0 (46.5)	9573	9574	

Remarks: *These turtles are recoveries. All of them were originally tagged within 1/2 mile of today's capture. 338 turtles tagged to date with 33 recoveries.

1.8cm/yr (CL)
3 yrs
6 mon

1.6cm/yr
3 yrs
6 mon

1.4cm/yr
3 yrs
6 mon

1.2cm/yr
3 yrs
6 mon

1.0cm/yr
3 yrs
6 mon

0.9cm/yr
3 yrs
6 mon

0.8cm/yr
3 yrs
6 mon

0.7cm/yr
3 yrs
6 mon

0.6cm/yr
3 yrs
6 mon

0.5cm/yr
3 yrs
6 mon

Date Tagged: May 21, 1986Location Caught: Outside Kalokoeli FishpondMethod of Capture: Fisherman's nets (incidentally)

Number	Curved Length (cm)	Curved Width XXXXXX (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
1	57.5 (53.5)	46.5 (38.5)	9575	9576

NOTE: Straight length in parenthesis. Animal
definitely not a green turtle but was
identified as a hawkbill after checking
with reference materials and literature.

Remarks: 339 turtles tagged to date with 33 recoveries.

RECOVERY TEAM SITE VISIT w/ Gene Nitta, Harold Hirth, 21
& Dick Wass.

5-1-86 Thursday Palauu, Molokai

CL 43.5 8439 8440

63.2 8441 8442

42.5 8443 8444

Caught by Dick Wass - tagged

And released.
Swampy in the coral-head zone
on the lagoon flat.

Date Tagged: July 3, 1986

Location Caught: Palauu, Molokai

Method of Capture: Incidental catch in fisherman's nets

Number	Curved Length (cm)	Curved Width XXXXXX (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
1	55.0 (52.5)	46.5 (40.0)	9577	9578

HANKS BILLY

Date Tagged: July 13, 1986

Location Caught: Outside Kanoa Fishpond, Molokai

Method of Capture: incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width XXXXXX (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>87.5 (79.5)</u>	<u>78.5 (61.5)</u>	<u>9579</u>	<u>9580</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

NOTE: Turtle had a very deep puncture on the plastron.

341 turtles tagged to date with 33 recoveries.

Date Tagged: Sept. 19, 1986

Location Caught: Palauu (Just west of house)

SITE "A"

Method of Capture: Nets

Number	Curved Length (cm)	Curved Width xxxxx (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
1.	81.5 (76.5)	71.0 (60.0)	9581	9582
2	58.0 (53.5)	51.0 (42.5)	9583	9584
3	61.0 (57.0)	54.0 (46.5)	9585	9586
4	62.0 (58.0)	54.0 (44.0)	9587	9588
5	49.5 (47.0)	43.5 (37.0)	9589	9590
6	80.5 (75.0)	69.5 (56.5)	9591	9592
7	42.5 (40.5)	39.5 (33.5)	9593	9594
8	80.0 (73.5)	70.5 (61.0)	9595	9596
9	44.0 (41.5)	38.5 (32.5)	9597	9598
RECOVERYRECOVERY***RECOVERY***RECOVERY***RECOVERY***				
10	80.5 (76.0) 80.0 (73.5)	69.0 (57.0) 68.0 (57.5)	8843	8844
11	63.0 (58.5) 61.5 (57.0)	56.0 (46.0) 54.0 (46.0)	9486	9487

7/88 50.1cm

initially tagged
7/11/85

initially tagged
10/2/85

6/4/87

145 cm CL INCREASE

12	72.0 (67.5)	66.0 (54.5)	6397	6398 initially tagged
4 yrs	9/3/82 57.5	57.5		9/3/82
0.5 Mon.				

Remarks: All three recoveries were originally tagged in the same area as today. 350 turtles tagged to date with 36 recoveries.

- Date Tagged: Nov. 14, 1986 (Return)

Location Caught: Kapaakea, Molokai

Method of Capture: Unknown

Number	Curved Length	Curved Length (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
1			3208	?

French Frigate Recovery

NOTE: This is an anonymous return of a tag obtained from a turtle off Molokai. This turtle was originally tagged at French Frigate Shoals

on June 25, 1979. No additional data was obtained.

