

4-19 FEBRUARY 1981

G. H. BALAZS

ALEIPATA, WESTERN SAMOA (808) 395-6409

90.5  
CEL 5052 > FEB 10, 1981 (p. 23)  
5053

NESTING Ei  
NAMUA

BALAZS  
2 of 2

78.5  
CEL 5054 > FEB 14, 1981 (p. 73)  
5055  
NESTING Ei  
NAMUA

5056 > FEB 16, 1981 (p. 86)  
42 CEL JUVENILE - BOUGHT AT APIA MARKET  
TAGGED AND RELEASED.

CLIPPING SCUTES p. 41

SIMI TEO' PENAI'A - SATITOA



Island no.	Island DATE	NO. COPIES	DATE	NO. COPIES	Island no.
14	Moulou 2/11/33	140	2/11/33	140	14
12	Moulou 2/11/33	107	2/11/33	107	12
16	Moulou 2/11/33	133	2/11/33	133	16
17	" 2/11/33	173	2/11/33	173	17
18	" 2/11/33	140	2/11/33	140	18
19	" 2/11/33	122	2/11/33	122	19
20	" 2/11/33	142	2/11/33	142	20
21	" 2/11/33	113	2/11/33	113	21
22	Moulou 2/11/33	101	2/11/33	101	22
23	Moulou 2/11/33	181	2/11/33	181	23
24	Moulou 2/11/33	177	2/11/33	177	24
25	" 2/11/33	134	2/11/33	134	25
26	" 2/11/33	153	2/11/33	153	26
27	" 2/11/33	187	2/11/33	187	27
28	" 2/11/33	173	2/11/33	173	28
29	" 2/11/33	111	2/11/33	111	29
30	" 2/11/33	121	2/11/33	121	30
31	" 2/11/33	119	2/11/33	119	31
32	Moulou 2/11/33	123	2/11/33	123	32
33	" 2/11/33	168	2/11/33	168	33
34	" 2/11/33	162	2/11/33	162	34
35	" 2/11/33	171	2/11/33	171	35
36	Moulou 2/11/33	144	2/11/33	144	36
37	Moulou 2/11/33	167	2/11/33	167	37
38	" 2/11/33	122	2/11/33	122	38
39	Moulou 2/11/33	122	2/11/33	122	39
40	" 2/11/33	122	2/11/33	122	40
41	" 2/11/33	122	2/11/33	122	41
42	" 2/11/33	122	2/11/33	122	42
43	" 2/11/33	181	2/11/33	181	43



Monthly Report 1979

TRANSCAUBERT 2/81 By G. BALAZS  
ALEPATA, W. SAMBA

	1979												
Months	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	1979 TOTALS
NESTS	5	8	4	5	3	4	-	5	3	-	-	6	43
EGGS	201	605	173	200	187	163	-	310	175	237	-	632	2883
Turtle Released	280	103	-	-	296	-	-	103	114	290	-	-	1186

Eggs Buried - Brought into the Nursery = 2883

1978													
NESTS	7	9	7	8	6	4	*NIL	6	5	2	1	1	
EGGS	951	1456	1038	1335	992	651	-	1213	772	370	160	156	
Turtle Released	1086	410	335	888	458	73	-	382	22	-			

\* None was found because engine broke down

Number of (female turtles) as from January to October, - 56  
 Eggs actually brought into the nursery - 8,778  
 Turtle released during the period - 2,197 (5,164)  
 28" long is about 8 years old (18 found to be 19" and 1970 1978?)

W/ name



1978

## "Turtles lay eggs on Beach"

written by Toga 67

January 1978	EGGS	April	EGGS	cont. August	EGGS
1	90	6	225	21	225
13	90	6	215	11	225
13	160	10	150	14	215
13	140	17	180	<u>Total - 1,213</u>	
13	158	17	130	<u>September</u>	
29	146	19	158	16	181
29	167	24	131	17	130
<u>Total -</u>	<u>951</u>	4	146	19	153
<u>February</u>		<u>Total - 1,335</u>		25	158
1	167	<u>May</u>		25	150
2	150	9	157	<u>Total - 772</u>	
6	180	9	168	<u>October</u>	
6	158	2	159	24	145
9	150	2	144	24	225
9	131	25	197	<u>Total - 370</u>	
18	156	25	167	8,778 eggs altogether	
18	197	<u>Total - 9,92</u>			
18	167	<u>June</u>			
<u>Total -</u>	<u>1,456</u>	9	195		
<u>March</u>		18	106		
6	144	9	190		
6	159	26	160		
6	106	<u>Total - 651</u>			
27	168	<u>July - nil</u>			
27	157	<u>August</u>			
14	158	15	115		
14	146	15	163		
<u>Total -</u>	<u>1,038</u>	21	170		



(8 or 9 years)

13 FEB 81 Between ~3:15 PM and 4:45 PM Viliamu, Sepe

FRIDAY

~~XXXXXXXXXXXX~~  
~~XXXXXXXXXXXX~~  
~~XXXXXXXXXXXX~~

and I motored out pass to view Nuulua - reasonably calm seas, but moderate swell rolling in. Heavy overcast. In pass and for some distance outside, I noted drift lines of Syringodium - apparently carried by ingoing and outgoing tides. - Could this serve as a "trail" for greens? We motored past the beach side of Nuutele and around two rock islets and offshore of Nuulua beach. This beach looks quite long - certainly longer than on other islets. Viliamu said that Alan and he had planted the 10-20 estimated coconut trees now present. Why wasn't this island ever planted for copra, like others? Viliamu pointed out the site where Alea was anchored when Alan was attacked; - This is between rock and point - currents are very strong - waves surge in - water may be deeper than 30' at this site. Proceeded to point where I took a picture; and continued very close to rock cliffs. Noted many Boobies <sup>mostly Browns</sup> along this coast - apparently inaccessible by land. Baka trees present. Certain that there were washed boobies on the ground - probably fledglings. Saw small gray birds fly out of cliff (Common & Black Noddy Terns)

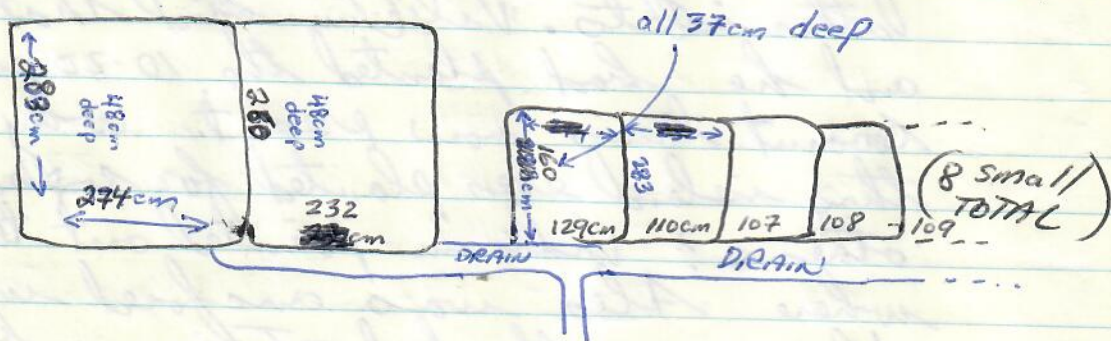


13 FEB 81  
FRIDAY faces. - identity unknown (PEA PEA - Samoan name)  
People says "no legs" - "must be very small."  
Also saw Ruddy Turnstones. Previously saw  
Sanderlings(?) - like Enewetak photo.  
Noted sea-cave through westerly(?) end of island.  
Frigates appear to be small species than in  
Hawaii. Oars were taken on this  
trip (but no oarlocks in boat). Facility does  
not have an anchor or suitable line.

