

Molokai 2012 Green Sea Turtle Nesting Survey

Participants

Helen Coelho

Bill Feeter

Frances Feeter

Mike Grinnell

Joe Kitagawa

Lil Macmillan

Margaret Marcom

Phyllis Murakami-Ciu

Cyrus Ciu

Diane Pike

Kathy Tachibana

2012 Green Sea Turtle Nesting Survey Kawa'aloa Bay, Moloka'i

This survey was done by a group of volunteers on behalf of Nature Conservancy of Hawaii Molokai, under direction of George Balazs of the National Marine Fisheries Service in Honolulu. The 2012 Green Sea Turtle nesting survey was carried out from April 17 until November 5. Volunteers checked the beach in the morning 3 to 7 days a week, depending on expected activity. April 17 all location markers were refreshed. The procedures for identifying and recording the excavations are those that were used in 2011. Recording & identifying the last excavation of each nesting trip on shore was done by using landmarks and measurements, gps waypoints, and a stake marking the center of the body pit.

Of the 72 trips on shore, 36 of the trips produced excavations. Of these, 10 hatches were observed. These nests were dug up at least 3 days after the last hatchling had been observed to emerge.

The contents of these nests were as follows:

	Nest	Successful Hatches	Undeveloped	Dead	Live	Total Eggs Laid
Hatch 1	1	84	1			85
Hatch 2	3	90	1			91
Hatch 3	6	74	4		2	78
Hatch 4	12	97	3	2		102
Hatch 5	23	71	5	11	6	86
Hatch 6	24	75	21	1		97
Hatch 7	28	93	5	3	2	101
Hatch 8	29	90	1			91
Hatch 9	33	75	2		1	77
<u>Hatch 10</u>	<u>36</u>	<u>72</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>75</u>
		821	45	18	12	883

The 12 live hatchlings found in Nests 6, 23, 28, 33, and 36 were released to the ocean.

The 45 undeveloped eggs and the 17 dead hatchlings recovered from the nests, were frozen and sent to George Balazs November 27.

Of the 36 false crawls reported 19 crawled high up onto the beach and 18 stayed below the high tide line, 17 of those were found at the western end of the beach.

Nesting activity was not concentrated in any one area of the beach.

Monk Seal activity was observed on 4 occasions - May 7, May 10, July 9 and July 15.

Green Sea Turtle nesting activity was also found on the Beaches to the West of Kawa'aloa in two locations.

East of Kalani Point at the base of the trail down from the archeological site

West of Kalani Point approximately half way along the beach to the cliffs at the West end of the Preserve.

These areas were not monitored on a regular schedule.

Of the 9 trips reported, 6 excavations were located & recorded. Of these, 3 hatches were observed. There were 2 hatches found from unrecorded nests for a total of 5 hatches, 4 of these nests were dug and the contents were as follows:

	Nest	Successful Hatches	Undeveloped	Dead	Live	Total Eggs Laid
Hatch 1	628	78	10	2	1	90
Hatch 2		67	27			94
Hatch 3				1		
Hatch 4	816	80	1			81
Hatch 5	831	70	2			72
		295	40	3	1	337

Hatch 3 was not dug up. A dead hatchling was found beside a crab hole, many crab & hatchling tracks, but the exit area from the nest was not found.

The 1 live hatchling found in Nest 628 was released to the ocean.

The 40 undeveloped eggs and the 3 dead hatchlings, were frozen and given to George Balazs