Date Tagged: February 24, 1987Location Caught: Palaau, MolokaiMethod of Capture: Fisherman's nets

Number	Curved Length	Curved Width XXXXXXXX (cm)	Tag Number On	
			Left Front Flipper	Right Front Flipper
1	79.5 (74.0)	69.0 (56.5)	9599	9600
2	55.5 (51.5)	47.0 (39.5)	9601	9602
3	7 (689) 61.0 (57.5) <i>Recal</i>	55.0 (46.0)	9603	9604

NOTE: Straight measurements in parenthesis.Turtles released at site of tagging.Remarks: 353 turtles tagged to date with 37 recoveries.

4/1/87-Mike Coelho 671-6684
 WCCU concerning Koalaupsa nesting report
 Summer 1986 30-60yds
 male trail, "EGS shells found"
 but not exact 99.65 6718.14
 Send map to Mark (in Molokai file)

MOLOKAI BOOK

THE NATURE CONSERVANCY -

Ed Misaki
P.O. Box 40
Kualapuu, HI 96754

517-6680

9/18/86 TO MOLOKAI - MOOMOMI BEACH
FRIDAY

To follow up on earlier reports by
 Moloka'i Dept., Peter Connolly, & various
 Nature Conservancy personnel.

→ Arrive HA ~ 8:30am Picked up
 by Bill Paleoa, and Ed Misaki.
 Drove to Bill's office (water supply)
 met Nathaniel Burrows and others
 having coffee. Departed ~ 9:30am for
 Moomomi (Kawāaloa Beach) in
 Bill's truck - through 2 locked
 cattle gates. Ended up on the
 overlook cliff to the west of
 the bay - Excellent vantage point
 where the entire beach can
 be surveyed with binoculars for
 nesting turtles at night. Walked down
 cliff and could see tracks all the
 way across unveg. zone, up berm.

MoLOKAI, Moomomi (Continued)

Thurs.
9/18
Cont.

Many photos taken. 5 sets of tracks visible, but impossible to tell how old they are due to unknown "weathering" factors. Same with digs, 5-6 present. But are there others completely weathered? Steep drop-off blow-out area immediately behind two digs (one has veg around it, so must be quite old). (Tracks most certainly from hatchling. Going into it - I dried hatchlings found - first by Bill's dog who wanted to eat it! Noted ghost crab holes. Suggested filling in hole. Lots of foot prints here, and sand areas to the west. Lots of plastic bottles/debris wash-up. Sand sample at nest site also collected. Del Monte recreational site just down the way. Back at Water office I talked to Kili Mawe - age 50 - says when he was 16 he saw lots of tracks at Moomomi. His father used to leave eggs alone. In later years there was not as much nesting. Also nesting at a beach site to the west just before the cliffs. Allencaster was shown turtle sites, including Moomomi, but they killed many and left remains laying around. They ran them off MoLOKAI. Earlier Ed Misaki showed us a kitchen Midden area where turtle bones are found - he learned this from Jean

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Molokai, Moomomi (cont)

9/18

Thurs Aidkem. Kili said they caught a large hawksbill off Moomomi once, "hooked it" (gaff) underwater. Once they caught (10-15 years ago) a large green floating at the surface near KK dock. It was strong and dove him to the bottom. It had a tag ("French Frigate Shoals") which he gave to his cousin Leroy. Kili knows where Arthur Pua's sleeping place is off Kawela (near Bill's home).

ED & DIANE MEDIEPES interview:

Tropical fish business

6/9/87 Mostly done in the Kawela area.

ed: April 9, 1987

Caught: Pukoo, Molokai

Capture: Sick/Stranded on Beach

Curved Length (cm)	Curved Width xxxxxxx (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
<u>80.0</u>	<u>73.5</u>	<u>9605</u>	<u>9606</u>
<u>78.0</u>	<u>64.0</u>		

straight measurements

Animal was floundering in 3-4 feet water apparently in distress. Tourists swimming in the area were able to approach and touch the turtle. After they decided that it was not able to fend for itself, they help beached the animal and contacted the Molokai Police Department. After measuring and tagging the turtle, it was led back to the water and allowed to swim away. 354 turtles tagged to date on Molokai with 37 recoveries.