13 FEB 81  
FRIDAY

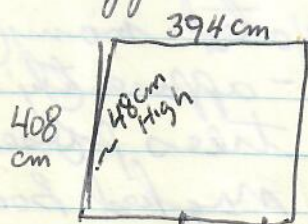
Upon return to hatchery, I measured concrete  
tanks where turtles are held and raised:  
inside dimensions:

OVERNIGHT  
NO. 3 -  
NAMUYA



Turtle in 2 tanks with water ~ 8cm deep.  
Two of tanks (small) are used for laundry.

PEN where eggs are hatched:



low "gate" where I saw dog  
whisker jump over.



13 FEB 81 - 3:30 PM

FRIDAY

While at the village, I was told by the part New Zealand Dunes that last year he saw a turtle returning <sup>while</sup> to the shore from the black sand beach at SohySoh (near new bridge). This particular sight doesn't not have houses. Storekeeper's wife wanted to know, with exasperation, why he didn't stop and grab it.

OVERNIGHT

NO. 3 -

NAMUA

Before dark we departed for Namua - House helper (Mormon) Tele motored us over. Viliamu showed me the site where he got eggs on Thursday when William and I were in town. One was our turtle 5052, 5053 (190 eggs); - the other was at the far end of the beach, up under the vegetation which he had hacked away (189 eggs) - This may or may not have been newly laid since William and I were on the island - nevertheless I did not have it in my earlier "nest" count.

The tide was receding when we arrived. We saw a turtle offshore, but on the rock reef - Viliamu saw her head - I saw her carapace as a wave pulled out. She was either exploring area, or starting to go ashore while the tide was high enough.



13 FEB 81 We established our campsite in vegetation,  
FRIDAY about midway down the beach, right against  
the rock (cliff face). A bat was seen  
during twilight.

Ate (Pluvian) canned fish for dinner, with yellow  
baranas, 2nd variety of bro (smooth), <sup>Variety</sup> bigints  
and orange soft drink.

Viliamu seemed very alert and nervous  
about a turtle coming ashore (hunter instinct?).  
When smoking, he went to a secluded  
site so turtle "couldn't smell the ~~the~~ smoke".  
Lots of rain during the night PM - I  
checked the beach ~ 10:30 PM - and again

14 FEB 81 at 11:30 PM. A ~ 2 AM Viliamu woke me  
SATURDAY up, reporting he had found 2 turtles.

Sites were at beginning segment of beach -  
A single turtle had dug two false areas  
and was excavating the egg chamber in  
a third area. Appeared small, and was  
under many vines and other vegetation. Excavations  
continued until approximately 2:35-2:40 AM -  
egg deposition then occurred - probably lasted  
only 10 minutes. Many photos taken on  
remaining of Roll 3 and beginning of Roll 4.

Covering of nest lasted until ~ 3:10 AM.  
"Pully ahead" and throwing sand with front  
flipper was far longer with this turtle  
than 5052, 5053. Water washed on my  
legs while taking photos - nest (like  
most others) was just a short distance

14 FEB 8  
SATURDAY

Le

\* ||



14 FEB 81 above high tide line.  
SATURDAY

CURVED MEASUREMENTS: 78.5cm x 67.5cm

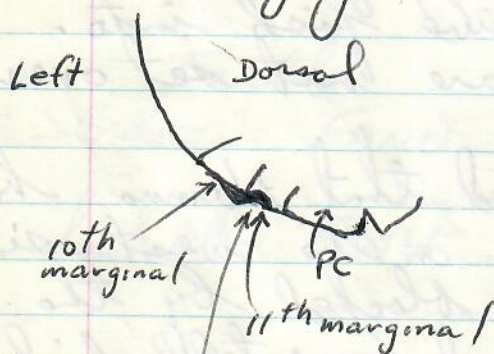
TRACKS IN SAND: 27" wide

Turtle was turtle over-thrashed flippers, but did not try to bite. Plastron was nearly all orangish-yellow, with a few black pigmented spots around the periphery.

Tags - 5054CFL and 5055PFL applied.

Left side of carapace definitely had marginal plate that was more "indented" than right - particularly noticeable when viewed from ventral surface.

Postcentrals seems to be very long, but not "hanging out" posteriorly.



\* ||

Can't say for certain, but certainly seems very likely. greater indentation than right side - Did not look like healed injury at large size. But rather occurred during growth.

Pelvis - hind flipper areas of turtle seemed "sunken" from the ventral surface - Vibiana thought this might be due to eggs having just been laid.



14 FEB 81 Returned to tenford slept until about  
 SATURDAY 7:45 AM. Vikiana plug up the  
 eggs (142 with 2 of these broken by stick)  
 after "probing" with some difficulty.  
 Photos. Sand sample collected - in Apple shells.  
 Departed about 9:15 AM. His helpers  
 arrived to chop drift wood log for  
 firewood. I was informed that Buka  
 is not used here for ~~drift~~ firewood -  
 but in the Tokelau canoes are made.

A school of 10-20 large porpoise were  
 seen a short distance outside the  
 beach. Two canoes were in the  
 area - probably setting gill nets which  
 they then try to drive fish into.  
 Apparently gill nets are not set overnight.

While returning, I noted that Namua has  
 a white sand beach on the west side -  
 but part of this is blocked by the  
 wall of a fish pond (reportedly built by  
 Ellice Islander (s?) of district).

"VAOVAO" is Syringodium grass - thick  
 growth just after dropoff of tidal flat.  
 Saw piece of Turbicaria on Namua east beach -  
 Also noted many small, white barnacles  
 growing on intertidal rocks.



14 FEB 81 Alan reportedly brought <sup>7</sup> ironwood trees  
Saturday to hatchery - 13 are now present.

Names of seabirds, as told to me by  
Viliamu:

Sooty Tern - TALALIKI (Tokelau & Ellice)

Noddy Tern - LAKIA (Tokelau)

LAIA (Samoa)

Gray-backed Tern - TALA

White Tern - GOGOSINA (Samoa)

FKIAKI (Tokelau)

Brown Boobie - FUAO (Samoa)

(Same for Red footed)

SAKEA (Tokelau)

FRIGATE - ATAFA (Samoa)

KATAFA (Tokelau)

Turtle

Green - FONU TUA KULA (Tokelau)

hawksbill - FONU "

Samoa -

FONU or FONU LAUMA  
(for all sea turtles)



14 FEB 81  
SATURDAYViliamu's  
WIFE

When we arrived back at the butcher's, lots of discussion ensued about our turtle "encounter". Viliamu said that Malu had told him "why didn't he take the turtle, so they could take it to the market to get money". Everyone talked a lot in native tongue. Later, Viliamu said that Malu was joking. I took the opportunity to explain to her that the Mama turtle had come ashore to have her babies and that she was very helpless at this time while on land - her element is the sea. If she wants turtles, go after the male, in the sea.