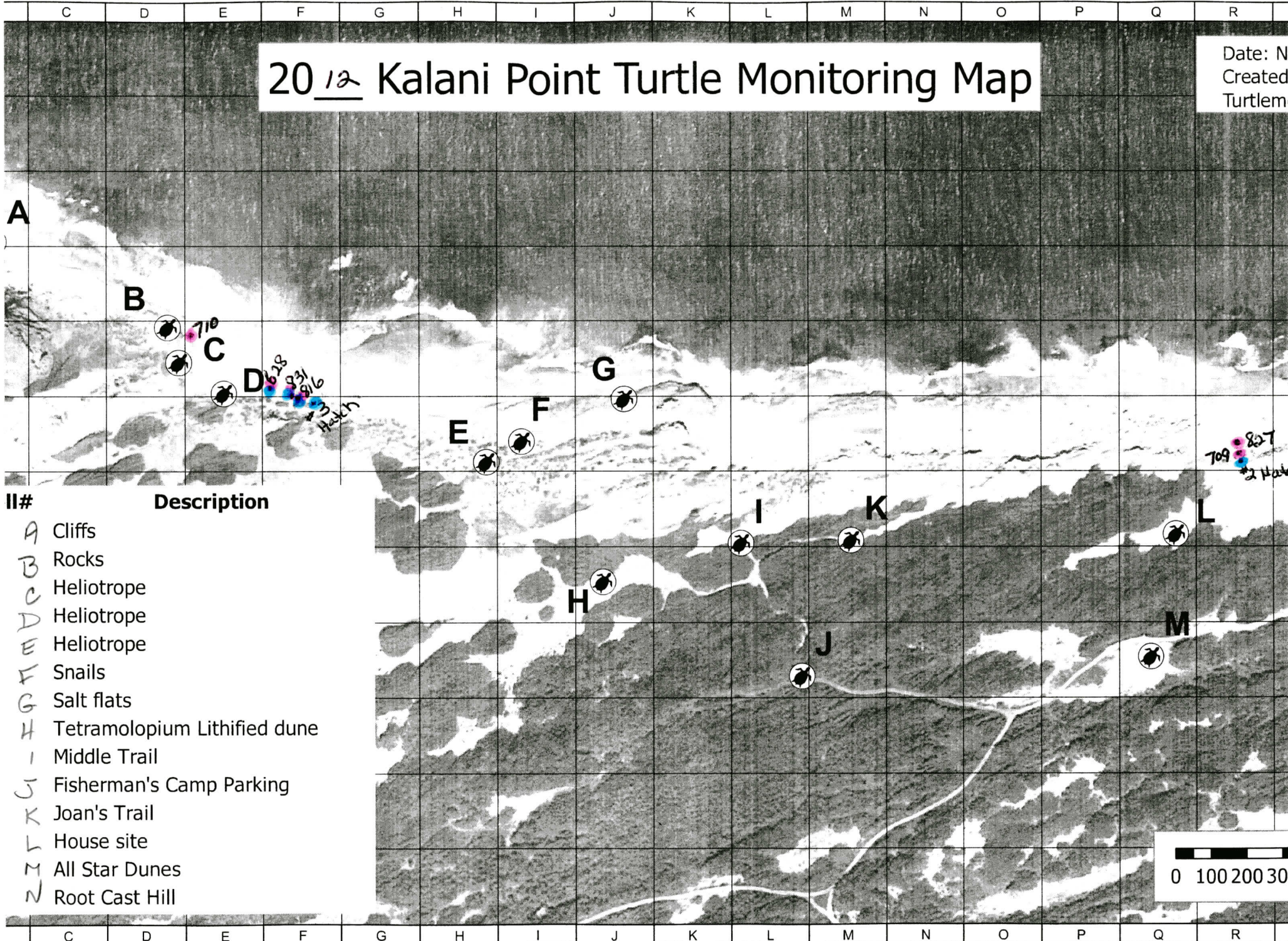
Submitted by:
Lil Macmillan

20₁₂ Kalani Point Turtle Monitoring Map

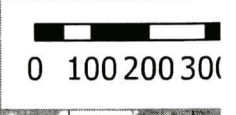
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EXCAVATION •

HATCH •



II#	Description
A	Cliffs
B	Rocks
C	Heliotrope
D	Heliotrope
E	Heliotrope
F	Snails
G	Salt flats
H	Tetramolopium Lithified dune
I	Middle Trail
J	Fisherman's Camp Parking
K	Joan's Trail
L	House site
M	All Star Dunes
N	Root Cast Hill