3 JUNE 87 Depart Hawaiian Air 6:55am
 MONDAY w/ Robert - Arrive Molokai 7:20am.

Sail Grace & Paul Atkins. Picked up
 at the airport by Bill Pukloa.
 Drove to kiki dock where Diana
 and Ed had boat ready. Bullpen
 had been set ~ 6pm June 2 at
 first site to the west of Harbor
 Channel. Guide actually extended
 into deeper area of (a channel
 Harbor). Calm seas - no wind.
 Mild south swell. Small clouds
 in area. 2-3 tuftles seen by
 marker buoys outside kiki harbor.

SITE
 "A"

See PAGE 7 for net location.

Water temperature in bullpen = 27°C .
 Depth ~ 3-4 feet.

10 turtles found + Weke, 1 AWA,
 Papip and a few venue.
 Fish only filled one large cooler.
 Data on turtles follows.

After measuring, tagging and releasing
 turtles we snorkel surveyed the
 area - following guide in. Bill
 located some seaweed (not *Amansia*)
 that he believes turtles eat. Small
 pieces in stomach, he said.
 Half way along guide temperature 28°C
 (cont. p. 106).

92

NOTE

Bill - Sea Life Park
6/29 -

June 2-3, 87

9795 - RHF 9799 LFF 9800 - RFF

Left hind flipper amputated - we fully healed
7/8's missing

SC - 84.6

W - 65.5

CC - 90.6 x 82.5

H - 11.6

RFF - 13.5

2nd lateral left 6" slice in scute

9th marginal left healed injury

Painted #1 in white (all w/ marker pen -
cream color)

Photos

9841 - LFF

9842 - R~~FF~~^F

Painted #2

SC - 60.4 x 45.6

CC - 64.5 x 55.5

H - 8.7

RFF - 9.9

3 JUNE 87
WED.

93

9843 - LFF
Painted #3

9844 - RFF

SC - 57.4 x 47.7

N - 57.0

CC - 61.0 x 55.0

H - 8.6

RFF - 9.9

LH Flipper $\frac{1}{3}$ missing - rose lace - all healed

9845 - LFF

9846 - RFF

Painted #4

SC - 41.5 x 31.7

N - 40.8

CC - 43.5 x 37.0

H - 6.5

RFF - 7.2

Plastron 32.5

Photos w/NO.5, dorsal & ventral

94 3 JUNE 87
Wed

9847 - LFF 9848 - RFF Painted #5

SC - 42.4 X 34.7 N - 41.9 CC - 44.6 X 39.5
H - 6.7
RFF - 7.2
PI - 33.7

Photos w/ no. 4 dorsal & ventral.

9849 - RFF 9850 - LFF Painted #6

SC - 53.3 X 42.8 N - 52.5 CC - 57.0 X 52.0
H - 8.4
RFF - 9.6

3 June 87
Wed,

95

9851 - LFF 9852 - RFF Painted # 7

SC - 60.8 x 46.7 N - 60.4 CC - 65.0 x 55.0

H - 8.5

RFF - 9.9

9th & 10th left marginal heated piece missing
5 x 5 cm indentation

Photos

9853 - LFF 9854 - RFF Painted # 8

SC - 67.3 x 51.1 N - 65.8 CC - 71.5 x 61.0

H - 9.6

RFF - 11.2

3 June 87
Wed.

10 TOTAL
2-3 JUNE 87

9855 - RFF 9856 - LFF Painted # 10

SC - 57.0 x 41.7 N - 56.8 CC - 61.0 x 50.5
H - 8.5
RFF - 9.4

April 84 - Palau * TAG Recovery
May 85 -
Kawela?