Need  
Native  
Tongue  
Booklet  
aimed at  
sea turtle  
conservation

I also mentioned to Viliamu that he is a government employee, with government equipment - and it would not be right for him to take turtles on the island. Contrary to his job (?)

"Pronounced  
TONGAN"

From Ellice Is. at about 5-6 yrs of age  
Toga Tekia (<sup>was</sup> ~30 years), Malu's  $\frac{1}{2}$  sister (?) arrived from Apia - Sepe's <sup>adoptive</sup> mother by Samson <sup>Bull!</sup> ~~man~~ <sup>15</sup>  
~~(not approved for marriage by parents)~~ - Tosis's mother (23 yrs old) by New Zealand Peace Corps man. Worked for a year as nurse at Elifata hospital - now works at food processing in Apia - makes jams.

14 FEB 81  
SATURDAY



14 FEB 81

SATURDAY

In the afternoon ~ 3:30 PM we motored out to FANATAPU - sand beach is load with rock - nevertheless, Viliamu pointed out several sites where a turtle had tried (unsuccessfully) to nest.

This was at least 2-3 weeks ago. We climbed up cement stairway to the top of the island where a stainless steel light exists (12v car battery inside) - This is not currently operating. An older, abandoned skeleton tower stands nearby. Photos taken of east end of island, with very dark clouds over Nuvua and Nuvutele.

Returned about 45 minutes later and motored along <sup>distinct</sup> seagrass drift line - Viliamu and I thought that we saw a turtle dive.

Following return, I took a walk to the eastern pier - noted rusty rolls of chicken wire left over from TEO's fish trap - also noted coconut posts in the water.

Toga gave "highland" canned milk to ITO, indicated that Sarah was too lazy to boil water to make this or Glaxo. She should get a job in town. Also bought 50 lbs of LAUTOKA Fijian sugar for the family.



Viliamu's pay -

1978

Gross 766.54 TALA Deductions 25.96  
+ House etc.

TOGA. TEKU.

P.O. Box 1181

Aleipata

Apia

W. SAMOA.

21602

[continued on page 83]

Food processing - 22968 -

cold storage 24106

Notes made 2/15/81 Sunday from bound data book:

(starting back of book working forward) -

Last page - lists of eggs taken from Nuntele,  
Naulua and Namua portions of 1972 & 1973:  
Columns marked "paid" (most from Naulua)

DATE

3/31/77

3/31/77

3/31/77

"1972 Turtles Released" - 3,200 (Viliamu)

"1973 eggs collected" - 4,656 "

2/76

"1973 Turtles released" - 3,257 "

"1974 eggs collected" - 7,992

" also total  
2,843 which is  
correct?

"Turtle Emerged 1974" - 5,447 "

"Turtle Released 1974" - 3,491 "



"1975 total eggs found" - 5,159

"1975 total eggs hatched" - 2,460

"1975 Turtles Released" - 2,380

"1976 Turtles lay eggs" - 3,709 <sup>also, total</sup> ~~given as 2,378~~

"1976 Turtles Hatched on the year" - 2,378  
(continued on next page)

(also copied from bound data book)

TURTLES TAGGED					
DATE	SEX	LENGTH OF CARAPACE - NECK TO TAIL	LOCATION OF CAPTURE	ADDITIONAL COMMENTS	NO.
3/31/77	Female	16 in.	-	RAISED IN CAPTIVITY FROM EGGS. NO RECORD OF birthdate found - were 4, one escaped early	103
3/31/77	M	15 in.	-		376
3/31/77	M	15 1/2 in.	-		325
2/76	F	~34-36"	G. FELDMAN NOULUA		3

Number tagged, or TAG NUMBER?



# 80 "Turtle Hatchery on the year 1976"

## NUULUA

DATE NO. EGGS

Clutch No.

designated for numbers released by date; but not for eggs collected.

## NUUTELE

DATE NO. EGGS

## NAMUA

DATE NO. EGGS

1/1/1976	156
"	195
"	184
"	156
2/27	180
"	180
3/1	180
3/6	184
3/6	154
3/9	85
3/16	197
3/16	184
3/30	132
4/4	172
4/6	140
4/19	140
4/30	134
5/13	175
6/8	151
6/8	172
6/12	134
6/24	115
10/5	184
10/20	180
11/17	78
11/20	158

2/22/1976	157
2/24	159
2/24	102
10/5	175

2/6	156
2/6	195
2/23	160
6/11	140
10/10	134



"EGGS Found During 1977"

<u>DATE</u>	<u>CLUTCH NO.</u>	<u>NO. EGGS</u>	<u>ISLAND</u>
1/1/1977	1	140	NUULUA
1/10	2	105	"
1/17	3	116	"
1/24	4	136	"
1/24	5	187	"
1/26	6	105	?
1/26	7	109	?
1/26	8	136	?
2/10	9	77	?
2/10	10	173	?
2/18	11	175	?
2/18	12	136	?
4/4	13	114	NUULUA
4/4	14	155	"
4/27	15	124	"
4/27	16	155	"
5/7	17	139	"
6/4	18	161	"
6/7	19	123	"
6/22	20	164	"
9/16	21	181	"
9/19	22	153	"
10/24	23	173	"
10/24	24	103	"
11/2	25	103	"
11/2	26	180	"



FEBRUARY  
15, SUNDAY  
1981

UP just after sunrise and walked to wharf to look for greens on flat and by pass. When to <sup>on the</sup> <sup>Greenery</sup> <sup>Society</sup> church in the morning. Transcribed data from hatchery records nearly all day. Photographed ~~all~~ juvenile hawksbills.

OVERNIGHT  
NO. 4 -  
NAMUA

At about 6:30 Viliamu had Fred and 2 other kids moter' me over to Namua - set up tent at central site again - cool, pleasant night without any rain. Almost dark at 7 PM, - Tide receding - up peak high at about 4:30 AM. I checked the beach at ~ 10:30 PM, 3 AM, 4 AM and 5:30 AM, and before departure at about 8:30 AM. No tracks or any other signs of nesting noted. Also, no signs of new nesting since Viliamu and were here last. Noted a few ghost crab holes in beach at low tide. At 9 AM I walked to the west beach of Namua - noted fishponds and overgrown foundations ("Filita") of house - well. Thick Halophila growth close to shore. Saw large Tupa (Pigs eat these?) Viliamu was on Nauru vessel for one year during 1976, and for one month during 1977. Also, in Sept of 1978 he took Fred on the Nauru boat to Fuvafuti for the independence celebration. \$15 round trip. Lots of



Send  
ALOE  
PLANT:

SIAPILI TAGO.  
YARAU  
LOTOFAGA.  
WESTERN SAMOA.