Preserve Beaches East & West of Kalani Point

Date	Trip #	Map Location	# of Pits	Est Hatch (60 days)	Hatch Date	Days Incubated	Hatch #	<u>Dig Date</u>	<u>Dig Count</u>	<u>spoiled/ undeveloped</u>	<u>Dead</u>	<u>Live</u>	<u>Successful Hatches</u>
6/13/12		West K		12-Aug									
6/16/12		West K		15-Aug									
6/28/12	628	West K	1	27-Aug	28-Aug	61	1	3-Sep	90	10	2	1	78
7/9/12	709	East K	1	7-Sep									
7/11/12	710	West K	1	8-Sep									
		East K			22-Sep		2	4-Oct	94	27			67
		West K			24-Sep		3				1		
8/16/12	816	West K	4	15-Oct	15-Oct	60	4	5-Nov	81	1			80
8/27/12	827	East K	3	26-Oct									
8/31/12	831	West K	3	30-Oct	5-Nov	66	5	15-Nov	72	2			70
									337	40	3	1	295

Notes

unable to record exact location of excavations reported June 13 & 16

Hatch 2 from unrecorded nest

Hatch 3 from unrecorded nest, found dead hatchling beside crab hole. Many crab & hatchling tracks, unable to find exit area of nest

Excavation

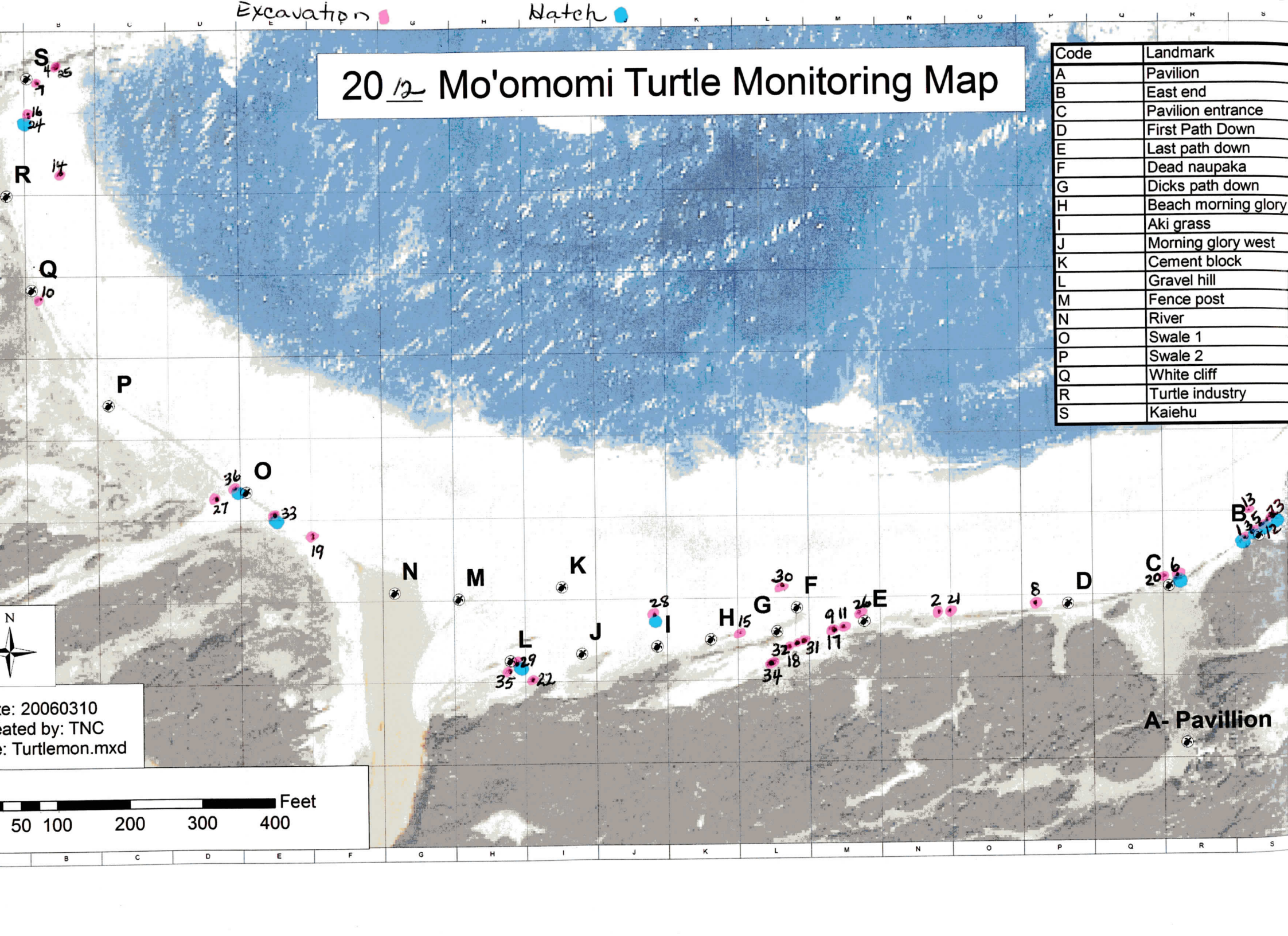
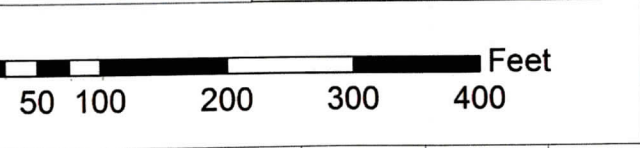
Natch