6698 - LFF 6699 - RFF Painted # 9

SC - 52.1 x 33.4 CC - 54.5 x 49.5
H - 8.0
RFF - 9.1

6/3/87

Scum and silt on carapace
Tumors over eyes, behind front flippers
Photos - including close-ups of legs
2 tumors left hind flipper

see letter on P. 116 Book 2
Caught by Hoca at Palau - released to Bill's home - Kawela

6/3/87 - 52.1
4/25/84 - 48.0
4.1 cm

4/25/84 C - 51.0 x 45.0
S - 48.0 x 40.0

5/19/85 S - 50.5 x 42.0 C - 53.0 x 48.0

3 years, 1 month (37 months) 0.111 cm/mo 1.33 cm/year
0.52 inch/year

New Day

3-4 JUNE 87 THURSDAY

97

Wed: Thurs.

Bent
9857 - Not used

9859-LFF 9858-RFF

PAINTED #11

SC - 71.2 x 54.9 N 71.0 CC - 75.6 x 66.5

H - 10.0

RFF 12.1

9860-LFF

9861-RFF

Painted #12

SC - 65.1 x 48.4 N - 64.5 CC - 69.0 x 58.0

H - ~~8~~ 9.4

RFF - 11.0

98

4 June 87

Thurs.

9862 - LFF

9863 - RFF

Painted #13

9864 - LHF

SC - 82.1 X 63.1

N - 81.0

→ broken, healed

CC - 87.0 X 76.5

H - 11.2

RFF - 14.1

9865 - LFF

9866 - RFF

Painted #14

SC - 71.8 X 55.1

N - 71.6

CC - 77.0 X 69.5

H - 10.2

RFF - 11.5

4 JUNE 87 THURS.

99

9867-LFF 9868-RFF Painted #15

SC-72.6 X 58.0 N-71.9 CC-78.5 X 72.0
H-10.6
RFF-12.9

* Tag Recovery

6397 6398
~~9867~~-LFF ~~9868~~-RFF Painted #16

SC-69.0 X 56.4 N-68.7 CC-73.5 X 68.0
H-9.8
RFF-12.0

9/3/82 C-57.5 X 51.5

9/19/86 C-72 X 66
S-67.5 X 54.5

6/4/87

73.5

57.5

+ 1165 cm

4 years, 9 months (57 months)

0.281 cm/mo

3.37 cm/yr

1.33 inch/yr

4 JUNE 87

THURS.

9869 - LFF 9870 - RFF Painted #17
9871 - LHF

SC - 80.3 X 63.2 No N CC - 86.0 X 81.5

H - 12.7

RFF - 14.4

LHF - 1 cm X 3 cm hole - tag applied



9872 - LFF 9873 - RFF Painted #18

SC - 59.7 X 47.2 No N CC - 64.0 X 56.0

H - 8.6

RFF - 9.9

4 JUNE 87
THURS

101

9874-LFF 9875-RFF Painted #19

SC - 54.0 x 41.8 N-53.8 CC- 58.0 x 47.5

H- 8.2

RFF- 9.5

7/88 56.2 cm

* Tag Recovery
9876-LFF ^{new} → 6421-RFF Painted #20

SC - 63.9 x 51.5 N- 63.6 CC- 68.5 x 63.5

H - 10.0

RFF- 11.1

3rd scale Rt + F healed tear

short healed slit on left LFL

9/3/82 ^{LF} 6420, ^{RF} 6421 ^{RF} 6422 C-63 x 55.5

7/11/85 6420, 6421, 6422 C-68 x 62 | C-68.5
S-62 x 51 | S-63.0
6/4/87
+5.5 cm

4 yr, 9 mons (57 mo)

0.096 cm/mo

1.15 cm/yr

0.45 inch/year

4 JUNE 87
THURS.

9877 - LFF 9878 - RFF Painted #21

SC - 57.4 x 44.9 N - 57.1 CC - 61.5 x 54.5
H - 8.8
RFF - 9.8

7/88 59.8

9880 - LFF 9881 - RFF Painted #22

SC - 47.1 x 37.4 N - 46.9 CC - 50.5 x 43.5
H - 7.5
RFF - 7.6

6/4/87

4 June 87
THURS.

103

* Tag Recovery newly

9879 - LHF - applied

very close to edge

Painted # 23

6541 - LFF flap

6542 - RFF - 1st scale rt

SC - 53.2 X 42.3

N - 53.1

CC - 56.5 X 50.0

H - 8.4

RFF - 9.3

10/19/82 C - 46 X 41

6/4/87 C - 56.5 X 50.0

+ 10.5cm

5 4 years, 7.5 mon. (55.5 MONTHS)

0.189 cm/mo

2.27 cm/yr

0.89 inch/yr

9882 - LFF

9883 - RFF Painted # 24

44.8

SC - 55.2 X ~~54.4~~

N - 54.4

CC - 59.0 X 53.5

H - 8.5

RFF - 9.1

104 4 JUNE 87
Thurs.