School teacher at  
Eteipate Junior High No. 2 -  
worked at Canton ~ 1971

16 FEB  
Monday

16 FEB 81

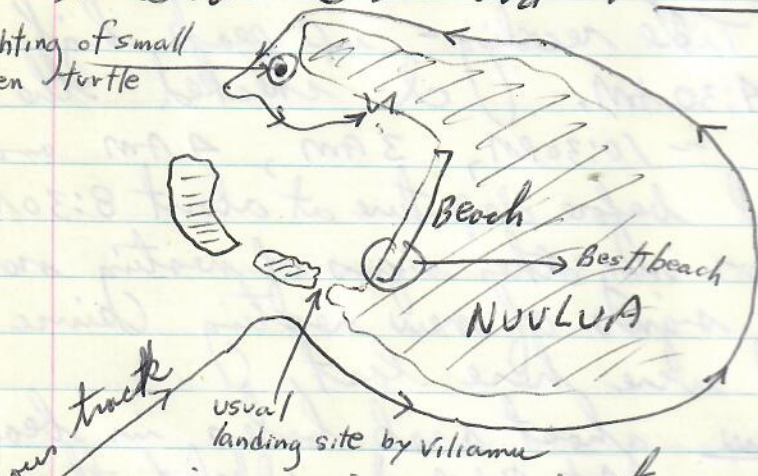
Monday

Ellice Islands people live in Samoa

Former head school master  
named "ENI" met on bus ride  
to Faleolo airport on 2/17/81 -  
W. G. Gideon Society  
members

At about 11:30 AM we motored out  
the channel to Nuulua - wind moderate  
out of the west. Upon arrival we found  
fairly heavy swells breaking ~~in~~ nearly all  
around the island. Much rougher than our

sighting of small  
green turtle



previous circumnavigation. Site where  
Viliamu lands was far too rough, with  
swells washing up on rocky ledges.  
Motored all the way around the island and  
into bay. Saw a small green turtle (~13")  
at the surface - it dove as we approached.  
Sighted an area on the rock ledge where  
swell wrapped around the point and broke into



16 FEB 81 white water, Vilivamu and Isuam to point and  
 Monday scribbled ashore. Walked a long ledge to  
 white sand beach, backed by dense jungle  
 vegetation. Saw a gray pigeon fly out of a bush.  
 Noted coarse beachrock protruding beach  
 that would be considerably exposed at low tide.  
 Tide now coming up slightly. Few if any  
 ghost crabs or holes noted. Walked all the  
 way along beach counting nesting sites - total  
21. 2-3 of these were one to two days  
 old and located at the far end (west) of beach.  
 More sites seemed to be in this segment.  
 Sand sample taken. <sup>50%</sup> Turtle nests located back  
 under vegetation - nauyaka, etc. - could have been  
 missed. Walked back along beach, took photos,  
 and departed shortly thereafter. - bigger swell present.  
 Vilivamu lost his dive knife. Motored  
 back to kitchen against choppy waves. Fale  
 and Toqa did not see any sharks or turtles  
 while motoring, <sup>and</sup> waiting for us. Noted Alea  
 returning from sea - skirted close to the island.

In the afternoon I walked to the telephone at  
 Sarbomanu village to call about plane  
 reservations. Stopped at <sup>Sima</sup> TED's house (just  
 east of the wharf) about 5 PM to  
 photograph green turtle carapace. Photo  
 with one of his sons, who confirmed that  
 his father catches lots of green turtles.  
 CURVED LENGTH - 66.4 cm



16 FEB 81

MONDAY

During the evening the family cooked a pig in the stone oven and had 13 guests over in my honor. I was given 3 woven mats to take home.

Transcribed more data after the feast. Didn't go to bed until shortly after midnight.

17 FEB 81

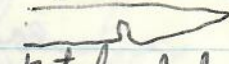
TUESDAY

Bus ride to town.

Arrived in Apia at about 7:15 AM.

Took a cab from the market and checked in at the Tubitaha Hotel (gov. owned) \$36 per night

Cleaned up and ate breakfast at ~ 9:30 AM. Went to market where

I found a juvenile hawkbill for sale (#4) - no notch present - but  in right front flipper; and left hind totally missing <sup>but</sup> headed.

Purchased and carried it in a palm frond basket to my hotel room.

Went to Fisheries Dept., but Philipp was

TEL. 20369

Curved - 42cm x 37.5cm  
RELEASED TAG 5056 LFL  
17 FEB ~ 11:30 AM  
TUESDAY

17 FEB  
TUESDAY

★



17 FEB 81 on a boat setting an aggregation buoy.  
 TUESDAY Talked to Dan Poffe, who expressed reservations about the hatchery project. Is it doing any good? Are these turtles of any economic value? Is the project only producing information of "academic" value? Should someone else be funding/running it? Hatch rate is reduced when the eggs are replanted? "Good deal" for Williams, when he was on the Russian research ship (twice?) off Aleipata, people came out to trade - one item was turtle eggs. Sargibotele was among them. Use the money to station & guard on the island? Poffe also mentioned a dispute in court about ownership of the islands. Parliament passed laws protecting a species of rare birds. Poffe didn't realize that turtles and eggs were not protected by laws. He and Alfonso agree that they had never heard of the large number (17) of turtles in the market in a two-day period, as reported in Travis' SPC paper.

Travis lives at Tuaraimato village, about 5 miles from Apia, Tel. 20516.

\* Consider - inexpensive conservation comic book for Pacific W. Samoa turtles - check SPC (in Samoan - other languages)



17 FEB 81

TUESDAY "A Prayer for Mankind" (inspired by Apia Catholic Church) - Peace to those who have anguish; Love to those who have hate, and Joy to those who have sorrow.  
by GNB

Talked again to woman at Samoan Handicraft who directed me to "Sua" - in the area of Gov. wharfs. on the way, I stopped at US Peace Corps office - I talked to two Samoan women employees who gave me the Director's name:

MS. CAROLYN GULLATT  
Box 880  
MATAUTU-TAI, APIA

A check in old records produced the following:

Gene Feldman  
1404 NE 42nd St, #3422  
Seattle, WA 98105

Bob Davidson  
28 Quarry Ridge Road  
Monroe, CT 06468

about 50-60 US PCV's in Samoa.


They could use more.

Also Peace Corps people from Australia and Japan, well accepted.



17 FEB

Located "Sua" - <sup>full name:</sup> Laava lefolata  
P.O. Box 4003

As written by him: 

Sign in area said "MATAUTU"  
near "Palolo" Deep Water Marine Reserve  
Mask and fins being sold (or rented?) here.  
junk area - almost a joke!