20₁₂ Mo'omomi Turtle Monitoring Map

Code	Landmark
A	Pavilion
B	East end
C	Pavilion entrance
D	First Path Down
E	Last path down
F	Dead naupaka
G	Dicks path down
H	Beach morning glory
I	Aki grass
J	Morning glory west
K	Cement block
L	Gravel hill
M	Fence post
N	River
O	Swale 1
P	Swale 2
Q	White cliff
R	Turtle industry
S	Kaiehu



File: 20060310
 Created by: TNC
 Project: Turtlemon.mxd



Date	Trip #	Map Location	# of Pits	Est Hatch (60 days)	Hatch Date	Days Incubated	Hatch #	Dig Date	Dig Count	spoiled/ undeveloped	Dead	Live	Successful Hatches
4/16/12	1	B	2	10-Jun	?	14-Jun	1	6/20	85	1			84
4/16/12	2	D/E	1	10-Jun	?								
4/26/12	3	B	1	25-Jun		28-Jun	63	7/27	91	1			90
5/2/12	4	S	2	1-Jul									
5/14/12	5	B	1	13-Jul									
5/15/12	6	C	1	14-Jul		15-Jul	61	7/27	78	4		2	74
5/29/12	7	S	2	28-Jul									
5/30/12	8	D	1	29-Jul									
5/30/12	9	E	2	29-Jul									
6/1/12	10	Q	1	31-Jul									
6/2/12	11	E	2	1-Aug									
6/3/12	12	B	1	2-Aug		30-Jul	57	8/29	102	3	2		97
6/15/12	13	B	2	14-Aug									
6/15/12	14	R	2	14-Aug									
6/16/12	15	G/H	2	15-Aug									
6/17/12	16	S	1	16-Aug									
6/20/12	17	E	1	16-Aug									
6/20/12	18	F	1	19-Aug									
6/20/12	19	N/O	2	19-Aug									
6/21/12	20	C	3	20-Aug									
6/21/12	21	D/E	2	20-Aug									
6/21/12	22	L	2	20-Aug									
6/22/12	23	B	1	21-Aug		14-Aug	53	8/29	86	5	10	6	71
6/24/12	24	S	1	22-Aug		27-Aug	65	9/3	97	21	1		75
7/3/12	25	S	3	1-Sep									
7/4/12	26	E	4	2-Sep									
7/5/12	27	O	2	2-Sep									
7/10/12	28	I	2	8-Sep		13-Sep	65	9/23	101	5	3	2	93
7/20/12	29	L	2	18-Sep		27-Sep	69	10/4	91	1			90
7/26/12	30	F	2	24-Sep									
7/27/12	31	F	1	25-Sep									
7/27/12	32	F	4	25-Sep									
8/5/12	33	O	3	4-Oct		7-Oct	63	10/14	77	2		1	75
8/21/12	34	G/H	3	20-Oct									
8/22/12	35	L	2	21-Oct									
8/24/12	36	O	1	23-Oct		29-Oct	66	11/5	75	2	1	1	72
									883	45	17	12	821