5/90 site A

6/4/87
SITE A

9884 - LFF

9885 - RFF Painted # 25

SC - 40.6 X

N - 39.6

CC - 43.0 X 40.0

H - 6.3

RFF - 6.2

Scum & white/pink coralline algae
Photos w/ #26

#12 SITE A

C 46.0 X 40.5
5/8/90 SITE A

7/88 - 41.3
40.6
0.70 cm

44.0 curved
43.0
1.0 cm
0.65 cm/yr

9886 - LFF

9887 - RFF Painted # 26

SC - 37.5 X 32.5

N - 37.0

CC - 39.5 X 37.0

H - 5.8

RFF - 6.5

No fouling growth

Photos w/ #25

4 JUNE 87

105

THURS.

9888 - RFF 9889 - LFF

SC - 55.3 x 43.2 N - 55.0 CC - 59.0 x 51.5

H - 8.4

RFF - 9.6

Turtle resuscitated

NOT PAINTED #
(would have been #27)

need to check outside net before taking turtles out.
Found in fold of net while picking it up to move at > 12 noon.
Tygon tube used - blew lightly into it numerous times.
Tail reflex present. Eyes bulged and hard. Slow revival over an hour period.

Released about 2 hours ^{TOTAL} later on east side of harbor in ~ 4-5' water. Swam slowly to the bottom. Circled boat and watched it rise and take a deep breath, and submerged again. Did not swim off though.

Diane found a fecal pellet from this turtle in the boat.

- Sent to Dennis Russell for ID on 6/5/87

3 JUNE 87
WEDNESDAY

(adjacent to)
At inshore end, shallow reef flat was 29°C. No trade winds. Sunny weather. A trough, inshore end of guide was set into deep area. Top of guide floats visible about 5' underwater for about 1/8 - 1/4 the guide length. Orange buoy on inside (shoreside) end of guide. Several "gilled" weke in guide.

Sporked shallow reef-flat searching for Anansia. Bill said his all over. None found. Later he explains he was probably wrong about that ID.

Dictyota
sandvicensis
??

Instead, he pointed out a somewhat common flat brown Dictyota. Sample brought home. Need to ID in McGaruder booklet.

After measuring, paint numbering and releasing all 10 turtles (west to the net, and bagging fish, 1 Cooker, 1 weke & 1 AWA) Robert and I sporked the area seaward for a while, outside the breaker line where Ed had motored the boat -- a 1/4 - 1/2 mile in a west direction. Nothing seen. Vertigo from light/dark (alternating) + reflection of particles - turbidity.

TAGF 7317-7318 reported by DIANE W. 107
BULLET AT KAWELA. DATE =

3 JUNE 87 Ed reported seeing one turtle in
Wed. the distance swimming while
spearfishing over deeper water.

→ Glassy water present when we left
Kk Dock at 7:15 am and motored
to Palau Harbor. 2-3 turtles
seen at the surface near channel
marker buoys. However, none others
seen on the entire trip there.

Not any seen the next morning -
similar sea surface conditions
present. If turtles were
sleeping on the bottom anywhere
along the survey, surely there would
be a few on the surface at
any one time. Like during survey
off Lania.

Returned to Kk dock at ~3 pm.

Bill drove us to Bay Hana
Pmn where we checked into
Room #210 double #45. Refurbishing
of old wooden structures going
on. Lots of termite preservative
being used. Ate dinner at Bill's house
and saw his home computer.
Turtle data entries.

4 JUNE 87 UP at 5:30 am -
 THURS. Ate breakfast at Mid NITE Inn
 6:55 am. Bought some canned goods
 for lunch at Pasqua Store.
 Donuts again at bakery,

Departed dock ~ 7:30 am. Net
 had been left at same site
 as yesterday. Turtle turtles
 taken from it, plus one (17 total)
 found from base in fold of
 net - needed to circle and
 check outside the net before and after
 getting turtles out.