Sua was filing and scraping with knife when I  
arrived - making rings from scutes 4.5mm  
thick. Reportedly paid \$50, but only got 11  
instead of the 12. Not sold by weight.  
Bought from Burns Philip. He has been making  
jewelry for 20 years - learned it from his  
father. Entire investment in tools appears to be  
less than \$20. - Hot pointed rebar used to  
burn hole in plate (for ring). The plates he  
was working with were very large - and had  
varnish on them. - from a carapace that was  
varnished? Reportedly he can use up one  
coastal scute a day. He doesn't get marginals -  
even from big ones! Light, clear color layer  
present on the surface that would have been  
against the bone. Doesn't work with  
Coconut Shell - difficult to "work". However,  
he does use a type of shell from New  
Zealand that looks like a balone. He  
also inlays silver on tortoise shell.

Laava lefolata  
P.O. Box 4003

P.O. Box 4003



17 FEB 81 TUESDAY The thin shells (from small turtles) he obtains from whole turtles at the market - eats the meat and makes soup. Thin plates are used for ear rings. Small thick pieces are used for necklaces. He laminates <sup>(using hot water)</sup> when making a pendant. He knows of about 5 other people making tortoise shell jewelry. He doesn't sell to anywhere outside of Western Samoa.

17 FEB 1981 TUESDAY

At Burn Phipps, I talked to <sup>(part Chinese)</sup> Flora Ginnem, sales girl, who took me to supervisor MARIE ULBERG of the "Excessory" Dept - (Handicrafts and Gifts). She claims she gives shell to Sua and pays him to make jewelry. Stock upstairs includes thin and thick plates - finished bracelets (some all "honey" color), rings, etc. <sup>Does not get belly plates</sup>

signs an arrangement with some vendors that sit in front of store

I counted at least 34 groove lines along the edge of a thick scute. She claims that she buys from many people: Savaii, small island in-between, and Eleipata. One of the persons she buys from is Chief Sagapolu of Salomani village (near hospital). The best month for buying is October - just before Christmas. She said that fishing is good at that time. Flora will ask Old Man that sells

check ULUTOGI village location



17 FEB  
1981  
TUESDAY

in front of the store if he knows of sellers  
of raw shells.

"TEPATASI"

Ate dinner at Tusitala-

Highlights of 9:30 PM interview with MATAI  
TUSILA- (following service for birth of baby):

1. He owns Namua, Nuntele and Nuplua -  
passed on from father - owned in family.
2. 30-40 years ago he lived on Namua -  
Used to have 5 turtles nesting each  
night - (OR NUNTELE ??)
3. He is concerned about people taking eggs,  
because it means a reduced revenue for him
4. Alan <sup>Panner</sup> and Viliamu will pay for a  
marked turtle
5. Doesn't really believe people take turtles  
off the island at night - too hard for  
them to get on - and they don't have good  
boats - except for Viliamu.
6. He doesn't allow people to take turtles  
off the beach - if he hears of this he  
will go there <sup>Elepata</sup> and talk to them. Shell  
that I saw at Burn Philip he  
believes originated from turtles caught  
in nets. I pointed out that Elepata  
nets were very flimsy.

~~Went~~ Slept from midnight - 7 AM 18 FEB Wednesday



18 FEB 81 Ate a roll and coffee at Tersilab -  
 WEDNESDAY checked market -- 8:30 AM - no turtles present.

Talked to June at I.H. Carruthers Ltd store concerning government import taxes (35-40%) and other repressive acts to private business. <sup>Bribes of bottles of liquor to get allotment from government officials.</sup>

At Burns Philip, Flora introduced ~~me~~ me to Seala Pisa Togisiv (Box 1223, Seese, Apia), a 69 year old man that sells tortoiseshell jewelry that he makes. He used to buy his own raw shell, but now gets it from Burns Philip. When he was about 18 years old he used to catch turtles by hiding in the vegetation and waiting for them to come ashore to nest at Solosolo. He never caught them in Eleipata because it was not where he lived. Techniques by other people involved the use of a spear. When he bought shell on his own, his sources included residents of Savaii, and someone from Lalomana, near the hospital.

William Pedro later pointed out to me that Solosolo is near the village of LYATUANU that is noted for its people catching turtles (check w. Savog's story in my Polynesian reprint file). He stated that the only marginal scutes used in jewelry making are the 2 post-centrals, at least by him.

His wife and some children live in haie - Pefa Seala Togisiv - Box 493 -  
 Wife's name - Mrs. Arp.



18 FEB 81  
 WEDNESDAY When he was in Laie (year not stated) he knew of an expert Hawaiian turtle catcher near the school (NON <sup>NON</sup>mormon) - house has many turtle shells.

Solid type Buckets at Burn Ship are \$2.50 - 6.50. Necklaces and buckets made from pieces, inset with "catseyes" from Turbo shell, are \$12 - 15 TALA. Flora said that rings are mostly made large - lots of Samoan people visiting Western Samoa like to buy these rings.

I telephoned Bill Travis at 20510 - Concerning paying Tusila for eggs, this was requested, but taken to "Head-of-State" where it was denied. Ownership of island can involve cultivation (i.e. Copra), but not such things as eggs deposited in the "forebeach". This area, unlike in Fiji, is not owned by anyone, but rather provides access to all for fishing purposes.

He does not know if Tusila is being paid for eggs at the present time. Travis stated that Makais own turtles - but this does not cover eggs. Concerning the 17 adults he reported having seen in the market, in 2 days, he attributed this sudden large number to raising money for the Christmas holiday. Stated that Samoan life revolves around four holidays - Easter, National Independence Day, White Sunday, and Christmas. All of these were confirmed to be adults - "5yrs or more old".



18 FEB 81  
WEDNESDAY

Bill feels that adult turtles are "customarily" protected in Samoa because they must be given the Matai when captured. Consequently, fishermen may, at first, go to the great trouble of catching a turtle and give it to the Matai "to enhance his prestige". However, later he will lose enthusiasm and stop doing it because it lacks any benefit for him. [I'm not a bit sure that this argument is logical].

Travis stated that the basic reason for ever starting the hatchery was because the great increase in human population at all coastal areas of Upolu thereby pushing (forcing) nesting by turtles off (the) island to the small (marginal) beaches of the 3 islets. At these sites the turtles were digging up each others eggs because of the very limited beach space. To alleviate this problem, the eggs were moved to the hatchery.

With respect to predation on eggs by people, they will not eat them (are no good to them) if they are older than about one week. Eggs are almost never for sale in the market. If a fisherman happens to be off the island and it is calm, he will go ashore and take eggs.

18 FEB  
WEDNESDAY

concrete



18 FEB 81 Met with Alphonso Philipard Dan Popper  
WEDNESDAY about 10:30 AM.

Popper indicated that in 1967 (approx. April) he was aboard a research vessel that went to Palmyra to construct a Meteorological Station at a shallow spot. In an area of about 3-4 acres he saw numerous green turtles - many full size adults.

\* Estimates at about 100, but difficult to determine when head are popping up all over. They caught two of the turtles, and found that their guts were jammed with Caulerpa.