One copy of Papiro/uke + 1 ~ 50 lb o/w
 (power headed), + one ~ 5 lb kala
 + 1 5 foot black tipped shark
 (Mekapthous) killed by Bill
 (to test for Ciguatera)

While taking in guide, 10-20 small
 slipper lobsters were found gilled, but
 not dead, in it.

All gear moved to the east,
 across harbor, and sea-ward
 further - in clear area, but
 probably 4.5' deep.
 Net J laid out fairly

4 JUNE 87

Thursday

rapidly, but lots of time
 taken for Ted and Diane to
 secure it together and straighten
 it as needed. Robt & Bill
 swam out to and beyond the reef
 edge to spear holes. I swam
 alone to search for resting turtles -
 checking "green" areas near reef - but
 ~1pm holes found were not very deep
 2pm (< 7 feet). Water turbid with
 particles. Very calm sea conditions
 very small surf at fringing reef.

Note: While motoring to Palau
 this morning we spotted 2 floats
 several hundred meters or more off
 the harbor - off the drop in
 deep water. Goose-necks on floats and
 roof. We had pulled - very heavy.
 Slimy growth. 3 links of huge
 chain on the end. Reportedly part
 of lobster-trap set line from K'K boat.

Bill reported seeing 2 turtles
 swimming in deeper water outside
 the fringing reef. Also 2 small sharks.
 Arrived back at K'K dock at ~3pm
 Diane reported previously that

1104 JUNE 87 THURSDAY

Chinese net fisherman Ching (Chong?)
[Bill worked for him many years ago]
Sometimes sets nets right across
the bullpen "guide".

Departed on Hawaiian Air at 7:35
Saw Dave Woodside & Steve Berry
at the airport.

Drove my car home from the airport.

Growth rates of immature green turtles tagged and recaptured at
Palaaau, Molokai, in June 1987. (Compiled by G. H. Balazs.)

Tag No.	Date first tagged and measured	Initial carapace length, cm		Carapace length at recovery, cm		Elapsed time in months	Growth rate	
		Curved	Straight	Curved	Straight		cm/year	inches/year
6698, 6699*	4/25/84	—	48.0	—	52.1	37 (1 yr, 1 mo)	1.33	0.52
6397, 6398	9/3/82	57.5	—	73.5	—	57 (4 yr, 9 mo)	3.37	1.33
6421, (9876)	9/3/82	63.0	—	68.5	—	57 (4 yr, 9 mo)	1.15	0.45
6541, 6542	10/19/82	46.0	—	56.5	—	55.5 (4 yr, 7.5 mo)	2.27	0.89

*Extensive tumors on the eyes and front flippers. Not present when originally tagged on 4/25/84, or when resighted on 5/19/85.

JUNE 87. THURSDAY

Date Tagged: Nov. 17, 1987Location Caught: Kawela, MolokaiMethod of Capture: Fisherman's Nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>86.5 (79.5)</u>	<u>86.0 (64.0)</u>	<u>9607</u>	<u>9608</u>
<u>2</u>	<u>87.0 (81.0)</u>	<u>78.0 (66.0)</u>	<u>9609</u>	<u>9610</u>

Remarks: 379 turtles tagged to date with 42 recoveries.

Straight measurements in parenthesis.

Both animals released at site of tagging.

Date Tagged: November 18, 1987

Location Caught: Kawela, Molokai

Method of Capture: Fisherman's Nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>44.5(43.0)</u>	<u>42.0(35.0)</u>	<u>9611</u>	<u>9612</u>
<u>2</u>	<u>47.0(45.0)</u>	<u>42.0(36.5)</u>	<u>9613</u>	<u>9614</u>

— Remarks: 381 turtles tagged to date with 42 recoveries.

Straight measurements in parenthesis.

Both turtles released at 'site of tagging.

Date Tagged: Jan. 23, 1988

Location Caught: Kawela, Molokai (Outside Kanoa Fishpond)

Method of Capture: Fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>63.0(59.0)</u>	<u>54.5(46.0)</u>	<u>9615</u>	<u>9616</u>

~~REXXXX~~ Released at same site. 382 turtles tagged to date with 42 recoveries.