Questions presented to Alphonso were answered as follows:

1. Tusila has been paid for eggs ever since Alphonso took over as ~~the~~ Chief Fisheries officer in 1976. <sup>TRAVIS</sup> stated that <sup>TRAVIS</sup> started payment policy. Later Sargibolytele showed up and also wanted payment - claiming he owned the islands. Philip took him he would not pay, and that if he wanted to dispute payment to Tusila, he should take it up in the "Land Court". Popper thought it had gone to court, but Philip stated it never did.
2. <sup>concrete</sup> The foundation that I saw on Namua was the "Catholic Sisters" <sup>"MISSIONARY"</sup> (not Leprosy facility).  
Payment now at \$25000 per egg.
3. Total budget of Fisheries Division is about \$300,000 (~\$7,000 for hatchery, ~\$10,000 for Popper's baitfish aquaculture project).  
Hatchery - ~ 2.3%.
4. In the early 1950's there were still no roads in to Eligata - only foot trails. Principal transportation was by coastal boat - hauling goods (Copra,



18 FEB 81

WEDNESDAY

etc.). Philip was a policeman at the time and was given the assignment of going to Eleipata to respond to "trouble" in the district. Upon arrival he was told that the Matai had sent four men out to Vini Beach on Nuntele to make copra. In doing this they had to stay overnight. Eleven turtles came on the beaches that night and the men turned them over. They built a fire and cooked one, and took the other 10 to the Matai. A few weeks later some other people went to Vini and saw the burned remains of the cooked turtle. They told the Matai and he ordered that all four men and their families be permanently banished from the district. Philip tried to talk the Matai into a lesser punishment or slightly moving the boundary of the district so they could live on the edge. This was not agreeable, and they were indeed banished.

I also discussed the following with Philip:

1. Supplying small tags as a secondary marking of hatchling or headstarted turtles;
2. Obtaining a Peace Corps person to help Viliamu - this will probably occur in conjunction with data gathering for fish caught at trap aggregate buoys off Eleipata. Also, market data will be gathered by a new PVC (this will include turtles).



18 FEB 81  
wed.

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3. I ~~will~~ will provide assistance whenever and however necessary - he seemed receptive to this suggestion.

A Van Bus was taken to the airport at ~1 PM. Noted Tiafau Hotel. Kimball, president of Mormon Church, arrived on a New Zealand jet. I departed on a Polynesian Airlines <sup>FL 256</sup> Nomad Islander at ~2:45 PM. Cloudy with rain during flight. Briefly saw Gall islets for a short time at a distance. Flight took about one hour.

Called OMR <sup>resources</sup> - Henry's office upon arrival, but he had been out all afternoon. I wanted to

1. Tell him of the great value William was during the trip;
2. Inquire about their forthcoming vessel, for use in transport to Rose Atoll;
3. Briefly mention the possible trip to Tokelau.

Took a taxi (#7) to Rainmaker Hotel and checked in. William <sup>PERRO</sup> met me at ~7:15 PM and we discussed our trip. Dick Wass picked me up ~9:15 PM and drove me to the airport. Also gave me a frozen fish for delivery to Jacky Randal. Discussed findings of visit with Dick. Departed Pago airport about 11 PM on Continental Airlines - Arrived



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19 FEB 1981

Thursday  
in Honolulu - 5:30 AM.

Misc. BACKNOTES:

- Plastic jewelry was commonly seen for sale and being worn in W. Samoa
- Very few bikes or motorbikes were seen - however I was informed by Eri that they were previously common (before everyone <sup>had</sup> "to" ride a bus or car).
- Very few pelagics seen in W. Samoa - particularly outside of Apia.
- All buses seem to be made from Toyota trucks.
- Tuku Poatua was in the military during WWII and received 3 medals

3/15/82 - Kim Wright - FWS - showed me a sarapace 77 GL varnished that was confiscated from man coming to Honolulu from Pago



Food Processing - Box 743, Apia

4/3 -  
81

LAWREN CRAWFORD (former PCV),  
Samoan wife & 9 mon baby visited  
Honolulu - stayed at Whistler<sup>er</sup>  
apt 2004, 500 Ala Wai. I delivered  
package for Dan Poppers. Lauren went  
on Nahrn vessel with Vihima to  
Tuvalu. Described one outer-island  
group that brought 13 large greens  
to <sup>INDEPENDENCE</sup> ceremony - believed that they  
came from Nukunai - but not  
certain.



Feb 1982 - Box 713, April

Handwritten notes, including "A/3-81" and "C. ...".

3/15/82

Handwritten notes for 3/15/82, including "C. ...".



by Bob Johnson  
copy from your lab book

Experiment to measure growth of *Aspergillus*  
fungus. Mark 14: 1977

1	10	10
2	10	10
3	10	10
4	10	10
5	10	10
6	10	10
7	10	10
8	10	10
9	10	10
10	10	10
11	10	10
12	10	10
13	10	10
14	10	10
15	10	10
16	10	10
17	10	10
18	10	10
19	10	10
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33	10	10
34	10	10
35	10	10
36	10	10
37	10	10
38	10	10
39	10	10
40	10	10
41	10	10
42	10	10
43	10	10
44	10	10
45	10	10
46	10	10
47	10	10
48	10	10
49	10	10
50	10	10

... the growth of the fungus ...  
... the results of the experiment ...  
... the growth of the fungus ...



by Bob Davidson

Experiment to measure growth of shell into  
punched Mark May 14, 1977

Procedure: 11 turtles from clutch #2 were punched (using a leather punch) on May 2, 1977 (2-5-77). Allowing time for the injured shell to heal itself, the size of the hole was measured, using a ruler, in millimeters. One has to make do with what's available. Measurements were taken weekly to determine if the shell will grow into this area, thus obliterating the mark. The mark indicates the year released, hence the age. To identify the 11 turtles from each other, a different plate on each turtles carapace was painted white. One turtle was not identified in this way, it being easily recognizable due to ~~the~~ a distinct carapace. It might serve as a sort of control, though a poor one at that. It is obviously genetically defective.



Date:	Date	14/5	19/5	7/6	14/6	27/6	
turtles:	pl. IR -	6mm	7	8	9	10	
	pl. IIR -	7	7	9	10	11	R
	pl. IIIR -	3.5	6	8	9	10	E
	pl. IIIR -	3	6	8	8	9.5	L
	IM -	5.5	6	8	8.5	9	E
	IIM -	3.5	6	8	9	9	A
	IIIM -	6	7	9.5	9.5	9.5	S
	IIIM -	4	4	6	8	10	E
	IIM -	4	4	8	9/8	9	D
	IL -	3	3	8	9.5	10.5	
	unmarked	-	6	6	6	6	Dead

Notes: 19/5 - Tendency noted for damaged plate to degenerate & fall off. Only 3 turtles (IIM, IIM, IL) have not lost their marked plate entirely. Nonsymmetry of # of plates on each side could be indicative of marked shell. Possibly bordering plates will grow to fill in gap.

7/6 - paint marks on turtles faint or while away 2 clutches mixed together turtle MII is indistinguishable; 2 possibilities for MII - both measure at 8mm - so remarked both.

14/6 - All marked plates have fallen off except on ~~plate~~ unmarked turtle. This turtle being marked on plate 4 right side from tail. Degeneration



of this plate would lead to marked loosening of shell protection, and expose the abdomen to attack.

### Conclusion

10.7.77

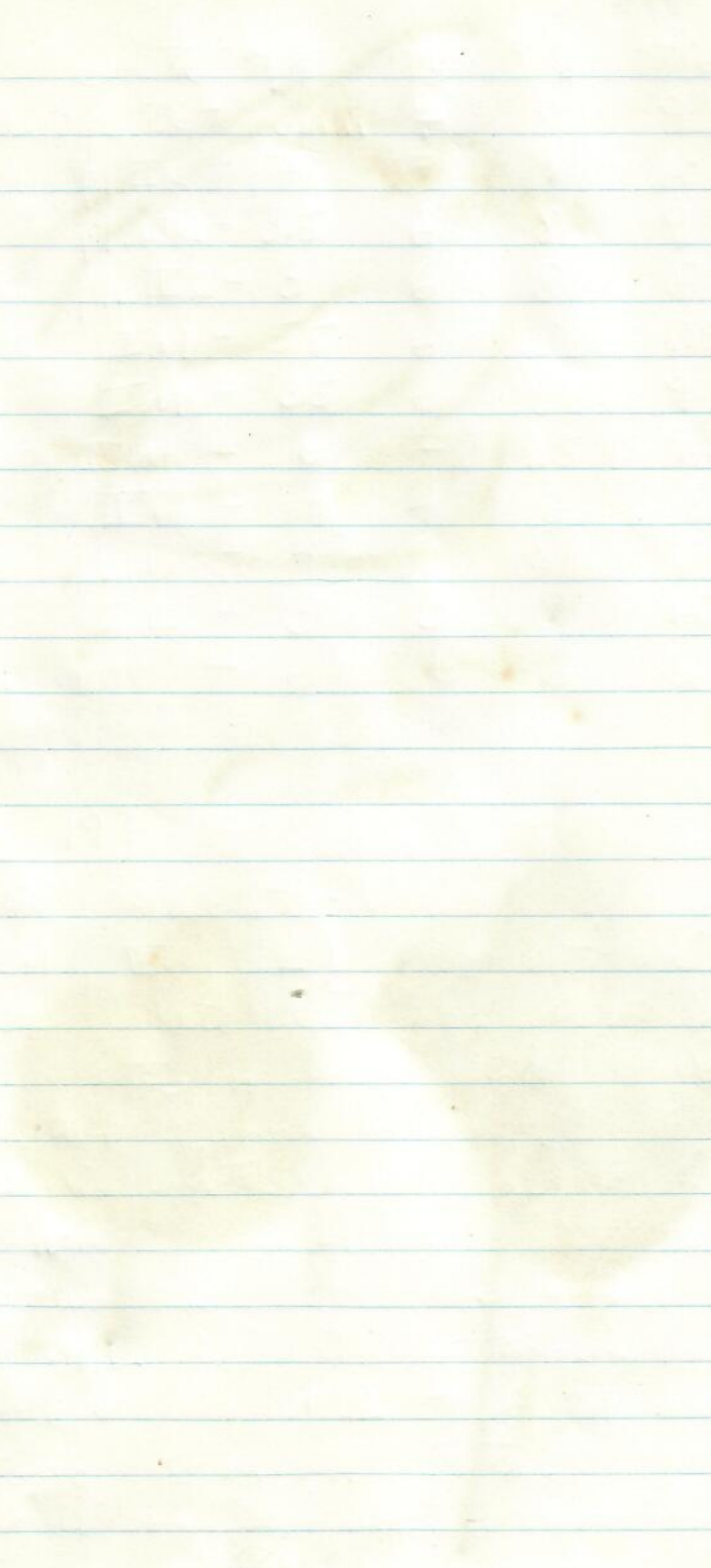
It is evident from these measuring procedures, not be mention, adult turtles observed, that the removed plate is not replaced. Therefore using a leather punch to mark the turtles, so as to identify them as to year released, is a reliable identification method.

→ All turtles released in 1977 have been marked on the second marginal plate from the tail.

2 miscellaneous cards in file, as follows:

Clutch no	Date	NO EGGS	Date emerged	NO emerged	release
3	Nov/74	1/3/75	(5) 139	2/28/75	- no data -
1	"	1/2/75	(4) 173	2/26/75	98 2/27/75 375







FEB 1981



from Basalt rock occurring  
intertidally on Namua



In shallow water  
on along west side of Namua -  
small sized plants off hatchery  
coastline



Tototolo  
from egg enclosure



8-13 June 1957

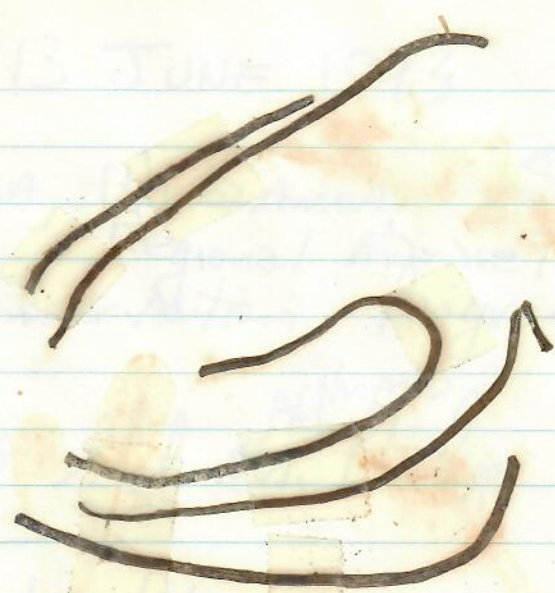
Area 1000 ft. above sea level

(S. 1000 ft. above sea level)

Area 1000 ft. above sea level

2/4/57 (L.A. NAT. HIST. MUSEUM)

Henrietta, United States





8-13 JUNE 1993

APIA, W. SAMOA SPREP  
 Regional Marine Turtle  
 Conservation Programme (3<sup>rd</sup> meeting)

Report that Mr. <sup>ALPHONZO</sup> Philippe Died in May 1993.

2/93 Viliamu MATAGI Tel. Apia  
 21763  
Henrietta Winterstein  
Div. Fisheries (TATTOOS)



FEB 1981

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- Photo needs -

(short WRITE-UP for Elepaio)

FANUATAPU - Namua - Nuytele

✓ notch & belly of captive hawks -

hatchery buildings & pen & tanks <sup>flash</sup> (ocean view?) -

Viliamu & me -

me in office -

Adults - ~~say~~ <sup>light</sup> back & belly (no possible because of example to viliamu - leaving on back - or simply turning over)

✓ ~~at~~ Canapace at Teo's house -

BW print of Alan



NOTE:  
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Humidity & sand deemed to be very harsh on EL, 55 & WA lens, & flash.  
Thorough cleaning important.