Date Tagged: February 5, 1988

Location Caught: Kawela (right side of channel)

Method of Capture: Fishermen's nets

Number	Curved Length (cm)	Curved Width (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
1*	52.5 (-) 68.0 (63.0)	47.0 (-) 61.5 (49.0)	6640 6640	6641 6641
2	76.0 (70.0)	70.0 (54.5)	9617	9618
3	44.0 (41.5)	39.0 (33.5)	9619	9620
4	66.0 (61.5)	60.0 (48.5)	9621	9622

NOTE: Straight measurements in parenthesis.

* Turtle #1 was originally tagged on 7-7-83
2 miles east of this site.

All turtles released in same area today.

Remarks: 386 turtles tagged to date with 43 recoveries.

Date Tagged: February 20, 1988Location Caught: Kawela outside Kanoa FishpondMethod of Capture: Fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>62.5(59.5)</u>	<u>56.5(48.5)</u>	<u>9637</u>	<u>9638</u>

Date Tagged: February 23, 1988Location Caught: 1 miles west of Kaunakakai Wharf & released in KawelaMethod of Capture: Fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>66.0(62.0)</u>	<u>58.0(49.0)</u>	<u>9639</u>	<u>9640</u>
<u>2</u>	<u>51.5(48.0)</u>	<u>45.0(38.0)</u>	<u>9641</u>	<u>9642</u>

Date Tagged: February 24, 1988

Location Caught: 1 mile west of K'kai Wharf & released in Kawela

Method of Capture: Fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>45.0(43.0)</u>	<u>40.0(34.5)</u>	<u>9643</u>	<u>9644</u>

Remarks: 397 turtles tagged to date with 44 recoveries.

Date Tagged: March 8, 1988

Location Caught: Kawela, Molokai

Method of Capture: Incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>58.5(54.5)</u>	<u>52.5(42.5)</u>	<u>9649</u>	<u>9650</u>

Date Tagged: March 1, 1988

Location Caught: 1 mile west of K'kai Wharf & released at Kawela

Method of Capture: Incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>53.0(50.0)</u>	<u>45.5(39.0)</u>	<u>9645</u>	<u>9546</u>
<u>2</u>	<u>68.0(62.0)</u>	<u>62.0(51.5)</u>	<u>9647</u>	<u>9648</u>

Date Tagged: March 10, 1988

Location Caught: Kawela, Molokai

Method of Capture: Incidental Catch in Fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>42.0(40.0)</u>	<u>40.0(35.0)</u>	<u>9651</u>	<u>9652</u>
<u>2</u>	<u>43.0(41.5)</u>	<u>42.0(36.5)</u>	<u>9653</u>	<u>9654</u>

NOTE: Tags on turtle #2 were difficult to attach.

Remarks: Both turtles released in Kanoa Fishpond. 402 turtles tagged to date with 44 recoveries.

corrected 12/28/94
See page 64 book 5
where consecutive numbers start at 9155, etc.

George,

July 5 This/late month.

① Reported dead turtle at Kanooa
 Pailipipi. Some only flat, head,
 & flippers. Plastron = 14";

② Seaman reported that he pulled up
 turtle in 4/2/88 at Palau. Killed.
 Tag # 6730.

③ Skin off his front at 140' from
 a leather back turtle!! Big red
 eyes. Thought it was a dragon!!

④ What are you up to?

Bill.

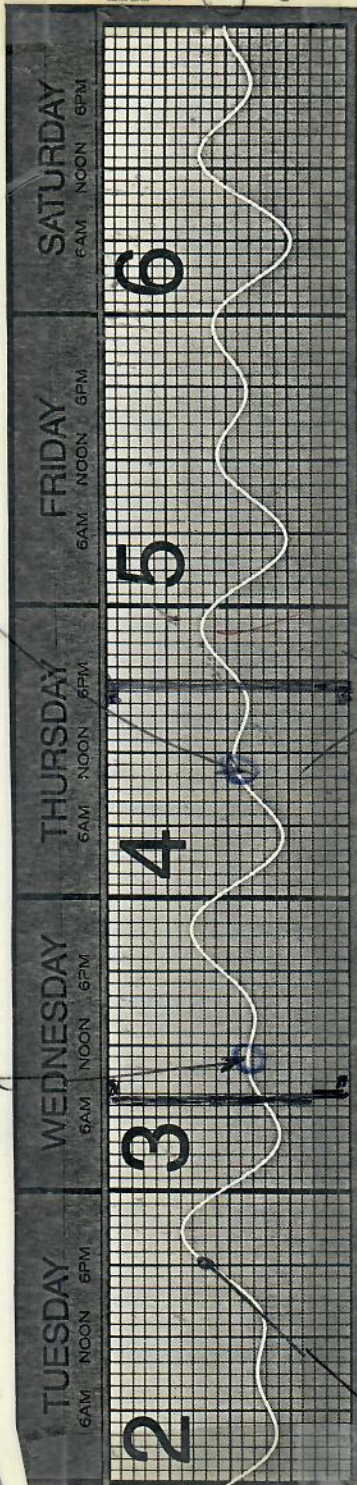
P. 75 Book 2
 6729, 6730
 C-62.5
 5-58.5
 Palau
 (outside Brown's)

Bull-pen
w/ MEDICALS

9 new
1 recovery

3-4 JUNE 87

14 NEW
3 RECOVERY



SYSTEM V

EQUIVALENT

- 0.04 inches
- 0.39 inches
- 0.94 inches
- 0.37 inches
- 2.81 feet
- 0.36 yards
- 0.62 miles
- 6.2 miles
- 155 sq. inches
- 196 sq. yards
- 9.60 sq. yards
- 2.47 acres
- 861 sq. miles
- 015 grains
- 154 grains
- 543 grains
- 035 ounces
- 353 ounces
- 527 ounces
- 046 pounds
- 0.46 pounds
- 1.1 tons

MOON PHASES

FIRST QUARTER JUN 4	FULL MOON JUN 11
LAST QUARTER JUN 18	NEW MOON JUN 25

For tide time at following places, add or subtract from Honolulu time.

PORTS	Hrs. Mins.	Ports	Hrs. Mins.
HANAIE BAY, KAUAI	-1 40	KALUNAKAKAI, MOLOKAI	-0 09
NAWILIWILI BAY, KAUAI	-0 52	KANILUUI MAUI	-1 48
PORT FALLEN, KAUAI	-0 52	KIHEI, MAALAE BAY, MAUI	-0 14
HALEIWA, OAHU	-1 36	HILO, HAWAII	-0 59
HANAUIMA BAY, OAHU	-0 52	HONOLULU, HAWAII	-0 24
KANEOHE BAY, OAHU	-1 38	MAHIKONA, HAWAII	-0 24
LAIE, OAHU	-1 38	KEALAKEKUA BAY, HAWAII	-0 16
WAIANAE, OAHU	-0 16		
WAIMANALO, OAHU	-1 15		

EQUIVALENTS

UNIT (1) U.S. EQUIVALENT

- 1 liter (cm³) = 0.061 cubic inches
- 1 liter (dm³) = 0.0353 cubic feet
- 1 m³ = 1.31 cubic yards
- 1 kiloliter (Dm³) = 13.10 cubic yards

CAPACITY, CUBIC

- (ml) = 0.06 cubic inches
- (cl) = 0.6 cubic inches
- (dl) = 6.1 cubic inches
- (l) = 61.02 cubic inches
- (Dl) = 0.35 cubic feet
- (h) = 3.53 cubic feet
- 1 kiloliter = 1.31 cubic yards

CAPACITY, DRY

- 1 deciliter (dl) = 0.18 pints
- 1 liter (l) = 0.908 quarts
- 1 decaliter (Dl) = 1.14 pecks
- 1 hectoliter (h) = 2.84 bushels

CAPACITY, LIQUID

- 1 milliliter = 0.27 fluidrams
- 1 centiliter = 0.338 fluidounces
- 1 deciliter = 0.21 pints
- 1 liter = 1.057 quarts
- 1 decaliter = 2.64 gallons

Set Net
by [unclear]