## DATE - PHOTO LOG -

ROLL 1 (W. Samoa Trip - D408 Tiger Mortality from Midway (flash); Bob Ross kareoke  
TMR GREEN; HIROTA TMR GREEN;  
ASA 64 EL Aerial

6 FEB 81 → 2<sup>nd</sup> photos of Nuutele; 2 photos of William holding #8 hawk  
in Asia market; 7 FEB (Saturday) → Viliamu digging eggs  
+ Namua beach ← flash  
on Namua; Reburying egg; people in area; Nuutele showing vini beach;  
8 February SUNDAY Viliamu & family preparing Sunday feast (Tokelavan) ← flash

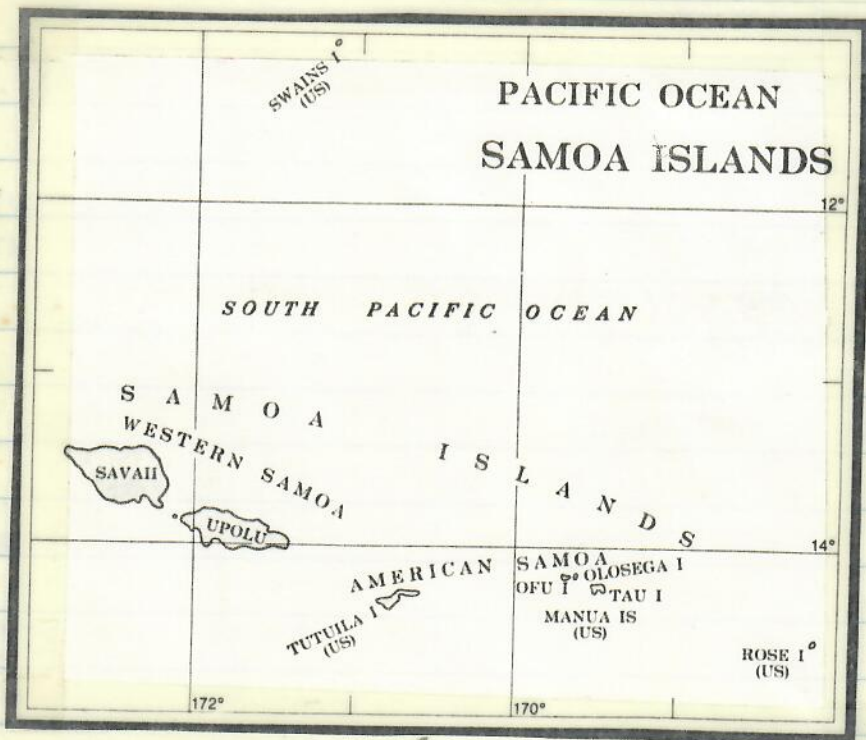
ROLL 2 <sup>2/9 MON</sup> Fale & William in boat; Nuutele easterly beach; ALEIPATE hatch  
9/10 - TUES  
Fale putting eggs in pen; flash of some family members;  
ASA 64 EL 9/10 night - REMAINDER OF ROLL OF HAWKSBILL 5052, 5053 on  
NAMUA.

ROLL 3 WEDNESDAY 2/11/81 flash photos of family members in house during rain storm; 2 juv  
ASA 64 EL hawkbill carapaces at W. Samoa Handicraft Ltd.; 2 photos; <sup>2/13 NUTTELE</sup> Fale feeding / pleasing clams (flash);  
#4 tala 2/13 FRIDAY - Fale feeding / pleasing clams (flash);  
2/14 AM 2:30-3 AM SATURDAY Rest of roll of hawk 5054, 5055 WA flash + 55mm - some may have flash like  
partly in front of lens; most at f5.6 - but some at lower & high f stops.

ROLL 4 2/14 AM SATURDAY - First 10 or so photos 55mm flash of Hawk 5054, 5055;  
ASA 64 EL WA of digging out 5054, 5055 eggs; WA of putting the eggs in pen  
enclosure (now cleared of weeds); FAUNATAPU (WA); TOGA TEKIU  
at FAUNATAPU; East end of Faunatapu; 2/15 SUNDAY - TOGA &  
family; Juvenile Hawk dorsal & ventral

ROLL 5 2/15 SUNDAY juvenile hawk; TOGA with hawk; 2/16 Monday - Nuulua Beach  
ASA 64 EL and Nuulua - Nuutele from boat; Egg enclosure with laundry  
5imi TEO green carapace; hanging on fence; Photos of pig preparation; 2/17 TUESDAY  
juvenile hawk purchased at market (#4 tala); Sua making  
jewelry;







4-12-97 A9

## Last phoneless nation makes its very first call

Associated Press

The Honolulu  
Advertiser

**WELLINGTON, New Zealand** —The last country in the world without telephone service made its first call yesterday.

The 1,500 residents of Tokelau have until now had to communicate through a noisy short-wave radio link to Western Samoa and a mail ship that arrived once every five weeks.

The \$2.8 million project installed phone lines to the nation of three coral atolls 1,700 miles northeast of New Zealand, which administers it.

President Aliko Faipule Faliema Teao made the first call yesterday, dialing up New Zealand Prime Minister Jim Bolger to thank him for contributing \$1 million toward the project, the New Zealand government said in a statement.



G.H. BALAZS  
 HIMB  
 UNIV. HAWAII  
 P.O. Box 1346  
 KANEHOHE, HAWAII  
 96744

## METRIC SYSTEM WITH U.S. EQUIVALENTS

### METRIC UNIT (1) U.S. EQUIVALENT

#### LENGTH

millimeter	(mm)	0.04 inches
centimeter	(cm)	0.39 inches
decimeter	(dm)	3.94 inches
meter	(m)	39.37 inches
decameter	(Dm)	32.81 feet
hectometer	(hm)	109.36 yards
kilometer	(km)	0.62 miles
myriameter		6.2 miles

#### AREA

square centimeter	(cm <sup>2</sup> )	0.155 sq. inches
square meter	(m <sup>2</sup> )	1.196 sq. yards
are	(a)	119.60 sq. yards
hectare	(ha)	2.47 acres
sq. kilometer	(km <sup>2</sup> )	0.3861 sq. miles

#### WEIGHT

milligram	(mg)	0.015 grains
centigram	(cg)	0.154 grains
decigram	(dg)	1.1543 grains
gram	(g)	0.035 ounces
decagram	(Dg)	0.353 ounces
hectogram	(hg)	3.527 ounces
kilogram	(kg)	2.2046 pounds
quintal		220.46 pounds
metric ton		1.1 tons

### METRIC UNIT (1) U.S. EQUIVALENT

#### VOLUME

cubic centimeter	(cm <sup>3</sup> )	0.061 cubic inches
cubic decimeter	(dm <sup>3</sup> )	0.0353 cubic feet
cubic meter	(m <sup>3</sup> )	1.31 cubic yards
cubic decameter	(Dm <sup>3</sup> )	13.10 cubic yards

#### CAPACITY, CUBIC

milliliter	(ml)	0.06 cubic inches
centiliter	(cl)	0.6 cubic inches
deciliter	(dl)	6.1 cubic inches
liter	(l)	61.02 cubic inches
decaliter	(Dl)	0.35 cubic feet
hectoliter	(hl)	3.53 cubic feet
kiloliter		1.31 cubic yards

#### CAPACITY, DRY

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

#### CAPACITY, LIQUID

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



